

PEYEE INSTRUMENTS

PMS





CD

PMG



General Information

Basic Eye Instruments

Titanium Eye Instruments

Cataract Instruments

Keratorefractive Instruments

Vitreoretinal Instruments

Speciality Products

Miscellaneous Instruments

Sterilising Equipment

Index

# TABLE OF CONTENTS





## COPYRIGHT

All photographs, enlarged tip drawings, technical and medical information in this catalogue - including the cover - are fully protected by COPYRIGHT. No part of this catalogue, may be reproduced in any form without the written permission of PMS Precision Medical Specialities GmbH, 78532 Tuttlingen, Germany. PMS GmbH reserves the right to make changes at any time, without notice, in product specification and availability. Photos may vary slightly from actual size. Descriptive, typographic, or photographic errors are subject to correction.

## LICENSING

In using this CD you fully agree to the following conditions without reservation. The issuer of the license accepts no liability that the computer programme will meet up to your expectations or that it will work smoothly and contain no errors. This CD and its documentation are delivered "AS IS", and do not contain any explicit guarantees or other guarantees.

## CD

Usage allowed only under acknowledgment of the license conditions. All rights reserved. Total or partial reproduction, photo-copying, public performance or transmission of this publication, or portions of this publication, is prohibited. No commercial lending.

## PMS ONLINE

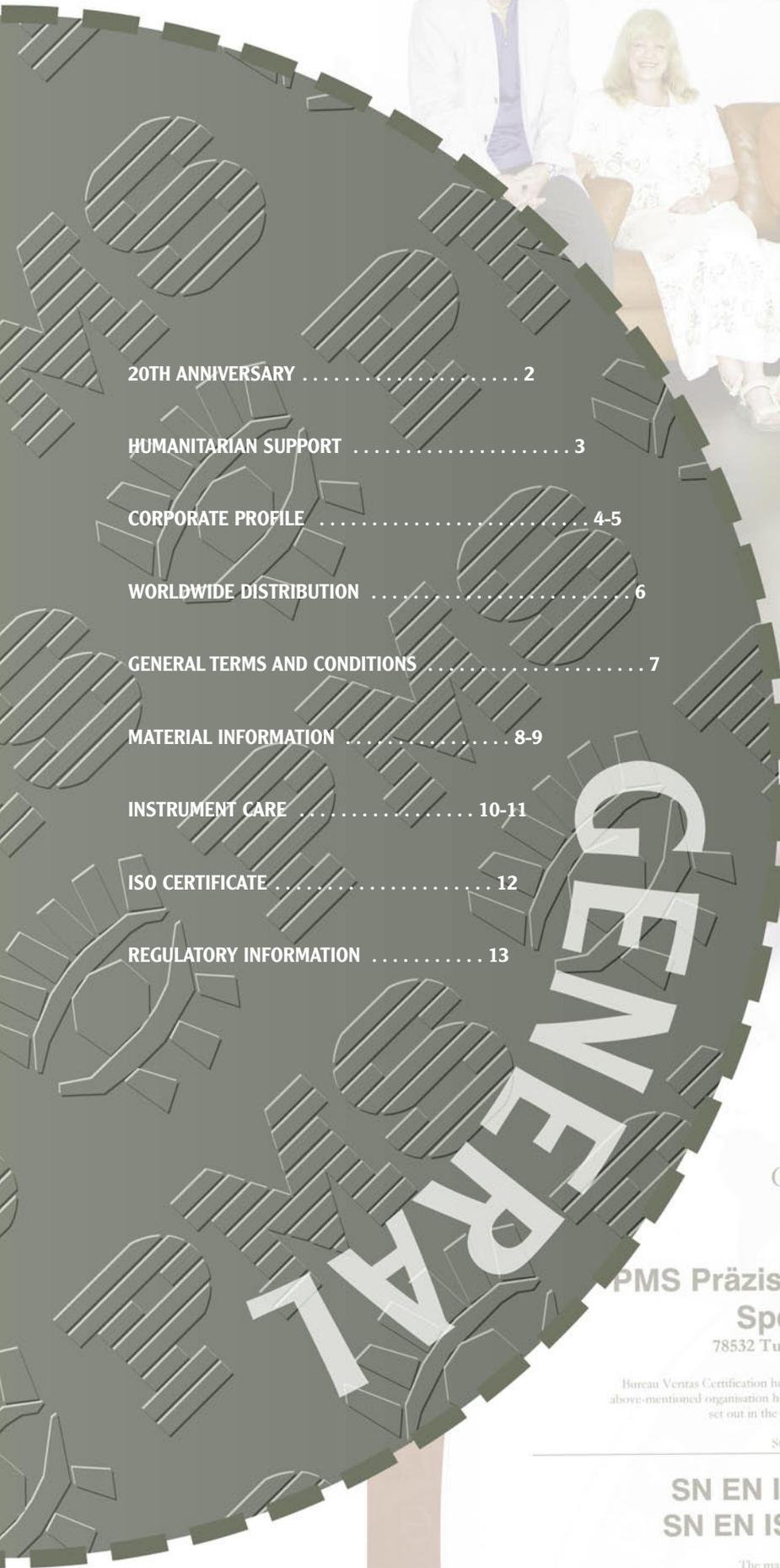
Our new Ophthalmic Product Catalogue, CD and Website are an excellent basis and support for future growth. There you will find precise product descriptions, general technical and medical data, and tips for proper care and maintenance on the complete range of PMS Ophthalmic Surgical Products. So if you want a general idea or detailed information about our company, our philosophy and our high quality products - come and have a look. You can visit PMS "Precision Medical Specialities" online -

[www.pms-tuttlingen.de](http://www.pms-tuttlingen.de)



# NOTES

A large, curved dashed line on the right side of the page, defining a semi-circular area. Inside this area, there are numerous horizontal dotted lines, serving as a template for writing notes.



20TH ANNIVERSARY ..... 2

HUMANITARIAN SUPPORT ..... 3

CORPORATE PROFILE ..... 4-5

WORLDWIDE DISTRIBUTION ..... 6

GENERAL TERMS AND CONDITIONS ..... 7

MATERIAL INFORMATION ..... 8-9

INSTRUMENT CARE ..... 10-11

ISO CERTIFICATE ..... 12

REGULATORY INFORMATION ..... 13



Certificate  
for

**PMS Präzisions Medizinische  
Spezialitäten**

78532 Tuttlingen / Deutschland

Bureau Veritas Certification hereby confirms that the management system of the above-mentioned organisation has been assessed and complies with the requirements set out in the following standards / regulations.

Standards/Regulations:

**SN EN ISO 9001 : 2000  
SN EN ISO 13485 : 2003**

The management system comprises:

Sales of special medical instruments (Group I)



### Classic quotes in celebration of PMS's 20<sup>th</sup> Anniversary

An anniversary is the celebration of love, trust, partnership, tolerance and tenacity. The order varies for any given year.  
—Paul Sweeney

At 20 a man is full of fight and hope. He wants to reform the world. When he's 70 he still wants to reform the world, but he knows he can't.  
—Clarence S. Darrow

Celebrate what you want to see more of.  
—Thomas J. Peteres

There's not one wise man among 20, who will praise himself.  
—William Shakespeare

Instead of thinking about where you are, think about where you want to be. It takes 20 years of hard work to become an overnight success.  
—Diana Rankin

The more you praise and celebrate your life, the more there is in life to celebrate.  
—Oprah Winfrey

At 20 years of age the will reigns; at 30 the wit; at 40 the judgement.  
—Benjamin Franklin

The measure of a master is his success in bringing all men around to his opinion 20 years later.  
—Ralph Waldo Emerson

Hindsight is always 20-20.  
—Billy Wilder

Though it sounds absurd, it is true to say I felt younger at 60 than I felt at 20.  
—Ellen Glasgow

### PMS

Precision Medical Specialities GmbH was founded in 1988 with the total commitment to produce eye surgical instruments of excellent quality and to provide unexcelled service to our clients. Our dedication to that promise has earned us hundreds of satisfied customers all over the world for which we are very grateful. Whilst we are proud of our achievements during the last 20 years, our success would not have been possible without the continued patronage from you, our valued customers.

### From the management

*I would like to take this opportunity to personally thank you for your support and allowing us to serve you over the last 20 years. You have made our success possible and I promise that we will continue to maintain the same standard of excellence in the future. With sincere thanks, Volker Schneckeburger (CEO).*

### The future development

PMS is currently made up of a small group of highly experienced people. We produce our instruments entirely in Tuttlingen, the home of the surgical instrument making industry, since more than 200 years with continual improvements. In the near future, we shall also improve on communication, image, packaging and PR, which will better correspond to the high standard of our surgical instruments.

### Comprehensive product presentation

This is the most modern and extensive line of German made ophthalmic microsurgical instruments we have ever presented. You will find almost 1000 items including many new products to aid the progressive eye surgeon in performing the most delicate procedures, in particular Cataract, Keratorefractive and Vitreoretinal Surgery. This easy to use catalogue is designed to provide full details on all PMS products - please use it as a reference.

### New catalogue design

Inside this new catalogue, you will find that our pages have been redesigned, not because we did not like our old look, but because of the 20<sup>th</sup> anniversary, we felt it was simply time to freshen up our image and our presentation. We trust you will like it, and we look forward to hearing your comments on the catalogue's new design.



## YOU CAN HELP US HELP

In this anniversary year, there are many ways to express the spirit of giving, of thankfulness, of celebration, and of hope. We at PMS GmbH would like to support a humanitarian project of your choice.

Therefore, we plan to establish a fund with the aim to deliver assistance to a charity that helps children or families in need, regardless of race, creed, religion or nationality.

One of our main principles is to support people in countries, where deprivation, hunger, disease and destitution are strong realities, and where people struggle daily for survival.

Starting January 1<sup>st</sup>, 2009, for each ophthalmic surgical instrument sold, we shall equally contribute 0.20 EUR to a humanitarian project – chosen by you.

At the close of each year, we shall inform you of the contribution amount available. We will also provide a list of charities to you and you should let us know which project you prefer. Your favoured charity will receive this financial donation from PMS GmbH.

HUMANITARIAN SUPPORT



# Precision Means Security

In 1988, PMS GmbH was established by Volker Schnekenburger with an aim to specialise in the manufacturing, promotion and sales of medical instruments and related equipment for hospitals, clinics and research institutes.

The company's objective was and remains to manufacture and market the finest and most delicate surgical instruments - of affordable quality and excellence - for OPHTHALMOLOGY and the following disciplines: ENT, Plastic & Reconstructive, Micro and Neuro Surgery.

Based on a team of highly skilled, quality conscious and experienced craftsmen (instrument makers) and modern milling centres and equipment, PMS GmbH became, over the last 20 years, a synonym for supplying consistent, superior quality Precision Medical Specialities.

This consistency is guaranteed by a Quality Assurance System. All PMS facilities are certified according to the prestigious ISO 9001:2000 / EN 13485:2003 as well as acc. to the European Medical Devices Directive 93/42/EEC, Annex II, to ensure compliance with the CE-Marking requirements.

Quality is a key word at PMS GmbH. This starts with the design and the choice of raw material (medical grade stainless steel), and is valid throughout the manufacturing process including the final inspection and shipment of the products.

New products have contributed significantly to the growth and success of PMS GmbH. We have a dedication to provide innovative products as surgical techniques and requirements may change. If you have a new instrument idea which may simplify surgical techniques and reduce procedural costs, please contact us directly and/or your local distributor (listed on page 6 of this catalogue).



**The world is changing faster than ever before in history - and so are the specific needs of the customers. The demand is for flexibility, reliability, quick response, and quality.**

**Everywhere service is the key. PMS GmbH is taking this into account. Our sales and customer service representatives, as well as competent international distributors around the world, will provide the assistance you may need for PMS products.**

**At PMS, people make the difference. A dedicated service team - backed up by an efficient stocking and distribution system - will give you the competitive edge you need to build your business.**



**MORE THAN MEETS THE EYE**



**CORPORATE PROFILE**



**Tuttlingen, home of the instrument making industry for almost 200 years.**



WORLDWIDE DISTRIBUTION



## **HERE YOU ARE SERVED BEST**

PMS' distribution partners who are based throughout the world are available to visit you to demonstrate instruments, offer technical advice or solve administrative problems.

- **AUSTRALIA:** McFARLANE, Surrey Hills (VIC)
- **BAHRAIN:** WAEI PHARMACY W.L.L., Manama
- **CANADA:** INSTRUMENTARIUM, Terrebonne (QC)
- **CHINA:** --> TAIWAN
- **CZECH REPUBLIC:** PETR BÍLEK 3B instruments, Nove Mesto na Morave
- **EGYPT:** CARE FOR TRADING S.A.E, Cairo
- **FRANCE:** ALCYON FRANCE, Paris
- **GERMANY:** WEFISINNOVID GMBH, Cologne
- **GREECE:** PHARMEX S.A., Sepolia-Athens
- **HONG KONG:** MILVERTON LIMITED, Tsimshatsui, Kowloon
- **HUNGARY:** OPHTHALMIC PRODUCT CENTER LTD., Budapest
- **INDONESIA:** PT. AJIAGUNG LANGGENG ABADI, Depok
- **IRAN:** CDX IRAN COMPANY, Tehran
- **IRELAND:** TEKNO SURGICAL LTD., Dublin
- **ITALY:** ALFA INTES SRL., Casoria (NA)
- **JAPAN:** T.M.I. COMPANY LTD., Niiza-Shi, Saitama
- **JORDAN:** AL GHAD DRUG STORE, Amman
- **KUWAIT:** GROUPTEK FOR MEDICAL/SCIENTIFIC
- **KOREA, SOUTH:** MEERE TECHNOLOGY CO. LTD., Seoul
- **LEBANON:** HAGE MEDICAL S.A.R.L., Dora, Beirut
- **MALAYSIA:** SURGICAL IMPLANTS AND APPLIANCES, Kuala Lumpur
- **MOROCCO:** USAGE MEDICAL S.A.R.L., Casablanca
- **PERU:** GLATT S.A., Surco, Lima
- **PHILLIPINES:** --> SINGAPORE
- **POLAND:** ELITE SP. ZO.O., Warsaw
- **PORTUGAL:** PRODULAB LDA., Lisbon
- **SAUDI ARABIA:** CIAME MEDICAL DIVISION, Jeddah
- **SINGAPORE:** SURGIPRO PRIVATE LIMITED
- **SPAIN:** BIOGAL S.A., Vigo
- **SWEDEN:** PREISLER INSTRUMENT AB, Lund
- **SYRIA:** KINDA COMMERCIAL COMPANY, Damascus
- **TAIWAN:** CLINICO INC., Junghe City, Taipei
- **THAILAND:** PS PROSEARCH COMPANY LTD., Bangkok
- **TUNESIA:** OPHTHALMOCONSULT, Tunis
- **USA:** VOLKER INSTRUMENTS, Goleta (CA)
- **VIETNAM:** BMS CO. LTD., Hanoi



## GENERAL TERMS AND CONDITIONS

### GENERAL INFORMATION

#### DESIGN

PMS products are designed and manufactured according to the recognised institute of standards and technology. We reserve the right to modify the instruments illustrated in our catalogue as improved materials, finishes and designs become available.

#### MATERIAL

All products shown in our catalogue are made of medical grade stainless steel material, unless otherwise indicated.

#### MEDICAL INFORMATION

The medical information contained in this catalogue is for informational purposes only. It is not intended as instructional material for the use of the instruments, procedures or techniques.

#### LIABILITY

A great deal of care has been taken during the development of this catalogue. However, we are not liable for the accuracy, completeness and up-to-dateness of the technical and medical information given.



#### SYMBOL

This symbol is intended to alert the user to the presence of important operating and maintenance instructions in the catalogue.

#### COPYRIGHT

All photographs, illustrations and descriptions in this catalogue - including the cover - are fully protected by copyright, and may not be reproduced in any form without prior written permission of PMS GmbH.

#### CATALOGUE

This catalogue has been completed and printed in June 2008. It is our exclusive property. In case of misuse, we reserve the right to recall all copies of this catalogue in your possession.

TUTTlingen, June 2008  
PMS GmbH

#### PRICES

Our prices are to be understood in EURO, ex works Tuttlingen, Germany, excluding packing, delivery charges and insurance. Prices in the price list are for one unit, unless otherwise stated. Prices may be changed without prior notice.

#### PAYMENT

Invoices are payable net 30 days of invoice date.

#### DELIVERY

From stock or according to order confirmation. Partial shipments must be permitted. Delayed deliveries do not entitle the buyer to claims.

#### RETENTION OF TITLE

The goods delivered by us remain our property until they have been fully paid. This also includes all goods supplied previously or at a later date.

#### WARRANTY

Our warranty is valid world wide and for life from date of purchase. It covers any defects in material and craftsmanship. Damage resulting from inexpert use and/or misuse with regard to handling, cleaning, sterilisation and storage does not fall under this warranty.

#### COMPLAINTS

Any complaints should be made in writing within 30 days upon receipt of goods. Any product which appears unsatisfactory in material and craftsmanship will be repaired or replaced free of charge.

#### RETURN GOODS POLICY

Returned items should be:

- in perfect condition
- never have been used
- boxes should be complete.

Returns are subject to a 20% restocking charge. Product returns will be accepted within 90 days from date of shipment. NOTE: No return will be accepted without authorisation.

#### PLACE OF PERFORMANCE

The place of performance for shipment and payment as well as the court of jurisdiction is Tuttlingen.

**APPLICABLE LAW**  
German law only.



## MATERIAL INFORMATION

### STAINLESS STEEL

The material used for most surgical instruments today is stainless steel. Stainless steel is an alloy, consisting of various elements which make it extremely resistant to staining and corrosion. Despite the multitude of papers, articles, and research reports on this material, the misconception that “stainless” will not stain or corrode still lingers. Although it is strong, durable, aesthetically appealing, and ranks high among corrosion-resistant metals, stainless steel can and will corrode.

Of the many different types of stainless steel, those used for surgical instruments generally fall into two basic categories:

#### 300 Series Steel

(austenitic) contains no carbon and is considered the most stain-resistant of all steels. However, because it doesn't contain carbon, it can't be hardened. In ophthalmology, it is typically used for making eye speculae and handles for instruments, such as hooks, retractors and knives.

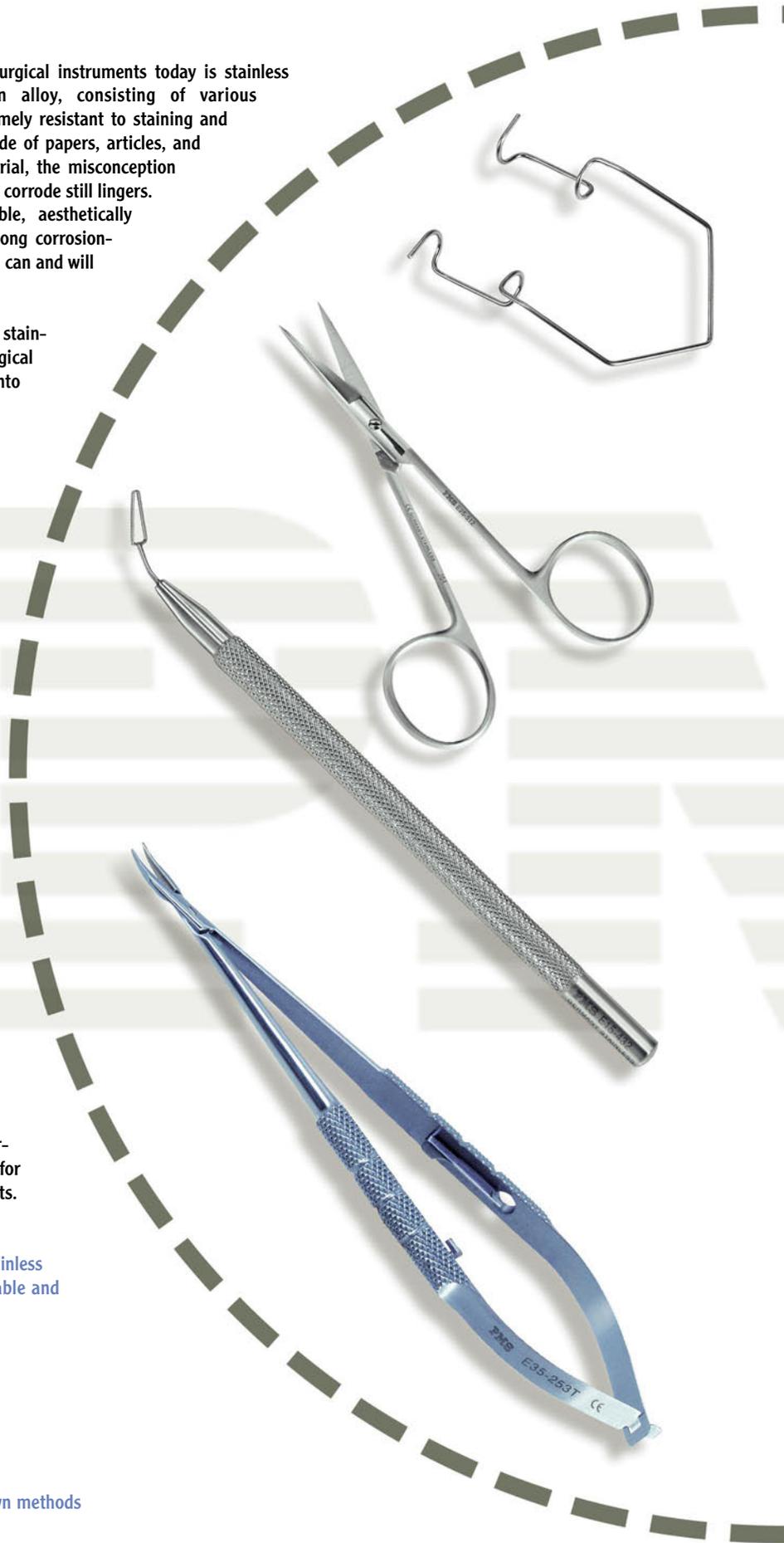
#### 400 Series Steel

(martensitic) contains a small percentage of carbon and thus can be hardened. The percentage of carbon content determines its hardness, the more carbon, the higher the attainable hardness. Steels with a lower percentage of carbon are typically used for making forceps, needle holders and haemostats. Steels with a higher percentage of carbon are used for scissors and cutting instruments.

### TITANIUM

is a natural complement to stainless steel. It is stronger, more durable and offers the following features:

- High strength
- Non toxic
- Non magnetic
- Non corrosive
- Non-glare, blue finish
- Tungsten carbide coated tips
- Can be sterilised by all known methods





## MATERIAL INFORMATION

### 1. SELECTION AND TESTING OF MATERIAL

To meet the rigorous demands of the medical industry utmost care is given to the selection of the proper material, which is an essential prerequisite for quality and safety. Comprehensive analytical examinations and inspections of the selected materials are carried out in metallurgical test laboratories.

### 2. PROCESS CONTROLS

After PMS craftsmen shape stainless steel into semi-formed instruments, highly skilled instrument makers grind, file and shape each instrument by hand into the finished form. At every stage the new instrument is matched carefully to the precise specifications to avoid any deviations in regard to structure of material, true measurements, function and surface finish.

### 3. HEAT TREATMENT

Surgical instruments require special heat treatment for hardening. Thus, tempering furnaces are used to control the elasticity, resistance to fracture, high cutting ability, and corrosion-resistant quality.

### 4. SURFACE FINISH

After initial polishing, instruments are returned to the instrument maker for inspection. Then, they are exposed to an electro-polishing process which removes the loose iron and reseals the surface. This process greatly enhances the ability of the instrument surface to resist corrosion.

### 5. QUALITY CONTROL

A final quality control is carried out prior to packaging the instruments. Under the microscope the following is inspected: Exact product duplication, true to size, surface finish and function. This attention to detail and care assures the finest quality products and contributes to the PMS tradition of excellence and affordable quality.

*Quality counts!*

MATERIAL INFORMATION



## PROPER CARE AND MAINTENANCE

As a manufacturer of surgical products, we often receive inquiries from customers asking for information on the proper care of instruments. These questions encompass decontamination, cleaning methods, drying, lubrication, inspection, sterilisation and storage. Described here are basic informations regarding the care and maintenance procedures necessary in the hospital to help insure a longer, more trouble-free life for your valuable tools.



### THE BASICS AT A GLANCE

- Always inspect, clean, rinse and lubricate brand-new surgical instruments prior to the first sterilisation.
- Do not allow blood, tissue, cellular debris or saline to dry on the instruments.
- Always use a demineralised or distilled water for the last cleaning process.
- Remember that instruments cleaned with BSS without thorough rinsing thereafter, will start corroding in the autoclave.
- Use a soft brush to clean handles and nothing rougher than facial tissue for the tips of the instruments.
- If ultrasonic cleaning is practised, do not clean by this method for more than 3 minutes and use only low-powered cleaners.
- Dry the instrument carefully by using a dust-free cloth or a hot-air blast before storing them.
- Lubricate the joints and locking devices after cleaning.
- Store and sterilise instruments in a protective tray.
- Autoclave instruments. The temperature should not exceed 273°F / 134°C.

### AND ALWAYS REMEMBER:

## HANDLE YOUR INSTRUMENTS WITH TENDER LOVING CARE

Everything you need to know about the proper care and maintenance of micro surgical instruments please contact:

[www.A-K-I.org](http://www.A-K-I.org)





## IMPROPER CARE AND MAINTENANCE

# INSTRUMENT CARE

**Fretting corrosion** is due to lack of sufficient lubrication agents.

**Encrusted and brownish-red contamination** layers on surface are due to insufficient cleaning.

Microsurgical instruments are subject to extreme wear. Therefore, inspect them regularly and replace, if necessary.

**Chloride induced pitting.** Pitting can only be avoided if instruments are cleaned immediately after use.

Worn, corroded, deformed or otherwise damaged instruments must be sorted out and discarded.

**Discolourations** on Barraquer Iris Scissors appear because of poor quality water used for cleaning and/or autoclaving.

Faulty instruments returned for repair must be cleaned and sterilised by the hospital prior to despatch in order to avoid contamination.

**Stress corrosion cracking.** In order to avoid such damage all instruments should be kept in an open position during the complete cleaning phase.

The processing and sterilisation of the instruments remains exclusively your responsibility.

**Water spots** are due to an excessively high concentration of minerals in the water.

PMS shall not be liable for any damage arising from the use of the device.

**Contact corrosion** is due to preparation of instruments on a brass rack.



BUREAU VERITAS  
Certification



BUREAU VERITAS  
Certification



Certificate  
for

Certificate  
for

PMS Präzisions  
Spezialitäten

# PMS Präzisions Medizinische Spezialitäten

78532 Tuttlingen / Deutschland

Bureau Veritas Certification hereby confirms that the management system of the above-mentioned organisation has been assessed and complies with the requirements set out in the following standards / regulations.

Bureau Veritas Certification hereby confirms that the management system of the above-mentioned organisation has been assessed and complies with the requirements set out in the following standards / regulations.

Standards/Regulations:

SN EN ISO 9001 : 2000  
SN EN ISO 13485 : 2003

**SN EN ISO 9001 : 2000**  
**SN EN ISO 13485 : 2003**

The management system comprises:

The management system comprises:

Sales of special medical instruments (Group I)

Sales of special medical instruments (Group I)

CERTIFICATE

**BUREAU VERITAS**  
Certification

Certificate  
for

**PMS Präzisions Medizinische  
Spezialitäten**  
78532 Tuttlingen / Deutschland

Bureau Veritas Certification hereby confirms that the management system of the above-mentioned organisation has been assessed and complies with the requirements set out in the following standards / regulations.

Standards/Regulations:

**SN EN ISO 9001 : 2000**  
**SN EN ISO 13485 : 2003**

The management system comprises:

Sales of special medical instruments (Group I)

Date of initial certification: 20.08.1998

Valid until: 20.08.1998

Date of certification: 16.09.2007 Valid until: 16.09.2010

Certificate number: 211048 Date: 22.10.2007

Bureau Veritas Certification (Switzerland) AG,  
Grossschmitten 25, CH-8194 Wädenswil ZH

Date of initial certification: 20.08.1998

20.08.1998

Valid until:

211048

211048

Date:

22.10.2007





## KONFORMITÄTSERKLÄRUNG

Wir, die Firma

**PMS**  
**Präzisions Medizinische Spezialitäten GmbH**  
 Kreuzstraße 5  
 78532 Tuttlingen - Deutschland

erklären in alleiniger Verantwortung, dass  
 die von uns gelieferten wiederverwend-  
 baren chirurgischen Instrumente der  
 Klasse I mit den folgenden Normen /  
 Regelwerken

**SN EN ISO 9001 : 2000 /**  
**SN EN ISO 13485 : 2003**

und der Richtlinie

**93/42/EWG des Rates**  
**vom 14. Juni 1993**

**über**  
**Medizinprodukte**

**übereinstimmen.**



## DECLARATION OF CONFORMITY

We, the company

**PMS**  
**Precision Medical Specialities GmbH**  
 Kreuzstraße 5  
 78532 Tuttlingen - Germany

declare under our sole responsibility, that our reusable surgical  
 instruments of Class I are in conformity with the following standards/  
 regulations

**SN EN ISO 9001 : 2000 / SN EN ISO 13485 : 2003**

and guideline according to

**Directive 93/42/EEC from June 14<sup>th</sup>, 1993**  
**on medical products**



## DICHIARAZIONE DI CONFORMITÀ

La sottoscritta Azienda

**PMS**  
**Präzisions Medizinische**  
**Spezialitäten GmbH**  
 Kreuzstraße 5  
 78532 Tuttlingen - Germania

dichiara sotto la propria e sola responsabilità  
 che i propri strument chirurgici riutilizzabili di  
 Classe I sono conformi ai seguenti standard/norme

**SN EN ISO 9001 : 2000 / SN EN ISO 13485 : 2003**

ed alle linee guida della

**Direttiva 93/42/EEC del 14 giugno 1993 sui prodotti medicali.**

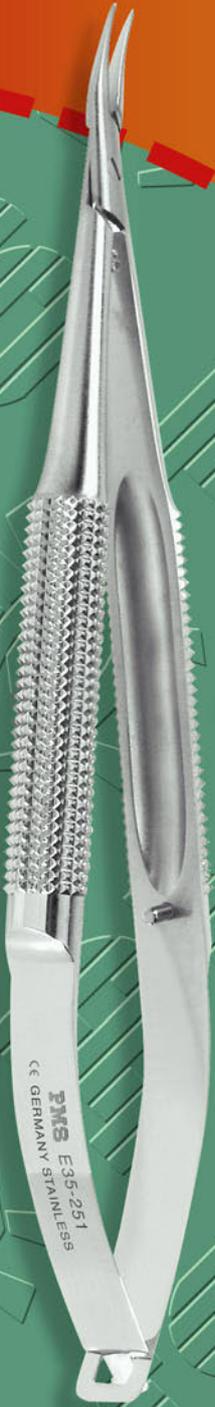




# NOTES

A large dashed semi-circular line on the right side of the page, enclosing a series of horizontal dotted lines for note-taking.

PMS



BASIC





GENERAL INSTRUMENTS ..... 16

SPECULAE & RETRACTORS ..... 17

BLADE BREAKERS, HANDLES & BLADES ..... 18

CALIPERS & FIXATION RINGS ..... 19

CANNULAE & ACCESSORIES ..... 20

IOL & PHACO INSTRUMENTS ..... 21

SCISSORS ..... 22

FORCEPS +  
**TYPES OF FORCEPS TIPS** ..... 23-24

NEEDLE HOLDERS ..... 25

MISCELLANEOUS PRODUCTS ..... 26

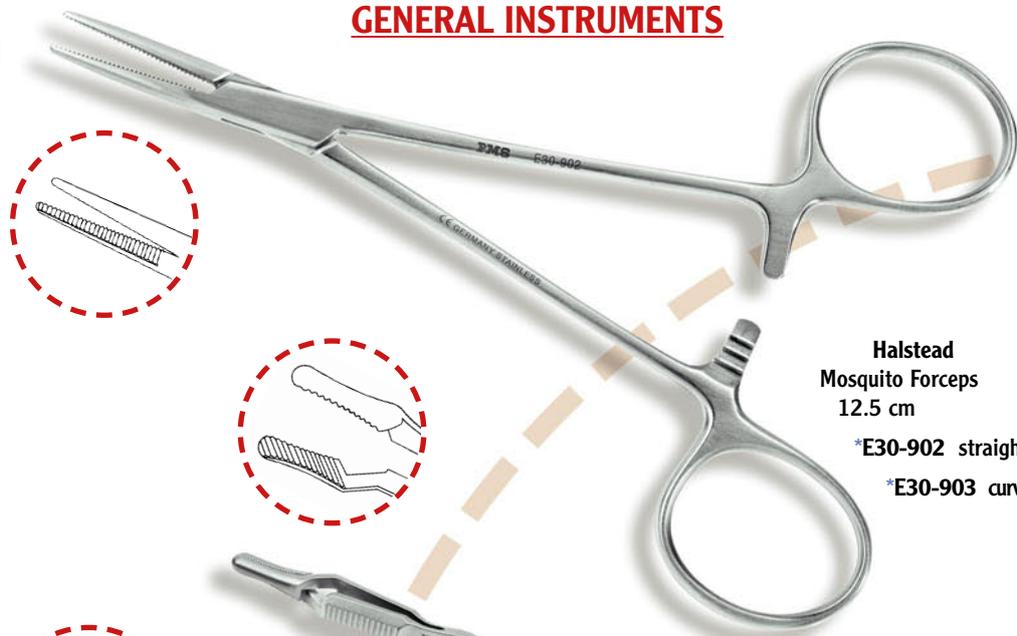
DISPOSABLE PRODUCTS ..... 27

BASIC EYE SET ..... 28



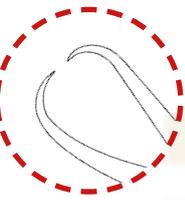


**GENERAL INSTRUMENTS**



**Halstead  
Mosquito Forceps**  
12.5 cm

- \*E30-902 straight
- \*E30-903 curved



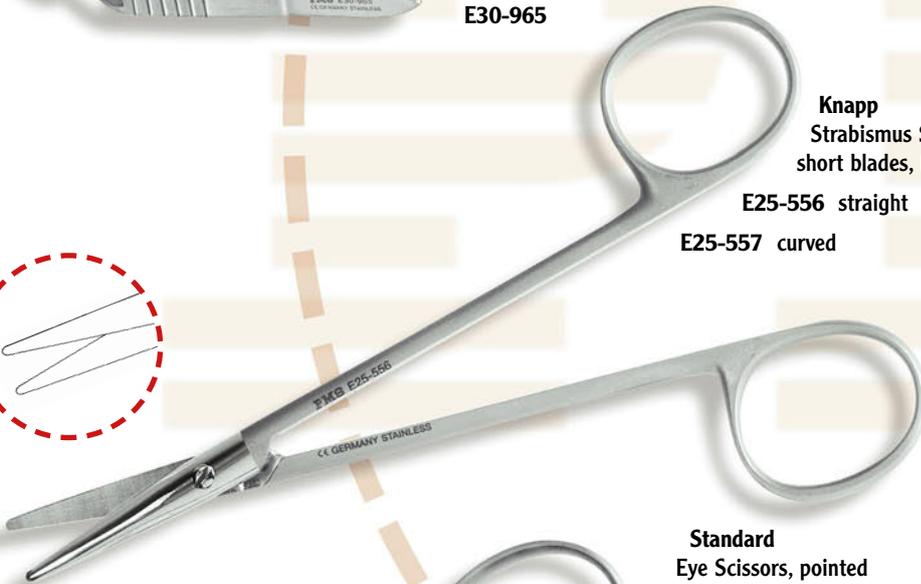
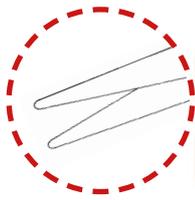
**Dieffenbach  
Serrefine, 3.5 cm**

- E30-934 straight
- E30-935 curved



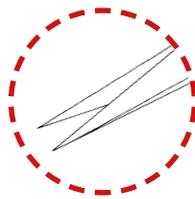
**Baby Jones  
Towel Clamp, 5.5 cm**

E30-965



**Knapp  
Strabismus Scissors**  
short blades, blunt, 12.0 cm

- E25-556 straight
- E25-557 curved



**Standard  
Eye Scissors, pointed**

- E25-510 straight, 9.0 cm
- E25-512 straight, 10.5 cm
- E25-514 straight, 11.5 cm
- E25-511 curved, 9.0 cm
- E25-513 curved, 10.5 cm
- E25-515 curved, 11.5 cm

\*also available in titanium, please add "T" when ordering



**SPECULAE & RETRACTORS**

**BASIC EYE INSTRUMENTS**



**Barraquer  
Wire Speculum**

E40-011 adult size

E40-012 child size

E40-013 infant size

E40-014 premature size

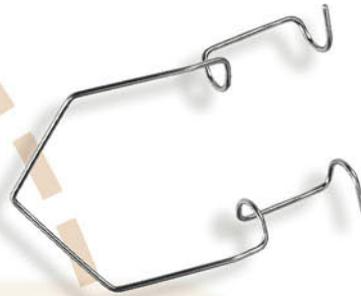


**Kratz-Barraquer  
Wire Speculum**

E40-031 adult size

E40-032 child size

E40-033 adult size,  
heavy wire model



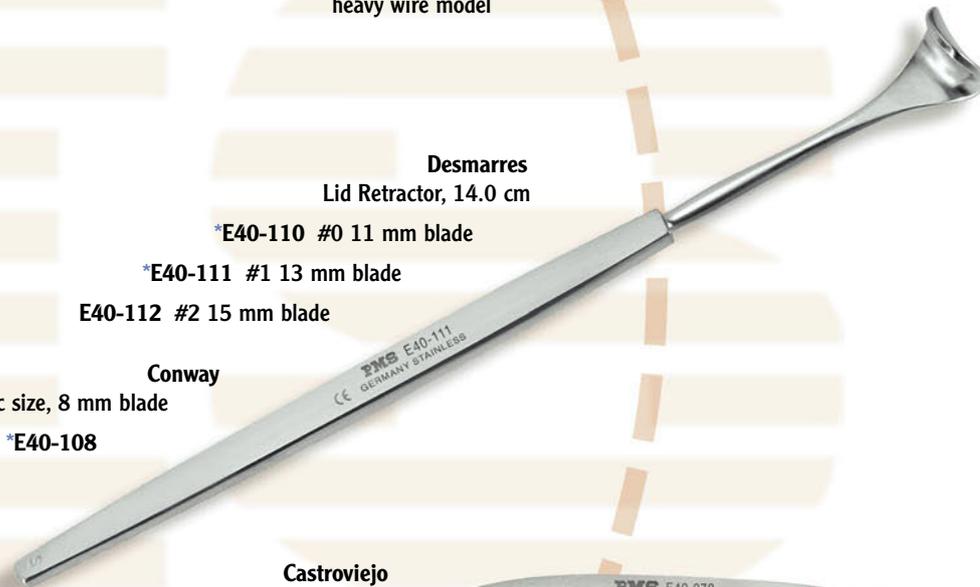
**Desmarres**

Lid Retractor, 14.0 cm

\*E40-110 #0 11 mm blade

\*E40-111 #1 13 mm blade

E40-112 #2 15 mm blade



**Conway**

pediatric size, 8 mm blade

\*E40-108

**Castroviejo**

Universal Eye Speculum  
fenestrated blades, 9.0 cm

E40-078 medium, 16 mm

E40-079 small, 14 mm



**Fishkind**

Phaco Eye Speculum  
open blades, 8.5 cm

E40-080



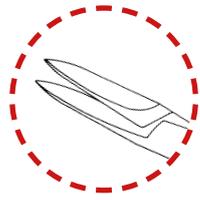
for use with Phaco  
or I/A tips

\*also available on round titanium handle, please add "T" when ordering



**BLADE BREAKER, HANDLES & BLADES**

**BASIC EYE INSTRUMENTS**



**Razor Blade**  
easy to break,  
stainless steel,  
non-sterile,  
(box of 10)  
**E35-001**



**Troutman-Chris**  
Blade Breaker & Holder  
5.5 mm dia. x 9.5 cm long handle  
straight jaws with concave/  
convex inside surfaces  
**\*E35-010**



**Chuck Handle**  
(for miniature edged blades)  
**\*E10-003K #3K, 10.0 cm**  
**\*E10-003KM #3KM, 7.5 cm**



**Blade Collet**  
**\*E10-003BC**



**Miniature Edged Blades**  
surgical stainless steel,  
single use, sterile (box of 10)  
**E10-064 #64**  
**E10-065 #65**  
**E10-067 #67**  
**E10-069 #69**

**for precise  
microsurgical incisions**

\*also available in titanium, please add "T" when ordering

## CALIPER & FIXATION RINGS

PMS

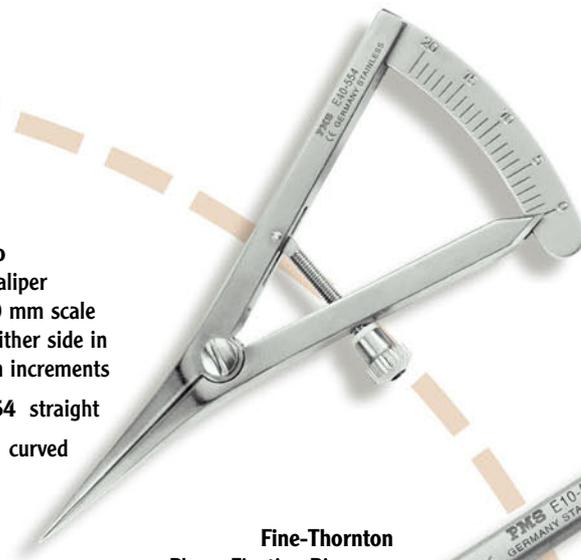


### Castroviejo

Eye Caliper  
0-20 mm scale  
on either side in  
1 mm increments

\*E40-554 straight

E40-555 curved



### Fine-Thornton

Phaco Fixation Ring

3/4 open swivel ring,  
with multiple teeth, 13.5 cm

\*E10-513 13 mm ID  
for clear cornea incision

E10-516 16 mm ID  
for scleral tunnel incision



### Schocket

Scleral Depressor

with pocket clip, 13.5 cm

\*E40-613



### Flieringa

Scleral Fixation Ring

E40-628 Set of 8 sizes

E40-614 14 mm dia.

E40-615 15 mm dia.

E40-616 16 mm dia.

E40-617 17 mm dia.

E40-618 18 mm dia.

E40-619 19 mm dia.

E40-620 20 mm dia.

E40-622 22 mm dia.

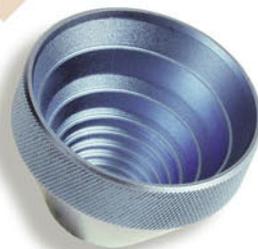


### Maloney

Astigmatic Keratometer

E10-690T

for qualitative evaluation  
of astigmatism



\*also available in titanium, please add "T" when ordering

BASIC EYE INSTRUMENTS



**CANNULAE & ACCESSORIES**



**Bishop-Harmon  
AC Irrigator System**

**E20-001** complete

**E20-002** silicone bulb

**E20-003** LL adaptor

**E20-004** 19GA cannula



**Lewicky  
Anterior Chamber Maintainer**

20GA/0.9 mm x 3 mm long screw threaded tip  
attached to 180 mm silicone tubing with LL cone

**E20-020ST**



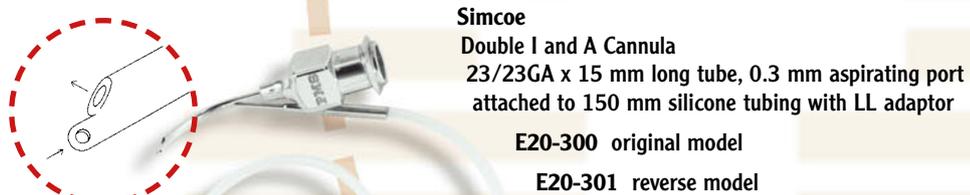
**Rycroft  
Air Injection Cannula**

20 mm tube, angled 5 mm

**E20-030** 30GA/0.3 mm

**E20-031** 27GA/0.4 mm

**E20-032** 25GA/0.5 mm



**Simcoe  
Double I and A Cannula**

23/23GA x 15 mm long tube, 0.3 mm aspirating port  
attached to 150 mm silicone tubing with LL adaptor

**E20-300** original model

**E20-301** reverse model

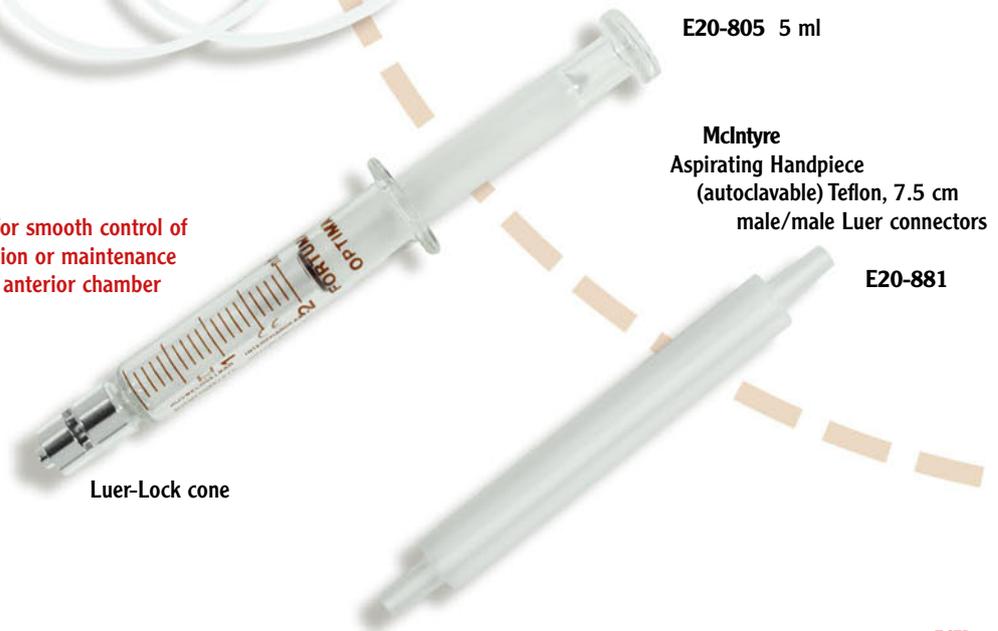


**All Glass Syringe** **E20-801** 1 ml

**E20-802** 2 ml

**E20-805** 5 ml

ideal for smooth control of  
irrigation or maintenance  
of the anterior chamber



**McIntyre  
Aspirating Handpiece**  
(autoclavable) Teflon, 7.5 cm  
male/male Luer connectors

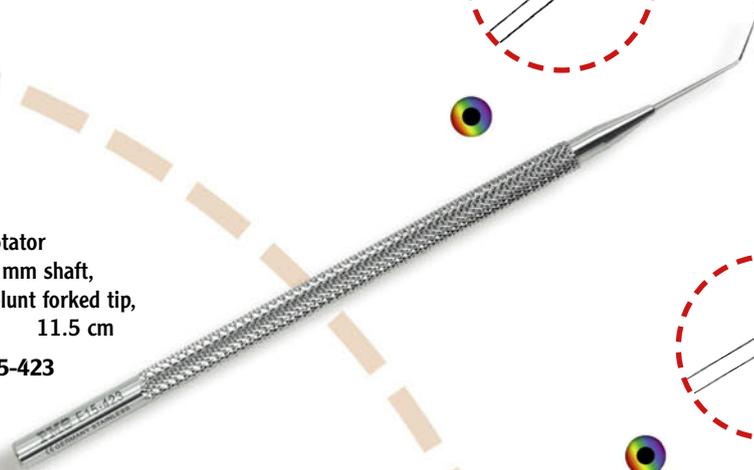
**E20-881**

Luer-Lock cone

## IOL & PHACO INSTRUMENTS



**Jaffe-Bechert**  
Lens Nucleus Rotator  
angled 9 mm shaft,  
blunt forked tip,  
11.5 cm  
\*E15-423



**Sinsky II**  
IOL Manipulating Hook  
0.2 mm dia. blunt tip,  
12.0 cm  
\*E15-552 straight  
\*E15-553 angled



**Lester**  
Lens Pusher  
delicate "hour glass" style tip,  
12.0 cm  
\*E15-500 straight  
\*E15-501 angled

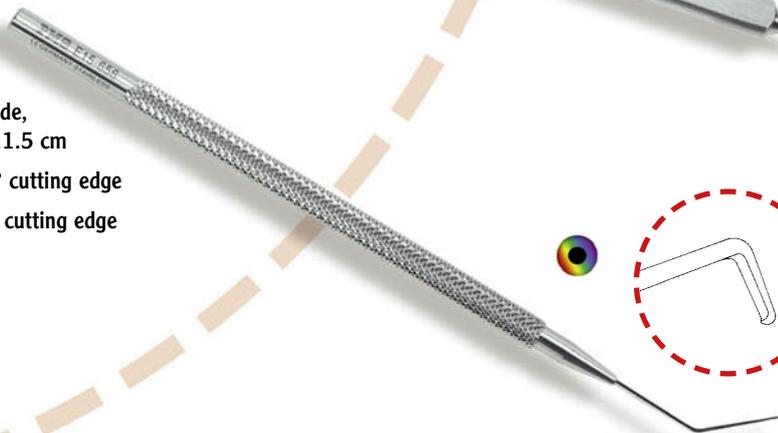


**Kuglen**  
Lens Manipulator  
and Iris Hook  
"push-pull" model,  
angled 10 mm shaft,  
ball-like tip, 12.0 cm  
\*E15-565



introduced in 1975 still  
as popular as ever

**Nagahara**  
Phaco Chopper  
angled 10 mm shaft,  
"wedge-shaped" blade,  
11.5 cm  
\*E15-656 60° cutting edge  
\*E15-659 90° cutting edge



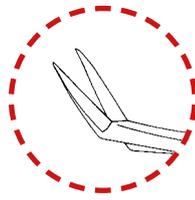
also available on coloured aluminium handles, see page 95, 107 and 131

\*also available on titanium handle, see page 34-36

BASIC EYE INSTRUMENTS

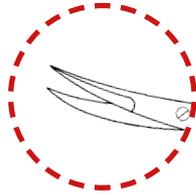


**SCISSORS**



**Barraquer  
Iris Scissors**  
7 mm blades,  
blunt tips, 5.5 cm

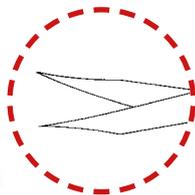
**E25-200**



**Micro Iris Scissors**  
curved, small blades,  
10.0 cm

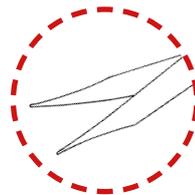
\*E25-251 sharp tips

\*E25-253 blunt tips



**Westcott  
Stitch Scissors**  
curved, large blades,  
sharp tips, 11.5 cm

\*E25-315



**the working horse  
of cataract surgery**

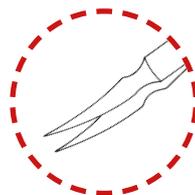


**Westcott  
Tenotomy Scissors**  
curved, large blades,  
blunt tips, 11.5 cm

E25-334T right (shown)

E25-334 right

E25-335 left



**Vannas  
Capsulotomy Scissors**  
5 mm blades, 8.2 cm

E25-400 straight, sharp

E25-401 curved, sharp

E25-402 straight, blunt

E25-403 curved, blunt

**all time favourite**

\*also available on titanium handle, please add "T" when ordering



# FORCEPS

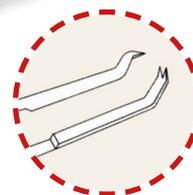
## TYPES OF FORCEPS TIPS



1x2 teeth 90°  
(Bonn style)

**Barraquer-Colibri**  
Corneal Utility Forceps  
1x2 teeth 90°, 0.12 mm,  
without tying platform, 7.5 cm

\*E30-051



1x2 teeth 45°  
(Castroviejo style)

**Harms-Colibri**  
Corneal Suture Forceps  
1x2 teeth 45°, 0.12 mm,  
tying platform, 7.5 cm

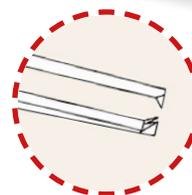
\*E30-081

**Dressing Forceps**  
serrated jaws, 10.0 cm  
E30-110 0.5 mm wide  
E30-114 1.0 mm wide



serrated jaws

**Tissue Forceps**  
toothed jaws, 10.0 cm  
E30-120 0.5 mm teeth  
E30-124 1.0 mm teeth



toothed jaws

**Bishop-Harmon**  
Dressing & Tissue Forceps  
E30-100 criss-cross serrated  
E30-103 0.3 mm teeth  
E30-106 0.6 mm teeth



criss-cross serrated

\*also available in titanium, see page 44



**FORCEPS**

these forceps are ideal...



**Bonn**  
Suturing Forceps  
1x2 teeth 90°,  
0.12 mm, delicate  
4 mm platform  
\*E30-410 short model,  
7.2 cm

\*E30-430 long model, 9.5 cm

...for 11-0 to 8-0 sutures



**Harms**  
Tying Forceps  
6 mm platform, 10.0 cm

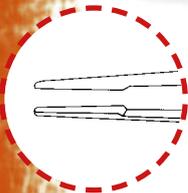
\*E30-422 straight

\*E30-423 curved

**McPherson**  
Tying Forceps  
5 mm platform, 10.5 cm

\*E30-460 straight

\*E30-461 angled

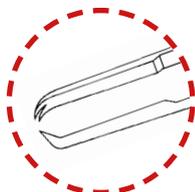


**Castroviejo (standard handle)**  
Suturing Forceps  
1x2 teeth 45°, fine  
tying platform, 10.0 cm

\*E30-431 0.12 mm

E30-432 0.30 mm

\*E30-433 0.50 mm



**Utrata**  
Capsulorhexis Forceps  
extra thin 11 mm shanks,  
triangular, sharp tips, 10.5 cm

\*E30-581S flat handle

\*E30-583S knurled handle



still the most popular

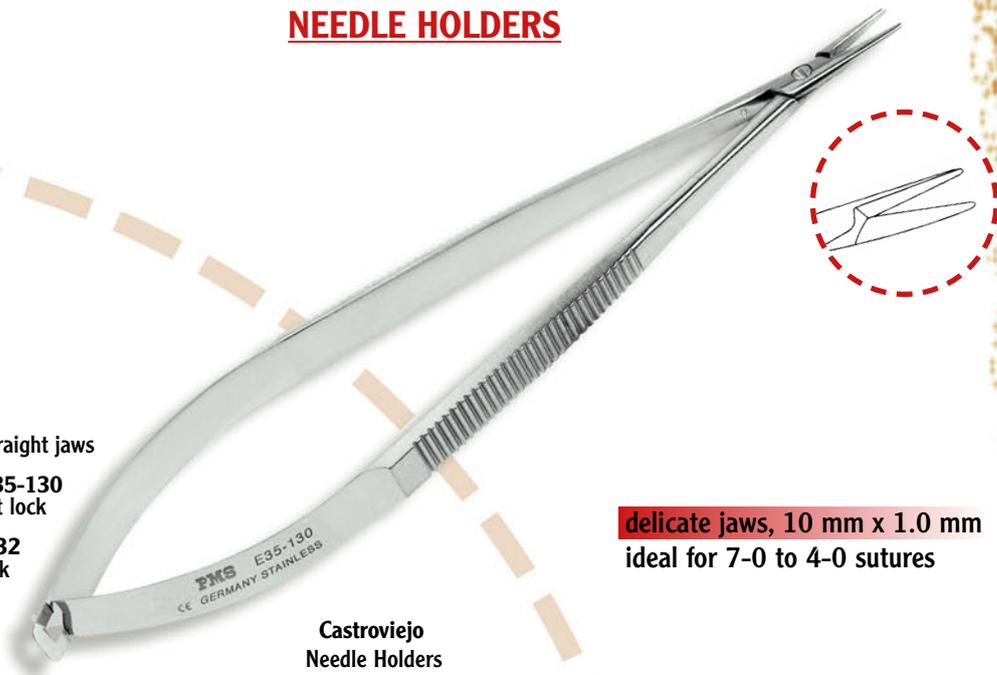
\*also available in titanium, see page 41,43,45

## NEEDLE HOLDERS

PMS



straight jaws  
E35-130  
without lock  
\*E35-132  
with lock



**Castroviejo  
Needle Holders**  
14.0 cm

**delicate jaws, 10 mm x 1.0 mm**  
ideal for 7-0 to 4-0 sutures

curved jaws  
E35-131  
without lock  
\*E35-133  
with lock



straight jaws  
E35-230  
without lock  
E35-232  
with lock



**Barraquer  
Needle Holders**  
13.5 cm

**delicate jaws, 10 mm x 0.75 mm**  
ideal for 9-0 to 6-0 sutures

curved jaws  
\*E35-231  
without lock  
\*E35-233  
with lock



\*also available in titanium, please add "T" when ordering

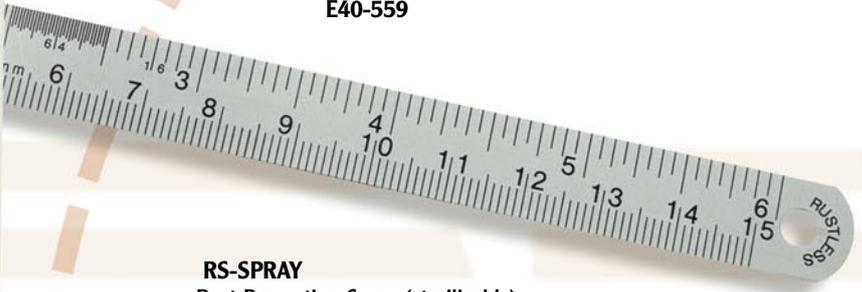
BASIC EYE INSTRUMENTS



**MISCELLANEOUS PRODUCTS**



**Protector**  
for Lens Hooks with  
E15-002 straight shaft  
E15-003 angled shaft



**Metal Ruler**  
flexible, graduated in mm & inches  
E40-559

**RS-SPRAY**  
Rust Prevention Spray (sterilisable)  
for stainless steel instruments,  
spray box of 200 ml  
No. 2820

Ideal to prevent rusting of stainless steel surgical instruments during and after sterilisation. Applicable for all methods of sterilisation. Autoclave max. 134°C and hot air sterilizers max. 180°C.

Type	Id. (mm)	Wd. (mm)	Od. (mm)
Product No.			
SIL-00301	0,3	0,1	0,5
SIL-00302	0,3	0,2	0,7
SIL-00502	0,5	0,2	0,9
SIL-00503	0,5	0,3	1,1
SIL-00504	0,5	0,4	1,3
SIL-00505	0,5	0,5	1,5
SIL-00701	0,7	0,1	0,9
SIL-00702	0,7	0,2	1,1
SIL-00703	0,7	0,3	1,3
SIL-00705	0,7	0,5	1,7
SIL-00804	0,8	0,4	1,6
SIL-01002	1,0	0,2	1,4
SIL-01004	1,0	0,4	1,8
SIL-01005	1,0	0,5	2,0
SIL-01010	1,0	1,0	3,0
SIL-01204	1,2	0,4	2,0
SIL-01502	1,5	0,2	1,9
SIL-01503	1,5	0,3	2,1
SIL-01504	1,5	0,4	2,3
SIL-01505	1,5	0,5	2,5
SIL-01507	1,5	0,7	2,9
SIL-01510	1,5	1,0	3,5
SIL-02005	2,0	0,5	3,0
SIL-02007	2,0	0,7	2,9
SIL-02010	2,0	1,0	4,0
SIL-02505	2,5	0,5	3,5
SIL-02510	2,5	1,0	4,5

**Silicone Tubing (VMQ Quality)**  
autoclavable up to max. 140°C,  
available in coils of 100 cm

SIL-00302 for E40-900 and E40-910

SIL-00804 for E20-015 to E20-019

SIL-01004 E20-300 to E20-319 and Lieberman style aspirating speculae (side connectors)

SIL-01204 for E20-321 and E20-323

SIL-01504 for E20-751 to E20-753 and Lieberman aspirating speculae (main connectors)

SIL-02005 for E20-741, E20-754 to E20-757

Further sizes are available by request and in coils of 25 metres.



## DISPOSABLE PRODUCTS



**Sugi®**  
Cellulose Eye Spears  
white plastic handle,  
single use, sterile  
**30601** box of 200  
(20 pouches of 10 pcs)

highly absorbent sponge for removal of blood,  
fluids and cellular debris within the operating field

**Sugi®**  
Cellulose Eye Points  
single use, sterile  
**31602** box of 200 (20 pouches of 10 pcs)  
**31603** box of 500 (bulk, non-sterile)

**Pro-ophta®**  
Ocular Sticks  
5 mm dia. x 66 mm,  
single use, sterile  
**16516** box of 400 (20 pouches of 20 pcs)  
**16515** box of 500 (bulk, non-sterile)

**Insight®**  
Universal Eye Shield  
single, sterile blister packed (box of 100)  
**ES/100/C**

dual fitting to either eye  
with ventilation holes for vision

Universal Eye Shield  
single, sterile blister packed (box of 100)  
**ES/100/W**



Latex free

white polypropylene material

BASIC EYE INSTRUMENTS



E40-086



E30-232



E30-532



E40-771



E40-777

- E20-001 AC Irrigator System, page 20
- E20-031 Air Injection Cannula, page 20
- E30-965 Schaedel Towel Clamp, page 16
- E30-902 Halstead Artery Forceps, page 16
- E30-934 Dieffenbach Serrefine, page 16
- E40-011 Barraquer Eye Speculum, page 17
- E40-086 Lancaster Universal Eye Speculum**
- E10-014 Sapphire Knife 45° blade, page 63
- E35-001 Razor Blade (box of 10), page 18
- E35-010 Blade Breaker & Holder, page 18
- E25-200 DeWecker Iris Scissors, page 22
- E25-315 Westcott Stitch Scissors, page 22
- E25-334 Westcott Tenotomy Scissors, page 22
- E25-401 Vannas Capsulotomy Scissors, page 22
- E25-512 Standard Eye Scissors, page 16
- E25-556 Knapp Strabismus Scissors, page 16
- E30-051 Barraquer Colibri Forceps, page 23
- E30-106 Bishop-Harmon Tissue Forceps, page 23
- E30-110 Dressing Forceps, straight, page 23
- E30-232 Lester Conjunctival Fixation Forceps**
- E30-431 Castroviejo Suture Forceps, page 24
- E30-432 Castroviejo Suture Forceps, page 24
- E30-460 McPherson Tying Forceps, page 24
- E30-463 Kelman-McPherson Forceps, page 124
- E30-532 Bipolar Forceps "Jewelers" Style**
- E35-231 Barraquer Needle Holder, page 25
- E35-132 Castroviejo Needle Holder, page 25
- E40-111 Desmarres Lid Retractor, page 17
- E40-559 Stainless Steel Ruler, page 26
- E40-554 Castroviejo Eye Caliper, page 19
- E40-613 Schocket Scleral Depressor, page 19
- E40-771 Graefe Strabismus Hook**
- E40-777 Gass Retinal Detachment Hook**
- Schioetz Tonometer, Wash Trays and Sterilising Trays (see section)

PMS



TITANIUM







WHY TITANIUM? ..... 30

SPECIALITY INSTRUMENTS ..... 31

EYE SPECULAE ..... 32

KNIVES, FIXATION RINGS AND CALIPERS ..... 33

LENS HOOKS AND NUCLEUS MANIPULATORS ..... 34-35

PHACO-CHOPPERS AND SPATULAE ..... 36-37

AKAHOSHI STYLE NUCLEUS INSTRUMENTS ..... 38-39

FIXATION FORCEPS ..... 40

CAPSULORHEXIS FORCEPS ..... 41

FOLDABLE LENS FORCEPS ..... 42

TYING & LENS HOLDING FORCEPS +  
PLATFORM DESIGNS ..... 43

SUTURE TYING FORCEPS ..... 44-45

NEEDLE HOLDERS ..... 46

PMS-ECOLINE® ..... 47

SET ..... 48

TITANIUM





## WHY TITANIUM?

Titanium is a natural complement to stainless steel for ophthalmic surgical instruments

- Absolute precision
- High strength
- Non toxic
- Non magnetic
- Non corrosive
- Non-glare, blue finish
- Tungsten carbide coated tips
- Can be sterilised by all known methods

### LIGHT WEIGHT

Titanium is 40% lighter than stainless steel. This is very important for surgeon's hands as it provides extra comfort and control that reduces fatigue during long operations under the microscope.

### ANTIMAGNETIC

Titanium is non-toxic and non-magnetic. In contrast to stainless steel, titanium instruments cannot be magnetic. For example, a stainless steel needle will not "stick" to a titanium needle holder.

### NO RUST & LONG LIFE

Titanium is highly corrosion resistant. It is stronger and more durable than stainless steel. Still, the life and durability of titanium instruments depend upon the care it receives during use, cleaning, sterilisation and storage.



### CARE AND HANDLING TIPS

The following guidelines are given to allow you to optimise the performance and longevity of the instrument.

- Do not allow blood, tissue, cellular debris or saline to dry on the instrument.
- Flush the instrument in distilled water and a neutral pH detergent; avoid any acid based products.
- Inspect the instrument regularly under magnification for cleanliness and damage, replace if necessary.
- Use a soft brush to clean handles and nothing rougher than facial tissue for the tips of the instrument.
- Ultrasonic cleaning may be used where appropriate.
- Store instruments in a protective tray for sterilisation.



single level tray  
E45-005

### MINITAINER TRAYS

The Minitainer line of small to medium sized trays is specifically designed to help organise and protect delicate instruments during sterilisation, transport and storage.

### BENEFITS

- Various sizes help customise procedural sets.
- Soft silicone finger mats (latex free) gently secure instruments and provide ventilation to facilitate drying.
- Clear Radel® lids allow easy identification of instruments.

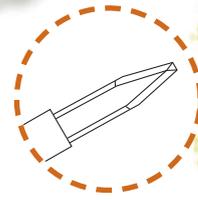
E45-005 (180x75x18.5 mm)  
for 3-5 instruments

E45-015 (267x160x16 mm)  
for 10-15 instruments

E45-025 (267x160x35 mm)  
double level tray  
for 15-25 instruments



**Sapphire and  
Diamond Knives**  
page 64-69



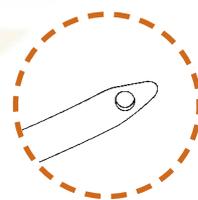
**Vitreoretinal Instruments**  
page 170-177



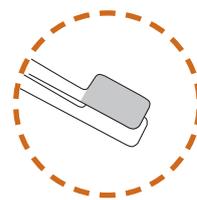
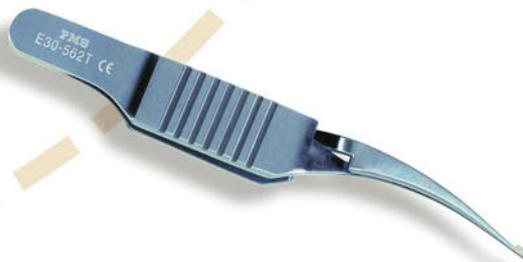
**IOL Cutters**  
page 132-133



**Bimanual I/A Systems**  
page 110-119



**Salz**  
**Nucleus Splitter Forceps**  
cross-action paddle style jaws,  
textured external surfaces,  
7.5 cm  
**E30-562T**

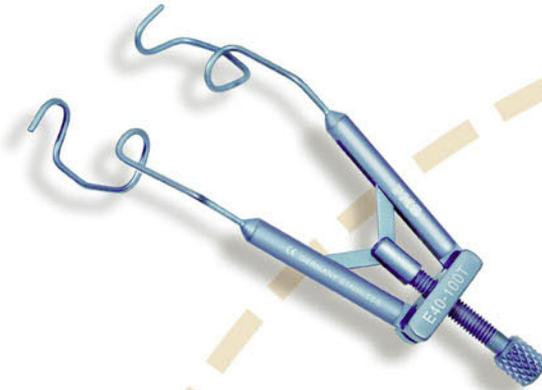


**TITANIUM EYE INSTRUMENTS**



**EYE SPECULAE**

**TITANIUM EYE INSTRUMENTS**



**Lieberman  
Temporal Speculum  
E40-100T adult size  
E40-100TS child size**



**Lieberman  
Nasal Speculum  
E40-101T adult size  
E40-101TS child size**



**Lieberman  
Nasal Speculum  
E40-103T adult size  
E40-103TS child size**



**Lieberman  
Temporal Speculum  
E40-104T adult size  
E40-104TS child size**

## KNIVES, FIXATION RINGS AND CALIPERS

PMO



further sapphire knives are  
shown on page 64 to 67

**Sapphire**  
Clear Cornea Knives  
0.2 mm thick blades  
available in 3 widths:

**E10-042** 2.8 mm

**E10-043** 3.0 mm

**E10-044** 3.2 mm



for controlled and  
precise clear corneal incision

**Fyodorov**  
Phaco Fixation Ring  
3/4 open swivel ring with  
atraumatic concentric rings,  
11.5 mm ID, 13.0 cm

**E10-511T**

for atraumatic fixation of the eye during phaco



**Fine-Thornton**  
Phaco Fixation Ring  
3/4 open swivel ring  
with multiple teeth,  
13.0 cm

**E10-513T** 13 mm ID for clear corneal incision

**E10-516T** 16 mm ID for scleral tunnel incision



**Maloney**  
Astigmatic Keratometer  
**E10-690T**

for qualitative evaluation of astigmatism



**Castroviejo**  
Eye Caliper  
double sided scale  
in 1 mm increments  
**E40-552T** 0-15 mm  
**E40-554T** 0-20 mm



TITANIUM EYE INSTRUMENTS



**NUCLEUS MANIPULATORS**

with stainless steel shafts and tips

**Micro Nucleus Spatula**  
vaulted 12 mm shaft,  
disc shaped tip, 12.0 cm  
**E15-400T**

ideal for  
manipulating and  
rotating the nucleus as well as to push back  
the iris in case of a small pupil

**Koch II Nucleus Spatula**, light curved shaft,  
duckbill style tip with notches, 12.0 cm  
**E15-418T**

to manipulate and control  
the nucleus during phaco procedures; the notched tip facilitates  
nucleus rotation if needed

**Jaffe-Bechert Nucleus Rotator**  
angled 9 mm shaft, blunt forked tip, 12.0 cm  
**E15-423T**

ideal to impale, manipulate  
and rotate soft and hard nucleus

**Drysdale Nucleus Manipulator**  
angled 10 mm shaft, paddle shaped tip, 12.0 cm  
**E15-465T**

ideal for manipulating  
tissue, rotating and cracking  
the nucleus; used by many surgeons for  
the "Divide and Conquer" technique

**"Connor Wand" Nucleus Manipulator**  
curved, ball-like tip,  
12.0 cm  
**E15-467T**

designed to spin, chop and crack  
the nucleus; ideal to protect the  
capsule posteriorly, and Iris  
during Phaco & I/A  
cortical clean up

 also available on coloured aluminium handles, see page 94 and 95

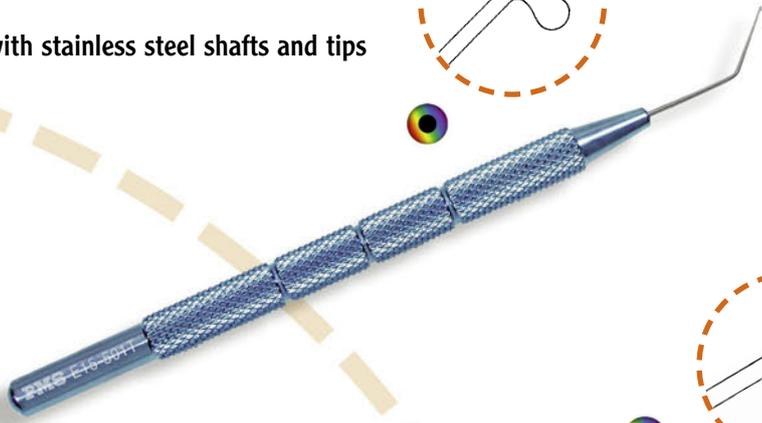
## LENS AND IRIS HOOKS

with stainless steel shafts and tips



**Lester**  
Lens Pusher  
angled 10 mm shaft, 0.25 mm dia.  
hour glass shaped tip, 12.0 cm

E15-501T



**Sinskey II**  
Lens Manipulating Hook

0.2 dia. blunt tip, 12.0 cm

E15-560T straight

E15-561T angled



**Rentsch**  
Lens Manipulator  
& Iris Retractor

straight shaft, "boat hook" tip, 12.0 cm

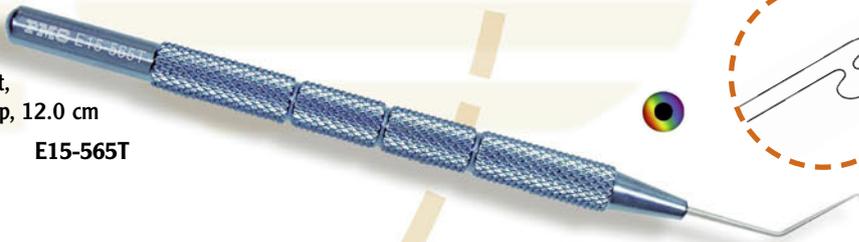
E15-562T



**Kuglen**  
"Push-Pull" Lens  
Manipulator & Iris Hook

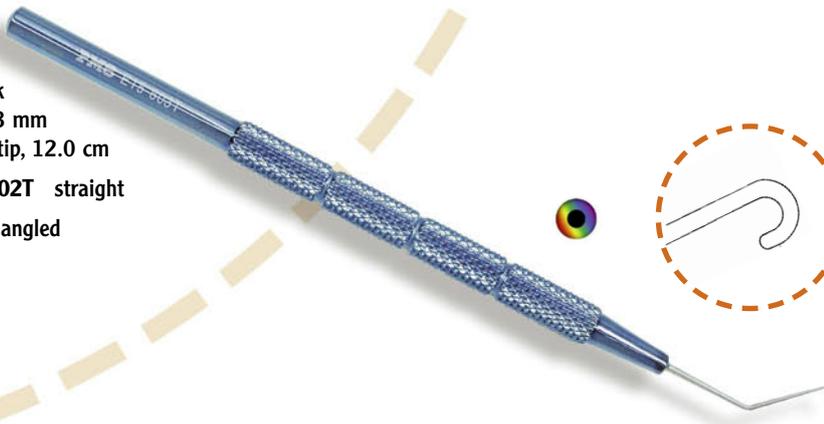
angled 10 mm shaft,  
ball shaped tip, 12.0 cm

E15-565T



**Bonn**  
Micro Iris Hook  
delicate 0.3 mm  
blunt tip, 12.0 cm  
E15-602T straight

E15-603T angled



also available on coloured aluminium handles, see page 130 and 131

PMS



TITANIUM EYE INSTRUMENTS



## PHACO CHOPPERS

with stainless steel shafts and tips



**Fukasaku**  
Phaco Splitter  
and Iris Pusher  
wedge shaped  
90° inferior  
cutting edge,  
12.0 cm

**E15-653T**

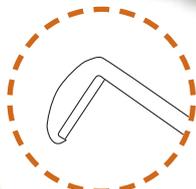


for the "Snap & Split" technique; used to crack the nucleus in the central "safe area" and to push back the iris for better visibility



**Rosen**  
Universal Phaco Splitter  
wedge shaped 90° inferior  
cutting edge, 12.0 cm

**E15-655T**



designed for the "Phaco Chop" technique; the tip is long enough to penetrate the entire nucleus thickness

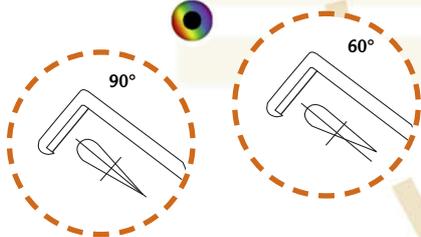


**world-wide best seller**

**Nagahara**  
Phaco Chopper  
wedge shaped tip, 12.0 cm

**E15-656T** 60° cutting edge  
to cut in the same direction as the phaco handpiece

**E15-659T** 90° cutting edge  
to cut toward the side port incision



**Seibel**  
Phaco Chopper  
0.5 mm olive tip,  
curved 2.2 mm,  
12.0 cm

**E15-669T**

the special wedge shaped, curved blade allows efficient chopping toward the phaco tip, providing effortless separation with maximum safety



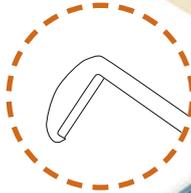
 also available on coloured aluminium handles, see page 94 and 95

# PHACO SPATULAE



with stainless steel shafts and tips

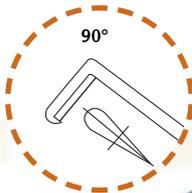
**Rowen  
Phaco Spatula  
13.0 cm  
E15-673T**



*combination of a Rosen Phaco Splitter & Bechert Nucleus Rotator*



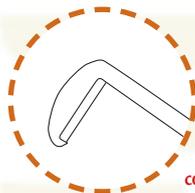
**Nagahara/Sinsky  
Phaco Spatula  
13.0 cm  
E15-675T**



*combination of a Nagahara Phaco Chopper & Sinsky IOL Hook*



**Masket  
Phaco Spatula  
13.0 cm  
E15-676T**

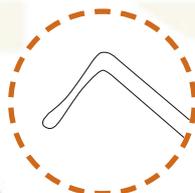


*combination of Rosen Phaco Splitter and round spatula with disc shaped tip*

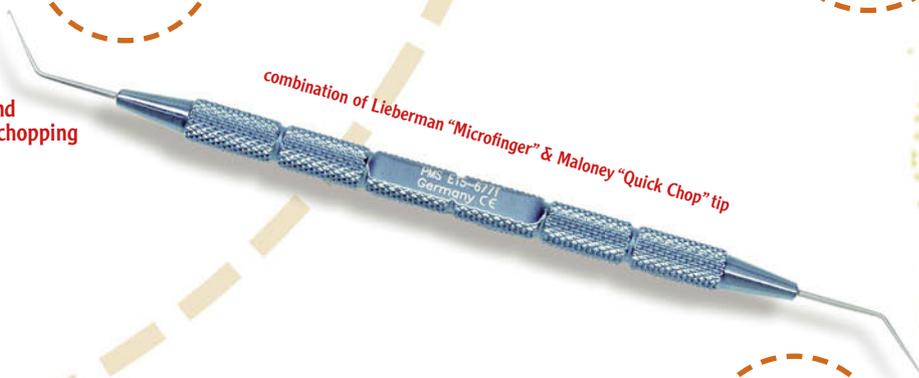


**Chang  
Phaco Chopper  
13.0 cm  
E15-677T**

*ideal for vertical and horizontal phaco chopping*



*combination of Lieberman "Microfinger" & Maloney "Quick Chop" tip*



TITANIUM EYE INSTRUMENTS



**AKAHOSHI STYLE NUCLEUS SUSTAINERS**

with stainless steel shafts and tips



Nucleus Sustainer  
microball tip, angled 1.5 mm, 12.0 cm  
E15-660T<sup>o</sup>

to reduce the stress on the capsular bag and zonules



Nucleus Sustainer  
olive shaped tip, angled 1.9 mm, 12.0 cm  
E15-661T<sup>o</sup>

for stable nuclear support during prechopping



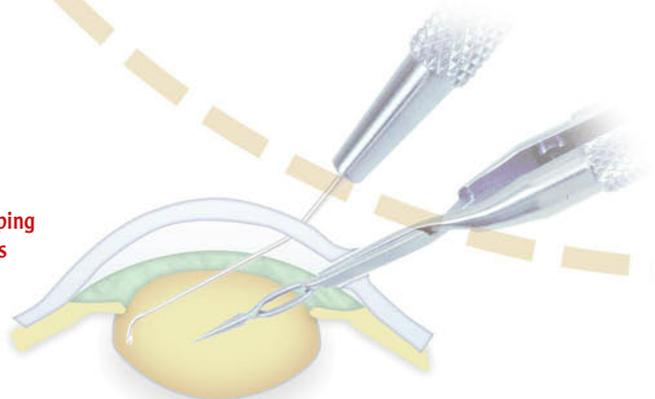
Nucleus Ring Sustainer  
1 mm dia. ring, angled 2.5 mm, 12.0 cm  
E15-662T<sup>o</sup>

supports the nucleus from posterior side during vertical prechopping



Sharp Prechopper  
for very hard nucleus  
(grades 4 and 5)  
E30-566T straight  
E30-567T angled

<sup>o</sup> to support the nucleus during prechopping with the Akahoshi Style Prechoppers for counter prechop technique.

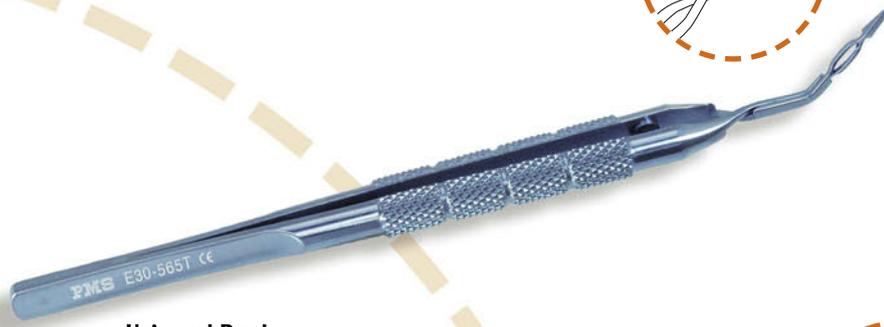


## AKAHOSHI STYLE PRECHOPPERS

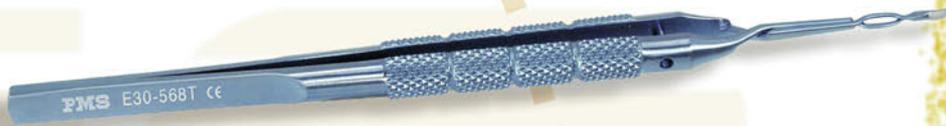
PMS



for detailed product information,  
please refer to page 95



**Universal Prechopper**  
E30-564T straight  
E30-565T angled  
for medium to hard nucleus



**Karate Prechopper**  
TC textured jaws  
E30-568T  
for vertical prechop of soft to medium nucleus



**Hybrid Prechopper**  
E30-569T  
for initial split and prechopping nucleus



**Nucleus Splitter / Completer**  
E30-572T

for all prechopping  
techniques

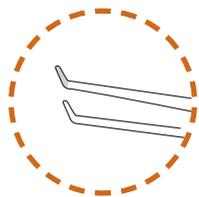
helps to...

- complete the prechopping of a partially prechopped nucleus
- divide the nucleus after grooving for "divide & conquer" technique
- attain nuclear division even if the initial split was not deep enough

TITANIUM EYE INSTRUMENTS



**FIXATION FORCEPS**

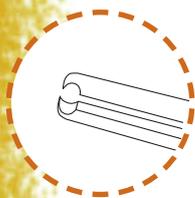


**New**



**Akahoshi Style**  
**Universal Micro Forceps**  
 angled, blunt 0.35 mm fine tips  
 with TC textured inner surface,  
 10.5 cm  
**E30-239T**

multi purpose forceps for fixating eye by grasping the bulbar conjunctiva; picking up foldable IOLs from case, implanting PMMA lenses, and fine suture tying

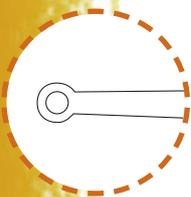


**New**



**Koch**  
**Paracentesis Fixation Forceps**  
 grooved 0.1 mm tips, 11.0 cm  
**E30-240T**

ideal to atraumatically hold the edge of the paracentesis during topical anesthesia procedures



**New**



**Fechtner**  
**Conjunctiva Forceps**  
 ring shaped jaws with hole of 0.5 mm dia.,  
 fine tying platform, 10.5 cm  
**E30-241T**

these forceps are ideal for atraumatic grasping and handling of the conjunctiva and other soft tissue.



**New**



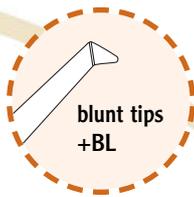
**Solish**  
**Conjunctiva Forceps**  
 ring shaped jaws with  
 2 holes of 0.4 mm dia.,  
 tying platform, 10.5 cm  
**E30-242T**

# CAPSULORHEXIS FORCEPS

PMS



## TIP DESIGNS



blunt tips  
+BL



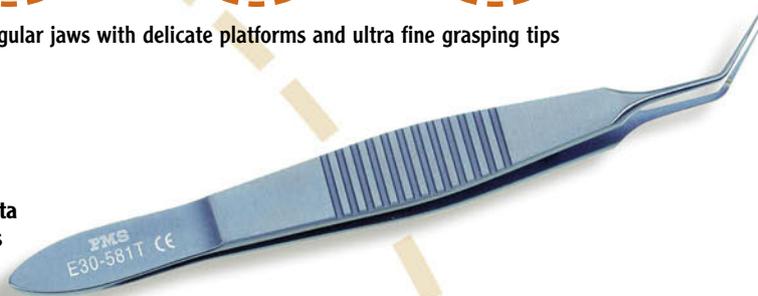
sharp tips  
+SH



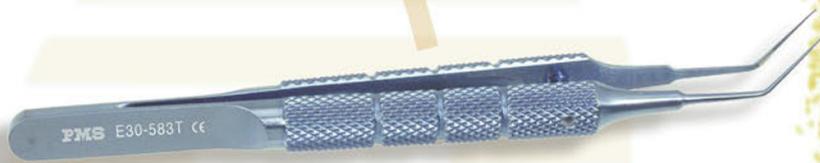
sharp/blunt tips  
+SB

triangular jaws with delicate platforms and ultra fine grasping tips

**Utrata**  
Capsulorhexis Forceps  
angled 11 mm shanks,  
10.5 cm  
E30-581T+



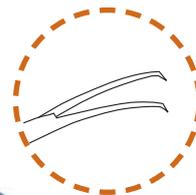
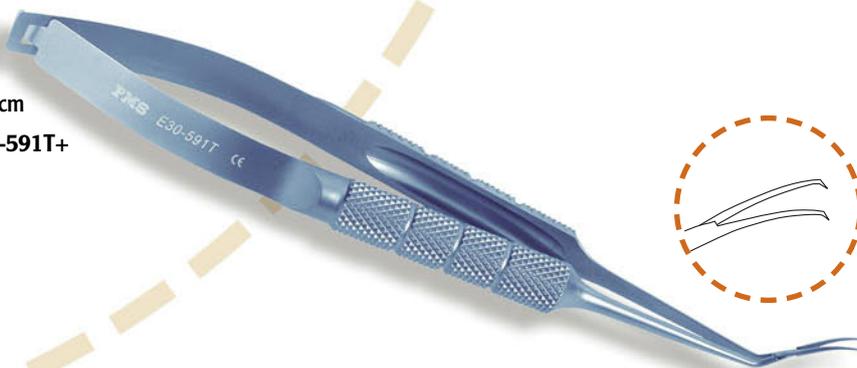
**Utrata**  
Capsulorhexis Forceps  
angled 11 mm shanks  
10.5 cm  
E30-583T+



**Masket**  
Capsulorhexis Forceps  
vaulted 11 mm shanks,  
10.5 cm  
E30-589T+



**Inamura Style**  
Capsulorhexis Forceps  
13 mm vaulted shanks,  
ultra fine grasping tips,  
12.0 cm  
E30-591T+

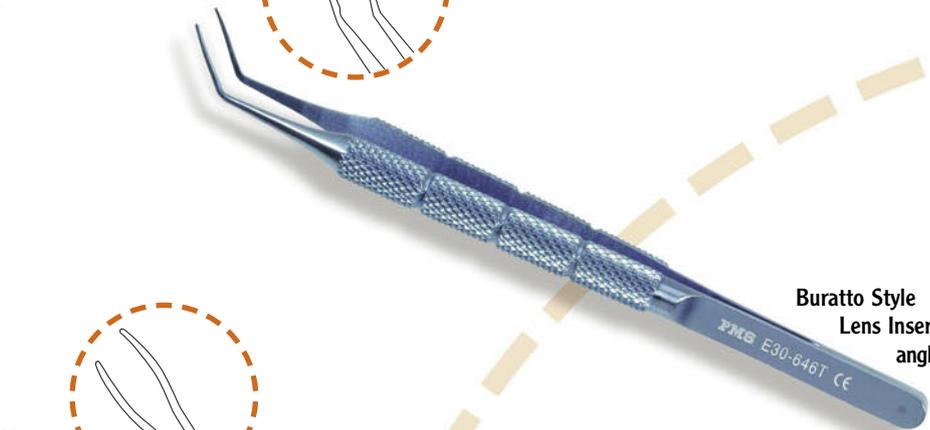
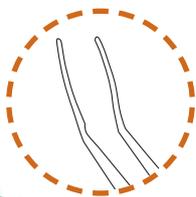


+ when ordering please specify tip design: BL=blunt, SH=sharp, SB=sharp/blunt

TITANIUM EYE INSTRUMENTS



**FOLDABLE LENS FORCEPS**



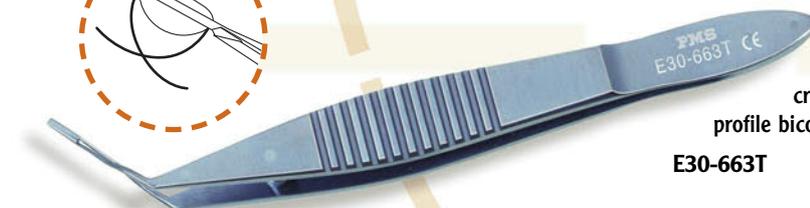
**Buratto Style**  
**Lens Insertion Forceps**  
 angled 9 mm shanks,  
 biconvex jaws,  
 10.5 cm  
**E30-646T**



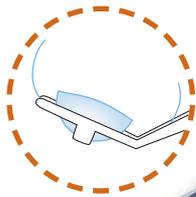
**Spaleck Style**  
**Lens Insertion Forceps**  
 angled 15 mm shanks, biconvex jaws, 11.0 cm  
**E30-648T**



**Fine Style**  
**Universal Lens Folder**  
 angled 8 mm shanks,  
 biconvex jaws, 10.5 cm  
**E30-650T**



**Ernest-McDonald Style**  
**IOL Insertion Forceps**  
 cross-action shanks, low  
 profile biconvex jaws, 10.5 cm  
**E30-663T**



paddles  
 effectively  
 pick up lens  
 for even folding



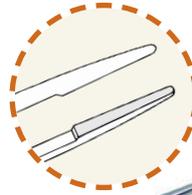
**Seibel Style**  
**Lens Loader**  
 angled 12 mm,  
 paddle style jaws,  
 11.0 cm  
**E30-667T**

## TYING & LENS HOLDING FORCEPS



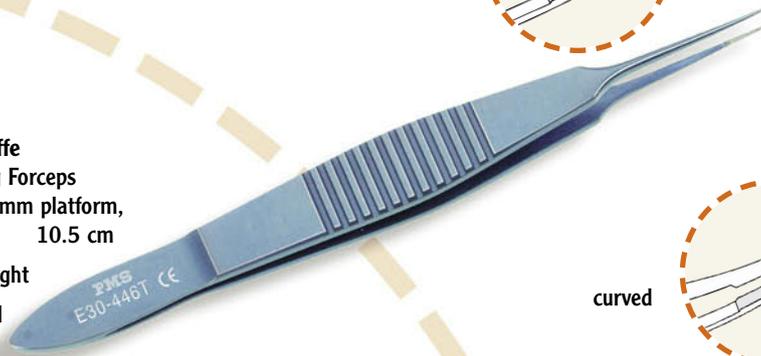
### PLATFORM DESIGNS

straight

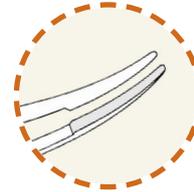


**Jaffe**  
Tying Forceps  
4 mm platform,  
10.5 cm

E30-446T straight  
E30-447T curved

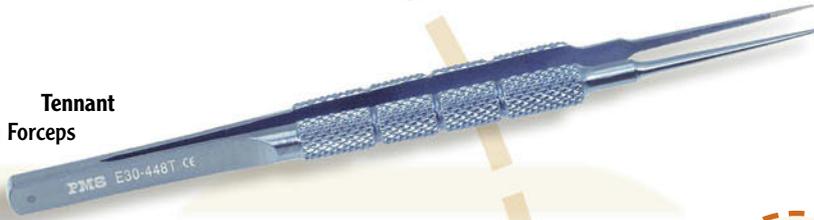


curved

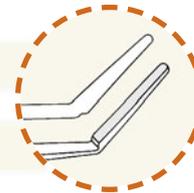


**Tennant**  
Tying Forceps  
6 mm platform,  
10.5 cm

E30-448T straight  
E30-449T curved



short  
angled



**McPherson**  
Tying Forceps  
6 mm platform,  
10.5 cm

E30-460T straight  
E30-461T angled



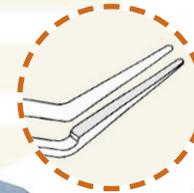
**Kelman-McPherson**  
Lens Holding Forceps,  
angled, 8 mm platform,  
10.5 cm

E30-463T



*ideal for implanting PMMA IOLs*

long  
angled

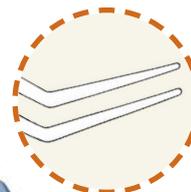


**Faulkner**  
Soft Lens Holding  
Forceps, angled  
11 mm round jaws,  
10.5 cm

E30-645T



long angled,  
round jaws



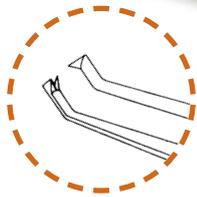
All tying platforms are covered with **Tungsten Carbide** to ensure that the forceps have a very firm grip.



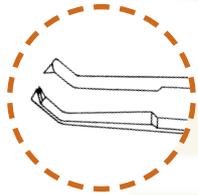
**SUTURE TYING FORCEPS**

delicate, toothed forceps with tying platforms are ideal for grasping tissue and fine suture tying

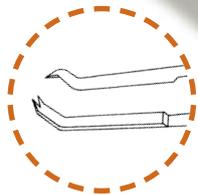
TITANIUM EYE INSTRUMENTS



**Barraquer-Colibri**  
Corneal Forceps  
1x2 teeth 90°, 7.5 cm,  
without platform  
E30-051T 0.12 mm  
E30-052T 0.20 mm



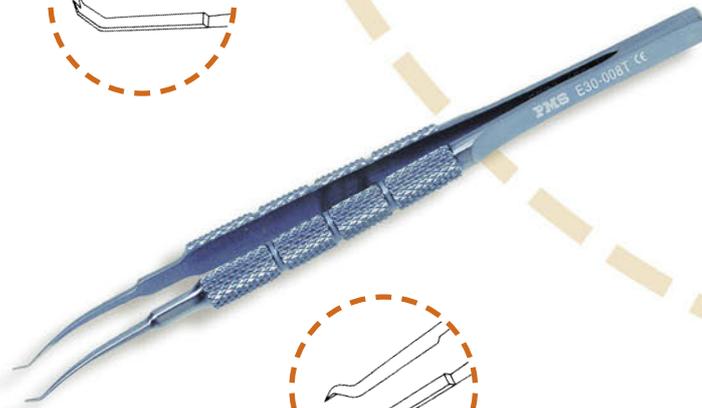
**Barraquer-Colibri**  
Suture Tying Forceps  
1x2 teeth 90°, 0.12 mm,  
3 mm platform, 7.5 cm  
E30-061T



**Harms-Colibri**  
Suture Fixation Forceps  
1x2 teeth 45°, 0.12 mm,  
3 mm platform, 7.5 cm  
E30-081T



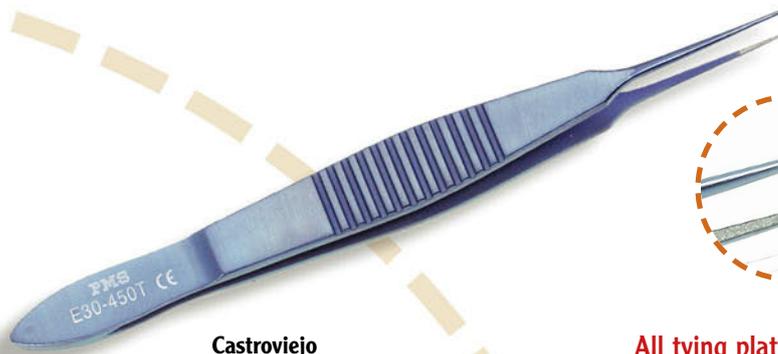
**Standard-Colibri**  
Corneal Fixation Forceps  
1x2 teeth 45°, 0.4 mm,  
5 mm platform, 7.5 cm  
E30-085T



**Girard**  
Corneoscleral Forceps  
1x2 teeth 45°, 0.12 mm,  
6 mm platform, 10.0 cm  
E30-008T

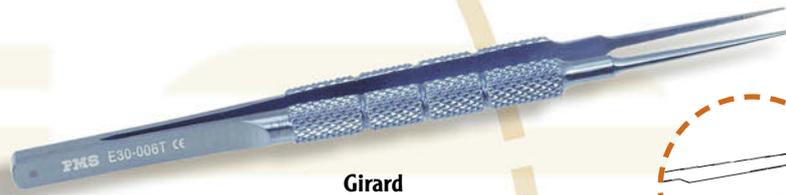
## SUTURE TYING FORCEPS

PMS



**Castroviejo**  
Suture Tying Forceps  
1x2 teeth 45°, 6 mm platform, 10.5 cm  
E30-450T 0.12 mm  
E30-451T 0.30 mm

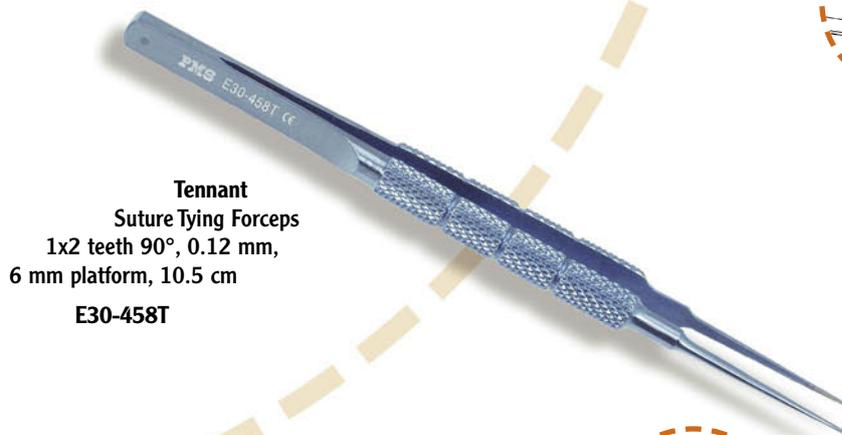
All tying platforms are covered  
with **Tungsten Carbide**.



**Girard**  
Corneoscleral Forceps  
1x2 teeth 45°, 0.12 mm,  
6 mm platform, 10.5 cm  
E30-006T



**Jaffe (Bonn)**  
Suture Tying Forceps  
1x2 teeth 90°, 0.12 mm,  
6 mm platform, 10.5 cm  
E30-456T



**Tennant**  
Suture Tying Forceps  
1x2 teeth 90°, 0.12 mm,  
6 mm platform, 10.5 cm  
E30-458T

TITANIUM EYE INSTRUMENTS



## NEEDLE HOLDERS

All Titanium Needle Holders have **Tungsten Carbide** covered jaws for firm, atraumatic grip and handling of delicate sutures and tissues.

*ideal for 11-0 to 8-0 sutures*



**Barraquer**  
Needle Holder  
very fine jaws,  
9 mm x 0.4 mm,  
12.5 cm

\*E35-251T curved, without lock

\*E35-253T curved, with lock

*ideal for 11-0 to 8-0 sutures*



**Anis**  
Needle Holder  
extra fine jaws,  
9 mm x 0.3 mm,  
12.5 cm

\*E35-271T curved, without lock

\*E35-273T curved, with lock

*ideal for 11-0 to 7-0 sutures*



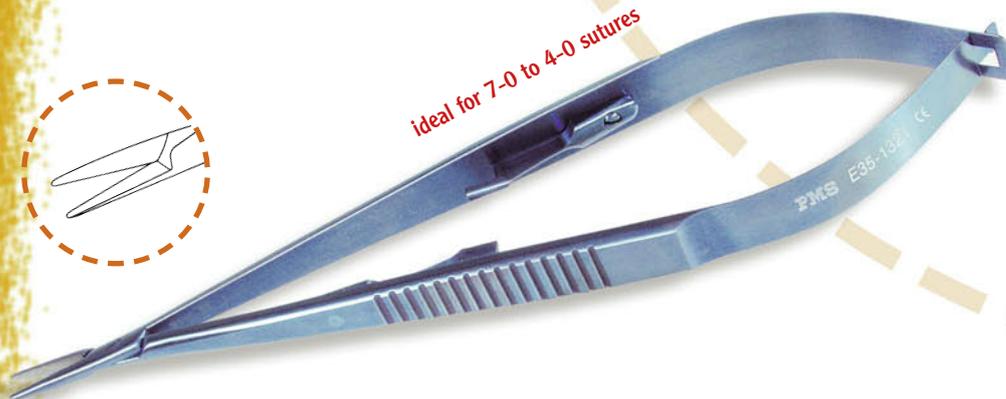
**Barraquer**  
Needle Holder  
(Catford Model)  
short, fine jaws,  
6 mm x 0.4 mm,  
12.5 cm

\*E35-301T curved, without lock

\*E35-303T curved, with lock

**Castroviejo**  
Needle Holder  
delicate jaws, 11 mm x 1.0 mm, 14.0 cm

*ideal for 7-0 to 4-0 sutures*



\*E35-132T  
straight, with lock

\*E35-133T  
curved, with lock

\*also available in stainless steel, please delete "T" from cat. no. when ordering.



# TITANIUM EYE INSTRUMENTS

- E40-078TE Castroviejo Speculum, page 17
- E40-554TE Castroviejo Eye Caliper, page 19
- E10-513TE Globe Fixation Swivel Ring, page 19
- E10-003TEK Beaver Chuck Handle #3K, page 18
- E35-010TE Troutman-Chris Blade Breaker, page 18
- E10-014E Sapphire Universal Knife 45°, page 65
- E10-022E Sapphire Phaco Knife, 2.8 mm, page 64
- E15-423TE Jaffe-Bechert Nucleus Rotator, page 21
- E15-561TE Sinsky IOL Manipulating Hook, page 21
- E25-251TE Micro Iris/Utility Scissors, page 22
- E25-334TE Wescott Tenotomy Scissors, page 22
- E25-401TE Vannas Capsulotomy Scissors, page 22
- E30-051TE Barraquer Corneal Utility Forceps, page 23
- E30-430TE Bonn Suture Forceps, long model, page 24
- E30-431TE Castroviejo Suture Tying Forceps, page 24
- E30-417TE Paufique Suture Utility Forceps, page 140
- E30-422TE Harms Tying Forceps, straight, page 24
- E30-460TE McPherson Tying Forceps, straight, page 24
- E30-461TE McPherson Tying Forceps, angled, page 24
- E30-448TE Tennant Tying Forceps, straight, page 41
- E30-581TE+ Utrata Capsulorhexis Forceps, page 24
- E35-132TE Castroviejo Needle Holder, straight, page 24
- E35-231TE Barraquer Needle Holder, curved, page 25
- E40-110TE Desmarres Lid Retractor, small, page 17
- E40-613TE Schocket Scleral Depressor, d/e, page 19
- E20-331TE Bimanual Irrigation Handle, page 112
- E20-341TE Bimanual Aspiration Handle, page 113

**ECONOMICAL,  
ERGONOMICAL  
& EFFICIENT**



Once thought to be expensive, titanium in life-cycle costing is now seen as economical. The key to its cost effectiveness is its long life and superior performance under routine working conditions. Virtually immune to a broad range of acids and alkalis, titanium instruments maintain their quality and their smooth surface finish when properly cleaned after each use.



**TITANIUM EYE INSTRUMENTS**



**E10-513T**



**E10-043**



**E30-591T+**



**E15-660T**



**E30-565T**



**E30-667T**



**E10-690T**

**E40-100T** Lieberman Eye Speculum, page 32

**E10-513T** Fine-Thornton Fixation Ring, page 33

**E40-554T** Castroviejo Eye Caliper, page 33

**E10-043** Sapphire Clear Cornea Knife, page 64

**E10-014** Sapphire Universal Knife 45°, page 65

**E30-591T+** Inamura Capsulorhexis Forceps, page 41

**E25-401T** Vannas Capsulotomy Scissors, page 22

**E15-656T** Nagahara Phaco Chopper 60°, page 36

**E15-673T** Rowen Phaco Spatula, d/e, page 37

**E15-660T** Akahoshi Style Nucleus Sustainer, page 38

**E30-565T** Akahoshi Style Prechopper, page 39

**E20-205** Pearce Nucleus Hydrodissector, page 88

**E20-331T** Bimanual Irrigating Handpiece, page 112

**E20-343T** Bimanual Aspirating Handpiece, page 113

**E15-501T** Lester Lens Manipulator, page 35

**E30-667T** Seibel Foldable Lens Loader, page 42

**E30-646T** Buratto IOL Insertion Forceps, page 42

**E10-690T** Maloney Keratometer, page 33

PMO

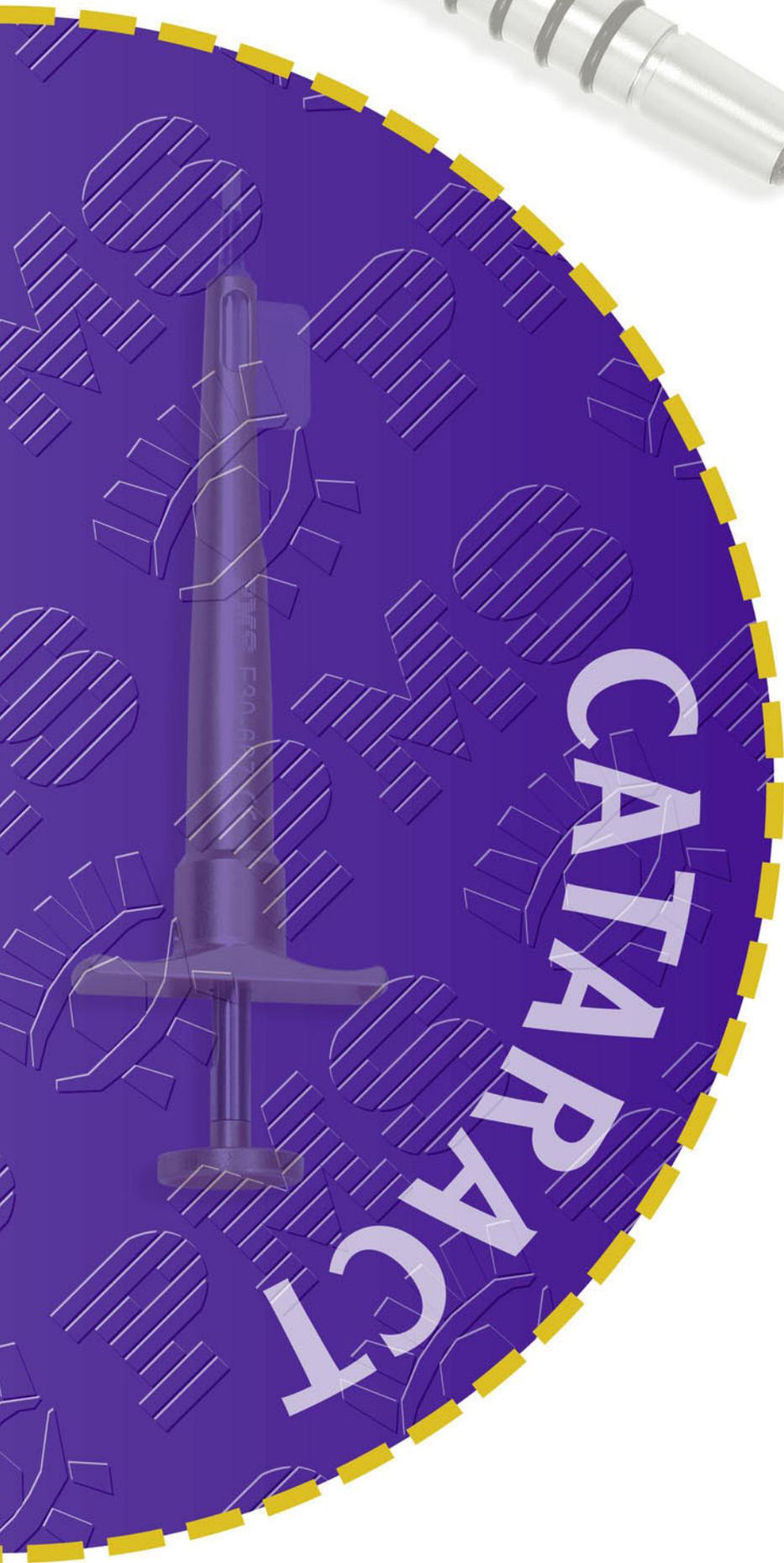


# CATARACT





PMS



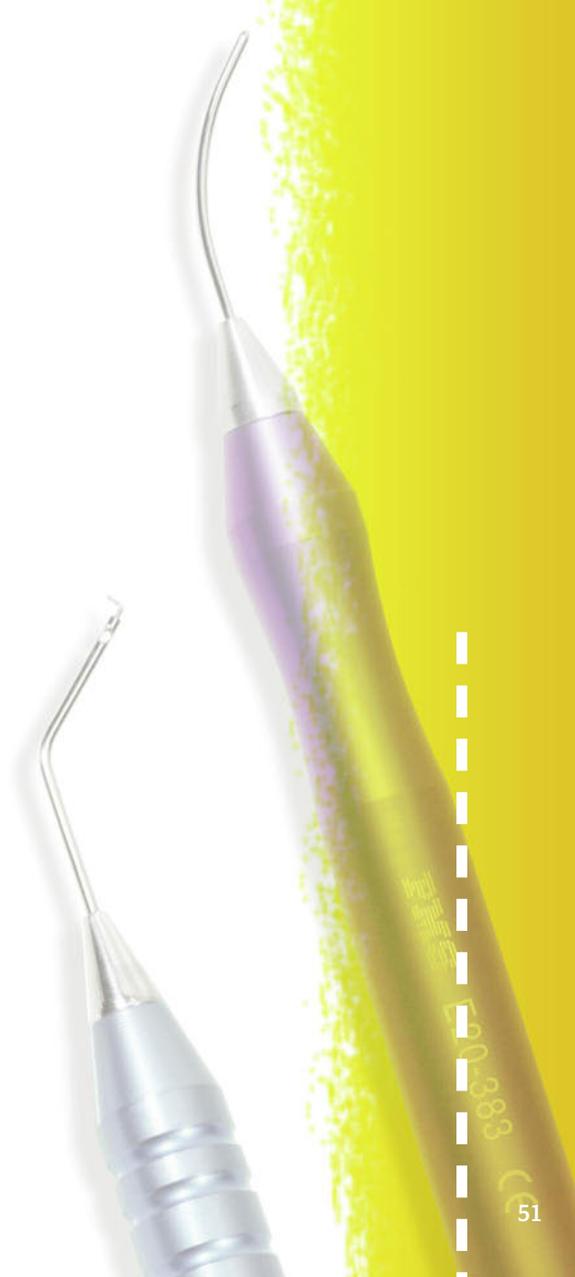


ANESTHESIA NEEDLES .....	52-53
EYE SPECULAE .....	54-55
GLOBE FIXATION RINGS .....	56
CALIPERS AND MARKERS .....	57
DISPOSABLE BLADES AND KNIVES .....	58
CONJUNCTIVA AND TENOTOMY SCISSORS' .....	59
FIXATION AND SUTURING FORCEPS .....	60-61
DISPOSABLE, SAPPHIRE AND DIAMOND KNIVES .....	62-69
<b>DIAMOND KNIVES CARE PRODUCTS .....</b>	<b>70-71</b>
ANTERIOR CHAMBER MAINTAINERS / IRRIGATORS .....	72-73
IRRIGATING CYSTOTOME CANNULAE .....	74
<b>MANUAL CAPSULORHEXIS TECHNIQUES .....</b>	<b>75</b>
CAPSULORHEXIS FORCEPS .....	76-77
CAPSULOTOMY SCISSORS .....	78-79
NUCLEUS REMOVAL INSTRUMENTS .....	80-81
IRRIGATION AND ASPIRATION CANNULAE .....	82
CORTEX REMOVAL & CAPSULE POLISHER .....	83-84
<b>GAUGE CONVERSION CHART .....</b>	<b>85</b>
CATARACT (ECCE) SET .....	86-87



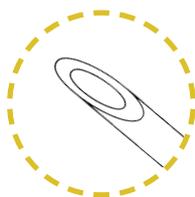
**PHACO CHOICES**

- HYDRODISSECTION CANNULAE . . . . . 88-89
- FIXATION RINGS & EYE SPECULAE . . . . . 90-91
- DIAMOND & SAPPHIRE KNIVES . . . . . 92-93
- ROTATORS/MANIPULATORS & PHACO CHOPPERS . . 94-95
- AKAHOSHI STYLE PRECHOPPERS . . . . . 96-97
- CATARACT PHACO INSTRUMENT SET . . . . . 98-99
- MANUAL FRACTURE INSTRUMENTS . . . . . 100-101
- HELPFUL INSTRUMENTS . . . . . 102-103
- TODAY'S GLAUCOMA INSTRUMENTS . . . 104-105
- SMALL PUPIL MANAGEMENT . . . . . 106-107
- POSTERIOR CAPSULE RUPTURE . . . . . 108-109
- IRRIGATING & ASPIRATING SYSTEMS . . 110-115
- IRRIGATING PHACO CHOPPERS . . . . . 116-117
- CLEANING CANNULATED PRODUCTS 118-119**
- MICRO INCISIONS INSTRUMENTS 120-121
- LENS IMPLANTATION INSTRUMENTS 122-131
- LENS EXPLANTATION INSTRUMENTS 132-133
- TENSION RING INJECTORS 134-135

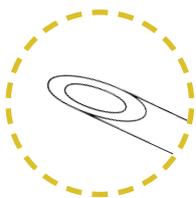




**ANESTHESIA NEEDLES**

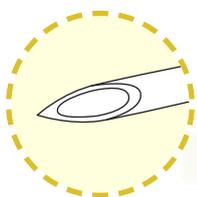


**Atkinson Style  
Anesthesia Needles**  
23GA/0.6 mm, bevel blunt tip  
E20-672 peribulbar, 22 mm  
E20-674 retrobulbar, 38 mm  
E20-673 retrobulbar/peribulbar, 32 mm

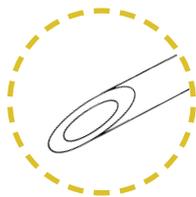


**Atkinson Style  
Peribulbar Needles**  
22 mm tube, bevel blunt tip,  
single use, sterile (box of 10)  
102-23-22 23GA/0.6 mm  
102-25-22 25GA/0.5 mm  
102-27-22 27GA/0.4 mm

Atkinson point needles - with single bevel 20° front open port - are designed to push aside blood vessels rather than perforate.



**Atkinson Style  
Retrobulbar Needle**  
38 mm tube, bevel blunt tip,  
single use, sterile (box of 10)  
101-23 23GA/0.6 mm  
101-25 25GA/0.5 mm  
103-25 25GA/0.5 mm, sharp point



**Atkinson Style  
Retrobulbar/Peribulbar Needles**  
32 mm tube, bevel blunt tip,  
single use, sterile (box of 10)  
102-23-32 23GA/0.6 mm  
102-25-32 25GA/0.5 mm



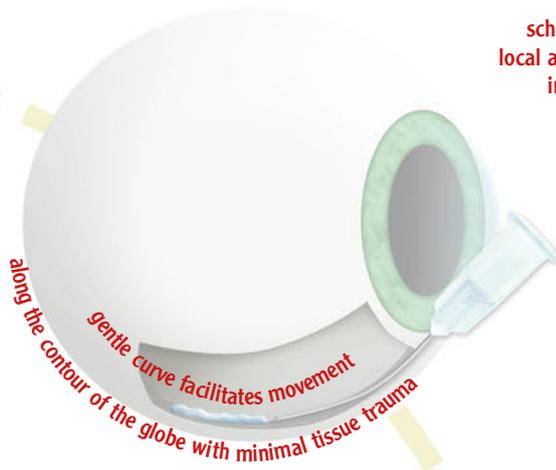
injection of local anesthetic prior to ophthalmic surgery

## ANESTHESIA CANNULAE

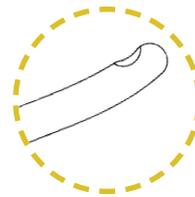
PMD



schematic representation of  
local anesthesia solution injection  
into Sub-Tenon's space

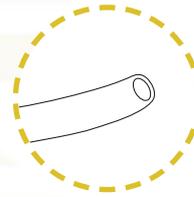


**Corbin**  
Sub-Tenon Cannula  
23GA/0.6 x 25 mm tube,  
rounded tip, 0.3 mm top port  
E20-683



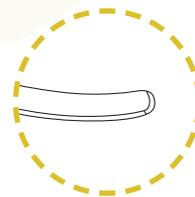
all cannulae are curved to a radius of 30 mm

**Fukasaku**  
Sub-Tenon Cannula  
23GA/0.6 x 25 mm tube,  
tapered tip, front port  
E20-685



tapered and flattened tips facilitate advancement  
within sub-Tenon tissue plain

**Stevens**  
Sub-Tenon Cannula  
21GA/0.8 x 25 mm tube,  
flattened tip, front port  
E20-689



**Troutman**  
Alpha-Chymotrypsin Cannula  
25GA/0.5 x 27 mm tube,  
olive tip, front port  
E20-089

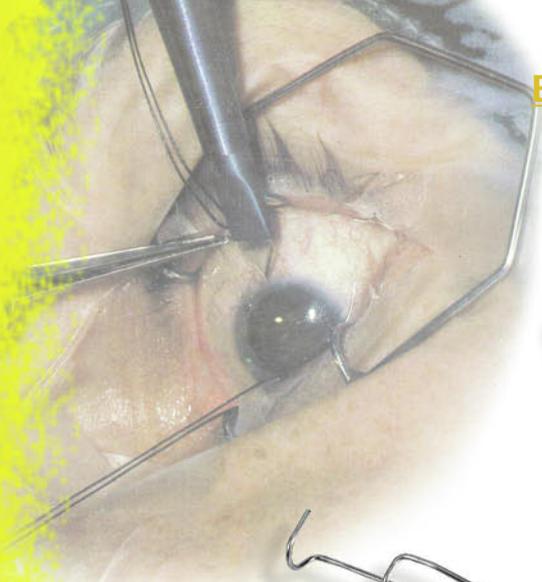


CATARACT INSTRUMENTS



**EYE SPECULAE**

**CATARACT INSTRUMENTS**



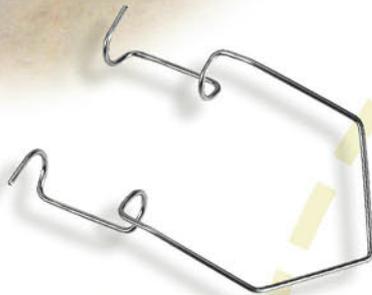
**Barraquer  
Wire Speculum**

**E40-011** adult size

**E40-012** child size

**E40-013** infant size

**E40-017** adult, heavy wire model  
to better control eyelids

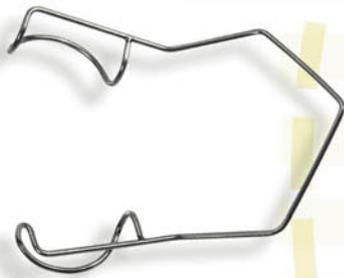


**Kratz-Barraquer  
Wire Speculum**

**E40-031** adult size

**E40-032** child size

**E40-033** adult, heavy wire model  
to better control eyelids



**Barraquer  
Wire Speculum (new model),  
fenestrated rounded blades**

**E40-015** adult size, for nasal approach

**E40-016** child size, for nasal approach

**E40-018** adult size, for temporal approach



**Jaffe  
Eyelid Retractor Set**

**E40-041** adult, 14 mm blade

**E40-042** child, 10 mm blade  
may be clamped to surgical drape  
with suture or adhesives



**Kratz-Barraquer  
Aspirating Speculum  
6 ports on each blade**

**E40-033AM** adult size

**E40-033AS** child size

use with syringe  
or suction on low

## EYE SPECULAE

PMS



Lieberman style eye speculae are an excellent choice for cataract and other anterior segment surgeries

**Lieberman  
Temporal Speculum**

**E40-100** adult size

**E40-100S** child size



Kratz style open blades allow easy access for cataract incision with phaco or I/A tips

**Lieberman  
Nasal Speculum**

**E40-101** adult size

**E40-101S** child size



**Lieberman  
Temporal Speculum**

**E40-102** adult size

V-wire blades help to retain the surgical drape under the eyelids



**Lieberman  
Temporal Speculum**

**E40-104** adult size

**E40-104S** child size

solid blades keep eye lashes from entering the surgical field



**Lieberman  
Aspirating Speculum**  
6 ports on each blade

**E40-100A** adult size

**E40-100AS** child size

to evacuate fluid from the surgical side



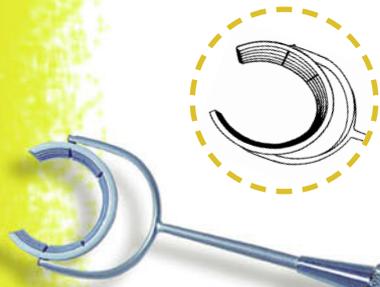
CATARACT INSTRUMENTS



**GLOBE FIXATION RINGS**

**CATARACT INSTRUMENTS**

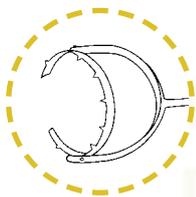
Super instruments to achieve excellent fixation of the globe during construction of the Paracentesis, Phaco Incision, AK Incision, Limbal Relaxing Incision and during Lens Implantation.



**Fyodorov Phaco Fixation Ring**  
3/4 open swivel ring, with atraumatic concentric rings, 11.5 mm ID, 13.0 cm

**E10-511T**

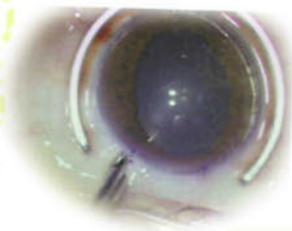
for atraumatic fixation of the eye during phaco



**Fine-Thornton Phaco Fixation Ring**  
3/4 open swivel ring, with multiple blunt teeth, 13.0 cm

**E10-513 13 mm ID**  
for clear cornea incision

**E10-516 16 mm ID**  
for scleral tunnel incision



**Fine-Thornton Phaco Fixation Ring**  
3/4 open swivel ring, multiple blunt teeth

**E10-513T 13 mm ID**  
for clear cornea incision

**E10-516T 16 mm ID**  
for scleral tunnel incision



**Gimbel LASIK Stabilising Ring**, 3/4 open swivel ring, blunt teeth on both sides, 13 mm ID, 13.0 cm

**E10-517**

for stabilizing either the right or the left eye during LASIK





**most helpful for...**

**Castroviejo**  
Eye Caliper  
double sided scale  
E40-552 0-15 mm  
E40-554 0-20 mm

...measuring white to white of the corneal and marking the limbal incision width



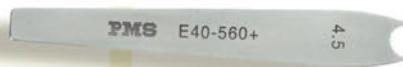
**Osher**  
Incision Caliper  
single scale reading  
from 0 to 10 mm  
E40-550

...internal measurement of cataract incisions



**Galand**  
Incision Marker  
pre-calibrated templates available in 3.0, 3.2, 3.5, 4.0, 4.5, 5.0, 5.5, 6.0, 7.0, 7.5 and 8.0 mm width  
E40-560+ size

...measuring cataract incisions before phaco,...



**Memmen**  
Incision Gauge  
pre-calibrated templates ranging from 2.0 to 4.0 mm width in 0.10 mm increments  
E40-561+ size

...after phaco and after IOL implantation



**Marking Pen**  
Gentian Violet Ink  
sterile (box of 10)  
52-100

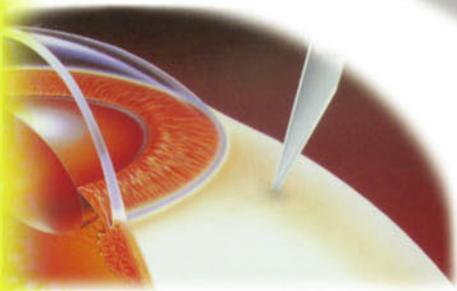
can be used with any refractive/  
cornea marking instruments





**DISPOSABLE BLADES AND KNIVES**

**CATARACT INSTRUMENTS**



**Chuck Handle**  
(for miniature edged blades)

\*E10-003K #3K, 10.0 cm

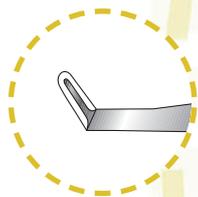
\*E10-003KM #3KM, 7.5 cm



**Miniature Edged Blades**  
sterile (pack of 10)

E10-065 #65 for stab incisions

E10-069 #69 for tunnel incisions



**Lamellar Blades**  
#66-60, sterile (box of 6)

EL-6600

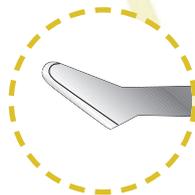
sharp all around surfaces;  
ideal for undermining



**Scleral Blades**  
#57, sterile (box of 6)

EL-5700

used for limbal incisions as well as preparing  
scleral buckle tunnels in retina surgery



**Scleral Knives**  
#57 with handle,  
sterile (box of 6)

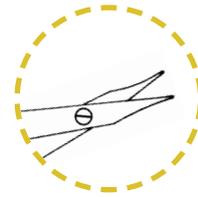
EL-6823H



\*also available in titanium, please add "T" to cat. no.

## CONJUNCTIVA AND TENOTOMY SCISSORS

PMD



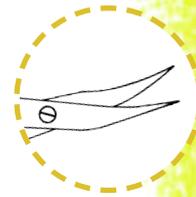
**McPherson-Westcott**  
Conjunctiva Scissors  
curved, small blades,  
10.0 cm

**E25-311** sharp tips

**E25-331** blunt tips



sharp tips are ideal for suture knots  
and conjunctival incision, ...

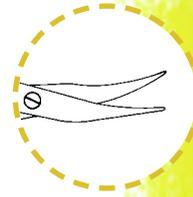


**Jaffe**  
Stitch Scissors  
curved, medium blades,  
sharp tips, 10.5 cm  
**E25-313**



blunt tips for preparation and dissection of  
other soft and delicate tissues, tendons, etc.

**Westcott**  
Tenotomy Scissors  
curved, medium blades,  
blunt tips, 11.0 cm  
**E25-333**



**Stevens**  
Tenotomy Scissors  
rounded blunt tips,

short model, 10.5 cm

**E25-564** straight

**E25-565** curved

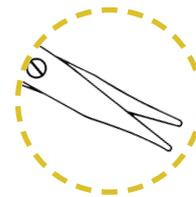
long model, 11.5 cm

**E25-566** straight

**E25-567** curved



strong, stable scissors for  
performing a tenotomy

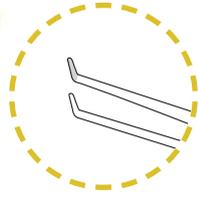


CATARACT INSTRUMENTS



**CONJUNCTIVA FIXATION FORCEPS**

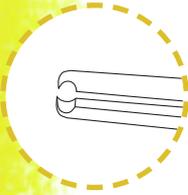
**CATARACT INSTRUMENTS**



**New**

**Akahoshi Style**  
 Universal Micro Forceps  
 angled 30°, blunt 0.35 mm tips  
 with platform, TC textured  
 inner surface, 10.5 cm  
**E30-239T**

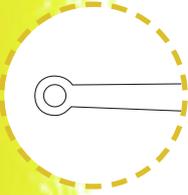
multi purpose forceps for fixating eye by grasping the bulbar conjunctiva; picking up foldable IOLs from case, implanting PMMA lenses, and fine suture tying



**New**

**Koch Style**  
 Paracentesis Fixation Forceps  
 grooved 0.1 mm tips, 11.0 cm  
**E30-240T**

ideal to atraumatically hold the edge of the paracentesis during topical anesthesia procedures



**New**

**Fechtner Style**  
 Conjunctiva Forceps  
 ring shaped jaws with hole of 0.5 mm dia.,  
 fine tying platform, 10.5 cm  
**E30-241T**

these forceps are ideal for atraumatic grasping and handling of the conjunctiva and other soft tissue.



**New**

**Solish Style**  
 Conjunctiva Forceps  
 ring shaped jaws with  
 2 holes of 0.4 mm dia.,  
 tying platform, 10.5 cm  
**E30-242T**

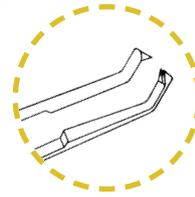
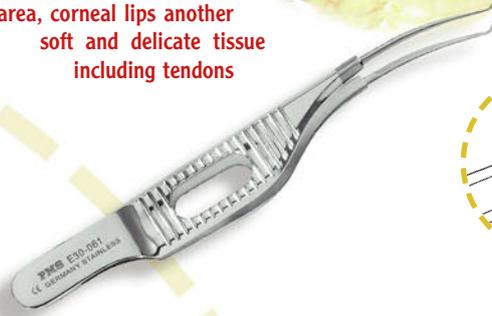
## SUTURING FORCEPS

delicate, toothed forceps are ideal for manipulation and fixation of conjunctiva, limbal area, corneal lips another soft and delicate tissue including tendons

**Barraquer-Colibri**  
Corneal Suture Forceps  
1x2 teeth 90°, delicate  
tying platform, 7.5 cm

E30-061 0.12 mm

E30-063 0.30 mm



**Micro (M-types)**  
Suture Fixation Forceps  
1x2 teeth 45°, 0.12 mm  
delicate tying platform,  
8.5 cm

E30-412



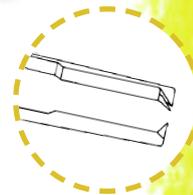
**Troutman**  
Suturing Forceps  
1x2 teeth 90°, 0.12 mm,  
delicate platform, 10.0 cm

E30-438

Tying Forceps  
delicate platform

E30-428 straight

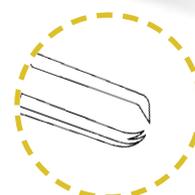
E30-429 curved



**Castroviejo**  
Fixation Forceps  
1x2 teeth 45°, 10.5 cm

E30-453 0.3 mm

E30-455 0.5 mm



PMS

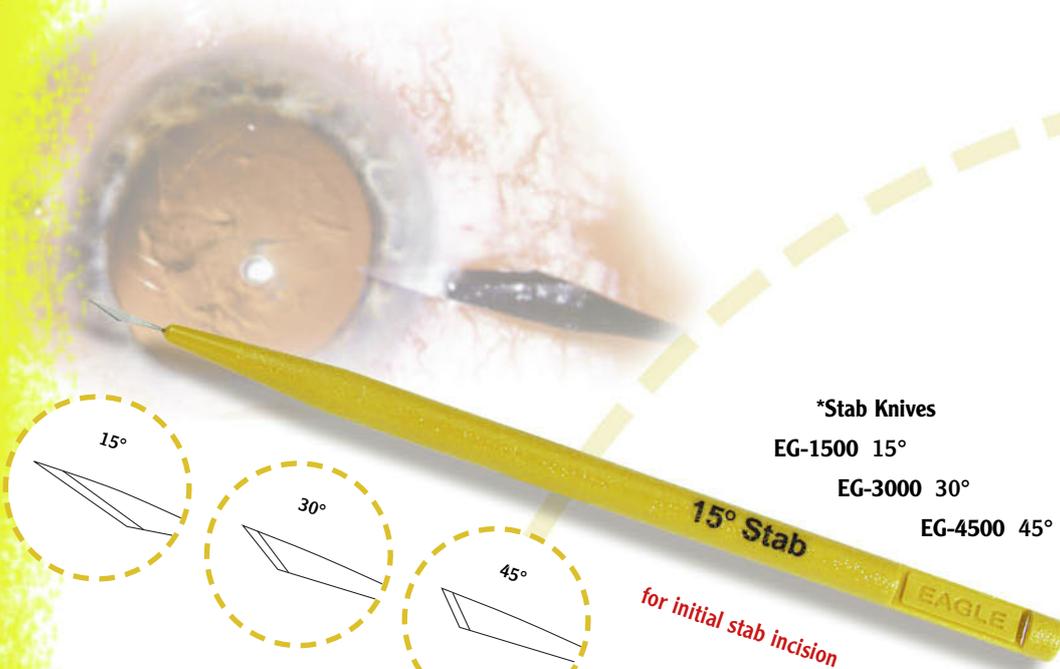


CATARACT INSTRUMENTS



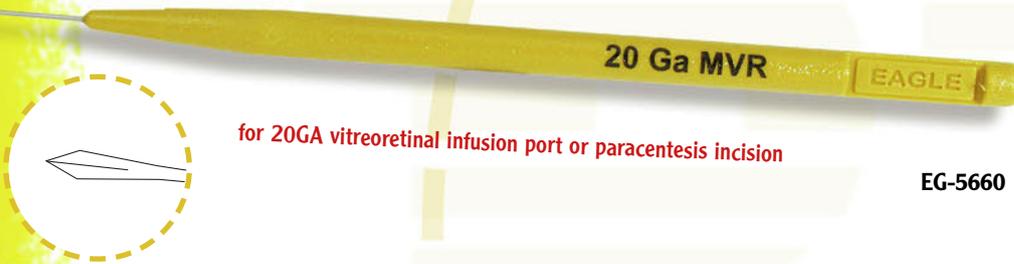
**DISPOSABLE EYE KNIVES**

**CATARACT INSTRUMENTS**



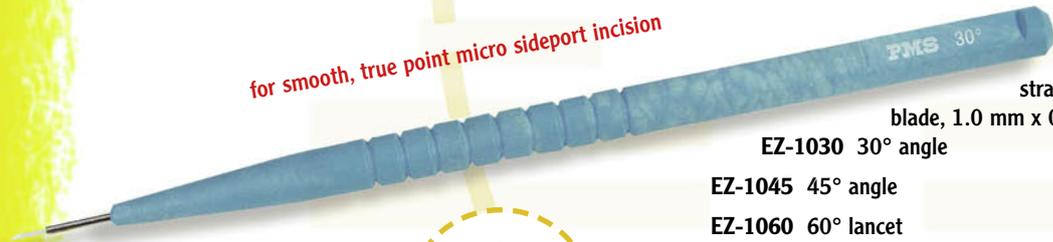
**\*Stab Knives**  
 EG-1500 15°  
 EG-3000 30°  
 EG-4500 45°

*for initial stab incision*



*for 20GA vitreoretinal infusion port or paracentesis incision*

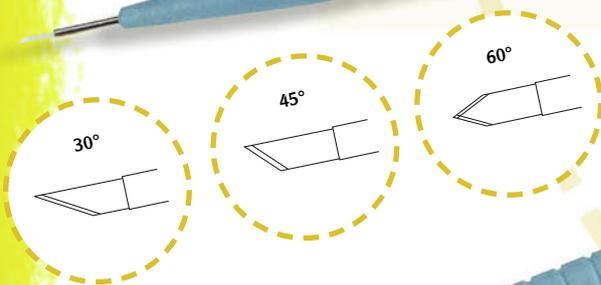
**\*Stiletto MVR Knives**  
 EG-5560 straight  
 EG-5660 angled



*for smooth, true point micro sideport incision*

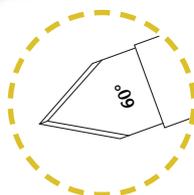
**EZCut® Sapphire Eye Knives**  
 straight, single edge blade, 1.0 mm x 0.2 mm thick

EZ-1030 30° angle  
 EZ-1045 45° angle  
 EZ-1060 60° lancet



*for accurate width clear cornea or sclera incision*

**EZCut® Sapphire Phaco Knives**  
 angled, single edge, lancet 60° blade  
 EZ-1028 2.8 mm wide  
 EZ-1030 3.0 mm wide  
 EZ-1032 3.2 mm wide

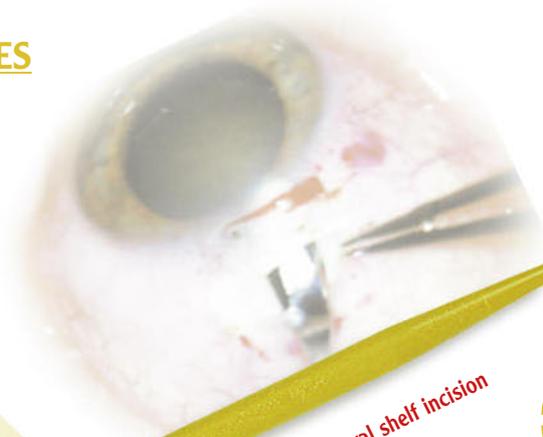


disposable knives, sterile, 6 per box

\* Manufacturer:  
 EAGLE LABS  
 Rancho Cucamonga,  
 California, USA

## DISPOSABLE PHACO KNIVES

PMO



**\*Crescent Knife**  
angled 2.0 mm blade  
(bevel up),  
EG-9402



*for creating a smooth scleral shelf incision*



**\*Phaco Slit Knives**  
angled blade (bevel up)  
EG-4740 2.85 mm  
EG-5570 3.0 mm  
EG-5572 3.2 mm



*for accurate width phaco incision*

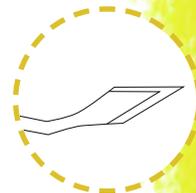


**\*Phaco Slit Knives**  
(2.0 mm Sub)  
angled blade (bevel up)

EG-1015 1.5 mm  
EG-1018 1.8 mm  
EG-1020 2.0 mm



*for bimanual phaco and micro cataract incision*

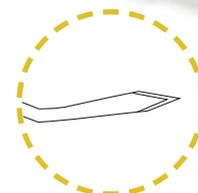


**\*Sideport Knives**  
angled blade (double bevel)

EG-5010 1.0 mm  
EG-5012 1.2 mm  
EG-5014 1.4 mm



*for creating a self-sealing incision  
during bimanual phaco procedure*



CATARACT INSTRUMENTS

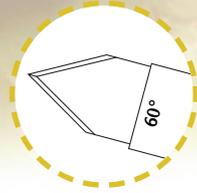
disposable knives, sterile, 6 per box

\* Manufacturer:  
EAGLE LABS  
Rancho Cucamonga,  
California, USA



**SAPPHIRE KNIVES**

**PMS EZCut® Sapphire Phaco Knives**  
 - providing consistent sharpness for repeated use - are the perfect choice for those who want performance without the cost of a diamond knife.



*very sharp precision cutting edges reduce trauma to the wound and recovery time following surgery*

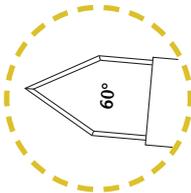
**EZCut®**  
**Sapphire Phaco Knives**  
 angled, lancet 60° blade (double edge)

**E10-122 2.8 mm**

**E10-123 3.0 mm**

**E10-124 3.2 mm**

**for controlled clear cornea and sclera incisions**



**EZCut®**  
**Sapphire Clear Cornea Knives**  
 angled, keratome 60° blade (4 cutting edges)



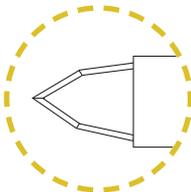
*lightweight titanium handles have gnarling to aid secure grasping and holding during the procedure*

**E10-142 2.8 mm**

**E10-143 3.0 mm**

**E10-144 3.2 mm**

**for accurate clear cornea incisions**



**EZCut®**  
**Sapphire Trapezoid Knives**  
 angled, tapered spear blade (double lancet)



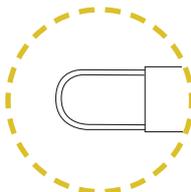
*handles are spring action bayonet style for protection of the sapphire when not in use*

**E10-152 2.1-2.9 mm**

**E10-153 2.35-3.2 mm**

**E10-154 2.5-3.4 mm**

**for precise and controlled phaco incisions**



**EZCut®**  
**Sapphire Crescent Knives**  
 angled, facet-free blade (bevel up)



*when the plunger is pushed forward the knife is ready for surgery*

**E10-191 1.5 mm**

**E10-192 2.0 mm**

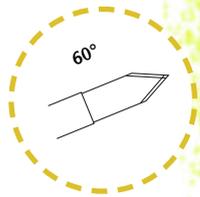
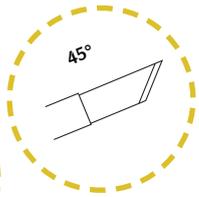
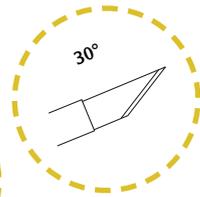
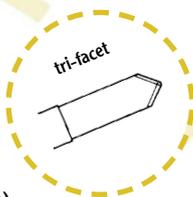
**for scleral tunnel incisions**

## SAPPHIRE KNIVES

PMS



only models with width of 1.2 mm or less can be used for sideport incision



**EZCut®**

Sapphire Universal Knives  
straight blade (double edge)  
1.0 mm width x 0.2 mm thick

E10-112 20° tri-facet

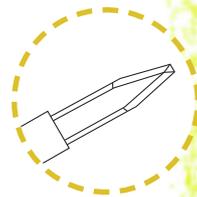
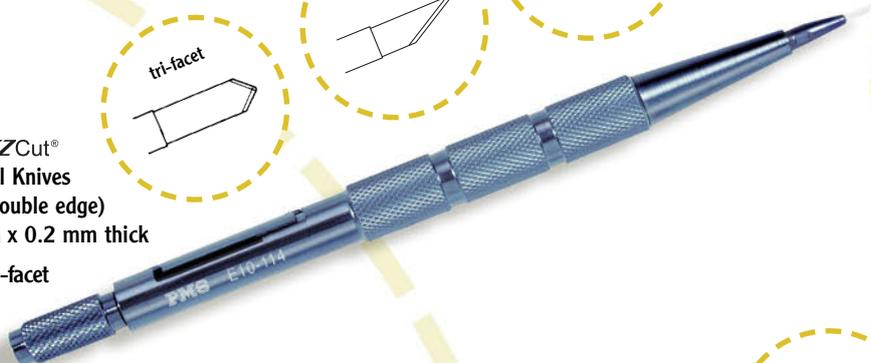
E10-113 30° angle

E10-114 45° angle

E10-116 60° lancet

E10-121 60° lancet, 1.2 mm wide

for smooth, true point micro stab incision



**EZCut®**

Sapphire Micro Incision Knives  
angled, tapered spear shaped blade

E10-170 0.9-1.2 mm

E10-171 1.3-1.5 mm

E10-172 1.8-2.4 mm

for ultra small, precise bimanual phaco incision

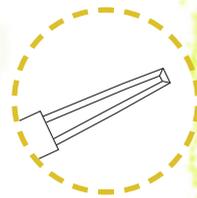


**EZCut®**

Sapphire Zaldivar Style Knife  
angled, trapezoid shaped blade,  
0.55 - 1.0 mm width,  
4.5 mm long

E10-181

ideal for anterior segment procedures, initial groove,  
sideport, sclera tunnel, clear cornea technique, etc.



Sterilising Case  
(autoclavable) clear plastic,  
for 1 sapphire knife

E45-000



supplied  
without knife

CATARACT INSTRUMENTS



## SAPPHIRE KNIVES - RETRACTABLE HANDLES

### FEATURES AT A GLANCE:

- New lightweight, ALL-aluminum handle
- Round for perfect balance and control
- Compatible with EZChange® blade holder
- Selective, highly economical solution, too
- Available in five colours:

New

E10-200AY handle, yellow

E10-200AR handle, red

E10-200AG handle, green

E10-200AB handle, blue

E10-200AP handle, purple



When changing the blade, place your fingers firmly on the flat part of the shaft and turn handle anti-clockwise to unscrew. Avoid touching the blade!



Do not use aggressive (alkaline) detergents or any kind of acid based products for cleaning the aluminium handle. Never use BSS for rinsing.

## SAPPHIRE BLADES - BLADE HOLDER

PMD

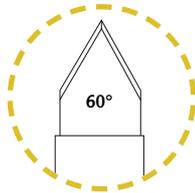


New

- Corundum Clear Gemstones; sharp similar to diamond
- All blades are computer video cut and inspected
- Blades fully mounted in stainless steel shaft



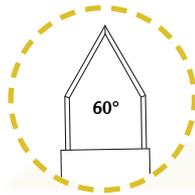
blade shapes	width in mm	removable holder with sapphire blade
--------------	-------------	--------------------------------------



Lancet

2.8	E10-222
3.0	E10-223
3.2	E10-224

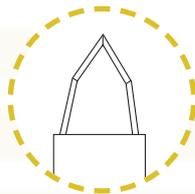
for controlled clear cornea and sclera incision



Keratome

2.8	E10-242
3.0	E10-243
3.2	E10-244

for accurate clear cornea incision



Tapered Spear

2.5/2.9	E10-252
2.5/3.2	E10-253
2.5/3.4	E10-254

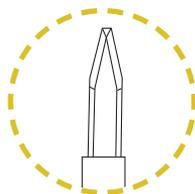
for precise phaco incision



Crescent

1.5	E10-291
2.0	E10-292
2.8	E10-293

for smooth scleral shelf incision



Trapezoid

0.9/1.2	E10-270
1.3/1.5	E10-271
1.8/2.4	E10-272

for ultra small bimanual phaco incision



Zaldivar Style

0.55/1.0 E10-281

for anterior segment procedures, initial groove, side-port, sclera tunnel, clear cornea technique, etc.

Sapphire blade is fully mounted in a stainless steel shaft with thread



CATARACT INSTRUMENTS

Choose your own handle and blade style



**DIAMOND KNIVES**

**NOTE: Complementary sterilisation tray is included with diamond knife purchase.**

**CATARACT INSTRUMENTS**

*EZCut*<sup>®</sup>

**Diamond Phaco Knives**  
lancet shaped 60° blade  
(double edge)

**E10-322 2.8 mm**

**E10-323 3.0 mm**

**E10-324 3.2 mm**



**for Clear Corneal and Scleral Incisions**

Angled diamond knives in new titanium handle with bayonet mechanism.

*EZCut*<sup>®</sup>

**Diamond Clear Cornea Knives**  
keratome shaped 60° blade  
(4 cutting edges)

**E10-342 2.8 mm**

**E10-343 3.0 mm**

**E10-344 3.2 mm**



*EZCut*<sup>®</sup>

**Diamond Trapezoid Knives**  
tapered spear shaped blade  
(double lancet)

**E10-352 2.0-2.3 mm**

**E10-353 2.6-3.0 mm**

**E10-354 2.8-3.2 mm**

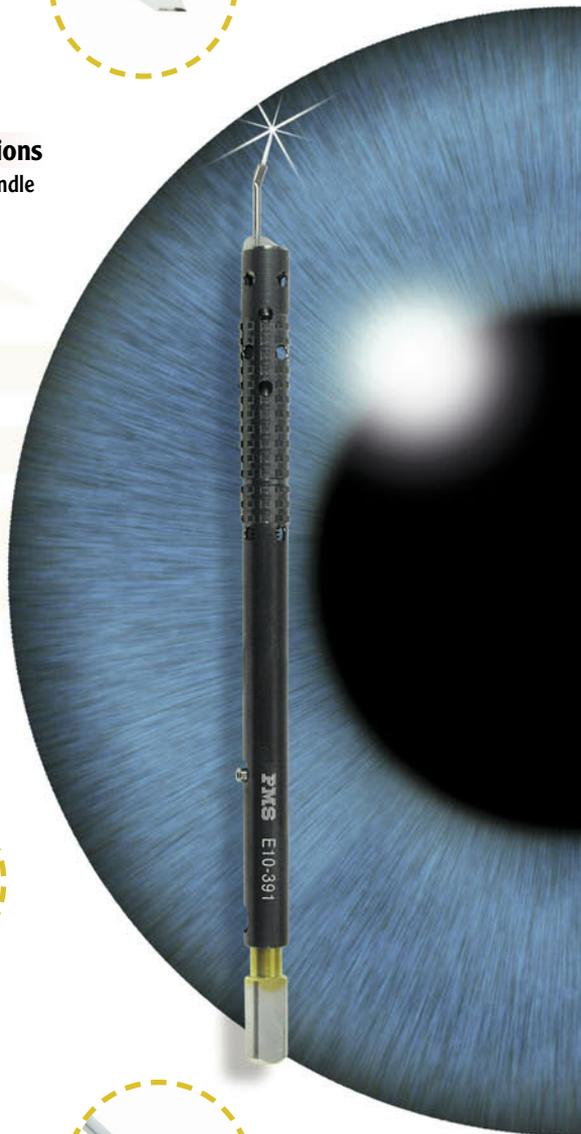


*EZCut*<sup>®</sup>

**Diamond Tunnel Knives**  
crescent shaped (9 facet) blade

**E10-391 1.5 mm**

**E10-392 2.0 mm**



Individual Designs and Special Mountings on Request.

## DIAMOND KNIVES

PMS



**EZCut®**

Diamond Micro Incision Knives  
tapered spear blade (double lancet)

E10-360 0.9-1.2 mm

E10-361 1.3-1.5 mm

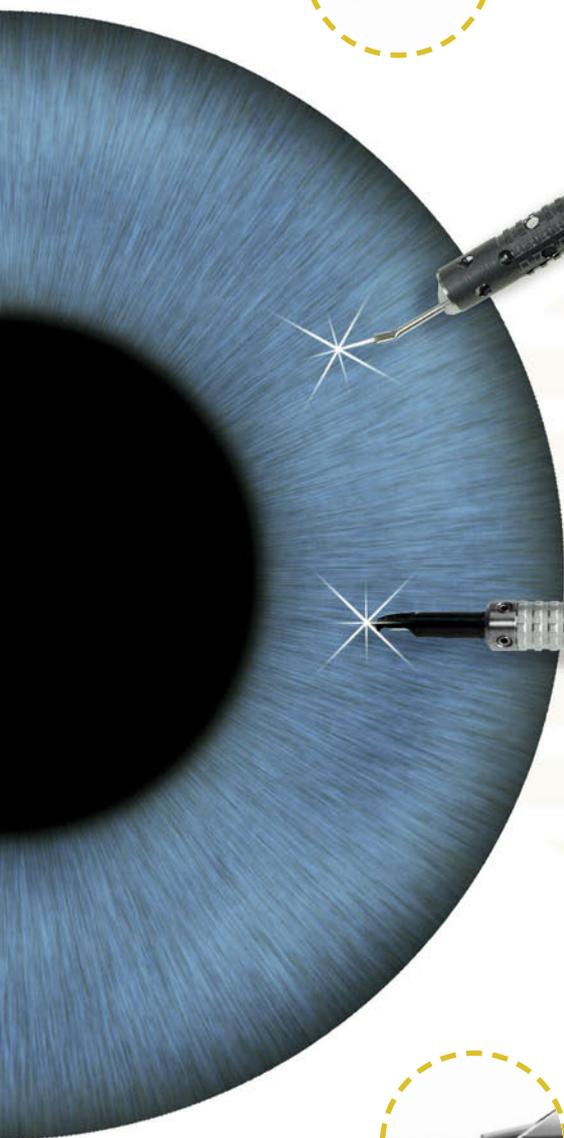
E10-362 1.8-2.0 mm



**EZCut®**

Diamond Zaldivar Style Knife  
trapezoid shaped blade,  
0.55 - 1.0 mm width,  
4.5 mm long

E10-381



### for Arcuate and T-Incision

Diamond Micrometer Knives are developed to complement modern surgical techniques for correction of myopia, astigmatism and hyperopia.



### for Limbal Relaxing Incision (LRI)

Diamond Step Knives with single foot plate and preset blade depths are ideal to make controlled scleral incisions.

For more details please refer to page 157

Repairshop for all Types of Diamond Knives.

CATARACT INSTRUMENTS



**CARE PRODUCTS FOR DIAMOND KNIVES**

**CATARACT INSTRUMENTS**



**Netcell®  
Instrument Wipe**  
3" x 3" x 2 mm sponge,  
single use, sterile (box of 20)

**37-900**

**ideal for cleaning diamond blades,  
and wiping delicate instrument tips**



**Netcell®  
Diamond Knife Cleaning Block**  
single use, sterile (box of 10)

**37-462**

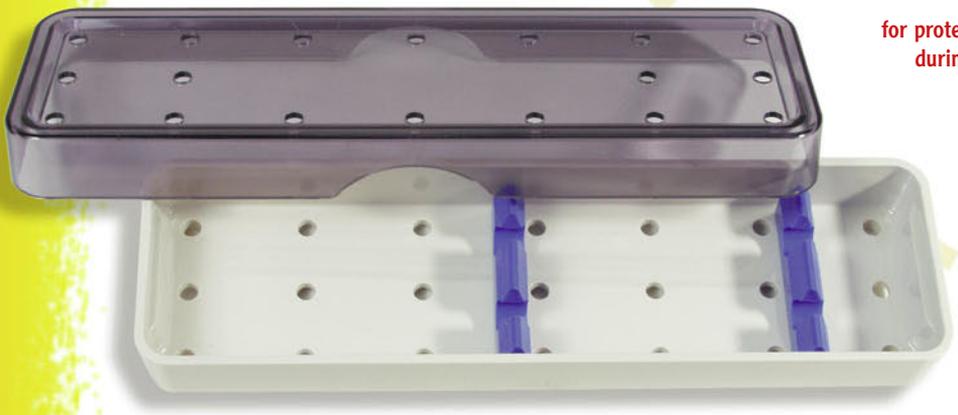
**small pore construction absorbs fluids, ideal to  
remove stains and debris from diamond blade**



**Economy  
Illuminated Magnifying Loupe (pocket size)**  
biconvex lens 30 mm dia., 21.0 dpt./6.25X

**1571**

**used to examine the cutting edge of diamond  
knives and instrument tips prior to sterilisation**



**Minitainer  
Sterilising Tray**  
autoclavable plastic (180 x 75 x 18.5 mm)  
lid/base are perforated for steam penetration

**E45-001 for 1 diamond knife**

**E45-002 for 2 diamond knives**

**for protecting diamond knives  
during sterilisation and storage**



## CARE AND HANDLING TIPS FOR PMS SAPPHIRE AND DIAMOND KNIVES

### WASH

Immediately after each use flush diamond blade with running water or distilled water using a syringe.

### WIPE

Gently wipe the diamond blade from back to the tip with a lint-free, moistened special sponge (art. no. 37-900).

### CLEAN

If the diamond blade is still not clean, use a diamond knife cleaning block (art. no. 37-462) to remove stains or debris.

### ULTRA SONIC

Ultra Sonic Cleaning is not recommended. Where used, restrict to low power for 60 seconds with the blade retracted into the handle.

### EXAMINE

The diamond blade should be examined under high magnification for tip and cutting edge damage prior to sterilisation and each use.

### RETRACT

Fully retract the diamond blade into the handle safety position and **STORE** it in a protective tray (art. no. E45-002) for sterilisation.

### STERILISE

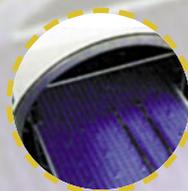
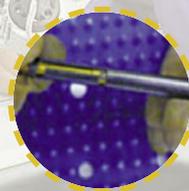
The diamond blade can be gas, flash or steam sterilised (in autoclave). The temperature should not exceed 273°F/134°C.

### CLOSE

Never keep the diamond blade open while handing it over to others or when laying it down (store it).

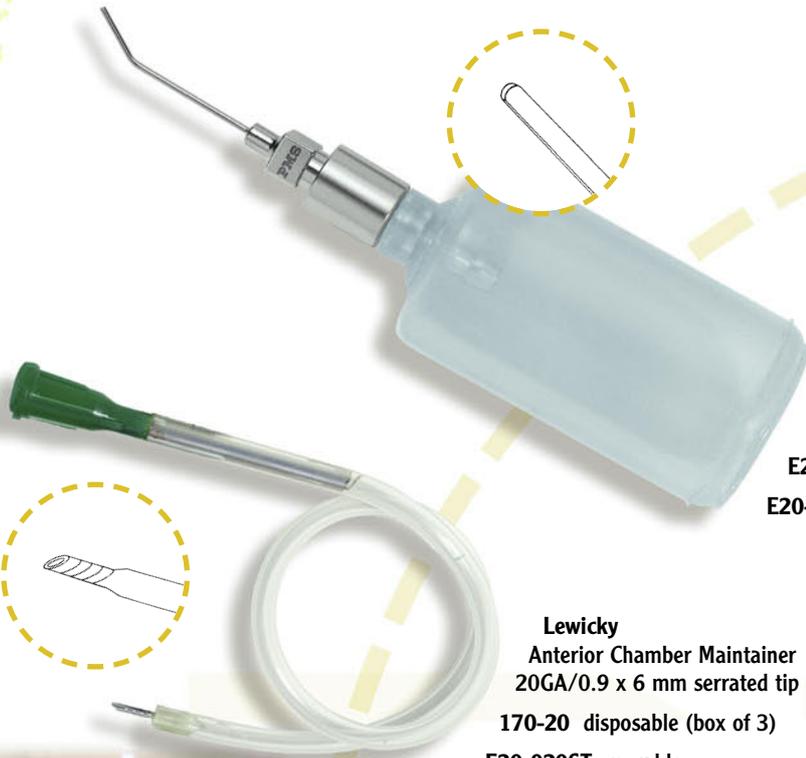
### TOUCH

Always ensure that the diamond blade never touches any metal surface. If possible keep your diamond knife separate from other instruments.





**ANTERIOR CHAMBER MAINTAINER**



**Bishop-Harmon**  
**AC Irrigator System**  
**E20-001** complete  
**E20-002** silicone bulb  
**E20-003** LL adaptor  
**E20-004** 19GA cannula



**Lewicky**  
**Anterior Chamber Maintainer**  
 20GA/0.9 x 6 mm serrated tip  
**170-20** disposable (box of 3)  
**E20-020ST** reusable

cannula tips of reusable maintainers are attached to 180 mm long silicone tubing with Luer-Lock adaptor



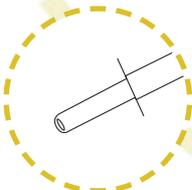
**Heslin**  
**Anterior Chamber Maintainer (reusable)**  
 23GA/0.6 x 6 mm bevelled blunt tip  
**E20-023PT** polished  
**E20-023TT** textured



**Anterior Chamber Maintainer (reusable)**  
 23GA/0.6 x 6 mm "Flager" tip  
**E20-023FT**



**Rainin**  
**Suturing Cannula Set (reusable)**  
 18GA/1.2 x 6 mm blunt tip,  
 with suturing flange  
**E20-018SF**



## ANTERIOR CHAMBER IRRIGATORS

PMS



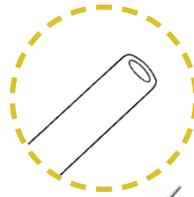
### Anterior Chamber Irrigating Cannula

25 mm straight tube,  
single use (box of 10)

112-25 25GA/0.5 mm

112-27 27GA/0.4 mm

112-30 30GA/0.3 mm



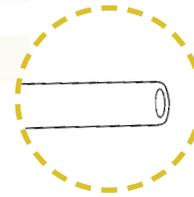
### Anterior Chamber Irrigator

25 mm tube, angled 7 mm,  
single use (box of 10)

110-25 25GA/0.5 mm

110-27 27GA/0.4 mm

110-30 30GA/0.3 mm



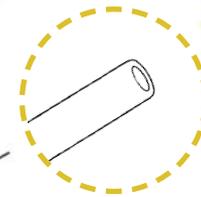
**McIntyre**  
Anterior Chamber Cannula  
15 mm straight tube - 12 mm angled tube

E20-043	30GA/0.30 mm	E20-047
E20-045	26GA/0.45 mm	E20-048
E20-046	23GA/0.60 mm	E20-049



**Rycroft**  
Air Injection Cannula  
20 mm tube, angled 5 mm

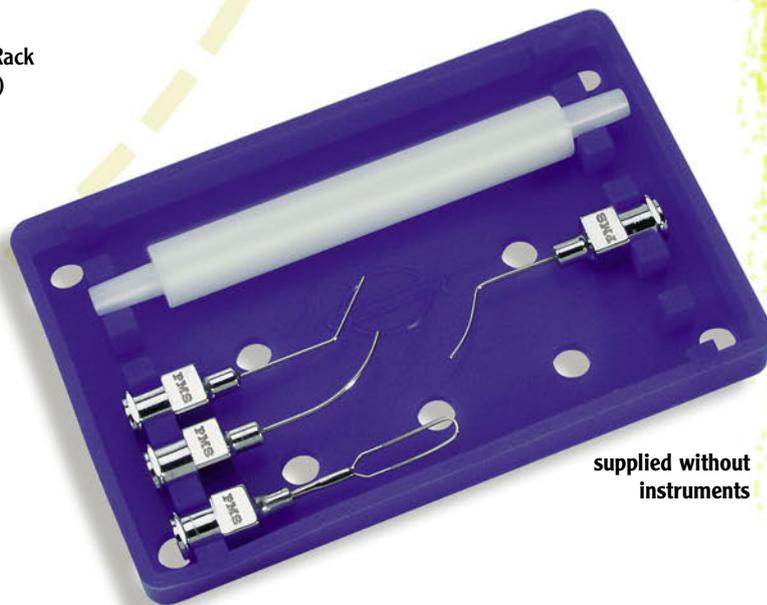
E20-030	30GA/0.3 mm
E20-031	27GA/0.4 mm



Silicone Cannula Rack  
autoclavable, (85x55x8 mm)

E45-085

for secure positioning of  
conventional cannulae  
and handpieces



supplied without  
instruments

CATARACT INSTRUMENTS

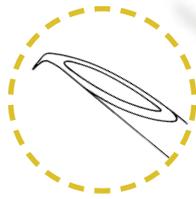


**DISPOSABLE IRRIGATING CYSTOTOMES**

**CATARACT INSTRUMENTS**



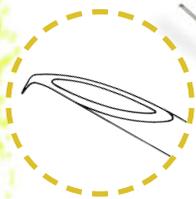
1 ml syringe provides the optimum hydraulics and feel; larger syringes can produce excessive flow with only light pressure of the plunger



**Irrigating Cystotome, straight**  
**120-25S** 25GA/0.5 x 16 mm  
**120-27S** 27GA/0.4 x 13 mm  
**120-30S** 30GA/0.3 x 19 mm  
 to perform a can-opener technique

All Glass Syringe  
 Luer-Lock cone  
**E20-801** 1 ml  
**E20-802** 2 ml

provides smooth control of hydrodissection, hydrolineation and manipulation of the nucleus



**Joyce**  
**Irrigating Cystotome, curved**  
**220-25** 25GA/0.5 x 16 mm  
**220-27** 27GA/0.4 x 13 mm  
 for intercapsular/endocapsular techniques



**Irrigating Cystotome, formed**  
**120-25F-12** 25GA/0.5 x 16 mm  
**120-27F-12** 27GA/0.4 x 13 mm  
 for direct puncture capsulorhexis



**Irrigating Cystotome, angled**  
**123-25** 25GA/0.5 x 16 mm  
**123-27** 27GA/0.4 x 13 mm  
 for CCC techniques

disposable cannulae, sterile, 10 per box



**Manual Capsulorhexis** remains the favourite standard procedure as it offers greater resistance to capsule tearing and also reveals a smooth regular edge.



Capsulorhexis in progress using a cystotome cannula



### Direct Puncture Capsulorhexis

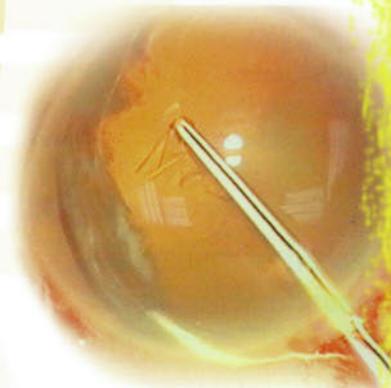
A simple technique is to use a 27 gauge or 30 gauge bent cystotome and directly puncture the clear cornea to create a capsulorhexis without a groove or stab incision. The technique offers savings in instruments and viscoelastics and is ideally suited for bimanual micro incision phaco surgery. For more details: M.Spencer, MD, 1179 Seafield Crescent, Nanaimo, BC V9S4S1, Canada, E-mail: martin.spencer@shaw.ca



Anterior capsule is torn to complete a circular tear

### Continuous Curvilinear Capsulorhexis (with cystotome cannula)

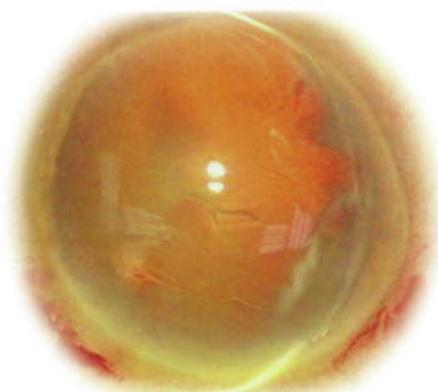
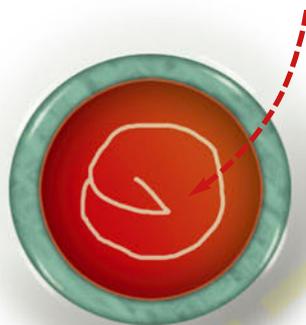
Initiation of a 5 to 6.5 mm continuous curvilinear capsulorhexis (CCC) is performed with a 27 gauge or 30 gauge bent needle. The cystotome is introduced through the side port and creates the first puncture on the center of the anterior capsule and then creates the anterior capsular flap. The anterior capsule is torn in a curved fashion by pushing or pulling the flap to create an optimal circular opening.



Capsular flap grasped with capsulorhexis forceps

### Continuous Curvilinear Capsulorhexis (with forceps)

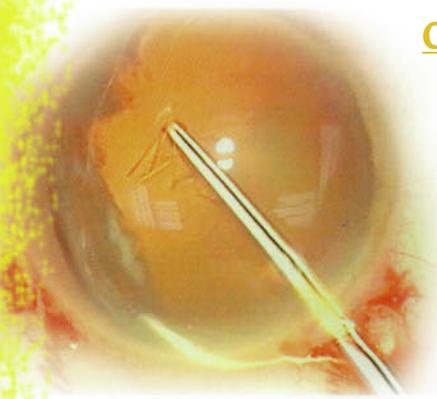
The tips of a capsulorhexis forceps are used to puncture the anterior capsule. A flap is created by grasping the inferior end of the puncture and lifting it anteriorly. The edge of the flap is grasped and then re-grasped in a curved fashion creating a circular tear. **Ideally, the puncture site should always be in the central "safe" area of the anterior lens capsule.**



Capsulorhexis shown with an optimal circular opening



**CAPSULOREXIS FORCEPS**

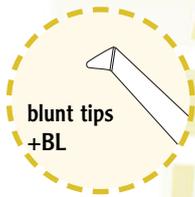


**“Always keep in mind”**  
a well defined capsulotomy is of supreme importance. An irregular capsulotomy will create difficulties throughout the remainder of the procedure.



**Utrata**  
Capsulorhexis Forceps  
angled 11 mm shanks,  
10.5 cm  
**E30-581+**

**TIP DESIGNS**



blunt tips  
**+BL**

...grip, lift and pull



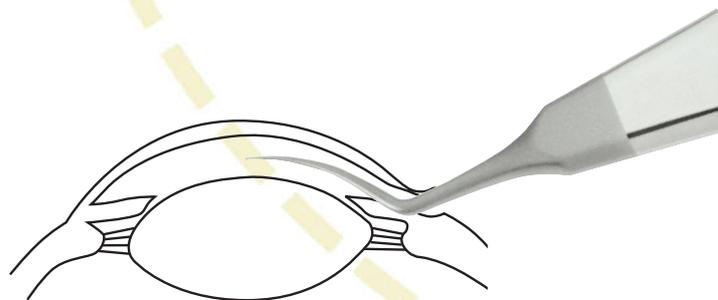
sharp tips  
**+SH**

...penetrate and tear

triangular jaws with delicate platforms and ultra fine grasping tips are ideal to...



**Masket**  
Capsulorhexis Forceps  
vaulted 11 mm shanks,  
10.5 cm  
**E30-589+**



vaulted shaft forceps allow to perform the capsulorhexis from a more posterior incision without gaping the wound

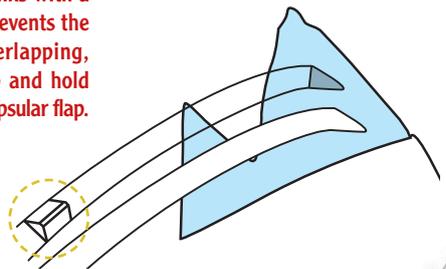
\*when ordering please specify tip design: BL=blunt, SH=sharp

## CAPSULOREXIS FORCEPS

PMS



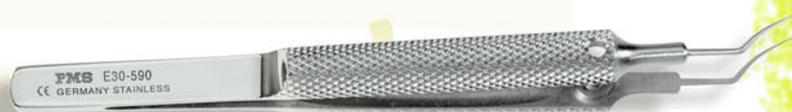
Featuring very thin, angled and vaulted shanks with a calibrated heel stop. This design prevents the ultra fine tips from overlapping, tough enough to grip and hold the edge of the capsular flap.



**Utrata**  
Capsulorhexis Forceps  
angled 11 mm shanks,  
10.5 cm  
E30-583+



**Masket**  
Capsulorhexis Forceps  
vaulted 11 mm shanks,  
10.5 cm  
E30-590+



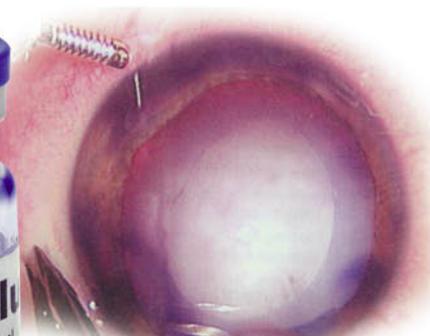
**Inamura Style**  
Capsulorhexis Forceps  
vaulted 13 mm shanks,  
ultra fine tips, 12.0 cm  
E30-591+



ideal for CCC during  
micro incision surgery

**Oftalblu**  
Trypan blue 0.1 %  
-sodium chloride- purified water  
does not contain preservatives  
supplied in 1 ml bottle, sterile packaged

sterile intraocular solution for  
anterior capsule staining  
during cataract operati-  
on



A CCC is performed with the aid of  
trypan blue and an ACM inserted  
through the paracentesis.

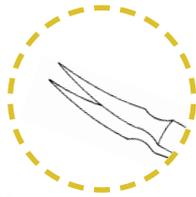
CATARACT INSTRUMENTS



**CAPSULOTOMY SCISSORS**

**CATARACT INSTRUMENTS**

ideal for cutting the anterior capsule, ...

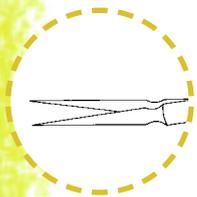


**Vannas**  
Capsulotomy Scissors  
5 mm blades, sharp tips, 8.2 cm

**E25-400** straight

**E25-401** curved

**E25-405** angled



**Gills-Vannas**  
Capsulotomy Scissors  
7 mm blades, sharp tips, 8.2 cm

**E25-410** straight

\***E25-411** curved

**E25-415** angled



**Ong**  
Capsulotomy Scissors  
angled 9 mm blades, 8.5 cm

**E25-440** blunt tips

**E25-442** sharp tips



**EZChange® Side Port Capsulotomy Scissors**  
removable tips with 20GA/0.9 x 30 mm curved tube,  
2 mm sharp blades, 15.2 cm

**E25-460** straight blade

**E25-461** curved left

**E25-462** curved right

ideal for cutting capsulorhexis  
edge through a paracentesis



removable scissors tips  
(E25-460R, E25-461R & E25-462R)  
and titanium squeeze handle (E25-600T)  
can be ordered separately

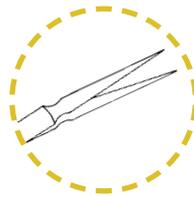
\*also available on titanium handle, please add "T" to cat. no.

## CAPSULOTOMY SCISSORS

PMB



snips capsule tags, iris, cornea and membranes



**Gills-Welsh**  
Capsulotomy Scissors  
very thin 10 mm blades,  
sharp tips, 8.5 cm

E25-430 straight

E25-431 curved



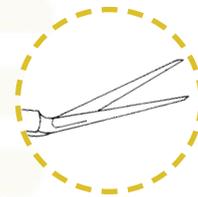
**Uthoff-Vannas**  
Capsulotomy Scissors  
very thin 10 mm blades,  
strong curve, blunt tips,  
8.2 cm

E25-433



**Stern-Gills**  
Capsulotomy Scissors  
very thin 10 mm blades,  
angled up, sharp tips,  
8.5 cm

\*E25-435



**Janach 4223 Style**  
Micro Capsulotomy Scissors  
very delicate 7 mm blades,  
lightly curved, 10.5 cm

E25-451 blunt tips

E25-453 sharp tips



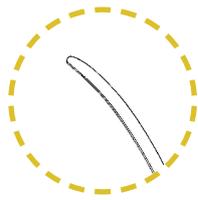
\*also available on round titanium handle, please add "T" to cat. no.

CATARACT INSTRUMENTS



**NUCLEUS MOBILISATION INSTRUMENTS**

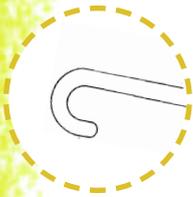
**CATARACT INSTRUMENTS**



**Barraquer**  
Iris Repositor  
vaulted 12 x 0.5 mm  
rounded blade, 12.0 cm

**E40-662**

ideal for repositioning - tucks,  
pushes, retracts and retains  
- the iris during ECCE



**Bonn**  
Micro Iris Hook  
delicate 0.3 mm blunt tip, 12.0 cm

**E15-602** straight

**E15-603** angled

used to retract the iris  
and anterior capsule, supports nucleus delivery



**Barrett**  
Nucleus Rotator/Manipulator  
angled 90° "mushroom style" tip, 11.5 cm

**E15-466**

used to control, manipulate and  
divide either soft or hard nucleus



**Koch II**  
Nucleus Spatula  
light curved "duckbill style" tip with notches, 11.5 cm

**E15-418**

placed under the nucleus  
to control and support easy  
delivery into anterior chamber



**Jaffe-Bechert**  
Nucleus Rotator  
angled 9 mm, blunt forked tip, 11.5 cm

**E15-423**

used to impale,  
lift and remove  
the nucleus into the  
anterior chamber



also available on coloured aluminium handles, see page 95, 107 and 131

## NUCLEUS REMOVAL CANNULAE

PMS



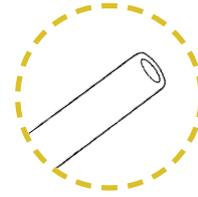
**Rainin**  
Irrigating Cannula  
20 mm tube, angled 7 mm  
horizontal flattened tip  
E20-033 30GA/0.3 mm  
E20-034 27GA/0.4 mm

used to create a separation plane between the nucleus and posterior cortical position of the lens



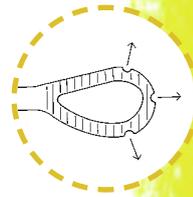
**Gill**  
Cortex Aspirating Cannula  
25GA/0.5 x 20 mm tube,  
angled 5-9 mm round tip:  
E20-164 5 mm  
E20-167 7 mm  
E20-169 9 mm

used to remove the anterior cortex and epinucleus through a side port incision



**Sheets**  
Irrigating Vectis  
23GA/0.6 x 35 mm tube,  
finely serrated 6x9 mm loop,  
with 3 irrigating ports  
E20-231

used to effectively remove  
- irrigate, separate and lift out -  
the lens nucleus and large cortical debris



**Irrigating Vectis**  
25GA/0.5 x 35 mm tube,  
with 0.3 front opening port,  
single use, sterile (box of 10)  
140-25-1 1 open port  
140-25-2 2 open ports  
140-25-3 3 open ports



photo representation of lens nucleus removal



CATARACT INSTRUMENTS



**IRRIGATION AND ASPIRATION CANNULAE**

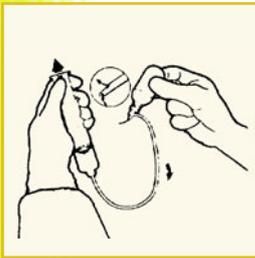
**CATARACT INSTRUMENTS**



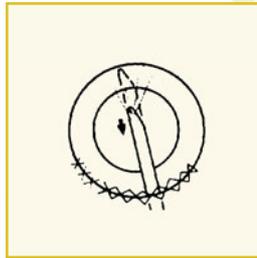
**Simcoe (Reusable)  
Double I and A Cannula**  
23/23GA x 15 mm tube,  
0.3 mm aspirating port with  
silicone tubing and LL adaptor

**E20-300** original model

**E20-301** reverse model



Manual irrigation and aspiration of lens cortex.



Inferior cortex approached via superior incision.



Superior cortex approached via inferior stab wound.



Vacuum cleaning of capsule with posterior capsule polishers.



**Simcoe (Disposable)  
Double I and A Cannula**  
23/23GA x 15 mm tube,  
0.4 mm aspirating port with  
flexible tubing and adaptor,  
sterile (box of 6)

**150-23** original model

**150-23R** reverse model

**Aspirating Syringe (Disposable)**  
with spring and LL cone,  
sterile (box of 10)

**300-03** 3 ml

**300-05** 5 ml



aspirating syringes  
provide smooth, one-handed  
aspiration when plunger is compressed  
against spring device and gradually released

## CORTEX REMOVAL CANNULAE



**Simcoe (Reusable)**  
Cortex Extractor Cannula  
23GA/0.6 mm tube,  
0.3 mm top port

**E20-151** 13 mm  
**E20-152** 21 mm



**Simcoe (Disposable)**  
Cortex Extractor Cannula  
22 mm tube, 0.3 mm top port,  
single use, sterile (box of 10)

**108-23** 23GA/0.6 mm  
**108-25** 25GA/0.5 mm



curved cannulae are very popular for aspirating  
difficult 12 o'clock cortex through a paracentesis

**Charleux (Reusable)**  
Cortex Aspirating Cannula  
23 GA/0.6 mm tube,  
0.35 mm front port

**E20-153** 13 mm  
**E20-154** 21 mm



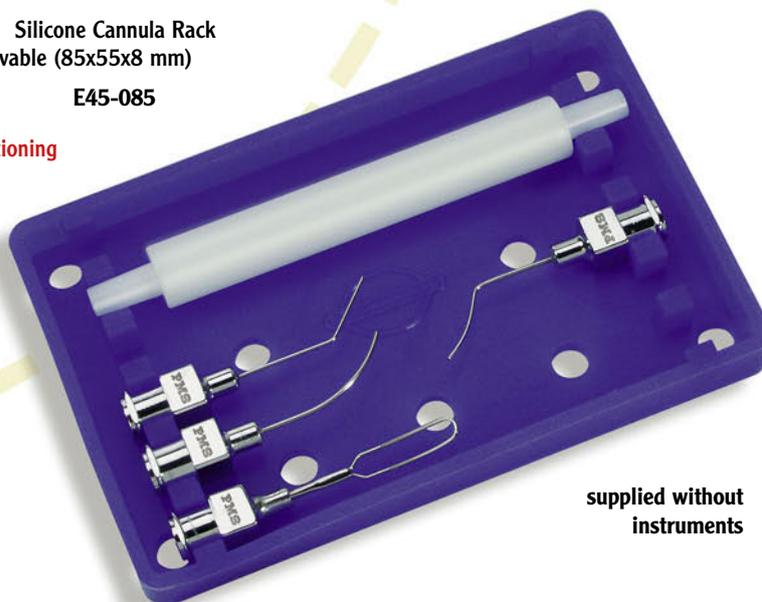
**McIntyre**  
Handpiece  
(autoclavable) Teflon

**E20-880** for irrigating  
male/female Luer slips, 6.8 cm  
**E20-881** for aspirating  
male/male Luer slips, 7.5 cm



**Silicone Cannula Rack**  
autoclavable (85x55x8 mm)  
**E45-085**

for safe and selective positioning  
of conventional cannulae  
and handpieces



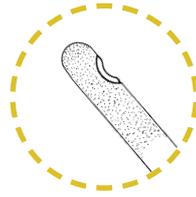
supplied without  
instruments

CATARACT INSTRUMENTS



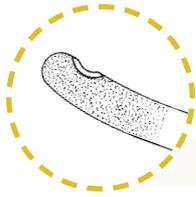
**CAPSULE POLISHING CANNULAE**

**CATARACT INSTRUMENTS**

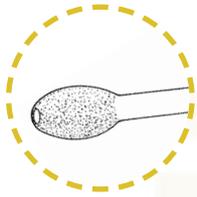


**Kratz**  
 Capsule Polisher  
 25 mm tube, angled 8 mm,  
 rough tip, 0.3 mm top port  
 125-21 21GA/0.80 mm  
 125-24 24GA/0.55 mm

sandblasted and roughened tips allow controlled polishing of posterior capsule, scraping and aspiration of lens epithelial cells from the capsular bag



**Simcoe**  
 Capsule Polisher & Cortex Extractor  
 23GA/0.6 mm curved tube,  
 sandblasted tip, top port  
 E20-141 13 mm  
 E20-142 21 mm



**Jensen-(Lu)**  
 Posterior Capsule Polisher  
 23GA/0.6 x 25 mm curved tube,  
 roughened olive tip with front port  
 E20-145 reusable  
 124-23 disposable



**Capsule Polisher**  
 25 mm tube, angled 10 mm,  
 roughened olive tip, front port  
 126-23 23GA/0.6 mm  
 126-25 25GA/0.5 mm

disposable cannulae, sterile, 10 per box

# GAUGE CONVERSION CHART AND ISO 6009 COLOUR CODING



**Natural (Clear)**  
30GA/0.30 mm, ID 0.15 mm  
(not ISO colour coded)

**Grey**  
27GA/0.40 mm, ID 0.20 mm

**Brown**  
26GA/0.45 mm, ID 0.25 mm

**Orange**  
25GA/0.50 mm, ID 0.25 mm

**Purple**  
24GA/0.55 mm, ID 0.30 mm

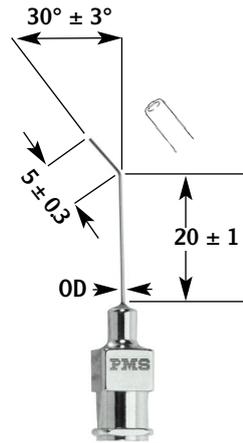
**Blue**  
23GA/0.60 mm, ID 0.33 mm

**Black**  
22GA/0.70 mm, ID 0.41 mm

**Green**  
21GA/0.80 mm, ID 0.51 mm

**Yellow**  
20GA/0.90 mm, ID 0.60 mm

**Cream**  
19GA/1.10 mm, ID 0.70 mm



**Rycroft**  
Air Injection Cannulae  
E20-030 30GA/0.30 mm  
E20-027 27GA/0.40 mm

CATARACT INSTRUMENTS



**CATARACT (ECCE) SET**

**CATARACT INSTRUMENTS**



**E40-011**



**E25-200**



**E30-460**



**E30-623**



**E20-300**

**E40-011 Barraquer Speculum, page 54**

**E20-001 Bishop-Harmon Irrigator, page 72**

**E40-554 Castroviejo Eye Caliper, page 57**

**E35-010 Blade Breaker and Holder, page 18**

**E35-001 Razor Blade (box of 10), page 18**

**E25-050 Castroviejo Scissors, page 141**

**E25-051 Castroviejo Scissors, page 141**

**E25-200 Barraquer Iris Scissors, page 22**

**E25-315 Westcott Stitch Scissors, page 22**

**E25-334 Westcott Tenotomy Scissors, page 22**

**E25-440 Ong Capsulotomy Scissors, page 78**

**E30-051 Barraquer Corneal Forceps, page 23**

**E30-106 Bishop-Harmon Forceps, page 23**

**E30-431 Castroviejo Suture Forceps, page 24**

**E30-460 McPherson Tying Forceps, page 24**

**E30-463 Kelman-McPherson Forceps, page 124**

**E30-581+ Utrata Capsulorhexis Forceps, page 76**

**E30-623 Blaydes Lens Forceps, page 124**

**E15-553 Sinsky IOL Manipulator, page 21**

**E15-565 Kuglen Hook/Manipulator, page 21**

**E40-662 Barraquer Iris Repositor, page 80**

**E20-020ST Lewicky A/C Maintainer, page 72**

**E20-030 Air Injection Cannula, page 73**

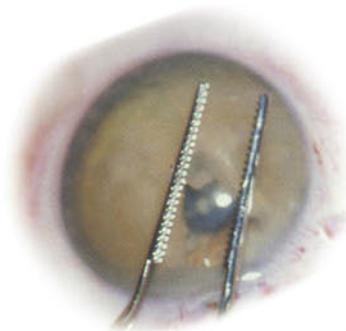
**E20-231 Sheets Irrigating Vectis, page 81**

**E20-300 Simcoe I/A Cannula, page 82**

**E20-145 Jensen Capsule Polisher, page 84**

**E35-132 Castroviejo Needle Holder, page 25**

**E35-231 Micro Needle Holder, page 25**



**E30-567**

**FOR MANUAL PHACO FRACTURE ADD**

- E15-432T Nucleus Trisector, angled, page 100
- E15-442T Nucleus Cutting Platform, page 100
- E30-562T Nucleus Splitter Forceps, page 101
- E30-567** Nucleus Fragment Forceps, page 101

**FOR STERILE FIELD PREPARATION ADD**

- E25-556** Knapp Utility Scissors, page 16
- E30-934** Dieffenbach Serrefine, page 16
- E30-902 Halstead Artery Forceps, page 16
- E30-965 Baby Jones Towel Clamp, page 16



**E25-556**



**E30-934**

**FOR FLUID DISTRIBUTION ADD**

- E20-805 All Glass Syringe, page 20
- 300-03SP** Disposable Syringe, page 89
- E20-880 Irrigating Handpiece, page 83
- E20-881 Aspirating Handpiece, page 83



**300-03SP**

**MISCELLANEOUS PRODUCTS ADD**

- 30601 Eye Spears, page 27
- E45-113** Sterilising Tray  
(see section)

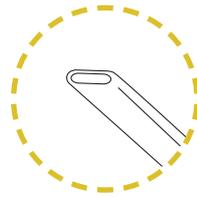


**E45-113**



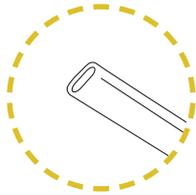
**PHACO CHOICES - HYDRODISSECTION CANNULAE**

**CATARACT INSTRUMENTS**



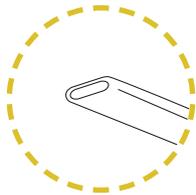
**Helsinki**  
Nucleus Hydrodissector  
27GA/0.4 x 20 mm tube  
with horizontal flattened tip

**E20-201** reusable  
**118-27** disposable



**Sautter**  
Nucleus Hydrodissector  
27GA/0.4 x 20 mm tube  
with vertical flattened tip

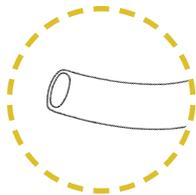
**E20-203** reusable  
**118-27S** disposable



**Pearce**  
Nucleus Hydrodissector  
25GA/0.5 x 20 mm tube,  
angled 7 mm flattened tip

**E20-205**

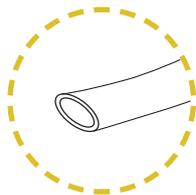
Flattened tip cannulae allow for smooth insertion beneath the capsulorhexis edge. Fluid is distributed in a fan-like effect all around the capsular bag for effective hydrodissection.



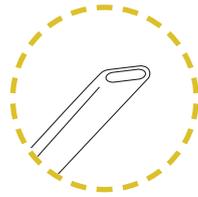
**Kellan**  
Hydrodissection/Hydrolineation Cannula  
25GA/0.5 x 20 mm curved tube

**E20-211** flattened blunt tip  
for hydrodissection

**E20-213** bevelled blunt tip  
for hydrolineation



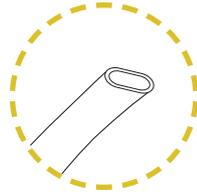
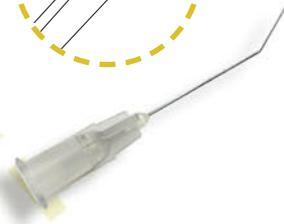
disposable cannulae, sterile, 10 per box



**Hydrodissection Cannula**  
25 mm tube, angled 7 mm flat tip

113-25 25GA/0.5 mm

113-27 27GA/0.4 mm



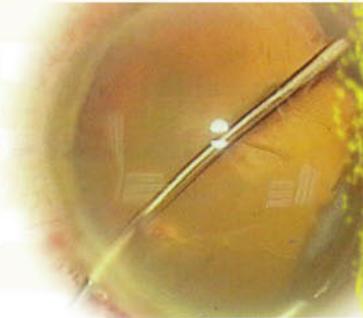
**Nichamin**  
Nucleus Hydrodissector  
25 mm tube, formed 12 mm flat tip

113-25F-12 25GA/0.5 mm

113-27F-12 27GA/0.4 mm



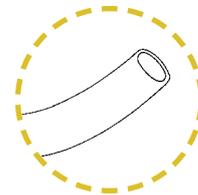
BSS or viscoelastic material is injected slowly and continuously until the "wave" of dissection is visible on the posterior capsule. Injection of the mentioned solutions are continued until luxation of the nucleus begins.



**Tübingen**  
Hydrodissection Cannula  
25 mm tube, curved round tip

313-27 27GA/0.4 mm

313-30 30GA/0.3 mm

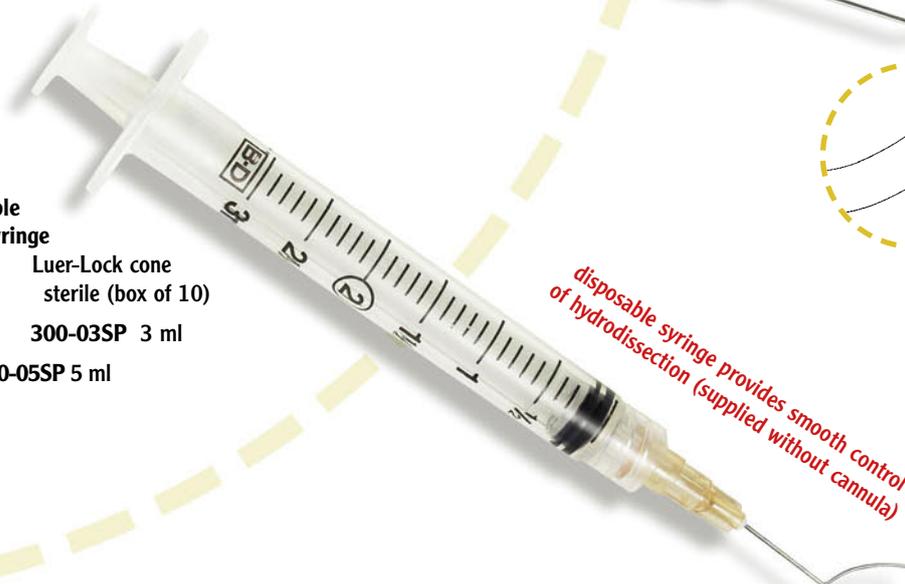


**Disposable**  
Syringe

Luer-Lock cone  
sterile (box of 10)

300-03SP 3 ml

300-05SP 5 ml



*disposable syringe provides smooth control  
of hydrodissection (supplied without cannula)*

disposable cannulae, sterile, 10 per box



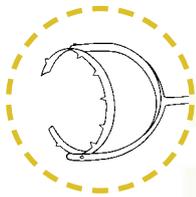
super instruments to achieve excellent fixation of the globe during construction of the Paracentesis, Phaco Incision, AK Incision, Limbal Relaxing Incision and during Lens Implantation



**Fyodorov**  
Phaco Fixation Ring  
3/4 open swivel ring, with atraumatic concentric rings, 11.5 mm ID, 13.0 cm

**E10-511T**

for atraumatic fixation of the eye during phaco



**Fine-Thornton**  
Phaco Fixation Ring  
3/4 open swivel ring, with multiple blunt teeth, 13.0 cm

**E10-513** 13 mm ID  
for clear cornea incision

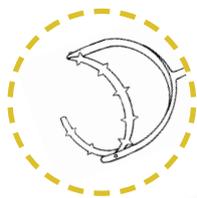
**E10-516** 16 mm ID  
for scleral tunnel incision



**Fine-Thornton**  
Phaco Fixation Ring  
3/4 open swivel ring, multiple, blunt teeth

**E10-513T** 13 mm ID  
for clear cornea incision

**E10-516T** 16 mm ID  
for scleral tunnel incision



**Gimbel**  
LASIK Stabilising Ring, 3/4 open swivel ring, blunt teeth on both sides, 13 mm ID, 13.0 cm

**E10-517**

for stabilizing either the right or the left eye during LASIK

## PHACO CHOICES - EYE SPECULAE

PMS



**Mellinger**  
Universal Eye Speculum  
self-retaining, fenestrated blades  
E40-056 adult size, 6.8 cm  
E40-057 child size, 5.5 cm



**Mellinger**  
Phaco Eye Speculum  
self-retaining, open blades, 6.8 cm  
E40-060

for use with Phaco or I/A tips



these speculae provide unobstructed access to the globe during phaco and other eye surgical procedures

**Kershner Style**  
Reversible Eye Speculum  
fenestrated blades, 7.7 cm  
E40-106



can be used either on the nasal or temporal side

**Kershner Style**  
Reversible Eye Speculum  
thin solid blades, 7.7 cm  
E40-105



CATARACT INSTRUMENTS



**New**

**CATARACT INSTRUMENTS**

*EZCut®*

**Diamond Phaco Knives**  
lancet shaped 60° blade  
(double edge)

**E10-322 2.8 mm**

**E10-323 3.0 mm**

**E10-324 3.2 mm**



**for Clear Corneal and Scleral Incisions**

Angled diamond knives in new titanium handle,  
spring action bayonet style.

*EZCut®*

**Diamond Clear Cornea Knives**  
keratome shaped 60° blade  
(4 cutting edges)

**E10-342 2.8 mm**

**E10-343 3.0 mm**

**E10-344 3.2 mm**



*EZCut®*

**Diamond Trapezoid Knives**  
taped spear shaped blade  
(double lancet)

**E10-352 2.0-2.3 mm**

**E10-353 2.6-3.0 mm**

**E10-354 2.8-3.2 mm**



*EZCut®*

**Diamond Tunnel Knives**  
crescent shaped (9 facet) blade

**E10-391 1.5 mm**

**E10-392 2.0 mm**



Individual Designs and Special Mountings on Request.

## PHACO CHOICES - SAPPHIRE KNIVES

PMO



*New*

**EXCELLENT BACK UP for  
expensive diamond knives**



blade shapes	width in mm	removable holder with sapphire blade
	2.8	E10-2222
	3.0	E10-223
	3.2	E10-224
	2.8	E10-242
	3.0	E10-243
	3.2	E10-244
	2.5/2.9	E10-252
	2.5/3.2	E10-253
	2.5/3.4	E10-254
	1.5	E10-291
	2.0	E10-292
	2.8	E10-293

Sapphire blade is fully mounted in a stainless steel shaft with thread



Coloured handles for above sapphire blades are shown on page 66. When ordering, specify desired handle and blade.



**EZWash®  
Sterilising Tray  
E45-113**

excellent for safe positioning of sapphire and diamond knives

CATARACT INSTRUMENTS



we have shown all Nucleus Manipulators, Phaco Choppers/Splitters and Spatulae in this catalogue on ...



...stainless steel handles with stainless steel tips

...titanium handles with stainless steel tips

New

and now PMS offers ...

... colour coded ALL-aluminium handles for a series of EZChange® removable instrument tips from the most popular sideport instruments for Phaco Surgery



**FEATURES AT A GLANCE:**

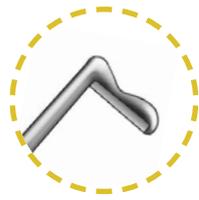
- Lightweight, aluminium handle, 9.0 cm
- Optimal round handle for optimal balance and perfect control
- Colour coded for easy identification
- Handles and tips are sold separately
- Available in five colours:

**Product code for handles only**

- E15-100 AY yellow
- E15-100 AR red
- E15-100 AG green
- E15-100 AB blue
- E15-100 AP purple



Do not use acid or alkali detergents or any kind of abrasives for cleaning the aluminium handle. Never use balanced salt solution for rinsing.



**Fukasaku  
Phaco Splitter and Iris Pusher  
E15-653R**



**Rosen  
Phaco Splitter  
E15-655R**



**Jaffe-Bechert  
Nucleus Rotator  
E15-423R**

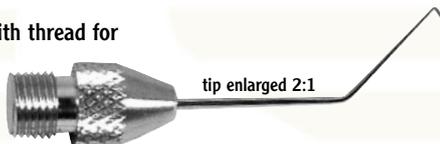


**Drysdale  
Nucleus Manipulator  
E15-465R**



**Nagahara  
Phaco  
Chopper  
E15-656R 60° cutting edge  
E15-659R 90° cutting edge**

instrument tip with thread for absolute secure locking; shaft and tips are from one-piece stainless steel



**Koch  
Phaco  
Chopper  
E15-657R**



**Chang  
Nucleus Manipulator  
E15-464R**



**Seibel  
Phaco Chopper  
E15-669R**



**Barrett  
Nucleus Rotator/  
Manipulator  
E15-466R**



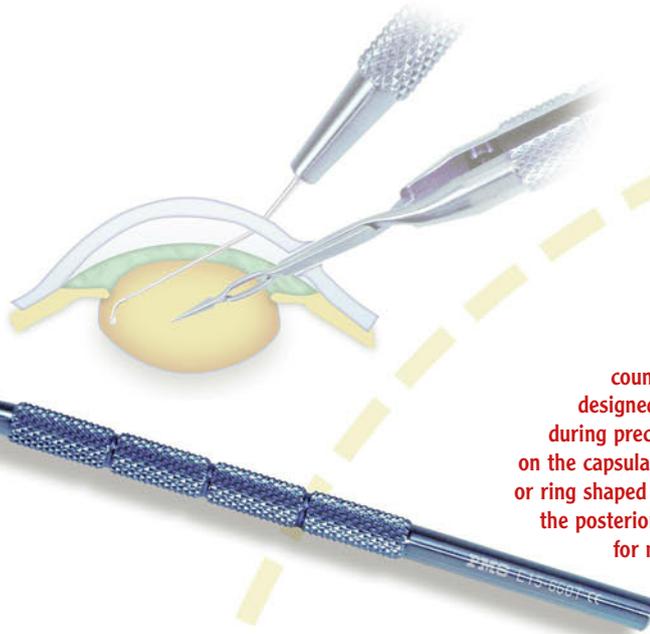
**"Connor Wand"  
Nucleus Manipulator  
E15-467R**

for detailed product description, please see page 34, 36 and 80



**PHACO CHOICES - AKAHOSHI STYLE NUCLEUS SUSTAINERS**

**CATARACT INSTRUMENTS**



**Nucleus Sustainers** are ideal to use with the Akahoshi Style Prechopper series for the counter prechop technique. They are designed to support the harder nucleus during prechopping. This will reduce stress on the capsular bag and zonules. The ball-like or ring shaped tips offer optimal protection of the posterior capsule, and can also be used for manipulating the iris, nucleus and IOL's, etc.

**Nucleus Sustainer**

0.4 mm microball tip, angled 1.5 mm, 12.0 cm

**E15-660T**

helps to reduce the stress on the capsular bag and zonules



**Nucleus Sustainer**

olive tip, angled 1.9 mm, 12.0 cm

**E15-661T**

for stable nuclear support during prechopping



**Nucleus Sustainer**  
1.0 mm dia ring,  
angled 2.5 mm, 12.0 cm

**E15-662T**

for maximum protection of the posterior capsule

**NOTE:** Stainless steel shafts and tips



**Nucleus Splitter/  
Completer**

1.5 mm dia. ring  
shaped jaws, 12.2 cm

**E30-572T**

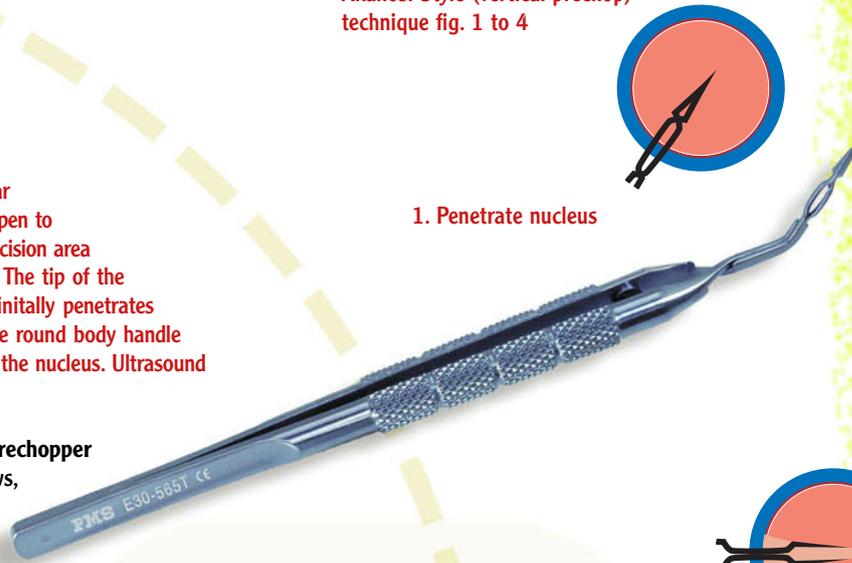
the latest development,  
suitable for all prechopping  
techniques



schematic representation of the Akahoshi Style (vertical prechop) technique fig. 1 to 4

**Prechopper**  
 Forceps are designed to crack the nucleus into four or more fragments in the capsular bag. The shanks of the forceps open to a maximum of 1.8 mm at the incision area while the tips open to 2.8 mm. The tip of the forceps has a sharp point that initially penetrates the nucleus. When squeezing the round body handle the tips open to crack and split the nucleus. Ultrasound time can be reduced by 50 %.

**Universal Prechopper**  
 paddle style jaws,  
 sharp tips, 12.2 cm  
**E30-564T** straight  
**E30-565T** angled  
 for medium to hard nucleus



1. Penetrate nucleus

**Sharp Prechopper**  
 triangular style jaws,  
 sharp pointed tips, 12.2 cm

**E30-566T** straight  
**E30-567T** angled

for hard nucleus, sharp pointed tips are used to insert into the dense nucleus, and performing initial prechopping



2. Split nucleus in two

**Karate Prechopper**  
 paddle style TC jaws,  
 angular sharp edge on top,  
 blunt edge on the bottom, 12.2 cm

**E30-568T**

for vertical prechop of soft to medium nucleus



3. Rotate each half 90°

**Hybrid Prechopper**  
 hooked jaws with  
 sharp angular edge,  
 12.2 cm

**E30-569T**

for initial split and prechopping nucleus (grades 1-4)



4. Split the halves into quarters

Tip drawings of forceps are shown on page 38 and 39



**E40-100**



**E10-690T**



**E25-435**



**E30-581+**



**E30-661**

**E42-113 CATARACT PHACO SET**  
complete, consisting of one each:

**E20-001** Bishop-Harmon Irrigator, page 72

**E40-100** Lieberman Eye Speculum, page 55

**E10-513** Phaco 3/4 Fixation Ring, page 56

**E10-690T** Maloney Keratometer, page 33

**E40-554** Castroviejo Eye Caliper, page 57

**E10-123** Sapphire Phaco Knife, page 64

**E10-113** Sapphire Universal Knife, page 65

**E25-333** Westcott Tenotomy Scissors, page 59

**E25-400** Vannas Capsulotomy Scissors, page 78

**E25-435** Stern-Gills Capsulotomy Scissors, page 79

**E30-051** Barraquer Colibri Forceps, page 23

**E30-110** Delicate Dressing Forceps, page 23

**E30-431** Castroviejo Suture Forceps, page 24

**E30-463** Kelman-McPherson Forceps, page 122

**E30-581+** Utrata Capsulorhexis Forceps, page 76

**E30-661** Livernois Soft IOL Folder, page 123

**E30-663** Ernest-McDonald IOL Inserter, page 125

**E15-423** Jaffe-Bechert Nucleus Rotator, page 21

**E15-501** Lester Lens Pusher, angled, page 21

**E15-565** Kuglen Hook/Manipulator, page 21

**E15-656** Nagahara Phaco Chopper, page 21

**E20-030** Air Injection Cannula, page 73

**E20-151** Simcoe Cortex Extractor, page 83

**E20-205** Pearce Hydrodissector, page 88

**E20-300** Simcoe I/A Cannula, page 82

**E35-231** Barraquer Needle Holder, page 25



**E20-441**

**FOR BIMANUAL CORTICAL CLEAN UP**

**E20-441** Irrigating Handpiece, page 112

**E20-452** Aspirating Handpiece, page 113

**FOR COUNTER PRECHOPPING TECHNIQUE**

**E15-662T** Akahoshi Nucleus Sustainer, page 96

**E30-566T** Akahoshi Sharp Prechopper, page 97

**FOR MICRO INCISION CATARACT SURGERY**

**E10-170** Sapphire Micro Incision Knife, page 120

**E25-623S** Alio Micro Incision Scissors, page 121

**E30-623S** Micro Capsulorhexis Forceps, page 121

**FOR FOLDABLE LENS IMPLANTATION**

**LP604240M** Viscoject® Cartridge, page 126

**E30-651** EZJect® Lens Injector, page 126

**FOR SMALL PUPIL MANAGEMENT**

**E15-573** Pupil Dilator, page 106

**IRIS-1000** Iris Retractor, page 107

**MISCELLANEOUS PRODUCTS**

**30601** Eye Spears, page 27

Sterilising Trays (see section)





**PHACO CHOICES - MANUAL FRACTURE INSTRUMENTS**

The **KANSAS-ALFONSO** instruments for manual phaco fracture techniques offer several important benefits.



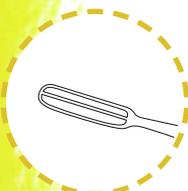
**Kansas-Alfonso**  
Nucleus Bisector  
angled 10 mm blade,  
sharp cutting edge on  
the vertical plane,  
11.0 cm  
**E15-431T**

used to split the nucleus in two parts



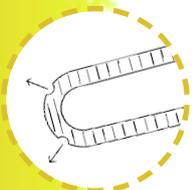
**Kansas-Alfonso**  
Universal Nucleus Trisector  
angled semicircular blade with  
sharp cutting edges, 11.0 cm  
**E15-432T** 1.5 mm wide  
**E15-433T** 2.5 mm wide

used to divide the nucleus in three parts



**Kansas-Alfonso**  
Universal Cutting Platform  
angled 10 mm solid blade, 11.0 cm  
**E15-442T** 2 mm wide  
for use with E15-432T  
**E15-443T** 3 mm wide  
for use with E15-433T

used to slide under the nucleus and act as a cutting platform for Bisector and Trisector



**Alfonso-Hoffmann**  
Irrigating Nucleus Fragment Cannula  
25GA/0.5 mm loop with fine  
serrations, two front ports  
**E20-242** 2 mm wide  
**E20-243** 3 mm wide

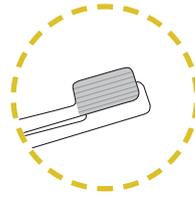
ideal to remove nuclear fragments

**McIntyre**  
Irrigating Handpiece, titanium,  
male/female Luer fittings  
**E20-882T**

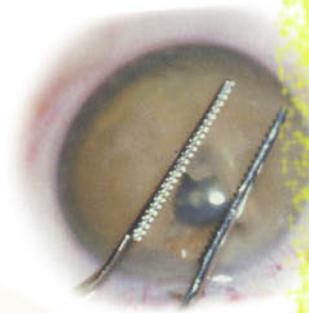
- It can be performed through a small incision, thereby resulting in minimum astigmatism and rapid recovery.
- It functions well with hard and soft nucleus.
- It requires low investment in instrumentation.
- It provides a very good backup when complications arise and Phacoemulsification must be discontinued.
- Also important, it requires no sutures and stitches.



**Salz**  
**Nucleus Cracking Forceps**  
 cross-action shanks with finely serrated paddle style tips, 7.5 cm  
**E30-562T** 1.1 x 2.5 mm tips  
**E30-563T** 1.7 x 2.8 mm tips



used to crack the nucleus through an incision size as small as 2.5 mm



**Kansas**  
**Nucleus Removal Forceps**  
 angled 10 mm jaws with extra delicate multiple teeth, 10.5 cm  
**E30-567TK** titanium  
**E30-567** stainless steel



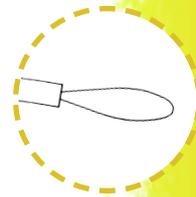
used to remove nuclear fragments and large cortical debris

**Alfonso**  
**Nucleus Fragment Forceps**  
 angled 10 mm jaws, 2 short rows of delicate interlocking teeth, 10.5 cm  
**E30-567TA**

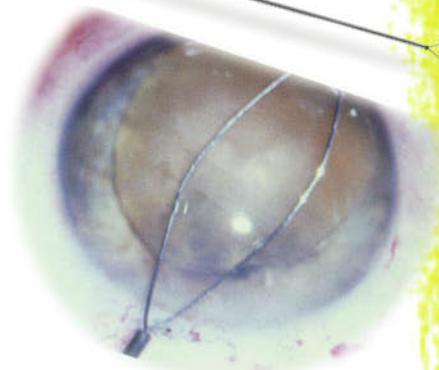


used to extract nuclear fragments

**Keener**  
**Lens Nucleus Divider**  
 with set of snare wire  
**E15-450**  
**E15-452** replacement snare wire (set of 2)

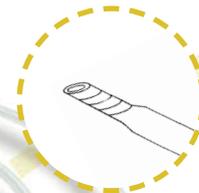


used to divide the nucleus in two or more segments





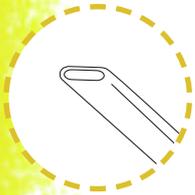
A combination of the E20-020ST Lewicky Chamber Maintainer and E20-152 Simcoe Cortex Aspirating Cannula can be used to remove the anterior cortex and epinucleus through a side port incision at 11 and 2 o'clock.



A E20-055 cannula is used to inject viscoelastic, which is mandatory in MIC surgery to protect the endothelium from being touched by the relatively large nuclear fragments.



E20-033 and E20-034 Rainin Irrigating Cannulae are ideal to create a separation plane between the nucleus and the posterior cortical position of the lens.



After hydrodissection, the anterior pole of the nucleus is partially prolapsed into the anterior chamber using a E15-565 Kuglen Hook.



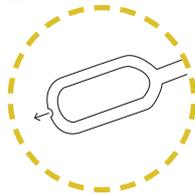
**Irrigating Vectis**  
27GA/0.4 mm x 30 mm tube,  
3 mm wide loop with 0.3 mm port,  
single use, sterile (box of 10)  
140-27-1



designed for small incision surgery;  
ideal to remove nuclear fragments



**Cortex Aspirating Cannulae**  
26GA/0.45 mm x 20 mm tube,  
angled 5 mm J-shaped tip, front port  
E20-064 straight  
E20-065 angled left  
E20-066 angled right



ideal for retracting the iris, and  
aspirate the cortex between  
10 and 2 o'clock



You can also use other surgical techniques and instrumentation.

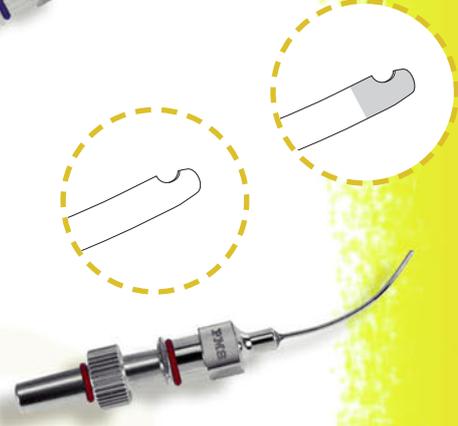


**EZFit®**  
 Irrigation Cannula with female/male LL connector and 21GA/0.8 x 21mm curved tube, smooth tip, dual 0.4 mm side ports  
**E20-431EF**



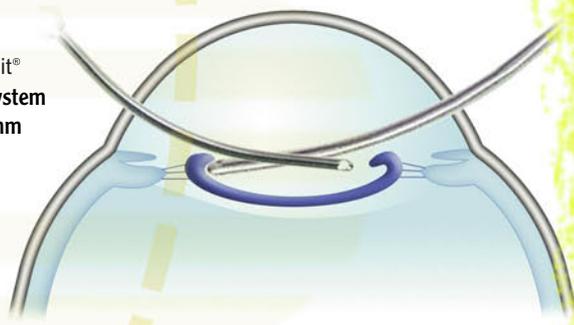
cannulae and connectors have coloured rings:  
**BLUE** stands for irrigation - **RED** for aspiration

**EZFit®**  
 Cortex Aspiring Cannula with male/male Luer connector 21GA/0.8x21mm curved tube with 0.4 mm top open port  
**E20-432EF** smooth tip  
**E20-433EF** rough tip

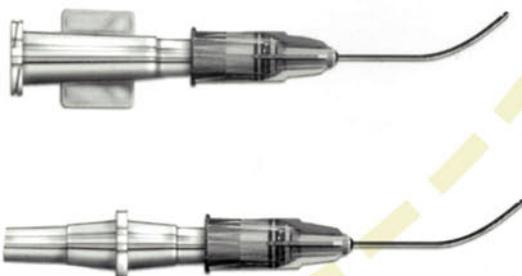


21GA/0.8 curved tip facilitates cortex clean up; when used with irrigating handpiece, complete 360° removal of cortex is possible

**EZFit®**  
 Bimanual I/A Cortex Removal System consisting of 1 piece each 21GA/0.8 mm Irrigating cannula, dual 0.4 mm side ports, Aspiring cannula, single 0.4 mm top port  
**E20-434EF** system with smooth aspirating tip  
**E20-435EF** system with rough aspirating tip



can be attached to an I.V. Line, on a syringe or on an irrigation handpiece while maintaining the chamber



**Bimanual I/A Cortex Removal System**  
**\*192-23** IRRIGATION 21GA x 1" (25mm)  
 TWO .4mm PORTS WITH FEMALE CONNECTOR  
 ASPIRATION 23GA x 1" (25mm)  
 ONE .4mm PORT .5mm FROM TIP WITH MALE CONNECTOR

MALE AND FEMALE CONNECTORS ARE COMPATIBLE WITH I/A AND PHACO SYSTEMS. ALLOWS CORTEX REMOVAL THROUGH PARACENTESIS OR PHACO INCISION WHILE MAINTAINING THE CHAMBER WITH IRRIGATION.

\*  **Manufacturer:**  
 EAGLE LABS  
 Rancho Cucamonga,  
 California, USA

\*disposable products, sterile, 10 per box

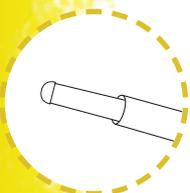


side view of the micro punch head

for Viscocanalostomy,  
Canaloplasty and other  
Trabeculectomy procedures

**EZCut®**  
Micro Membrane Punch  
titanium "direct action" handle,  
19GA/1.1 x 15 mm straight shaft,  
micro 0.75 mm dia. head with  
0.5 mm deep bite, 13.0 cm  
**E40-994T**

for primary trabeculectomy without iridectomy; best to  
use after phaco having filled the chamber with viscoelastic



**EZCut®**  
Kelly Decemet's Membrane Punch  
micro 1.1 mm dia. head with  
0.75 mm deep bite, 13.0 cm  
**E40-992T** titanium handle  
**E40-992** all stainless steel

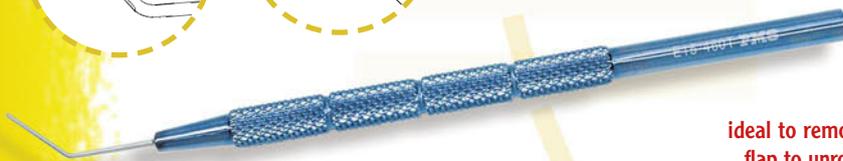
for easy insertion through small incisions



**USC Scleral Shaver**  
angled 10 mm sharp blade, single cutting edge, 11.0 cm  
**E15-221T**

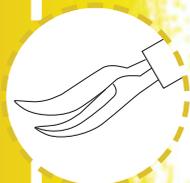
**USC Scleral Planer**  
angled 10 x 1 mm wide blade,  
dual cutting edges, 11.0 cm  
**E15-222T**

ideal to remove layers of sclera on the base of the second  
flap to unroof Schlemm's Canal in a non-invasive manner



**Nishi Style**  
Schlemm's Canal Scissors  
removable tip, 20GA/0.9 x 25mm curved tube,  
thin curved blades, 14.5 cm  
**E25-621N**

for cutting scleral tissue  
adhering to Schlemm's canal





*Schott Lid Speculum*

dual function,  
retracts and lifts lids without pressure on the globe

E40-001 fenestrated  
E40-003 solid blades

*Diamond 7-Step Knife*

retractable, tapered spear shaped blade (1 mm wide), steps:  
0.15, 0.2, 0.25, 0.37, 0.4, 0.5 and 4.0 mm fully extended

E10-367

to create the initial and second flap of the USC procedure  
when the micrometer is set at 0.3 mm

*Luntz-Dodick Punch*

bullet shaped head for easy entry into the scleral tunnel,  
rotatable tip can be preset to cut in one of four directions

E40-995 all stainless steel

E40-995T on titanium handle

Retrograde cutting edge is ideal to engage the scleral lip at the  
base of the tunnel and cuts 0.5 mm bites of tissue for small and  
large trabeculectomies.

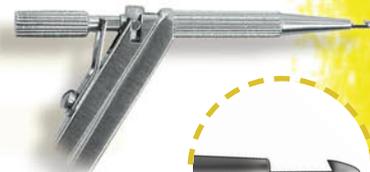


image of punch head  
in cutting position

**E42-114 PHACO-TRABECULECTOMY SET**

Consisting of E40-001, E10-367, E40-995  
and one each of the following instruments:

E40-554 Castroviejo Eye Caliper, page 57

E25-200 Barraquer Iris Scissors, page 22

E25-333 Westcott Tenotomy Scissors, page 59

E30-051 Barraquer Colibri Forceps, page 23

E30-241T Fechtner Conjunctiva Forceps, page 60

E35-251T Barraquer Micro Needle Holder, page 46

EG-1020 Phaco Slit Knife (Sub 2.0 mm), page 63

EG-9402 Crescent Style Tunnel Knife, page 63

30601 Sugi® Disposable Eye Spears, page 27

14-5006 Intraocular Cautery Pencil, see VR section

14-5004 Cautery Pencil, see MVR section

E45-321 EZLoad® Sterilisation Container

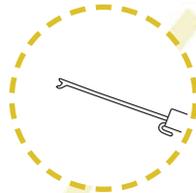
E45-111 EZWash® Sterilising Tray



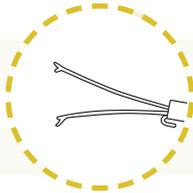
*Beehler Style  
Small Pupil  
Dilators*



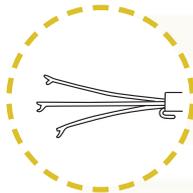
**for micro incision**  
20GA/0.9 mm straight tube,  
1 finger for 2 points dilation  
E15-571



**for small incision**  
18GA/1.2 mm straight tube  
2 fingers for 3 points dilation  
E15-572



**for 3 mm incision**  
16GA/1.6 mm curved tube,  
3 fingers for 4 points dilation  
E15-573

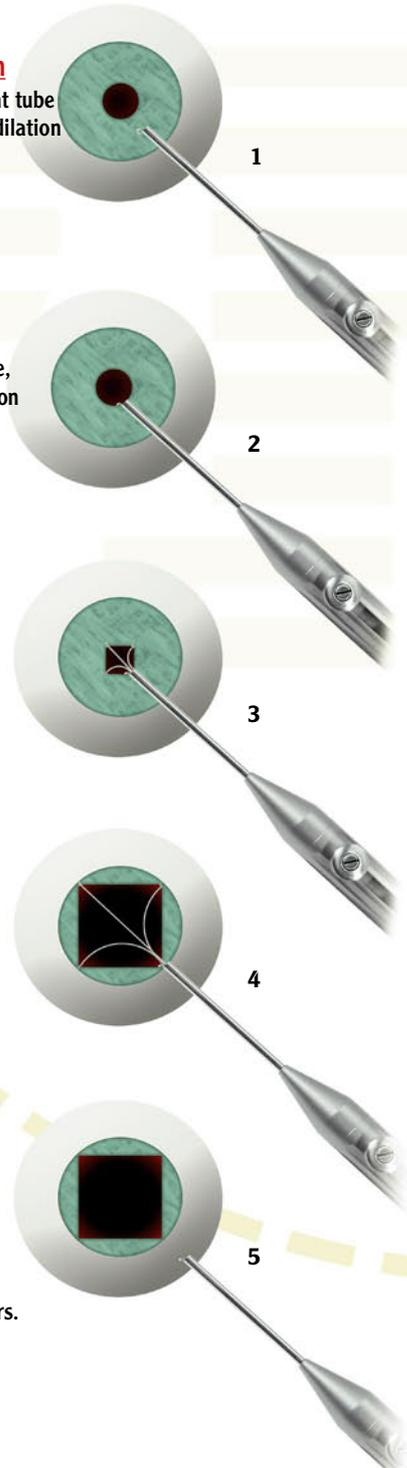


**NOTE:**  
This instrument is ineffective on an eye which has not been properly medicated preoperatively.

The Beehler Style Pupil Dilators enlarge small pupils to 6-7 mm without additional incision:

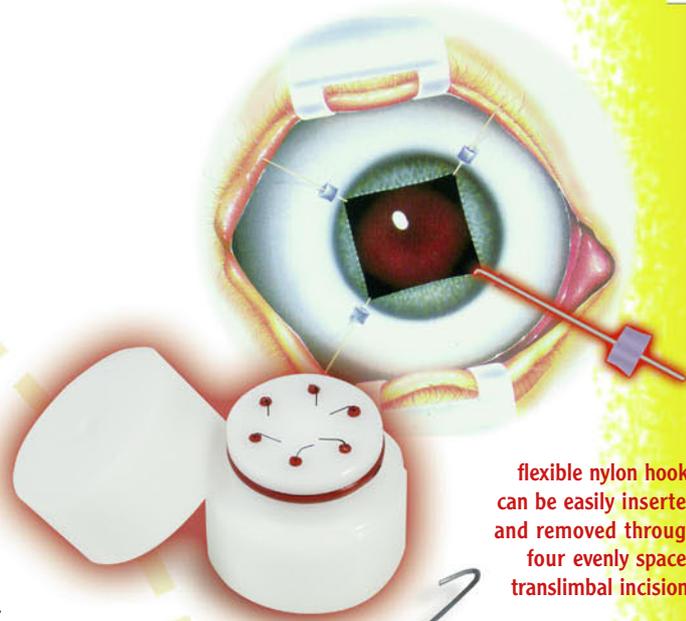
1. Tubular shaft fits easily through a side port or standard phaco incision.
2. After entering, the instrument is turned 90° and the external micro hook is engaging the 12 o'clock pupil margin.
3. A simple -thumb controlled- activation of three microfingers results in a 4 points symmetrical and simultaneous dilatation.
4. The pupil is gently dilated to the limbus.
5. The tip is then removed, leaving a widely dilated pupil for the remainder of the case.

Not only is the instrument easy to use, but it's atraumatic pupil dilatation eliminates the need for costly and time consuming disposable iris retractors.





*IrisMate®  
Translimbal Iris  
Retractors*



- \*IRIS-1000 reusable (6 pcs) in autoclavable case
- \*\*IRIS-2000 disposable (5 pcs) in plastic tray

- Ideal for temporary iris dilation.
- Safely used in Aphakic, Pseudophakic and Phakic eyes.
- Works through 0.3 mm - 0.5 mm self sealing incision.
- Specially designed silicone cinch provides superior grip.
- Nylon hook retracts iris with minimal damage to the tissue.
- Cinch is colour coded for easier viewing under microscope.

flexible nylon hooks  
can be easily inserted  
and removed through  
four evenly spaced  
translimbal incisions

all **MEDICAL GRADE** materials

\* Manufacturer:  
Howard Instruments, Inc.  
Tuscaloosa, AL  
USA

\*\* Manufacturer:  
Biotech Vision Care Ltd.  
Khatraj, Gandhinagar  
India

**Video available**

*Iridectomy  
Instruments for*

**MICS** work well for the removal of fibrotic  
synechia and the creation of micro cuts in the iris



**EZChange®**  
Zaldivar Style Iridectomy Scissors  
removable tip, 20GA/0.9 x 30 mm straight shaft,  
curved 2.0 mm sharp blades, 15.0 cm  
**E25-620Z**

**EZChange®**  
Utrata Style  
Micro Iridectomy Forceps  
removable tip, 20GA/0.9 x 30 mm  
curved shaft, fine grasping tips with  
0.5 mm platforms, 15.0 cm  
**E30-621U**



CATARACT INSTRUMENTS



**PHACO CHOICES - POSTERIOR CAPSULE RUPTURE**

Posterior capsular rupture is a common intraoperative complication that can arise at any stage of phaco surgery. Despite advanced equipment and technology, it is difficult to prevent. With the PMS Emergency Kit #E42-115 you can easily convert to an ECCE and perform a vitrectomy.

**CATARACT INSTRUMENTS**

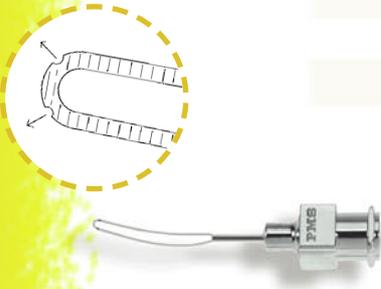


**Gross Sub-Tenon Cannula**  
21GA/0.8 mm gently curved tube, flattened tip  
**E20-687**

for injection of local anesthesia agent

**Infusion Cannula**  
23GA/0.65 mm angled tip attached to silicone tubing with LL adaptor  
**E20-023AT**

to maintain a stable anterior chamber



**Irrigating Lens Loop**  
25GA/0.5 mm x 3 mm wide loop with fine serrations, two front opening ports  
**E20-242**

ideal to remove nuclear fragments



**Bimanual Irrigation Handpiece**  
21GA/0.8 mm x 17 mm cannula, smooth tip, two 0.5 mm side ports  
**E20-441**

for bimanual cortical clean up



**Bimanual Aspiration Handpiece**  
21GA/0.8 mm x 17 mm cannula, rough tip, single 0.3 mm top port  
**E20-452**



**Castroviejo Universal Corneal Scissors**  
curved blunt blades, 10.0 cm  
**E25-013**

for enlarging phaco incision



You can also use other surgical techniques and instrumentation.

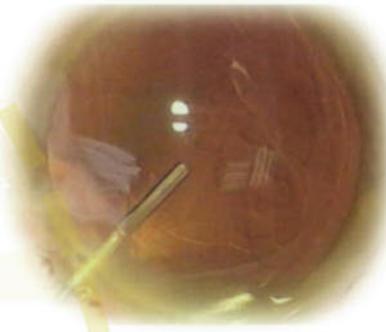
### Capsular Rupture

If a capsular tear does occur several steps can help minimize vitreous loss.



### Viscoelastic Injection

A closed chamber system should be maintained by injecting viscoelastic before withdrawing the phaco tip. This helps to tamponade the vitreous backwards.



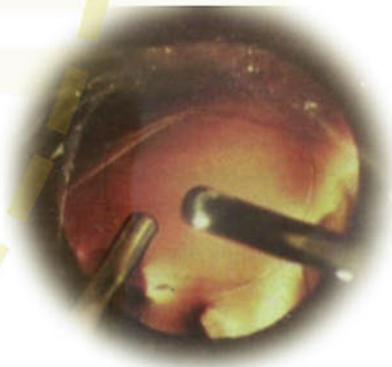
### Cortical Removal

Cortical removal should then be performed with either low infusion or by a dry technique filling the chamber with viscoelastic fluids using conventional cannulae (Simcoe Aspirator E20-151).



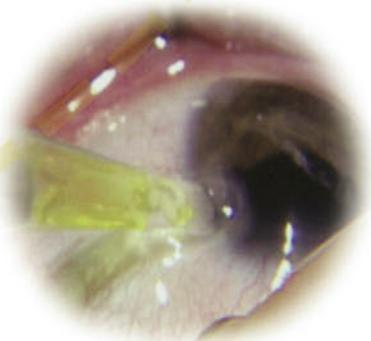
### Bimanual Vitrectomy

If the hyaloid face is broken and vitreous presents through the rupture a routine 2-port mechanised vitrectomy using low flow and low vacuum rates is performed. The tear can then be easily converted into a round and stable opening.



### IOL Implantation

The IOL can then be safely placed into the bag. A 6 mm optic acrylic lens should be used when implanting in the capsular bag as it unfolds slowly, thus causing less stress on the posterior capsule.



You can also use other surgical techniques and instrumentation.



The PMS **EZLock<sup>®</sup>**  
I/A Tip System

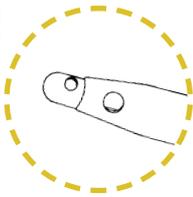
for easy and effective cortex removal

CATARACT INSTRUMENTS



**EZLock<sup>®</sup>**  
I/A Handpiece  
ergonomically handle with  
male/female Luer slip fittings,  
compatible with all I/A and phaco systems

**E20-400EL**



**EZLock<sup>®</sup>**  
I/A Tip straight

**E20-401EL** 0.35 mm port for standard aspiration procedures

**E20-402EL** 0.5 mm port for removal of viscoelastic substances



aspiration of epinucleus with E20-403S I/A tip

**EZLock<sup>®</sup>**  
Aspirating Tips without  
silicone irrigation sleeve

**E20-403ELS** straight

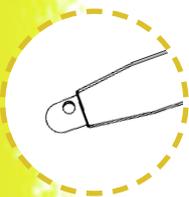
**E20-403ELA** angled 45°

provides tight seal around wound  
and anterior chamber stability



**EZLock<sup>®</sup>**  
Silicone Irrigation Sleeve  
non-sterile (pack of 5)

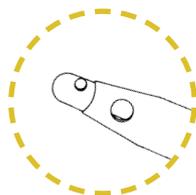
**E20-403ELI**



**EZLock<sup>®</sup>**  
I/A Tip curved

**E20-404EL**

for initial  
cortex removal



## MONOMANUAL INTERCHANGEABLE I/A TIP SYSTEM...

PMS



...makes the monomanual technique convenient and effective.

**EZLock®** mechanism allows quick exchange of the various tips and guarantees safe positioning during surgery.

### PMS **EZLock®**

removable I/A tips have 16GA (1.6 mm OD) irrigation tube with 0.9 mm dual side ports and 21GA (0.8 mm OD) inner cannula with 0.35 mm aspirating port. Other sizes also available on request.



**EZLock®**  
I/A Tip angled 45°

**E20-405EL**

for peripheral cortex removal

removal of peripheral cortex



**EZLock®**  
I/A Tip angled 90°

**E20-406EL**

for peripheral and superior cortex removal



O-Ring Replacement Set  
for **EZLock®** I/A tips  
5 each rings 2x1, 3x1  
and 5x1 mm, (pkg/15)



**E20-410**

**EZFit®**  
Luer-Lock Adaptor  
female/male fittings

**E20-420EF**



**EZFit®**  
Luer Adaptor  
2 x male fittings  
**E20-421EF** reusable

**191-01** disposable (box of 50)



adaptors to fit any conventional  
cannulae (reusable and disposable)

male and female connectors are  
compatible with I/A and  
phaco systems

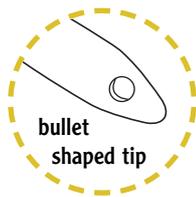
**EZFit®**  
Luer-Lock Adaptor  
2 x female connectors  
**E20-422EF**



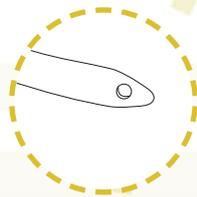
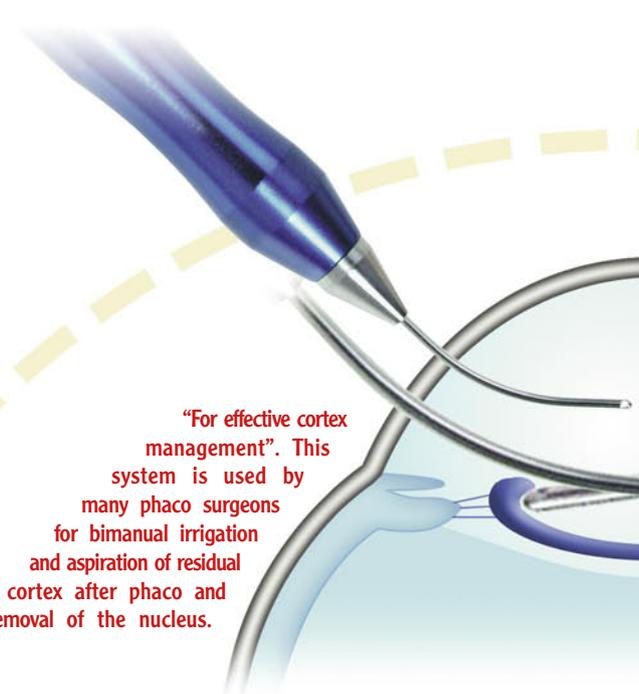
CATARACT INSTRUMENTS



**IRRIGATION**

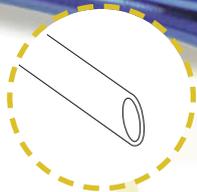


“For effective cortex management”. This system is used by many phaco surgeons for bimanual irrigation and aspiration of residual cortex after phaco and removal of the nucleus.



**EZFlo®**  
Irrigation Handpiece  
21GA/0.8 x 17 mm round cannula,  
dual 0.5 mm side open ports  
E20-441 smooth tip  
E20-442 rough tip

bullet shaped tip for easy entry through 1.2 mm paracentesis



**EZFlo®**  
Irrigation Handpiece  
20GA/0.9 x 17 mm round cannula  
E20-446 0.6 mm front port  
E20-447 dual 0.65 mm side ports

20GA cannulae with large ports for maximum irrigation



**EZFlo®**  
Irrigation Handpiece  
0.55 x 0.95 x 17 mm elliptical cannula,  
smooth tip with 0.55 mm anterior port  
E20-445

oval, smooth tip for improved wound seal



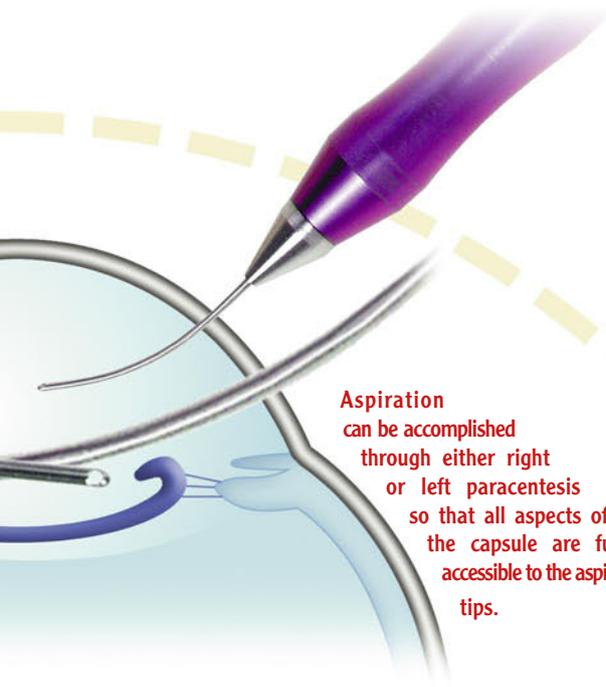
**EZFlo®**  
Irrigation Handpiece  
male/female Luer fittings  
E20-440

for standard reusable and disposable cannulae

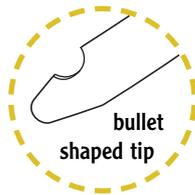
**CATARACT INSTRUMENTS**



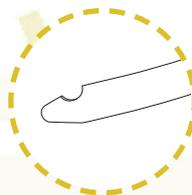
# ASPIRATION



Aspiration can be accomplished through either right or left paracentesis so that all aspects of the capsule are fully accessible to the aspirating tips.

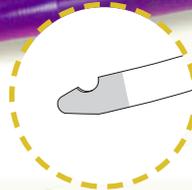
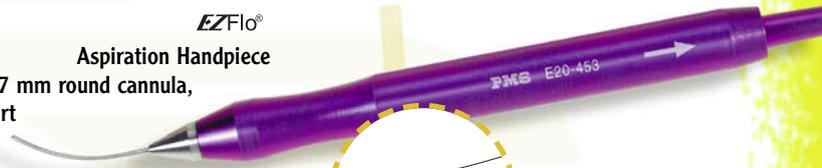


**EZFlo®**  
Aspiration Handpiece  
21GA/0.8 x 17 mm round cannula  
0.3 mm top open port  
E20-451 smooth tip  
E20-452 rough tip



for standard aspiration procedures

**EZFlo®**  
Aspiration Handpiece  
21GA/0.8 x 17 mm round cannula,  
0.4 mm top open port  
E20-453 smooth tip  
E20-454 rough tip



for aspiration and capsule polishing

**EZFlo®**  
Aspiration Handpiece  
0.55 x 0.95 x 17 mm elliptical cannula,  
smooth tip, 0.3 mm top open port  
E20-455



for easy glide through side port incision

**EZFlo®**  
Aspiration Handpiece  
male/male Luer fittings  
E20-450



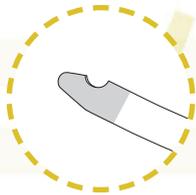
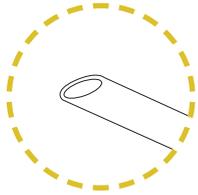
for standard reusable and disposable cannulae

# CATARACT INSTRUMENTS

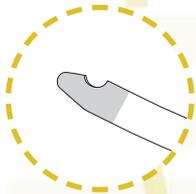
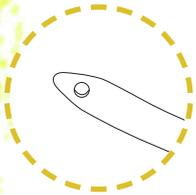


**FEATURES AT A GLANCE**

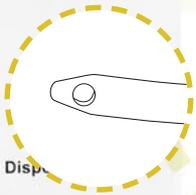
- Single use, sterile product.
- No risk of cross contamination.
- Lightweight, colour coded handles.
- Bullet shaped tip for easy tunnel insertion.
- Irrigation front open port or dual side ports.
- Aspiration port of 0.35 mm diameter.
- Roughened tip for capsule polishing.



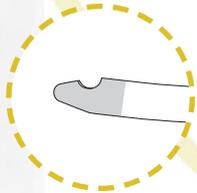
Bimanual I/A System 21GA/0.8 mm complete, consisting of 1 piece each:  
 Irrigating handle, 45° front open port  
 Aspirating handle, 0.35 mm diameter  
**BSD 500** system with rough aspirating tip



Bimanual I/A System 21GA/0.8 mm complete, consisting of 1 piece each:  
 Irrigating handle, dual 0.45 mm side ports,  
 Aspirating handle, 0.35 mm top open port  
**BSD 510** system with rough aspirating tip  
**BSD 515** system with smooth aspirating tip



Bimanual I/A System 20GA/0.9 mm complete, consisting of 1 piece each:  
 Irrigating handle, dual 0.65 mm side ports,  
 Aspirating handle, 0.35 mm top open port  
**BSD 560** system with rough aspirating tip  
**BSD 565** system with smooth aspirating tip



disposable products, sterile, 10 per box



## FEATURES AT A GLANCE

- Reusable, xchangeable system
- Easy to clean; handles and tips can be cleaned separately. • EZLock® concept; I/A tips are secured by locking ring.
- Ergonomically designed titanium handpiece.
- Colour coded handpieces and removable tips.

While the irrigation instrument is used as an active rinsing cannula...

**EZLock®**  
Irrigation Handpiece  
titanium, 9.0 cm  
**E20-460**

**EZLock®**  
Irrigation Cannula Tips  
for use with handle E20-460  
21GA/0.8 mm curved tube, dual 0.5 mm side ports  
**E20-461** smooth tip  
**E20-462** rough tip

**EZLock®**  
Irrigating Chopper Tip  
for use with handle E20-460  
20GA/0.9 mm curved tube, 0.5 mm front open port  
**E20-483R**

**EZLock®**  
Aspiration Handpiece  
titanium, 9.0 cm  
**E20-470**

**EZLock®**  
Aspiration Cannula Tips  
for use with handle E20-470,  
21GA/0.8 mm tube, 0.3 mm top port  
**E20-471** smooth tip  
**E20-472** rough tip

...aspiration can be performed in the safe central area of the capsule.



**Your favourite Phaco Chopper is now available with irrigation!**

stainless steel tips are welded for extra durability...



**EZFlo®**  
Nichamin Irrigating Chopper  
“Quick Chop”, wedge shaped tip



**EZFlo®**  
Rosen Irrigating Chopper  
wedge shaped tip, blunt front end

titanium handle with stainless steel tip and shaft, female Luer connector, 9.0 cm



**EZFlo®**  
Nagahara Irrigating Chopper  
0.5 mm front open port  
wedge shaped tip, 60° or 90° cutting edge



**EZFlo®**  
Nagahara Irrigating Chopper  
dual 0.5 mm side ports  
wedge shaped tip, 60° or 90° cutting edge

Aspirating handpieces are ideal for maintaining the fluidic balance in the anterior chamber when used with irrigating phaco choppers and while aspirating residual cortex



**EZFlo®**  
Aspirating Handpieces  
curved 17 mm cannula,  
smooth tip, 0.35 mm top port

E20-450S20 20GA/0.9 mm

E20-450S18 18GA/1.2 mm

The PMS range of EZFlo® standard 20GA and 18GA Irrigating Choppers caters to all types of nucleus and various dividing techniques with tips that are sharp or blunt. Tips with cutting edges for sweeping or backward action, etc.

Product No.	Description	GA	OD (mm)	ID (mm)	Port diameter (mm)	Flow rate*
E20-483	Nichamin, front port	20	≠Ø 0.9 mm	≠Ø 0.5 mm	1 x Ø 0.5 mm	52/min
E20-485	Rosen, front port	20	≠Ø 0.9 mm	≠Ø 0.5 mm	1 x Ø 0.5 mm	52/min
E20-486	Nagahara 60°, front port	20	≠Ø 0.9 mm	≠Ø 0.5 mm	1 x Ø 0.5 mm	55/min
E20-487	Nagahara 60°, dual side ports	20	≠Ø 0.9 mm	≠Ø 0.5 mm	2 x Ø 0.5 mm	50/min
E20-489	Nagahara 90°, front port	20	≠Ø 0.9 mm	≠Ø 0.5 mm	1 x Ø 0.5 mm	55/min
E20-493	Nichamin, front port	18	≠Ø 1.2 mm	≠Ø 0.8 mm	1 x Ø 0.8 mm	75/min
E20-495	Rosen, front port	18	≠Ø 1.2 mm	≠Ø 0.8 mm	1 x Ø 0.8 mm	75/min
E20-496	Nagahara 60°, front port	18	≠Ø 1.2 mm	≠Ø 0.8 mm	1 x Ø 0.8 mm	75/min
E20-497	Nagahara 60°, dual side ports	18	≠Ø 1.2 mm	≠Ø 0.8 mm	2 x Ø 0.8 mm	70/min

\*Flow Rate Test Conditions:

One litre head of water, gravity fed over a vertical distance of one meter through an irrigation line (Ø 2.5 mm) \*These values are estimates only. It is recommended that the surgeon derives his/her own values based on individual clinical experience (positioning of the BSS bottle height).



### FEATURES AT A GLANCE:

- All required instruments in one kit, saves time and costs.
- Elliptical shaped tips provide a better fit to the incision.
  - Less fluid leakage, better anterior chamber stability.
  - Lightweight, titanium handpiece, colour coded: blue for irrigation and magenta for aspiration.
- Standard male/female Luer slip connectors.
  - Compatible with I/A and Phaco systems.
  - Works between 1.2-1.5 mm incision.

**the KEY to successful bimanual ultra-small incision phaco surgery**

**A. Gomes**  
Irrigating Phaco Chopper  
20GA/0.9 mm oval cannula,  
flat tip with front open port  
**E20-484**



**A. Gomes**  
Aspirating Handpiece  
21GA/0.8 mm oval cannula,  
flat tip with front open port  
**E20-457**



**A. Gomes**  
Phaco Needle Tip 30°  
20GA/0.9 mm oval needle,  
inclusive plastic wrench key  
**PTO 1050/A**



for use with  
AMO Sovereign  
B&L Millenium  
Fritz Ruck Pentasys

**A. Gomes**  
USICS Kit  
(supplied in autoclavable case)  
complete, consisting of one each:  
E20-484, E20-457, PTO 1050/A  
**E42-119**



tip enlarged 2:1

**Video available**

CATARACT INSTRUMENTS



### CLEANING AND MAINTENANCE

- Monomanual I/A System
- Bimanual I/A System
- Irrigation Choppers

The above I/A Handpiece systems and Irrigation Choppers are reusable products supplied Non-Sterile. To insure patient safety, handle the instruments carefully and protect from damage. Do not use if damaged in any manner. Do not attempt to alter or repair. Wash, flush, rinse, dry and sterilise prior to initial use & each subsequent use. Assure free flow of rinse solution through instrument.

#### NOTE!

Improper or inadequate cleaning may result in particles adhering to the instrument and exfoliation into the surgical field. In addition, the function and life expectancy may become compromised.

#### CLEANING

##### Before First Use:

Immerse in an alkaline solution/pH >10 at 20°C during 15 min. Afterwards, rinse thoroughly with purified or distilled water.

##### During Use:

Immerse I/A Tip and Irrigation Chopper in sterile distilled water, which will help to prevent blood, tissue or saline (BSS) to dry on instruments.

##### After Use:

##### Irrigation Handpieces & Choppers

1. Fill distilled water in a 10 cc syringe.
2. Attach syringe to the irrigation connector.
3. Expel water and repeat this step.

##### Aspiration Handpieces

1. Connect the cleaning adaptor E20-422 to a disposable or reusable 10 cc syringe.
2. Attach syringe to the aspiration connector
3. Draw distilled water through the aspiration connector into the syringe.
4. Disconnect the syringe and expel water
5. Connect syringe and repeat step 3-4.



Cleaning Adaptor  
2 x Luer-Lock female  
E20-422

### STERILISATION (IS NOT CLEANING)

- Monomannual I/A System
  - Bimanual I/A System
  - Irrigation Choppers

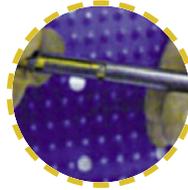
Above products are sold Non-Sterile and must be cleaned and sterilised before the first use!

Hospital approved procedure for handling, cleaning and sterilising must be followed.

Before sterilisation the instrument should be inspected for cleanliness and functionality.

Store instruments in a protective tray for selective positioning and sterilisation.

As a suitable sterilisation process we recommend steam sterilisation in autoclave at 273°F/134°C.



### POINTS TO REMEMBER

Do not allow blood, tissue or saline (BSS) to dry on instruments.

**NEVER USE SALINE (BSS) FOR RINSING INSTRUMENTS**

Always use demineralised or distilled water for final rinsing.

**NOTE: The processing of the instruments remains exclusively your responsibility.**





**MICRO INCISION CATARACT INSTRUMENTS**

**CATARACT INSTRUMENTS**

**20GA/0.9 mm**

standard instruments are ideal to fit through a 1.4 mm paracentesis.



Sapphire  
Micro Incision Knives  
angled, 10 facet blade

E10-170 0.9-1.2 mm

E10-171 1.3-1.5 mm

E10-172 1.8-2.4 mm

for bimanual phaco  
procedures and micro  
cataract surgery



Beehler Style  
Small Incision Pupil Dilator  
18GA/1.2 mm straight tube with external micro hook

\*E15-572 2 fingers for 3 points dilation

simple and safe  
method for  
pupil dilation



**EZChange®**  
Zaldivar Style Iridectomy Scissors  
removable tip, 20GA/0.9 x 30 mm straight shaft,  
curved 2 mm sharp blades, 15.0 cm

E25-620Z

ideal to perform iridectomy



**EZChange®**  
Utrata Style Iridectomy Forceps  
removable tip, 20GA/0.9 x 30 mm  
curved shaft, fine grasping tips with  
0.5 mm platforms, 15.0 cm

E30-621U

ideal for easy  
pick up of  
the iris and  
fibrotic synechia



**EZChange®**  
Kershner Style Micro Capsulorhexis/  
Iridectomy Forceps, removable tip,  
23GA/0.6x22 mm curved shaft,  
fine grasping tips, 15.0 cm

E30-623K

\* for further details please refer to page 106

## MICRO INCISION CATARACT INSTRUMENTS

PMS



### 23GA/0.65 mm

micro instruments are ideal for easy passage through a very small paracentesis.



**Alio**  
Micro Iridectomy Scissors  
23GA/0.6 x 26 mm curved shaft,  
straight cutting blades, 14.0 cm  
**E25-623S**

ideal for cutting  
synechia, per-  
forming small  
pupil iridotomies and enlargement of the capsular bag

Ultra micro shafts for insertion through a 1.0 mm incision.



**Alio II**  
Micro Capsulorhexis/Iridectomy Forceps  
23GA/0.6 x 22 mm curved shaft,  
very fine grasping tips,  
14.0 cm  
**\*E30-623S**

ideal for easy pick up of the iris, for creating and grasping the capsular tag and performing the capsulorhexis in one maneuver

Curved shafts for a more comfortable approach.

**Fine-Ikeda**  
Micro Capsulorhexis Forceps  
23GA/0.6 x 17 mm curved shaft, extra fine tips, 14.0 cm  
**\*E30-624S**

short shaft allows  
for easy working in  
the sub-incisional area



**Ikeda II**  
Micro Capsulorhexis Forceps  
23GA/0.6 x 26 mm curved shaft,  
micro jaws with 0.25 mm tips, 14.0 cm  
**\*E30-625S**

for secure grip  
of the anterior  
capsule in the  
presence of viscoelastics

Recessed jaws for improved sub-incision flap purchase.



The PMS range of 23GA/0.65 mm MICS Instruments is also available with **EZChange®** removable tips.

Special designed platform to securely grip in the presence of viscoelastic.

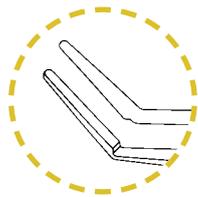
Brief Description	Product No. (complete)	Product No. (tip only)
Alio Scissors	E25-623A	E25-623R
Alio II Forceps	E30-623A	E30-623R
Fine-Ikeda Forceps	E30-624F	E30-624R
Ikeda II Forceps	E30-625I	E30-625R

CATARACT INSTRUMENTS

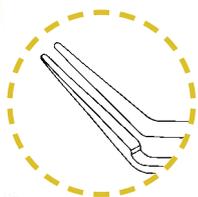


**IOL INSTRUMENTS - PMMA LENS FORCEPS**

*Gold-plated handles  
for easy identification.*



**EZHold®**  
Kelman-McPherson  
Tying & Lens Holding Forceps  
angled 7.5 mm smooth jaws  
with platform, 10.5 cm  
**\*E30-463**



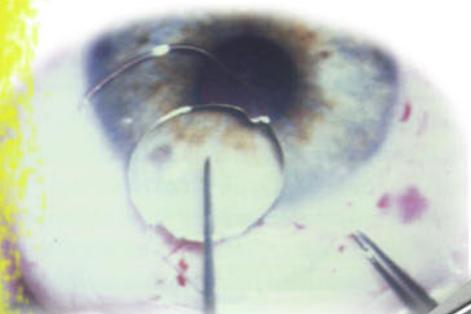
*for holding and implanting  
small incision PMMA lenses*

**EZHold®**  
Bechert-McPherson  
Lens Holding Forceps  
angled 10 mm smooth jaws  
with platform, 10.5 cm  
**\*E30-465**



**EZHold®**  
Clayman Style  
Lens Holding Forceps  
gently curved, angled  
smooth jaws, 11.5 cm  
**\*E30-622**

*for superior approach, enables easy  
implantation of haptic and optic*



*forceps grasping approximately half  
of lens optic for easy implantation*



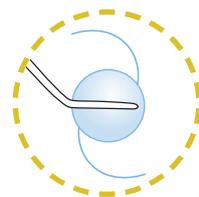
**EZHold®**  
Blaydes Style  
Lens Forceps  
narrow smooth  
jaws, 11.0 cm  
**\*E30-623**

*\*also available in titanium, please add "T" to cat. no.*



*Highly polished jaws*  
prevent damage to the optic surface.

**HOLD**

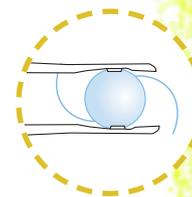


**EZHold®**  
Steinert Lens Holding Forceps  
angled 7.5 mm smooth jaws,  
flat inside surfaces, 10.5 cm  
**E30-643**



for holding soft IOLs  
while folding with an inserting forceps

**PICK UP**

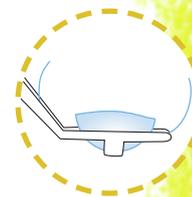


**EZFold®**  
Livernois IOL Folding Forceps  
angled 10 mm smooth paddle jaws,  
concave inside surfaces, 10.5 cm  
**E30-661**



designed to pick up and fold silicone  
or acrylic lenses in one maneuver

**FOLD**

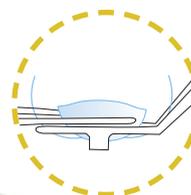


**EZFold®**  
Seibel Foldable Lens Loader  
angled 12 mm smooth paddle jaws,  
straight inside surfaces, 11.0 cm  
**E30-667T**



paddles effectively pick up soft IOLs  
for even and equal folding

**TRANSFER**



**EZHold®**  
Faulkner Lens Holding Forceps  
angled 11 mm rounded  
smooth jaws, 10.5 cm  
**\*E30-645**

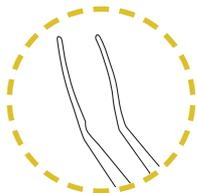


\*also available in titanium, please add "T" to cat. no.



**IOL INSTRUMENTS - ACRYLIC LENS FORCEPS**

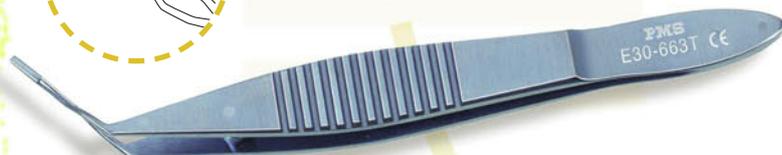
*Foldable Lens Inserters*  
are best to implant acrylic lenses  
through a small incision.



**EZSert®**  
**Buratto Lens Forceps**  
angled 8 mm shanks,  
biconvex smooth jaws,  
10.5 cm  
**E30-646T**



**EZSert®**  
**Spaleck Lens Forceps**  
angled 15 mm shanks,  
biconvex smooth jaws,  
11.0 cm  
**E30-648T**



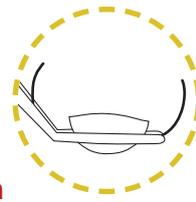
**EZSert®**  
**Ernest-McDonald**  
**Soft Lens Insertion Forceps**  
cross-action design, angled 15 mm shanks,  
low profile biconvex smooth jaws,  
10.0 cm  
**E30-663T**



**EZSert®**  
**Fine Universal Lens Folder**  
angled 8 mm  
shanks, biconvex  
smooth jaws,  
10.5 cm  
**E30-665T** without lock  
**E30-666T** with lock



*Always make certain  
that the lens is centered and  
symmetrically folded and the  
haptics are in the desired position*



**EZSert®**  
**Buratto Lens Forceps**  
angled 8 mm shanks,  
biconvex smooth jaws,  
10.5 cm  
**E30-646**



designed to provide a secure hold  
on most soft IOLs for easy insertion

**EZSert®**  
**Spaleck Lens Forceps**  
angled 15 mm shanks,  
biconvex smooth jaws,  
10.5 cm  
**E30-648**



ideal for inserting foldable IOLs  
through a small incision; internal stop restricts stretching of  
the small incision

**EZSert®**  
**Ernest-McDonald**  
**Soft Lens Insertion Forceps**  
cross-action design, angled 15 mm shanks,  
low profile biconvex smooth jaws,  
10.0 cm  
**E30-663**



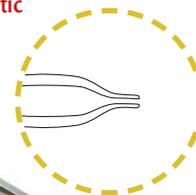
cross-action design allows for  
easy insertion of most foldable len styles

**EZSert®**  
**Zaldivar Soft Lens Insertion Forceps**  
angled 9 mm shanks, biconvex jaws  
with extended smooth tips, 12.0 cm  
**E30-633** stainless steel  
**E30-633T** titanium



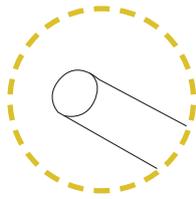
extended flat tips are useful to  
implant superior haptic

designed to fold  
today's soft IOLs





The EZ way  
to implant...



supplied without cartridge  
and silicone cushion



**EZJect®**

Thomas Lens Injectors  
lightweight aluminium handle,  
plunger piston with flat tip,  
for 1-piece foldable lenses

**E30-650LP** syringe style, 10.0 cm

**E30-651LP** screw style, 14.5 cm

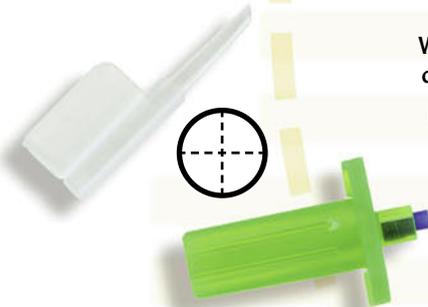


photo shows injection of 1-piece foldable lens

The **EZJect®** Foldable Lens Injectors can be used with  
the Medical ViscoJect™ Cartridge Sets #LP604235/  
#LP604240M and other injector cartridge systems.

ViscoJect™ and ViscoGlide™ are registered trademarks of Medical AG

CATARACT INSTRUMENTS



**VISCOJECT™ CARTRIDGE SETS FOR 1-PIECE LENSES**  
consisting of ViscoGlide™ cartridge and silicone cushion

**LP604235** 2.7 Cartridge Set, sterile (box of 10)  
for < 2.8 mm incision size

**LP604240M** 2.2 Cartridge Set, sterile (box of 10)  
for < 2.5 mm incision size

Silicone Cushion (blue)  
**LS604500**

used with flat tip injectors  
**E30-650LP & E30-651LP**

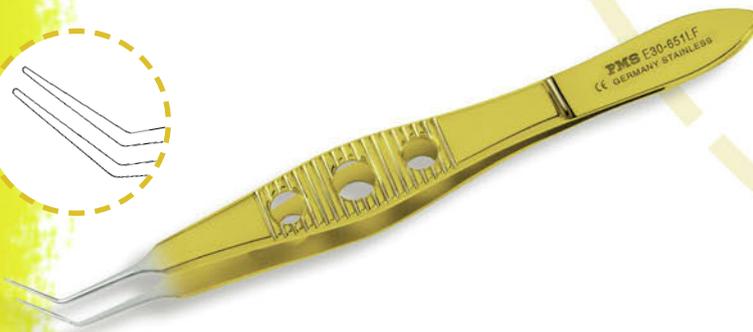


**EZJect®**

Cartridge Loading Forceps  
angled 13 mm long jaws,  
smoothly polished, 10.5 cm

**E30-651LF**

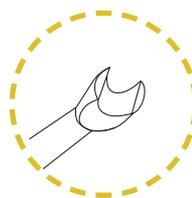
ideal to place the soft lens into the  
open cartridge and to control  
correct loading



Do not resterilise injector cartridge and silicone cushion. Single use only.



*...simple, safe  
and speedy*



**EZJect®**  
Thomas Lens Injectors  
lightweight aluminium handle,  
plunger piston with grooved tip,  
for any kind of foldable lenses

**E30-650LC** syringe style, 10.0 cm

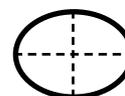
**E30-651LC** screw style, 14.5 cm



**Injector Cartridges**  
for any kind of foldable lenses  
with oval shaped tips  
sterile, disposable plastic

**LC604210 OvalGlide™**  
for 3.2-3.35 mm incisions

**LC604220 MicroGlide™**  
for 2.85-3.0 mm incisions



used with grooved tip injectors  
**E30-650LC and E30-651LC**

OvalGlide™ and MicroGlide™ are registered trademarks of Medical AG

**EZJect®**  
**Lens Pusher/Manipulator**  
angled 13 mm parallel arms  
with flat external surfaces,  
10.5 cm  
**E30-651LM**

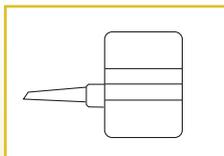
designed to accurately adjust soft lenses  
within the tube portion of the cartridge



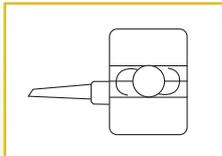
**Video available**

**CATARACT INSTRUMENTS**

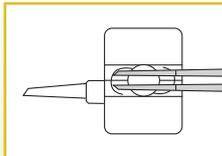
**INSTRUCTIONS FOR LOADING**



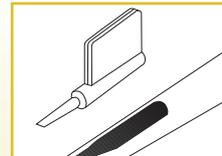
Open cartridge and fill  
the loading chamber  
with viscoelastic.



Place lens into the open  
cartridge. Adjust lens  
always in the axis of  
the cartridge.



Use E30-651LF forceps  
or E30-651LM pusher  
to gently press the  
centered lens into  
the tube.



Close cartridge  
and slide into the injector  
opening.

**IMPORTANT INFORMATION FOR IMPLANTATION:**

The cartridge is inserted bevel down in the wound! Advance the lens slowly.



*innovative IOL injection system*

CATARACT INSTRUMENTS



**EZJect® II Lens Injector**  
lightweight titanium handle with  
single hand plunger mechanism

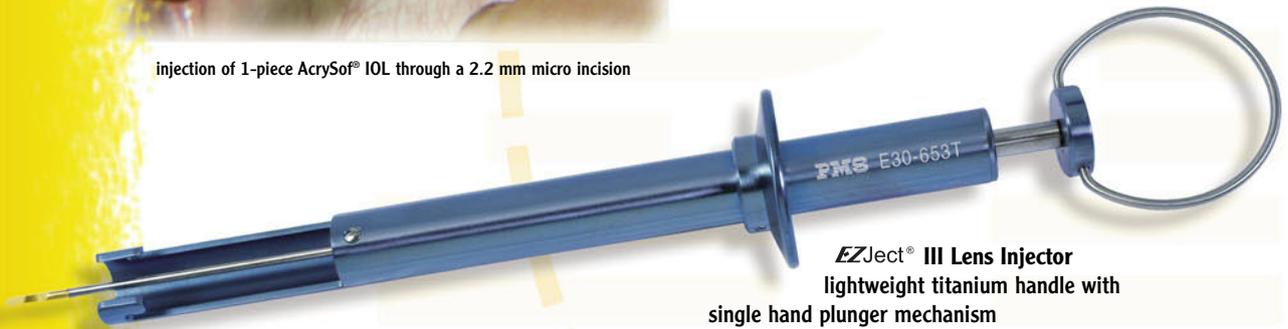
**E30-652T**

for 1-piece and 3-piece AcrySof® IOLs using  
the Monarch® II A, B and C cartridges



injection of 1-piece AcrySof® IOL through a 2.2 mm micro incision

Specially designed handle with finger rest and  
removable thumb ring allows firm grip and  
precise control of the implantation procedure.



**EZJect® III Lens Injector**  
lightweight titanium handle with  
single hand plunger mechanism

**E30-653T**

for injecting 1-piece AcrySof® Aspheric IOLs  
using the new Monarch® III D cartridges

Gold tip for good visibility  
through the cartridge

Patent pending



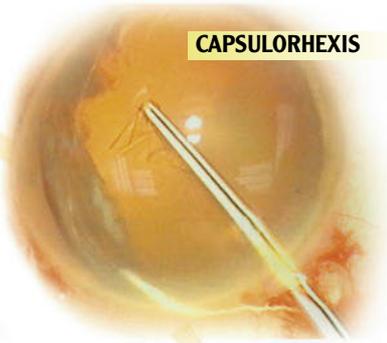
**EZJect®**  
IOL Inserter Forceps  
all titanium body, thin  
and smooth jaws, 11.0 cm  
**E30-654T**

ideal for inserting  
AcrySof® IOLs to  
Monarch® A, B and  
C cartridges

to be used with the **EZJect®** Lens Injectors E30-652T and E30-653T



Lens Implant / Euro Cent comparison



CAPSULORHEXIS

Fortunately for every one of us who's "getting older", a man-made artificial lens has been developed which many times will even work better than the natural human lens after age 60. This clear plastic lens - **made of PMMA, Silicone and Acrylic material** - is inserted surgically as a replacement for the natural lens and will, in most cases, last a lifetime.

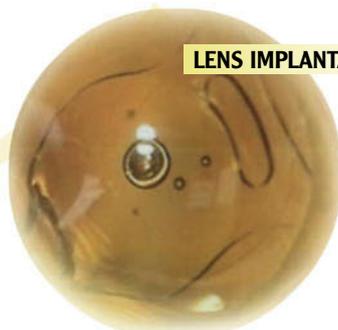
Many who go through the procedure experience not only return of lost vision, but also a renewed independence and vitality. The removal of the cloudy lens and the increase in light which results may well be one reason why senior adults are living more productive and healthy lives in the 21st Century.



PHACOEMULSIFICATION



ASPIRATION



LENS IMPLANTATION



*“It's so EZ® to change”*



**Removable instrument tips**

Hold the tip gently but firmly and screw the handle onto the tip!  
Make sure that the handle is turned only, NOT THE TIP!

**Ergonomically designed handpieces**

- Lightweight, aluminium 70% lighter (than steel).
- Highly corrosion-resistant, good for long life.
- Sleek design for perfect balance and control.
- Handles compatible with removable tips.
- Eliminates cost of permanent handle.
- Total length of handle 9.0 cm.



**Handles and tips sold separately**

**Colour-coded handles**

- Easier identification on the sterile field

**Product code for handles**

E15-100 AY	yellow
E15-100 AR	red
E15-100 AG	green
E15-100 AB	blue
E15-100 AP	purple



Do not use acid or alkali detergents or any kind of abrasive for cleaning the aluminium handle. Never use balanced salt solution for rinsing .



**Lester  
Lens Pusher**  
E15-500R straight  
E15-501R angled



**Lewicky  
IOL Manipulating Hook**  
E15-557R vaulted



**Nevyas  
Soft IOL Manipulator**  
straight, rough tip  
E15-558R

**Choice of EZChange® tips**

Ideal for dialing rigid or foldable IOLs, insert and maneuver lens haptics, retract iris and to manipulate nuclear cataract.

instrument tip with thread for absolute secure locking; shaft and tips are made of 1-piece stainless steel



**Sinsky II  
IOL Manipulating Hook**  
E15-560R straight  
E15-561R angled



**Rentsch  
Lens Manipulating Hook &  
Iris Retractor, straight**  
E15-562R

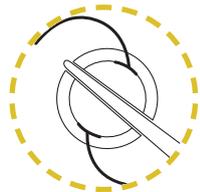


**Kuglen  
Iris & IOL Manipulator**  
E15-564R straight  
E15-565R angled



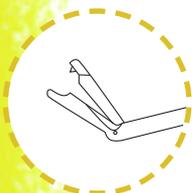


*Just got easier!*



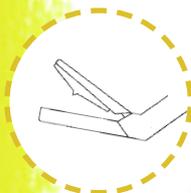
**EZCut®**  
Williams Soft IOL Cutter  
solid lower blade, wedge shaped  
upper cutting blade, 11.0 cm  
**E30-630T**

ideal to cut and remove any soft IOL;  
hinged mechanism ensures needed  
cutting strength



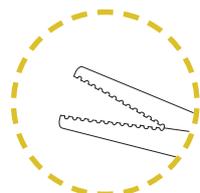
**EZCut®**  
Leopold Soft IOL Cutter  
scissors style cutting blades  
with fixation pin at the front, 11.0 cm  
**E30-631T**

scissors style allows cutting in  
one smooth continuous action



**EZCut®**  
Osakabe Soft IOL Cutter  
slotted lower blade, wedge shaped  
upper blade with slightly blunt pick, 11.0 cm  
**E30-632T**

for controlled and effective cutting;  
fixation pick prevents IOL slipping



**EZCut®**  
Osher IOL Cutting Scissors  
angled to side, 8 mm serrated blades,  
blunt tips,  
10.0 cm  
**E25-466**

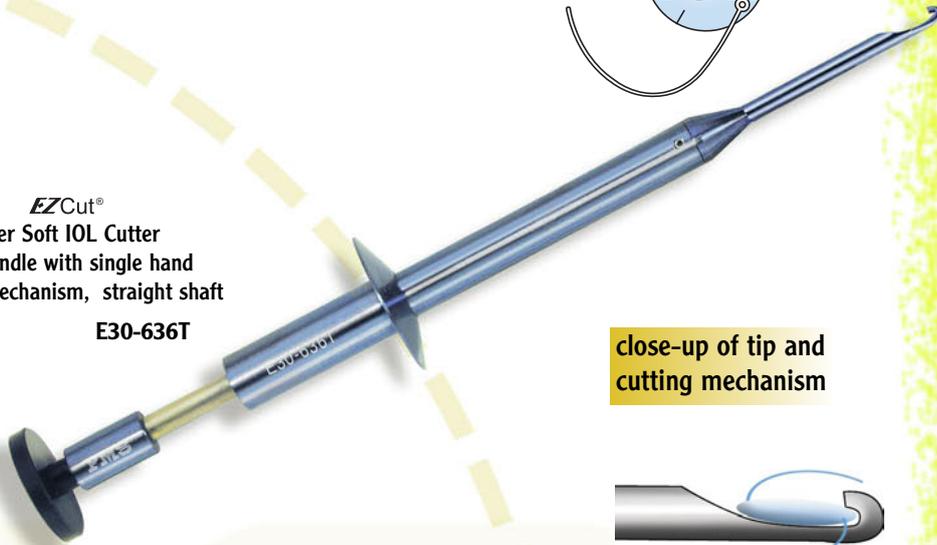
for "crisscross technique"  
IOL removal



*Cuts any foldable IOL*

**IOL**

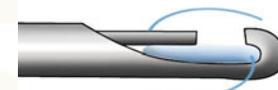
**EZCut®**  
Alexander Soft IOL Cutter  
titanium handle with single hand  
plunger mechanism, straight shaft  
**E30-636T**



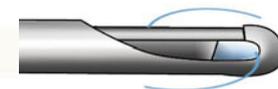
**close-up of tip and cutting mechanism**



1. Retrograde curved tip and platform cradles the IOL in the anterior chamber.



2. Lightly press the plunger to engage the lens retaining guard which secures the IOL during cutting process.



3. Continual pressure on the plunger engages the cutting blade and bisects the IOL.

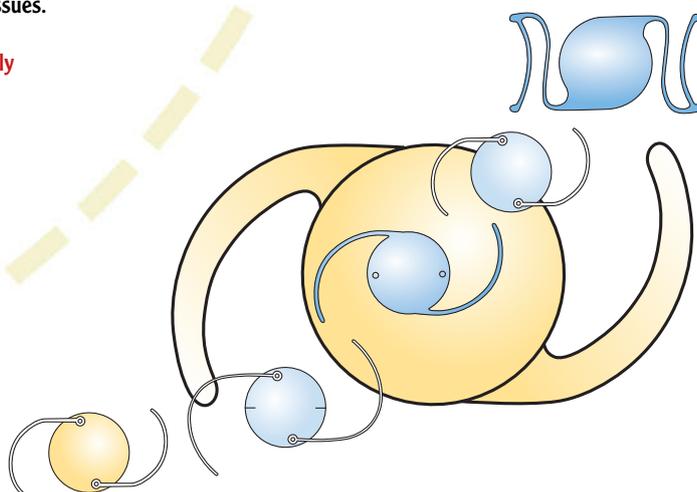
**FEATURES AT A GLANCE**

- Titanium construction provides durability and lightweight.
- Designed to be used through a small incision without stretching the wound.
- Plunger rod activates retaining guard and cutting blade simultaneously.
- Retaining guard firmly holds the lens in place and prevents it from “buckling” upward.
- Angled cutting blade advances lengthwise through the IOL in one linear movement.

**PROTECTION AND SAFETY**

- The lens is firmly hold during the cutting process, lessening the chance of endothelial damage.
- The cutter movement is designed to cut only the IOL and not the surrounding tissues.

The PMS EZCut® IOL Cutter effectively and safely cut any kind of foldable acrylic and silicone lenses through a small incision.



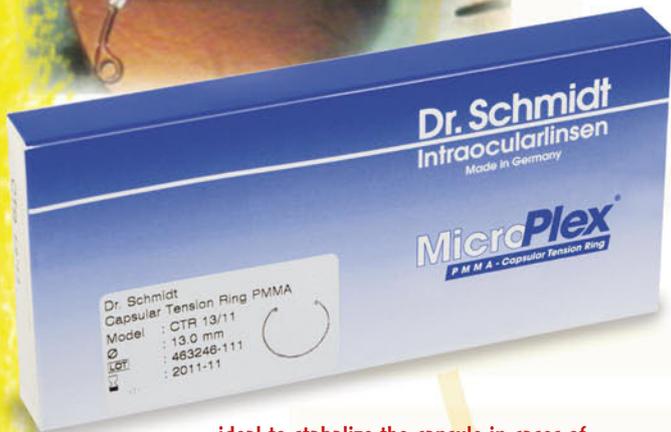


*necessary in modern cataract surgery*

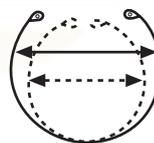


Spatulated tip with a micro hook inside for effective and reliable catching, holding and injecting of the Capsular Tension Ring. The Ring can be implanted in both clockwise or counterclockwise directions.

**EZJect®**  
Tension Ring Injector  
lightweight titanium handle with single hand plunger mechanism and 19GA/1.1 mm curved shaft  
**E30-655T**



*ideal to stabilize the capsule in cases of damaged or missing zonules, luxation of IOLs and zonulolysis*



**Dr. Schmidt**  
Capsular Tension Ring PMMA with eyelet, total diameter 11.0 mm to 13.0 mm, disposable (1 unit)



**E30-655S** stationary tip  
**E30-655N** removable tip

**EZJect®**  
Tension Ring Manipulator/Forceps  
20GA/0.9 mm curved shaft, disc shaped lower jaw with hole to accommodate the manipulator, 15.0 cm

The manipulator can be used independently and in combination with the disc as a forceps.

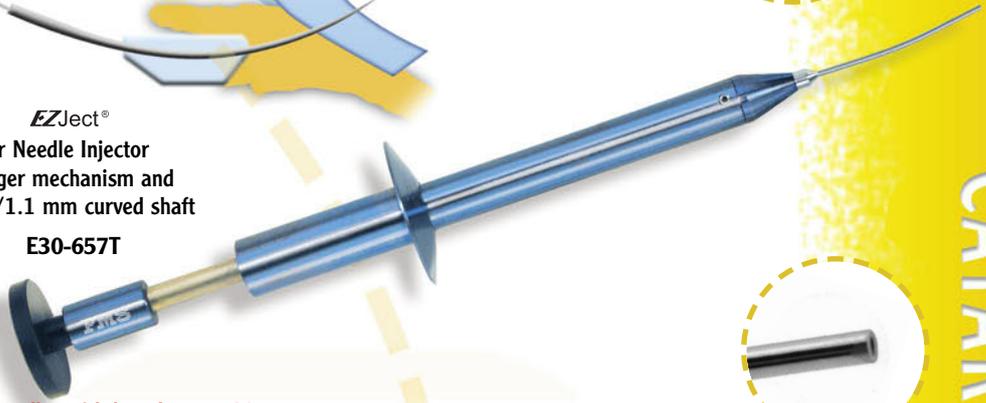




*IOL Scleral Suturing*

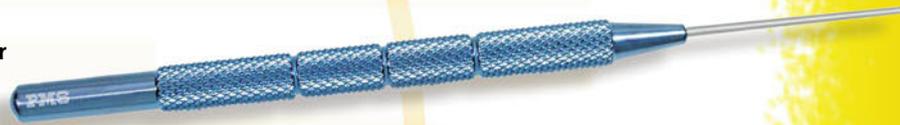
**EZJect®**  
Intraocular Needle Injector  
titanium handle with plunger mechanism and  
19GA/1.1 mm curved shaft  
**E30-657T**

Ideal for IOL scleral fixation through a small incision using needled sutures for secondary implantation. Can be used with straight and curved spatulated needles with length up to 20 mm (Polypropylene 10-0 or 9-0)



**Osher**  
Needle Guide  
titanium handle with  
stainless steel tip,  
12.0 cm  
**E30-658T**

can be used with E30-657T, provides counter traction for IOL suturing needle when passes through eye wall



**EZJect®**  
Sugiura Intraocular Needle Injector  
aluminum handle with plunger mechanism,  
straight shaft, cushion style  
2.0 x 0.9 mm flat tip  
**E30-659**

latest technique for ciliary sulcus fixation of IOL; extremely safe and simple to use



**Video available**

**CATARACT INSTRUMENTS**



PMS TRADEMARKS

**EZFit**<sup>®</sup>

**EZChange**<sup>®</sup>

**EZSert**<sup>®</sup>

**EZCut**<sup>®</sup>

**EZFix**<sup>®</sup>

**EZFLO**<sup>®</sup>

**EZFold**<sup>®</sup>

**EZGrip**<sup>®</sup>

**EZHold**<sup>®</sup>

**EZJect**<sup>®</sup>

**EZWash**<sup>®</sup>

**EZLock**<sup>®</sup>

**EZLoad**<sup>®</sup>



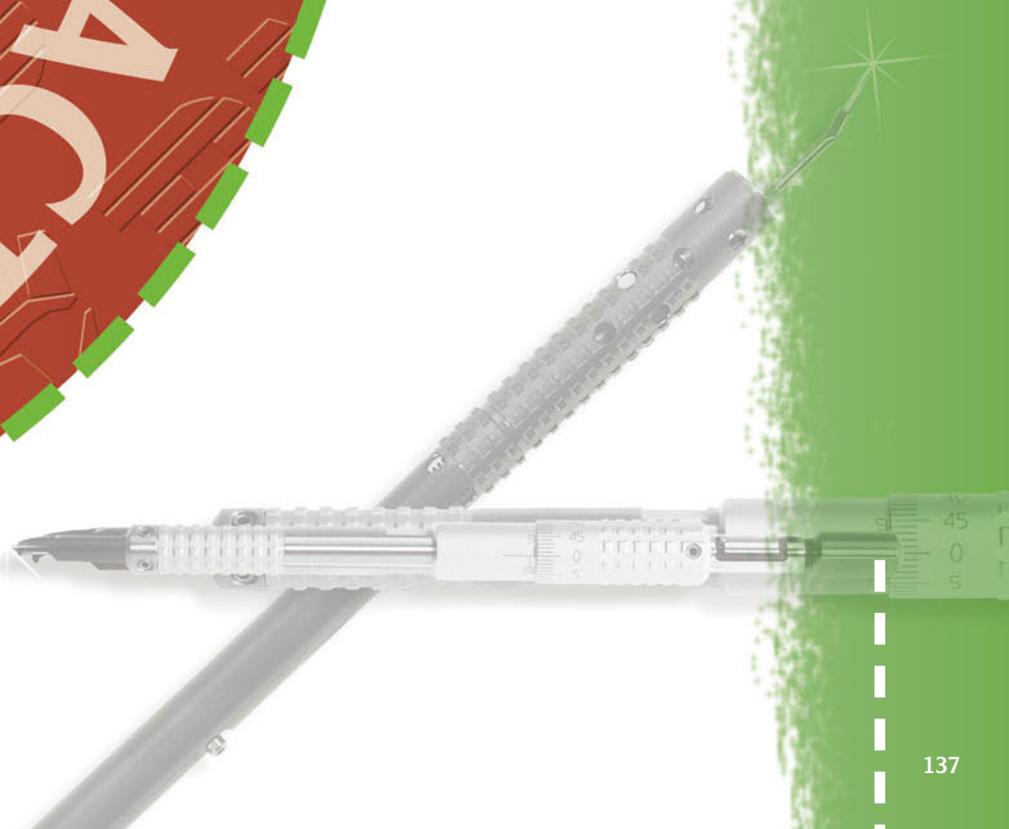
PMS



# KERATOPREFRACTIVE







# KERATO REFRACTIVE

CORNEAL TREPHINE INSTRUMENTS .	138-139
CORNEAL TRANSPLANT SYSTEM . . . . .	140
CORNEAL TRANSPLANT INSTRUMENTS	141-147
LASIK & PRK INSTRUMENTS . . . . .	148-157
LASEK INSTRUMENTS . . . . .	158-159
AK INSTRUMENTS & DIAMOND KNIVES . .	160-161
LRI INSTRUMENTS . . . . .	162-165
TORIC IOL'S & CORNEAL RINGS . . . . .	166-167
ICL® INSTRUMENTS . . . . .	168-171
DSEK/DLEK INSTRUMENTS . . . . .	172-173
DSAEK INSTRUMENTS . . . . .	174-175



**CORNEAL TREPHINE INSTRUMENTS**

PMS *EZCut*® Trephine Blades are machined from solid stainless steel rod. Handcrafted, sharp, uniform blade edges produce a symmetrical, smooth vertical cut of all corneal layers.



*EZCut*®  
Corneal Trephine Blades  
long 15 mm model,  
for "Free Hand" use

**E40-530L+ size**

available in 0.25 mm increments  
from 6.0 mm through 9.5 mm, and  
in large sizes 14, 15 & 16.0 mm dia.

Large size trephines for "Free Hand" use allow  
a surgeon, or eye bank, to remove the cornea  
along with its scleral rim from the donor eye



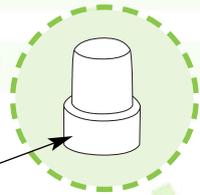
*EZFit*®  
Universal Trephine Handle  
adjustable spring arms to fit  
short trephine blades E40-530S+  
**E40-531**

**New**

**\*E40-530L+ and E40-530S+ series of trephine blade are  
NOW available in disposable, sterile version upon request!**



universal hub, 10 mm dia.



*EZCut*®  
Corneal Trephine Blades  
new model with universal hub  
for trephine handle E40-532  
**E40-530N+ size**

available in 0.25 mm increments  
from 6.0 mm through 9.5 mm dia.



handle is supplied without blade

*EZFit*®  
New Trephine Handle  
designed to fit trephine  
blades E40-530N+  
**E40-532**

A unique universal hub diameter with varying  
blade edge diameter provides an easier, more  
secure means of mounting the blade to the handle.

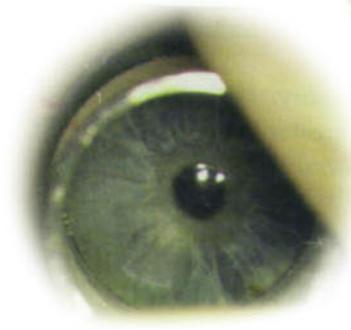
\* by special order only, 4-6 week delivery

# CORNEAL TREPHINE INSTRUMENTS

PMS



"Free Hand" corneal graft trephination



**EZCut®**  
Corneal Trephine Blades  
short 9.5 mm model, for  
handles E40-531 & E40-533



\*E40-530S+ size  
available in 0.25 mm increments  
from 6.0 mm through 9.5 mm dia.,

trephine blades from  
6.0 mm to 9.5 mm are placed here and

**EZFit®**  
Trephine Blade Holder  
adjustable, fits with the series of  
short trephine blade E40-530S+



10.0 mm to 11.0 mm are placed here

**E40-533**

By turning the back of the handle you can raise or  
lower the mm size that the handle accommodates.

**EZFit®**  
Corneal Trephine Punch  
with Teflon base plug, to fit  
E40-533 Trephine Blade Holder  
**E40-540**

for accurate donor button preparation

Replacement Base Plug  
(15 mm x 9 by 4 mm depth)  
for Corneal Punch E40-540

**E40-541**



Corneal Transplant Block  
(22 mm dia. x 8 mm depth)  
for Corneal Punch E40-540

**E40-542**

Base Plug Shield  
(27 mm dia. x 22 mm depth) fits over  
base plugs E40-542 and E40-543

**E40-544**

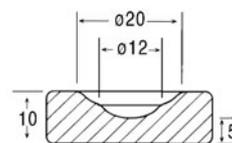
to cover cornea tissue



Large Teflon Cutting Block...  
for universal use  
**E40-543**

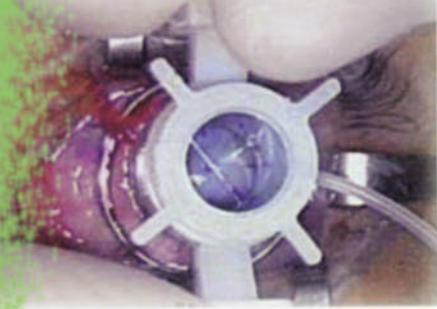


supplied without E40-533 handle



internal surface has multiple radii  
shape to closely approximate to  
the corneal scleral profile

KERATOREFRACTIVE



## CORNEAL TRANSPLANT SYSTEM

The Hessburg Barron Vacuum Trephine for cutting the recipient cornea is a single use, sterile instrument for lamellar or penetrating keratoplasty.



- A7028 6.0 mm
- A7030 6.5 mm
- A7032 7.0 mm
- A7034 7.5 mm
- A7035 7.75 mm
- A7036 8.0 mm
- A7038 8.5 mm
- A7040 9.0 mm

A precise calibrated rotating mechanism allows the surgeon to advance the blade depth 0.25 mm with each 360° rotation.

All Trephines and Punches include a marking pen and are supplied completely assembled and ready for use.

The Barron Donor Marking Punch is a single use, sterile system, designed to make an exact cut of the donor tissue for corneal transplant surgery.



- A7041 6.0 mm
- A7042 6.5 mm
- A7044 7.0 mm
- A7046 7.5 mm
- A7047 7.75 mm
- A7048 8.0 mm
- A7049 8.25 mm
- A7050 8.5 mm
- A7051 8.75 mm
- A7052 9.0 mm
- A7053 9.5 mm

Not for sale in the UK and USA.

## CORNEAL MARKERS

PMS

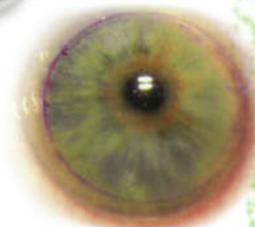
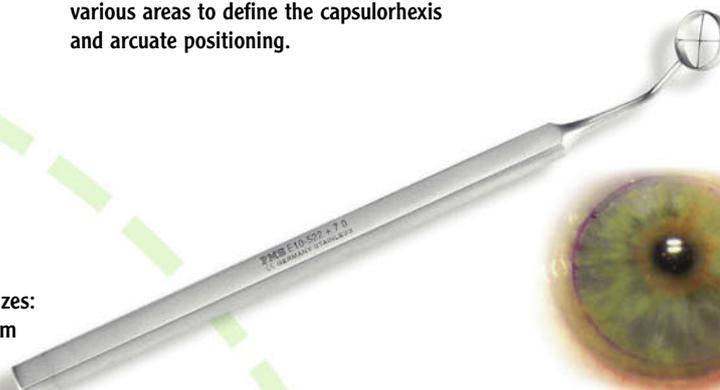


**Corneal Markers** - are being applied in various areas to define the capsulorhexis and arcuate positioning.

### Optic Zone Markers

low profile ring with cross hair, 10.5 cm available in 3 sizes: 7.0, 8.0 and 9.0 mm  
\*E10-522+size

cross hairs are ideal for accurately centering the marker over the patient's visual axis



marking of the recipient cornea

### Thornton

**Radial Incision Marker**  
semi-sharp marking blades, 4.5 mm center opening, 14.0 mm OD, 11.5 cm

\*E10-530+ size

available with 4, 6, 8, 12 and 16 blades

radial incision markers with symmetrical patterns provide orientation lines on the recipient cornea



eight-blade marker in situ

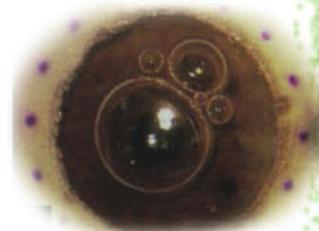
### Anis

**Suture Placement Marker**  
eight radial marking lines, 8 mm dia. central opening,

11.0 cm

E10-548

ideal to mark suture placement sites on the recipient cornea prior to penetrating keratoplasty



ink markings of suture placement sites

### Marking Pad

Gentian violet ink  
non-sterile (box of 10)  
630-01



Ink marking pads are used for coating cornea markers to produce a pattern on the cornea which is clearly visible for the duration of the surgery.

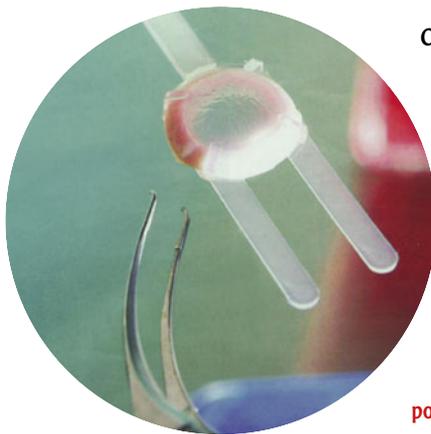
\*also available on titanium round handle

KERATOREFRACTIVE



slotted spoon shaped blade is ideal for corneal button transfer and to lift contact lens bandage from bottle and place on patient's eye following LASEK

## CORNEAL TRANSPLANT FORCEPS

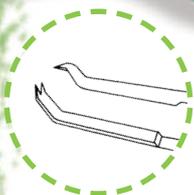


Corneal Donor Tissue is of great value to the recipient. Thus, it should be controlled and selected by specialists, stored with utmost care and only handled using Precision Micro Surgical instruments of superior quality material. Using the double-armed forceps, you can stabilise the corneal graft in two locations simultaneously. This allows you to precisely place the needle between the two arms without tissue distortion minimising potential astigmatism.



**Paton**  
Spatula & Spoon  
slotted spoon shaped blade and angled 7 x 2 mm wide spatula, 12.5 cm

**E40-682** stainless steel  
**E40-682T** titanium



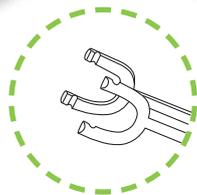
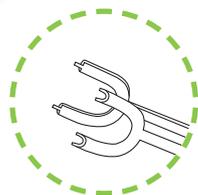
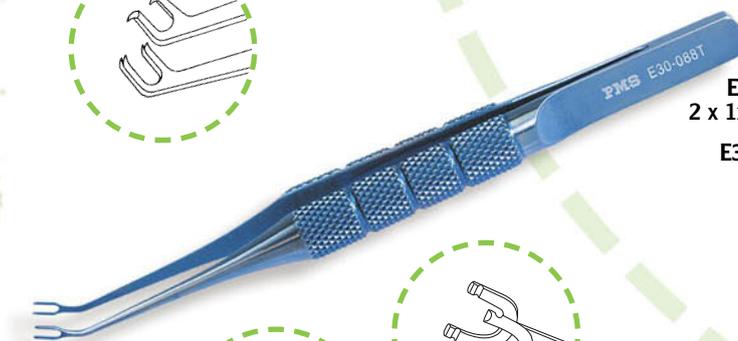
**Harms**  
Corneal Suturing Forceps  
1 x 2 teeth, 0.12 mm/45°, tying platform, 7.5 cm

**E30-081T**



**Polack**  
Double Corneal Suture Forceps  
U-shaped 1 mm spread, 2.75 mm long double tips with 1 x 2 teeth, 0.12 mm/45°, 7.5 cm

**E30-087T**



Double Corneal Fixation Forceps  
U-shaped 2 mm spread, angled two 3 mm long arms  
**E30-088T Remky-Polack**  
2 x 1x2/0.12 mm teeth 45°

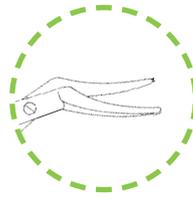
**E30-089T Hofman-Polack**  
2 x 2/0.1 mm notched tips

## CORNEAL SCISSORS



### Corneal Section & Transplant Scissors

– with right and left curved blades and blunt tips are ideal for wound enlargement and completion of trephine cuts.



#### Castroviejo

Corneal Section Scissors  
uneven length blades

E25-040 small, right

E25-041 small, left

outer blade is 0.5 mm longer than inner blade

E25-050 medium, right

E25-051 medium, left

E25-060 large, right

E25-061 large, left

ideal for wound enlargement



#### Castroviejo

Universal Corneal Scissors  
rounded blunt tips, 10.0 cm

\*E25-011 small blades, light curve

\*E25-015 medium blades, light curve

\*E25-013 medium blades, medium curve

\*E25-019 large blades, strong curve

\*also available with sharp tips



#### Katzin

Corneal Transplant Scissors  
small 5.0 mm blades,  
strong curved, 10.0 cm

E25-100 right

E25-101 left

ideal to complete corneal trephination



### CURVED CORNEAL SCISSORS SPECIFICATIONS

Blade sizes and average lengths in millimetres,  
measured from mid screw and aperture angle\*

small	8.0 - 9.0	4.5 - 5.5
medium	10.0 - 11.5	5.5 - 6.0
large	14.5 - 16.0	7.0 - 9.0
Xlarge	17.5+	10.0+

\* aperture angle = blade length from angle, therefore cutting edge

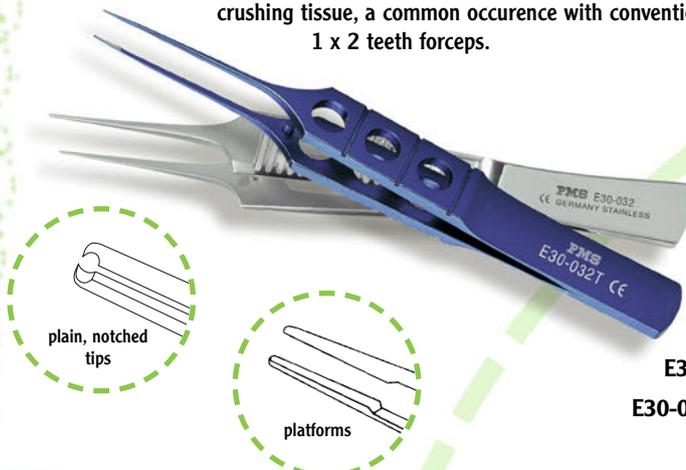


KERATORREFRACTIVE



**CORNEAL SUTURE FORCEPS**

**Hoskin Style Forceps** – have notched (1x1) atraumatic tips to grasp tissue, and a recessed area directly behind the tips for encapsulating rather than crushing tissue, a common occurrence with conventional 1 x 2 teeth forceps.



**Hoskin**  
Suture Tying Forceps  
8.5 cm, ultra fine jaws with  
E30-028T plain, notched 0.25 mm tips  
E30-032T 6 mm x 0.5 mm platform tips  
E30-036T platform, notched 0.25 mm tips

ideal for atraumatic tissue fixation, manipulation of limbal area and corneal lip, and fine suture tying



**Hoskin**  
Suture Tying Forceps  
8.5 cm, ultra fine jaws with  
E30-030T plain, notched 0.25 mm tips  
E30-038T platform, notched 0.25 mm tips  
E30-034T plain, pointed tips for suture removal



**Troutman-Barraquer**  
Corneal Suture Forceps  
ultra fine jaws, 6 mm platform,  
1 x 2/0.12 mm teeth, 8.5 cm  
E30-044T oblique 45°  
E30-046T straight 90°

these forceps are excellent for manipulation and fixation of delicate tissue, and fine suture tying



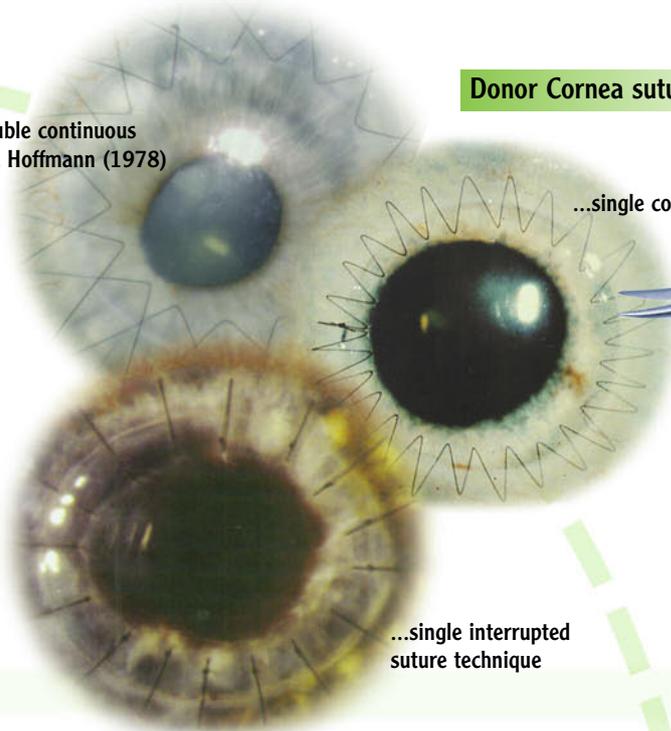
**Troutman-Barraquer**  
Corneal Suture Forceps  
ultra fine jaws, 4.5 mm platform,  
1 x 2/0.12 mm teeth, 8.5 cm  
E30-045T oblique 45°  
E30-047T straight 90°

for stainless steel models delete "T" from cat. no.



**Donor Cornea sutured in place using...**

...double continuous  
acc. to F. Hoffmann (1978)



...single continuous

2:1

**Barraquer**  
Micro Needle Holder  
titanium made, TC textured  
conical 8 mm curved jaws with  
extra fine 0.3 mm tips, without lock  
E35-211T 10.0 cm  
E35-213T 12.5 cm

ideal for 11-0 to 8-0 sutures

**St. Martin's**  
Micro Suture Forceps  
5 mm tying platforms, 1 x 2/45° teeth, 8.5 cm  
E30-411T 0.12 mm  
E30-413T 0.3 mm



excellent for corneoscleral fixation,  
grasping conjunctiva and fine suture tying

**Paufique**  
Universal Suture Forceps  
6 mm tying platforms, 1 x 2/45° teeth, 8.7 cm  
E30-415T 0.5 mm  
E30-418T 0.8 mm



All titanium forceps have  
tying platforms covered with  
**Tungsten Carbide** to ensure that  
the forceps have a very firm grip.

**Castroviejo**  
Suturing Forceps  
straight (wide handle)  
6 mm tying platforms,  
1 x 2/45° teeth, 11.0 cm  
E30-450T 0.12 mm  
E30-451T 0.3 mm  
E30-452T 0.5 mm  
**Colibri Style (wide handle)**  
E30-453T 0.12 mm



for stainless steel models delete "T" from cat. no.

**KERATOPREFRACTIVE**



**CORNEAL TRANSPLANT SURGERY SET**

*Instrument sets  
are presented as  
guidelines only*



**E10-114**



**E10-548**



**E30-093T**



**E35-251**



**E10-690T**

**E42-120 CORNEAL TRANSPLANT SET**  
complete, consisting of the following:

- E30-902** Halstead Mosquito Forceps, page 16
- E30-934** Dieffenbach Bulldog Clamp, page 16
- E30-965** Baby Jones Towel Clamp, page 16
- E20-001** Bishop-Harmon Irrigator, page 20
- E20-030** Rycroft Irrigating Cannula, page 20
- E40-104** Liebermann Eye Speculum, page 55
- E40-618** Scleral Fixation Ring, page 19
- E10-548** Anis Host Bed Marker, page 141
- E10-522+** Optic Zone Marker, page 141
- E40-530N+** Trephine Blade, page 138
- E40-532** New Trephine Handle, page 138
- E10-114** Sapphire Universal Knife, page 65
- E25-100** Corneal Transplant Scissors, page 143
- E25-101** Corneal Transplant Scissors, page 143
- E25-313** Jaffe Micro Stitch Scissors, page 59
- E25-333** Westcott Tenotomy Scissors, page 59
- E30-081** Harms Corneal Forceps, page 23
- E30-093T** Maumenee Corneal Forceps, page 146
- E30-106** Bishop-Harmon Forceps, page 23
- E30-450** Castroviejo Suture Forceps, page 145
- E30-460** McPherson Tying Forceps, page 24
- E35-251** Barraquer Needle Holder, page 146
- E35-133** Castroviejo Needle Holder, page 25
- E40-682** Paton Spatula & Spoon, page 142
- E10-690T** Maloney Keratometer, page 160

## FOR CORNEAL TRANSPLANT SURGERY ADD



donor cornea being placed on the host bed



supplied without E40-533 handle



E40-540

### FOR CORNEAL TRANSPLANT SURGERY ADD

A7034 Hessburg-Barron Vacuum Trepphine, page 140

A7048 Barron Donor Marking Punch, page 140

E40-530S+ Corneal Trepphine Blade, page 139

E40-533 Trepphine Blade Holder, page 139

E40-540 Corneal Trepphine Punch, page 139

### FOR CORNEAL SECTION ADD

E25-070 Troutman Right Corneal Section Scissors, page 147

E25-071 Troutman Left Corneal Section Scissors, page 147



E25-070

### FOR CORNEAL SUTURING ADD

E30-411 St. Martin's Micro Suture Forceps, page 145

E30-418 Paufigue Universal Suture Forceps, page 145

E35-211 Barraquer Micro Needle Holder, page 145



E30-411

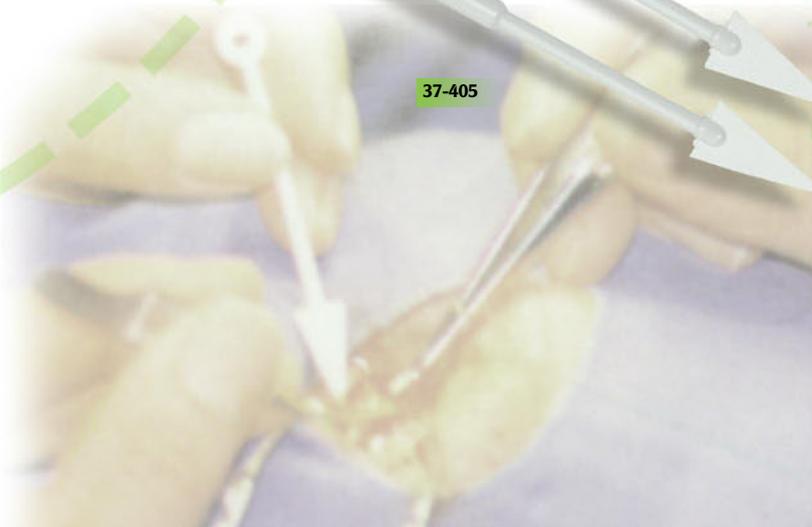
### MISCELLANEOUS PRODUCTS

37-405 PVA Eye Spears, page 155

52-100 Ink Marking Pen, page 151

EZWash® Sterilising Trays, see section

37-405



KERATOPREFRACTIVE



**LASIK INSTRUMENTS**

**Adjustable Wire Speculae** - provide maximal exposure of the globe for LASIK. The ability to adjust and lock the speculum is important for maintaining control in patients with narrow palpebral fissures or those with blepharospasm.



**Genisi**  
LASIK Temporal Speculum  
solid 15 mm rounded blades, 8.0 cm  
**\*E40-100TG**

adjustable & strong, allows unobstructed micro-keratotome access. Solid blade to minimise interference and contamination from eyelashes



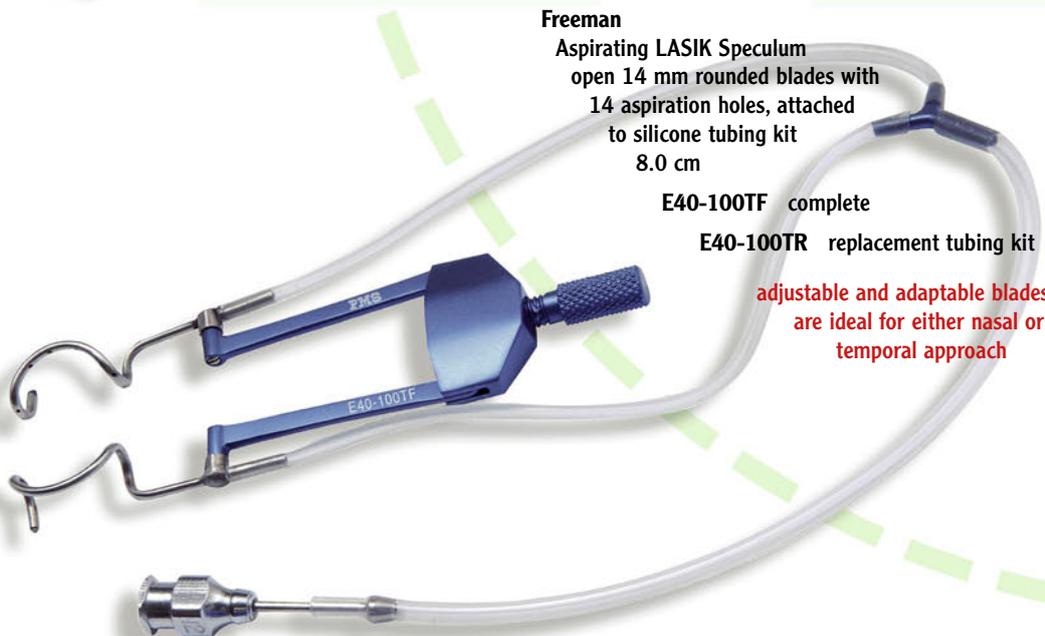
**Machat**  
LASIK Temporal Speculum  
open 14 mm V-shaped blades, 8.0 cm  
**\*E40-100TM**

for maximum exposure of the eye ball and to accommodate suction ring for efficient operation of the keratotome



**Slade**  
LASIK Temporal Speculum  
open 14 mm rounded blades, 8.0 cm  
**\*E40-100TL**

shanks of the speculum follow the facial angle on the temporal side allowing for easy access of the keratotome



**Freeman**  
Aspirating LASIK Speculum  
open 14 mm rounded blades with  
14 aspiration holes, attached  
to silicone tubing kit  
8.0 cm  
**E40-100TF** complete  
**E40-100TR** replacement tubing kit

adjustable and adaptable blades are ideal for either nasal or temporal approach

\*on request also available in stainless steel



**Nasal Placement**

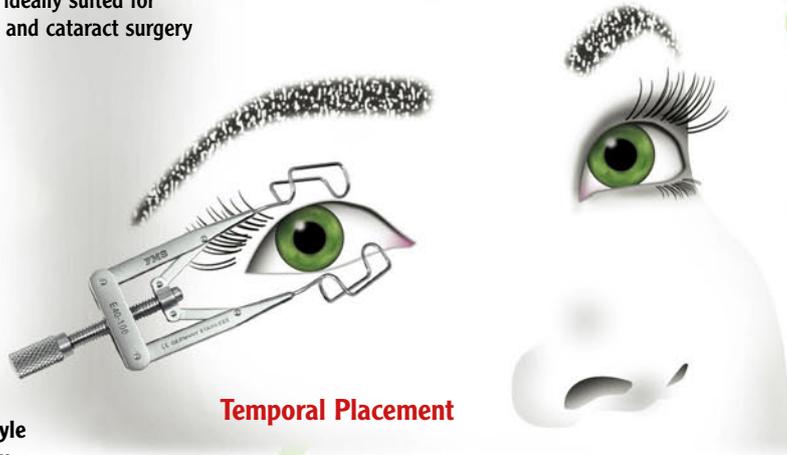
**Retracting the lids** - many surgeons prefer the adjustable Lieberman style speculum which retracts the lids sufficiently to provide unobstructed access for the microkeratome suction ring (see page 157).

**Kershner Style**  
 Reversible LASIK Speculum  
 solid 14 mm blades, 7.7 cm  
**E40-105** stainless steel  
**E40-105T** titanium



**Reversible Eye Speculae -**

can be positioned nasally or temporally, by simply flipping the instrument; ideally suited for today's techniques of refractive and cataract surgery



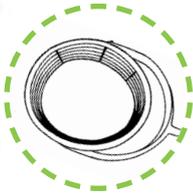
**Temporal Placement**

**Kershner Style**  
 Reversible LASIK Speculum  
 fenestrated 14 mm blades, 7.7 cm  
**E40-106** stainless steel





**Fixation Rings** - are used to stabilise the globe and prevent inadvertent movement of the eye ball during laser ablation.



**Blumenthal**  
PRK/LASIK Atraumatic Fixation Ring  
closed 12 mm ID swivel ring with  
concentrically grooved inside  
surface, 13.0 cm

**E10-512B** stainless steel

**E10-512TB** titanium round handle

positioned at the limbus to prevent eye moment during PRK/LASIK; also serves as a resting place for the corneal flap



**Gimbel**  
LASIK Atraumatic Stabilisation Ring  
open 13 mm ID swivel ring  
with 9 mm cutout, 13.0 cm

**E10-513G** stainless steel

**E10-513TG** titanium

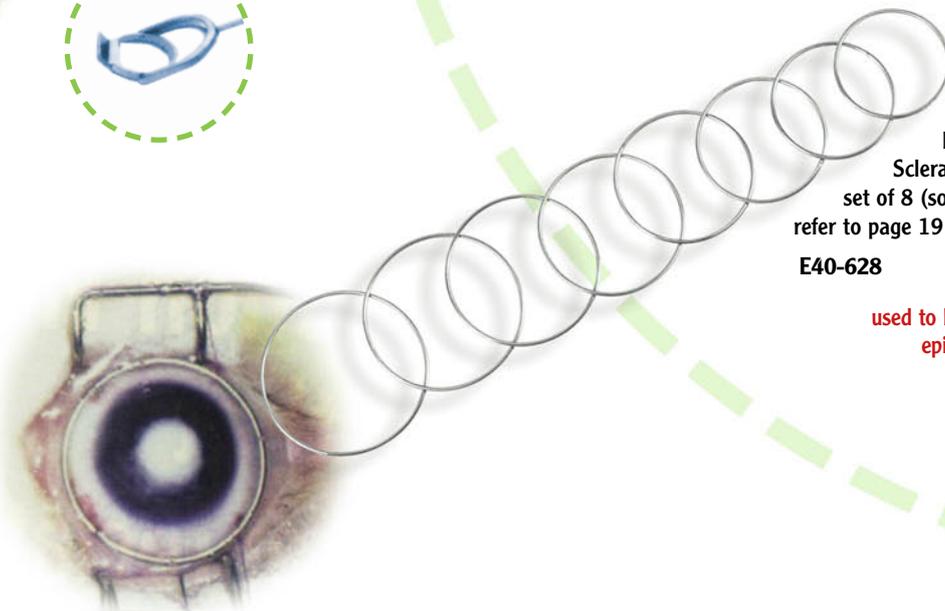
blunt teeth on both sides for atraumatic fixation; can be used for either the left or right eye



**Moretsky**  
LASIK Hinge Protector  
with swivel fixation ring  
11.0 mm ID, 13.0 cm

**E10-511TM**

ideal to fixate the globe during laser ablation while covering the hinge and flap for complete protection



**Flieringa**  
Scleral Fixation Rings  
set of 8 (sold singly),  
refer to page 19

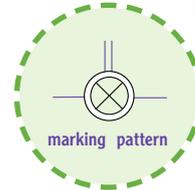
**E40-628**

used to be fixed to the episclera with sutures



**LASIK Markers** - with asymmetrical marking lines are designed to place identifying patterns on the cornea for accurate realignment of the flap.

**Mendez LASIK Marker**  
modified cross pattern with two opposite radial marking lines and two asymmetrically placed parallel marking lines, 11.0 cm  
**E10-673**



central rings with cross hair are used for accurately centering the marker over the patient's visual axis

**Chayet LASIK Marker**  
8.5 mm dia. marking ring with two asymmetrically spaced smaller rings, and central cross hair, 11.0 cm  
**E10-675**



circular opening maximises visibility during marking

**Lu LASIK Marker**  
10.5 mm dia. external ring with radial marking lines, 3.0 mm central ring with cross hair, 11.0 cm  
**E10-677**



**Ink Marking Pen**  
disposable, sterile  
**52-100** broad tip (box of 10)  
**T5222AA** fine tip (pack of 25)



Gentian violet marking pens are used for coating any refractive/corneal marking instruments



**Flap Spatulae** - have bevelled front edge for easy entry under the flap and smoothly rounded surfaces to elevate and reposit the flap.



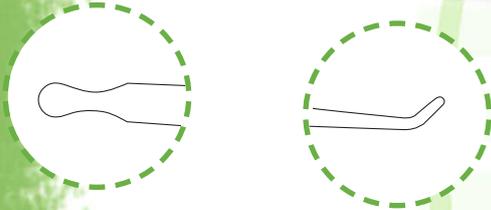
**Slade**  
**Flap Spatula/Elevator**  
 vaulted 12 x 2 mm wide blade,  
 smooth tip, 11.5 cm  
**E15-371T**

works well to find any "mark" or begin entry into the flap margin for enhancements



**Katzen**  
**LASIK Retreatment Flap Separator**  
 smooth bullet tip and 45° angled  
 delicate hook, 11.5 cm  
**E15-372T** titanium  
**E15-372** stainless steel

bullet tip to cut a clean edge through the epithelium before lifting the flap and delicate hook to locate and manipulate the flap edge



**Buratto**  
**Flap Retractor & Protector**  
 angled 8 x 5mm blade with narrow lip, 11.5 cm  
**E15-381T**

used to retract and protect nasally hinged flap (left & right eye)



**Caro**  
**Flap Smoother**  
 angled, hemispherical tip, 11.5 cm  
**E15-383T**

designed to lightly press on the corneal flap conforming it to the newly shaped stromal bed



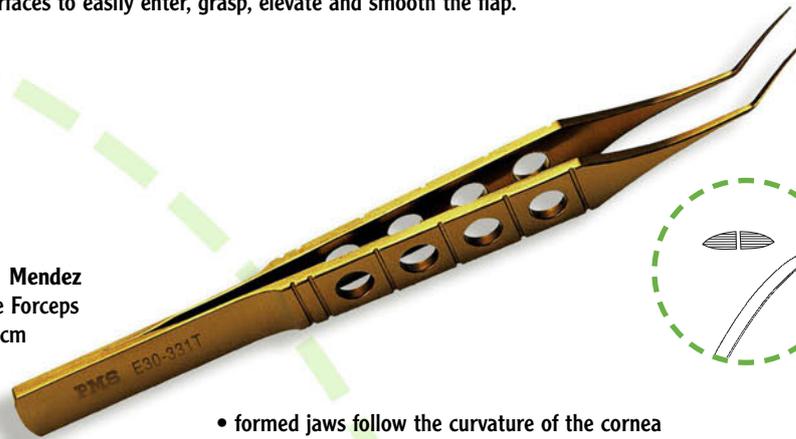
**Caro-Avalos**  
**Flap Smoother/Conformer**  
 angled, funnel shaped tip  
 11.5 cm  
**E15-385T**





**Flap Forceps** - have specially designed jaws with smooth inner surfaces to easily enter, grasp, elevate and smooth the flap.

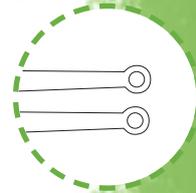
**Mendez**  
LASIK Multipurpose Forceps  
11.5 cm  
E30-331T



this instrument combines the features of a spatula, dissector and forceps

- formed jaws follow the curvature of the cornea
- spatulated tips and beveled edges to enter, lift and smooth the flap
- smooth inside jaw surfaces for atraumatically grasping the flap

**Perone**  
LASIK Flap Forceps  
curved, extra delicate  
2 mm ring tips,  
11.0 cm



ideal for atraumatically grasping and securely lifting the flap

E30-332T

**Manche**  
LASIK Flap Forceps  
curved jaws, oval tips, smooth  
inside surfaces, 11.0 cm



used to manipulate the flap with minimal risk of tearing and trauma

E30-333T

**Hersh**  
LASIK Retreatment Forceps  
curved shafts, U-shaped 3 mm  
spread, double notched tips,  
11.0 cm



used for controlled peeling of the flap from the stroma

E30-335T

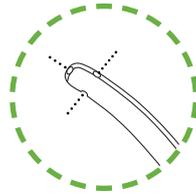




**LASIK INSTRUMENTS**



1ml syringe provides the optimum hydraulics and feel; a larger syringe can produce excessive flow with only light pressure of the plunger



**Irrigation Cannulae** - are used for irrigating the eye before and after repositioning the flap.

**Buratto LASIK Cannula**  
25GA/0.5 x 25 mm tube, formed 12 mm flattened tip with 1 front and 2 side ports

\*606-25 disposable

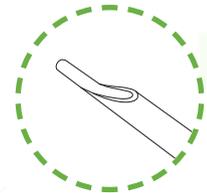
E20-525 reusable

spatulated tip allows easy entry under the flap, and three ports provide equal flow in 3 directions

All Glass Syringe (LL cone)

E20-801 1 ml

E20-802 2 ml



**Slade**

**LASIK Cannula**  
26GA/0.45 x 25 mm tube, formed 9 mm thin spatulated tip with recessed end port

\*613-26 disposable

E20-526 reusable

to easily locate and lift the flap edge, and effectively irrigate the lamellar interface



**Banaji**

**LASIK Cannula**  
25GA/0.5 mm x 25 mm tube, formed 12 mm bullet-shaped tip with 6 ports

\*604-25 disposable

E20-529 reusable

ideal for easy insertion under the flap, 6 ports provide multi-directional irrigation



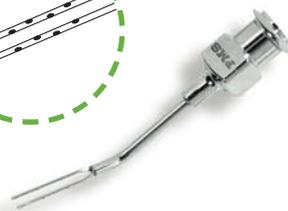
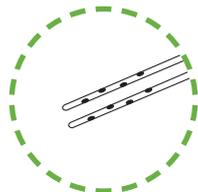
**Vidaurri**

**LASIK Cannula**  
25GA/0.5 mm double arm cannula, horizontal with 8 irrigating ports

\*600-06 disposable

E20-522 reusable

to simultaneously irrigate both sides of the flap and stromal bed, for controlled flap manipulation



\* disposable cannulae, sterile 10 per box



**Preparing the cornea** - cleaning and preparing the cornea is usually done with a wet sponge spear. The Netcell® Classic Range PVA Sponge guarantees a LINT FREE environment during LASIK surgical procedures.

**PVA Eye Spears**  
triangular, pointed tip,  
sterile (18 packs of 10)

**37-405**

for absorbing fluid in and around the orbital area during LASIK and refractive procedures



**PVA LASIK Spears**  
pre-expanded, broad tip,  
sterile (20 packs of 2)

**37-800**

to remove excess fluid and aligning and smoothing the corneal flap



**PVA LASIK Drain Rings**  
sterile (box of 20)

**37-830** 11.5 mm opening for nasal hinge

**37-831** 10.5 mm opening for superior hinge

used to control stromal bed hydration during laser ablation



**PVA LASIK Shields**  
sterile (box of 20)

**37-820** 9 mm dia. (7 mm edge)

**37-821** 8 mm dia. (6 mm edge)

**37-822** 4 mm dia. (8 mm edge)

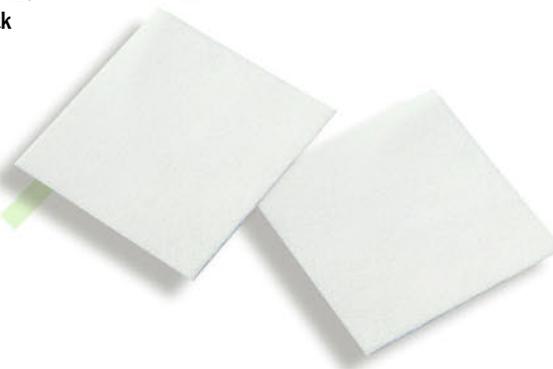
used to protect and moisten the nasal and superior hinge of the corneal flap



**Eye Kit**  
consisting of Instrument Wipe, Wick  
and Corneal Light Shield (1 each)  
sterile (20 packs of 1)

**37-450**

ideal for wiping delicate instrument tips during surgery, and to protect the cornea from harmful light rays



KERATOREFRACTIVE

photographs do not correspond to the actual size



EZWash® Sterilising Tray  
without silicone mat and  
instruments  
E45-113



**E42-123**  
**BASIC PRK INSTRUMENT SET**  
complete, consisting of 1 each:

**E40-100L** LASIK Speculum, page 148

**E10-512B** PRK Fixation Ring, page 150

**E10-522+7.0** Corneal Marker, page 160

**E15-353** Fukasaku Hockey Knife, page 157

**E15-365T** Lindstrom Spatula, page 156

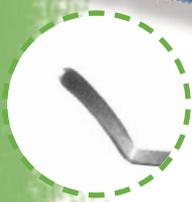
**E30-460** McPherson Tying Forceps, page 24

KERATOREFRACTIVE



**Lindstrom**  
**PRK/LASIK Spatula**  
double ended, 14.0 cm  
**E15-365T**

semi-sharp golf club end used for epithelial debridement during PRK and fine spatula to lift flap during LASIK



**Simpel**  
**LASIK Flap Elevator & Repositor**  
double ended, 14.5 cm

**E15-366T**

V-end with sharp inner edges to cut a clean edge through the epithelium, smooth spatula end is used to lift and reposition the flap back



**Intralasik Flap Lifter & Manipulator**  
double ended, 12.5 by 1.3 x 0.15 mm tip,  
angled 35°, 1.0 x 0.15 mm tip, 10.5 cm

**E15-373T**

delicate pick and curved spatula  
to open and manipulate the flap



**Intralasik Flap Spatula/Elevator**  
vaulted, semi-sharp 1 x 12 mm  
spatula with a jag on the tip,  
12.0 cm

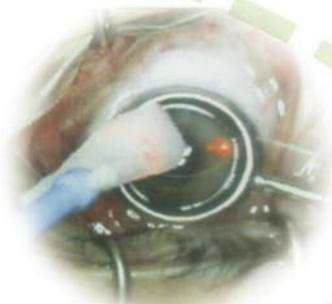
**E15-375T**

to detach the flap edge  
and to open the flap

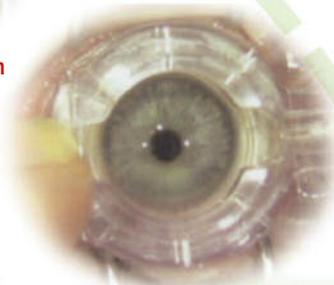




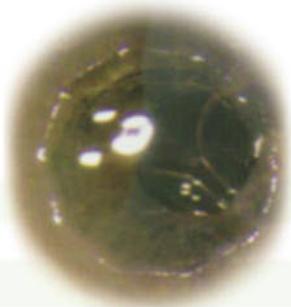
*Incisional and ablative corneal procedures*



**LASEK using alcohol solution**



**epi-LASIK with mechanical microkeratome**



**fs-LASIK with femtosecond laser**

Surface treatments: Tissue ablation is performed directly under the epithelium in surface ablation techniques. The epithelium is completely removed mechanically, chemically or with a laser (Photorefractive keratectomy - PRK), or an epithelial flap is produced using an alcohol solution (laser epithelial keratomileusis - LASEK), or by using a microkeratome (epithelial laser in situ keratomileusis - epi-LASIK). After treatment the flap is re-positioned to achieve faster wound recovery in comparison to PRK. However, most surgeons tend to remove the flap after treatment. In this case the only difference to PRK is the way of epithelial removal.

**Fukasaku Epithelium Removal Knife "Hockey" style, 12.5 cm E15-353 all stainless steel E15-353T on titanium handle**

**3 mm sharp front edge used to strip the epithelial layer; and semi-sharp 6 mm bottom edge to remove residual epithelium**



**Fukasaku LASIK Flap Spatula vaulted, extra thin, semi-sharp blade, 12.0 cm E15-363**

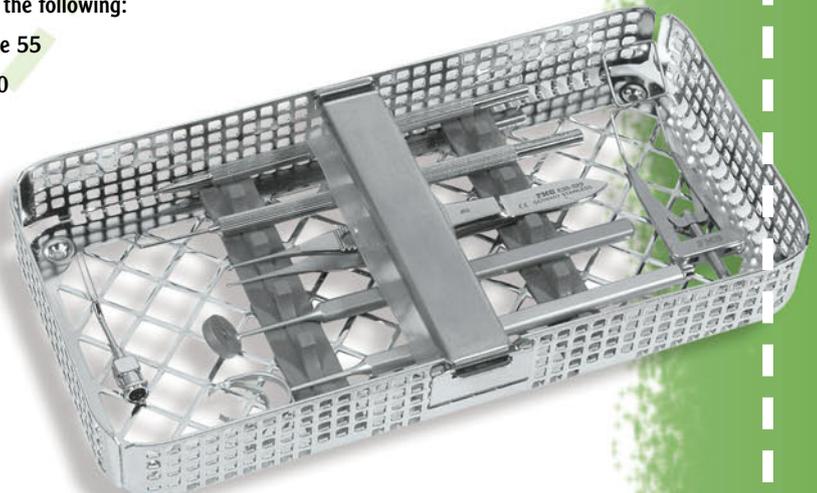
**used to locate and elevate the flap edge, and to effectively dissect underneath the flap**



**E42-124 PRIMARY LASIK SET complete, consisting of the following:**

- E40-100 Liebermann Speculum, page 55**
- E10-513G Gimbel Stabilising Ring, page 150**
- E10-673 Mendez Corneal Marker, page 151**
- E15-363 Fukasaku Flap Spatula, page 157**
- E15-372 Katzen Flap "Unzipper", page 152**
- E15-381T Burratto Flap Protector, page 152**
- E20-522 Vidaurri LASIK Cannula, page 154**
- E30-330T Mendez LASIK Forceps, page 153**

**EZWash® Sterilising Tray without instruments E45-113**



**KERATOREFRACTIVE**



**LASEK INSTRUMENTS FOR CAMELLIN TECHNIQUE**

**Simple Technique** - starts with the creation of an epithelial flap, using a 20% Alcohol/BSS solution for 10-30 seconds, which is then repositioned after laser ablation.

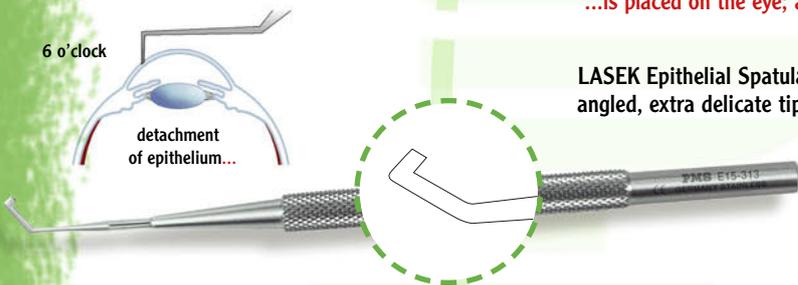


**LASEK Trephine**  
with central cross hair,  
semi-sharp edge, 10.5 cm  
E15-300+ 8.0 mm  
E15-300+ 9.0 mm  
E15-300+ 9.5 mm

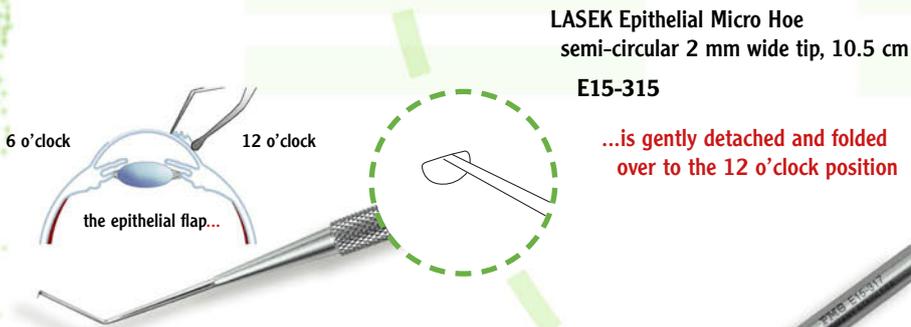
...is performed using special trephine with a 80 µm depth calibrated blade

**LASEK Alcohol Funnel**  
dual concentric rings, blunt, 11.0 cm  
E15-310+ 8.5 mm for 8 mm flap  
E15-310+ 9.5 mm for 9 mm flap  
E15-310+ 10.0 mm for 9.5 mm flap

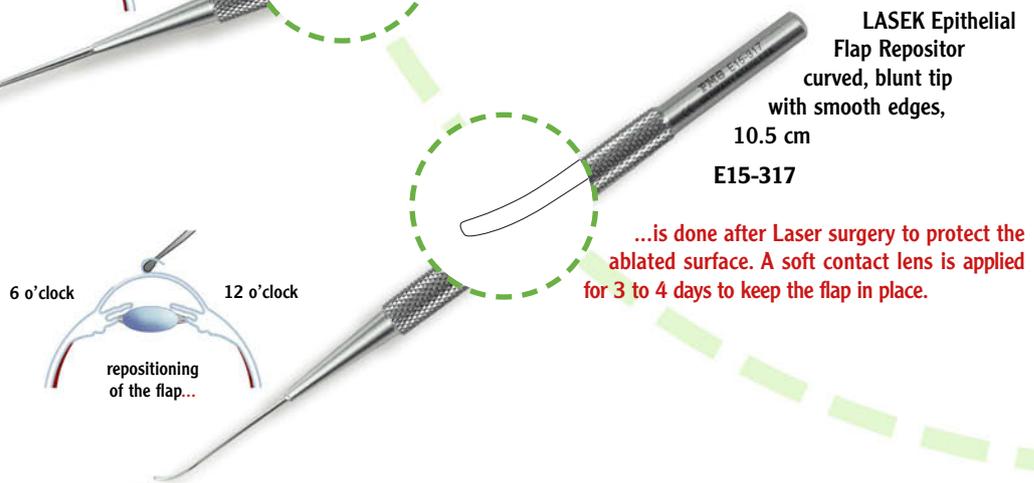
...is placed on the eye; a 20 % Alcohol/BSS solution is then instilled



...is performed in the pre-cut margin of the epithelium



...is gently detached and folded over to the 12 o'clock position



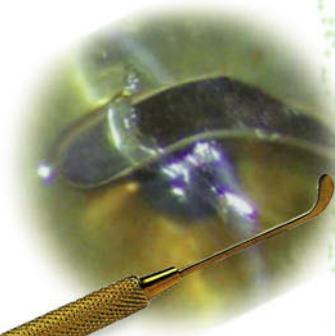
...is done after Laser surgery to protect the ablated surface. A soft contact lens is applied for 3 to 4 days to keep the flap in place.

## LASEK INSTRUMENTS FOR VINCIGUERRA TECHNIQUE

PMB



**“Curtain Technique”** - the initial incision is made off-center of the pupil. After an Alcohol/BSS solution is applied the flap is dissected underneath the epithelium and peeled from the center outward to the limbus.



**Vinciguerra Style  
PRK/LASIK Spatula Knife**  
curved 2.5 x 5 mm long blade,  
semi-sharp anterior edge, 11.5 cm

**E15-355T**

used to make initial off-center  
incision into the epithelium  
and to dissect the flap outwards to the limbus



**LASEK Epithelial Dissector**  
vaulted, 1.7 x 6 mm blade,  
semi-sharp tip, 10.5 cm

**E15-316**

to undermine and peel the flap from the center  
outward to the limbus for the “curtain technique”



**LASEK Epithelial Peeler**  
angled, 1 x 5 mm long blade,  
semi-sharp edges, 10.5 cm

**E15-318**

to efficiently dissect and fold back the flap



**E42-125 CAMELLIN STYLE LASEK SET**  
complete, consisting of the following:

**E40-100L** Slade LASIK Speculum

**E15-300+ 9.0** LASEK Trepphine

**E15-310+ 9.5** LASEK Funnel

**E15-315** LASEK Micro Hoe

**E15-317** LASEK Repositor

**E20-025** Alcohol Cannula

**E45-162** Instrument Tray



**Silicone Instrument Tray**  
(160x85x20 mm)

**E45-162**

for secure positioning of 10 instruments

KERATOREFRACTIVE



**Maloney**  
Astigmatic Keratometer  
**E10-690T**

projects multiple rings on cornea for qualitative evaluation of astigmatism



**Hoffer**  
Optical Zone Marker  
low profile ring with cross hair,  
10.5 cm, available in 3 sizes:  
7.0, 8.0 and 9.0 mm dia.

\*E10-522+ size

ideal to define arcuate positioning



**Mendez**  
Degree Gauge  
measures 0-180° every 10 degrees,  
12.0 mm dia. inner ring, 11.0 cm

\*E10-562

used with the Bores axis marker for easy alignment



A simple method of marking the steep meridian is with the Bores axis marker aligned in the Mendez degree gauge.

**Bores**  
Astigmatism Axis Marker  
two blades, 11.0 mm OD,  
9.5 cm

\*E10-572

fits inside the Mendez Degree Gauge to precisely mark the steepest meridian



\*also available on titanium round handle, add "T" to cat. no.

## AK MICROMETER DIAMOND KNIVES

PMS

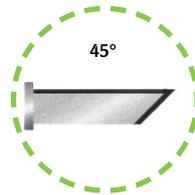


**Incisional Corneal Procedures** - are used to treat regular astigmatisms by flattening the corneal curvature in one meridian, utilising either transverse (straight) or arcuate (curved) incisions across the steep meridian.

Back & Front Cutting Knife  
vertical and 45° cutting edges

\*E10-260

suitable for all types of  
keratorefractive incision

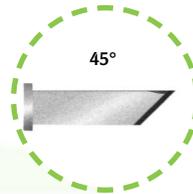


Gem Quality Diamond Knives. A gem quality diamond is considered to be free of inclusions visible at 10x magnification.

"Duo-Blade" Knife  
45° cutting edge and 250 microns vertical cutting edge

E10-262

for both Russian and American technique



Micrometer mechanism is easy to adjust in 10 micron increments from 0 to 3.0 mm.



Thornton Arcuate Knife  
"triple-blade" with vertical and 15° cutting edges

E10-263

perfect for arcuate incisions, because it easily follows the curvature of the arc



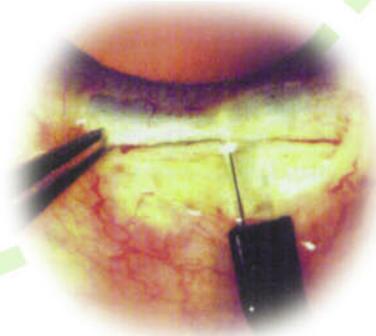
Footplates of PMS micrometer diamond knives are highly polished and coated with titanium nitride for smooth gliding on the corneal surface.

### CURRENT INCISIONAL AK TECHNIQUES

performed with arcuate (curved) cuts

Nomograms developed by different surgeons precisely stipulate the length and location of such incisions.

performed with transverse (straight) cuts



Ultra thin (100 microns) diamond blades. Their extremely thin profile makes them ideal for transverse (straight) and arcuate (curved) incisions.

\*also available with 0.17 mm thick standard diamond blades

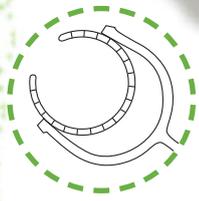
KERATOREFRACTIVE



**LRI INSTRUMENTS**

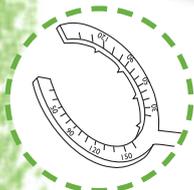
**LRI Degree Gauge** - are designed to determine Limbal Relaxing Incision axis. Multiple fixation teeth are ideal to stabilise the globe during marking.

**KERATOREFRACTIVE**



**Fine-Thornton**  
 Fixation Ring/Incision Guide  
 multiple blunt teeth, 13.0 cm  
**E10-513F** 13.0 mm ID  
**E10-516F** 16.0 mm ID

features 15° markings on the anterior surface as a guide for placement of limbal relaxing incisions



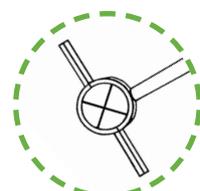
**Lu-Mendez**  
 LRI Guide/Fixation Ring  
 measures from 0-150° on both sides, 13.0 mm ID, 11.5 cm  
**E10-561**

for globe fixation and axial alignment of corneal incisions



**Nichamin**  
 LRI Fixation/Degree Ring  
 28 atraumatic teeth, visible 10° scale and 30° hash marks at top of the ring, 14.0 mm ID, 11.5 cm  
**E10-563**

when used with the Bores Two-Ray Meridian Marker the system delivers simplicity and acuity with precision engineering performance

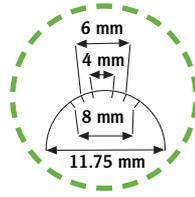


**Bores**  
 Two-Ray Meridian Marker  
 low-profile 3 mm ring with cross hair, 12 mm OD, 11.5 cm  
**E10-573**

fits with degree gauge of max. 13.0 mm ID



**LRI Markers** - with patient laying down - are used with the degree gauge to mark the limbus in a symmetrical pattern for correcting astigmatism.



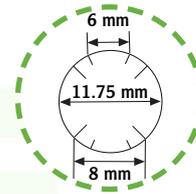
**LRI Marker**  
single marking blade for  
4, 6 and 8 mm chord length  
**E10-573T**

markers are designed to be  
used with a degree gauge



**LRI Marker**  
double marking blade for  
6 and 8 mm chord length  
**E10-574T**

chord lengths of 6.0 mm correct approx. 1.0 D of astigmatism  
chord lengths of 8.0 mm correct approx. 2.0 D of astigmatism



**LRI Marker/Degree Gauge**  
rotatable head with thin bevelled  
marking lines, 13.0 cm

**E10-576T** for 6 & 8 mm chord length

**E10-578T** for 40-60-80 degrees

marks incision size by degrees instead of  
chord length; corrects up to 2.5 D of astigmatism

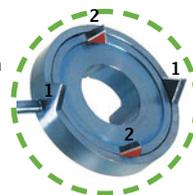
**Toric IOL/LRI Marker**  
low-profile degree gauge,  
with adjustable inner  
points, 13.0 cm

**E10-579T**

allows precise marking of the steeper  
meridian prior to IOL implantation

1 Fixed points allow to verify the 90° position  
as previously marked

2 Inner points are adjustable to align the  
steepest axis





**LRI INSTRUMENTS**

**LRI Markers** - to make LRI at slit lamp - are designed to mark the astigmatic axis on the cornea for a correct alignment of the lens.



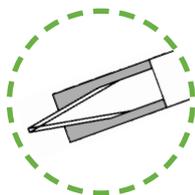
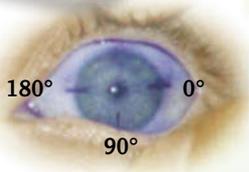
**LRI Slit Lamp Gravity Marker**  
lightweight, all titanium body with  
2-point pendulum marker, 13.5 cm  
**E10-582T**

used to mark the 0° and 180° meridian  
from the temporal position



**LRI/Toric Slit Lamp Marker**  
lightweight, titanium body with stainless steel  
3-point pendulum marker, 13.8 cm  
**E10-583T**

used to mark the 0°, 90° and 180° positions - as pictured at left



**Donnenfeld**  
**Slit Lamp Preset Diamond Knife**  
tri-facet 20° blade, 0.25 mm flat tip,  
fixed depth setting of 0.6 mm,  
10.5 cm  
**E10-380**

short handle permits  
arcuate incisions at slit lamp,  
narrow, single footplate prevents  
corneal epithelial detachments

- E42-127** LIMBAL RELAXING INCISION SET  
complete, consisting of the following:
- E10-690T** Astigmatic Keratometer, page 160
- E10-561** Fixation Ring/Degree Gauge, page 162
- E10-572** Astigmatic Axis Marker, page 160
- E10-383** Three-Step LRI Knife, page 165
- 52-100** Marking Pen, page 151

## LRI DIAMOND KNIVES

PMS



**LRI Diamond Knives** - feature a titanium handle and gem quality 1.0 mm wide diamond blade with tri-facet, flat 20° tip for controlled Limbal Relaxing Incisions.

LRI Preset Diamond Knives  
tri-facet 20° blade, flat 0.4 mm tip,  
one fixed depth setting of:

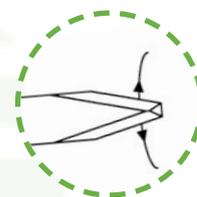
E10-384 0.5 mm

E10-385 0.55 mm

E10-386 0.6 mm



- ideal for paracentesis and astigmatism incisions
- side cutting edges for bi-directional cutting
- flat tip for controlled entry during incision
- used with open fixation ring/degree gauge



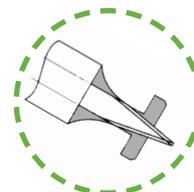
LRI Three-Step Diamond Knife  
tri-facet 20° blade, flat 0.4 mm tip,  
preset depths of: 0.5, 0.55 and 0.6 mm

E10-383

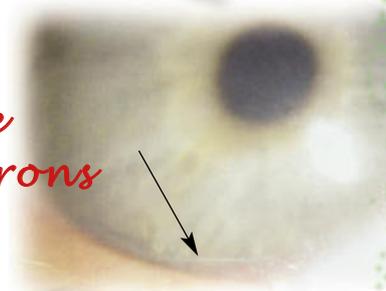
Nichamin  
LRI 7-Step Diamond Knife  
tri-facet 15° blade, narrow/flat  
0.2 mm tip, preset depth settings of:  
0.45, 0.5, 0.55, 0.6, 0.65, 0.7, 0.75 mm

E10-387

excellent blade visualisation  
while performing the incision

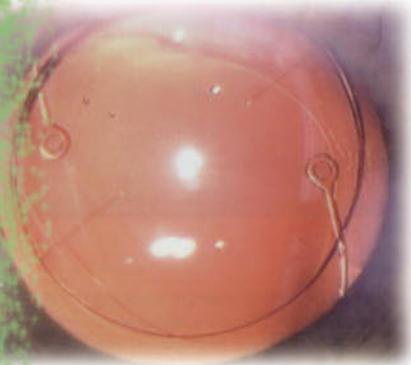


*the preferred depth of the  
LRI procedure is 600 microns*



limbal relaxing incision (arrow)  
performed with a diamond knife

KERATOPREFRACTIVE



Hydrophobic, 3-Piece Toric IOL MS 6116 TU implanted

**MicroSil® TORIC LENSES**

for more information visit  
[www.dr-schmidt-iol.de](http://www.dr-schmidt-iol.de)

**MATERIAL**

- Hydrophobic Silicone Elastomer
- With UV-Absorber and
- High Molecular PMMA haptics

**FEATURES**

- Three-piece posterior chamber lens
- 360° sharp posterior optic edge
- **Blue light protection**
- Optic size 6.0 mm
- Haptic angulation 0°

**LENS STYLES**

- Z-shaped haptics for implantation into capsular bag
- extended C-loop for implantation into ciliary sulcus
- undulated extended C-loop for piggyback implantation into the ciliary sulcus

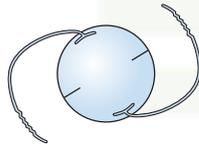
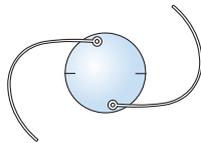
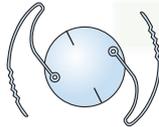
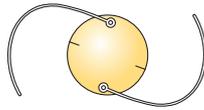
**DIOPTER RANGE**

**SPHERE**

- +15.0 to +25.0 D (0.5 D steps)
- - 3.0 to +14.0 D (1.0 D steps)
- +26.0 to +31.0 D (1.0 D steps)

**CYLINDER**

- 1.0 to 3.0 D (0.5 D steps)
- 4.0 to 12 D (1.0 D steps)
- (special production up to 30 D cylinder)



Discover Astigmatism  
and its Correction  
through our  
**Toric Demonstrator !**



The Toric Demonstrator #100010 simulates why a toric lens is useful for patients having corneal astigmatism.

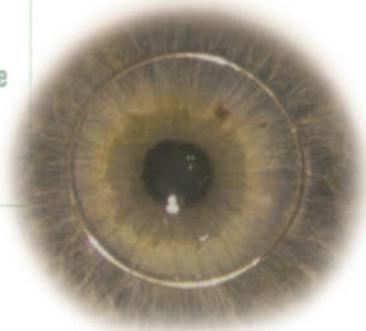
KERATOREFRACTIVE

\* Manufacturer:  
Dr. Schmidt  
Intraocularlinsen GmbH  
St. Augustin, Germany



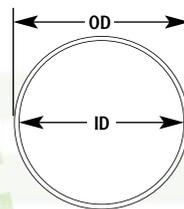
“In the eyes where the ring was implanted, the immune rejection rate was significantly lower than in the control group.”

— Jörg H. Krumeich, MD



Krumeich ring in place

- Krumeich**  
Intrastromal Corneal Rings  
available in three sizes:
- CR 7.0 OD 7.3 mm, ID 7.00 mm
  - CR 7.5 OD 7.8 mm, ID 7.50 mm
  - CR 8.0 OD 8.3 mm, ID 8.00 mm



**For more information:**

Jörg H. Krumeich, MD, can be reached at  
Clinic Krumeich, Propst-Hellmich Promenade 28-30, Bochum D-44866, Germany; +49-2327-82002; fax: +49-2327-88171; e-mail: jk@krumeich.de.

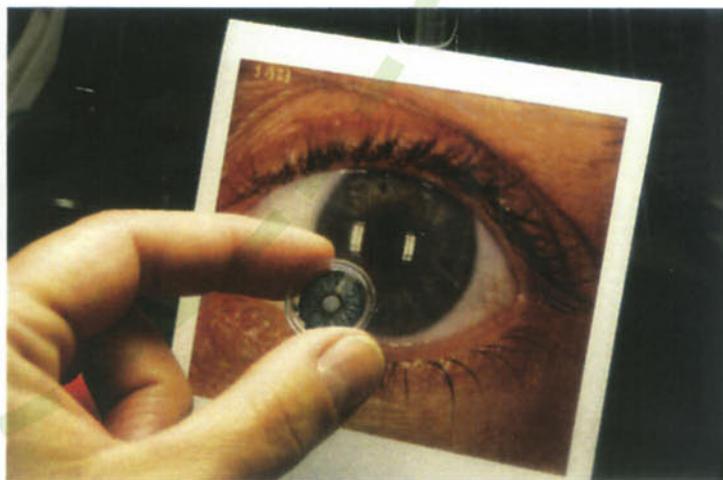
**MATERIAL** Ceralloy-Ti  
made from an alloy of

- 69% cobalt
- 24% steel
- 4,5% molybdenum
- 2% titanium

## Artificial Iris



- Designed on the Basis of an Individual Photography of the Patient's Eye
- Structure and Topography resembling the Natural Iris
- Available on Customer's Request, Special Production



• Models: Artificial Iris with or without Fiber Layer

\* Manufacturer:  
Dr. Schmidt  
Intraocularlinsen GmbH  
St. Augustin, Germany



**IMPLANTABLE CONTACT LENS INSTRUMENTS**

**KERATOREFRACTIVE**



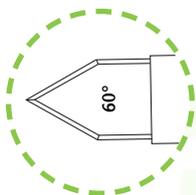
**Kraff-Lieberman  
Temporal Eye Speculum**  
solid 15 mm blades, 8.0 cm  
**E40-104T** titanium  
**E40-104** stainless steel

facilitates unobstructed access  
for temporal approach, adjusts  
easily to comfort patient's eye

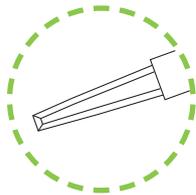


**Fine-Thornton  
Globe Fixation Ring**  
3/4 open swivel ring with  
nine blunt teeth, 13.0 cm

- E10-513T** 13 mm ID for clear cornea incision
- E10-516T** 16 mm ID for scleral tunnel incision



**EZCut®**  
**Clear Cornea Sapphire Knife**  
angled, keratome shaped 60° blade,  
3.2 mm width (4 cutting edges), 13.0 cm  
**\*E10-144**



**EZCut®**  
**Zaldivar Style Sapphire Knife**  
angled, trapezoid shaped blade,  
0.55-1.0 mm width, 13.0 cm  
**\*E10-181**

ideal for making the side port incision



**EZCut®**  
**Micro Incision Sapphire Knife**  
angled, spear shaped blade,  
0.9-1.2 mm width, 13.0 cm  
**\*E10-170**

\* also available with Diamond Blade, see page 68-69



**Livisolo**  
**ICL® Loading Forceps**  
 angled 13 mm rounded jaws,  
 highly polished surface, 10.5 cm  
**E30-601T** titanium  
**E30-601** stainless steel

ideal to remove the ICL® from container  
 and place it inside the cartridge



**Livisolo**  
**ICL® Removal Forceps**  
 angled 13 mm jaws, TC textured,  
 flat inside surface, 10.5 cm  
**E30-602T** titanium  
**E30-602** stainless steel

ideal to grasp the ICL® inside the eye for removal  
 in case of upside-down placement of the lens



**Phakic IOL Forceps**  
 curved 15 mm shafts with delicate  
 T-bar jaws, universal lock, 11.5 cm  
**E30-603T**



**ICL® Front Loading Forceps**  
 removable tip, 20GA/0.9 mm shaft,  
 angled 20°/1.2 mm wide jaws,  
 15.0 cm  
**E30-604T**

Specially designed cup shaped  
 jaws to pull the ICL® through the  
 nozzle of the cartridge without  
 damage. This prevents the  
 ICL® from coming out  
 of the cartridge in the  
 upside down position



ICL® is a trademark of STAAR Surgical Company



*Instrument sets  
are presented as  
guidelines only*



Foldable Phakic Lens Implantation

**E42-128 PHAKIC LENS SET**  
complete, consisting of 1 each:

**E15-562T IOL Manipulator**, page 35

**E30-603T Phakic IOL Forceps**, page 169

**E10-360 Micro Diamond Knife**, page 69



ICL® is implanted into the posterior chamber  
Picture courtesy: STAAR Surgical Company

**E42-129 IMPLANTABLE CONTACT LENS SET**  
complete, consisting of the following instruments:

**E15-531T Vukich ICL® Lens Manipulator**, page 171

**E15-532T Deitz ICL® Slider/Tucker**, page 171

**E30-601T Livisolo ICL® Loading Forceps**, page 169

**E30-602T Livisolo ICL® Removal Forceps**, page 169

**E10-381 Zaldivar Style Diamond Knife**, page 69

*for Iridectomy add*

**EZChange®**

**Zaldivar Style Iridectomy Scissors**

rotatable 360° tip, 20GA/0.9 x 22 mm curved shaft,  
vertical cutting 2.0 mm curved blades with sharp tips, 15.0 cm

**E25-621Z**

*for easy iris cutting  
through side port  
incision*



**EZChange®**

**Kershner Micro Iridectomy Forceps**  
rotatable 360° tip, 23GA/0.6 x 22 mm  
curved shaft, 15.0 cm

**E30-623K**

*for iris pickup*



instrument tips

are coloured for

easier identification;

**MAGENTA** for scissors

**BLUE** for forceps and



ICL® is a trademark of STAAR Surgical Company

## IMPLANTABLE CONTACT LENS INSTRUMENTS

PMS



**EZGuard® Safety Instruments** - are premium instruments available on new titanium handle with retractable safety shield.

EZGuard®  
Vukich ICL® Manipulator  
0.6x1 mm oval tip, 13.0 cm

**E15-516P**



**New**



ICL® Manipulators have textured surface underside from tip...

EZGuard®  
Deitz ICL® Tucker and Slider  
0.75 mm forked tip, 13.0 cm

**E15-517P**



...for placement of the ICL® haptic under the iris; and backward angled 45°/11.0 mm long shaft...

EZGuard®  
Deitz ICL® Slider  
0.8 mm dia. ring tip, 13.0 cm

**E15-518P**



... for ease of manipulation of the ICL® through a paracentesis



PMS EZGuard® Safety Instruments **FEATURE:**

**AND THE MOST POPULAR INSTRUMENT TIPS**

### PROTECTION

Instruments have an integrated retractable shield specifically designed to protect health care workers from accidental sharp injuries.

### PERFORMANCE

The built-in shield protects the quality and consistency of the instrument tips from possible damage.

### SIMPLICITY

The integrated safety shield is activated by the user through screw locking device.

### MATERIAL

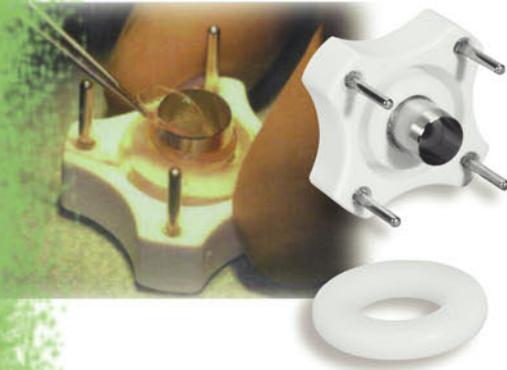
Stainless steel instrument tips are made from 302S26 orthodontic hard wire, this provides a hard wearing surface that will never rust and will hold for a good length of time.



also available on round handle - made of:  
• stainless steel, page 21  
• titanium, page 34  
• aluminum, page 94



KERATOREFRACTIVE



**The Barron Donor Marking Punch** is a single use, sterile system, designed to make an exact cut of the donor tissue for corneal transplant surgery.

more information on page 140



- A7048 8.0 mm
- A7050 8.5 mm
- A7052 9.0 mm
- A7053 9.5 mm

**STERILE**  
**DISPOSABLE**

for punching the endothelial donor button



**Corneal Dissectors**  
12 mm long x 3 mm wide blade, semi-sharp front end, 11.5 cm

\*E15-331 angled, straight

\*E15-333 angled, curved

for intrastromal dissection



**Donor Tissue Insertion Spatula**  
4 x 8 mm smooth platform with two raised edges, 12.0 cm

\*E15-335

for atraumatically insertion of the donor lamella, raised edges prevent the graft from moving during insertion



**Membrane Manipulators**  
angled 12 mm shaft, blunt tip, 12.0 cm

\*E15-341 Reverse Sinskey Hook, 0.2 mm

\*E15-343 Z-shaped Hook, 0.15 mm

ideal for scoring the area of planned Descemet's removal and to manipulate the donor lamella into position



for tucking the donor lamella edge

\*also available on titanium round handle, add "T" to cat. no.



The Hessburg Barron Vacuum Trephine for cutting the recipient cornea is a single use, sterile instrument for lamellar or penetrating keratoplasty.



corneal graft trephination of recipient eye

more information  
on page 140

**A7034 7.5 mm**

**A7036 8.0 mm**

**A7038 8.5 mm**

**A7040 9.0 mm**

**STERILE**  
**DISPOSABLE**

**Bores**  
**Optic Zone Markers**  
without cross hair, 10.5 cm  
available in 8.0, 8.5  
and 9.0 mm dia.  
**E10-521+size**



for marking the recipient cornea

**DLEK Excision Scissors**  
extra long blades with lightly rounded tips, 11.0 cm  
ideal for excision of the recipient  
posterior lamellar disc

**E25-471** light curved  
for primary excision  
10 & 2 o'clock

**E25-472** medium curved  
for enlargement of excision 8 & 4 o'clock

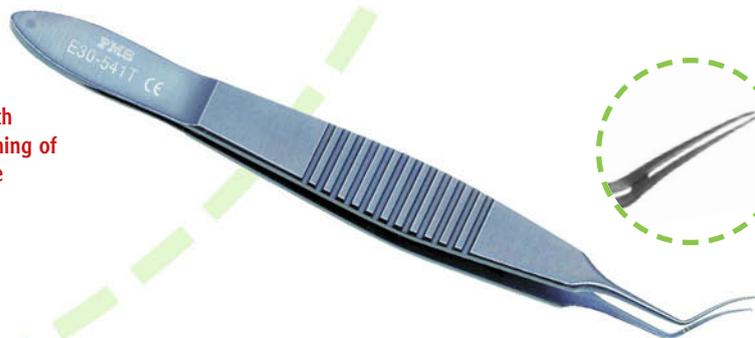
**E25-473** strongly curved  
for completing the excision  
towards 6 o'clock position



**EZSert®**  
**Donor Tissue Insertion Forceps**  
vaulted, very thin 12.0 mm shanks with  
ultra fine platform tips and heel stop, 10.5 mm

**E30-541T** titanium  
**E30-541** stainless steel

to fold and insert the donor  
lamella - preferably coated with  
viscoelastics to minimise crushing of  
tissue - into the recipient's eye



**KERATORREFRACTIVE**



**DSAEK INSTRUMENTS**

*for patient preparation*

**KERATOREFRACTIVE**



**Shapira**  
 DSAEK Eye Speculum  
 open 14 mm round blades,  
 blunt distal ends, 8.0 cm  
**E40-100P** stainless steel  
**E40-100TP** all titanium

*ideal for micro lamellar keratoplasty*

**DSAEK Marker**  
 double-ended, low profile rings of  
 8.0 mm and 9.0 mm dia., 12.0 cm  
**E10-529**

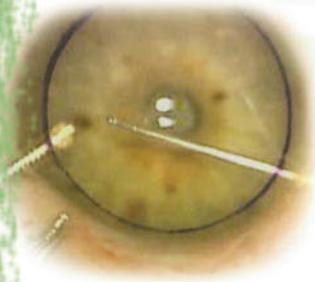


*for marking the Decemet's-Rhexis  
 on the epithelial side*



**Gispel**  
 DSAEK Anterior Chamber Maintainer  
 20GA/0.9 x 6 mm self-retaining, serrated tip  
 attached to silicone tubing with LL-adapter  
**E20-020SR**

*ideal to keep a deep chamber during stripping and  
 removal of the Descemet's membrane*



**DSAEK Endothelial Irrigating Stripper**  
 20GA/0.9 x 12 mm angled cannula,  
 thin, semi-circular 0.4 x 1.0 mm tip,  
 angled upward, 10.0 cm  
**E20-481**



*for gently stripping and removing  
 the endothelial layer*



*irrigation allows the surgeon  
 to maintain the chamber with  
 BSS thereby reducing the  
 dependence on viscoelastics*



*for insertion & positioning*



**EZSert®**  
 DSAEK Insertion Forceps  
 angled jaws, spatulated tips  
 with smooth, bevelled edges,  
 11.5 cm

**E30-330T** angled straight  
**E30-331T** angled curved

calibrated heel stop prevents  
 the tips from complete closing,  
 thus minimising trauma to  
 donor tissue



“What counts is the way you insert your graft into the anterior chamber and how you unfold it.”  
 — Massimo Busin, MD

**EZSert®**  
 Busin Style DSAEK Implantation Guide  
 angled shaft, thin concave plate with slot and 4 x 2.5 mm  
 funnel-shaped tip, 11.5 cm

**E15-344T** titanium  
**E15-344** stainless steel



the edge of the donor graft is grasped with the  
 foremost tips of the forceps and placed on the  
 guide plate with the endothelial-side facing up

illustration shows inverted position

to support “PULL-THROUGH” technique for quick and  
 easy insertion of the donor lamellar button  
 through a nasal clear corneal tunnel.

**EZSert®**  
 DSAEK Grasping Forceps  
 rotatable 360° tip,  
 20GA/0.9 mm x 25 mm  
 curved shaft with micro  
 TC-textured jaws, 15.0 cm

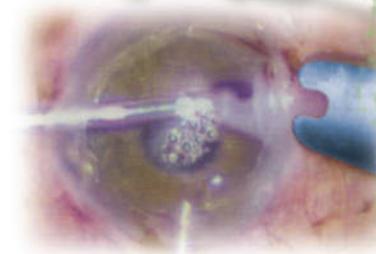
**E30-549T**

used through opposite side entry to grasp  
 the donor tissue from the insertion guide  
 and to pull it into the anterior chamber



the donor lamella is pulled into the funnel-shaped  
 part of the insertion guide using E30-549T forceps

**NOTE:**  
 The medical information is not intended as instructional materials for  
 the performance of the demonstrated procedures or techniques.

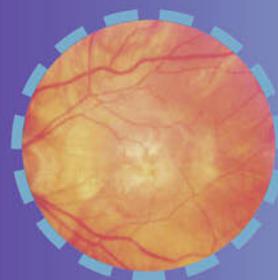


donor lamella is grasped and pulled into the A.C.

**KERATORREFRACTIVE**



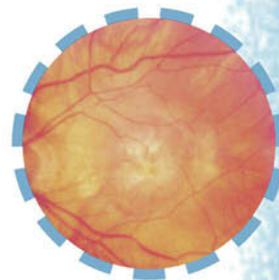
PMS



VALTAREORETTIN







**INTRODUCTION** . . . . . 178

**SCISSORS AND FORCEPS** .179-186

**FOREIGN BODY INSTRUMENTS** . . .187

**CARE AND HANDLING** . . . . .188-189

**ILLUMINATED INSTRUMENTS** . . . . .190-191

**MEMBRANE INSTRUMENTS** . . . . .192-193

**BACKFLUSH INSTRUMENTS** . . . . .194-197

**INFUSION & SILICONE OIL CANNULAE** . . . . .198

**SCLERAL PLUGS, TABLETS & FORCEPS** . . . . .199

**23/25GA CANNULAE & INSTRUMENTS** . . . . .200-207

**OBLIQUE INSERTION TECHNIQUE** . . . . .205

**MISCELLANEOUS INSTRUMENTS** . . . . .208-211

**SURGICAL INSTRUMENT SETS** . . . . .212-213

**SILICONE OIL & HEAVY FLUIDS** . . . . .214-220

**DISPOSABLE VITRECTOMY LENSES** . . . . .221

**SILICONE RETINAL IMPLANTS** . .222-223

**SCLERAL SPONGE IMPLANTS** . .224





**WELCOME**  
to the PMS World  
of Vitreo Retinal  
Products.

PMS offers one of the widest ranges of stainless steel and special alloy products for a unique engineering miracle: THE HUMAN EYE.

PMS *EZ*Grip®, *EZ*Change® and *EZ*Cut® vitreoretinal forceps and scissors offer the specialist the perfect instruments for grasping, manipulating and cutting intraocular tissue.

PMS VR instruments are welded to attain the extra durability, longevity and reliable performance that makes PMS known around the world as quality leader in ophthalmic surgical instrumentation and related products and equipment.

To protect these instruments we are able to offer an intelligent solution. The PMS sterilising tray system is designed to hold delicate instruments securely and allow them to be thoroughly cleaned by automated washer/disinfector machines.

*We invite you to learn about all the outstanding products we have to offer.*



## 20GA/0.9 MM EZCut® STANDARD SCISSORS

PMS



scissors have sharp tipped blades, unless otherwise indicated

### Straight Scissors

E25-600S blunt tips

E25-602S sharp tips

sharp blades allow cutting of peripheral membranes; blunt blades are ideal for cutting near the retinal surfaces

lightweight titanium handle reduces hand fatigue while providing lasting durability

### Curved Scissors

E25-603S

curved to a 4 mm radius blades enable safe cutting along the contour of the retina surface

### Horizontal Scissors

E25-604S

allow easy cutting and dissection parallel to the retina and delaminating membranes adherent to the surface

### Vertical Scissors

E25-605S 45°, 1.6 mm long

E25-608S 80°. 1.9 mm long

for cutting vertical to the retina surface and resection of delicate membranes

### Kroll (Vertical)

Scissors with Membrane Pick angled 45° hooked blade

E25-605SK

hooked blade for lifting and manipulation of membranes during cutting process

### 20GA/0.9 MM SCISSORS SPECIFICATIONS

Straight scissors blade length 2.9-3.0 mm

Curved scissors blade length 2.9-3.0 mm

Angled scissors blade length 1.5-1.6 mm

Vertical scissors blade length 1.6-1.9 mm

VITREORETINAL INSTRUMENTS



**20GA/0.9 MM EZGrip® STANDARD FORCEPS**

**VITREORETINAL INSTRUMENTS**

“squeeze handle“ design offers synchronous, safe and smooth tip closure (important when working close to the retina)



**Crocodile Forceps**  
serrated 4 mm jaws

**\*E30-672S**

ideal for general purpose membrane peeling and manipulating thicker and more fibrotic membranes



**End Gripping Forceps**  
small tip 4 mm jaws

**\*E30-674S**

for grasping and manipulating fine membranes, ideal for (PVR) and difficult macular pucker cases



**Hockeystick Forceps**  
grooved 2mm/45° jaws

**\*E30-679S**

for gripping and peeling membranes along the retina surface with good visualization



**Pic Forceps**  
smooth 2mm/45° jaws

**E30-681S**

for grasping and elevating membranes



**Side Gripping Forceps**  
smooth 2mm/45° jaws,  
flat 0.7 mm wide tips

**E30-683S**

for gripping and pulling peripheral membranes

**GA/MM CONVERSION DATA & MODELS**

- 19GA/1.1 mm, ID 0.70 mm, illuminated
- 20GA/0.9 mm, ID 0.60 mm, standard
- 23GA/0.6 mm, ID 0.33 mm, micro
- 25GA/0.5 mm, ID 0.25 mm, miniature

\*also available with titanium tips



*excellent for  
“maculorhexis”  
and ILM peeling*



rounded grip area  
enables easy 360°  
rotation and freedom  
for manipulation and  
optimal surgical control

End Gripping Forceps  
fine tip 3.5 mm jaws  
\*E30-673S



for grasping of thin membranes in the macular  
region, particularly in cases with detached retina

End Gripping Forceps  
pointed tipped 4.0 mm jaws  
\*E30-676S straight shaft



effective at lifting, stripping  
and peeling fine membranes

End Gripping Forceps  
nail-like tipped 3.5 mm jaws  
\*E30-687S Eckhardt style 90°



for precise grasping of thin  
membranes near the macula

End Gripping Forceps  
delicate 3.5 mm jaws  
with 0.7 mm pick at tip  
\*E30-678S



**NOTE:**

The medical informational contained in this catalogue  
is for informational purposes only. It is not intended  
as instructional material for the use of the  
instruments, procedures or techniques.

\*also available for 23GA/0.6 mm trocar cannula system, see page 198



Tip Protector for instruments with stationary tips  
**E15-022**



Horizontal Subretinal Scissors  
sharp 3.5mm/45° blades  
**E25-604SR**

for cutting and dissecting in the subretinal space



Horizontal Subretinal Forceps  
narrow 3.0mm/45° jaws  
**E30-681SR**

angled 45° long thin jaws are ideal for grasping...



Horizontal Subretinal Forceps  
picked 3.5mm/45° jaws  
**E30-682SR**

subretinal membranes through a small retinotomy



Vertical Subretinal Forceps  
thin 3.5mm/45° jaws  
**E30-683SR**

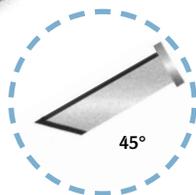


Diamond Subretinal Knife  
titanium bajonet handle with J-lock mechanism,  
0.17 thick x 6 mm blade with double cutting edges

**E10-301SR** 20°/0.5mm wide

**E10-302SR** 45°/0.9mm wide

excellent for cutting of subretinal membranes





for PMS Vitreoretinal Instruments  
with stationary or removable tips

Tip Protector  
for stationary instrument tips

E15-022

for protecting instrument tips during  
sterilisation, storage and transportation

Protective Cap  
for removable instrument tips

E15-023

Vitreo Flushing Tubes  
for stationary instrument tips

E20-424 metal adaptor

E20-424T titanium adaptor

for cleaning/flushing instrument tips  
after each use to avoid encrustations

Vitreo Cleaning Adaptor  
for removable instrument tips

E20-426T

Cleaning Syringes  
for Cleaning Tube and Adaptor  
available in 20, 30 and 50 ml,  
disposable, sterile (sold singly)

on request

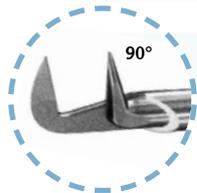
1:2

All PMS reusable instruments  
are supplied with detailed instructions  
for cleaning and sterilisation. General cleaning and  
sterilisation advice can also be found on page 10 and 71.



scissors have sharp tipped blades, unless otherwise indicated

removable instrument tips (360° rotatable)



Horizontal Scissors Tips  
straight 3.4 mm blades

- E25-600R blunt tips
- E25-602R sharp tips

titanium "squeeze handle"  
with thread for removable  
instrument tips, 10.0 cm  
**E10-010T**

Horizontal Scissors Tip  
curved 2.7 mm blades  
**E25-603R**

curved by 12 mm radius blades enable easy cutting along the curvature of the eye ball

Horizontal Scissors Tips  
angled 1.7 mm blades  
**E25-604R2 25°**  
**E25-604R4 45°**

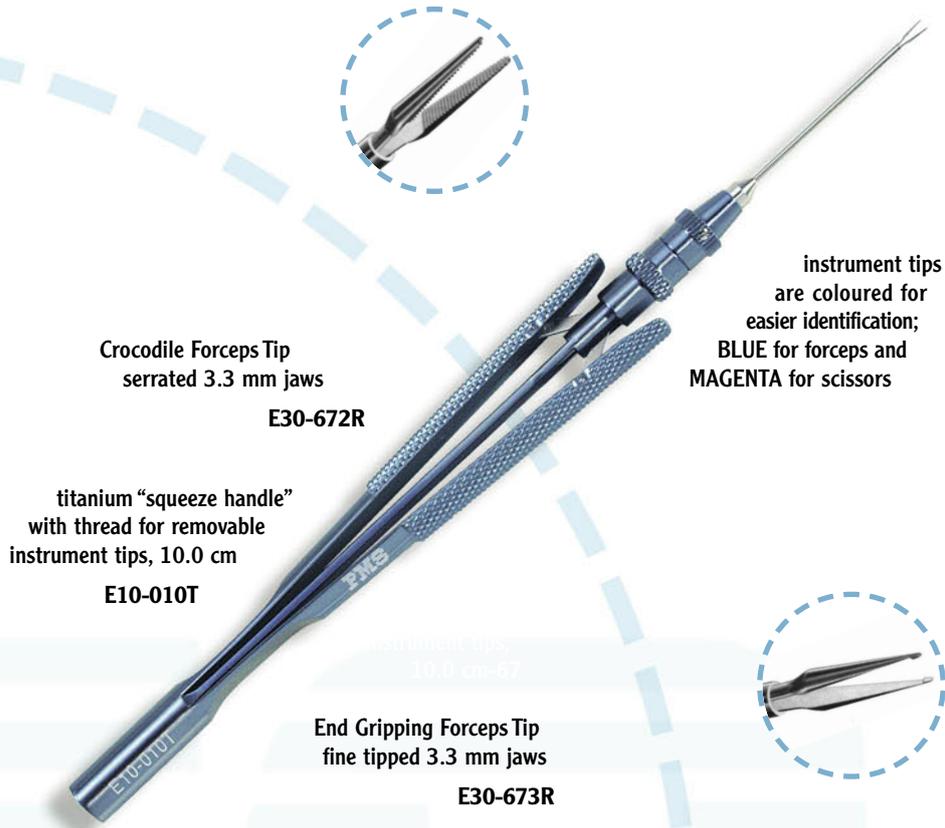
gentle angle of blade allows cutting and dissection parallel to the retinal surface

Vertical Scissors Tips  
angled 1.5 mm blades  
**E25-605R 45°**  
**E25-607R 70°**  
**E25-609R 90°**

vertical scissors allow powerful, controlled cutting action; distal blade remains stationary during use

**Kroll (Vertical)**  
Scissors Tip with Membrane Pick  
hooked 1.1mm/45° blade  
**E25-605RK**

tips and handle sold singly



Crocodile Forceps Tip  
serrated 3.3 mm jaws  
**E30-672R**

titanium "squeeze handle"  
with thread for removable  
instrument tips, 10.0 cm  
**E10-010T**

instrument tips  
are coloured for  
easier identification;  
**BLUE** for forceps and  
**MAGENTA** for scissors

instrument tips,  
10.0 cm-67  
End Gripping Forceps Tip  
fine tipped 3.3 mm jaws  
**E30-673R**

Hockeystick Forceps Tip  
grooved 2.3mm/45° jaws  
**E30-679R**

Pic Forceps Tip  
smooth 2.3mm/45° jaws  
**E30-681R**

Eckhardt Style Forceps Tip  
nail-like tipped 3.3 mm jaws,  
**E30-687R**

**tips and handle sold singly**



**23GA/0.65 MM EZChange® MICRO INSTRUMENT TIPS**

VITREORETINAL INSTRUMENTS

23GA/0.65 mm diameter  
EZChange® instrument tips  
are excellent for pediatric and  
other microsurgical procedures



Horizontal Scissors Tips  
delicate 1.6 mm blades  
\*E25-602R23 straight  
E25-603R23 curved

titanium "squeeze handle"  
with thread for removable  
instrument tips, 10.0 cm  
**E10-010T**



Vertical Scissors Tips  
blunt 0.8 mm blades  
E25-605R23 45°  
E25-607R23 70°

for 20GA/0.9 mm Trocar Cannula System



Crocodile Forceps Tip  
serrated 1.7 mm jaws  
\*E30-672R23

cellent for peeling and manipulating membranes



End Gripping Forceps Tip  
fine tipped 1.7 mm jaws  
\*E30-673R23

end gripping tips are ideal for maculorhexis...



End Gripping Forceps Tip  
nail-like tipped 1.7 mm jaws  
(Eckhardt Style)  
\*E30-687R23

and to peel ILM

**tips and handle sold singly**

\* fits through 23GA/0.65 mm trocar cannula system



reverse action  
basket style forceps  
ideal for objects of  
irregular shape



Foreign Body Forceps  
three 1.9 mm long arms,  
slightly angled inwards  
E30-693F removable tip  
E30-693S stationary tip



removal of lead shot using  
E30-692F18 Foreign Body Forceps

Foreign Body Forceps  
removable tip (360° rotatable),  
blunt, two prongs grasping jaws

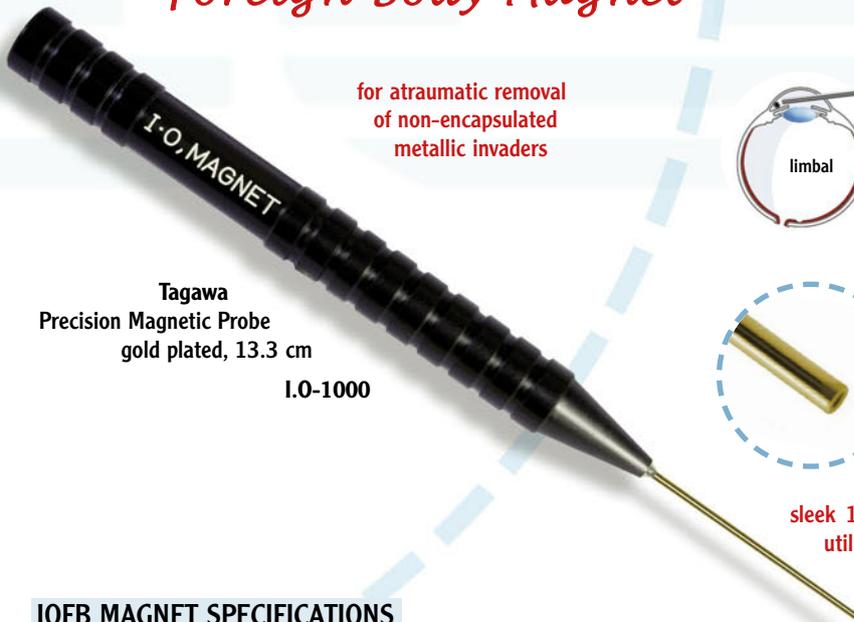
- E30-692F18 18GA/1.2 mm tube, 2.5 mm jaws
- E30-692F20 20GA/0.9 mm tube, 1.9 mm jaws



essential instruments for managing IOFB, two sizes 18 & 20GA are  
ideal to remove most foreign bodies of any shape, size and material

## Intraocular Foreign Body Magnet

for atraumatic removal  
of non-encapsulated  
metallic invaders



Tagawa  
Precision Magnetic Probe  
gold plated, 13.3 cm  
I.O-1000



sleek 19GA/1.1 mm probe can be  
utilized with a limbal, open sky  
and/or pars plana approach

### IOFB MAGNET SPECIFICATIONS

Probe: 19GA/1.1 mm x 33 mm  
Handle: ø 10 mm x 100 mm long  
Power: 1.000 gauss (at tip only)  
Life expectancy: Indefinite  
Sterilisation: Autoclave and ETO



for PMS Vitreoretinal Instruments with EZGrip® stationary tips



All PMS vitreoretinal forceps and scissors have a very thin shaft with a delicate working mechanism. Intraocular fluids may enter this mechanism during surgery. If these fluids are not promptly and properly cleaned out, it will lead to the possibility of instrument malfunction, because salt, cellular debris, protein and viscoelastic can accumulate the inside of the mechanism.

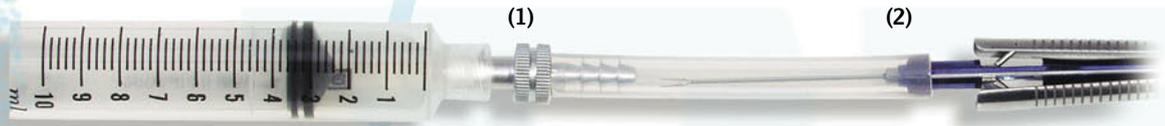
Additionally protein may coagulate inside the instrument if not flushed out before sterilisation and thus can completely stop the mechanism from functioning.

- Clean the instrument immediately after use with distilled/sterile water to remove blood, tissue or other contaminants.

- Remove any debris from the instrument tip very carefully. A fine soft bristled brush may be used for this.

- Clean the exterior of the instrument carefully with a moistened surgical sponge #37-900 (page 70).

- Place syringe with vitreo flushing tube E20-424 (1) over instrument tip and push over front of handle (2).



- Gently press the syringe plunger and flush instrument two or three times with purified distilled water.

- Replace the empty purified water syringe with a syringe filled with Isopropyl Alcohol, and flush the instrument to remove any remnants of water.

- Remove the empty Isopropyl Alcohol syringe then attach an empty syringe to the cleaning flush tube. To remove the alcohol blow through the instrument with one or two syringes with air.

**INSPECTION**

- Before sterilisation instruments should be inspected for cleanliness and suitability regarding:

- Any physical damage to the device, bent blades, chipped tips, misalignment, scratches.
- Smooth action, blades and arms should move smoothly and not jerk.
- Instrument surface should be clean, without any staining and pitting.
- All blades should be sharp and cut along the full length. Cutting performance can be tested against tissue paper and/or rubber dam.
- Any damaged instruments should be disposed of or repaired following the hospital approved procedures.

- Cover instrument tip with Protective Sheath E15-022 and place separately on a wash/sterilising tray (see section), then clean in a Washer/Disinfector or Ultra Sonic Cleaner.

- The mechanism and the handpiece should be oiled occasionally with a hospital approved medical grade instrument lubricant

- Sterilise the instruments in suitable trays using flash autoclave, (steam) autoclave, high vacuum steriliser. Autoclaving 135°C/276°F is the preferred method of sterilisation.

**REPAIR**

- PMS can also offer a high quality repair service for all types and makes of vitreoretinal instruments. Estimates are free and prices extremely competitive.



### for PMS Vitreoretinal Instruments with EZChange® removable tips

- Unscrew the tip from hand piece and attach cleaning adapter E20-426T.
- Ultrasonically clean both parts, if possible.
- Attach syringe filled with distilled or sterile water to adapter and flush the tip two/three times.
- Flush the tip with alcohol. This will remove any remnants of water and facilitate drying.
- Dry the tip by forcing one or two syringes full of air through tip to remove any remaining alcohol.
- Force special heat-resistant instrument milk through the tip, following instruction in article number three above.
- Dry with air following instruction in article number five above.
- Immerse handle in distilled or sterile water for two minutes, and then clean and dry with surgical sponge.
- Lubricate joints in handpiece with hospital approved and medical grade agent.
- Store and sterilise the instrument in a protective tray #E45-112. Instruments should not touch each other, to avoid contact corrosion.

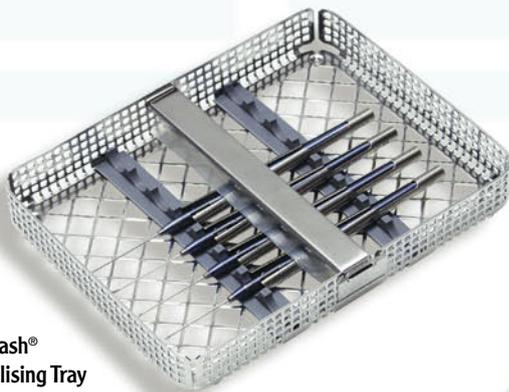


Vitreous Cleaning Adapter  
titanium case with LL cone  
E20-426T

for flush-through cleaning of removable instrument tips immediately after each surgery

### RECOMMENDED HANDLING

- The scissors and forceps are microsurgical instruments and must be handled with care at all times.
- NEVER DROP YOUR PMS VITREOUS AND RETINAL INSTRUMENTS.
- When cleaning care should be taken to prevent chemicals or human debris contaminating the user.
- Only handle devices using personal protective equipment, e.g. gloves, etc.
- All cleaning to be carried out in a suitably controlled environment.
- Hospital approved procedure for handling, cleaning and sterilising must be strictly followed.



EZWash®  
Sterilising Tray  
E45-112  
(supplied without instruments)

**PMS EZWash® Sterilising Trays** are designed to hold micro surgical instruments securely and allow them to be thoroughly cleaned by automated washer disinfector machines which are now popular in many hospitals.



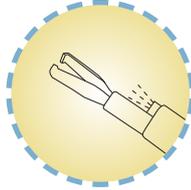
19GA/1.1 MM ILLUMINATED INSTRUMENTS

VITREORETINAL INSTRUMENTS

**Crocodile Forceps**  
fine serrated jaws  
\*E30-672SI



**End Gripping Forceps**  
nail-like grip tips  
\*E30-687SI

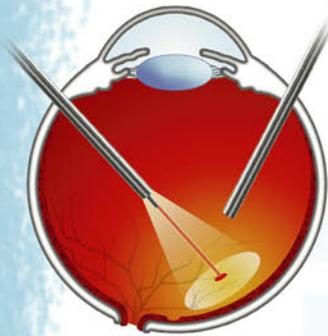


**Horizontal Scissors**  
delicate curved blades  
\*E25-603SI

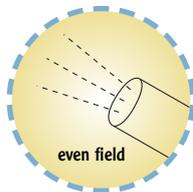
\* supplied without Monofilament

**Monofilament**  
25GA/0.5 mm "fine" fiber,  
disposable, sterile (box of 5)  
\*PD 100.06

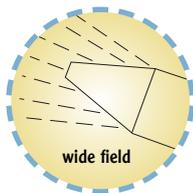
the monofilament is designed for use with  
"illuminated" instruments with an inner  
diameter of at least 23GA/0.6 mm



**Endo-Illuminators**  
20GA/0.9 mm Fiber Optic Probe,  
disposable, sterile (box of 5)  
\*PD 100.00 even field illumination  
\*PD 100.14 wide field illumination



1:2



fits Ocutome, Alcon  
and B&L system

\* Manufacturer:  
Peregrine Surgical Ltd.  
Doylestown, PA  
USA



“Chandelier illumination ... gives excellent illumination and visualization, and it allows one to perform a proper bimanual vitrectomy ...”

— Amar Agarwal, MS, FRCS, FRCOphth, and colleagues

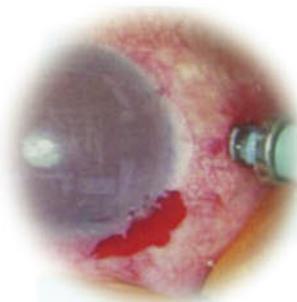
Wide Angle Chandelier Cannula with adaptor for Ocutome system, self-retaining 20GA/0.9 mm cannula, disposable, sterile (box of 5)

\*5037



Chandelier illumination is a technique using a 20GA/0.9 mm or smaller illumination fibre that is inserted into the vitreous cavity transconjunctivally through the pars plana. It increases the surgeons visibility making anterior and posterior segment surgery safer and easier to perform.

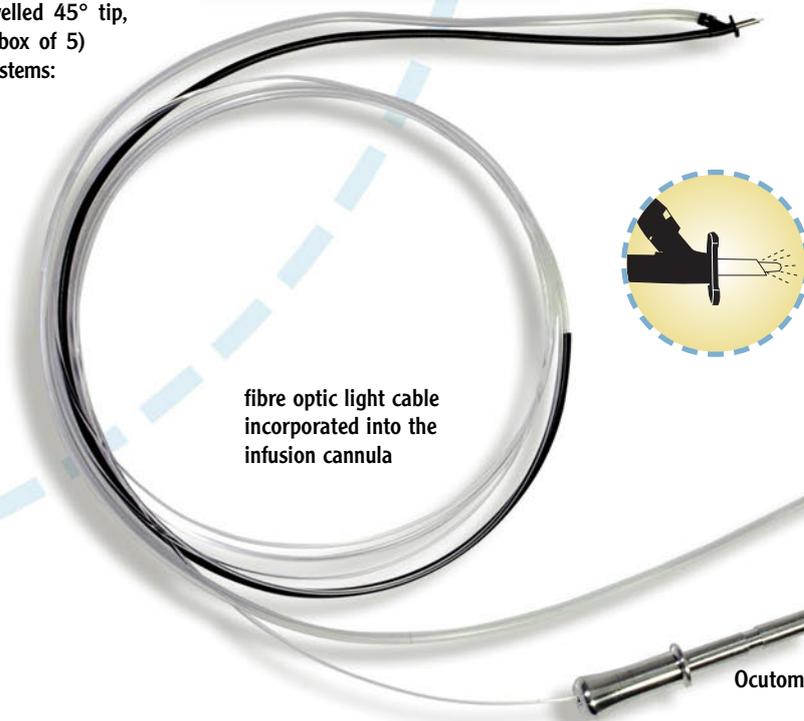
Chandelier Cannula is placed in the pars plana area without the need of sutures for fixation.



Removal of dislocated IOL with chandelier illumination and vitreoretinal forceps.

Illuminated Infusion Cannulae 18GA/1.2 mm bevelled 45° tip, disposable, sterile (box of 5) fits the following systems:

- \*5038 Ocutome
- \*5096 Alcon
- \*5128 B&L



fibre optic light cable incorporated into the infusion cannula



Ocutome adaptor

\* Manufacturer: MicroVision, Inc. Seabrook, NH USA



**Removable Instrument Tips**

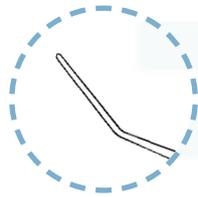
Hold the tip gently but firmly and screw the handle onto the tip!  
Make sure that the handle is turned only, NOT THE TIP!

tips and handle sold singly

Aluminium Handle  
for removable tips  
E15-100AB

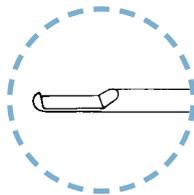


other colours  
see pages  
94 & 130



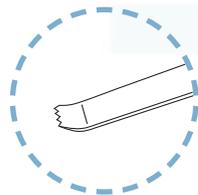
Membrane Spatula/Knife Tip  
angled sharp 5 mm blade  
E15-347R

for dissection and excision of  
membranes from the surface



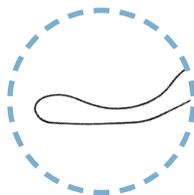
Membrane Peeler Tip  
blunt recessed shaft  
\*E15-350R

for lifting and locating the edge of  
epiretinal membranes in PVR cases



Membrane Rake Tip  
angled 1 mm blade  
E15-355R

to clear fine membranes  
from the retinal surface



Membrane Knob Tip  
curved round end  
E15-365R

for manipulation of  
detached retina

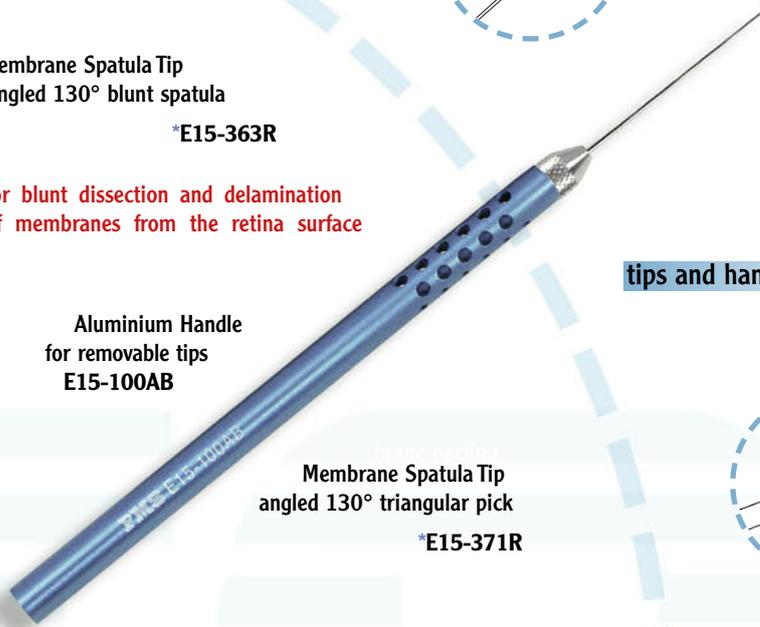
also available with stationary tips in all titanium (\*) and/or stainless steel

Membrane Spatula Tip  
angled 130° blunt spatula

\*E15-363R

for blunt dissection and delamination  
of membranes from the retina surface

Aluminium Handle  
for removable tips  
E15-100AB



tips and handle sold singly

Membrane Spatula Tip  
angled 130° triangular pick

\*E15-371R

ideal for blunt dissection and  
epiretinal membrane peeling

Membrane Pick Tip  
angled 130° blunt spatula

\*E15-373R



PMS EZChange® picks, rakes, and spatulas  
can meet all your needs for easy, controlled  
membrane manipulation and peeling  
around the retina surface.



E15-350R

...locating, lifting, stripping...



E15-363R

...dissection, delamination...



E15-347R

...dissection and excision...



E15-355R

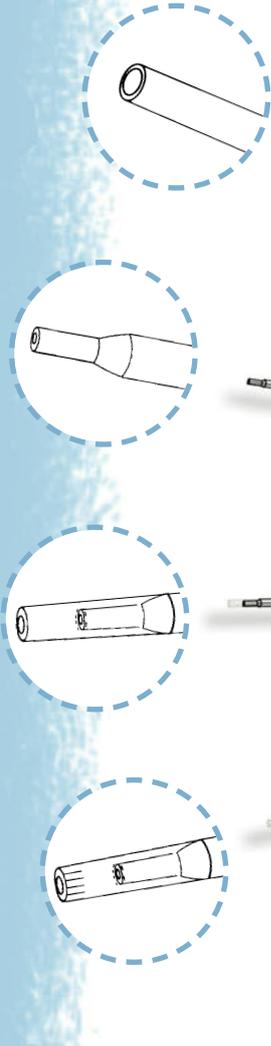
...cleaning and peeling.



**20GA/0.9 MM REUSABLE BACKFLUSH INSTRUMENTS**

PMS Backflush Instruments are useful for passive or active aspiration of intraocular fluids and reflux of incarcerated tissue, atraumatic “brushing” of the retinal surface and repositioning of retinal folds or breaks.

**VITREORETINAL INSTRUMENTS**



**Backflush Instrument for passive aspiration (manual control)**

**E20-730 complete, consisting of:**

**E20-731 handpiece**

**E20-700 flute tip cannula**

**E20-732 silicone reservoir**



**Blunt Tip Cannula  
\*E20-700**

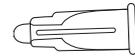


**Tapered Tip Cannula  
\*E20-704**



**Soft Tip Cannula  
\*E20-710**

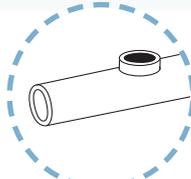
**\* also available with Luer-Lock cone**



**add “L” to cat. no., e.g. E20-710L**



**Brush Tip Cannula  
\*E20-720**



**Silicone Backflush Reservoirs with “cut-off” aspiration control port**

**\*\*E20-732 for passive aspiration (sealed end)**

**\*\*E20-742 for active aspiration (open end)**

**Backflush Instrument for active aspiration (syringe or machine)**

**E20-740 complete, consisting of:**

**E20-741 handpiece**

**E20-700 flute tip cannula**

**E20-742 silicone reservoir**

**E20-743 silicone tubing kit**



**\*\* also available sterile, 10 per box**



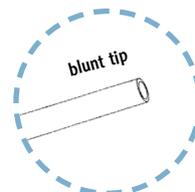
PMS Backflush Handles accept Luer-Lock and Standard Luer Fitting Cannulae. Simple design provides ease of use and setup.

Backflush Handpieces  
for passive aspiration  
(manual control)

\*\*E20-731LL Luer-Lock male  
E20-731LM Luer male



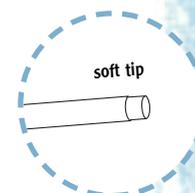
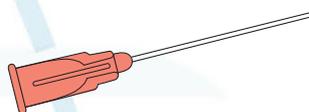
supplied  
without cannula



Blunt Tip Cannula  
front open port

\*A3207

also known as Charles Flute Needle

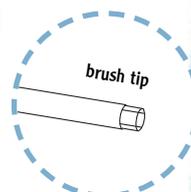


Soft Tip Cannula  
2 mm extendible sleeve

\*A3198

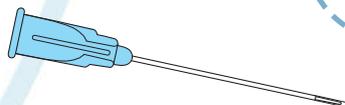


\* disposable cannulae, sterile, 10 per box



Brush Tip Cannula  
1 mm extendible sleeve

\*A3206



Backflush Handpieces  
for active aspiration (syringe or machine)  
supplied with E20-743 silicone tubing kit

\*\*E20-741LL male Luer-Lock and hose end  
E20-741LM male/male Luer cone



supplied  
without cannula

\*\* also available sterile, 5 per box

VITREORETINAL INSTRUMENTS



The PMS range of backflush instruments are produced of high quality materials including stainless steel, silicone rubber and teflon. These instruments will provide long service if properly cleaned after each surgical procedure.

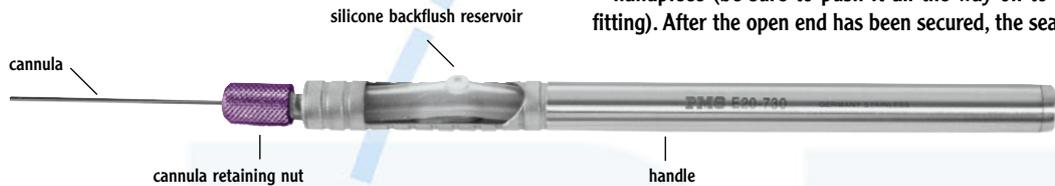
PMS backflush instruments consist of four basic parts:

- stainless steel handle
- stainless steel tip cannula
- stainless steel retaining nut
- silicone rubber backflush reservoir with white teflon aspiration control port

**REASSEMBLY**

After all of the parts have dried completely the instrument can be reassembled as follows:

- 1) Install the silicone backflush reservoir by inserting the open end of the reservoir into its fitting at the distal end of the opening within the handpiece (be sure to push it all the way on to the fitting). After the open end has been secured, the sealed



**DISASSEMBLY**

After use the instrument should be disassembled and cleaned before being sterilised. The following is a brief description of the disassembly procedure to be followed prior to cleaning.

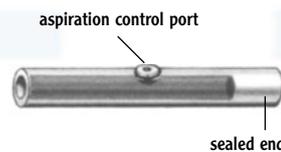
- 1) Unscrew and remove the cannula retaining nut and remove the cannula.
- 2) Remove the silicone backflush reservoir from the handpiece by pulling up the center of the tubing.

end of the reservoir is inserted into the proximal end of the opening within the handpiece (it is necessary to “crimp” the tubing while inserting the proximal end). After the backflush reservoir is in its proper position, there should be no crimps in the reservoir tubing.

- 2) Insert the cannula in the distal tip of the handpiece and secure with the cannula retaining nut.

**BACKFLUSH RESERVOIRS**

If the backflush reservoir shows any signs of wear or damage or if it contains tissue remnants, blood, etc., which cannot be removed, it must be replaced.



**MANUAL CLEANING**

1) Wash the handpiece and backflush reservoir thoroughly, rinse well and allow to dry before re-assembling. The silicone backflush reservoir should be inspected under magnification to be sure that it does not show any signs of wear or damage. Confirm that the teflon “washer” is in the aspiration control port and that the proximal end of the reservoir tubing is sealed.



**SILICONE OIL**

is extremely difficult to completely remove from silicone tubing. Therefore if silicone oil is used in a surgical procedure, the silicone parts of the backflush instrument must be replaced after the procedure.

2) If a silicone “brush” or “soft tip” cannula is used, it should be inspected under magnification for wear or damage and replaced as necessary. If the inspection reveals an intact silicone tip carefully wash the cannula and brush/soft tip. Then reinspect the brush/soft tip to be sure that it has not been damaged while cleaning. The cannula should be thoroughly flushed and rinsed during the cleaning procedure.

3) After all of the parts have been rinsed thoroughly with distilled water, allow them to dry completely before being reassembled.



**Sterilisation Containers**

**OPTIONAL CARE & CLEANING**

Only hospital approved detergents and cleaners are acceptable for use in the cleaning process. If a detergent or cleaner is used, steps 1 through 3 of the Manual Cleaning Procedure should be followed immediately afterwards.

**AUTOMATED CLEANING**

Automated wash/disinfector machines and ultrasonic cleaner are an acceptable method to use in the instrument cleaning process, but should not be used as the sole cleaning method. However, the instrument should, at the very least, be cleaned with purified water prior to being placed into the mentioned systems. Follow the automated cleaning with steps 1 to 3 for the Manual Cleaning Procedure.

**STORAGE**

We highly recommend the utilisation of PMS EZWash® sterilisation trays and PMS EZLoad® sterilisation containers to sterilise, store and protect all of your delicate PMS vitreoretinal instruments. For more details refer to relevant section.

**STERILISATION**

The PMS backflush instruments (stainless steel handles and stainless steel cannulae) can be gas, flash or steam sterilised (in autoclave). The temperature should not exceed 273°F/134°C.

**AND ALWAYS REMEMBER:**

**HANDLE YOUR INSTRUMENTS WITH TENDER LOVING CARE**



**E45-221B**  
310 x 190 x 40 mm  
for storage of 1 x 1/1, 2 x 1/2  
or 3 x 1/3 size Sterilisation Trays

**Sterilisation Trays**



**E45-113**  
1/3 size 178 x 90 x 24 mm



**E45-112**  
1/2 size 178 x 140 x 24 mm



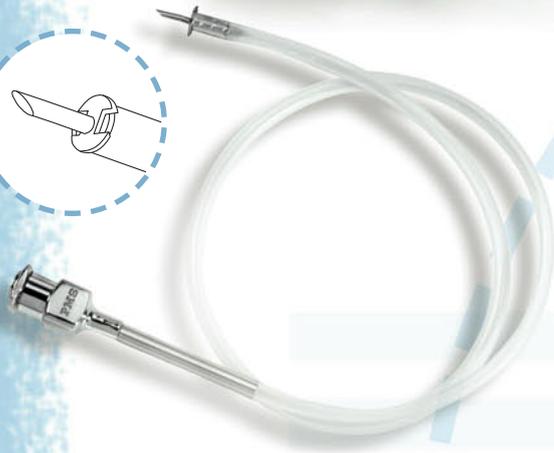
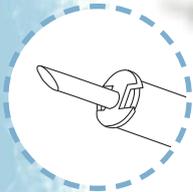
**E45-111**  
1/1 size 275 x 178 x 24 mm



**20GA/0.9 MM INFUSION CANNULAE**

VITREORETINAL INSTRUMENTS

*for Gas, Liquids  
and Silicone Oil*



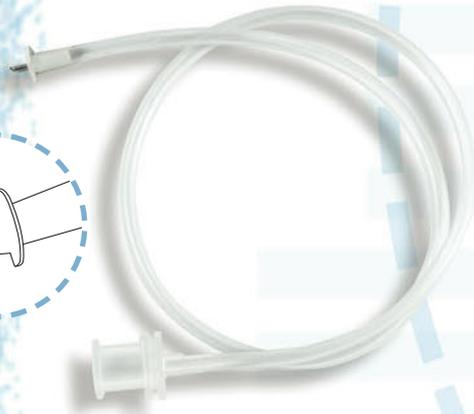
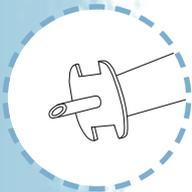
**PMS**  
Standard Infusion Cannulae  
attached to silicone tubing with LL cone,  
reusable, non-sterile (sold singly)

**E20-752** 2.5 mm tip  
**E20-754** 4.0 mm tip  
**E20-756** 6.0 mm tip



sterilise before use

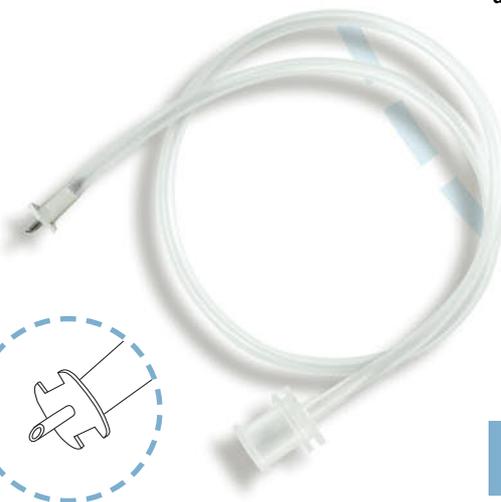
Reusable cannulae are constructed of stainless steel material; 380 mm extra long infusion tubing enables individual location of the silicone oil syringe.



Standard Infusion Cannulae  
attached to silastic tubing with LL cone,  
disposable, sterile (box of 10)

**\*175-25** 2.5 mm tip  
**\*175-40** 4.0 mm tip  
**\*175-60** 6.0 mm tip

for injection of viscous fluids during posterior segment procedures



High Viscosity Infusion Cannulae  
attached to silicone tubing with LL cone,  
disposable, sterile (box of 10)

**\*175-14** 4.0 mm tip  
**\*175-16** 6.0 mm tip

designed for easy injection of high viscosity substance such as silicone oil

further VFI instruments for manual delivery of heavy liquids are shown on pages 212 - 213

\* Manufacturer:  
EAGLE LABS  
Rancho Cucamonga,  
California, USA



**Directions for use**  
 Note: This item is sold as *NON-STERILE*

- SET:**
- 1) Sterilize (gas or steam autoclave) scleral plugs.
  - 2) Filtration, open pouch onto sterile field.
  - 3) With cross action forceps, grasp plug head and lift from retaining block.
  - 4) With forceps attached to head, place tip of plug into sclerotomy.
  - 5) With scleral plug properly positioned in sclerotomy, remove forceps.

**REMOVAL**  
 1) Grasp scleral plug head with forceps and gently remove from sclerotomy



**Reusable Scleral Plugs**  
 non-sterile (4 per tablet)

\*R19-1000 19GA/1.1 mm, gold

\*R20-1000 20GA/0.9 mm, silver



**sterilise before use**

**Disposable Scleral Plugs**  
 (2 x 20GA/0.9 mm &  
 2 x 19GA/1.1 mm)  
 sterile (4 per tablet)

\*RDP-1000

**Scleral Plug Forceps**  
 angled 9 mm grooved jaws  
 with side gripping tips,  
 10.5 cm

E30-777T

for standard 20GA/0.9 mm scleral plugs

cross-action handle, ideal for picking up the plug  
 from the holder and easy insertion and removal

**Scleral Plug Forceps**  
 angled 9 mm notched  
 jaws with side and  
 end gripping tips,  
 10.5 cm

E30-778T

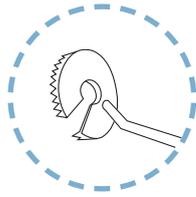
for micro 23GA/0.65 mm  
 scleral plugs and trocar  
 cannulae



\* **Manufacturer:**  
 Howard Instruments, Inc.  
 Tuscaloosa, AL  
 USA



*affordable,  
economical...*



Trocar Fixation Plate  
multiple atraumatic teeth,  
central 2.75 mm opening  
and side port, 11.0 cm

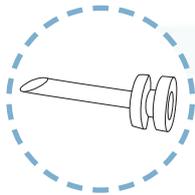
E15-727 stainless steel

E15-727T titanium

*ideal for conjunctiva fixation  
around the general area of  
the pars plana incision site*

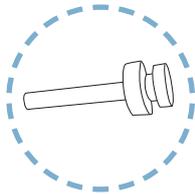
Cannula Inserter  
titanium, blunt tip, 10.0 cm

E20-723T



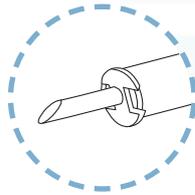
Trocar Cannulae  
non-sterile (4 per tablet)

E20-723C



Cannula Plugs  
non-sterile (4 per tablet)

E20-723P



Universal Infusion Cannula  
4 mm bevelled tube attached to  
silicone tubing with LL cone,  
non-sterile (sold singly)

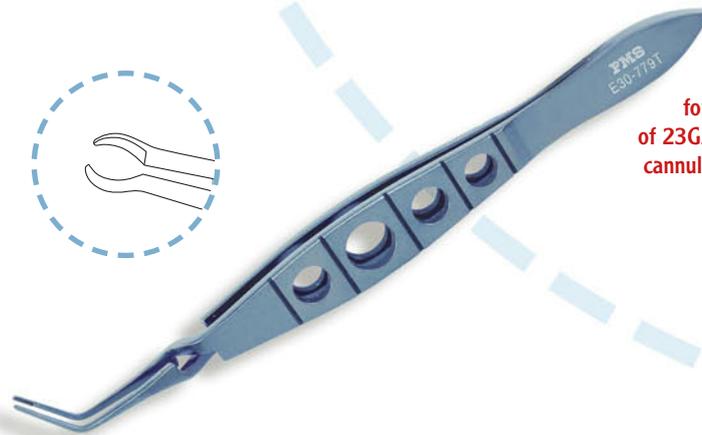
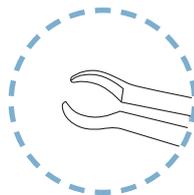
E20-723U



**sterilise before use**

Cannula Loading Forceps  
titanium, angled 9 mm shanks  
with biconvex curved jaws,  
10.5 cm

E30-779T



*cross-action design  
for insertion and removal  
of 23GA/0.65 mm trocar  
cannulae*



*... efficient,  
two step technique*

**23GA/0.65 mm  
Trocar System**

- complete, consisting of:
- 1 x Trocar fixation plate
  - 1 x Cannula inserter
  - 3 x Trocar cannulae
  - 3 x Cannula plugs
  - 1 x Universal infusion cannula
  - 1 x Cannula loading forceps
  - 1 x Sterilising case with ...
- E20-723R** ...removable lid  
**E20-723S** ...sliding lid



**23GA/0.65 mm Disposable  
ONE STEP & TWO STEP  
Trocar Cannula Systems**  
are shown on pages 200-201

**PMS**

- Reusable Trocar Cannula Kit  
non-sterile (4 per retaining block)
- E20-720K** 20GA/0.9 mm
  - E20-723K** 23GA/0.65 mm



**Replacement Cannula Kit**

23GA/0.6 mm, consisting of 2 each:  
instrument cannulae and cannula plugs

- \*5189 reusable, sterile (1 kit per tray)
- \*5190 disposable, sterile (5 trays per box)

5189



**Disposable Closure Valve Set**  
for 23GA/0.65 mm cannulae,  
consisting of 4 valves per tray,  
sterile (5 sets per box)

\*5209

**EAGLE**

- Stiletto MVR Knives  
23GA/0.65 x 30 mm shaft,  
0.75 mm wide lancet blade,  
disposable, sterile (box of 6)
- EG-5563** straight
  - EG-5663** angled

For sclerotomy incisions with smooth, easy  
penetration through the limbus or pars plana.  
Tip provides a fluid-tight seal and is tapered for  
easy withdrawal.



\* Manufacturer:  
MicroVision, Inc.  
Seabrook, NH  
USA



*smaller is better,  
less traumatic,  
less pain*



Micro Scissors  
sharp tipped blades

\*E25-602S23 straight

\*E25-603S23 curved

\*E25-605S23 vertical 45°



Crocodile Forceps  
serrated micro jaws

\*E30-672S23

*ideal for macular applications...*



End Gripping Forceps  
micro tips platform

\*E30-673S23

*fine membrane grasping...*



Eckhardt Style Forceps  
end gripping nail-like tips

\*E30-687S23

*and peeling of ILM*



Tano Style Forceps  
asymmetrical jaws

\*E30-689S23

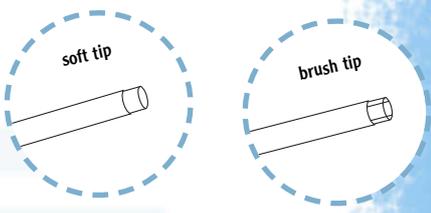
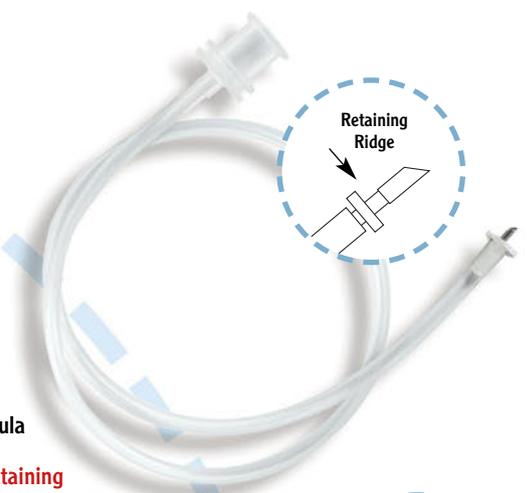
\* fits through 23GA/0.65 mm Trocar System



**Self-Retaining Infusion Cannulae**  
23GA/0.65 mm x 4.0 mm tip,  
disposable, sterile (box of 5)

- \*5144 infusion cannula
- \*5165 silicone oil cannula

designed for sutureless fixation; retaining  
ridge holds cannula securely in place



**Disposable Backflush Cannulae**  
23GA/0.65 x 30 mm tube,  
sterile (box of 10)

- A3209 blunt tip, Charles Flute Cannula
- A3195 soft tip, 2.0 mm silicone sleeve
- A3208 brush tip, 0.6 mm silicone sleeve



**Backflush Handpiece**  
for passive aspiration (manual control)  
with XL silicone reservoir,  
male Luer-Lock connector  
E20-731XL

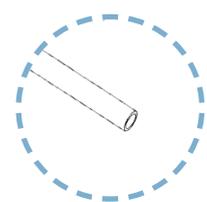
extra large reservoir  
for increased capacity,  
allows reflux of greater  
volumes of fluid



**Replacement Reservoir**  
E20-732XL



Fluid-air exchange with simultaneous  
aspiration of intravitreal fluid  
through blunt tip extrusion cannula.



**Charles Flute Cannula**

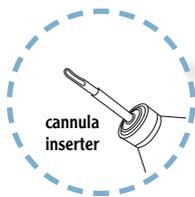
A3209

\* Manufacturer:  
MicroVision, Inc.  
Seabrook, NH  
USA



23GA/25GA DISPOSABLE TROCAR CANNULA SYSTEMS

VITREORETINAL INSTRUMENTS



**23GA/0.65 mm  
TWO STEP  
Cannula System**

complete, each package includes:  
3 x cannula inserter with preloaded  
cannula with self-sealing valve,  
1 x trocar knife and 1 infusion line  
disposable (pack of 6)

5700



sterilise before use

The unique cannula inserter works together with an ergonomically designed knife to accomplish oblique cannula insertion directly into the eye via pars plana.



**DIRECTION FOR USE**

Self-sealing cannulae are pre-mounted on the trocar insertion tools. Slide the trocar needle forward until it locks into the handle. Introduce the cannula with the trocar needle. Forceps may be used to hold the cannula in place while removing the trocar needle. The cannula is self-sealing and will minimise fluid loss when not in use.



Attach the Luer connector of the infusion line to a source of infusion fluid. Prime the infusion line. Insert the metal connector in to the rubber cap on one of the cannulae. Immobilise the infusion line and verify that it is securely attached to the cannula before use.

**25GA/0.5 mm  
ONE STEP  
Trocar Cannula System**

complete, each package includes:  
4 x inserter handles with preloaded  
trocar cannula and one infusion line  
disposable (pack of 6)

5605



sterilise before use

Insert handle consists of sharp wire trocar mounted to plastic handle. The inserter comes with a 25GA/0.5 mm cannula preloaded and is delivered in a safe, retracted position.



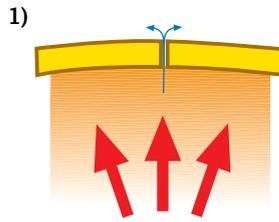
		132°/134° C
		270°/273° F

Not for sale in Europe

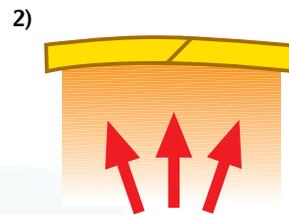


*for better incision closure  
and cannulae stability*

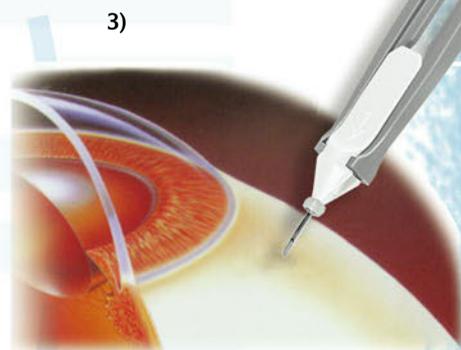
1)  
The conventional method of inserting a trocar cannula vertical to the scleral surface promotes incisions that are small (0.5 to 0.6 mm), however with poor sealing ability.



2)  
The oblique insertion technique with “valve” effects seals better than the traditional vertical technique. Valve-like incisions are very similar to self-sealing corneoscleral incisions performed in cataract surgery.



3)  
Oblique insertion of trocar cannula can be performed with a straight or angled 23GA/25GA trocar inserter. Both types are designed to accomplish oblique cannula insertion directly into the eye. Straight cannula inserters are introduced at an approximate 45° angle to the scleral surface with a movement tangential to the limbus.



**23GA/0.65 mm  
ONE STEP (without self-sealing valve)  
Trocar Cannula Set**

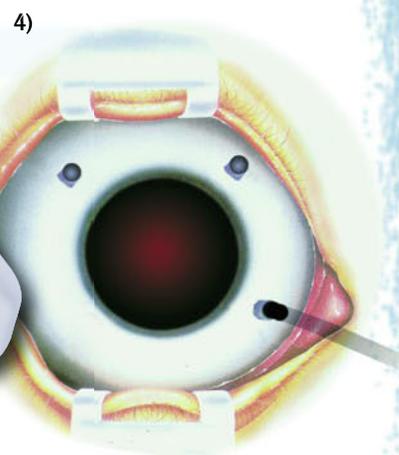
complete, each package includes:  
2 x trocars with instrument cannula, 1 x inserter (dark blue) with cannula for fluid/gas, 1 infusion line, 2 x scleral plugs,  
1 x scleral plug forceps, 1 fixation blade,  
disposable, sterile (box of 20)

03VI11



Simple System available upon request:

23GA ParsMate Trocar Kit  
complete, kit includes: 4 x trocars with insert cannula,  
1 x infusion cannula, 1 x scleral tablet with 4 plugs  
**pressure plate may be added upon request**



4)  
Using an oblique incision instead of a vertical incision helps maintain cannula stability in the eye. Oblique positioning of the trocar cannulae does not affect the maneuverability of the instruments.

VITREORETINAL INSTRUMENTS



VITREORETINAL INSTRUMENTS

*it's your choice*

**Silicone Tip Cannulae**

25GA/0.5 x 30 mm tube, disposable, sterile (box of 10)

A3210 brush tip

A3211 blunt tip

A3196 soft tip

silicone tips ensure safe entry through a macular tear or hole for aspiration of subretinal fluids

**Fiber Optic Endo-Illuminators**

available in 23GA and 25GA disposable, sterile (box of 5)

single purpose illuminator providing an even field and/or wide field illumination

**Endo Laser Probes**

available in 20GA, 23GA and 25GA, straight and angled tips, sterile (box of 5)

for Alcon, Coherent, Zeiss, HGM and Nidek systems

**Bipolar Cautery Pencils**

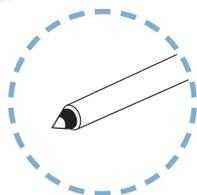
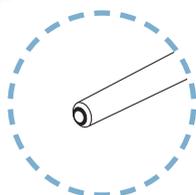
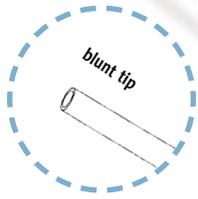
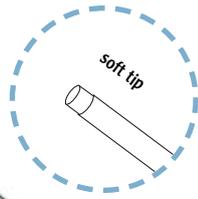
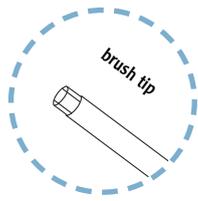
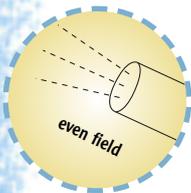
23GA/0.65 mm shaft, smooth and pointed tips, reusable and disposable

for gentle coagulation of scleral surface and intraocular hemostasis

All products shown are "Made in the USA" and carry the European Union CE Mark registration.



coagulation of small scleral bleeders





**Horizontal Scissors**  
sharp tipped blades  
**E25-602S25** straight  
**E25-603S25** curved  
**E25-605S25** vertical 45°



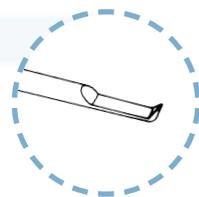
**Eckhardt Style Forceps**  
end gripping nail-like tips  
**E30-687S25**



**Berrod Style Forceps**  
end gripping tips platform  
**E30-673S25**

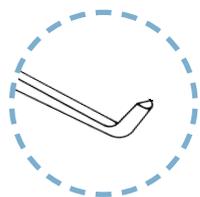
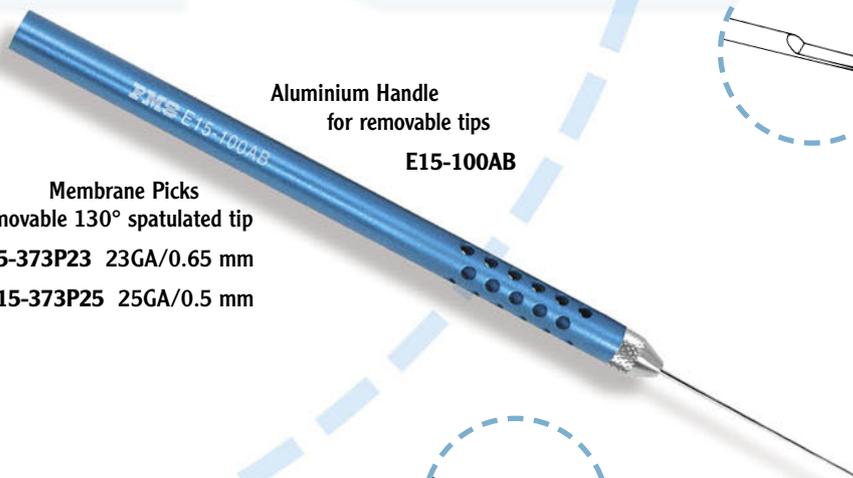


**Membrane Spatulae**  
removable 130° triangular tip  
**E15-371S23** 23GA/0.65 mm  
**E15-371S25** 25GA/0.5 mm



**Aluminium Handle**  
for removable tips  
**E15-100AB**

**Membrane Picks**  
removable 130° spatulated tip  
**E15-373P23** 23GA/0.65 mm  
**E15-373P25** 25GA/0.5 mm



**tips and handle also sold singly**



*Simple to use!*



**V.I.I.K.**  
**Vitreous Injection Kit**  
 consisting of the following:  
 Barraquer Adult Eye Speculum,  
 Scleral Marker (4.0/3.5 mm),  
 Hypodermic Needle 32GA/0.2 mm,  
 disposable, sterile (box of 10)

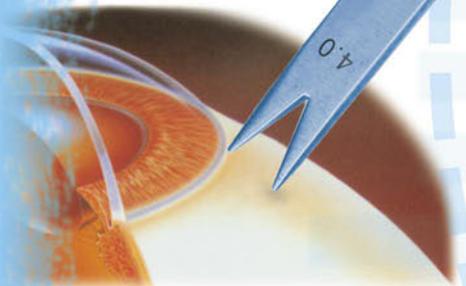
\*PD900.10

for office based intravitreal injections and examinations.



**Universal Sclerotomy Caliper**  
 titanium, blunt tips, 4.0 cm  
**E40-571T**

for marking 3.0, 3.5 and 4.0 sclerotomy sites



marking sclerotomy site for pars plana vitrectomy

**Braunstein**  
**Fixed Sclerotomy Caliper**  
 titanium, blunt tips, 7.0 cm

**E40-573T** 3.5-3.0 mm for aphakic eyes

**E40-574T** 4.0-3.5 mm for phakic eyes

- marks the distance from the limbus to sclera
- marks intravitreal injections entry PPV
- to make the mark for MVR blade incisions



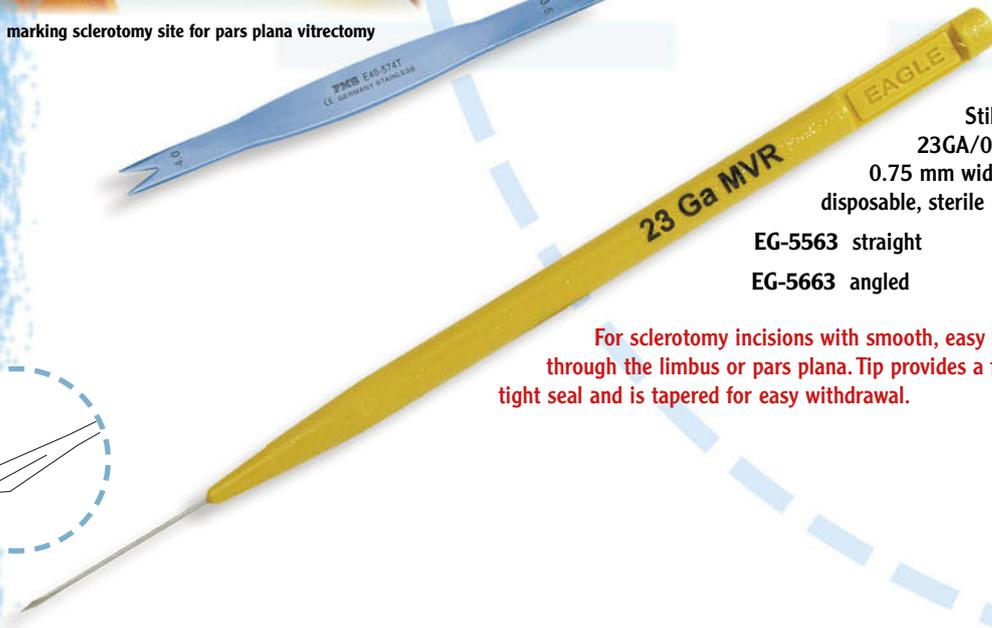
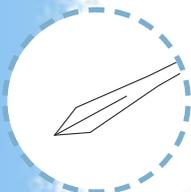
marking sclerotomy site for pars plana vitrectomy

**EAGLE**  
**Stiletto MVR Knives**  
 23GA/0.65 mm shaft,  
 0.75 mm wide lancet blade,  
 disposable, sterile (box of 6)

**EG-5563** straight

**EG-5663** angled

For sclerotomy incisions with smooth, easy penetration through the limbus or pars plana. Tip provides a fluid-tight seal and is tapered for easy withdrawal.



\* Not for sale in Europe

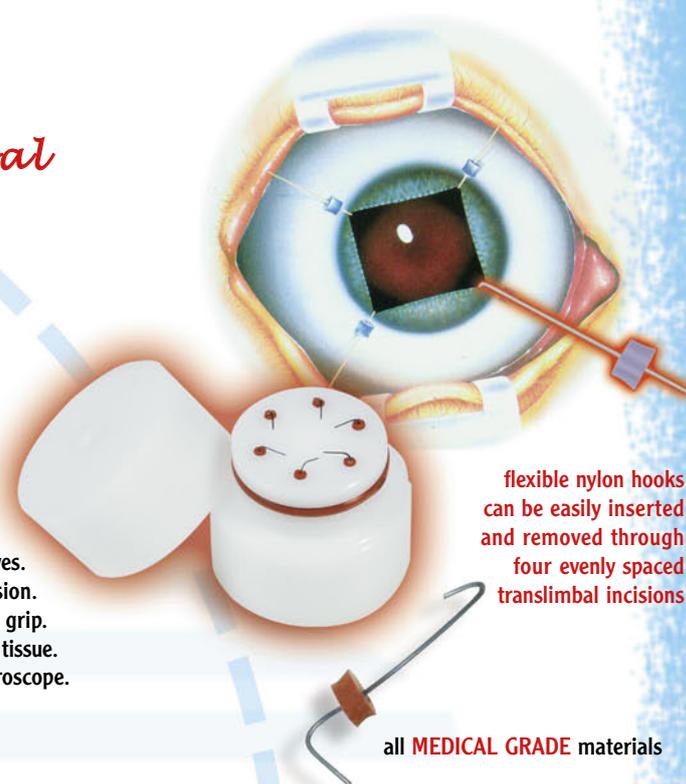
\* Manufacturer:  
 Peregrine Surgical Ltd.  
 New Britain, PA  
 USA



*IrisMate®  
Flexible Translimbal  
Iris Retractors*

\*IRIS-1000 reusable (6 pcs) in autoclavable case  
\*\*IRIS-2000 disposable (5 pcs) in plastic tray

- Ideal for temporary iris dilation.
- Safely used in Aphakic, Pseudophakic and Phakic eyes.
- Works through 0.3 mm - 0.5 mm self sealing incision.
- Specially designed silicone cinch provides superior grip.
- Nylon hook retracts iris with minimal damage to the tissue.
- Cinch is colour coded for easier viewing under microscope.



flexible nylon hooks  
can be easily inserted  
and removed through  
four evenly spaced  
translimbal incisions

all **MEDICAL GRADE** materials

\* Manufacturer:  
Howard Instruments, Inc.  
Tuscaloosa, AL  
USA

\*\* Manufacturer:  
Biotech Vision Care Ltd.  
Khatraj, Gandhinagar  
India

**Video available**

*Retinal Nails & Forceps*  
for temporary fixation of the retina in case of immobile retina

Reusable Retinal Nail  
20GA/0.9 mm trocar tip  
of 2.85 mm working length,  
non-sterile (4 per tablet)  
**E20-720NS**

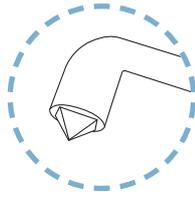


**sterilise before use**

Retinal Nail Holding Forceps  
removable tip (360° rotatable),  
20GA/0.9 x 30 mm straight shaft,  
cup-shaped 1.0 mm jaws, 15.2 cm  
**E30-690N** complete  
**E30-690R** tip only  
**E10-010T** handle only



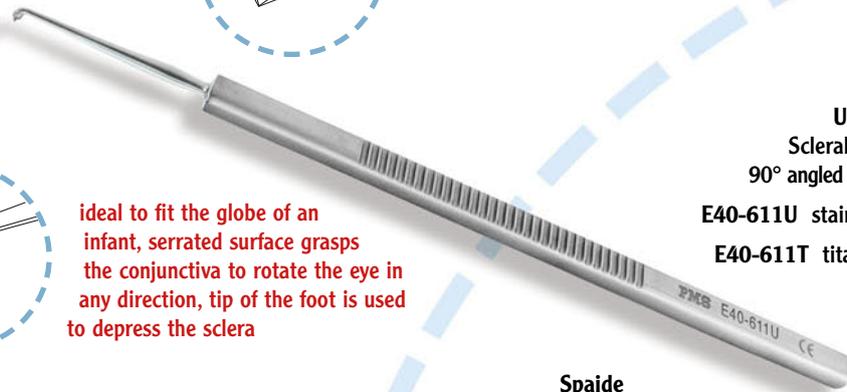
VITREORETINAL INSTRUMENTS



pick has sufficient sharpness to rotate the globe during examination

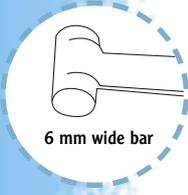


ideal to fit the globe of an infant, serrated surface grasps the conjunctiva to rotate the eye in any direction, tip of the foot is used to depress the sclera



**Urrets-Zavalía**  
Scleral Depressor-Fixation Pick  
90° angled tip with pick, 12.0 cm  
E40-611U stainless steel  
E40-611T titanium, curved shaft

**Spaide**  
Pediatric Scleral Depressor  
curved, serrated tip, 12.5 cm  
E40-611S



teardrop shaped tip for making a sharp protrusion at the side of mid-peripheral lesion or retinal tear.

6 mm wide bar



**Shinja Hara**  
Scleral Depressor  
6 mm wide bar and 7 mm angled hook with 2 mm teardrop shaped tip, 13.5 cm  
E40-612S

**Video available**



Gass marker

trephine-like 1.5 mm tip produces a ring shaped mark on the sclera when pressure is applied



**O'Connor-Schockett**  
Scleral Depressor-Marker  
6 mm wide bar and 1.5 mm Gass Marker, 13.5 cm  
E40-612C



Teardrop tip

rounded end designed for depressing sclera and curved marking end for reaching behind the globe



**Schockett**  
Scleral Depressor  
6 mm wide bar and 2.5 mm teardrop shaped tip, 13.5 cm  
E40-613 stainless steel  
E40-613T titanium

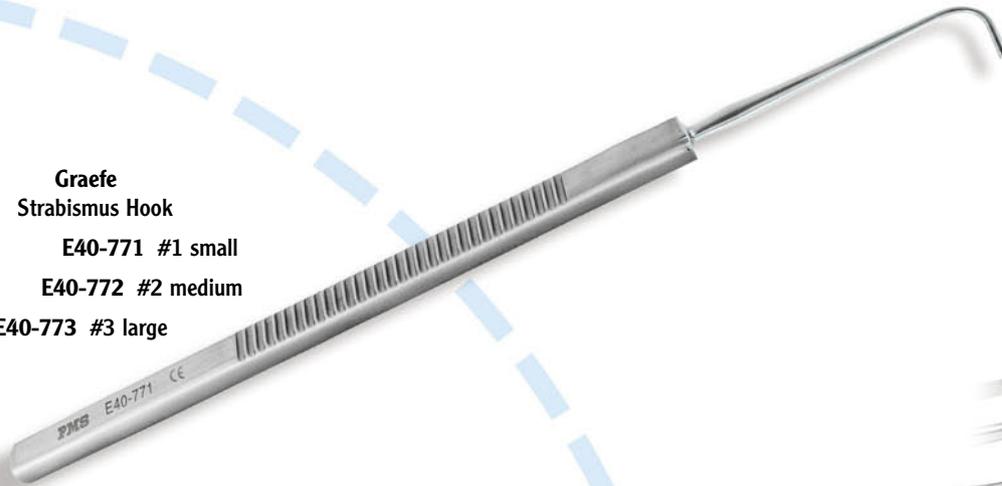


**Graefe  
Strabismus Hook**

E40-771 #1 small

E40-772 #2 medium

E40-773 #3 large



**Jameson**

**Muscle Forceps**

slide lock, adult size,  
6 teeth, 10.0 cm

E30-700 right

E30-701 left



**Gass**

**Retinal Detachment Hook**

flat tip with 1.5 mm oval hole, 14.0 cm

E40-777



**Schepens**

**Orbital Retractor**

curved smooth blade with  
4.0 mm wide notch, 15.0 cm

E40-813



**Bonn Model**

**Orbital Retractor**

angled smooth blade with  
convex-concave surfaces,  
15.0 cm

E40-815





*Instrument sets  
are presented as  
guidelines only*



E25-333



E35-231



E40-613



E40-779T



E25-581

**E42-140 RETINAL DETACHMENT SET**  
complete, consisting of the following:

**E30-902** Mosquito Forceps (2x), page 16

**E30-934** Dieffenbach Serrefine (4x), page 16

**E40-078** Castroviejo Eye Speculum, page 17

**E40-554** Castroviejo Eye Caliper, page 19

**E20-001** Bishop-Harmon Irrigator, page 20

**E20-031** Rycroft Infusion Cannula, page 20

**E25-333** Westcott Tenotomy Scissors, page 59

**E25-565** Stevens Tenotomy Scissors, page 59

**E30-063** Barraquer Colibri Forceps, page 61

**E30-423** Harms Tying Forceps, page 24

**E30-430** Bonn Suturing Forceps, page 24

**E35-132** Castroviejo Needle Holder, page 25

**E35-231** Barraquer Needle Holder, page 25

**E40-111** Desmarres Lid Retractor, page 17

**E40-771** Graefe Strabismus Hook, page 207

**E40-613** Schockett Scleral Depressor, page 206

**MISCELLANEOUS TO RETINAL**

**E40-611U** Scleral Marker & Fixation Pick, page 206

**E40-777** Gass Retinal Detachment Hook, page 207

**E40-779T** Eye Thermocauter, titanium, page 208

**E40-813** Schepens Orbital Retractor, page 207

**E30-835** Sleeve Spreading Forceps, page 219

**Nurse Scissors**, 13.0 cm  
straight 35 mm blades

**E25-580** sharp/sharp

**E25-582** sharp/blunt

**E25-584** blunt/blunt

curved 35 mm blades,

**E25-581** sharp/sharp

**E25-583** sharp/blunt

**E25-585** blunt/blunt

**Directions for use**

Note: This item is sold as *NON-STERILE*

**PLACEMENT:**

- 1) Clean and Sterilize (gas or steam autoclave) scleral plugs.
- 2) After sterilization, open pouch onto sterile field.
- 3) With cross action forceps, grasp plug head and lift from retaining block.
- 4) With forceps attached to head, place tip of plug into sclerotomy.
- 5.) With scleral plug properly positioned in sclerotomy, remove forceps.

**REMOVAL**

- 1) Grasp scleral plug head with forceps and gently remove form sclerotomy.



**R19-1000**

**E42-141 VITRECTOMY SURGICAL SET**  
complete, consisting of the following:

**EG-5560 Stiletto MVR Knife 20GA**, page 58

**R19-1000 Scleral Plug Set 19GA**, page 195

**E30-777T Scleral Plug Forceps**, page 195

**175-40 Infusion Cannula 4 mm**, page 194

**E20-730 Backflush Instrument**, page 190

**E20-741LL Backflush Handpiece**, page 191

**E20-704 Tapered Tip Cannula**, page 190

**E25-602S Vitrectomy Scissors**, page 175

**E30-672S Vitrectomy Forceps**, page 176



**E25-602S**

**FOR MEMBRANE MANIPULATION ADD**

**E15-350R Membrane Peeler**, page 188

**E15-355R Membrane Rake**, page 188

**E15-371R Membrane Pick**, page 189

**E30-679S Vitreous Forceps**, page 176



**E15-355R**

**FOR 23GA/0.65 MM OBLIQUE INSERTION**

**E20-723R Reusable Trocar System**, page 197

**5700 Disposable Cannula System**, page 200



**5700**

**MISCELLANEOUS TO VITRECTOMY**

**Fiber Optic Light Probes**, page 186

**Bipolar Cautery Pencils**, page 202



**Fiber Optic Endo-Illuminator**



*naturally pure,  
highly purified*

VITREORETINAL INSTRUMENTS



**AlfaSIL TRS**  
Purified Silicone Oil  
preloaded 15 ml syringe,  
sterile (box of 5)

**REF 24-TRS** standard connector

**REF 24TRSA** for Alcon + Dorc

**REF 24TRSB** for Bausch & Lomb

**REF 20L32** for Fritz Ruck

for automatic pressure injection



tubing with VFI standard connector  
REF 24-TRS

**GENERAL DESCRIPTION**

AlfaSIL Silicone Oil is an oil liquid, of high viscosity, used to replace the vitreous humour during vitrectomy surgeries with long time of permanence in the eye, usually more than 30 days.

**CHEMICAL COMPOSITION**

Formula:  $[-Si(CH_3)_2O-]_n$   
Viscosity: 1000 cSt at 25°C  
Refractive index 1.405 at 24°C  
Density: 0.965 g/cm<sup>3</sup> at 24°C

**INDICATIONS FOR USE** refer to page 207

**PACKAGING AND STERILISATION**

AlfaSIL Silicone Oil is available in preloaded 15 ml syringe or in 10 ml vial. AlfaSIL is dry heat sterilised and filled in its sterile container. The final container (syringe or vial) is sterilised by radiation.



The use of purified silicone oil as an internal tamponade is not recommended for patients with intraocular silicone lenses.

**AlfaSIL**  
Purified Silicone Oil  
sterile (vial of 10 ml)  
**REF 24**



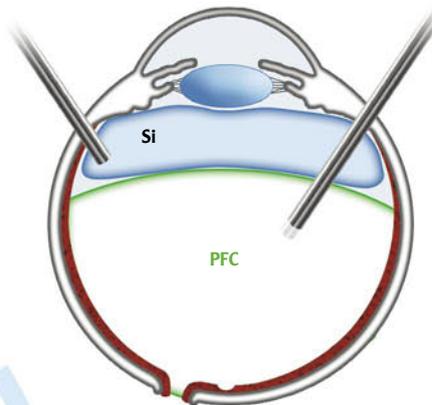


*exceptional stable,  
and transparent*

**INDICATIONS FOR USE**

Silicone Oil SO-1000/SO-5000 is used for intraocular tamponade in severe cases of retinal detachment, e.g.

- proliferative vitreo-retinopathy (PVR)
- giant tears
- ocular trauma
- secondary RD with viral retinitis
- as well as other retinal detachment, which can not be treated with other forms of therapy.



SO-1000 exchange procedure with passive aspiration through Brush Tip Cannula

Purified Silicone Oil is available in the following:			
in 10 ml sterile vial		in 10 ml sterile syringe	
SO-1000	1000 cSt	SO-1000-S	1000 cSt
SO-1300	1300 cSt	SO-1300-S	1300 cSt
SO-2000	2000 cSt	SO-2000-S	2000 cSt
SO-5000	5000 cSt	SO-5000-S	5000 cSt



CHEMICAL COMPOSITION  
see AlfaSIL REF 24

The choice of viscosity offers an optimum balance between easy injection and a stable temporary tamponade.

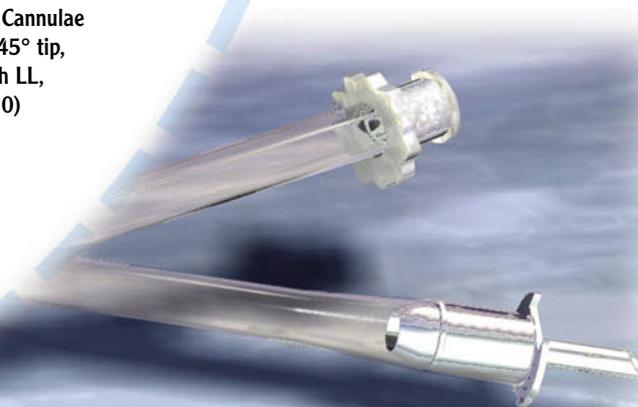
CE 0120 APPROVED FOR SALE IN ALL EUROPEAN UNION COUNTRIES

High Viscosity Infusion Cannulae  
20GA/0.9 mm bevelled 45° tip,  
attached to silicone tubing with LL,  
disposable, sterile (box of 10)

MIS-1040 4.0 mm tip

MIS-1060 6.0 mm tip

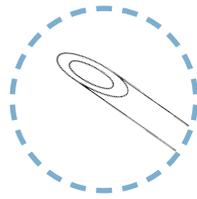
*designed for easy injection of  
high viscosity substance  
such as silicone oil*



Fixed to the globe at one end. Linked to the silicone oil syringe with a Luer-Lock fitting at the other end.



**STERILE EO**  
STERILISED BY ETO



**Peyman**  
Silicone Oil Cannulae  
8 mm tube, bevelled tip  
disposable, sterile (box of 10)

**167-16** 16GA/1.6 mm

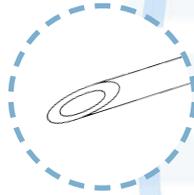
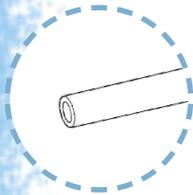
**167-19** 19GA/1.1 mm



**Wagner**  
Silicone Oil Cannulae  
16GA/1.6 x 8 mm tube, bevelled tip,  
attached to 6" (15.0 cm) high pressure extension tube,  
disposable, sterile (box of 3)

**167-16T**

for injection or aspiration of high viscosity fluids in the repair of retinal detachments



**Silicone Oil Cannula (Manual Delivery System)**  
8 mm cannula with 6" (15.0 cm) high pressure extension tube  
preattached to a 10 ml ring control syringe, sterile (box of 3)

**167-20TS** 20GA/0.9 mm

**167-19TS** 19GA/1.1 mm

**167-16TS** 16GA/1.6 blunt tip



**Subretinal/Vitreoretinal Injection Cannulae**  
20GA/0.9x25 mm tube, 32GA/0.25mm tip

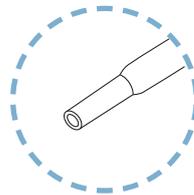
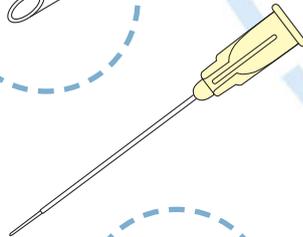
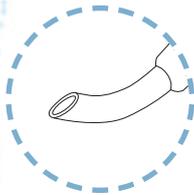
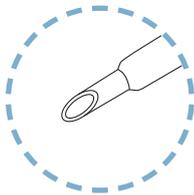
**173-32** straight 3 mm bevelled tip

**175-32** curved 8 mm rounded tip

**Subretinal/Vitreoretinal Aspiration Cannulae**  
20GA/0.9x25 mm tube, 32GA/0.25mm tip

**173-34** curved 8 mm bevelled tip

**175-28** straight 4 mm rounded tip



pictures shown are smaller/larger than actual sizes indicated



**sterilise before use**

**Silicone Oil Cannulae**  
8 mm tube, bevelled tip  
E20-716 16GA/1.6 mm  
E20-719 19GA/1.1 mm

for injection or aspiration of high viscosity fluids in the repair of retinal detachments

**Standard Infusion Cannulae**  
non-sterile (sold singly)  
E20-752 2.5 mm tip  
E20-754 4.0 mm tip  
E20-756 6.0 mm tip

**Silicone Oil Syringe**  
10 ml glass syringe with screw activated plunger, 12.0 cm  
E20-820

**Viscous Fluid Pressure Injector**  
10 ml glass syringe with finger support and pressure activated plunger, 12.5 cm  
E20-821

**High-Flow Fluid Filter** .20 Micron male/female Luer-Lock fittings, disposable sterile (50 per box)

201-20

used between syringe and cannula to filter out particulates and contaminants

pictures shown are smaller/larger than actual sizes indicated

VITREORETINAL INSTRUMENTS



*colourless,  
optical clear,*



VITRION  
Perfluorocarbon Liquid  
sterile (vial of 5 ml)  
\*REF 100VTO

**GENERAL DESCRIPTION**

Vitron is made by 98% of Octadecafluoro-decanydronaphthalene. It is treated to reduce as far as possible its residual toxicity. Existing impurities are 100% fluorinated and are fluorinated open chains of the same kind.

**CHEMICAL COMPOSITION**

Formula:  $C_{10}F_{18}$   
Molecular weight: 462.08  
Refractive index: 1.314 at 24°C  
Density: 1.941 g/cm<sup>3</sup> at 25°C  
Boiling point: 141°-143°C

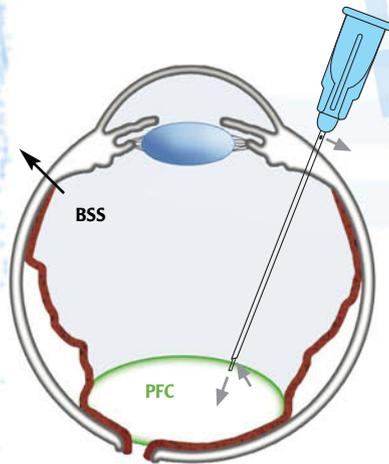
**DESTINATION OF USE**

Perfluorocarbon liquid is a high tensivity liquid for vitreous chamber washing during ocular surgery with a maximum time of permanence in the eye of one hour.

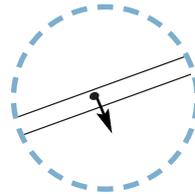
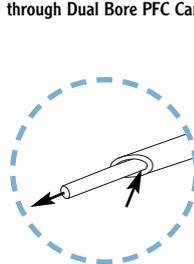
**INDICATIONS FOR USE** refer to page 209

**PACKAGING AND STERILISATION**

Vitron is packaged in 5 ml bottle of pharmaceutical glass with cap and seal. The bottle is outside and inside sterile, packaged in a sealed sterile bag.



retinal attachment with Perfluorocarbon through Dual Bore PFC Cannula



cut-off aspirating port allows to control constant intraocular pressure during injection

**Dual Bore PFC Coaxial I/A Cannula**

19GA outer tube with 0.4 mm aspiration port,  
25GA inner tube with open end irrigating port,

E20-325 reusable (sold singly)

149-19 disposable (box of 10)

*with aspiration channel for passive aspiration of intraocular fluid during injection of PFC*

\*  Manufacturer:  
Alfa Instruments,  
Casoria (NA),  
Italy



*100% fluorinated  
and purified*

**INDICATIONS FOR USE**

DecalineMate® Perfluorocarbon serves perfectly as an aid in temporary flattening of the retina and in the surgical treatment of:

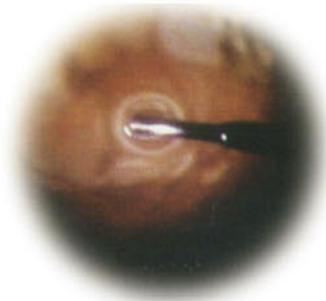
- retinal detachment
- giant tears
- ocular trauma
- laser coagulation and cryotherapy
- lifting of subluxated lenses
- retinal bleeding
- short term tamponade

**CHEMICAL COMPOSITION**

Formula: C<sub>10</sub>F<sub>18</sub>  
 Molecular weight: 462  
 Refractive index: 1.310 at 20°C  
 Density: 1.93 g/cm<sup>3</sup>  
 Boiling point: 142°C  
 Surface tension: 19.0 at 25°C  
 Interface tension: 57.8 at 20°C

\* **Manufacturer:**  
 Howard Instruments, Inc.  
 Tuscaloosa, AL  
 USA

**DecalineMate®**  
 Perfluorocarbon  
 100% fluorinated,  
 sterile (vial of 7 ml)  
 \*PFD-2000



PFC-air exchange using blunt tip extrusion cannula



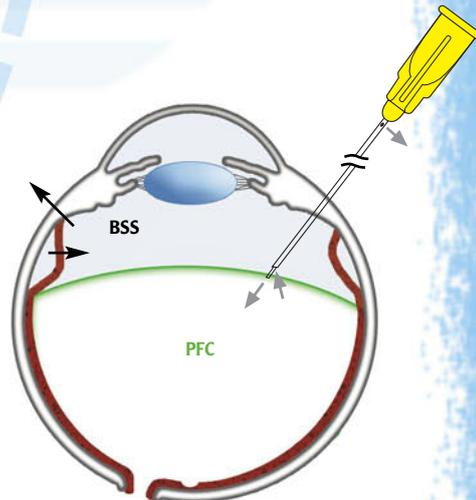
CE 0120 APPROVED FOR SALE IN ALL EUROPEAN UNION COUNTRIES

Dual Bore PFC I/A Cannulae  
 disposable, sterile (box of 5)  
 \*\*5191 20GA/0.9 mm  
 \*\*5203 23GA/0.65 mm

*for simultaneous infusion of heavy liquids  
and aspiration of intraocular fluids*

Dual Bore Subretinal BSS Injection Needle  
 20GA/0.9 tube with 41GA/0.1 mm tip  
 disposable, sterile (box of 1)  
 \*\*5194

*to control subretinal  
injection of BSS*



retinal attachment with Perfluorocarbon through Dual Bore PFC Cannula

VITREORETINAL INSTRUMENTS

\*\* **Manufacturer:**  
 MicroVision, Inc.  
 Seabrook, NH  
 USA



Howard GasMate® Tamponades come in a kit as described below, containing a sterile 50 ml bottle gas, (your choice) and may be purchased in the following:

- 99.9% PURE
- GMC3F8-PURE C3F8 Perfluoropropane
- GMC2F6-PURE C2F6 Hexafluoroethane
- GMSF6-PURE SF6 Sulfur Hexafluoride

**PRE-MIXED WITH DRY NITROGEN**

- GMC3F8-MIXED C3F8 Perfluoropropane
- GMC2F6-MIXED C2F6 Hexafluoroethane
- GMSF6-MIXED SF6 Sulfur Hexafluoride

**contact us for specific mixtures**



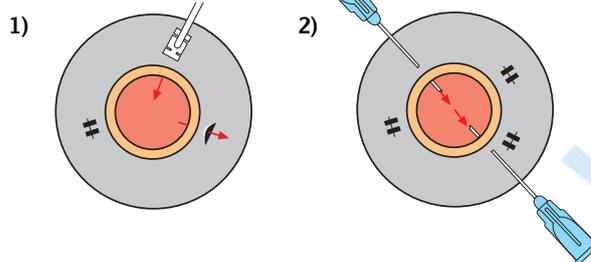
**GasMate® Kit**

- complete, each kit includes:
- 1 x sterile bottle of C<sub>3</sub>F<sub>8</sub>, C<sub>2</sub>F<sub>6</sub> or SF<sub>6</sub> (your choice)
  - 1 x sterile disposable syringe (60 ml),
  - 1 x sterile high quality filter,
  - 1 x sterile valve

CE 0120 APPROVED FOR SALE IN ALL EUROPEAN UNION COUNTRIES

**INJECTION OF GAS MIXTURE**

There are two possible techniques for replacing intraocular air by the gas mixture. Following fluid-air exchange, the gas mixture can be injected via the infusion line before the final closure of sclerotomies 1) or with the globe closed, using a 30GA/0.3mm needle cannula.



*optimal for routine  
vitrectomy procedures*

**Biconcave Lens**

**\*RSL-1000**

clear view of the fundus in an airfilled vitreous



**Flat Lens**

**\*RSL-2000**

for 36° field of view of the central posterior pole and vitreous



**Magnifying Lens**

**\*RSL-3000**

for thorough viewing central posterior fundus and structures deep in the vitreous cavity, on the vitreous cavity and on the retinal surface



**Wide Field Lens**

**\*RSL-4000**

48° field of view when observing central posterior pole and vitreous



**30° Prism Lens**

**\*RSL-5000**

viewing of the periphery and vitreous beyond the equator

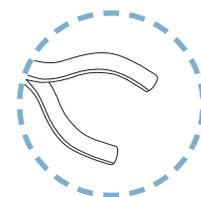


**Landers**

Vitrectomy Lens Forceps  
angled 45° shaft, curved  
grooved blades, 11.5 cm

**E30-837T**

for holding the Landers  
Vitrectomy Lenses



**\* HOWARD RSL-LENSES**

- Manufactured of optically clear silicone
- High resolution PMMA optics
- Self-retaining silicone flange in place of sew-on ring
- Economical back up for reusable lenses
- Single use, eliminates risk of contamination
- Individually sterile packaged (box of 10)



*Bands  
Strips  
Tires  
Sleeves  
Sponges*



FOR DECADES  
medical grade silicone materials for scleral buckling surgery have been the gold standard in the treatment of retinal detachment throughout the world with great success.

**MATERIAL FEATURES:**

- Soft and elastic
- Biocompatible and non-toxic
- Non-antigenic
- Tailored to size

**INDICATIONS FOR USE**

Silicone retinal implants are used for intrascleral and episcleral buckling in retinal reattachment surgery.

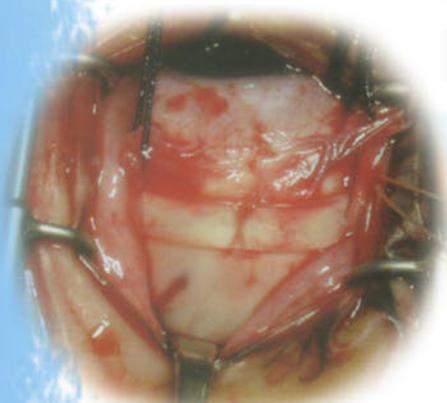


**STERILISATION AND PACKAGING**

Solid Silicone Implants and Silicone Sponges are gas sterilised with 100% ethylene oxide (ETO) and are guaranteed to be sterile unless the package has been damaged or opened. Individually sterile packaged (box of 5).

**SCLERAL BUCKLING**

Circular Scleral Buckling is useful when the vitreous is hemorrhagic, in order to prevent late retraction of the base of the vitreous and secondary retinal detachment. This can be performed at the beginning of the procedure or after vitrectomy.



Circular scleral buckling.

Sapphire Crescent Knives  
angled, facet-free blade (bevel up)

**E10-191 1.5 mm**

**E10-192 2.0 mm**

**E10-193 2.8 mm**

**ideal for scleral dissection in scleral buckling procedure**

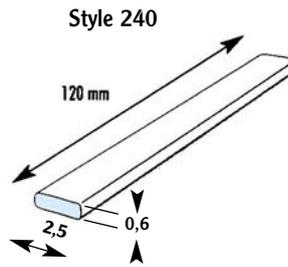




*Solid Silicone  
Implants*

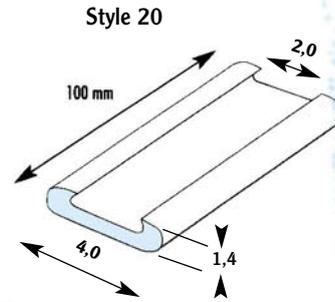
*Bands*

Circling styles:  
40, 41, 42, 240



*Strips*

Grooved styles:  
20, 31, 32, 219, 220, 225



*Tires*



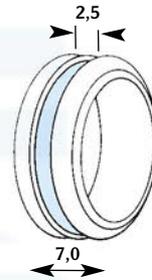
Asymmetrical styles:  
275, 276, 278, 280



Concave styles:  
277, 279



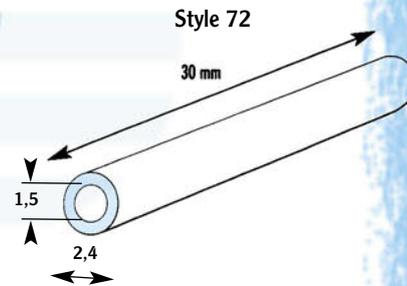
Convex styles:  
286, 287, 287WG, 289



Style 277

*Sleeves*

Round styles:  
70, 71, 72, 270



Style 72

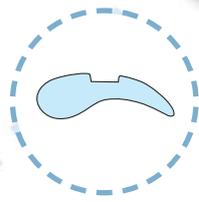
Watzke  
Sleeve Spreading Forceps  
angled, finely serrated jaws,  
11.5 cm

E30-835

ideal to fix sleeve onto circling bands

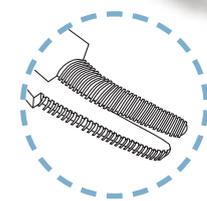
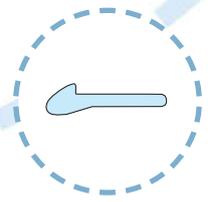
*Radial Wedges*

styles: 135,137



*Meridionales*

styles: 103,106,112

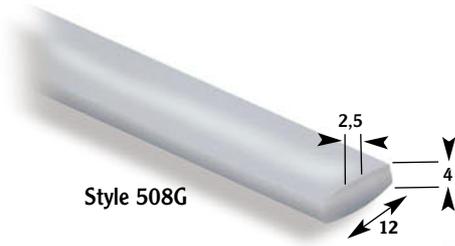
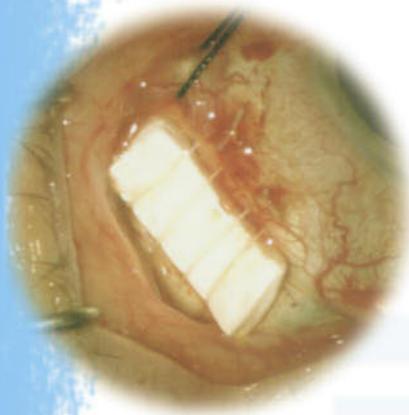


all dimensions are in millimeters, drawings shown are larger than actual sizes indicated

VITREORETINAL INSTRUMENTS



**SCLERAL SPONGE IMPLANTS ON REQUEST**



Style 508G

**Gooved**

Styles: 506G, 507G, 508G, 509G, 516G, 519G



Style 510

**Part-Thickness**

Styles: 510, 511, 515, 517

**MATERIAL**

Scleral Sponges are made of soft silicone elastomer composed of closed micro cells.

**LENGTH**

Silicone sponge implants are pre-cut to a length of 80 mm unless otherwise specified.

**PACKAGING**

Individually sterile packaged (box of 5).



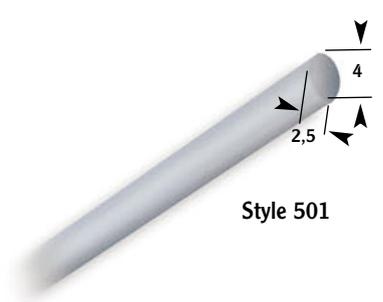
Style 505

**Round**

Styles: 503, 504, 505

**Oval/Oblong**

Styles: 501, 506, 507, 509



Style 501

all dimensions are in millimeters, pictures shown are larger than actual sizes indicated

PMS



# SPECIALITIES







**INNOVATIVE  
EYE SPECULAE . . 226-229**

**SOLUTIONS FOR GLAUCOMA 230-231**

**KLASSIK EYE FORCEPS . . . . . 232**

**PERFECT CAPSULORHEXIS FORCEPS . 233**

**COLOR UP YOUR SURGERY – THINK PINK! 234-235**

**FRENCH STYLE EYE INSTRUMENTS . . 236-239**

**ITALIAN DESIGN EYE INSTRUMENTS . . . 240-243**

**POPULAR EYE INSTRUMENTS . . . . . 244-251**

**DELICATE STRABISMUS INSTRUMENTS . . . . . 252-253**

**NEW INSTRUMENTS FOR MUSCLE RESECTION . . . . 254**

**MEIBOMIAN GLAND COMPRESSOR (MGC) . . . . . 255**

**LID-CONJUNCTIVA/CHALAZION INSTRUMENTS 256-257**

**LACRIMAL INSTRUMENTS (DCR) . . . . . 258-262**

**BONE AND TISSUE PUNCHES . . . . . 263**

**CORNEAL RUST RING REMOVERS . . . . . 264**

**PTERYGIUM DRILL AND INSTRUMENTS . . . . . 265**

**INSTRUMENTS FOR USE AROUND THE EYE . 266**

**ENUCLEATION INSTRUMENTS . . . . . 267**

**INTRAOCULAR PRESSURE REDUCER . 268**

**BATTERY CAUTERIES  
BIPOLAR FORCEPS . . . . 269**

**PMS OPHTHALMIC  
CATALOGUES . . . . . 270**

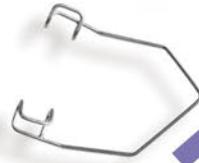
SP  
E  
C  
I  
A  
L  
I  
T  
I  
E  
S





for  
"Little People"

extra small version of popular eye speculae  
for routine premature infant lid retraction



**Barraquer, wire**

**E40-003** premature, 3 mm

**E40-005** newborn, 5 mm

**E40-007** infant, 7 mm

**E40-009** child, 9 mm

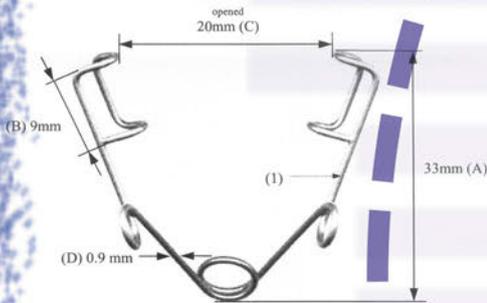
**Vinzenz, wire**

**Infant Speculum**

fenestrated 4 mm blades

**E40-004**

interlacing blades for easier insertion and removal



**Takeda, wire**

**Infant Child Speculum**

fenestrated 9 mm blades

**E40-010**

gentle spring tension of wire allows  
routine infant child lid retraction

**Alfonso, wire**

**Infant Child Speculum**

fenestrated interlacing 5 and 8 mm blades

**E40-008**

fingergrips allow easy lifting of the speculum



**Cook**

**Infant Eye Speculum**

with set screw, 4 mm wide

**E40-064** fenestrated

**E40-074** solid blades

ideal for routine infant lid retraction





*for "Oriental Eyes"*

modified version of popular eye speculae especially designed for oriental eyes

**Barraquer, wire**  
fenestrated **13 mm** blades  
**E40-013B**

Oriental eyes are not only somewhat smaller than western eyes, they also have stronger lid muscles.

**Kratz-Barraquer, wire**  
open **13 mm** wings  
**E40-013K**

Therefore PMS offers smaller (13 mm wide), but stronger versions of the Barraquer, Kratz- eye speculae and Jaffe eyelid retractor.

**Jaffe, wire**  
Eyelid Retractor Set  
closed **13 mm** blades  
**E40-013J**

*simple, effective, economical*

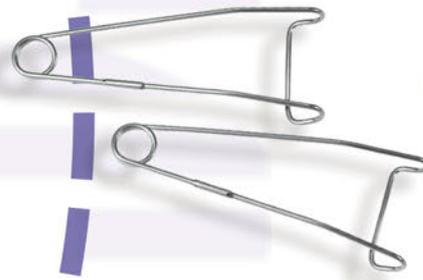
**LASIK Wire Speculum**  
ideal for **Cataract/Refractive surgery**

**E40-030A**  
Alió, fenestrated 15 mm blades

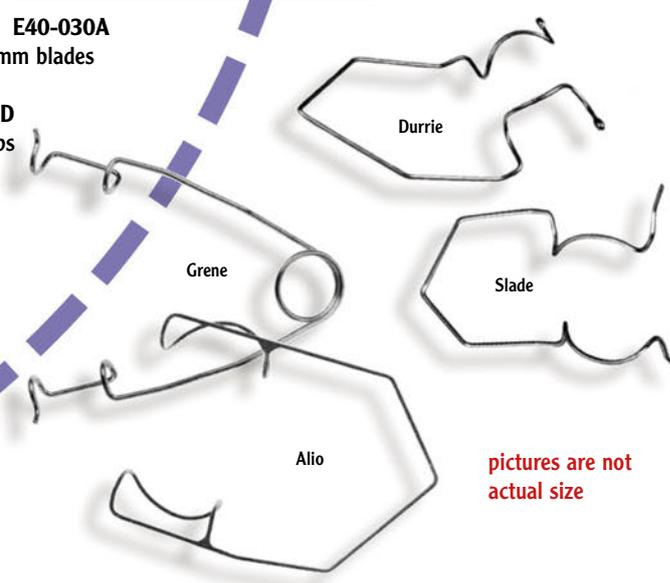
**E40-030D**  
Durrie, 15 mm wings with olive tips

**E40-030G**  
Greene, 15 mm wings with spring

**E40-030S**  
Slade, large 20 mm wings  
for either eye



**New**



pictures are not actual size

**SPECIALITIES**



*designed for continuous aspiration*

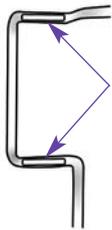


**Jaffe, wire Aspirating Lid Retractor Set**  
7 ports closed 17 mm blade  
**E40-041A**

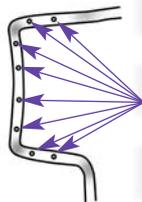
**Pannu-Kratz, wire Aspirating Speculum**  
6 ports open 15 mm blades  
**E40-033A**

*can be used with operating room suction or a 50 cc syringe*

**New** for improved fluid control



**E40-100AL**  
Lieberman K-Wire, 4.5 mm long slit ports, open 15 mm blade

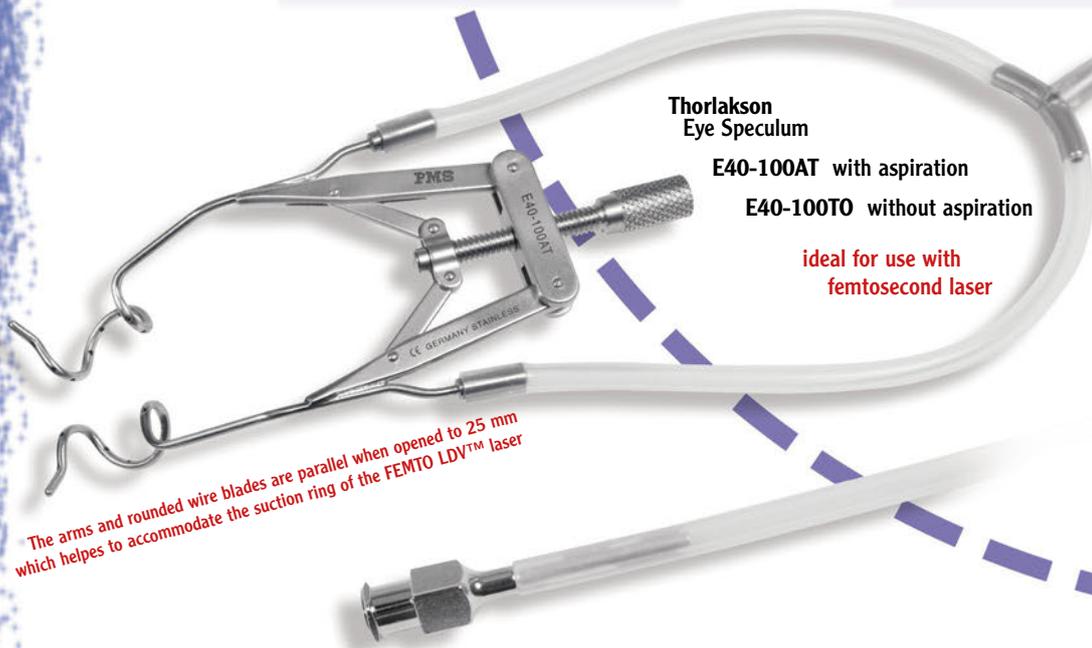


**E40-100AT**  
Thorlakson, 8 ports open 12 mm blade



**E40-100AC**  
Chu Reversible, 3 ports solid 15 mm blade

Centrally aligned aspiration ports allow the speculum to be used either nasally or temporally.



**Thorlakson Eye Speculum**  
**E40-100AT with aspiration**  
**E40-100TO without aspiration**

*ideal for use with femtosecond laser*

*The arms and rounded wire blades are parallel when opened to 25 mm which helps to accommodate the suction ring of the FEMTO LDV™ laser*

SPECIALITIES

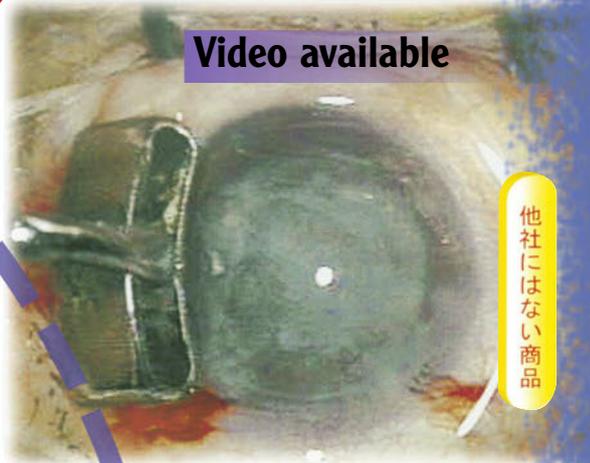


*SuperDrainer for  
Cataract/Refractive  
Surgery*

This device has been designed to maintain a good field of operation by preventing excess fluids and particulate matter from stagnating in the deep-set-eye during cataract/refractive procedures.

In conventional aspirating speculum, the aspirating port faces the conjunctiva. Consequently, the conjunctiva is often aspirated during surgery and the port tends to become clogged. To solve this problems, aspirating speculum have several ports. But since some ports are open to the air, only air is aspirated, resulting in a reduction of the aspiration effect.

This new design provides the aspirating ports in a canteen-shaped vessel and can handle a large volume of fluid without the risk of occlusion by the conjunctiva and without aspirating air as long as there is fluid in the field.



**Video available**

他社にはない商品

designed by Dr. Syuji Maeda,  
Maeda Ophthalmic Clinic, Aizuwakamatsu City, Japan



**SuperDrainer Surgical Aspirator**  
complete, 400 mm long silicone  
tubing with LL-adaptor  
SP20340 large, 9 x 5 mm  
SP20341 small, 7 x 5 mm

Patent No. 3006788

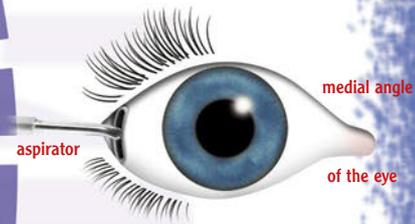
*We turn your good ideas  
into reality.*

**SuperDrainer Suction Speculum**

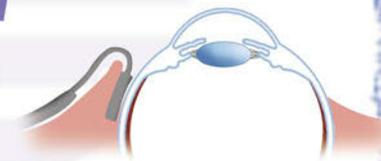
**E40-016A Markomanolakis**  
long suction tube with bevel blunt tip

**E40-015A Maeda**  
short suction tube with silicone tip

large 3.5 mm bore suction tube  
for effective drainage of excess  
fluids and particulate matters



SuperDrainer inserted into the conjunctival sac of the eye ball

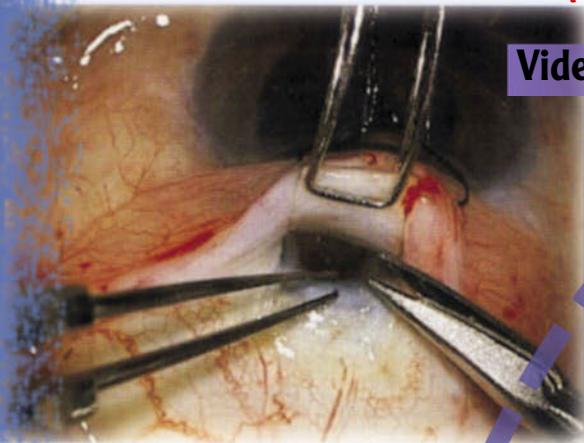


15 mm blades

**SPECIALITIES**



**BENKEIKUN**  
*Scleral Flap Retractor*



**Video available**

designed by Prof. Ryouji Yamakawa, University of Kurume

It is not easy to insert a trabeculotome with one hand while holding the scleral flap with the other during a trabeculectomy, since the procedure often leads to early perforation if you are not accustomed to it. Benkeikun was designed to pull the scleral flap toward the cornea by simply securing the flap with a clip. This makes both hands available and will facilitate difficult manipulations during trabeculectomy. The visibility within the dissected scleral flap can be further improved by anchoring the retractor via traction suture to the drape. For more details: [info@tmi-st.com](mailto:info@tmi-st.com).

Metric dimensions (mm)	
Weight	0.17g
Length	11
Width of jaws	3,5
Closing force	37,8 gms

*Yamakawa*  
Scleral Flap Retractor  
E40-050

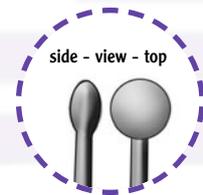


Spring design 0.17g wire construction features broad, parallel closing jaws with finely sandblasted inside surfaces for secure, atraumatic handling of the scleral flap and other delicate tissue. **Available on request: E30-774** Applying Forceps for Scleral Flap Retractor.

*Tanna-Lieberman*  
Adjustable Eye Speculum  
fenestrated 15 mm blades with  
traction suture posts, 8.5 cm  
E40-107



*Blumenthal*  
Conjunctiva Dissector  
straight 32 mm shaft, smooth  
2x1.4mm biconvex tip, 13.0 cm  
E15-214



designed to gently undermine and dissect the bleb pocket

*Fechtner*  
Conjunctiva Forceps  
delicate ring shaped tips  
with tying platform, 10.5 cm

E30-241 stainless steel  
E30-241T titanium



*Luntz-Dodick*  
Trabeculectomy Punch

E40-995 all stainless steel  
E40-995T titanium handle



more punches are shown on page 263

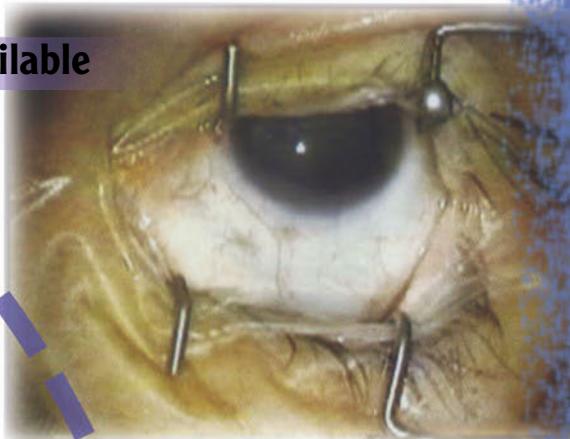
SPECIALITIES



**KINOKO -  
Lid Retractor**

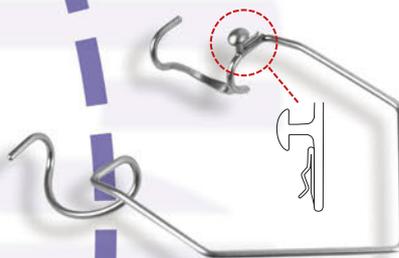
**Video available**

In the usual surgical procedures for glaucoma surgery, it is necessary to rotate the eyeball downward. However, the method of applying a suture to the superior rectus muscle placement causes pain. To solve this problem and to secure a wide surgical field, the author has designed an innovative new wire speculum to retract the eyelids as well as position the globe in preparation for a trabeculotomy procedure. It features a Kratz Style Wire Speculum for effective lid control and a notch, clip and mushroom shaped post for securing traction sutures. By anchoring directly to KINOKO rather than the drape the globe can be rotated for full exposure in a controlled fashion. A suture can be easily attached or detached. For more details: [info@tmi-st.com](mailto:info@tmi-st.com).



designed by Syuji Maeda, MD,  
Maeda Ophthalmic Clinic, Aizuwakamatsu City, Japan

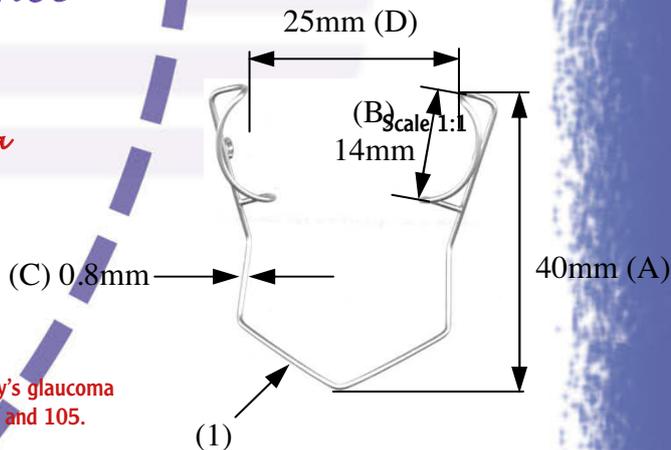
**Kinoko**  
Triple Procedure Glaucoma Lid Retractor  
open 13 mm deeply curved wings, one wing  
with traction suture anchor post, clip and notch  
E40-036R for right eye  
E40-036L for left eye



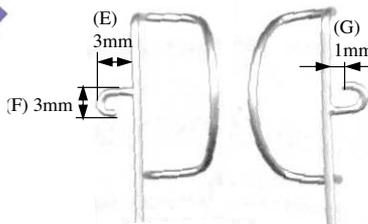
他社にはない商品

*...be part of our experience*

**Maeda**  
Glaucoma Speculum  
fenestrated 14 mm blades with  
hooks for securing traction sutures  
E40-039



other helpful instruments for today's glaucoma surgery are illustrated on page 104 and 105.

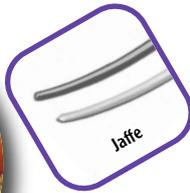


SPECIALITIES



...have micro-miniature *0.1 mm tips*  
and *1x2 teeth of .06 mm* in height.

SPECIALITIES



**Tying Forceps**

*smooth jaws with platform*

KE55200 Jaffe, straight

KE55210 Jaffe, curved

**McPherson Forceps**

*smooth jaws with platform*

KE55000 straight, 5 mm

KE55010 angled, 5 mm

KE55030 angled, 7.5 mm, Kelman-

KE55049 angled, 10 mm, Bechert-

**Suture Tying Forceps**

*1x2 straight 90° teeth with platform*

KE52020 Jaffe-Bonn, 0.12 mm

KE52300 McPherson, 0.4 mm

**Suturing Forceps**

*1x2 oblique 45° teeth with platform*

KE52500 Castroviejo, 0.12 mm

KE52510 Castroviejo, 0.3 mm

KE51800 Pierce, notched 0.1 mm tips

**Corneal Colibri Forceps**

*1x2 oblique 45° teeth of 0.12 mm*

KE51900 Castroviejo, without platform

KE51902 Harms, with platform

**Capsulorhexis Forceps**

*extremely thin 11 mm long straight shafts*

\*KE55081 Utrata, triangular grasping tips

\*KE55083 Nevyas, cystotome shaped tips

KE55088 Jaffe, blunt ball shaped tips

\*KE55084 Masket, curved shafts,  
triangular tips

\* also available on  
ergonomic round handle, see page 251



*at the Peak of Performance*

- thin profile straight and curved 11 mm shafts
- triangular grasping tips to use as a cystotome
- laser lines on jaws to gauge capsulorhexis size
- flat fenestrated handle for controlled movement

**for MICS through 1.5 mm incision**

**Auffahrt**  
cross-action curved and vaulted shafts,  
(Giannetti type) fine pointed tips, 9.5 cm

- E30-598 flat serrated handle
- E30-599 round knurled handle

**New**

cross-action design with stop pin  
control maximum spread and reduce  
the risk of stretching incision size.

curved and vaulted  
(Giannetti)

**for standard phaco 2.5 mm + incision**

- \*E30-581 Utrata, triangular tips
- E30-581T Utrata, titanium

- \*E30-585 Nevyas, cystotome shaped tips
- E30-585T Nevyas, titanium

straight shaft  
(Utrata)



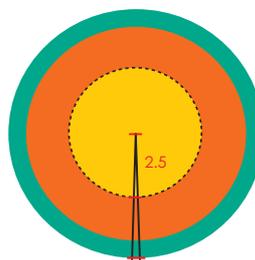
Capsulorhexis forceps on round knurled handle  
which "fit the fingers" are shown on page 251.

**for 2.2 mm sub incision**

- \*E30-589 Masket, triangular tips
- E30-589T Masket, titanium

curved shaft  
(Masket)

dashed line is the intended  
capsulorhexis size of 5.0 mm



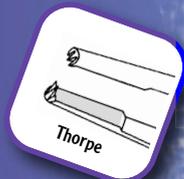
\* also available with laser lines at  
2.5 mm and 5 mm from the tip  
to gauge a precisely sized 5 mm  
capsulotomy

**SPECIALITIES**



This titanium range is a distinctive new concept of micro instruments, which "fit the fingers" to give the Ophthalmic Surgeon a better balanced control. The round bodied handle provides the ultimate in fingertip control and response and thus facilitates precise as well as controlled and fatigue-free working.

New



Thorpe



Kraff-Bonn



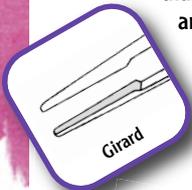
Maumenee-Colibri



Utrata straight



Masket curved



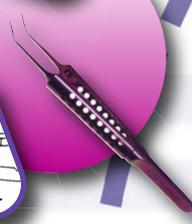
Girard



Maumenee



Kraff (Castroviejo)



**Girard**  
Micro Tying Forceps  
smooth 6 mm TC coated platform  
with 0.3 mm micro tips, 10.4 cm

TP30440 straight

TP30441 curved

TP30443 angled

**Maumenee**  
Tying Forceps  
V-groove 6 mm TC coated platform  
with 0.5 mm delicate tips, 10.4 cm

TP30466 straight

TP30467 curved

TP30469 angled

**Thorpe**  
Corneal Fixation Forceps  
extra delicate 2 x 3 teeth, 0.12 mm with  
3.5 mm long TC coated platform, 9.5 cm

TP30236

**Suture Tying Forceps**  
extra delicate 0.1 mm teeth  
with TC coated platform, 10.4 cm

TP30430 Kraff-Bonn straight 90° teeth

TP30450 Kraff-Castroviejo oblique 45° teeth



our tying and suture forceps have  
Tungsten Carbide coated platforms

**Maumenee**  
Colibri Corneal Forceps  
extra delicate 0.1 mm teeth set at 45° with  
TC coated 6 mm long platform, 10.4 cm

TP30093

**Capsulorhexis Forceps**  
very thin 11.5 mm long shafts with  
pointed grasping tips, 10.4 cm

TP30583 Utrata straight shaft

TP30590 Masket curved shaft



SPECIALITIES



*Think pink !*



TP15611

shafts angled 10 mm made of one-piece stainless steel



TP15613



TP15615

**Micro Manipulators**

(blow up of tips are shown on page 131)

- TP15561 Sinskey II Lens Manipulating Hook
- TP15565 Kuglen Iris and IOL Manipulator
- TP15423 Jaffe-Bechert Nucleus Rotator

**Phaco Choppers**

(for horizontal, vertical, quick chopping)

- TP15611 Nichamin, ball shaped 1,1 mm/90° edged tip
- TP15613 Phaconit Quick-Chop, pointed 1.3 mm long tip
- TP15615 Lens Crushing Knife, 1.5 mm cutting part

**Capsulotomy Scissors**

(delicate stainless steel blades with sharp tips)

- TP25400 Vannas, straight 5 mm blades
- TP25401 Vannas, curved 5 mm blades
- TP25411 Gills-Vannas, curved 8.5 mm
- TP25435 Stern-Gills, angled 10 mm blades

**Other stainless-titanium scissors available**

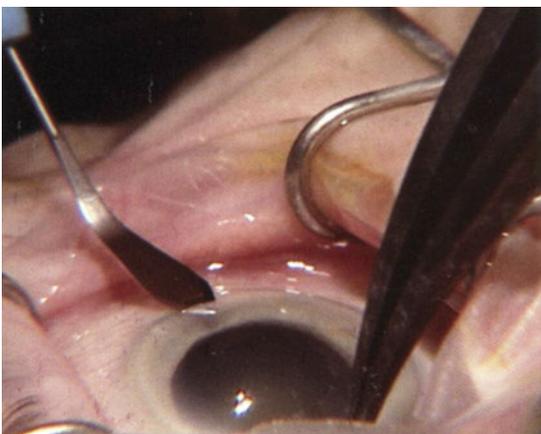
- TP25011 Castroviejo Micro Corneal, curved
- TP25070 Troutman Corneal Section, right
- TP25071 Troutman Corneal Section, left
- TP25315 Westcott Stitch, sharp tips
- TP25334 Westcott Tenotomy, blunt tips

**Barraquer Micro Needle Holders**

(delicate TC coated curved jaws, 0.4 mm tips)

- TP35201 w/o lock, 10.4 cm
- TP35203 with lock, 10.4 cm
- TP35251 w/o lock, 12.0 cm
- TP35253 with lock, 12.0 cm

*Cataract Extraction*



*starts* with an appropriately constructed 2.2 mm incision

PMS now offers a complete MSICS Set made of high grade stainless steel. It includes one each of the following instruments as well as an instrument sterilizing tray:

- E42-118 Manual Small Incision Cataract Set
- E40-100 Lieberman K-Wire Speculum, page 245
- E15-561 Sinskey II Angled Lens Hook, page 246
- E15-409 Barraquer Iris Spatula, vaulted, page 246
- E35-251 Barraquer Curved Needle Holder, page 241
- E30-093 Maumenee-Colibri Forceps, page 249
- E25-400 Vannas Straight Scissors, page 241
- E25-315 Westcott Stitch Scissors, page 241
- E30-567 Kansas Nucleus Fragment Forceps, page 101
- E30-581 Utrata Capsulorhexis Forceps, page 233
- E30-623 Blaydes Lens Holding Forceps, page 122
- E15-441 Kansas Lens Nucleus Loop (not shown)
- E30-902 Halstead Mosquito Forceps, page 266
- E20-300 Simcoe Original I/A Cannula, page 244
- E45-015 Instrument Sterilizing Tray, page 294

**SPECIALTIES**



*French Style*



**Pinces à monofilament**

(à plateaux de 6 mm, ultra affinés)

FS13241 de Tennant, droite

FS13243 de Tennant, courbe

**Pinces de McPherson**

(mors à plateaux ultra fins, coudée à...)

FS13265 de McPherson, ... 5 mm

FS13261 de Waring-, ... 7 mm

FS13242 de Bechert-, ... 11 mm

**Pinces à sutures cornée**

(à plateaux et micro dents de 0.1 mm face à face)

FS13160 de Bonn, modèle court, 7.5 cm

FS13161 de Bonn-Moria, branches courtes, 9.5 cm

FS13246 de Bonn-Kraff, branches longues, 11.0 cm

**Pinces à fixation cornée**

(dents obliques de 0.1 mm et plateaux pour fils)

FS13239 de Castroviejo-Waring, droite

FS13240 de Kraff-Moria, type colibri

FS13247 de Pierse, droite alvéolée 0.1 mm

**Pinces pour implants pliables**

(mors polis haute-finition coudée à...)

FS17151 de Buratto, biconvex, 9 mm

FS17161 de Crozafon, arrondis 11 mm

**Pinces à capsulorhexis de 2.2 mm**

(mors ultra fins, pointus et à plateaux)

FS17163 de Corydon, courbe

\*FS18259 de Corydon, courbe

\*FS17162 de Nevyas, droite

FS17160 d'Utrata, droite - mousse

FS17165 Giannetti, courbe



FS17165



\*FS18259



FS17160

\*avec les lignes Laser 2.5 et 5 mm pour mesurer la capsulorhexis

SPECIALITIES



d'autres micro ciseaux à cornée, conjonctive et ténotomie sont illustrés dans le catalogue général ophtalmologique PMS pages 59 et 248

## Micro-ciseaux de Worst

(longues lames fines de 9 mm)

FS17000 courbes - mousses

FS17001 courbes - pointus

FS17005 demi-courbes - mousses

FS17005

FS17001

## Micro-ciseaux de Vannas

(lames mousses très fines de 5 mm)

E25-402 droites

E25-403 courbes

## Micro-ciseaux de Gills –

(lames pointues, affinées de 11 mm)

E25-430 Welsh, droites

E25-431 Welsh, courbes

E25-435 Aron-Rosa, coudés

## Porte-aiguilles de Castroviejo

(mors standard de 11 mm x 1.2 mm, 14 cm)

E35-100 droite, sans verrou

E35-101 courbe, sans verrou

E35-102 droite, avec verrou

E35-103 courbe, avec verrou

photo échelle 0.8

## Micro porte-aiguilles de Troutmann-

(mors ultra fins de 8 mm x 0.5 mm, 10 cm)

FS09911 O'Brien, droite, sans verrou

FS09960 O'Brien, courbe, sans verrou

FS09961 O'Brien, courbe, avec verrou

FS13244 Aron-Rosa, coudé, sans verrou

## Micro porte-aiguilles de Barraquer

(mors fins de 9 mm x 0.7 mm, 12.5 cm)

FS07252 courbe, sans verrou

FS07253 courbe, avec verrou

FS09911

FS07252

FS13244

E35-101



Tous les modèles sont aussi disponibles avec un manche en titane de couleur, s'il vous plaît vous référer à la page 242



FS18210



FS18216



FS18227



FS13225



FS13227



FS17157



FS18039



FS18105

**Crochets manipulateurs à phaco**

FS17157 de Crozafon à fourche horizontale

FS18039 de Arneodo, rond, bout mousse

FS18105 de Pisacano, bout olivaire

**Micro-manipulateurs "Phaco Chop"**

FS18210 de Koch 90°, "Stop & Chop"

FS18216 de Thibaut-Nagahara 60°, mousse

FS18219 de Nagahara 90°, mousse

FS18227 de Haefliger, main droite

FS18228 de Haefliger, main gauche

**Crochets manipulateurs à LIO**

FS13225 de Buratto-Sinsky 0.2 mm

FS13227 de Lester, "bouton de col"

FS13228 de Kuglen, "Push & Pull"



FS13228



FS07820



FS07825

Tige et bout fabriqué d'un seul morceau d'acier inox, extrémités ultra fines, tige de 10 mm angulée

**Spatules à iris**

(extrémités ultra fines, coudés à 12 mm)

FS07820 de Barraquer, ronde et mousse

FS07825 de Barraquer, avec une petite boule

d'autres blépharostats sont illustrés dans le catalogue général ophtalmologique PMS pages 226-228 et 245

**Blépharostats**

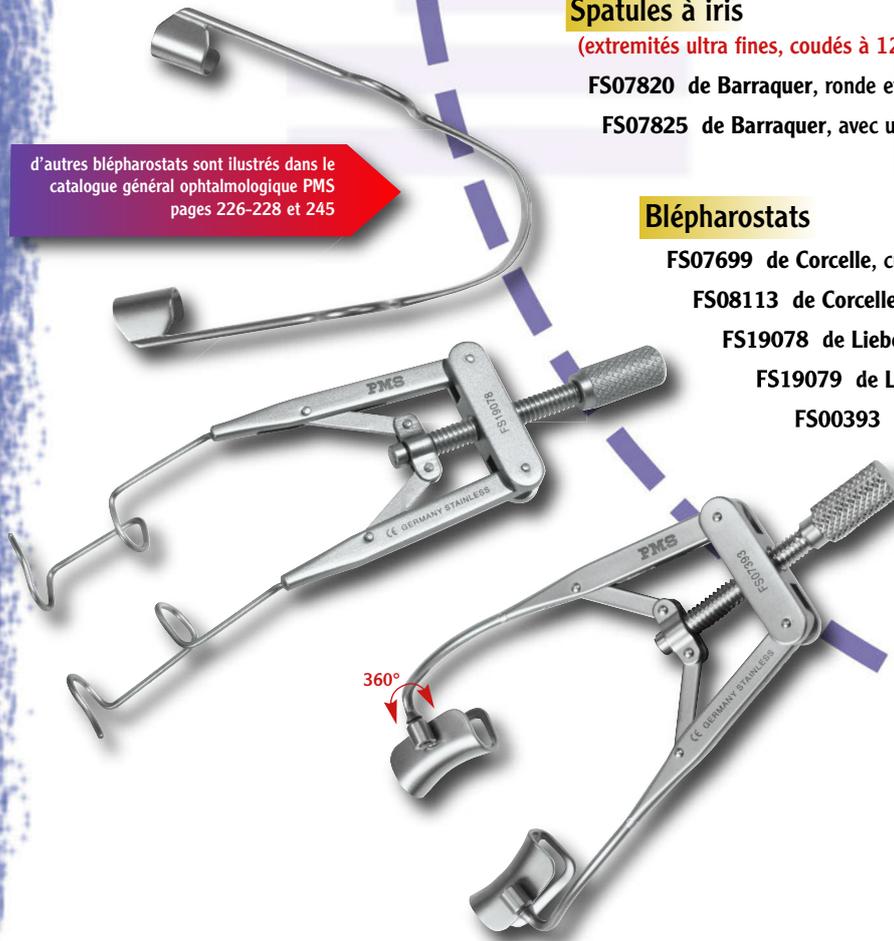
FS07699 de Corcelle, cuillers 8 mm

FS08113 de Corcelle-Legrand, cuillers 12 mm

FS19078 de Lieberman, anses 15 mm

FS19079 de Lieberman, anses 10 mm

FS00393 de Pley, cuillers 13 mm



360°

SPECIALITÉS



IRRIGATION

ASPIRATION

Nouvelle gamme de canule pour aspiration avec embout silicone



**Canule monobloc pour irrigation**  
avec terminaison mousse, prise femelle  
(canule à 2 orifices sur le cotés de Ø 0.35 mm)  
E20-427 22GA/Ø 0.7 mm  
E20-428 21GA/Ø 0.8 mm  
E20-429 21GA/Ø 0.8 mm, à irrigation en bout

**Canule monobloc pour aspiration**  
avec terminaison rugueuse, prise mâle  
(canule à orifice supérieur de Ø 0,35 mm)  
E20-437 22GA/Ø 0.7 mm  
E20-438 21GA/Ø 0.8 mm  
E20-439 21GA/Ø 0.8 mm mousse

**Manipulateur de noyau pour irrigation**  
(canule 20GA/Ø 0.9 mm, à 2 ports Ø 0.6 mm)  
E20-480 de Neuhann, coudé à fourche



**Manipulateur "Phaco Chop" pour irrigation**  
(canule coudée 20G/Ø 0.9 mm, à orifice en bout)  
E20-482 Fine Quick-Chop, pointu  
E20-485 Rosen 90°, arrandis  
E20-486 Thibaut 60°, mousse  
E20-489 Nagahara 90°, mousse



\*Gamme de canule pour aspiration avec embout silicone

Pointe avec embout silicone	21GA/Ø 0.8 mm	23GA/Ø 0.65 mm
pointe courbe	E20-413	E20-423
pointe coudée 45°	E20-414	E20-425
embout en silicone	E20-415 b/5	E20-426 b/6
manche I/A	E20-400	E20-400

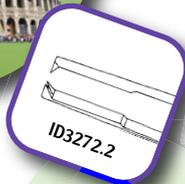
New

SPECIALITIES



## Italian Design

Progettata per le migliori prestazioni, performance ottimali e precisione nel controllo di ogni procedura chirurgica.



### Pinze serrafilì

(con piani delicati da 6 mm)

ID3207.1 Tennant, retta

ID3207.0 Tennant, curva

### Pinze serrafilì, McPherson

(angolate, con piani da...)

ID3276.5 McPherson, ... 5 mm

ID3276.8 Buratto-, ... 7.5 mm

ID3276.1 Bechert-, ... 11 mm

### Pinze corneali, Bonn

(con 1x2 denti retti da 0.12 mm e ppf)

ID3161.0 con manico corto, 7.5 cm

ID3272.4 con branche corte, 9.5 cm

ID3272.2 con branche lunghe, 11.0 cm

### Pinze corneo-sclerali

(con 1x2 denti obliqui da 0.12 mm e ppf)

ID3272.8 Castroviejo, retta

ID3272.6 Savaresi-Colibri

ID3276.6 Janach-Colibri, denti retti

### Pinze per piegamento IOL morbide

(angolate, con branche smusse e...)

ID2186.4 Buratto, biconvesse da 8 mm

ID2188.4 Crozafon, cilindriche da 11 mm

### Pinze capsuloressi per MICS-MCCS

(angolate da 11 mm, apice acuto ...)

\*ID3131.0 Corydon, dorso curvo

ID3131.1 Crozafon, dorso curvo

ID3133.0 Utrata, dorso retto

ID3135.1 Giannetti, dorso curvo

con zigrinatura a 2.5 e 5.0 mm per la misura della capsuloressi

SPECIALITIES



Forbici corneali sono disponibili su richiesta e illustrate nel nostro catalogo oftalmico a pagina 248



**Forbici per iride e capsulotomia**

(con lame acute e delicate da 5 mm)

- E25-400 Vannas, retta
- E25-401 Vannas, curva
- E25-405 Vannas, angolata
- E25-442 Ong, angolata da 9 mm



**Forbici per capsulotomia**

(con lame curve e sottili da 8 mm)

- E25-451 smussa
- E25-453 acuta



**Forbici Tipo Westcott**

(con lame curve e robuste da 12 mm)

- E25-315 acuta, per togliere i punti
- E25-334 smussa, per tenotomia
- E25-331 McPherson, per congiuntiva



**Port'aghi congiuntivale/palpebrale**

(con piani delicati da 10 x 1.0 mm, 14.0 cm)

- E35-130 Castroviejo, retto, senza arresto
- E35-131 Castroviejo, curvo, senza arresto
- E35-132 Castroviejo, retto, con arresto
- E35-133 Castroviejo, curvo, con arresto



**Port'aghi per sutura corneale**

(con piani molto delicati da 9 x 0.5 mm, 11.5 cm)

- E35-250 Troutman, retto, senza arresto
- E35-251 Troutman, curvo, senza arresto
- E35-253 Troutman, curvo, con arresto
- E35-231 Barraquer, curvo, 13.5 cm
- E35-233 Barraquer, curvo, con arresto



SPECIALTIES



*strumenti con manici in titanio colore*

I manici sono disponibili anche in acciaio. Aggiungere la "S" al codice



**Manipolatori del nucleo**

(con manico colore viola)

\*ID2192.2 Buratto, punta retta ad oliva

\*ID2192.7 Ligabue, piatta bottonuta, sabbata

\*ID2192.9 Drysdale, punta spatolata più sottile

**Uncini-manipolatori per IOL**

(con manico colore blu)

\*ID2193.6 Osher, punta a "Y" verticale

\*ID2193.1 Lester, punta push-pull

\*ID2180.2 Sinskey, punta 0.2 mm

**Phaco Chopper**

(con manico colore rosa)

\*ID2180.4 Rosen-Galan 90°, fronte arrotondato

\*ID2180.6 Nagahara 60°, punta smussa

\*ID2180.9 Nagahara 90°, punta smussa

**Uncino da iride**

(con manico colore giallo)

\*ID2182.2 Bonn, punta 0.3 mm

\*ID2185.2 Kuglen, punta push-pull

**Spatole per iride**

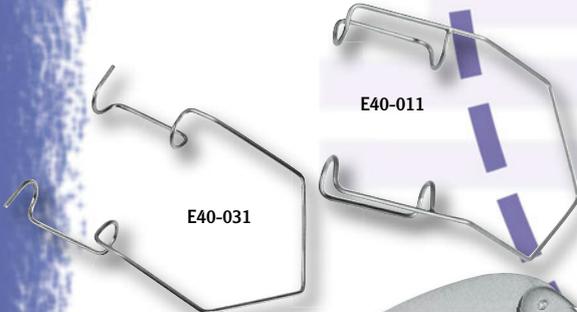
(con manico colore verde)

\*ID2407.1 Barraquer, 10x0.5 mm

\*ID2407.2 Troutman, 10x0.25 mm



punte in acciaio, angolate da 11 mm, con braccio: \*retto - \*curvo



**Blefarostati**

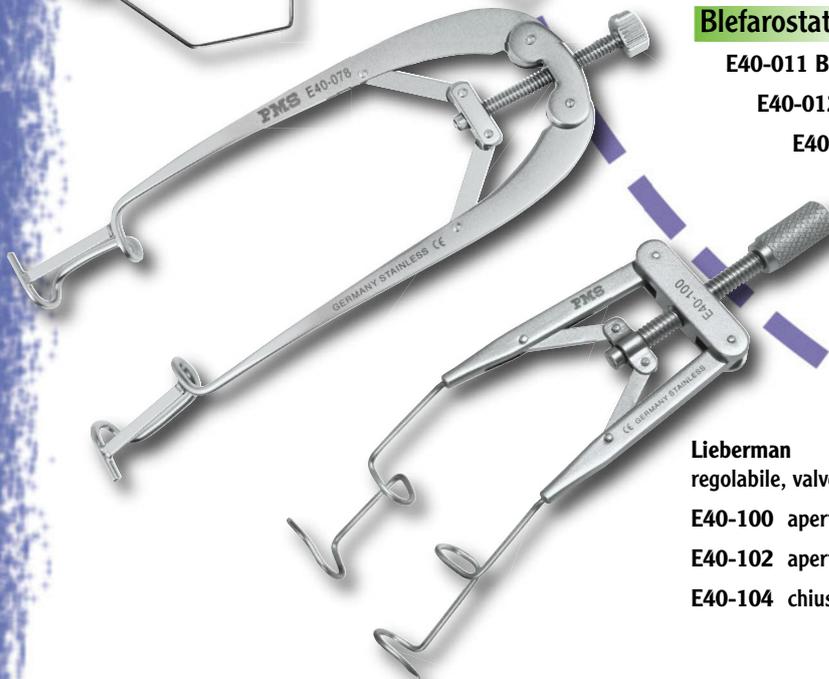
E40-011 Barraquer, valve da 15 mm

E40-012 Barraquer, valve da 10 mm

E40-031 Kratz-Barraquer, valve da 15 mm

E40-078 Castroviejo, valve da 16 mm

E40-079 Castroviejo, valve 13 mm



Lieberman regolabile, valve da 15 mm

E40-100 aperte tipo Kratz

E40-102 aperte a "V"

E40-104 chiuse

SPECIALTIES

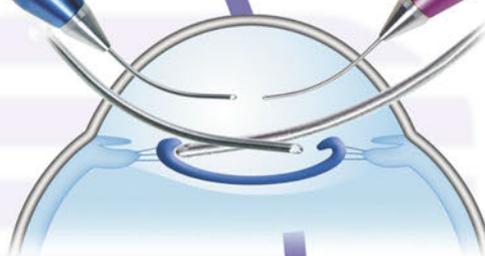


Sistema nuova coassiale I/A  
per Irrigazione/Aspirazione

composto da manico e  
punte intercambiabili



INFUSIONE



ASPIRAZIONE

**Monopizzo per infusione di colore blu**

(con cannula curva a 2 fori laterali Ø 0.35 mm)

E20-427 Ø 0.7 mm, punta smussa

E20-428 Ø 0.8 mm, punta smussa

E20-429 Ø 0.8 mm, foro frontale

**Monopizzo per aspirazione di colore oro**

(con cannula curva a foro superiore Ø 0.35 mm)

E20-437 Ø 0.7 mm, punta sabbata

E20-438 Ø 0.8 mm, punta sabbata

E20-439 Ø 0.8 mm, punta smussa

**Manipolatore del nucleo irrigante**

(20G/0.9 mm, a 2 fori laterali Ø 0.6 mm)

E20-480 Neuhann, punta a forcina



**Phaco chopper irrigante**

(20G/0.9 mm con infusione frontale)

E20-482 Fine Quick-Chop, punta acuta

E20-485 Rosen 90°, fronte arrotondato

E20-486 Thibaut 60°, punta smussa

E20-489 Nagahara 90°, punta smussa



\*Gamma di punte intercambiabili per manici I/A coassiali

Punte p. sleeve silicone	21GA/0.8 mm	23GA/0.65 mm
Punta curva	E20-413	E20-423
Punta angolata 45°	E20-414	E20-425
Sleeve in silicone	E20-415 c/5	E20-426 c/6
Manico I/A	E20-400	E20-400

New

SPECIALITIES



**POPULAR EYE INSTRUMENTS**

100%  made

**SPECIALITIES**



**Bishop-Harmon  
AC Irrigator System**

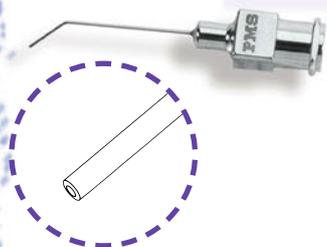
- E20-001 complete
- E20-002 silicone bulb
- E20-003 LL adaptor
- E20-004 19GA cannula



**Simcoe**

Double I and A Cannula  
23/23GA x 15 mm long tube with  
0.3 mm aspirating port and tubing kit

- E20-300 original model
- E20-301 reverse model



**Rycroft**

Air Injection Cannula  
20 mm tube, angled 5 mm

- E20-030 30GA/0.3 mm
- E20-031 27GA/0.4 mm
- E20-032 25GA/0.5 mm



**Schocket**  
Double Scleral Depressor  
with pocket clip, 13.5 cm

- E40-613 stainless steel
- E40-613T titanium handle

**Fine-Thornton**  
Phaco Fixation Ring  
3/4 open swivel ring, 13 mm ID,  
multiple teeth, 13.5 cm

- E10-513 stainless steel
- E10-513T titanium



**Castroviejo**

Eye Caliper, straight 0-20 mm scale  
on either side in 1 mm increments

- E40-554 stainless steel
- E40-554T titanium

**Maloney**  
Astigmatic Keratometer

**E10-690T**  
for qualitative evaluation  
of astigmatism



## POPULAR EYE INSTRUMENTS



**Barraquer, wire**  
E40-011 adult size, 15 mm  
E40-012 child size, 10 mm

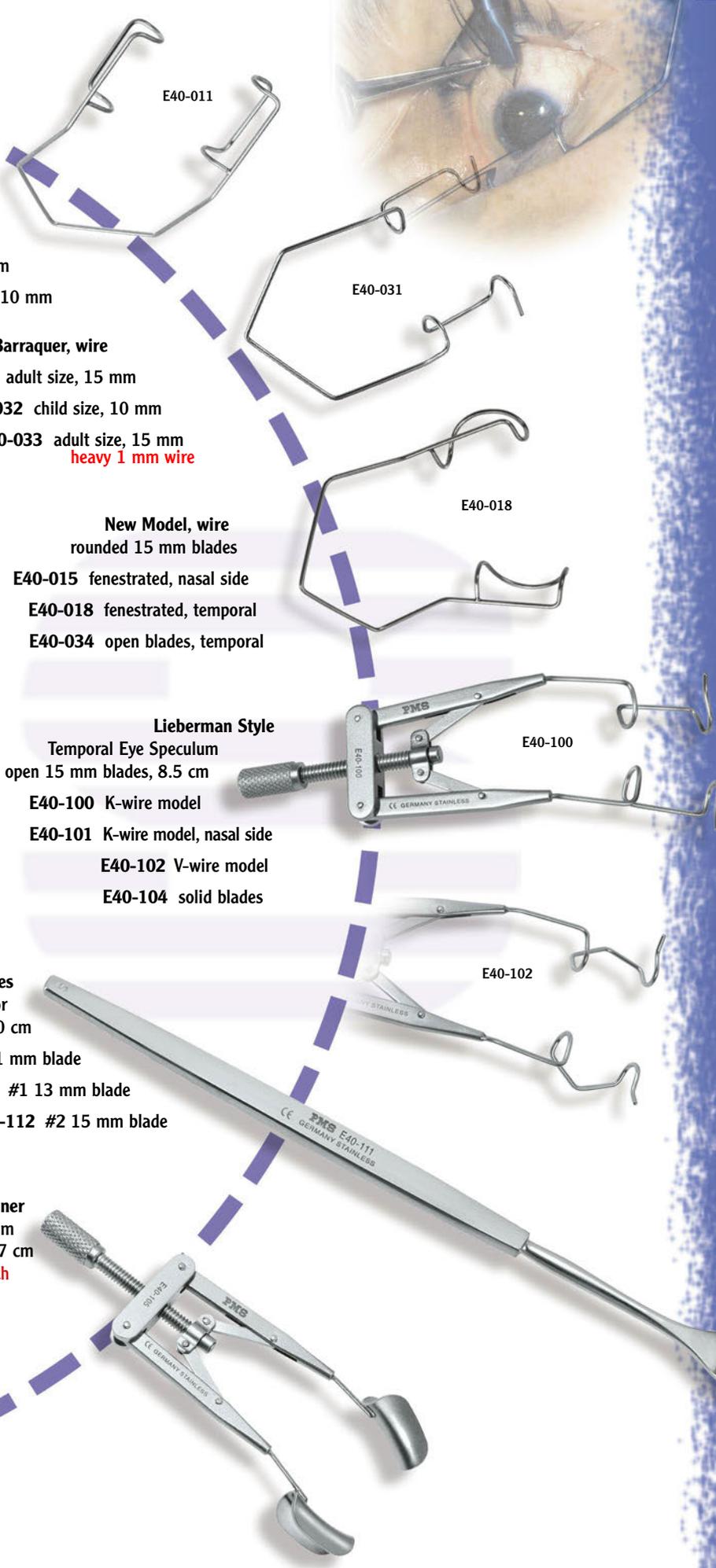
**Kratz-Barraquer, wire**  
E40-031 adult size, 15 mm  
E40-032 child size, 10 mm  
E40-033 adult size, 15 mm  
**heavy 1 mm wire**

**New Model, wire**  
rounded 15 mm blades  
E40-015 fenestrated, nasal side  
E40-018 fenestrated, temporal  
E40-034 open blades, temporal

**Lieberman Style**  
Temporal Eye Speculum  
open 15 mm blades, 8.5 cm  
E40-100 K-wire model  
E40-101 K-wire model, nasal side  
E40-102 V-wire model  
E40-104 solid blades

**Desmarres**  
Lid Retractor  
thin solid blade, 14.0 cm  
E40-110 #0 11 mm blade  
E40-111 #1 13 mm blade  
E40-112 #2 15 mm blade

**Kershner**  
Reversible Speculum  
solid 14 mm blades, 7.7 cm  
**for nasal and temporal approach**  
E40-105



SPECIALTIES



... exclusively produced  
in Tuttlingen home of the instrument making  
industry for almost 200 years

SPECIALITIES



E15-611



E15-465



E15-656



E15-613



E15-610



E15-418



E15-429



E15-423

**NUCLEUS MANIPULATORS**

E15-418 Koch II, curved notched tip  
E15-423 Jaffe-Bechert, angled forked tip  
E15-429 Ligabue, vaulted flat/buttoned tip  
E15-465 Drysdale, angled paddle shaped tip  
very effective instruments to push, lift, rotate,  
dissect and fracture nuclear and cortical material

**PHACO SPLITTER & CHOPPERS**

(wedge shaped tip with inferior cutting edge)  
E15-611 Nichamin 90° ball shaped tip - horizontal  
E15-656 Nagahara 60° blunt tip - horizontal  
E15-659 Nagahara 90° blunt tip - horizontal  
E15-613 Phaonit Quick-Chop, sharp tip - vertical  
E15-610 Nagahara Karate, spear shaped tip - vertical  
for horizontal, vertical and quick chopping

**LENS MANIPULATORS**

E15-501 Lester, "hour glass" tip  
E15-561 Sinsky II, 0.2 mm tip  
E15-567 Kuglen, "Push-Pull" tip  
used to dial and position IOL's, to  
retract iris; and for manipulations  
in the anterior segment



E15-561

E15-501

shafts angled 10 mm from tips are made of  
one-piece medical grade stainless steel

**IRIS REPOSITORS & HOOKS**

(round, smooth blade vaulted at 10 mm)  
E15-408 Barraquer, 0.25 mm conical tip  
E15-409 Barraquer, 0.5 mm cylindrical tip  
E15-607 Bonn, 0.3 mm reverse curved tip  
ideal for repositioning – push, retract  
and retain – the iris during ECCE



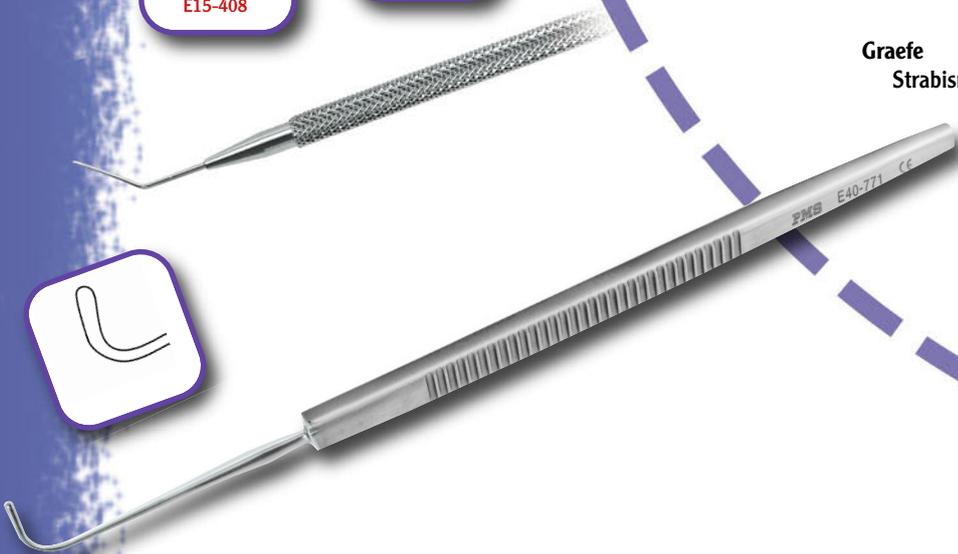
E15-408



E15-607

Graefe  
Strabismus Hook

E40-771 #1 small  
E40-772 #2 medium  
E40-773 #3 large



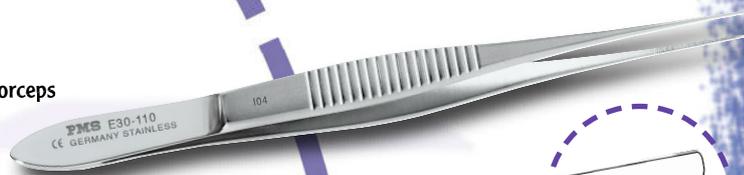


*... hand-crafted  
for hand use*

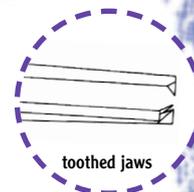
**Bishop-Harmon  
Dissecting Forceps**  
straight, 8.5 cm  
E30-100 criss-cross serrated  
E30-103 0.3 mm teeth  
E30-106 0.6 mm teeth



**Dressing Forceps**  
straight, 10.0 cm  
E30-110 0.5 mm  
E30-112 0.7 mm  
E30-114 1.0 mm



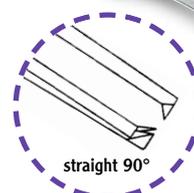
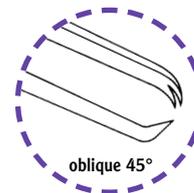
**Tissue Forceps**  
straight, 10.0 cm  
E30-120 0.5 mm  
E30-122 0.7 mm  
E30-124 1.0 mm



**Elschnig  
Scleral Fixation Forceps**  
oblique 1 x 2 teeth, 10.5 cm  
E30-244



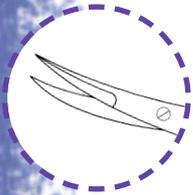
**Lester  
Conjunctiva Fixation Forceps**  
straight, 0.6 mm, 9.5 cm  
E30-232 1 x 2 teeth  
E30-233 2 x 3 teeth



**SPECIALITIES**



*Micro Corneal Scissors*



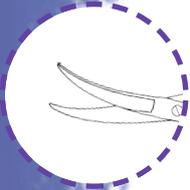
**Universal**  
Micro Corneal / Iris Scissors  
straight 6 mm blades, 10.0 cm

- E25-002 sharp tips
- E25-004 sharp/blunt
- E25-006 blunt tips



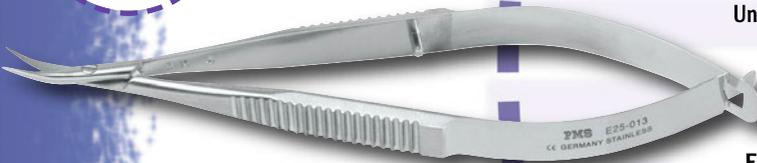
curved 6 mm blades

- E25-003 sharp tips
- E25-005 sharp/blunt
- E25-007 blunt tips

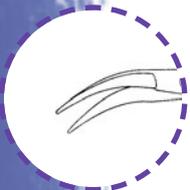


**Castroviejo**  
Universal Corneal Scissors

8 mm blades, blunt tips, 10.0 cm



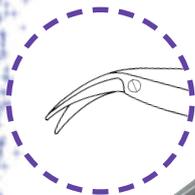
- E25-011 slightly curved blades
- E25-013 medium curved blades
- E25-015 medium 12 mm blades



**Troutman**  
Micro Corneal Section Scissors  
curved 6 mm blades, 10.0 cm



- E25-062 right
- E25-063 left



**Katzin**  
Micro Corneal Transplant Scissors  
strong curved 6 mm blades, 10.0 cm

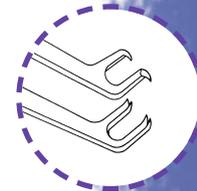
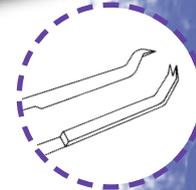
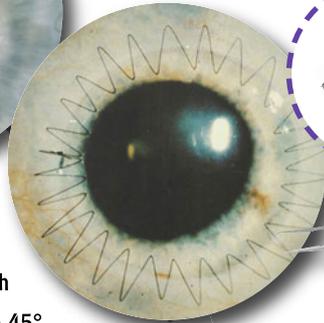
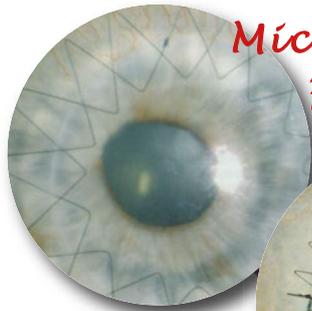


- E25-100 right
- E25-101 left

Micro Corneal Scissors with universal, right and left curved blades are ideal for wound enlargement and completion of trephine cuts



*Micro Corneal  
Forceps*



**Maumenee-Colibri**  
cross-action flat handle,  
smooth 6 mm platform,  
delicate 0.12 mm teeth

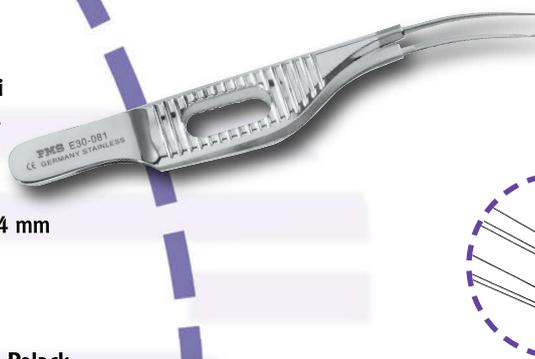
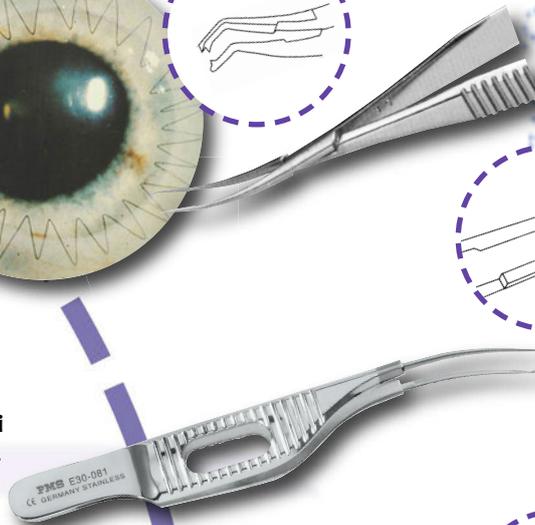
E30-093 oblique 45°

E30-094 straight 90°

**Harms-Colibri**  
smooth 6 mm platform,  
oblique 1 x 2 teeth, 7.3 cm

E30-081 0.12 mm

E30-085 0.4 mm



**Polack**

Double Corneal Suture Forceps  
U-shaped 1 mm spread, double tips with  
1 x 2 teeth, 0.12mm/45°, 7.5 cm

E30-087

**St. Martin's (Paufigue)**  
smooth 6 mm platform,  
oblique 1 x 2 teeth, 8.7 cm

E30-413 delicate, 0.3 mm

E30-415 medium, 0.5 mm

E30-418 heavy, 0.8 mm

**Bonn**

smooth 4 mm platform,  
straight 1 x 2 teeth, 0.12 mm

E30-410 short model, 7.2 cm

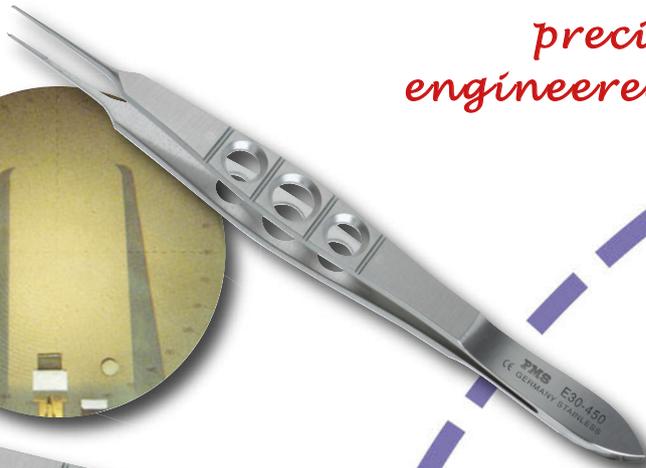
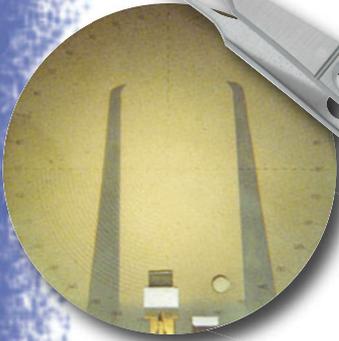
E30-430 long model, 9.5 cm

These forceps are ideal for manipulating delicate tissue, e.g. fixation of the corneal flap and continued suturing for cataract and corneal grafts.

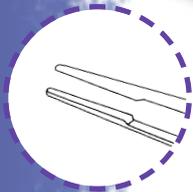
SPECIALITIES



*precisely  
engineered ...*



**Castroviejo**  
Suturing Forceps  
smooth 6 mm platform,  
oblique 1 x 2 teeth, 11.0 cm  
E30-450 0.12 mm  
E30-451 0.3 mm  
E30-452 0.5 mm

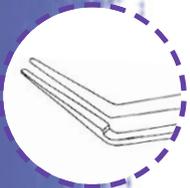


*ideal ...*



**Jaffe**  
Micro Suture Tying Forceps  
smooth 6 mm platform, 10.5 cm  
E30-446 tying, straight  
E30-447 tying, curved  
E30-456 suture, 0.12 mm teeth

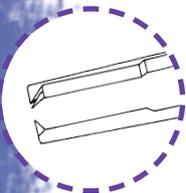
SPECIALITIES



*for 8-0 to ...*



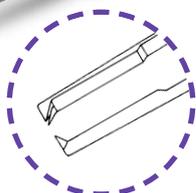
**McPherson**  
Tying Forceps  
smooth platform, 11.0 cm  
E30-460 straight, 5 mm  
E30-461 angled, 5 mm  
E30-463 angled, 7.5 mm, Kelman-  
E30-465 angled 10 mm, Bechert-



*11-0 sutures*



**Troutman**  
Micro Suture Tying Forceps  
smooth 6 mm platform, 10.0 cm  
E30-428 tying, straight  
E30-429 tying, curved  
E30-438 suture, 0.12 mm teeth



**Tennant**  
Micro Suture Tying Forceps  
smooth 6 mm platform, 10.0 cm  
E30-448 tying, straight  
E30-449 tying, curved  
E30-458 suture, 0.12 mm

all forceps are also available in lightweight,  
durable titanium, when ordering please add  
"T" to end of catalog number

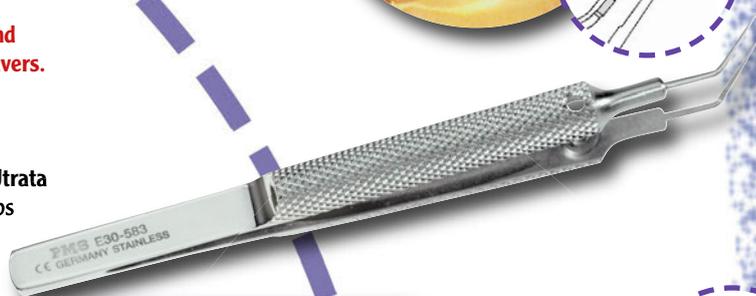


*... to every detail*

Thin-profile angled and vaulted  
11 mm shafts on round knurled  
handle, which "fit the fingers"  
for the best control and  
surgical manoeuvres.



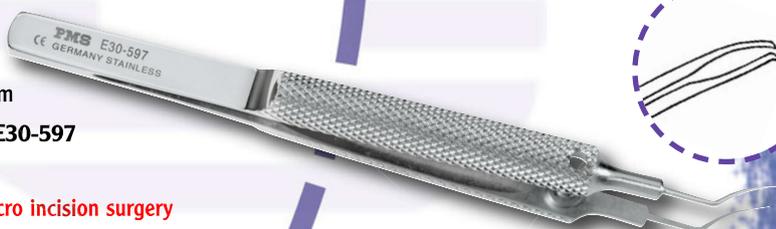
**Utrata**  
Capsulorhexis Forceps  
angled 11 mm shafts,  
triangular tips, 10.0 cm  
**E30-583**  
**E30-583T** titanium



**Masket**  
Capsulorhexis Forceps  
vaulted 11 mm shafts,  
triangular tips, 10.0 cm  
**E30-590**  
**E30-590T** titanium

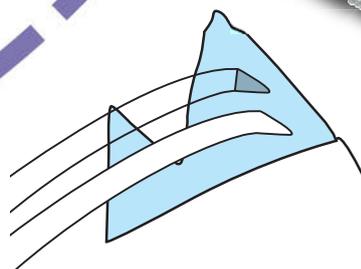
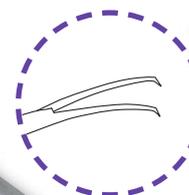


**Giannetti 1.8 mm**  
MICS Capsulorhexis Forceps  
vaulted and curved 11 mm shafts,  
fine pointed grasping tips, 10.0 cm  
**E30-597**



*ideal for CCC during micro incision surgery*

**Inamura Style 1.5 mm**  
MICS Capsulorhexis Forceps  
very thin vaulted 13 mm shafts,  
ultra fine pointed tips, 12.0 cm  
**E30-591** stainless steel  
**E30-591T** titanium



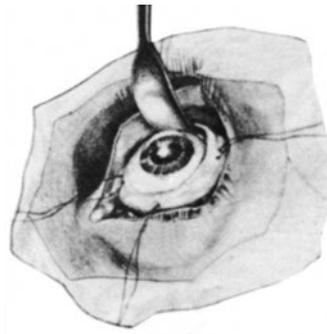
Thin-profile shafts with ultra fine grasping tips  
for best control and surgical manoeuvres.

SPECIALITIES



**STRABISMUS INSTRUMENTS**

all instruments are also available in light weight, durable titanium, when ordering please add "T" to end of catalog number



Featured is a selection of extra delicate Muscle Hooks, multi-purpose "Teaser" and "Finder" Hooks and Tissue Retractors with thin spatulated blades for more delicate – less trauma – better results strabismus surgery.

**Helveston Style Strabismus Instruments**

E40-790 "Teaser" Hook, conical 6 mm long tip

E40-791 Muscle Hook, delicate blunt tip, 8 mm

E40-792 Muscle Hook, delicate blunt tip, 10 mm

E40-793 Muscle Hook, delicate blunt tip, 12 mm

E40-795 "Finder" Hook, cone shaped tip, small

E40-796 "Finder" Hook, large

**The Micro Tissue Retractor**

are designed for opening and closing of the conjunctiva; scleral suture placement, dissection of the scleral, and vitreo retinal procedures. The broad 11 mm wide model is also useful in orbital, plastic and strabismus surgery.

Micro Tissue Retractors curved thin blade

E40-807 7 mm wide

E40-809 9 mm wide

E40-811 11 mm wide

Scleral Marking Ruler, titanium curved 15 mm blade with 1 mm increments, single tooth at the tip and a notch at 5 mm and 10 mm

E40-557T

**Helveston Tying Forceps** straight plain jaws for 4-0 to 6-0 sutures

E30-426

Smooth jaw forceps are ideal for fine suturing.

**Fine Micro Tying Forceps** curved plain jaws for 7-0 to 9-0 sutures

E30-427

**E42-132 Delicate Strabismus Surgery Set** consisting of 1 each or (x) instruments:

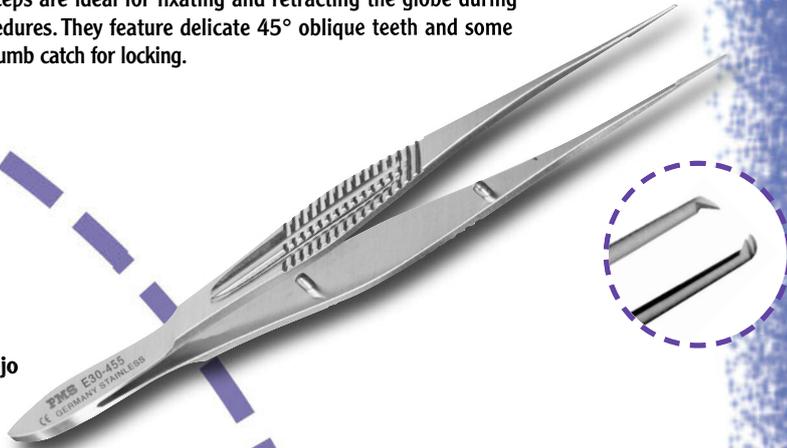
- E30-902 Halstead Mosquito Forceps (2x), page 266
- E30-934 Dieffenbach Serrefine, straight (2x), page 266
- E40-104 Lieberman Eye Speculum, solid blades, page 245
- E40-807 Helveston Micro Tissue Retractor, curved 7 mm blade
- E40-809 Helveston Micro Tissue Retractor, curved 9 mm blade
- E40-811 Helveston Micro Tissue Retractor, curved 11 mm blade
- E40-790 Helveston "Teaser" Hook, conical 6 mm long tip (3x)
- E40-795 Helveston "Finder" Hook, small, cone shaped tip
- E40-796 Helveston "Finder" Hook, large, cone shaped tip
- E40-791 Helveston Muscle Hook, blunt 8 mm tip
- E40-792 Helveston Muscle Hook, blunt 10 mm tip
- E40-793 Helveston Muscle Hook, blunt 12 mm tip
- E40-557T Scleral Marking Ruler, curved 15 mm blade

**SPECIALITIES**



These wide handle forceps are ideal for fixating and retracting the globe during strabismus procedures. They feature delicate 45° oblique teeth and some have a thumb catch for locking.

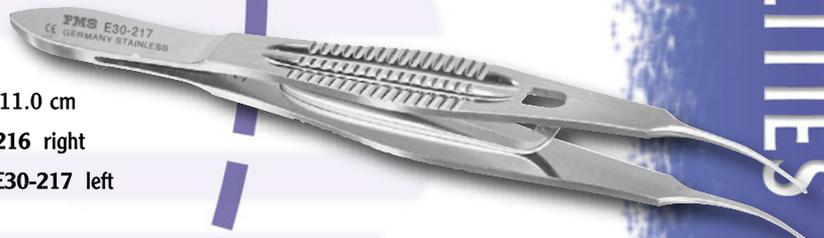
**Castroviejo**  
Fixation Forceps  
1 x 2 teeth, 10.8 cm  
E30-453 0.3 mm  
E30-455 0.5 mm



**Stern-Castroviejo**  
Fixation Forceps  
1 x 2 teeth, 0.5 mm, with  
thumb lock catch, 10.8 cm  
E30-214 stainless steel  
E30-214T titanium



**Moody**  
Fixation Forceps  
1 x 2 teeth, 0.5 mm, with  
thumb lock catch, 11.0 cm  
E30-216 right  
E30-217 left



**Helveston, titanium**  
Fixation Forceps  
1 x 2 teeth, 0.6 mm, with  
thumb lock catch, 11.8 cm  
E30-213T



**E42-132 Strabismus Set continued...**

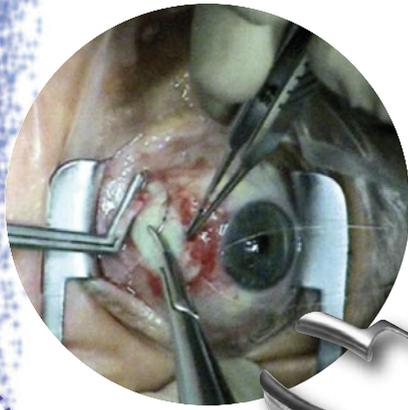
- E40-554 Castroviejo Eye Caliper, page 244
- E25-315 Westcott Stitch Scissors, page 241
- E25-334 Westcott Tenotomy Scissors, page 241
- E30-233 Lester Fixation Forceps (3x), page 247
- E30-456 Jaffe-Bonn Suturing Forceps, page 250
- E30-216 Moody Fixation Forceps, right, page 253
- E30-217 Moody Fixation Forceps, left, page 253
- E30-426 Helveston Tying Forceps (2x), straight, page 252
- E35-132 Castroviejo Needle Holder, straight, page 241
- E35-233 Barraquer Needle Holder, curved, page 241
- E20-001 Bishop-Harmon AC Irrigator System, page 244
- E10-003K Chuck Handle #3K, 10.0 cm, page 18
- E10-069 Miniature Edged Blade #69, page 18



**SPECIALTIES**



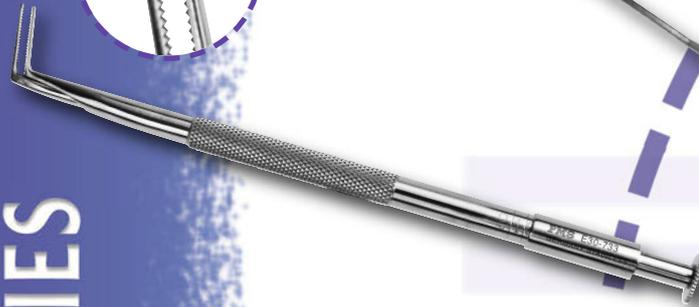
**INSTRUMENTS FOR MUSCLE RESECTION**



**Putterman, titanium**  
**6 Pins Muscle Resection Clamp**  
 24 mm wide blades with 3 pins on top and 3 pins on bottom, 3 aligning holes on both jaws, with thumb slide lock, 9.5 cm  
**E30-736T**



**Bangerter**  
**Eye Speculum**  
 solid blades, with locking screw  
**E40-066** child size, 11 mm  
**E40-067** adult size, 15 mm

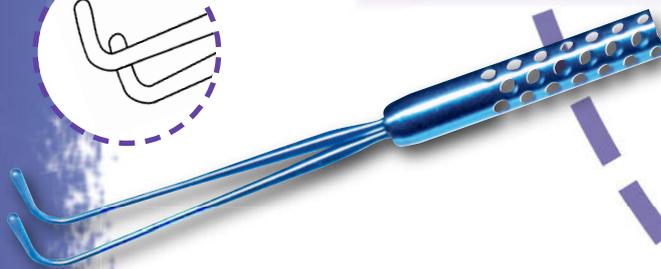


**Apt's, titanium**  
**Muscle Resection Clamp**  
 angled 77° shafts with 11.5 mm long tips, tongue-and-groove jaws with serrations, marked for 2, 4 and 6 mm openings  
**E30-732** short 80 mm handle  
**E30-733** long 105 mm handle

designed for use during a Muller's muscle-conjunctival resection ptosis procedure

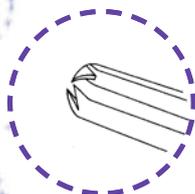


**Wright, titanium**  
**Recession Grooved Muscle Hook**  
 angled 14 x 2.5 mm hook, 14.0 cm  
**E40-784T** right  
**E40-785T** left



**Wright, titanium**  
**Recession Double Muscle Hook**  
 angled 11.5 mm working part, 14.0 cm  
**E40-786T**

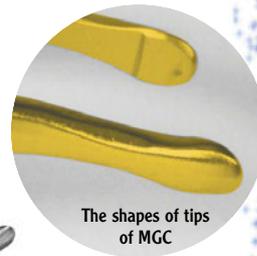
**Troutman**  
**Superior Rectus Forceps**  
 angled 10 mm shafts, oblique 1 x 2 heavy teeth, 10.7 cm  
**E30-223**



**SPECIALITIES**



*Drainage is the treatment procedure of choice*



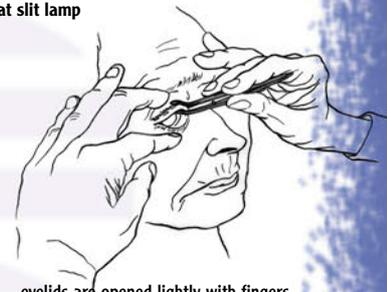
The shapes of tips of MGC

**Yoshitomi**  
**Meibomian Gland Compressor (MGC)**  
 angled curved jaws with smooth surfaces, 8.5 cm  
 E30-827 stainless steel  
 E30-827T titanium, blue  
 E30-827G titanium, gilded



**Video available**

MGC at slit lamp



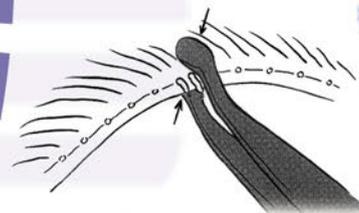
eyelids are opened lightly with fingers

This instrument was invented by Fumiaki Yoshitomi, MD, to drain meibum from dysfunctional meibomian glands (MGD) effectively.

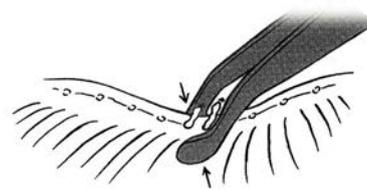
Under topical anesthesia, the eyelids are opened lightly with fingers. Then with the Meibomian Gland Compressor, the affected lid margin is gently squeezed at its anterior and posterior surface to express meibum from dysfunctional meibomian glands (MGD).

The special angles of the MGC allow the surgeon to easily insert and position the tips over the eyelid parallel to the lid margin. The broad, smooth jaws are then used to atraumatically compress the glands – relieving any occlusions with minimal pain to the patient.

MGC is user friendly and allows treatment of both upper eyelid or lower eyelid and working from either a temporal or nasal approach. Due to the curvature of the jaws, surgeon can keep his/her comfortable position during the procedure.



MGC squeezing the upper lid



MGC compressing the lower lid

**Protective Eye Shell**

for lid surgery with suction cup, autoclavable, available on request: with and without handle



**SPECIALTIES**



**LID-CONJUNCTIVA/PTOSIS INSTRUMENTS**

**SPECIALITIES**



**Berke Ptoisis Forceps**  
 +E30-832 20 mm long  
 E30-833 27 mm long



**Desmarres Chalazion Forceps**  
 +E30-821 20 mm  
 E30-822 26 mm



**Jaeger Lid Plate**  
 metal, 11.0 cm  
 +E40-128



**Wright Fascia Needle**  
 with 1 mm by 6 mm oval hole, 13.0 cm  
 may be used with *Ptose-Up*  
 E40-991

images are not actual size

**E42-131 LID-CONJUNCTIVA/TRICHIASIS-PTOSIS SET**

consisting of 1 each or (x) instruments:

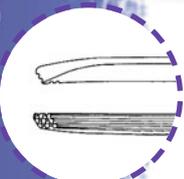
- E20-001 Bishop-Harmon Irrigator, page 244
- E30-902 Halstead Mosquito (2x), page 266
- E30-909 Backhaus Towel Clamp (2x), page 266
- E40-361 Kuhnt Scarifier #1, 12.0 cm, page 265
- E25-566 Stevens Tenotomy Scissors, page 261
- E25-532 Eye Scissors, straight, sh/bl tips, page 262
- E25-315 Westcott Stitch Scissors, curved, page 241
- E25-334 Westcott Tenotomy Scissors, curved, page 241
- E40-554 Castroviejo Eye Caliper, 0-20 mm, page 244
- E40-111 Desmarres Lid Retractor #1=11 mm, page 245
- E40-112 Desmarres Lid Retractor #2= 13 mm, page 245
- E40-772 Graefe Strabismus Hook, medium, page 246
- E40-451 Meyhoefer Chalazion Curette #1, page 257
- E40-453 Meyhoefer Chalazion Curette #3, page 257
- E30-106 Bishop Harmon Tissue Forceps, page 247
- E30-451 Castroviejo Suture Forceps, page 250
- E30-427 Fine Tying Forceps, curved, page 252
- E30-827 Yoshitomi MGC Forceps, page 255
- E35-131 Castroviejo Needle Holder, page 241
- E35-231 Barraquer Needle Holder, page 241
- E40-811 Helveston Tissue Retractor, page 252
- E40-812 Knapp Retractor 4-prong, page 262

+ instruments illustrated



**Bonaccolto Conjunctiva Forceps**  
 longitudinally serrated 1.2 mm jaws  
 with cross serrations at tips, 10.3 cm

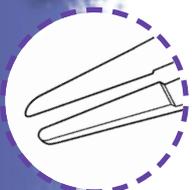
+E30-238



popular



**Barraquer Cilia Forceps**  
 angled jaws with platform, 11.0 cm  
 E30-773



non-toothed



**Nugent Utility Forceps**  
 angled jaws, 11.0 cm

E30-286 smooth  
 E30-287 serrated

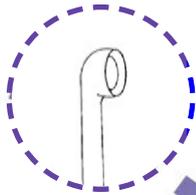


forceps



**Gillies Skin Hook**  
 single end sharp, 17.0 cm

+E40-754 small  
 E40-756 large



**Meyhoefer**  
Chalazion Curettes, round,  
cup-shaped sharp spoon, 12.5 cm  
E40-450 #0 = 1.5 mm  
E40-451 #1 = 1.8 mm  
E40-452 #2 = 2.0 mm  
E40-453 #3 = 2.5 mm  
E40-454 #4 = 3.5 mm



**Lambert**  
8 mm ID  
\*E30-808



**Hunt**  
12 mm ID  
\*E30-812



**Francis**  
14x11 mm ID  
\*E30-814

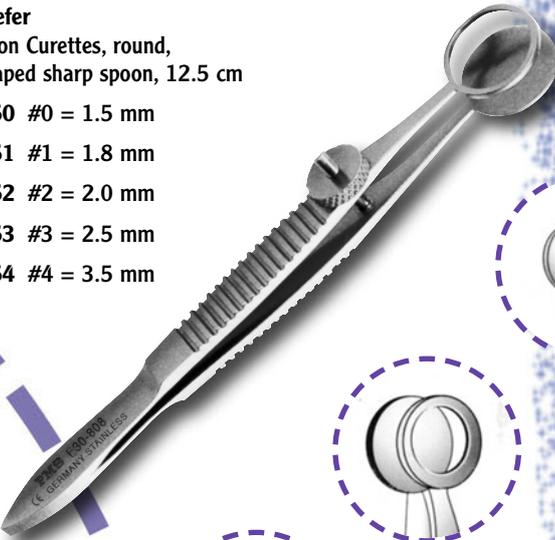
*\*on request also available in titanium*

**E42-130 CHALAZION SURGERY SET**

- complete, consisting of 1 instrument each:  
E40-128 Jaeger Lid Plate, metal, page 256  
E40-450 Meyhoefer Curette #0, page 257  
E40-452 Meyhoefer Curette #2, page 257  
E40-453 Meyhoefer Curette #3, page 257  
E40-454 Meyhoefer Curette #4, page 257  
E25-532 Eye Scissors, sh/bl tips, page 262  
E40-203 Scalpel Handle #3, 12.5 cm page 261  
E40-215 Scalpel Blade #15, sterile, page 261  
E30-385 Moorfield's Forceps, fine, page 257  
E30-349 Lister's Conjunctiva Forceps, page 257  
E30-812 Hunt Chalazion Forceps, page 257  
E30-814 Francis Chalazion Forceps, page 257  
E35-131 Castroviejo Needle Holder, page 241  
E45-015 Instrument Sterilizing Tray, page 294



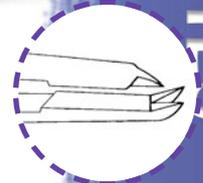
**Chalazion Forceps**  
round and oval  
plates



**Jayle's**  
Corneal Suture Forceps  
smooth platform with  
oblique 1 x 2 teeth, 10.5 cm  
E30-341 0.15 mm  
E30-343 0.3 mm  
E30-347 0.7 mm



*popular*



**Lister's**  
Conjunctiva Suture Forceps  
longitudinally serrated jaws,  
heavy 1.2 mm teeth, 10.0 cm  
E30-348 oblique 45° teeth  
E30-349 straight 90° teeth



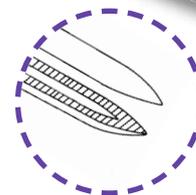
*English pattern*



**Moorfield's**  
Conjunctiva Forceps  
with serrations and groove  
E30-385 fine, 10.0 cm  
E30-386 standard, 10.7 cm



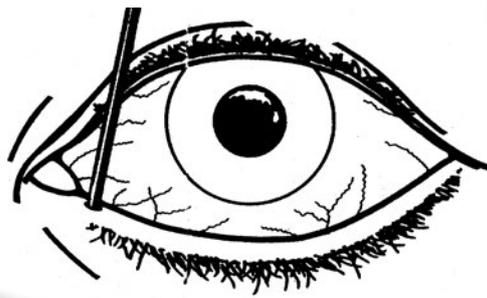
*forceps*



**SPECIALTIES**

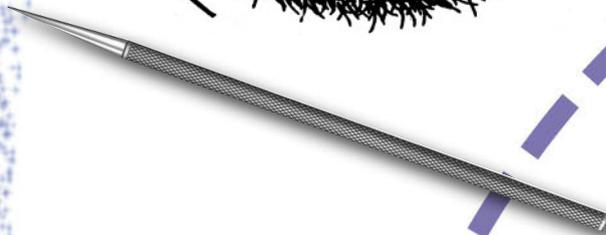


LACRIMAL DILATORS & PROBES



Castroviejo  
double ended, delicate  
and fine taper, 12.5 cm

E40-896



Ruedemann  
extra fine #0 tip, 8.0 cm

E40-888



Wilder  
blunt tip, 10.8 cm

E40-891 #1 delicate, 25 mm taper

E40-892 #2 medium, 21 mm taper

E40-893 #3 heavy, 13 mm taper

size scale of lacrimal dilators tips

fig.	0	1	2	3
mm	0.3	0.4	0.5	0.6

Sisler  
Punctum Dilator

graduated shaft with blunt tip beveling from  
0.35, 0.9, 1.4 to 1.9 mm OD, 9.5 cm

E40-894

one tip does the complete dilating procedure



size scale of lacrimal probe tips

fig.	0000	000	00	0	1	2	3	4	5	6
ø mm	0.5	0.6	0.7	0.8	0.9	1.1	1.3	1.4	1.5	1.6

Bowman  
double ended, bulbous tip

E40-861 #0000&000

E40-862 #00&0

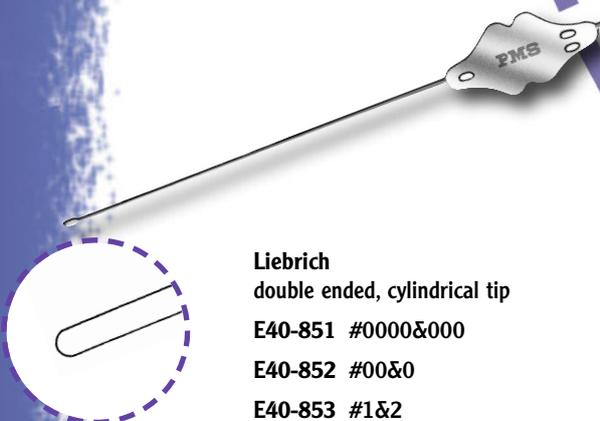
E40-863 #1&2

E40-864 #3&4

E40-865 #5&6

E40-866 #7&8

E40-860 set of 6



Liebrich  
double ended, cylindrical tip

E40-851 #0000&000

E40-852 #00&0

E40-853 #1&2

E40-854 #3&4

E40-855 #5&6

E40-856 #7&8

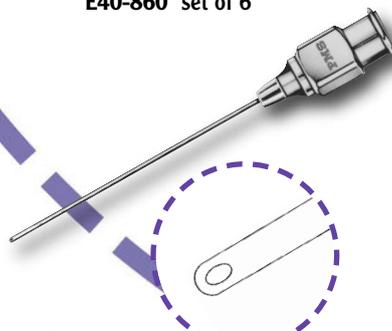
E40-850 set of 6

Bangerter

Lacrimal Probe Cannula  
23G/0.6 mm OD straight tube  
with large 0.6 x 0.3 mm oval side port

E20-646 40 mm

E20-647 60 mm



SPECIALITIES



*simple and effective*

**CRAWFORD INTUBATION SYSTEM**

includes 2 straight 150 mm probes with knob tip of 23G/0.7 mm OD attached to 320 mm silicone tube

**Reusable (non-sterile)**

E40-916 Probe Set

E40-917 Retrieval Device

E40-918 System with retrieval device

**Disposable (sterile packaged)**

51-917 Retrieval Device (box of 5)

51-918 System with retrieval device (box of 1)

retrieval device is designed to grasp knob-tip of probe for ease of removal from the inferior meatus.

**DCR BODKINS**

20 G/0.9 mm OD x 45 mm long pobe attached to 400 mm silicone tube

E40-924 straight, reusable, 1 piece

E40-923 angled, reusable, 1 piece

51-922 straight, disposable, box of 3

51-923 angled, disposable, box of 3

**QUICKERT**

Lacrimal Intubation Probe malleable stainless steel, 11.0 cm, one end has 0.4 mm taper point, one end has cylindrical tip of size:

E40-839 #00/0.7 mm

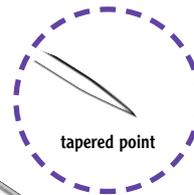
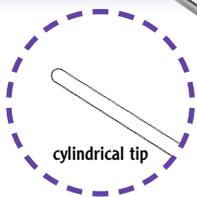
E40-840 #0/0.8 mm

E40-841 #1/0.9 mm

E40-842 #2/1.1 mm

E40-843 #3/1.3 mm

E40-844 #4/1.4 mm



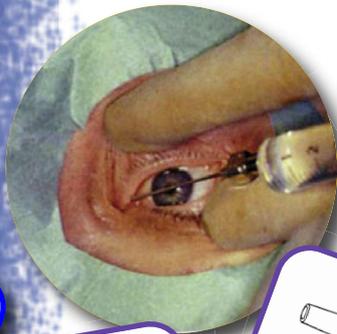
Probes are made from malleable stainless steel with blunt ends. Machined to assure a smooth transition and secure bonding between probe and silicone tubing. Silicone tube swaged to probe.

SPECIALTIES



## LACRIMAL CANNULAE

Cannulas are uniquely designed for their special application; atraumatic irrigation of the punctum or lacrimal duct, for punctal dilation and irrigation of the nasolacrimal system.



E20-642



E20-622



E20-643



E20-630



E20-645



E20-600



E20-602



**Galezowski**  
23G/0.6mm OD x 11mm  
blunt tip with end opening

E20-600 straight  
E20-601 curved

**Shahinian**  
23G/0.6mm OD x 11 mm straight tube,  
bullet-shaped tip with 0.3 mm side port  
E20-602

**Labarre**  
25G/0.5mm OD x 30 mm tube, tip  
is tapered to 0.3 mm, end opening

E20-612 straight  
E20-613 short angled  
E20-615 long angled  
E20-617 long curved  
*(on demand also available in sterling silver)*



**Anel**  
23G/0.6mm OD x 10 mm  
reinforced tip with end opening

E20-622 straight  
E20-623 curved 90°

Gauge	ID (in)	ID (mm)	OD (in)	OD (mm)
23g	.013	.33	.025	.60
25g	.010	.25	.020	.50

**Reinforced**  
19G/1.1 mm OD x 22 mm tube,  
reinforced tip of 23G/0.6 mmx10 mm

E20-630 straight  
E20-631 curved



**West**  
23G/0.6mm OD x 28 mm tube,  
blunt tip with 0.3 mm diameter  
E20-642 straight, side port  
E20-643 curved, bottom port  
E20-645 curved, front port

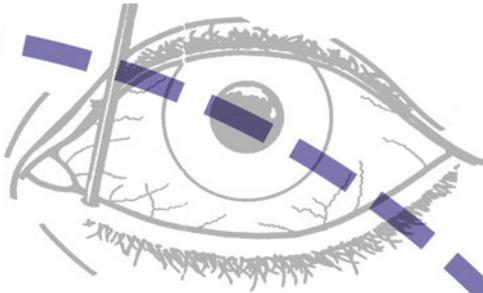


*ideal for smooth control  
of irrigation during  
lacrimal duct  
surgery*



**Irrigating Syringe**  
5 ml with Luer-Lock cone  
E20-805 all glass, reusable  
300-05SP plastic, disposable, sterile box of 10

SPECIALITIES



**E42-133 LACRIMAL SURGERY INSTRUMENT SET**  
(for Dacryocystorhinostomy and Intubation)

complete, consisting of 1 each or (x) instruments

- 1 E30-902 Halstead Mosquito Forceps (4x)
  - 2 E30-909 Backhaus Towel Forceps, 9.0 cm (2x)
  - 3 E20-001 Bishop-Harmon AC Irrigator, page 20
  - 4 E40-203 Scalpel Handle #3, stainless steel, 12.5cm
  - 5 E40-211 Scalpel Blade #11, sterile (box of 100)
  - 6 E40-215 Scalpel Blade #15, sterile (box of 100)
  - 7 E25-566 Stevens Tenotomy Scissors, straight, page 59
  - 8 E25-530 Universal Eye Scissors, straight, page 262
  - 9 E25-315 Westcott Stitch Scissors, curved, page 241
  - 10 E30-114 Standard Dressing Forceps, page 247
  - 11 E30-238 Bonaccolto Conjunctiva Forceps, page 256
  - 12 E30-446 Jaffe Tying Forceps, straight, page 250
  - 13 E30-451 Castroviejo Suture Forceps, page 250
  - 14 E35-131 Castroviejo Needle Holder, page 241
  - 15 E40-860 Bowman Lacrimal Probe Set, page 258
  - 16 E40-918 Crawford Intubation System, page 259
  - 17 E40-896 Castroviejo Lacrimal Dilator, page 258
  - 18 E20-630 Reinforced Lacrimal Cannula, page 260
  - 19 E40-972 West Lacrimal Sac Chisel, 6 mm wide
  - 20 E40-974 Freer Periosteal Elevator, sharp/blunt end
- + DCR instruments listed below (see page 262/263)
- E40-983 Hartmann-Halle Nasal Speculum
  - E40-812 Knapp Retractor
  - E40-823 Stevenson Retractor
  - E40-934 Gerzog Surgical Mallet
  - E40-922 Worst Pigtail Probe
  - E30-991 Beyer Bone Rongeur
  - E30-993 Kerrison Punch

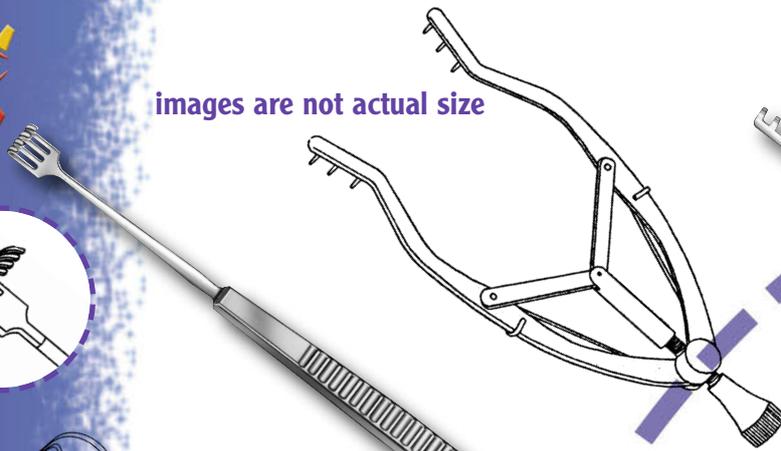


images are not actual size

**SPECIALITIES**



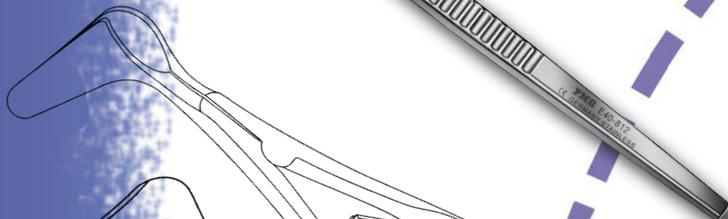
images are not actual size



**Agricola**  
Lacrimal Sac Retractor  
3x3 sharp prongs, 4.5 cm  
E40-820

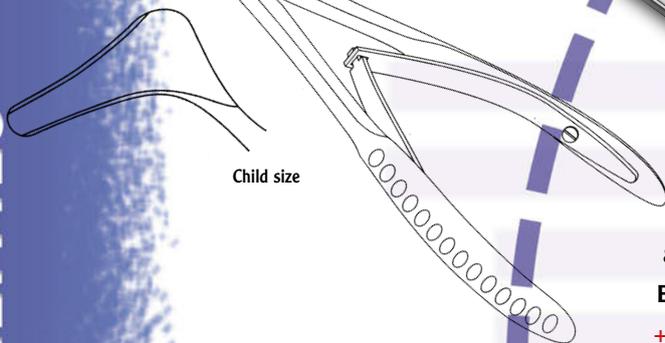
**Stevenson**  
Lacrimal Sac Retractor  
curved 3x3 teeth, 9.0 cm

+ E40-823



**Knapp**  
Lacrimal Retractor  
blunt four prongs, 13.5 cm

+ E40-812



Child size

**Hartmann-Halle**  
Nasal Speculum  
aseptic joint (dismantable), 15.5 cm

E40-982 child size

+ E40-983 adult size



**Gerzog**  
Surgical Mallet  
lead filled stainless steel head,  
30 mm dia. head, 400g, 18.0 cm

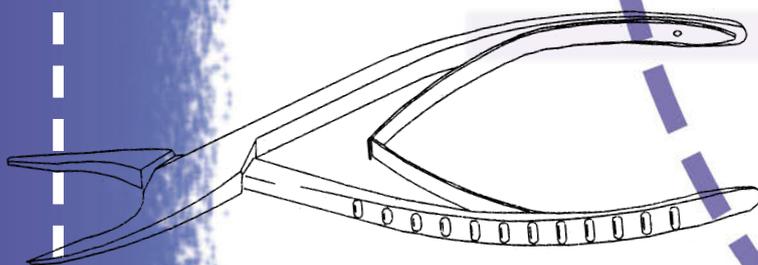
+ E40-934



**Worst**  
Lacrimal Pigtail Probe  
with suture eyes, 14.0 cm

+ E40-922 adult size

E40-921 child size



**Beyer**  
Bone Rongeur  
curved 3 mm jaws, 18.0 cm

+ E30-991

**Eye Scissors, Universal model, 11.5 cm**  
straight – blades – curved

E25-530 pointed E25-531

E25-532 sharp/blunt E25-533

E25-534 blunt E25-535



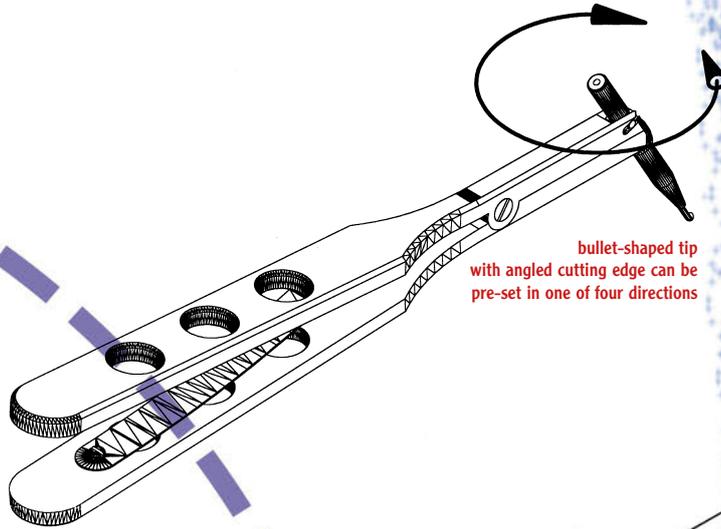
1:1

SPECIALITIES

# BONE AND TISSUE PUNCHES



**Luntz-Dodick  
Trabeculectomy Punch**  
exchangeable cutting head  
of 1.0 mm  $\varnothing$  with 0.5 mm  
deep bite, 11.5 cm  
E40-995

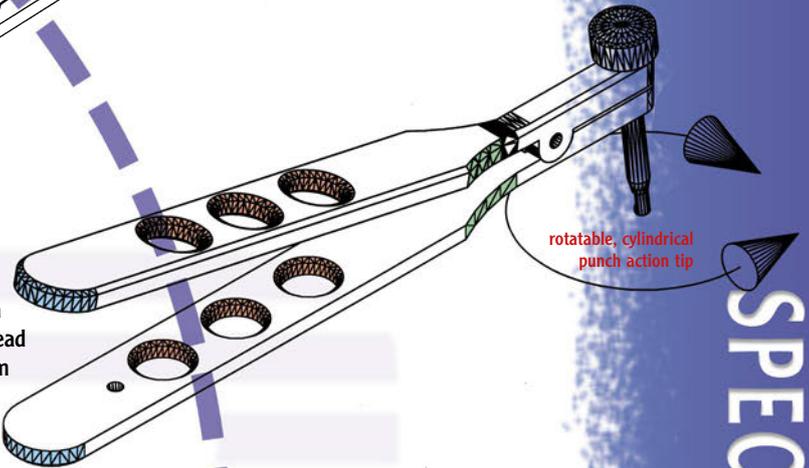


bullet-shaped tip  
with angled cutting edge can be  
pre-set in one of four directions

ideal for scleral tunnel insertion



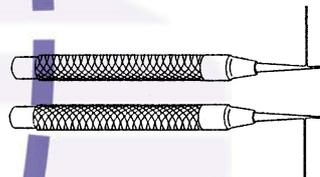
**Gass  
Corneoscleral Punch**  
rotatable 1.5 mm diameter head  
with 0.75 mm deep bite, 9.0 cm  
E40-996



rotatable, cylindrical  
punch action tip

ideal for clean, cylindrical, vertical holes

**Harms  
Trabeculotomy Probe**  
9 mm pointed tips with 3 mm spread, 4.8 cm  
E40-928 right  
E40-929 left

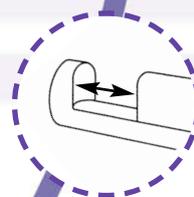


**Kerrison  
Sphenoidal Punch Forceps**  
up-cutting 90° jaws, 9 mm opening  
length of shaft 80 mm, 21.0 cm

+ E30-993 3x3mm bite

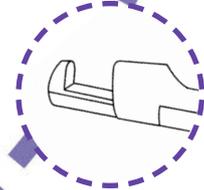
E30-994 3x4mm bite

E30-995 4x4mm bite

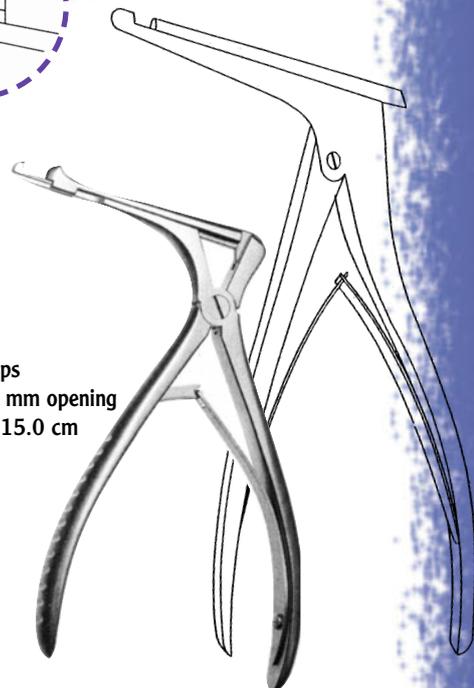


**Kelly  
Descemet's Membrane Punch**  
1.0 mm diameter head with 0.5 mm  
deep bite, 13.0 cm  
E40-992

ideal for round holes  
without tissue tags



**Citelli  
Sphenoidal Punch Forceps**  
thru-cutting 90° jaws, 7 mm opening  
length of shaft 80 mm, 15.0 cm  
E30-981 1.5 mm bite  
E30-982 2.0 mm bite  
E30-983 3.0 mm bite

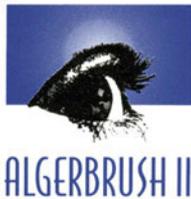


SPECIALTIES



**CORNEAL RUST RING REMOVERS**

*it's your turn*



**Chuck with burr**

E40-424 0.5 mm dia.

E40-425 1.0 mm dia.

E40-426 chuck only

**Algerbrush II**

Corneal Burr (Rust Ring Remover)  
battery powered, complete with  
two burs of 0.5 and 1.0 mm dia.

E40-420

**Replacement Burrs (tungsten-carbide)**

non-sterile head dia.    sterile (b/5)

E40-421 0.5 mm    BU-5S

E40-422 1.0 mm    BU-1S

**Corneal Pencil**

Eye Magnet and FB loop,  
translucent, reversible handle

E40-442

**Shaaf**

Foreign Body & Cilia Forceps  
fine grooved jaws with pointed tips, 10.5 cm

E30-290 straight

E30-291 curved

**Jeweler's Forceps**

E30-503 #3 straight, fine 12.0 cm

E30-504 #4 straight, extra fine 11.0 cm

\*E30-505 #5 straight, ultra fine 11.0 cm

\*E30-506 #5-FC angled, ultra fine 11.0 cm

\*E30-507 #7 curved, fine 12.0 cm

E30-513 #3C straight, fine 10.5 cm

**Foreign Body Instruments**

in sliding handle, double end

E40-411 Needle & Plange Lever

E40-412 Needle & Gouge

in sliding handle, single end

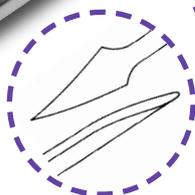
E40-413 Needle, curved sharp tip

E40-414 Gouge, straight round tip

E40-415 Plange Lever, curved tip

*\* on request also available  
in lightweight titanium*

SPECIALITIES





Ophthalmologists should have at least one motorized drill for removing rust ring and for polishing the cornea after excising a pterygium.

**Chuck with diamond burr**  
medium grit diamond stone

**E40-434** round 3.5 mm dia.

**E40-435** wheel 5.0 mm dia.

**Pterygium Drill**  
battery powered, complete with  
round 3.5 mm dia. diamond burr

**+E40-433**

**Replacement Diamond Burrs**  
medium grit diamond stone

**E40-436** round 3.5 mm dia.

**+E40-437** wheel 5.0 mm dia.

**Cook**  
Eye Speculum  
with locking screw, solid blades

**+E40-071** adult 15 mm blade

**E40-072** child 11 mm blade

**McReynolds**  
Pterygium Scissors  
angled 18 mm blades, blunt tips 10.5 cm

**+E25-561**

**E42-135 PTERYGIUM SURGERY SET**

complete, consisting of 1 instrument each:

**E10-003K** Chuck Handle #3K, round, page 18

**E10-064** Miniature Edge Blade #64, page 18

**E40-111** Desmarres Lid Retractor #1, page 245

**E30-233** Lester Fixation Forceps, 2x3 teeth, page 247

**E30-385** Moorfield's Conjunctiva Forceps, page 257

**E30-460** McPherson, Tying Forceps, page 250

**E30-450** Castroviejo Suture Forceps, page 250

**E35-101** Castroviejo Needle Holder, page 237

**E45-015** Sterilizing Instrument Tray, page 294

**+ instruments illustrated**



The diamond produces a very smooth healing surface in a very short time

**Bonn**  
Iris Scissors  
delicate blades, sharp tips, 9.0 cm

**+E25-500** straight

**E25-501** curved

**Kuhnt**  
Corneal Scarifier #1  
hockey type blade, 12.0 cm

**E40-361**

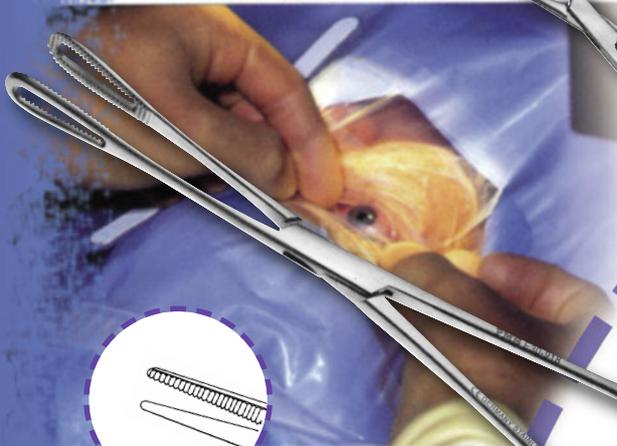
**Gill**  
Corneal Knife  
curved cutting edge,  
12.0 cm

**+E40-341**

**SPECIALTIES**



**SPECIALTIES**



**Backhaus Towel Forceps**  
curved shanks

- E30-909 9.0 cm
- E30-913 13.0 cm



**Rampley Sponge Holding Forceps**  
with ratchet, serrated ring shaped jaws

- E30-918 18.0 cm
- E30-925 25.0 cm

designed to scrub the skin around the eye with a cotton ball dipped in antiseptic solution



**Artery Mosquito Forceps**  
straight shaft with serrated jaws

- E30-900 Hartmann, 10.0 cm
- E30-902 Halstead, 12.5 cm

**Dieffenbach Serrefine**  
cross-action, straight jaws

- E30-934 3.5 cm
- E30-950 5.0 cm
- E30-970 7.5 cm



**Surgical Scissors**  
standard, straight blades, 14.5 cm

- E25-574 blunt tips
- E25-576 sharp and blunt tips
- E25-578 sharp tips

further Utility Scissors are illustrated on page 280 and 281

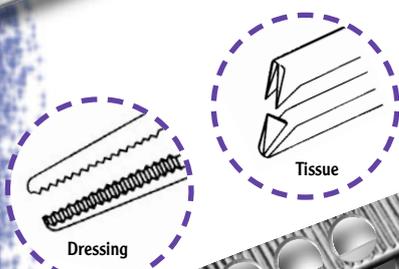
**Dressing Forceps**  
bayonet shaped, serrated jaws

- E30-914 Lucae, delicate shaft, 14.5 cm
- E30-916 Jansen, standard shaft, 16.0 cm



**Adson Dissecting Forceps**  
lightweight, fenestrated handle, 12.0 cm

- E30-130 micro dressing, 1.0 mm jaws
- E30-132 delicate dressing, 1.2 mm jaws
- E30-140 micro tissue, 1.0 mm teeth
- E30-142 delicate tissue, 1.2 mm teeth

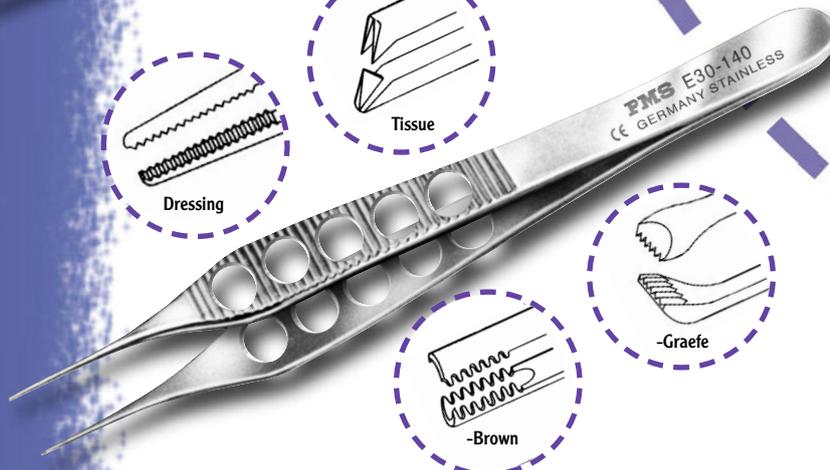


Dressing

Tissue



-Graefe



-Brown

- E30-146 -Graefe, 6x7 teeth
- E30-147 -Brown, 7x7 teeth

## ENUCLEATION INSTRUMENTS

PMS



images are not actual size

**Enucleation Scissors**  
heavy blades, blunt tips,  
13.0 cm  
E25-571 medium curve  
+ E25-573 strong curve



**Wells  
Enucleation Spoon**  
21 mm wide spoon with notch, 14.5 cm

+ E40-721



**Bunge  
Evisceration Spoon**  
round, sharp spoon, 13.5 cm

+ E40-708 small 8 mm dia.  
+ E40-712 large 12 mm dia.



**Jameson  
Muscle Hook**  
E40-782 small  
+ E40-783 large



**Carter  
Sphere Introducer and Holder**  
spring loaded plunger, 12.5 cm  
+ E40-730

non-sterile, autoclavable Enucleation and  
Orbital Implants are available on request



**Foster  
Enucleation Snare**  
complete with 12 snare wires, 14.5 cm  
+ E40-722

Twisted Snare Wire  
package of 12, 13.5 cm  
E40-723

white silicone spheres



lucite PMMA spheres



**E42-136 ENUCLEATION-EVISCERATION SET**  
complete, consisting of 1 or (x2) instruments:  
E40-078 Castroviejo Speculum, page 242  
E30-902 Halstead Mosquito (x2), page 266  
E25-566 Stevens Tenotomy Scissors, page 261  
E30-142 Adson Delicate Tissue Forceps, page 266  
E30-147 Adson-Brown Tissue Forceps, page 266  
E35-103 Castroviejo Needle Holder, page 237  
E45-015 Instrument Sterilizing Tray, page 294  
+ instruments illustrated

SPECIALTIES



BiRO

SPECIALITY PRODUCTS



**Schiøtz Tonometer**  
improved model (autoclavable)  
stainless steel construction, inclined scale,  
set of 3 weights (5.5, 7.5 & 10 grams) and  
zero test block in foam-lined metal case

S/1002/GB Specification #3

1001/GB Specification #5 (can be certified)

charge for certificate of accuracy on request

1001/15 Extra weight 15.0 g



**Honan Balloon**  
Intraocular Pressure Reducer  
with relieve valve in case

\*HB02055 complete

\*HB02150 bellows, reusable

\*HB02210 head band, reusable

HB02400 relief valve

HB02701 headband, disposable,  
latex free (box of 12)

\* Caution: these products are made of latex which may causes allergic reactions

SPECIALITIES

**E42-138 GLAUCOMA SURGERY SET**

complete, consisting of 1 each or (x) items

E30-900 Hartmann Forceps (x2), page 266

E30-909 Backhaus Forceps (x2), page 266

E40-011 Barraquer Eye Speculum, page 245

E40-107 Tanne-Lieberman Speculum, page 230

E20-001 Bishop-Harmon A/C Irrigator, page 244

E20-031 Rycroft Air Injection Cannula, page 244

E25-501 Bonn Iris Scissors, curved, page 265

E25-315 Westcott Stitch Scissors, curved, page 241

E25-334 Westcott Tenotomy Scissors, curved, page 241

E25-411 Gills-Vannas Scissors, curved 7 mm, page 241

E25-200 Barraquer Iridectomy Scissors, blunt tips, page 22

E30-241 Fechtner Conjunctiva Forceps, ring shaped, page 230

E30-081 Harms-Colibri Forceps 0.12/45° teeth, page 249

E30-106 Bishop-Harmon Tissue Forceps, 0.6 mm teeth, page 247

E30-446 Jaffe Tying Forceps, straight smooth platform page 250

E40-554 Castroviejo Eye Caliper, straight 0-20 mm scale, page 244

E10-301SR Diamond Knife for Visco Canalostomy, 20° cutting edge, page 182

E10-367 Diamond 7-step Knife, retractable, spear shaped blade, page 105

E15-214 Blumenthal Conjunctiva Dissector, smooth 2x1.4 mm biconvex tip, page 230

E40-995 Luntz-Dodick Trabeculectomy Punch, exchangeable 1.0 mm cutting head, page 263

E40-928 Harms Trabeculectomy Probe, right, 9 mm pointed tips with 3 mm spread, 4.8 cm, page 263

E40-929 Harms Trabeculectomy Probe, left, 9 mm pointed tips with 3 mm spread, 4.8 cm, page 263

E35-251 Troutman Micro Needle Holder, very delicate 9 x 0.5 mm curved jaws without lock, page 241

S/1002/GB Schiøtz Tonometer Specification #3, stainless steel construction, inclined scale, page 268

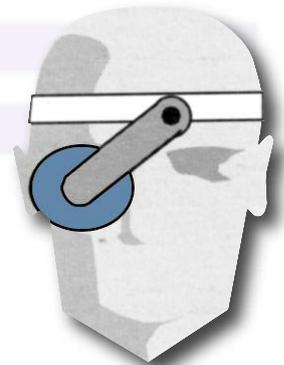
**Oculo Pressor**

Pressure Reducer  
with velcro head band

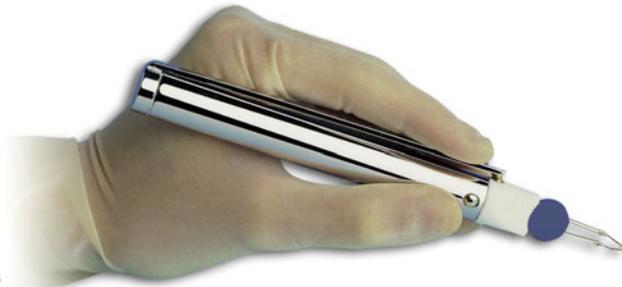
A4947 complete

A4947ARM plastic arm

A4948 spare head band



## BATTERY CAUTERIES



Battery Cautery, complete handle with one straight tip of platinum-iridium and battery

09-401 high temp 1000°C

09-402 low temp 500°C

The PMS changeable tip and battery cauterizers are excellent for office, emergency room and clinical procedures.

Reusable Fine Cautery Tips made of platinum-iridium

09-501 straight tip, blue

09-502 angled tip, yellow

09-505 straight ball tip, white

guarantee precise pinpoint hemostasis and minimal tissue damage, as well as extended life cycle



## POPULAR BIPOLAR FORCEPS

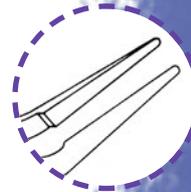
ideal for coagulation of small scleral bleeders, reattachment of the conjunctival flap, and sutureless closure of the conjunctiva.

McPherson Style

delicate 0.25 mm tip, 9.5 cm

81807000 straight jaws

81807010 angled jaws



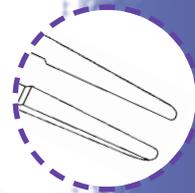
highly polished instrument tips, minimizing unwanted tissue adhesion

Jeweler's Style

delicate 0.25 mm tip, 11.0 cm

81811100 straight jaws

81811110 angled jaws

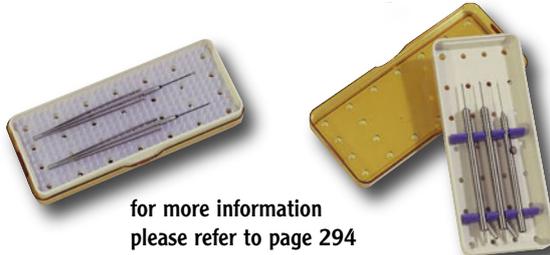


Bipolar Cord, reusable with round 2 pin forceps connector and banana jacks fitting to unit, 12"/3.0 m long

80100025



*safely stores your micro instruments*



for more information please refer to page 294

SPECIALTIES



SPECIALITIES

TITANIUM

BASIC

CATARACT

KERATOREFRACTIVE

VITREORETINAL

SPECIALITIES

STERILIZATION

EYE CATALOGUES  
ON REQUEST

[www.pms-tuttlingen.de](http://www.pms-tuttlingen.de)

**BASIC EYE INSTRUMENTS**  
**E10-001B**

**TITANIUM EYE INSTRUMENTS**  
**E10-001T**

**CATARACT INSTRUMENTS**  
**E10-001C**

**KERATOREFRACTIVE INSTRUMENTS**  
**E10-001K**

**VITREORETINAL INSTRUMENTS**  
**E10-001V**

**SPECIALITY INSTRUMENTS**  
**E10-001S**

**STERILIZATION**  
**E10-001E**

PMS



# STERILIZATION







# STERILISATION

**INTRODUCTION . . . 272-273**

**EZWASH® TRAY-IN-TRAY SYSTEM 274-277**

**EZWASH® DELUXE WIRE BASKETS 278-279**

**EZHOLD® SILICONE FINGER MATS . . . . . 280**

**EZHOLD® SILICONE STORAGE INSERTS . . . . 281**

**EZLOAD® STERILISATION CONTAINERS . 282-287**

**REPROCESSING & IMPORTANT SYMBOLS 288/289**

**EZHOLD® INSTRUMENT CASSETTES/BOXES 290-291**

**EZHOLD® INSTRUMENT TRAYS . . . . . 292**

**SILICONE RACKS AND NAP PLATES . . .293**

**LIGHTWEIGHT PLASTIC TRAYS . . . .294**

**CARE & MAINTENANCE  
PRODUCTS 295**





## PROTECTS WELL YOUR VALUABLE INSTRUMENTS

The right tools for the ophthalmic surgeon are hand crafted microsurgical instruments of the best quality. The skill of highly trained craftsmen, and the time devoted to every detail in

- design
- material
- manufacturing
- progress control
- final inspection

is directly reflected in the quality of the instrument and its price.

### QUALITY HAS ITS PRICE

The purchase of high quality surgical instruments represents a significant investment for the surgeon or hospital.

By using intelligent storage systems, optimally tailored for cleaning and sterilisation, maximal protection can be assured, especially for delicate surgical instruments.

PMS EZWash® Tray-in-Tray and EZLoad® Sterilisation Systems - designed for fine ophthalmic instruments - are ideal to help protect your investment over many years through proper care and maintenance.

### AND ALWAYS REMEMBER:

**DELICATE INSTRUMENTS NEED DEDICATED HANDLING**





# STERILISING EQUIPMENT

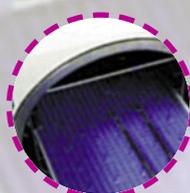
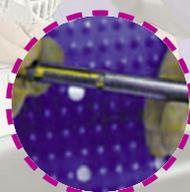
Everything you need to know about the proper care and maintenance of microsurgical instruments please contact

[www.A-K-I.org](http://www.A-K-I.org)

Here you will find much information regarding the following:

- CLEANING
- DISINFECTION
- DRYING
- LUBRICATION
- INSPECTION
- STERILISATION
- STORAGE
- IN-HOUSE TRANSPORTATION

A frequent cause of mechanical damage is improper collection of instruments from the surgical field. Heavy and delicate instruments are thrown into a collection container without consideration. Transportation under such conditions gives rise to vibrations, thus making the instruments come into contact with each other which may cause mechanical damage.





NEW from  
**PMS**



The PMS *EZWash*® Tray-In-Tray System is a versatile system for organising and protecting delicate surgical instruments during cleaning, disinfection, sterilisation, transport and storage.

*EZWash*® Trays are available in 1/1, 1/2 and 1/3 sizes, and can be used alone or can be stacked in several different combinations, allowing you to organise individual instruments into practical sets and protective layers.

The PMS *EZWash*® Tray System is an economical solution. The trays are designed to keep your instruments securely protected, reducing the possibility of damage and high costs of instrument repair or replacement.

**FEATURES:**

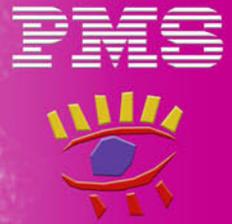
- Wire mesh to allow high degree of liquid penetration on to the instrument surfaces.
- Electrolytically polished 18/8 stainless steel construction inhibits rust and staining of the tray, and guarantees strength and durability.
- Total internal customisation. Hand tailored accommodation for your instrument sets that results in zero instrument movement.
- Trays can be reconfigured to accept alternative instruments.

Efficiencies in the operating room are realised because instruments arrive at their point of use in a consistent arrangement that is universal to all services.

In addition, sterilisation and processing time is reduced as general principles of set preparation are integrated into the total system needs of your facility.



## PMS EZWash® TRAY-IN-TRAY SYSTEM



Sized to fit into most filtered container system; can also be folded and wrapped in either reusable "woven" drapes and/or disposable CSR wraps.

### **EZWash® Instrument Baskets**

1/1 size (275x178x24 or 37 mm), complete with removable top cover

**E45-102** "LoProfile" 24 mm height, with two silicone instrument supports

**E45-103** "HiProfile" 37 mm height, with two teflon instrument holding bars

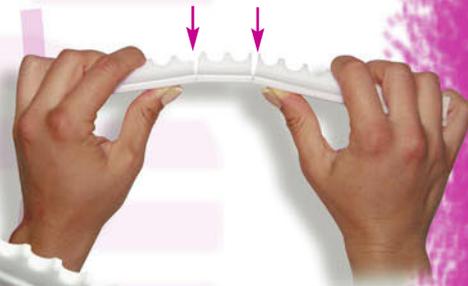


### **EZHold®**

**Instrument Holding Bar**  
16-slots Teflon profile, 260 mm long, complete with set of screws and plates

**E45-104**

easy to break due to pre-determined breaking points



In order to adapt the EZWash® Tray-in-Tray System to your individual need the Instrument Holding Bar is complete with pre-determined breaking points. This enables you to divide the 1/1 size holding bar into 2 bars with the length of 1/2 size or 1/3 and 2/3 sizes depending on the application.

### **EZHold®**

**Replacement Screw and Plate Set**  
for Teflon holding bar E45-104

**E45-105**



### **EZHold®**

**Teflon Holding Post**  
complete, with washer and fixation screw

**E45-106**

holding post can be attached anywhere in the base tray to stack EZWash® baskets at varying heights.



STERILISING EQUIPMENT



## PMS EZWash® TRAY-IN-TRAY SYSTEM

Created to meet both the growing demand toward standardisation of instruments sets and your individualised surgical needs.

STERILISING EQUIPMENT

**EZWash® Tray**  
"LoProfile" 24 mm sidewalls  
1/1 size (275x178x24 mm),  
for 16 hand instruments

interchangeable fixation bar with silicone squeeze ledge

fine grid sidewalls protect both personnel and instruments

latch slots on both ends allow simple placement of fixation bar

silicone instrument supports to protect and hold each instrument

open mesh stainless steel construction allows thorough cleaning, sterilising and drying

**1/1**  
for 16 hand instruments

**1/2**  
for 8 hand instruments

**1/3**  
for 5 hand instruments

**E45-128**  
1/3 size silicone finger mat to fit E45-113

**Trays**  
"LoProfile" sidewalls, 24 mm height, complete with 2 silicone instrument supports and 1 instrument fixation bar

**E45-111** 1/1 size 275 x 178 x 24 mm  
**E45-112** 1/2 size 178 x 140 x 24 mm  
**E45-113** 1/3 size 178 x 90 x 24 mm

designed to facilitate the reprocessing (cleaning, disinfection and sterilisation) of instruments.  
We recommend for sterilisation the PMS EZLoad® standard containers illustrated on page 282.

The following instrument holding devices fit into the trays to secure each microsurgical instrument, assure complete cleaning & sterilisation of the instruments and facilitate ease of use of the instruments in the operating room.

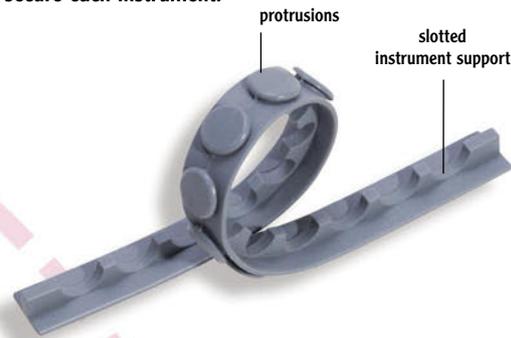
External dimension (mm)	Tray sizes	with silicone support	with silicone finger mat	with silicone nap plate	holding capacity
275 x 178 x 24	1/1	E45-111	*E45-121	*E45-131	16 + items
178 x 140 x 24	1/2	E45-112	*E45-122	*E45-132	8 +
178 x 90 x 24	1/3	E45-113	*E45-123	*E45-133	5 +

PMS standard 1/1 size and 1/2 size trays can be lidded and can also be stacked with 4 sets of Teflon post (E45-106) and placed in a filtered container system with varying heights.

\* See page 277 and 293



Instrument holding devices and silicone finger mats are ideally suited to secure each instrument.



**Silicone Instrument Support**  
265 mm long rubber strip with  
16-slots to fit 1/1 size tray

**E45-115**

can be cut to fit 1/2 or 1/3 size trays; raised protrusions on the underside fit in all bases and are easy to install; to reposition simply grasp and pull



**Instrument Fixation Bars**  
with silicone "squeeze ledge"

**E45-116** for 1/1 size tray

**E45-117** for 1/2 size tray

**E45-118** for 1/3 size tray

interchangeable instrument fixation bars for horizontal and/or vertical placement

Silicone "squeeze ledge"  
600 mm, can be cut to size

**E45-119**

extra soft material to prevent damage to the instrument surface and its function

**Silicone Finger Mats**  
extra soft, light blue material  
with narrow spaced fine nubbins

**E45-126** for E45-121

**E45-127** for E45-122

**E45-128** for E45-123

**E45-129** extra large size  
(520 mm x 240 mm)

with venting holes, raised protrusions on the underside to enhance air sterilant penetration and to facilitate rapid drainage of fluid



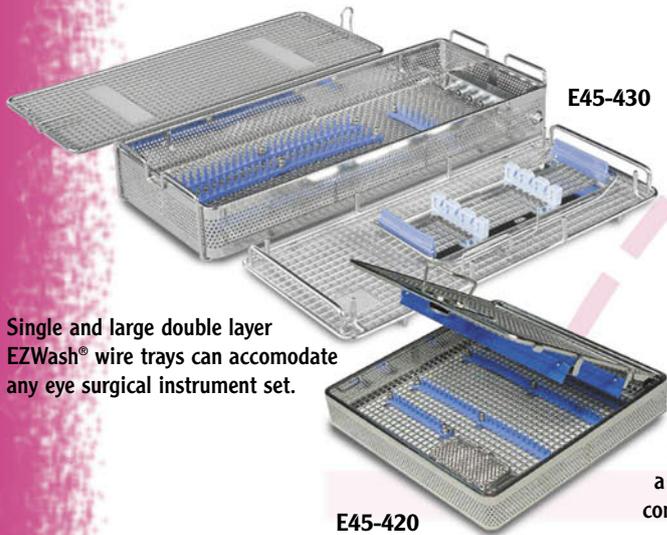
removable silicone mats feature cone shaped nubbins to accommodate all kinds of microsurgical instruments

**NOTE!** Do not use during cleaning in automated washer/disinfector or ultrasonic cleaners. Use only to protect and hold instruments whilst sterilising, storage and transportation.



**EZWash® STAINLESS STEEL WIRE BASKETS**

New reprocessing procedures require new instrument trays. The PMS EZWash® Wire Baskets enable microsurgical instruments to be washed and sterilised using modern automated methods.



Single and large double layer EZWash® wire trays can accommodate any eye surgical instrument set.

**E45-430**

**EZWash®**  
Deluxe Wire Basket (double level)  
363 x 146 x 60 mm, complete with  
E45-434, E45-435, E45-437,  
E45-441 and E45-442

**E45-430**

**EZWash®**  
Deluxe Wire Basket (single level)  
245 x 245 x 60 mm, complete with  
a set of silicone finger strips and  
compartment for cannulae, needles, etc.

**E45-420**

**E45-420**

**STERILISING EQUIPMENT**

**FEATURES**

**TOTAL INTERNAL CUSTOMISATION**

Hand tailored accommodation for your instrument sets that results in zero instrument movement.

**PERFORATED SHEET METAL WALLS**

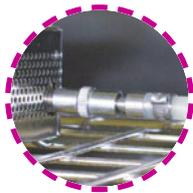
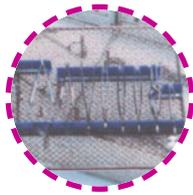
Fine grid sidewalls protect both personnel and instruments.

**COARSE BASE MESH / LID**

Allow high degree of liquid penetration onto the instrument surfaces, and facilitate rapid drying.

**RAPID CLEANING AND STERILISATION**

- Quick connection to washing machine.
- No manual cleaning required.



## EZWash® INSERT TRAYS AND ACCESSORIES

PMO



Safe, protective individual storage inserts are ideal for systematic organisation of delicate ophthalmic surgical instruments in sets.

**EZWash® Insert Wire Tray**  
320 x 135 x 30 mm, with  
stationary posts and frame  
to be used with E45-430

**E45-434**  
stationary posts for clearance of instruments

**EZWash® Insert Instrument Rack**  
190 x 60 x 22 mm, with  
3-slots instrument bars  
to be used with E45-434

**E45-435**  
securely holds 3 instruments of 100 to 160 mm length

**EZWash® Insert Cannula Holder**  
120 x 15 x 30 mm removable bar, complete with  
4xmale LL / 1xfemale LL hub, tubing connector,  
L-bracket with set of screws and simple quick  
connection to washing machine

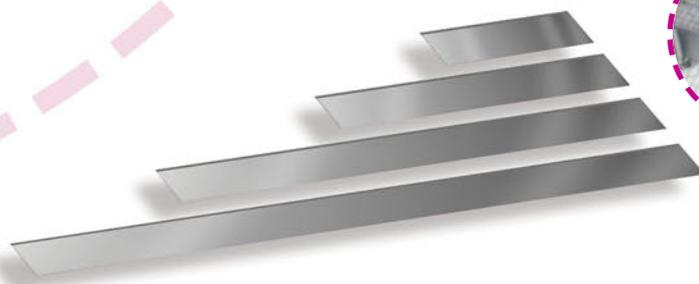
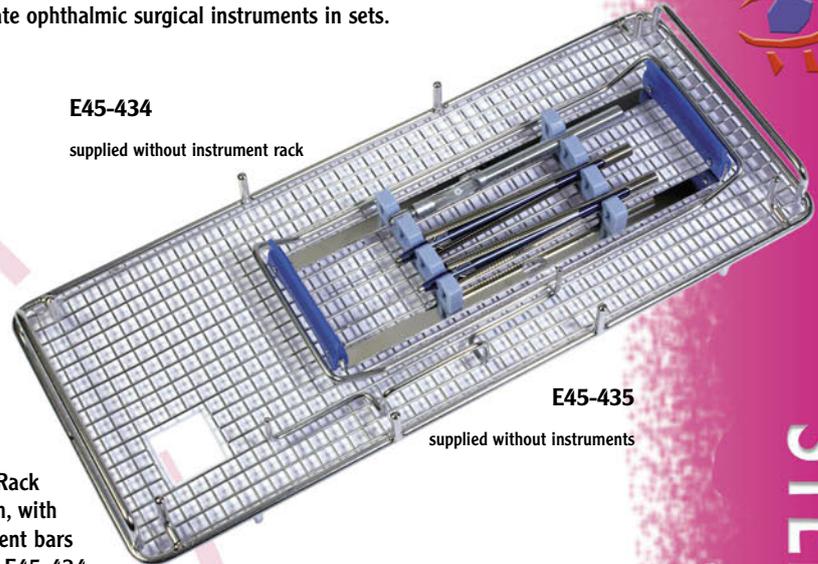
**E45-437**  
cannula bar can be elevated 90° for convenient placement  
or removal of individual cannulae and I/A handpieces

**EZHold® Silicone Finger Strips**  
extra soft material with fine nubbins,  
complete with set of screws as shown above

**E45-441** 95 mm  
**E45-442** 215 mm  
ideal for protective storage of instruments

**EZHold® Fixation Pins**  
**E45-410** smooth to stack ring instruments  
**E45-411** slotted to adapt partition sheets

**EZHold® Partition Sheets**  
stainless steel, 20 mm height  
**E45-412** 50 mm  
**E45-413** 130 mm  
**E45-414** 225 mm  
**E45-415** 460 mm

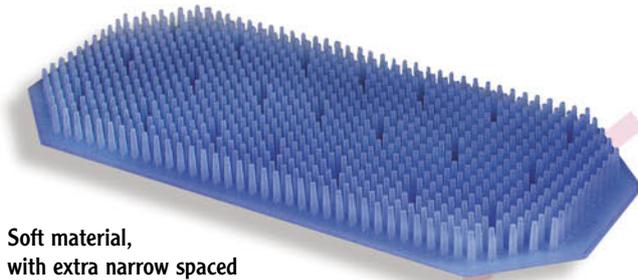


STERILISING EQUIPMENT



**EZHold® SILICONE FINGER MATS**

Four finger configurations allow utilisation of the silicone finger mats with a variety of surgical instruments.



Soft material, with extra narrow spaced nubbins for delicate instruments

**E45-271**  
Silicone Finger Mats  
pre-cut, 270 x 125 mm  
for minicontainers see page 285

**E45-274**  
pre-cut, 245 x 245 mm  
for flat containers see page 287

**\*E45-279**  
large sheet, 520 x 230 mm  
can be cut to size

Semi-soft material with wide spaced, coarse pins for standard eye surgical instruments



**E45-136**  
Silicone Nap Plates  
265 x 170 mm for E45-131

**E45-137**  
170 x 140 mm for E45-132

**E45-138**  
170 x 90 mm for E45-133

**\*E45-139**  
large sheet, 600 x 300 mm

\*large sheet may be cut with scissors to suit instruments of unusual shape for best protection

**E45-259**  
large sheet 520 x 230 mm  
coarse grid with semi-soft pins



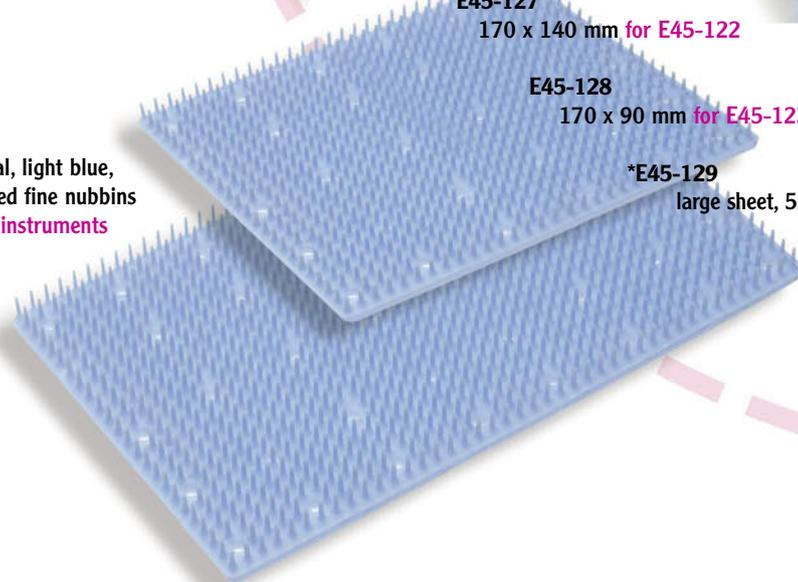
**Smith US Army**  
Utility Scissors  
with sharp/blunt tip  
**E25-816** 16.0 cm  
**E25-818** 18.0 cm  
**E25-820** 20.0 cm  
ideal to cut large sheets

**E45-126**  
Silicone Finger Mats  
265 x 170 mm for E45-121

**E45-127**  
170 x 140 mm for E45-122

**E45-128**  
170 x 90 mm for E45-123

Extra soft material, light blue, with narrow spaced fine nubbins for microsurgical instruments



**\*E45-129**  
large sheet, 520 x 240 mm

## EZHold® SILICONE STORAGE INSERTS

PMO



These components are made of advanced, lightweight, durable R-Mer® and hold all types of delicate surgical instruments.

### Instrument Holding Bars

E45-520 2.9"/73 mm

E45-521 7.0"/178 mm

### Silicone Instrument Holders 3 mm ø

E45-535 5 slots, 2.8"

E45-536 12 slots, 7.0"

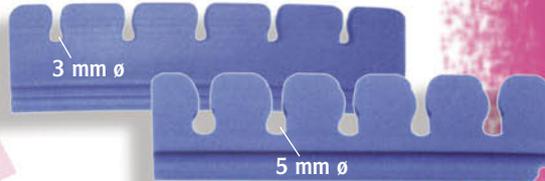
### Silicone Instrument Holders 5 mm ø

E45-555 5 slots, 2.8"/70 mm

E45-556 12 slots, 7.0"/178 mm



The instrument holding bar can be attached anywhere in the tray with screws; silicone instrument holders are inserted into the instrument holding bars.



### Plastic Holding Post 1.4"/3.5 mm

E45-524

### Movable Posts

E45-525 short 1.2"/3.0 mm

E45-526 long 2.0"/5.0 mm

L-Bracket  
E45-522



T-Bracket  
E45-523



### Universal Bandage Scissors blunt blades, angled to side

E25-715+ colour, 15.0 cm

E25-718+ colour, 18.0 cm

- +Y
- +R
- +A
- +G
- +B



Metal Screw  
for E45-522 to E45-524  
brackets and posts  
E45-512



### Utility Scissors straight, blunt blades, 14.5 cm

E25-714



A NURSE'S BEST FRIENDS

STERILISING EQUIPMENT



## EZLoad® STANDARD STERILISATION CONTAINERS

Stackable, space-saving storage. Choose from 3 standard bottom heights (40, 65 & 80 mm); designed to accommodate a wide variety of instrument sets (mix and match height to optimise tray storage capacity).

STERILISING EQUIPMENT



bottom and lid with fast clip system for simple exchange of filters

Lids  
(310 mm x 190 mm)  
anodised, lightweight aluminium,  
perforated with multiple round holes

E45-310+ colour

- +S
- +Y
- +R
- +A
- +G
- +B

Bottoms  
silver coloured, available  
perforated or unperforated,  
see E45-312/4 thru E45-313/8

New



### LOCKING SYSTEM

EZLock® quick-release with positive action spring mechanism on the lid.

Sterilisation Containers  
with perforated or unperforated bottom,  
see E45-314+ thru E45-328+

when ordering please add  
colour to article number

- +S
- +Y
- +R
- +A
- +G
- +B



Only the lid of the container is available in different colours.

The following PMS EZLoad® sterilisation containers are specially designed to accommodate 1/1, 1/2 & 1/3 EZWash® Trays assuring complete sterilisation, as well as safe in-house transportation and storage.

External dimension (mm)	Removable lids, perforated	Bottoms, silver coloured perforated - unperforated		Container, complete with perforated - bottom - unperforated	
310 x 190	E45-310+ colour				
310 x 190 x 40		E45-312/4	E45-313/4	E45-314+	E45-324+
310 x 190 x 65		E45-312/6	E45-313/6	E45-316+	E45-326+
310 x 190 x 80		E45-312/8	E45-313/8	E45-318+	E45-328+

## EZLoad® STANDARD CONTAINER ACCESSORIES

PMO



For easy identification, safe sterilisation, precise controlling and protective sealing of reusable, filtered sterilisation containers.

Identification Plates  
ALUMINIUM (50 x 18 mm)  
available in following colours:

- E45-330Silver
- E45-330Yellow
- E45-330Red
- E45-330Azure
- E45-330Green
- E45-330Violet
- E45-330Orange
- E45-330Brown



can be engraved to your  
specification; max. 16 letters

Drape Fixation Clamps  
stainless steel (set of 4)

E45-334



to hold drape; slip on to the sides

Drape Retainer  
flexible, tension frame  
(310 x 190 mm)

E45-335

to hold woven drapes in place

Classic Woven Drapes  
reusable, green colour

\*E45-336 600 x 400 mm

\*E45-337 650 x 650 mm

\*E45-338 850 x 850 mm

act as protective packaging  
for instrument racks and trays.

\* also available in blue colour,  
please add "B" to end of cat. no.

Paper Filters  
with chemical indicator,  
disposable (pack of 100)

E45-331  
for single use

Textile Filters  
reusable (set of 2)

E45-332  
for frequent use

PTFE Teflon Filters  
long-life (set of 2)

E45-333  
for permanent use



single use



frequent use  
≈ 40 cycles



permanent use  
≈ 1200 cycles

filters are suitable for all steam sterilisation methods



Paper Label/Indicator  
disposable (pack of 100)

E45-351  
for controlling validity of packaging



Plastic Safety Seals  
disposable (pack of 100)

E45-361

ensures that the protective packaging  
can not be opened and closed again -  
to rule out any form of manipulation.

STERILISING EQUIPMENT



**EZLoad® MINI STERILISATION CONTAINERS**

*You can store a maximum in a minimum of space.*

STERILISING EQUIPMENT



Mini sterilisation containers for one or two insert trays

**Lids**  
(300 mm x 140 mm)  
anodised, lightweight aluminium,  
perforated with multiple round holes

E45-300+ colour

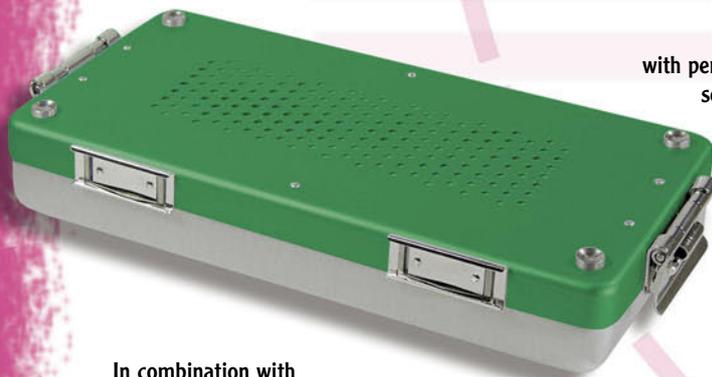
- +S
- +Y
- +R
- +A
- +G
- +B



Cleaning Agent for anodised aluminium  
E45-330 300g

**Bottoms**  
(40 mm and 70 mm heights),  
available perforated or unperforated,  
see below E45-304 to E45-307

Containers have uniquely raised buttons on the lid for secure stacking and offer facility for  
- easy filter exchange  
- sterilisation safety seals  
- interchangeable identification plates



**Mini Containers**  
with perforated or unperforated bottom,  
see below E45-304+ to E45-307+

- +S
- +Y
- +R
- +A
- +G
- +B

In combination with our stainless steel basket trays the best way to store, protect and sterilise an entire set of 15-30 ophthalmic instruments.

PMS EZLoad® Mini Containers with insert wire trays are ideal for sterilisation, safe transportation and organised storage.

External dimension (mm)	Removable lids, perforated	Bottoms, silver coloured perforated - unperforated	Container, complete with perforated - bottom - unperforated
300 x 140	E45-300+ colour		
300 x 140 x 40		E45-304	E45-304+
300 x 140 x 70		E45-306 E45-307	E45-306+ E45-307+



*Securely protects your instruments.*

**Insert Screen Tray**  
perforated metal sheet  
268 x 124 x 22 mm

**E45-268**  
for use with E45-304+



A variety of posts, instrument holding devices and silicone finger mats fit into the insert basket to secure each instrument (illustrated on page 279-281)

**Silicone Finger Mats**  
pre-cut (260 x 120 mm)  
for use with E45-268

**E45-271**



**Insert Wire Tray**  
stainless steel wire mesh,  
265 x 120 x 45 mm

**E45-265**  
for use with E45-306+ and E45-307+



**Paper Filters**  
with chemical indicator  
disposable (pack of 100)

**E45-331**  
for single use



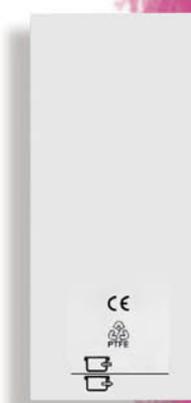
**Textile Filters**  
reusable (set of 2)

**E45-332**  
for frequent use



**PTFE Teflon Filters**  
long-life (set of 2)

**E45-333**  
for permanent use



single use

frequent use  
≈ 40 cycles

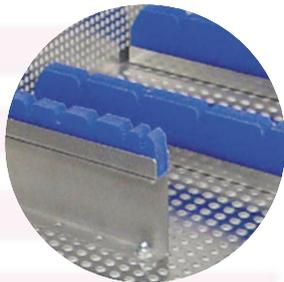
permanent use  
≈ 1200 cycles

**Drape Retainer**  
flexible, tension frame  
(280 x 125 mm)

**E45-328**  
to hold woven drapes in place



**Classic Woven Drape**  
reusable, 600 x 400 mm  
**E45-336B**



Silicone Holding Bars for E45-265 and E45-268 can be adapted to your specific requirements

**Identification Plates**  
see page 283



**STERILISING EQUIPMENT**



## EZLoad® FLAT STERILISATION CONTAINERS

Up-graded and improved sterilisation containers offer:

- Proven lightweight aluminium, anodised in different colours
- Silicone seals all around for total tightness and sterility.
- Quick-release pressure mechanism for easy filter exchange.
- Perfect arranged perforation for excellent drying properties.

STERILISING EQUIPMENT



Lid perforated

Lid  
(285 mm x 280 mm)

E45-285+ colour

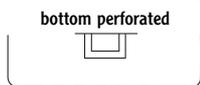
- +S
- +Y
- +R
- +A
- +G
- +B



bottom perforated

Bottoms  
(285 x 280 mm x height) silver coloured  
see below, E45-286 to E45-289

Choose from 2 standard bottom heights (55 mm and 85 mm); designed to accommodate a wide variety of instrument sets, you can mix and match height to optimise tray storage capacity.

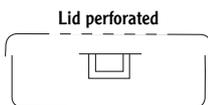


Flat Containers  
with perforated or unperforated bottom,  
see below, E45-286+ to E45-289+ colour



- +S
- +Y
- +R
- +A
- +G
- +B

please note that only the lid is coloured



bottom perforated

With the PMS EZLoad® containers can you well sterilise, rational store, and comfortably transport without contamination.

External dimension (mm)	Removable lids, perforated	Bottoms, silver coloured perforated - unperforated	Container, complete with perforated - bottom - unperforated
285 x 280	E45-285+		
285 x 280 x 55		E45-286	E45-286+
285 x 280 x 85		E45-288 E45-289	E45-288+ E45-289+

## EZLoad® FLAT CONTAINER ACCESSORIES

PMO



A variety of posts, instrument holding devices and silicone finger mats fit into the insert basket to secure each instrument, see page 279/281.

**Insert Wire Mesh Basket**  
stainless steel construction,  
crimp square hole wire mesh

**E45-253** 255 x 245 x 30 mm  
to fit with E45-286+

**E45-255** 255 x 245 x 50 mm  
to fit with E45-288+ and -289+

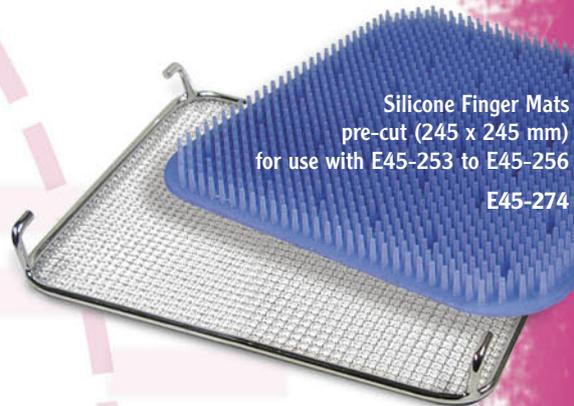


crimp square  
hole wire mesh for  
extra strength and durability

**Insert Wire Mesh Base**  
255 x 245 x 30 mm  
with special feet

**E45-256**

to fit with flat containers, special feet  
provide enough space for instruments



**Silicone Finger Mats**  
pre-cut (245 x 245 mm)  
for use with E45-253 to E45-256  
**E45-274**

**Paper Filters**  
with chemical indicator  
disposable (pack of 100)

**E45-281**  
for single use

**Textile Filters**  
reusable (set of 2)

**E45-282**  
for frequent use

**PTFE Teflon Filters**  
long-life (set of 2)

**E45-283**  
for permanent use



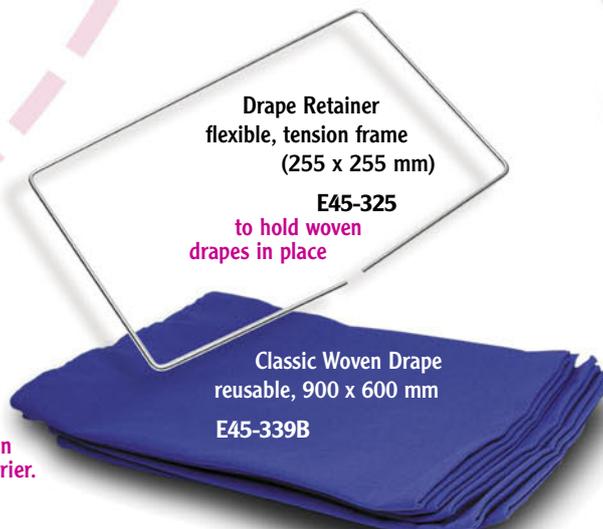
The filter retainer is locked by pressing down  
in center of the filter. The opening of the filter  
retainer succeeds by pressing the plate.

**Filter Retainer**  
185 mm dia.  
**E45-284**

**Drape Retainer**  
flexible, tension frame  
(255 x 255 mm)

**E45-325**

to hold woven  
drapes in place



**Classic Woven Drape**  
reusable, 900 x 600 mm  
**E45-339B**

The use of reusable wovens can  
not guarantee total protection  
of the sterile barrier.

STERILISING EQUIPMENT



**STERILISING EQUIPMENT**



Reprocessing (cleaning, disinfection, sterilisation) of eye surgical instruments is a critical issue and demands highest requirements in the design of washer/disinfector, sterilisation containers, and associated equipment.

The PMS EZWash Tray-In-Tray System and EZLoad Sterilisation Containers have been used in nearly all modern sterilisation methods with excellent results. They are in conformity with valid quality international standards and master nearly each challenge regarding

- Safety in reprocessing
- Flexibility in preparation
- Systematic organisation
- Functional in packaging
- Simple in operation
- Economical in maintenance

High quality 18/8 stainless steel material and proven anodized aluminium used for the manufacture of our reusable instrument trays, baskets and sterilisation containers will withstand repeated and long-term use, even under difficult conditions.

Precise controlling, functional filling, safety closing and sealing of our reusable containers, and the folding and wrapping of sterilisation drapes, ensure that STERILITY of the instruments is maintained until the point of use as well as aseptic presentation.

Therefore, PMS EZWash Trays and EZLoad Sterilisation Containers are the ideal tandem for perfect reprocessing with regard to optimal cleaning, complete sterilisation, validation of packaging and ease of use of the instruments in the operating room.

**AND ALWAYS REMEMBER:**

**DELICATE INSTRUMENTS  
NEED DELICATE  
HANDLING**



# IMPORTANT SYMBOLS AND SUITABILITY



Important Note!



Non-sterile product



Single use product only



Do not sterilise by ethylene oxide



Sterile packaged product



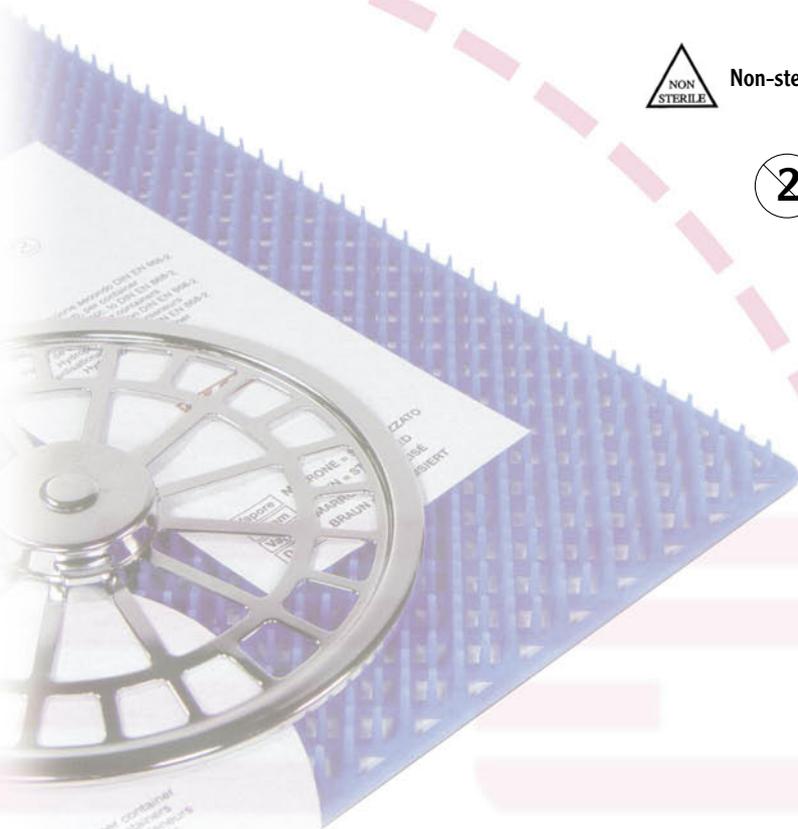
Sterilised by ethylene oxide



Sterilise by heat (steam)



Expiration date



Non-closed packaging is designated as “preformed sterile barrier systems”, e.g. open pouches and containers. (Forum 2007 - Medical Devices and Processes)

All PMS EZLoad® sterilisation containers are fitted with paper, textile or long-life Teflon filters; cover and bottom are perforated for steam procedures as indicated below.

Explanation of symbols :  
 + applicable  
 - not applicable  
 0 limited application

Suitability of our sterile containers for steam sterilization procedures<sup>1)</sup> as per DIN 58953, part 9 (issue May 1987)

Sterilization container	Packing		Steam sterilization procedure acc. to DIN 58946, part I				
	Description	Symbolic representation and packing system	Gravitation procedure	Pre-vacuum procedure	Fractional vacuum procedure	Fractional flow procedure	Steam injection procedure
with filters	Instruments in wire basket acc. to DIN 58952 part III, in sterilization container with filter in lid and bottom acc. to DIN 58952 part I		+ <sup>3)</sup>	+	+	+	+
	Instruments in wire basket acc. to DIN 58952 part III, in sterilization container with filter in lid and bottom not perforated acc. to DIN 58952 part I		-	+ <sup>2)</sup>	+ <sup>2)</sup>	+ <sup>2)</sup>	+ <sup>2)</sup>
	Instruments in wire basket acc. to DIN 58952 part III, in sterilization container with filter in bottom acc. to DIN 58952 part I		0	+	+	+	+

1) In order to avoid mistakes with regards to service, operation and/or when loading the sterilizer, please refer to table 1 for correct or wrong combination of sterilization containers for standardized steam sterilization procedures.  
 2) Only sterilization containers guaranteeing evaporation or discharge of condensate are suitable above.  
 3) Gravitation procedures having no drying device do not guarantee a sufficient after - drying effect.



**EZHold® STAINLESS STEEL INSTRUMENT CASSETTES**

Compact design guarantees strength and durability.  
Electro polished 18/8 stainless steel material  
inhibits rust and staining of the tray.



Holding Bars

**EZHold®**  
Instrument Holding Racks  
frame 180 mm long x 27 mm height

E45-180+ 3 instruments, 64 mm wide

E45-180+ 5 instruments, 95 mm wide

E45-180+ 10 instruments, 136 mm wide

**EZHold®**  
Instrument Fixation Bars  
with silicone “squeeze ledge” for holding racks,  
available in 60, 90, 130 mm length

E45-181+ length

**EZHold®**  
Instrument Holding Bars  
slotted silicone strip for holding racks,  
available for 3, 5 and 10 instruments

E45-182+ number of instruments



clip design closure

**EZHold®**  
Standard Instrument Cassettes  
hinged top cover with clip design closure

\*E45-205 5 instruments (180 x 60 x 25 mm)

\*E45-210 10 instruments (180 x 140 x 25 mm)

**KEY BENEFITS**

- unique hinge design with clip closure or twist lock
- slotted silicone bar can accommodate instruments with diameters ranging from 2.5 mm to 10 mm
- economical, durable and functional
- on-hand availability



twist lock

**EZHold®**  
Premium Instrument Cassettes  
hinged top cover with twist lock

\*E45-208 for 8 instruments  
(185 x 140 x 35 mm)

\*E45-216 for 16 instruments  
(280 x 180 x 35 mm)

\* also available with silicone finger mats, please add “M” to catalogue no.

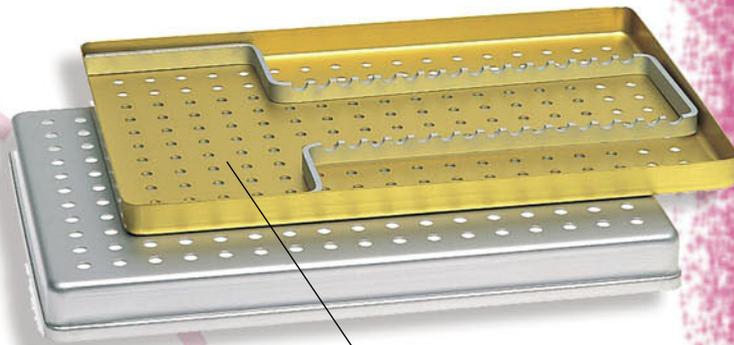


**EZHold®**  
Instrument Sterilising Box  
anodised aluminium, 280x180x19 mm,  
perforated lid and bottom, complete with  
instrument holder for 16 instruments

**E45-226+** colour

- +Silver
- +Yellow
- +Red
- +Azur
- +Green
- +Turquoise

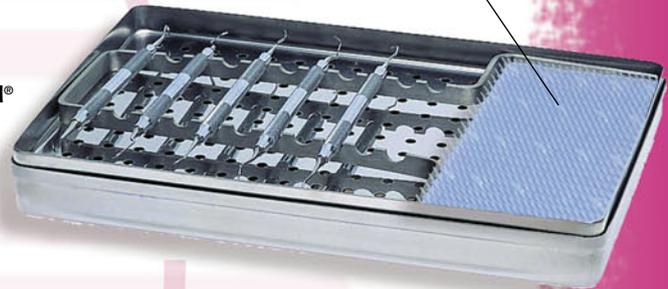
please note that only the bottom is coloured



Storage space for bipolar cords, I/A accessories, etc.  
accommodates also silicone finger mats and silicone  
nap plates for best protection of instruments

**EZHold®**  
Instrument Sterilising Box  
18/8 stainless steel, 280 x 180 x 19 mm,  
perforated lid and bottom, complete with  
instrument holder for 11 instruments

**E45-221**



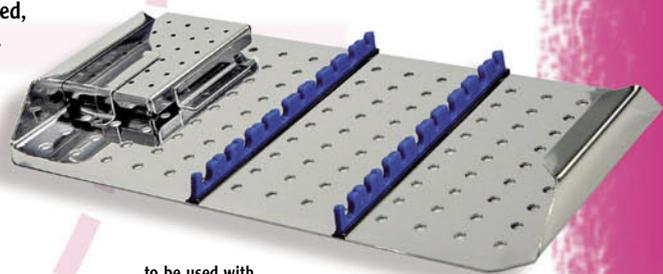
supplied without instruments  
and silicone finger mat

**EZHold®**  
Insert Instrument Tray  
18/8 stainless steel, perforated,  
complete with needle case and...

**E45-246** silicone instrument bars

**E45-247** silicone finger mat

**E45-248** silicone nap plate



to be used with  
E45-245 instrument box

**EZHold®**  
Instrument Sterilising Box  
18/8 stainless steel, 245 x 134 x 35 mm,  
perforated lid and bottom

**E45-245**



instrument box to hold  
E45-246 to E45-248 instrument tray

**STERILISING EQUIPMENT**



Stainless steel guarantees a solid exterior -wear-resistand surface - and even after long-term use stainless steel shows inself at its best.



**Instrument Box**  
(165 x 90 x 35 mm)  
lid with variable aperture,  
with silicone instrument rack

**E45-160 complete**

**E45-161 box only**

**E45-162 rack only**

**for Hot Air Sterilisation**



**Instrument Sterilising Case**  
(210 x 125 x 20 mm)  
perforated lid and base,  
with silicone finger mat

**E45-150 complete**

**E45-151 case only**

**E45-152 mat only**

Designed to protect a set of 8-12 microsurgical instruments. When the lid is closed, the tips of the cone shaped nubbins contact the inside of the lid preventing the instruments from moving within the case.

**Medicine Cup**  
graduated inside

**E45-172 25 ml**

**E45-175 50 ml**



**Solution Bowls**  
stainless steel, rounded corners

ø x h

**E45-882 40 x 19 mm (0.05 l)**

**E45-883 61 x 30 mm (0.07 l)**

**E45-884 80 x 40 mm (0.14 l)**

**E45-885 128 x 55 mm (0.45 l)**

**E45-886 147 x 65 mm (0.70 l)**

**E45-887 167 x 75 mm (1.10 l)**

**E45-888 187 x 85 mm (1.60 l)**



**for solution and sponge material**



**Kidney Dishes**  
stainless steel, curled edges

**E45-817 170 x 100 x 30 mm (0.25 l)**

**E45-825 250 x 140 x 40 mm (0.50 l)**

**E45-827 275 x 150 x 50 mm (0.75 l)**

**for solution and dressing material**

## EZHold® SILICONE RACKS AND NAP PLATES

PMO



Silicone racks and soft silicone nap plates with wide spaced, coarse pins are ideal for safe storage and positioning of delicate surgical instruments in sterilising trays.

Silicone Instrument Rack  
(160 x 85 x 20 mm)

E45-162

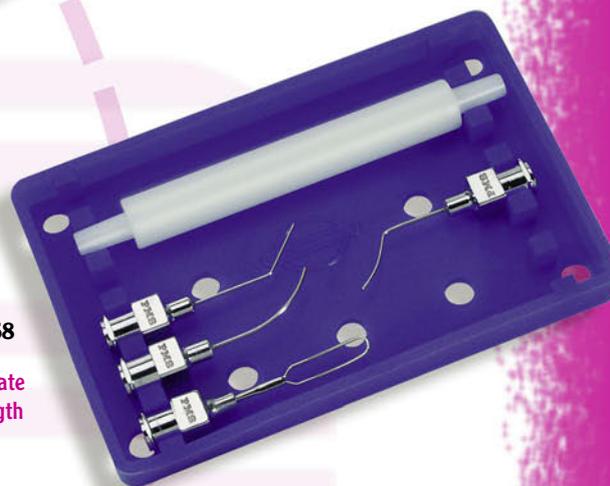
holds 10 single-armed instruments of  
100 to 120 mm total length, can be  
used with E45-161 sterilisation tray



Silicone Cannula Rack  
(85 x 55 x 8 mm)

E45-168

for conventional cannulae and delicate  
instruments of max. 80 mm total length



all racks supplied without instruments

Silicone Nap Plates  
soft material with wide spaced coarse pins;  
for standard eye surgical instruments

E45-136 for E45-131

E45-137 for E45-132

E45-138 for E45-133

E45-139 600 x 300 mm  
can be cut to size



STERILISING EQUIPMENT

Each instrument should be placed carefully  
in the silicone racks or on nap plates  
to prevent movement and possible  
damage during handling.



## LIGHT WEIGHT INSTRUMENT STERILISATION TRAYS

PolyVac® Minitainer are made of autoclavable plastic Radel® and intended for the protection, organisation and the delivery of surgical instruments to the sterile field. They are designed to facilitate the sterilisation process when used in conjunction with soft wrapping material or a rigid sterilisation container, which allow air removal, steam penetration/evacuation (drying) & maintain the sterility of the internal components.



Minitainer Sterilisation Tray  
with silicone holding bar for:

E45-001 1 instrument

E45-002 2 instruments

E45-003 3 instruments

*safely stores  
micro instruments*

Micro Instrument Sterilisation Tray  
with silicone finger mat to hold:

E45-004 180 x 50 x 18.5 mm  
(up to 4 instruments)

E45-005 180 x 75 x 18.5 mm  
(3 to 5 instruments)

E45-008 190 x 102 x 19 mm  
(5 to 8 instruments)

E45-015 267 x 160 x 16 mm  
(10 to 15 instruments)

E45-025 267 x 160 x 35 mm  
double level tray  
(20+ instruments)

## STEAM

Base, lid and mat are perforated  
for steam penetration.

### PREPARATION & LOADING

When preparing sterilisation trays it is important to remember that the sterilant must be able to contact the instrument, so there must be space between the instrument and holding device.

Once cleaned, prepared and packaged the trays are ready to be sterilised.



### AVAILABLE ON REQUEST

Instrument sterilisation trays with customised teflon inserts.

STERILISING EQUIPMENT



Sometimes you find partners who have products that work really well with your products. In our efforts to help our customers we have partnered with some of the best. On request, we can offer you an interesting range of speciality products for cleaning, disinfection, lubrication, storage and sterilisation.



**CLEANING AND DISINFECTION**

OPTIM® 33TB surface cleaner and disinfectant for medical products is the optimal choice in infection control. Ready-to-use wipes and liquid (with spray applicator for 1l bottles) are your ideal partner for proper care and cleaning of surgical instruments.



**ULTRASONIC CLEANING DEVICES**

SONOREX® ultrasonic cleaners and cleaning/disinfection agents are best suitable for intensive cleaning of stainless steel surgical instruments. Trust SONOREX® for all your ultrasonic cleaning needs, we do.

**LUBRICATION**

Our master instrument makers prefer special oil spray -free of silicone- for lubricating joints, box locks and ratches. RS-SPRAY No. 2820 rust preventing spray (see page 26) and DR. WEIGERT neodisher® IP Spray are best to avoid stains, crusts and rust-growth on instrument surfaces.



**INSPECTION**

After each cleaning all instruments should be carefully checked for cleanliness and inspected -if necessary under the microscope- for correct operation. We have access to a broad range of stereo microscopes, magnifying loops and spectacles manufactured by M/s Eschenbach Optik GmbH, a German specialist of Vision Technology Products



**STERILISATION**

PMS EZWash® trays and EZLoad® sterilisation containers and accessories have been used in nearly all modern sterilisation methods with excellent results. They are in conformity with valid quality standards with regard to materials, sterilisation, handling, transportation and storage. For typical steam autoclave cycles, the following are recommended times and temperatures developed from outside testing:



		<b>132°/134° C</b>
		<b>270°/273° F</b>
<b>≥ 10 Min.</b>		<b>≥ 4 Min.</b>
<small>EN Unwrapped only, in sterilization tray, gravity displacement steam sterilization cycle</small>		<small>EN Prevacuum steam sterilization cycle, in sterilization tray, wrapped or unwrapped</small>

Regardless of which sterilisation method is used, always follow instructions supplied by the manufacturer of the steriliser.



# NOTES

A large, light pink dashed arc on the right side of the page, enclosing a series of horizontal dotted lines for writing notes.

123 ABC

PHS



ABC

123

ABC

123





ABC ABC

ABC

123

ABC

123 1 2 3

# INDEX

ALPHABETICAL INDEX ..... 298-310

NUMERICAL INDEX ..... 311-317



# ALPHABETHICAL INDEX

PRODUCT DESCRIPTION ..... PAGE

## A

Absorbing Sponge .....	27, 155
Adaptor, Luer & Luer-Lok .....	20, 111, 118
Adson Dissecting Forceps .....	266
Adson-Brown Fixation Forceps .....	266
Adson-Graefe Fixation Forceps .....	266
Agricola Lacrimal Sac Retractor .....	262
Air Injection Cannula, Rycroft .....	20
Akahoshi Nucleus Splitter/Completer .....	96
Akahoshi Nucleus Sustainer .....	96
Akahoshi Phaco Prechopper .....	97
Akahoshi Universal Micro Forceps .....	60
Alcohol Funnel, LASEK .....	158
Alexander Soft IOL Cutter .....	133
AlfaSIL® Silicone Oil .....	214
Alfonso Infant Child Wire Speculum .....	226
Alfonso-Hoffman Nucleus Fragment Cannula .....	100
Algerbrush II Corneal Rust Ring Remover .....	264
Alio LASIK Wire Speculum .....	227
Alio Micro Capsulorhexis Forceps .....	121
Alio Micro Iridectomy Scissors .....	121
All Glass Syringe .....	20
Alpha-Chymotrypsin Cannula, Troutman .....	53
Aluminium Handle .....	66, 94, 130, 192
Aluminium Sterilizing Box .....	291
Aluminium Sterilizing Container .....	282-286
Anel Lacrimal Cannula .....	260
Anesthesia Needle, Atkinson .....	52
Anis Needle Holder .....	46
Anis Suture Placement Marker .....	141
Anterior Chamber Irrigating Cannula .....	73
Anterior Chamber Irrigator, Bishop-Harmon .....	72
Anterior Chamber Maintainer .....	72
Apt's Muscle Resection Clamp .....	254
Arcuate Incision Diamond Knife, Thornton.....	161
Arcuate Incision Marker (see LRI Marker) .....	162-163
Arneodo Nucleus Manipulator .....	238
Artery Forceps, Mosquito.....	16, 266
Aspirating Cannula, Backflush .....	194-195, 203
Aspirating Cannula, Bimanual .....	103
Aspirating Cannula, Cortex .....	81, 83, 102-103
Aspirating Cannula, Subretinal .....	216
Aspirating Cannula, Vitreoretinal .....	216
Aspirating Eyelid Retractor, Jaffe .....	228
Aspirating Eye Speculum .....	54-55, 148, 228
Aspirating Handpiece, Backflush .....	194-195, 203
Aspirating Handpiece, Bimanual .....	113, 239
Astigmatic Keratometer, Maloney .....	160
Astigmatic Keratotomy Instrument .....	160
Astigmatism Axis & LRI Marker .....	160-164
Astigmatism Diamond Knife .....	161
Atkinson Anesthesia Needle .....	52
Auffahrt MICS Capsulorhexis Forceps .....	233
Axis Gauge .....	160
Axis Marker .....	160

## B

Baby Jones Towel Clamp .....	16
Backflush Cannula .....	194-195, 203
Backflush Handpiece .....	194-195, 203
Backflush Reservoir, Silicone .....	194, 203
Backflush Tubing Kit, Silicone .....	194
Backhaus Towel Forceps.....	266
Banaji LASIK Cannula .....	154

PRODUCT DESCRIPTION ..... PAGE

Bandage Scissors, Universal.....	281
Bangerter Eye Speculum .....	254
Bangerter Probe Cannula .....	258
Barraquer Cilia Forceps .....	256
Barraquer-Colibri Forceps .....	23, 44, 61
Barraquer Iris Repositor .....	80
Barraquer Iris Scissors .....	22
Barraquer Iris Spatula.....	246
Barraquer Needle Holder .....	25, 46, 241
Barraquer Needle Holder, French Style .....	237
Barraquer Needle Holder, Titanium .....	46, 235
Barraquer Wire Speculum .....	17, 54, 226-227, 245
Barrett Micro Mushroom Manipulator.....	80, 95
Barron Corneal Marking Punch .....	140
Barron Corneal Trephine, Hessburg- .....	140
Base Plug, Corneal .....	139
Base Plug Shield, Corneal .....	139
Basic Eye Instrument Set .....	28
Basic PRK Instrument Set .....	156
Battery Powered Cautery.....	269
Bayonet Dressing Forceps .....	266
Bechert Nucleus Rotator, Jaffe- .....	47, 80, 95, 246
Bechert-McPherson Forceps.....	232, 250
Beehler Small Pupil Dilator .....	106
Berke Ptosis Forceps.....	256
Berrod MVR Forceps .....	207
Beyer Bone Rongeur. ....	262
Bimanual I/A System .....	112-114
Bipolar Cord.....	269
Bipolar Forceps.....	269
Bishop-Harmon AC Irrigator .....	72
Bishop-Harmon AC Cannula .....	72
Bishop-Harmon Forceps .....	23
Blade Breaker & Holder .....	18
Blade Collet, Chuck Handle .....	18
Blade, Disposable .....	18, 58
Blade, Lamellar .....	58
Blade, Miniature Edge.....	18
Blade, Razor.....	18
Blade, Sapphire .....	67
Blade, Scalpel.....	261
Blade, Scleral .....	58
Blade, Trephine .....	138-139
Blade Handle, Chuck .....	18
Blade Handle, Scalpel .....	261
Blade Handle, Trephine .....	138
Blade Holder, Trephine.....	139
Blaydes Lens Holding Forceps .....	122
Blumenthal Conjunctiva Dissector .....	230
Blumenthal Fixation Ring .....	150
Bodkins DCR .....	259
Boat Hook Manipulator, Rentsch .....	35, 131
Bonaccolto Conjunctiva Forceps .....	256
Bone Rongeur, Beyer.....	262
Bonn Iris Scissors.....	265
Bonn Micro Iris Hook .....	35, 80, 246
Bonn Orbital Retractor .....	211
Bonn Forceps,	
-French Style .....	236
-Italian Design .....	240
-Jaffe (Bonn) .....	250
-Klassik Eye .....	232
-Original .....	249
-Titanium .....	45
Bores Axis Marker .....	160



PRODUCT DESCRIPTION	PAGE
Bores Optic Zone Marker	173
Bores Meridian Marker	162
Bowman Lacrimal Probe	258
Box, Instrument Sterilization	291-292
Braunstein Fixed Sclerotomy Caliper	208
BSS Subretinal Injection Needle	219
Bunge Evisceration Spoon	267
Buratto Flap Retractor & Protector	152
Buratto IOL Manipulating Hook	242
Buratto LASIK Cannula	154
Buratto Lens Insertion Forceps	124-125
Buratto Nucleus Spatula	242
Buratto Tying Forceps	240
Buratto-Sinsky IOL Hook	238
Burr, Corneal	264
Burr, Pterygium Diamond	265
Busin Endothelial Grasping Forceps	175
Busin Endothelial Implantation Guide	175
<b>C</b>	
Caliper, Eye	33, 57
Caliper, Incision	57
Caliper, Sclerotomy	208
Camellin LASEK Instruments	158
Canaloplasty Instrument, Visco	104
Cannula Adaptor, Luer & Luer-Lok	111
Cannula Holder	279
Cannula Inserter, Trocar	200, 204-205
Cannula Kit, Replacement	201
Cannula Loading Forceps	200
Cannula Plug	200
Cannula Rack, Silicone	73, 83, 293
Cannula System, Trocar	200-205
Cannula, AC Infusion	108
Cannula, AC Irrigating	20, 72-73
Cannula, AC Maintainer	72, 108, 174
Cannula, Air Injection	73
Cannula, Alpha-Chymotrypsin	53
Cannula, Anesthesia	53
Cannula, Backflush Needle	194-195, 203, 206
Cannula, Capsule Polisher	84
Cannula, Cortex Aspirating	81-84
Cannula, High Viscosity Infusion	198
Cannula, Hydrodissection	88-89
Cannula, Hydroelineation	88
Cannula, I/A Perfluorocarbon	218-219
Cannula, I/A Simcoe	20, 82
Cannula, Irrigating Cystotome	74
Cannula, Irrigating Lens Loop	108
Cannula, Irrigating Nuclear Fragment	100
Cannula, Irrigating Vectis	81, 102
Cannula, Lacrimal	260
Cannula, Lacrimal Probe	258
Cannula, LASIK	154
Cannula, Silicone Oil	216-217
Cannula, Subretinal	216
Cannula, Sub-Tenon's	53
Cannula, Trocar	200
Cannula, Viscoelastic Injection	102
Cannula, Vitreofluid Injection	198, 203, 215-216
Cannula, Vitreoretinal	216
Capsular Tension Ring	134
Capsule Polisher Cannula	84
Capsulorhexis Forceps	
- French Style	236
- Italian Design	240
- Klassik Eye	232
- Micro	121

PRODUCT DESCRIPTION	PAGE
- MICS	233, 251
- Perfect	233
- Standard	76-77, 251
- Titanium	41, 233, 251
Capsulotomy Scissors	78-79, 235
Caro LASIK Flap Smoother	152
Caro-Avalos LASIK Flap Conformer	152
Carter Sphere Introducer and Holder	267
Cartridge Lens Injection System	126-128
Cartridge Loading Forceps, ICL®	169
Cartridge Loading Forceps, IOL	126
Case, Instrument Sterilizing	292
Castroviejo-Colibri Forceps	145
Castroviejo Corneal Forceps	24, 45, 145, 250
Castroviejo Corneal Scissors	143, 248
Castroviejo Eye Caliper	33, 57
Castroviejo Eye Speculum	17
Castroviejo Fixation Forceps	253
Castroviejo Lacrimal Dilator	258
Castroviejo Needle Holder	25, 46, 237, 241
Castroviejo Suturing Forceps	24, 145, 250
- French Style	236
- Italian Design	240
- Klassik Eye	232
- Titanium	45, 145
Catalogue, PMS Eye Instruments	270
Cataract Clear Corneal Surgery Set	48
Cataract (ECCE) Surgery Set	86-87
Cataract (Phaco) Surgery Set	98-99
Catford Micro Needle Holder	46
Cautery	269
Cautery Handle	269
Cautery Tip	269
Cellulose Eye Spear	27
Chalazion Curette, Meyhoefer	257
Chalazion Forceps	256-257
Chalazion Surgery Set	257
Chamber Maintainer, Anterior	72, 102, 108, 174
Chang Nucleus Manipulator Tip	95
Chang Phaco Chopper	37
Charleux Cortex Aspirating Cannula	83
Chayet LASIK Marker	151
Child Wire Speculum	17, 54, 226
Chisel, Lacrimal	261
Chopper, Phaco	36-37, 95, 171, 235, 246
Chopper, Phaco Irrigating	239
Chu Aspirating Eye Speculum	228
Chuck, Algerbrush II	264
Chuck Handle	18, 58
Cilia Forceps	256, 264
Citelli Sphenoidal Punch Forceps	263
Clamp, Muscle Resection	254
Clamp, Towel	16, 266
Clayman Lens Holding Forceps	122
Cleaning Accessory, Diamond Knife	70
Cleaning Accessory, VR Instrument	183
Cleaning Adaptor	118, 183
Cleaning Agent, Aluminum	284
Cleaning Block, Diamond Knife	70
Cleaning Syringe	183
Clear Corneal Diamond Knife	68, 92
Clear Corneal Sapphire Knife	33, 64
Clear Corneal Surgery Set	48
Clip Applying Forceps	230
Closure Valve Set, Disposable	201
Coagulation Forceps, Bipolar	269
Coaxial I/A Cannula, Perfluorocarbon	218-219
Coaxial I/A System	110-111
Colibri Forceps (see Corneal Forceps)	



Conjunctiva Dissector, Blumenthal ..... 230  
 Conjunctiva Forceps ..... 60, 247, 256-257  
 Conjunctiva Scissors ..... 59  
 Conner Wand Nucleus Manipulator ..... 34, 95  
 Conway Lid Retractor ..... 17  
 Cook Eye Speculum ..... 226, 265  
 Corbin Sub-Tenon's Cannula ..... 53  
 Corcelle Eye Speculum ..... 238  
 Corneal Base Plug ..... 139  
 Corneal Base Plug Shield ..... 139  
 Corneal Burr ..... 264  
 Corneal Caliper, Castroviejo ..... 57  
 Corneal Dissector ..... 172  
 Corneal Donor Marking Punch ..... 140  
 Corneal Forceps,  
 - Barraquer-Colibri ..... 44, 61  
 - Castroviejo ..... 250  
 - Double Fixation ..... 142  
 - French Style ..... 236  
 - Girard ..... 44-45  
 - Harms-Colibri ..... 44, 249  
 - Hoskin Style ..... 144  
 - Italian Design ..... 240  
 - Klassik Eye ..... 232  
 - Maumenee-Colibri ..... 234, 249  
 - Polack ..... 142  
 - Remky-Polack ..... 142  
 - Tennant ..... 45, 250  
 - Titanium ..... 44-45, 142-144, 233  
 - Troutman ..... 61, 250  
 - Troutman-Barraquer ..... 144  
 Corneal Knife, Gill ..... 265  
 Corneal Marker ..... 141, 151, 162-164  
 Corneal Pencil (Eye Magnet and FB Loop) ..... 264  
 Corneal Punch ..... 139  
 Corneal Rust Ring Remover, Algerbrush II ..... 264  
 Corneal Scarifier, Kuhnt ..... 265  
 Corneal Scissors ..... 143, 248  
 Corneal Spatula & Spoon, Paton ..... 142  
 Corneal Suture Placement Marker, Anis ..... 141  
 Corneal Suturing Forceps (see Corneal Forceps)  
 Corneal Transplant Block ..... 139  
 Corneal Transplant Scissors ..... 143, 248  
 Corneal Transplant Surgery Set (Keratoplasty) ..... 146-147  
 Corneal Transplant System ..... 140  
 Corneal Trephine Blade ..... 138-139  
 Corneal Trephine Handle ..... 138  
 Corneal Trephine Holder ..... 139  
 Corneal Trephine Punch ..... 139  
 Corneoscleral Forceps ..... 44-45, 249-250  
 Corneoscleral Punch, Gass ..... 263  
 Corneoscleral Scissors ..... 143, 248  
 Cortex Aspirating Cannula ..... 81-84  
 Corydon Capsulorhexis Forceps ..... 236, 240  
 Crawford Intubation Set ..... 259  
 Crawford Retrieval Hook ..... 259  
 Crozafon Capsulorhexis Forceps ..... 240  
 Crozafon Nucleus Rotator ..... 238  
 Crozafon Soft IOL Holding Forceps ..... 236, 240  
 Curette, Chalazion ..... 257  
 Cutter, Soft IOL ..... 132-133  
 Cutting Block, Trephine ..... 139  
 Cutting Platform, Nucleus ..... 100  
 Cutting Punch, Corneal Trephine ..... 139  
 Cutting Scissors, Osher IOL ..... 132  
 Cystotome, Irrigating ..... 74

**D**

DCR Bodkins ..... 259  
 DCR Instrument ..... 261-262  
 DCR Intubation Set ..... 259  
 DCR Instrument Set, Lacrimal Surgery & ..... 261  
 Degree Gauge, LRI ..... 160-163  
 Deitz ICL® Manipulator ..... 171  
 Depressor, Scleral ..... 210  
 Descemet's Membrane Hook ..... 172  
 Descemet's Membrane Punch ..... 104, 263  
 Desmarres Chalazion Forceps ..... 256  
 Desmarres Lid Retractor ..... 17, 245  
 Diamond Burr, Pterygium ..... 265  
 Diamond Knife,  
 - AK Micrometer ..... 161  
 - Arcuate Incision ..... 161  
 - Clear Corneal ..... 68  
 - Glaucoma ..... 105  
 - LRI ..... 164-165  
 - Micro Incision ..... 69  
 - Micrometer ..... 161  
 - Phaco ..... 68  
 - Step ..... 165  
 - Subretinal ..... 182  
 - Trapezoid ..... 68  
 - Tunnel ..... 68  
 Dieffenbach Serrefine (Bulldog Clamp) ..... 16, 266  
 Dilator, Lacrimal ..... 258  
 Dilator, Small Pupil ..... 106  
 Disposable Absorbing Sponge ..... 27, 155  
 Disposable Blade ..... 18, 58, 261  
 Disposable Cannula ..... 52, 72-74, 81-84, 195, 198  
 Disposable Corneal Punch ..... 140  
 Disposable Diamond Knife Cleaning Block ..... 70  
 Disposable Eye Shield ..... 27  
 Disposable Instrument Wipe ..... 70  
 Disposable Iris Retractor ..... 107  
 Disposable Knife ..... 62-63  
 Disposable Marking Pad ..... 141  
 Disposable Marking Pen ..... 151  
 Disposable Vitrectomy Lens ..... 221  
 Dissecting Forceps ..... 247, 266  
 Dissector, Conjunctiva ..... 230  
 Dissector, Corneal ..... 172  
 Dissector, Epithelial ..... 159  
 Divider, Lens Nucleus ..... 101  
 DLEK Instrument ..... 172-173  
 DLEK Scissors ..... 173  
 Donnenfeld LRI Diamond Knife ..... 164  
 Donor Marking Punch, Barron ..... 140  
 Donor Tissue Insertion Forceps ..... 173  
 Donor Tissue Insertion Spatula ..... 172  
 Donor Tissue Manipulator ..... 172  
 Double Fixation Corneal Forceps ..... 142  
 Dressing Forceps ..... 23, 247, 266  
 Drill Pterygium ..... 265  
 Drysdale Nucleus Manipulator ..... 34, 95  
 DSEK Instrument ..... 172-175  
 Durrie LASIK Wire Speculum ..... 227

**E**

Eckhardt ILM Forceps ..... 185-186, 202, 207  
 EcoLine® Titanium Instrument, PMS- ..... 47  
 Economy Magnifying Loupe ..... 70  
 Elevator & Repositor, LASIK ..... 156  
 Elevator, Intralask Flap ..... 156  
 Elevator, LASIK Flap ..... 152



Elevator, Periosteal ..... 261  
 Elschnig Fixation Forceps ..... 247  
 Endothelial Grasping Forceps, Busin ..... 175  
 Endothelial Implantation Guide, Busin ..... 175  
 Endothelial Insertion Forceps ..... 175  
 Endothelial Irrigating Stripper ..... 175  
 Enucleation Scissors ..... 267  
 Enucleation Snare, Foster ..... 267  
 Enucleation Spoon, Wells ..... 267  
 Enucleation-Evisceration Surgery Set ..... 267  
 Epithelial Dissector ..... 159  
 Epithelial Flap Repositor ..... 158  
 Epithelial Micro Hoe ..... 158  
 Epithelial Peeler ..... 159  
 Epithelial Spatula ..... 158  
 Epithelium Removal Knife ..... 157  
 Ernest-McDonald IOL Forceps ..... 124-125  
 Evisceration Spoon, Bunge ..... 267  
 Excision Scissors, DLEK ..... 173  
 Explantation Instrument, Lens ..... 132-133  
 Eye Caliper, Castroviejo ..... 33, 57  
 Eye Knife, disposable ..... 62  
 Eye Lid Retractor, Jaffe ..... 54, 227-228  
 Eye Magnet and FB Loop ..... 264  
 Eye Point, Cellulose ..... 27  
 Eye Scissors, Ring Handle  
 -Enucleation ..... 267  
 -Iris ..... 262, 265  
 -Pterygium ..... 265  
 -Standard ..... 16  
 -Strabismus ..... 16  
 -Tenotomy ..... 59  
 -Universal ..... 262  
 Eye Shield ..... 27, 155  
 Eye Spear ..... 27, 155  
 Eye Speculum,  
 - Aspirating ..... 54-55, 148, 228-229  
 - Bangerter ..... 254  
 - Barraquer ..... 17, 54, 226  
 - Castroviejo ..... 17, 242  
 - Chu Aspirating ..... 228  
 - Cook ..... 226, 265  
 - Corcelle ..... 238  
 - Corcelle-Legrand ..... 238  
 - Glaucoma ..... 105, 230-231  
 - Innovative ..... 226-229  
 - Kershner Reversible ..... 149  
 - Kratz-Barraquer ..... 17, 54, 227  
 - LASIK ..... 148, 227-228  
 - Lancaster ..... 28  
 - Lieberman ..... 32, 55, 245  
 - Phaco ..... 17, 91  
 - Pley ..... 238  
 - Shapira, DSEK ..... 174  
 - SuperDrainer Suction ..... 229  
 - Takeda Infant Child ..... 226  
 - Thorlakson, LASIK ..... 228  
 - Titanium ..... 32, 148, 168  
 Eye Sphere ..... 267  
 Eye Thermocauter ..... 212

**F**

Fascia Needle, Wright ..... 256  
 Faulkner Lens Holding Forceps ..... 43, 123  
 Fechtner Conjunctiva Forceps ..... 60, 230  
 Filter Retainer ..... 287  
 Filter Sterilization ..... 283, 285, 287  
 Finder Hook, Helveston ..... 252

Fine Tying Forceps ..... 252  
 Fine Universal Lens Folder ..... 124  
 Fine-Ikeda Micro Capsulorhexis Forceps ..... 121  
 Fine Irrigating Phaco Chopper ..... 239  
 Fine-Thornton Fixation Ring/Incision Guide ..... 162  
 Fine-Thornton Globe Fixation Ring ..... 56, 168  
 Fishkind Phaco Speculum ..... 17  
 Fixation Forceps,  
 - Conjunctiva ..... 60, 247, 256-257  
 - Corneal ..... 44, 61, 142-146, 249-250  
 - Globe ..... 253  
 - Muscle ..... 211  
 - Muscle Resection ..... 254  
 - Paracentesis ..... 60  
 - Scleral ..... 61, 247, 253  
 - Strabismus ..... 211  
 - Superior Rectus ..... 254  
 - Suture ..... 23, 44, 61, 142-145, 249-250  
 Fixation Hook, Gillies Skin ..... 262  
 Fixation Pick, Scleral Depressor- ..... 210  
 Fixation Plate, Trocar ..... 200  
 Fixation Ring, Globe ..... 56, 150, 162, 168  
 Fixation Ring, Scleral ..... 150  
 Fixed Sclerotomy Caliper, Braunstein ..... 208  
 Flap Conformer, LASIK ..... 152  
 Flap Elevator, Intralask ..... 156  
 Flap Elevator, LASIK ..... 152  
 Flap Forceps, LASIK ..... 153  
 Flap Lifter, Intralask ..... 156  
 Flap Manipulator, Intralask ..... 156  
 Flap Repositor, Intralask ..... 156  
 Flap Repositor, LASEK ..... 158  
 Flap Retractor & Protector, LASIK ..... 152  
 Flap Separator, LASIK ..... 152  
 Flap Smoother, LASIK ..... 152  
 Flap Spatula, Intralask ..... 156  
 Flap Spatula, LASIK ..... 152, 156  
 Flat Sterilization Container ..... 286  
 Flexible Iris Retractor ..... 107  
 Flieringa Scleral Fixation Ring ..... 150  
 Foldable Lens Injection System ..... 126-128  
 Foldable Soft Lens Inserter ..... 123-125  
 Forceps, Artery ..... 16, 266  
 Forceps, Bipolar Coagulation ..... 269  
 Forceps, Capsulorhexis ..... 41, 76-77, 121, 232-233, 251  
 Forceps, Chalazion ..... 256-257  
 Forceps, Cilia ..... 256, 264  
 Forceps, Coagulation ..... 269  
 Forceps, Conjunctiva ..... 60, 230, 247, 256-257  
 Forceps, Corneal (see Corneal Forceps)  
 Forceps, Dissecting ..... 23, 247, 266  
 Forceps, Dressing ..... 23, 247, 266  
 Forceps, DSEK ..... 173-175  
 Forceps, English pattern ..... 257  
 Forceps, Epithelial Flap ..... 153  
 Forceps, Fixation ..... 144-145, 247, 249-250, 253  
 Forceps, Fixation Titanium ..... 40, 44-45, 142, 145, 234  
 Forceps, Foldable Lens ..... 42, 123-124  
 Forceps, Foreign Body ..... 187, 264  
 Forceps, French Style ..... 236  
 Forceps, Globe Fixation ..... 253  
 Forceps, Inamura Capsulorhexis ..... 41, 77, 251  
 Forceps, Iris ..... 23, 247  
 Forceps, Italian Design ..... 240  
 Forceps, Jeweler's ..... 264  
 Forceps, Klassik Eye ..... 232  
 Forceps, LASIK ..... 153  
 Forceps, Lens Holding ..... 43, 122-123  
 Forceps, Lid ..... 256-257



Forceps, Lister's ..... 257  
 Forceps, MICS ..... 120-121, 233, 251  
 Forceps, Mosquito ..... 16, 266  
 Forceps, Muscle ..... 211  
 Forceps, Nucleus ..... 101  
 Forceps, Paracentesis ..... 60  
 Forceps, Phakic IOL ..... 169  
 Forceps, Pickup & Folding Forceps ..... 123  
 Forceps, Ptosis ..... 256  
 Forceps, Retinal Nail Holding ..... 209  
 Forceps, Scleral Fixation ..... 247, 253  
 Forceps, Scleral Plug ..... 199  
 Forceps, Sleeve Spreading ..... 223  
 Forceps, Soft Lens Folding ..... 123  
 Forceps, Soft Lens Insertion ..... 124-125  
 Forceps, Soft Lens Loading ..... 42, 123  
 Forceps, Sphenoidal Punch ..... 263  
 Forceps, Strabismus ..... 211  
 Forceps, Subretinal ..... 182  
 Forceps, Superior Rectus ..... 254  
 Forceps, Suture Removal ..... 144  
 Forceps, Suture (see Suturing Forceps)  
 Forceps, Tension Ring ..... 134  
 Forceps, Tissue ..... 23, 247, 266  
 Forceps, Titanium ..... 40-45, 142-145, 153, 234  
 Forceps, Towel ..... 266  
 Forceps, Tying ..... 43, 144, 232, 250  
 Forceps, Utility ..... 256  
 Forceps, Vitrectomy Lens ..... 221  
 Forceps, Vitreoretinal ..... 180-182, 185-186, 202, 207  
 Foreign Body Forceps ..... 187, 264  
 Foreign Body Gouge ..... 264  
 Foreign Body Lever ..... 264  
 Foreign Body Magnet, Intraocular ..... 187  
 Foreign Body Needle ..... 264  
 Foreign Body Pencil (Magnet and FB Loop) ..... 264  
 Foreign Body Spud ..... 264  
 Foster Enucleation Snare ..... 267  
 Francis Chalazion Forceps ..... 257  
 Freeman Aspirating LASIK Speculum ..... 148  
 Freer Periosteal Elevator ..... 261  
 French Style Cataract Instrument ..... 236-239  
 Fukasaku Epithelium Removal Knife ..... 157  
 Fukasaku LASIK Flap Spatula ..... 157  
 Fukasaku Phaco Splitter & Iris Pusher ..... 36, 95  
 Fukasaku Sub-Tenon's Cannula ..... 53  
 Fyodorov Phaco Fixation Ring ..... 33, 56

**G**

Galand Incision Marker ..... 57  
 Galezowski Lacrimal Cannula ..... 260  
 GasMate® Kit ..... 220  
 GasMate® Tamponade ..... 220  
 Gass Retinal Detachment Hook ..... 211  
 Gass Corneoscleral Punch ..... 263  
 Genisi LASIK Speculum ..... 148  
 Gerzog Surgical Mallet ..... 262  
 Giannetti MICS Capsulorhexis Forceps ..... 236, 240, 251  
 Gill Corneal Knife ..... 265  
 Gillies Skin Hook ..... 256  
 Gills Cortex Aspirating Cannula ..... 81  
 Gills-Vannas Capsulotomy Scissors ..... 78  
 Gills-Welsh Capsulotomy Scissors ..... 79  
 Gimbel LASIK Stabilisation Ring ..... 56  
 Girard Corneoscleral Forceps ..... 44-45, 234  
 Gispel DSAEK AC Maintainer ..... 174  
 Glass Syringe, All ..... 20, 74  
 Glaucoma Diamond Knife ..... 105

Glaucoma Speculum ..... 105, 230-231  
 Glaucoma Punch ..... 104-105, 263  
 Glaucoma Surgery Set ..... 268  
 Globe Fixation Ring ..... 33, 56, 150  
 Gouge, Foreign Body ..... 264  
 Graefe Strabismus Hook ..... 211  
 Grene LASIK Wire Speculum ..... 227  
 Gross Sub-Tenon's Cannula ..... 108  
 Guide, Endothelial Implantation ..... 175

**H**

Haefliger Phaco Cleaver ..... 238  
 Halstead Mosquito Artery Forceps ..... 16, 266  
 Handle, Aluminum ..... 66, 94, 130, 192-193  
 Handle, Cautery ..... 269  
 Handle, Chuck ..... 18, 58  
 Handle, Scalpel Blade ..... 261  
 Handle, Trephine Blade ..... 138  
 Handpiece, Backflush ..... 194-195, 203  
 Handpiece, Bimanual I/A ..... 112-114, 239  
 Handpiece, Coaxial I/A ..... 110, 239  
 Handpiece, Teflon ..... 20, 83  
 Handpiece, Titanium ..... 100  
 Harms-Colibri Forceps ..... 44, 249  
 Harms Trabeculotome ..... 263  
 Harms Tying Forceps ..... 24  
 Hartmann Mosquito Artery Forceps ..... 266  
 Hartmann-Halle Nasal Speculum ..... 262  
 Helsinki Nucleus Hydrodissector ..... 88  
 Helveston Finder Hook ..... 252  
 Helveston Fixation Forceps ..... 253  
 Helveston Muscle Hook ..... 252  
 Helveston Scleral Ruler ..... 252  
 Helveston Strabismus Surgery Set ..... 252  
 Helveston "Teaser" Hook ..... 252  
 Helveston Tissue Retractor ..... 252  
 Helveston Tying Forceps ..... 252  
 Hersh LASIK Retreatment Forceps ..... 153  
 Heslin Anterior Chamber Maintainer ..... 72  
 Hessburg Barron Vacuum Trephine ..... 140  
 High-Flow Fluid Filter, Disposable ..... 217  
 High Viscosity Infusion Cannula ..... 198, 215  
 Hoffer Optical Zone Marker ..... 141, 160  
 Hofman-Polack Corneal Forceps ..... 142  
 Holder & Introducer, Sphere ..... 267  
 Honan Balloon (Intraocular Pressure Reducer) ..... 268  
 Hook, DLEK ..... 172  
 Hook, Finder ..... 252  
 Hook, Fixation ..... 262  
 Hook, IOL ..... 21, 35, 131, 246  
 Hook, Iris ..... 21, 35, 80, 246  
 Hook, Lens Manipulating ..... 21, 35, 131, 246  
 Hook, Muscle ..... 211, 252, 267  
 Hook, Muscle Resection ..... 254  
 Hook, Retinal Detachment ..... 211  
 Hook, Strabismus ..... 211, 246, 252  
 Hook, "Teaser" ..... 252  
 Hoskin Corneal Forceps ..... 144  
 Hunt Chalazion Forceps ..... 257  
 Hybrid Phaco Prechopper, Akahoshi ..... 39, 97  
 Hydrodissection Cannula ..... 88-89  
 Hydrolineation Cannula ..... 88

**I**

I/A Cannula, Perfluorocarbon ..... 218-219  
 I/A Cannula, Simcoe ..... 20, 82  
 I/A Handpiece, Bimanual ..... 112-114, 239



PRODUCT DESCRIPTION	PAGE
I/A Handpiece, Coaxial	110, 239
I/A System, Bimanual	112-114, 239
I/A System, Coaxial	110-111, 239
ICL® Instruments	168-171
Identification Plate, Steri-Container	283
Ikeda II Micro Capsulorhexis Forceps	121
Implant, Scleral Sponge	224
Implant, Silicone Retinal	222-223
Inamura MICS Capsulorhexis Forceps	41, 77, 251
Incision Caliper, Osher	57
Incision Gauge, Memmen	57
Incision Guide, Lu-Mendez	162
Incision Marker, Galand	57
Incision Marker, Thornton	141
Infant Wire Speculum	17, 54, 226
Infusion Cannula, AC	72, 108
Infusion Cannula, VFI	191, 198, 203, 216-217
Infusion Handle, McIntyre	83, 100
Injection Cannula, Air	20, 73
Injection Cannula, Perfluorocarbon	217-218
Injection Cannula, VFI	102, 216
Injection Needle, Anesthesia	52
Injection Needle, Subretinal BSS	219
Injector, Soft Lens	126-128
Injector, Tension Ring	134
Injector, Viscous Fluid Pressure	217
Ink Marking Pad	141
Ink Marking Pen	151
Innovative Eye Speculum	226-229
Insert Cannula Holder	279
Insert Instrument Rack	279
Insert Instrument Tray	285, 291
Insert Wire Tray	279, 285
Inserting Forceps, Soft Lens	42, 124-125
Insertion Forceps, Donor Tissue	173, 175
Insertion Spatula, Donor Tissue	172
Instrument Basket	275, 287
Instrument Box	291-292
Instrument Case	291-292
Instrument Cassette	290
Instrument Container	282-286
Instrument Fixation Bar	277, 290
Instrument Holding Bar	275, 281, 290
Instrument Holding Rack	290, 293
Instrument Support, Silicone	277
Instrument Tip Protector	26, 183
Instrument Tray	275-279, 285, 294
Instrument Wipe	70
Instrument Set by surgical discipline,	
-Basic Eye	28
-Cataract Clear Corneal	48
-Cataract (ECCE)	86-87
-Cataract (Phaco)	98-99
-Chalazion	257
-Corneal Transplant (Keratoplasty)	146-147
-Enucleation-Evisceration	267
-Implantable Contact Lens	170
-Lacrimal (DCR & Intubation)	261
-LASEK	159
-LASIK	157
-Lid-Conjunctiva/Trichiasis-Ptoxis	256
-Limbal Relaxing Incision	164
-Phaco Manual Fracture	100-101
-Phaco Posterior Capsule Rupture	108
-Phaco-Trabeculectomy	105
-Phakic Lens	170
-Primary LASIK	157
-PRK Basic	156
-Pterygium	265

PRODUCT DESCRIPTION	PAGE
-Retinal Detachment	212
-Strabismus	252
-Vitrectomy	213
Internal Incision Caliper	57
Internal Incision Gauge	57
Intralasik Flap Elevator	156
Intralasik Flap Lifter	156
Intralasik Flap Manipulator	156
Intralasik Flap Spatula	156
Intraocular Foreign Body Forceps	187
Intraocular Foreign Body Magnet	187
Intraocular Pressure Reducer, Honan Balloon	268
Intrastromal Corneal Ring, MicroKer®	167
Intrastromal Corneal Dissector	172
Introducer, Carter Sphere Holder &	267
IOL Cutter	132-133
IOL Cutting Scissors, Osher	132
IOL Folding Forceps	123-125
IOL Holding Forceps	43, 122
IOL Hook	21, 35, 131, 246
IOL Injection System	126-128
IOL Insertion Forceps	42, 124-125
IOL Instrument Tip, removable	131
IOL Manipulator	21, 35, 131, 246
IOL Toric/LRI Marker	163
Iridectomy Forceps, Micro	120-121
Iridectomy Scissors, Micro	120-121
Iris & IOL Manipulator	21, 35, 131, 246
Iris Dilator, Small Pupil	106
Iris Forceps	23, 247
Iris Hook & Lens Manipulator	21, 35, 131, 246
Iris Hook, Micro	35, 80, 246
Iris Pusher & Phaco Splitter	36, 95
Iris Repositor	80, 246
Iris Retractor & Lens Manipulator	35, 131
Iris Retractor, Flexible	107
Iris Scissors, Barraquer	22
Iris Scissors, Bonn	265
Iris Spatula	80, 246
Irrigating Cannula	73, 81, 102-103
Irrigating Cystotome	74
Irrigating Handpiece, Bimanual	112, 239
Irrigating Handpiece, Teflon	83
Irrigating Handpiece, Titanium	100
Irrigating Lens Loop	108
Irrigating Nucleus Fragment Cannula	100
Irrigating Nucleus Hydrodissector	88-89
Irrigating Nucleus Manipulator, Neuhann	239
Irrigating Phaco Chopper	239
Irrigating Silicone Bulb	20, 72
Irrigating Silicone Sleeve	110, 239
Irrigating Stripper, Endothelial	174
Irrigating Syringe, Glas	20, 74
Irrigating Vectis	81, 102
Irrigator System, AC	20, 72
Italian Design Eye Instruments	240-243

## J

Jaeger Lid Plate	256
Jaffe-Bechert Nucleus Rotator	34, 80, 95
Jaffe (Bonn) Suture Tying Forceps	45, 232, 250
Jaffe Eyelid Retractor Set	54, 227
Jaffe Aspirating Eyelid Retractor	228
Jaffe Capsulorhexis Forceps	232
Jaffe Stitch Scissors	59
Jaffe Tying Forceps	43, 232, 250
Jameson Muscle Forceps	211
Jameson Muscle Hooks	267



PRODUCT DESCRIPTION	PAGE
Janach-Colibri Corneal Forceps	240
Janach Micro Capsulotomy Scissors	79
Jansen Bayonet Dressing Forceps	266
Jayle's Corneal Suture Forceps	257
Jensen-Lu Capsule Polisher	84
Jeweler's Forceps	264

## K

Kansas-Alfonso Cutting Platform	100
Kansas-Alfonso Nucleus Bisector	100
Kansas-Alfonso Nucleus Trisector	100
Kansas Lens Nucleus Loop	235
Kansas Nucleus Removal Forceps	101
Karate Phaco Prechopper, Akahoshi	39, 97
Katzen LASIK Flap Separator	152
Katzin Corneal Transplant Scissors	143, 248
Keener Lens Nucleus Divider	101
Kellan Hydrodissection Cannula	88
Kellan Hydroelineation Cannula	88
Kelly Descemet's Membrane Punch	104, 263
Kelman-McPherson Forceps	43, 232, 250
Keratometer, Astigmatic	160
Keratoplasty Surgery Set (Corneal Transplant)	146-147
Kerrison Sphenoidal Punch Forceps	263
Kershner Micro Capsulorhexis Forceps	120
Kershner Reversible Eye Speculum	149
Kidney Dish	292
Kinoko Glaucoma Lid Retractor	231
Klassik Eye Forceps	232
Knapp Lacrimal Retractor	262
Knapp Strabismus Scissors	16
Knife, Corneal	265
Knife, Diamond	68-69, 164-165, 182
Knife, Disposable	58, 62-63
Knife, Epithelium Removal	157
Knife, Membrane Spatula-	192
Knife, Micrometer Diamond	161
Knife, PRK/LASIK Spatula	159
Knife, Sapphire	64, 67
Knife, Scleral	58
Knife, Stiletto MVR	62, 201
Koch II Nucleus Spatula	34, 80, 246
Koch Fixation Forceps	60
Koch Phaco Chopper	95, 238
Kraff-Moria Corneal Colibri Forceps	236
Kraff-Lieberman Eye Speculum	168
Kraff Suturing Forceps, Bonn-	236
Kratz Capsule Polisher	84
Kratz-Barraquer Wire Speculum	17, 54, 227, 245
Kroll Vitrectomy Scissors	179
Krumeich Intrastromal Corneal Ring	167
Kuglen Lens Manipulator	21, 35, 131, 246
Kuhnt Corneal Scarifier	265

## L

Labarre Lacrimal Cannula	260
Lacrimal Cannula	260
Lacrimal Chisel, West	261
Lacrimal Dilator	258
Lacrimal Intubation Set	259
Lacrimal Probe	258
Lacrimal Probe Cannula	258
Lacrimal Retractor, Knapp	262
Lacrimal Sac Retractor	262
Lacrimal Surgery Set	261
Lambert Chalazion Forceps	257
Lancaster Eye Speculum	28

PRODUCT DESCRIPTION	PAGE
Landers Vitrectomy Lens Forceps	221
LASEK Alcohol Cannula	158
LASEK Alcohol Funnel	158
LASEK Epi Dissector	159
LASEK Epi Flap Repositor	158
LASEK Epi Micro Hoe	158
LASEK Epi Peeler	159
LASEK Epi Spatula	158
LASEK Instruments	158-159
LASEK Instrument Set, Camellin Style	159
LASEK Trephine	158
LASIK Aspirating Speculum	148, 228
LASIK Cannula	154
LASIK Drain Ring	155
LASIK Eye Kit	155
LASIK Femtosecond Instruments	156, 228
LASIK Fixation Ring	150
LASIK Flap Elevator & Repositor	156
LASIK Flap Separator	152
LASIK Flap Smoother	152
LASIK Flap Spatula/Elevator	152
LASIK Forceps	153
LASIK Hinge Protector	150
LASIK Instruments	148-157
LASIK Marker	151
LASIK Primary Instrument Set	157
LASIK Shield, PVA	155
LASIK Spear, PVA	155
LASIK Speculum	148-149, 227-228
LASIK Stabilizing Ring	56, 150
LASIK/PRK Fixation Ring	150
LASIK/PRK Hockey Knife	157
LASIK/PRK Spatula	156
LASIK/PRK Spatula Knife	159
Legrand Eye Speculum, Corcelle-	238
Lens Crushing Knife	235
Lens Cutter	132-133
Lens Folding Forceps	123-125
Lens Holding Forceps	122-123
Lens Injector System	126-128
Lens Insertion Forceps	123-125
Lens Loop, Irrigating	108
Lens Manipulator, Kuglen	21, 35, 131, 246
Lens Manipulator, Neuhann Irrigating	239
Lens Nucleus Divider	96-97, 101
Lens Nucleus Rotator, Jaffe-Bechert	21, 34, 80, 95, 246
Lens Pusher & Manipulator, IOL	21, 35, 131, 246
Lens Vitrectomy, disposable	221
Lester Fixation Forceps	247
Lester Lens Pusher & Manipulator	21, 35, 131, 246
Lever, Plange Foreign Body	264
Lewicky Anterior Chamber Maintainer	20, 72
Lewicky Lens Manipulating Hook	131
Lid Forceps	256-257
Lid Plate, Jaeger	256
Lid Retractor, Desmarres	17, 245
Lid Retractor, Glaucoma	230-231
Lid Retractor, Jaffe Eye	54, 227-228
Lid Speculum, Schott	105
Lid Surgery Set	256
Lieberman, Eye Speculum	32, 55, 228, 245
Liebrich Lacrimal Probe	258
Ligabue Scraper & Nucleus Manipulator	242, 246
Lindstrom PRK/LASIK Spatula	156
Lister's Conjunctiva Forceps	257
Livernois IOL Folding Forceps	123
Livisolo ICL® Loading Forceps	169
Livisolo ICL® Removal Forceps	169
Loop, Irrigating Lens	108



Loop, Snare Wire ..... 101, 267  
 LRI Diamond Knife ..... 164-165  
 LRI Fixation/Degree Ring ..... 162  
 LRI Guide/Fixation Ring ..... 162  
 LRI Marker ..... 163  
 LRI Marker/Degree Gauge ..... 163  
 LRI Marker/Toric IOL ..... 163  
 LRI Slit Lamp Diamond Knife ..... 164  
 LRI Slit Lamp Gravity Marker ..... 164  
 LRI Surgery Set ..... 164  
 Lucae Bayonet Dressing Forceps ..... 266  
 Luer & Luer-Lok Cannula Adaptor ..... 111  
 Luer-Lok Cleaning Adaptor ..... 118, 183  
 Lu LASIK Marker ..... 151  
 Lu-Mendez LRI Guide/Fixation Ring ..... 162  
 Luntz-Dodick Trabeculectomy Punch ..... 105, 263

**M**

Machat LASIK Speculum ..... 148  
 Maeda Eye Speculum for Glaucoma ..... 231  
 Maeda SuperDrainer Surgical Aspirator ..... 229  
 Maeda SuperDrainer Suction Speculum ..... 229  
 Magnetic Probe, Intraocular Foreign Body ..... 187  
 Magnifying Loupe, illuminated ..... 70  
 Magnifying Vitrectomy Lens ..... 221  
 Mallet, Gerzog Surgical ..... 262  
 Maloney Astigmatic Keratometer ..... 160  
 Manche LASIK Flap Forceps ..... 153  
 Manipulating Hook, IOL ..... 21, 35, 131, 246  
 Manipulating Hook, DLEK ..... 172  
 Manipulator, Flap ..... 152, 156, 158  
 Manipulator, ICL® ..... 171  
 Manipulator, Intralase ..... 156  
 Manipulator, Iris ..... 21, 35, 80, 95, 246  
 Manipulator, IOL ..... 21, 35, 131, 246  
 Manipulator, Nucleus ..... 34, 37, 80, 95, 246  
 Manual Phaco Fracture Instrument ..... 100-101  
 Manual Small Incision Cataract Set ..... 235  
 Marker, Arcuate Incision ..... 162-163  
 Marker, Astigmatism ..... 162-163  
 Marker, Axis ..... 160  
 Marker, Corneal ..... 140-141, 151  
 Marker, Descemet's Membrane ..... 174  
 Marker, Flap Alignment ..... 151  
 Marker, Incision ..... 57  
 Marker, LASIK ..... 151  
 Marker, LRI ..... 162-164  
 Marker, LRI Slit Lamp ..... 164  
 Marker, Meridian ..... 162  
 Marker, Optic Zone ..... 141, 160, 173  
 Marker, Radial Incision ..... 141  
 Marker, Scleral ..... 210  
 Marker, Sclerotomy ..... 208  
 Marker, Suture Placement ..... 141  
 Marking Pad ..... 141  
 Marking Pen ..... 151  
 Marking Punch, Donor Corneal ..... 140  
 Markomanolakis Suction Speculum ..... 229  
 Masket Capsulorhexis Forceps ..... 41, 232-234, 251  
 Masket Phaco Spatula ..... 37  
 Maumenee-Colibri Forceps ..... 234, 249  
 Maumenee Tying Forceps ..... 234  
 McIntyre Anterior Chamber Cannula ..... 73  
 McIntyre Infusion Handle ..... 83, 100  
 McPherson Forceps, ..... 250  
 - Bipolar Coagulation ..... 269  
 - French Style ..... 236  
 - Italian Design ..... 240

- Klassik Eye ..... 232  
 - Titanium ..... 43  
 McPherson-Westcott Conjunctiva Scissors ..... 59  
 McReynolds Pterygium Scissors ..... 265  
 Medicine Cup ..... 292  
 Meibomian Gland Compressor (MGC) ..... 255  
 Mellinger Phaco Speculum ..... 91  
 Membrane Instrument, Vitreoretinal ..... 192-193  
 Memmen Incision Gauge ..... 57  
 Mendez Degree Gauge ..... 160  
 Mendez LASIK Forceps ..... 153  
 Mendez LASIK Marker ..... 151  
 Meridian Marker, Bores Two-Ray ..... 162  
 Metal Ruler ..... 26  
 Meyhoefer Chalazion Curette ..... 257  
 Micro Capsulorhexis Forceps ..... 120-121  
 Micro Capsulotomy Scissors, Spring Handle ..... 78-79  
 Micro Capsulotomy Scissors, Squeeze Handle ..... 120-121  
 Micro Corneal Scissors ..... 143, 248  
 Micro Hoe, LASIK ..... 158  
 Micro Incision Diamond Knife ..... 69  
 Micro Instrument Tray ..... 294  
 Micro Iris Hook, Bonn ..... 35, 80  
 Micro Iris Scissors ..... 22, 248  
 Micro Membrane Punch ..... 104  
 Micro Needle Holder ..... 145, 241  
 Micro Needle Holder, French Style ..... 237  
 Micro Needle Holder, Titanium ..... 46, 145, 235  
 Micro Nucleus Spatula ..... 34, 246  
 Micro Scissors Tip, removable ..... 120-121  
 Micro Vitreoretinal Knife, Stiletto ..... 201  
 MICS Bimanual I/A System ..... 239  
 MICS Coaxial I/A System ..... 239  
 MICS Capsulorhexis Forceps ..... 233, 251  
 MICS Diamond Knife ..... 69  
 MICS Iridectomy Forceps ..... 120-121  
 MICS Iridectomy Scissors ..... 120-121  
 MICS Irrigating/Aspirating Handpiece ..... 239  
 MICS Sapphire Knife ..... 65  
 Miniature Edged Blade ..... 18, 58  
 Mini Container, Aluminium ..... 284  
 Minitainer Instrument Sterilizing Tray ..... 294  
 Moody Fixation Forceps ..... 253  
 Moorfield's Conjunctiva Forceps ..... 257  
 Mosquito Forceps ..... 16, 266  
 Muscle Forceps, Jameson ..... 211  
 Muscle Hook ..... 246, 252, 267  
 Muscle Recession Hook ..... 254  
 Muscle Resection Clamp ..... 254  
 Muscle Surgery Set, Helveston ..... 252  
 MVR Knife, Stiletto ..... 201

**N**

Nagahara Karate Phaco Chopper ..... 246  
 Nagahara Phaco Chopper ..... 21, 36, 95, 246  
 Nagahara Phaco Chopper, Irrigating ..... 239  
 Nagahara/Sinsky Phaco Spatula ..... 37  
 Nasal Speculum, Hartmann-Halle ..... 62  
 Needle,  
 - Anesthesia ..... 52  
 - Backflush ..... 194  
 - Fascia, Wright ..... 256  
 - Foreign Body ..... 264  
 - Peribulbar ..... 52  
 - Phaco ..... 117  
 - Retrobulbar ..... 52  
 - Subretinal BSS Injection ..... 219  
 Needle Holder,



- Anis ..... 46
- Barraquer ..... 25, 46, 145, 241
- Castroviejo ..... 25, 46, 237, 241
- Catford ..... 46
- French Style ..... 237
- Titanium ..... 46, 145, 235
- Troutman ..... 241
- Troutman-O'Brien ..... 237
- Needle & Gouge, Foreign Body ..... 264
- Neuhann Irrigating Nucleus Manipulator ..... 239
- Neyvas Capsulorhexis Forceps ..... 232-233
- Neyvas Soft IOL Manipulator ..... 131
- New Trephine Blade ..... 138
- New Trephine Handle ..... 138
- Nichamin Irrigating Chopper ..... 116
- Nichamin LRI Diamond Knife ..... 165
- Nichamin LRI Fixation/Degree Ring ..... 162
- Nichamin Nucleus Hydrodissector ..... 89
- Nichamin Phaco Chopper ..... 235, 246
- Nishi Schlemm's Canal Scissors ..... 104
- Nucleus Bisector ..... 100
- Nucleus Chopper ..... 21, 36-37, 95, 235, 246
- Nucleus Chopper, Irrigating ..... 116, 239
- Nucleus Cracking Forceps ..... 101
- Nucleus Cutting Platform ..... 100
- Nucleus Divider ..... 101
- Nucleus Fragment Cannula ..... 100
- Nucleus Fragment Forceps ..... 101
- Nucleus Hydrodissector ..... 88-89
- Nucleus Manipulator ..... 21, 80, 246
- Nucleus Manipulator, Irrigating ..... 239
- Nucleus Manipulator, Titanium ..... 34-37, 235
- Nucleus Prechopper, Akahoshi ..... 39, 97
- Nucleus Removal Cannula ..... 81
- Nucleus Removal Forceps, Kansas ..... 101
- Nucleus Ring Sustainer, Akahoshi ..... 38
- Nucleus Rotator, Jaffe-Bechert ..... 21, 47, 80, 95, 246
- Nucleus Spatula ..... 34, 37, 80, 246
- Nucleus Splitter/Completer ..... 39, 96
- Nucleus Splitter Forceps, Salz ..... 31
- Nucleus Sustainer ..... 38, 96
- Nucleus Trisector ..... 100
- Nucleus Vectis, Irrigating ..... 81, 100
- Nugent Utility Forceps ..... 256
- Nurse Scissors ..... 212, 281

**O**

- O'Brien Micro Needle Holder, Troutman- ..... 237
- O'Connor Scleral Depressor-Marker ..... 210
- Ocular Stick, Pro-ophta® ..... 27
- Oculo Pressor Pressure Reducer ..... 268
- Oftalblu® Trypan blue ..... 77
- Ong Capsulotomy Scissors ..... 78, 241
- Operating Scissors ..... 212, 266
- Ophthalmic Basic Instrument ..... 16-28
- Ophthalmic Drill, Pterygium ..... 265
- Ophthalmic Titanium Instruments ..... 29-48, 234-235
- Optic Zone Marker ..... 141, 160, 173
- Orbital Retractor ..... 211
- O-Ring Replacement Set ..... 111
- Osher Incision Caliper ..... 57
- Osher IOL Cutting Scissors ..... 132
- Osher Needle Guide ..... 135
- Osher Y-Hook Manipulator ..... 242

**P**

- Pad, Marking ..... 141
- Pannu-Kratz Aspirating Wire Speculum ..... 228
- Paper Filter ..... 283, 285, 287
- Paper Label/Indicator ..... 283
- Paracentesis Fixation Forceps ..... 60
- ParsMate® 23G Trocar Kit ..... 205
- Paton Corneal Spatula & Spoon ..... 142
- Paufique Suture Forceps ..... 145, 249
- Pearce Nucleus Hydrodissector ..... 88
- Pediatric Eye Speculum ..... 226
- Pediatric Scleral Depressor, Spaide ..... 210
- Peeler, LASEK Epithelial ..... 159
- Pen, Marking ..... 151
- Peribulbar Needle, Atkinson ..... 52
- Periosteal Elevator, Freer ..... 261
- Perone LASIK Flap Forceps ..... 153
- Peyman Silicone Oil Cannula ..... 216
- Phaco-Cataract Surgery Set ..... 98-99
- Phaco Chopper ..... 21, 95, 246
- Phaco Chopper, Irrigating ..... 239
- Phaco Chopper, Karate ..... 246
- Phaco Chopper, Phacanit ..... 235, 246
- Phaco Chopper, Titanium ..... 36-37, 235
- Phaco Cleaver, Haefliger ..... 238
- Phaco Quick-Chopper ..... 235, 246
- Phaco Diamond Knife ..... 68-69
- Phaco Disposable Knife ..... 62-63
- Phaco Eye Speculum ..... 17, 91
- Phaco Fixation Ring ..... 33, 56
- Phaco Instruments ..... 88-109
- Phaco Instrument Tip, removable ..... 95
- Phaco Manipulator ..... 34, 80, 95, 246
- Phaco Manual Fracture Instrument ..... 100-101
- Phaco Posterior Capsule Rupture Instrument ..... 108
- Phaco Sapphire Knife ..... 64-67
- Phaco Spatula ..... 37, 80, 246
- Phaco Splitter ..... 36, 95, 246
- Phaco-Trabeculectomy Surgery Set ..... 105
- Phacanit Quick-Chopper ..... 235, 246
- Phakic IOL Forceps ..... 169
- Phakic Lens Set ..... 170
- Pick, Membrane ..... 193, 207
- Pick, Scleral Fixation ..... 210
- Pierce Corneal Forceps ..... 232, 236
- Pigtail Probe, Worst ..... 262
- Pisacano Nucleus Rotator ..... 238
- Plange Foreign Body Lever ..... 264
- Plastic Eye Shield ..... 27
- Plastic Safety Seal ..... 283
- Plastic Sterilization Tray ..... 294
- Plate, Identification ..... 283
- Plate, Jaeger Lid ..... 254
- Plate, Silicone Nap ..... 280, 293
- Plate, Trocar Fixation ..... 200
- Platform, Nucleus Cutting ..... 100
- Platinum-Iridium Cautery Tip ..... 269
- Pley Eye Speculum ..... 238
- Plug, Cannula ..... 200
- Plug, Scleral ..... 199
- Plug Forceps, Scleral ..... 199
- PMS EcoLine® Titanium Instruments ..... 47
- PMS Registered Trademark ..... 136
- Polack Double Fixation Corneal Forceps ..... 142
- Posterior Capsule Polisher ..... 84
- Posterior Capsule Rupture Instruments ..... 108
- Prechopper, Phaco ..... 39, 97
- Precision Magnetic Probe, IOFB ..... 187



PRODUCT DESCRIPTION	PAGE
Pressure Injector, Viscous Fluid	217
Pressure Reducer	268
Primary LASIK Surgery Set	157
PRK/LASIK Basic Instrument Set	156
PRK/LASIK Fixation Ring	150
PRK/LASIK Flap Elevator & Repositor	156
PRK/LASIK Flap Lifter & Manipulator	156
PRK/LASIK Flap Removal Knife (Hockey Style)	157
PRK/LASIK Flap Spatula	157
PRK/LASIK Flap Spatula & Elevator	156
PRK/LASIK Spatula-Knife	159
Probe Cannula, Lacrimal	258
Probe, Lacrimal	258
Probe, Pigtail	262
Probe, Trabeculotomy	263
Protective Cap	183
Protective Eye Shell	255
Protector, Instrument Tip	26
Protector, VR Instrument Tip	183
Protector, LASIK Hinge	150
Protector & Retractor, Flap	152
Pterygium Diamond Burr	265
Pterygium Diamond Wheel	265
Pterygium Drill	265
Pterygium Instruments	265
Pterygium Surgery Set	265
Ptosis Forceps, Berke	256
Punch Forceps, Sphenoidal	263
Punch, Corneal Trephine	139
Punch, Corneoscleral	263
Punch, Descemet's Membrane	104, 263
Punch, Donor Corneal Marking	140
Punch, Trabeculectomy	104, 263
Punctum Dilator, Sisler	258
Pupil Dilator	106-107
Pusher, Fukasaku Phaco Splitter & Iris	36, 95
Pusher, Lester Lens	21, 35, 131, 246
Putterman Muscle Resection Clamp	254
PVA LASIK Absorbing Sponge	155

## Q

Quick-Chopper, Phaco	246
Quickert Lacrimal Intubation Probe	259

## R

Rack, Insert Instrument	279
Rack, Instrument Holding	290
Rack, Silicone Cannula	73, 293
Rack, Silicone Instrument	293
Radial Incision Marker, Thornton	141
Rainin Irrigating Cannula	81
Rainin Suturing Cannula Set	72
Ramley Sponge Holding Forceps	266
Razor Blade	18
Razor Blade Breaker & Holder	18
Recession Muscle Hook	254
Reinforced Lacrimal Cannula	260
Remky-Polack Double Fixation Corneal Forceps	142
Rentsch Manipulator & Iris Retractor	35, 131
Repositor & Elevator, LASIK	156
Repositor, Iris	80, 246
Repositor, Epithelial Flap	158
Resection Muscle Clamp	254
Reservoir, Silicone Backflush	194, 203
Retinal Detachment Hook, Gass	211
Retinal Detachment Surgery Set	212
Retinal Nail	209

PRODUCT DESCRIPTION	PAGE
Retinal Nail Holding Forceps	209
Retractor, Eyelid	54, 227-228
Retractor, Flexible Iris	107
Retractor, Iris & Lens Manipulator	21, 35, 131, 246
Retractor, Lacrimal Sac	262
Retractor, LASIK Flap	152
Retractor, Lens Manipulator & Iris	21, 35, 131, 246
Retractor, Lid	17, 245
Retractor, Orbital	211
Retractor, Scleral Flap	230
Retractor, Tissue	252
Retrieval Hook, Crawford	259
Retrolbulbar Needle, Atkinson	52
Reversed Simcoe I/A Cannula	82
Reversed Sinskey Hook, DLEK	172
Reversible Eye Speculum, Kershner	149
Ring, Capsular Tension	134
Ring, Corneal	167
Ring, Degree Gauge	160, 162
Ring, Flieringa Scleral Fixation	150
Ring, Globe Fixation	56, 150
Ring, LASIK Drain	155
Ring, LRI Fixation/Degree	162
Ring, Scleral Fixation	150
Rongeur, Bone	262
Rosen Irrigating Chopper	239
Rosen Phaco Splitter	36, 95, 242, 246
Rotator, Jaffe-Bechert Nucleus	80, 95, 246
Rotator, Titanium Nucleus	34, 235
Rowen Phaco Spatula	37
Rubber Suction Cup	255
Ruedemann Lacrimal Dilator	258
Ruler, Metal	26
Ruler, Scleral Marking	252
Rust Prevention Spray	26
Rust Ring Remover, Corneal	264
Rycroft Air Injection Cannula	73

## S

Salz Nucleus Cracking Forceps	101
Sapphire Blade, Cataract	67
Sapphire Knife, Cataract	64
Sautter Nucleus Hydrodissector	88
Scalpel Blade	261
Scalpel Handle	261
Schepens Orbital Retractor	211
Schioetz Tonometer	268
Schlemm's Canal Scissors, Nishi	104
Schocket Scleral Depressor	210
Schott Lid Speculum	105
Scissors, Bandage	281
Scissors, Capsulotomy	78-79
Scissors, Conjunctiva	59
Scissors, Corneal	143, 248
Scissors, DLEK	173
Scissors, Enucleation	267
Scissors, Eye	16, 262
Scissors, IOL Cutting	132
Scissors, Iridectomy	120-121
Scissors, Iris	22, 248, 265
Scissors, Janach Style	79
Scissors, Lamellar	173
Scissors, Micro Capsulorhexis	120-121
Scissors, Micro Iridectomy	120-121
Scissors, Nurse	212, 281
Scissors, Operating	212
Scissors, Pterygium	265
Scissors, Side Port Capsulotomy	120-121



Scissors, Standard Eye ..... 16

Scissors, Stitch ..... 22, 59

Scissors, Strabismus ..... 16

Scissors, Stainless Steel-Titanium ..... 22, 235

Scissors, Subretinal ..... 182

Scissors, Surgical ..... 266

Scissors, Suture Removal (Stitch) ..... 22, 59

Scissors, Tenotomy ..... 22, 59

Scissors, Universal ..... 262

Scissors, Utility ..... 281

Scissors, Vitreoretinal ..... 179, 184, 186, 202, 207

Scissors, Worst Micro Capsulotomy ..... 237

Scissors Tip, Removable VR ..... 184, 186

Scissors Tip, Removable MICS ..... 120-121

Scleral Blade, disposable ..... 58

Scleral Depressor ..... 210

Scleral Fixation Ring ..... 150

Scleral Flap Retractor ..... 230

Scleral Forceps, Girard Corneo- ..... 44-45, 234

Scleral Knife ..... 58

Scleral Planer, USC ..... 104

Scleral Plug ..... 199

Scleral Plug Forceps ..... 199

Scleral Punch, Gass Corneo- ..... 263

Scleral Ruler, Helveston ..... 252

Scleral Shaver, USC ..... 104

Scleral Sponge Implant ..... 224

Sclerotomy Caliper, Braunstein Fixed ..... 208

Seibel Phaco Chopper ..... 36, 95

Seibel Foldable Lens Loader ..... 123

Serrefine, Dieffenbach ..... 16, 266

Shaaf Cilia & Foreign Body Forceps ..... 264

Shahinian Lacrimal Cannula ..... 260

Shapira Eye Speculum, DSEK ..... 174

Sheets Irrigating Vectis ..... 81

Shield, Base Plug ..... 139

Shield, Eye ..... 27

Shield, LASIK ..... 155

Shinja Hara Scleral Depressor ..... 210

Side Port Capsulotomy Scissors ..... 120-121

Silicone Bulb ..... 72

Silicone Cannula Rack ..... 73, 293

Silicone Finger Mat ..... 280

Silicone Finger Strip ..... 279

Silicone Instrument Holder ..... 281

Silicone Instrument Holding Bar ..... 281

Silicone Instrument Rack ..... 293

Silicone Instrument Support ..... 277

Silicone Instrument Tray ..... 159

Silicone Irrigation Sleeve ..... 110, 239

Silicone Nap Plate ..... 280

Silicone Oil ..... 214-215

Silicone Oil Cannula ..... 216-217

Silicone Oil Syringe ..... 217

Silicone Reservoir, Backflush Handle ..... 194, 203

Silicone Retinal Implant ..... 222-223

Silicone Scleral Sponge Implant ..... 224

Silicone "Squeeze Ledge" ..... 277

Silicone Tip Backflush Cannula ..... 195, 203, 206

Silicone Tubing, Replacement ..... 26

Silicone Tubing Kit, Backflush ..... 194

Simcoe Capsule Polisher ..... 84

Simcoe Cortex Extractor ..... 83

Simcoe I/A Cannula ..... 82

Simpel LASIK Flap Elevator & Repositor ..... 156

Sinsky II IOL Hook ..... 21, 35, 131, 246

Sinsky Phaco Spatula, Nagahara- ..... 37

Sinsky Reversed Hook, DLEK ..... 172

Sisler Punctum Dilator ..... 258

Slade LASIK Cannula ..... 154

Slade LASIK Flap Spatula/Elevator ..... 152

Slade LASIK Speculum ..... 148, 227

Sleeve Spreading Forceps, Watzke ..... 223

Slit Lamp Diamond Knife, Donnenfeld ..... 164

Slit Lamp Gravity Marker, LRI ..... 164

Slit Lamp Marker, LRI/Toric ..... 164

Small Incision Pupil Dilator, Beehler ..... 106

Smith US Army Utility Scissors ..... 280

Snare Enucleation, Foster ..... 267

Snare Wire, Twisted ..... 267

Soft IOL Cutter ..... 132-133

Soft IOL Manipulator, Nevyas ..... 131

Soft Lens Folding Forceps ..... 123-125

Soft Lens Holding Forceps ..... 43, 123

Soft Lens Insertion Forceps ..... 124-125

Solish Conjunctiva Forceps ..... 60

Solution Bowl ..... 292

Spaide Pediatric Scleral Depressor ..... 210

Spaleck Lens Inserting Forceps ..... 124-125

Spatula, Donor Tissue Insertion ..... 172

Spatula, Iris ..... 80, 246

Spatula, Epithelial ..... 158

Spatula, Flap ..... 157

Spatula, Membrane ..... 207

Spatula, Nucleus ..... 34, 80, 246

Spatula, Orbital ..... 211

Spatula, Phaco ..... 37, 246

Spatula, PRK/LASIK ..... 156, 159

Spatula/Elevator, Intralase Flap ..... 156

Spatula/Elevator, LASIK Flap ..... 152

Spatula/Knife, Vinciguerra ..... 159

Spatula & Spoon, Paton Corneal ..... 142

Spear, Absorbing Eye ..... 27, 155

Speciality Ophthalmic Instruments ..... 226-269

Speciality Eye Instruments Catalogue ..... 270

Speculum, Aspirating ..... 54-55, 148, 228

Speculum, DSEK ..... 174

Speculum, Eye ..... 17, 54-55

Speculum, Glaucoma ..... 105, 230-231

Speculum, Innovative Eye ..... 226-229

Speculum, LASIK ..... 148-149, 227-228

Speculum, "Little People" ..... 226

Speculum, Nasal ..... 262

Speculum, "Oriental Eye" ..... 227

Speculum, Phaco ..... 17, 91

Speculum, Titanium ..... 32, 148, 168

Speculum, Wire ..... 17, 54, 226-228

Sphere, Eye ..... 267

Sphere Introducer & Holder, Carter ..... 267

Splitter, Fukasaku Iris Pusher & Phaco ..... 36, 95

Splitter, Rosen Universal Phaco ..... 36, 95, 242

Sponge Absorbing ..... 27, 155

Sponge Implant, Scleral ..... 224

Spoon, Enucleation ..... 267

Spoon, Evisceration ..... 267

Spray, Instrument ..... 26

Spud, Foreign Body ..... 264

Steinert Soft Lens Holding Forceps ..... 123

Step Knife, Diamond LRI ..... 165

Step Knife, Diamond USC ..... 105

Sterilizing Basket, Instrument ..... 275, 278

Sterilizing Box, Instrument ..... 291-292

Sterilizing Case, Instrument ..... 292

Sterilizing Cassette, Instrument ..... 290

Sterilizing Container, Instrument ..... 282-287

Sterilizing Tray, Instrument ..... 275-277, 294

Stern-Castroviejo Fixation Forceps ..... 253

Stern-Gills Capsulotomy Scissors ..... 79, 235



PRODUCT DESCRIPTION	PAGE
Stevens Sub-Tenon's Cannula	53
Stevens Tenotomy Scissors	59
Stevenson Lacrimal Sac Retractor	262
Stiletto MVR Knife, Disposable	201
Stitch Scissors	22, 59
St. Martin's Suture Forceps	145
Strabismus Forceps	211
Strabismus Hook	246, 252, 267
Strabismus Scissors	16
Strabismus Surgery Set, Helveston	252
Subretinal BSS Injection Needle	219
Subretinal Cannula	216
Subretinal Diamond Knife	182
Subretinal Forceps	182
Subretinal Scissors	182
Sub-Tenon's Cannula	53, 108
Sulfur Hexafluoride Tamponade, SF6	220
SuperDrainer Surgical Aspirator	229
SuperDrainer Suction Speculum	229
Superior Rectus Forceps, Troutman	254
Surgical Mallet, Gerzog	262
Surgical Scissors	266
Suturing Forceps,	
- Conjunctiva	60, 231, 257
- Corneal	44, 142, 144-145, 249-250
- English Pattern	257
- French Style	236
- Italian Design	240
- Klassik Eye	232
- Titanium	40, 44-45, 234-235
Suture Placement Marker, Anis	141
Suture Removal Forceps	144
Suture Removal Scissors (Stitch)	22, 59
Syringe, All Glass	20, 74
Syringe, Aspirating	82
Syringe, Cleaning	183
Syringe, Disposable	82
System, Bimanual I/A	112-114
System, Coaxial I/A	110-111
System, Sterilization Container	282-287
System, Tray-in-Tray Sterilization	273-277
System, Trocar Cannula System	200-205

**T**

Tagawa IOFB Magnetic Probe	187
Takeda Infant Child Wire Speculum	226
Tanna-Lieberman Glaucoma Speculum	230
Tano Vitreoretinal Micro Forceps	202
"Teaser" Hook, Helveston	252
Teflon Cutting Block	139
Teflon Filter, Steri-Container	283-287
Teflon Holding Post	275
Teflon Infusion Handpiece, McIntyre	83
Temporal Eye Speculum	32, 54-55, 148, 168, 245
Tennant Suture Tying Forceps	43, 45, 250
Tenotomy Scissors	22, 59
Tension Ring Injector	134
Textile Filter, Steri-Container	283, 285, 287
Thibaut-Nagahara Phaco Chopper	238
Thomas Lens Injector, Soft Lens	126-127
Thorlakson LASIK Speculum	228
Thornton Arcuate Diamond Knife	161
Thornton Radial Incision Marker	141
Thornton (Fine-) Globe Fixation Ring	56
Thorpe Fixation Forceps, Titanium	234
Tip, Backflush Cannula	194, 195, 203, 206
Tip, Cautery	269
Tip, Coaxial I/A	110-111, 239

PRODUCT DESCRIPTION	PAGE
Tip, IOL Instrument	131
Tip, Membrane Instrument	192-193
Tip, Phaco Instrument	95
Tip, Protector	26, 183
Tip, Sapphire Blade	67
Tip, VR Forceps	185-186
Tip, VR Scissors	184-187
Tissue Forceps	23, 247, 266
Tissue Insertion Spatula, DLEK	172
Tissue Retractor, Helveston	252
Titanium Eye Instrument by surgical discipline,	
-Astigmatic Keratotomy	160-161
-Cataract	29-48
-Cataract, Think Pink	234-235
-Corneal Transplant	142-145
-DLEK & DSEK	172-173
-DSAEK	174-175
-ICL®	168-171
-LASEK	158-159
-LASIK	148-151
-LRI	162-165
-Manual Fracture	100-101
-Muscle Resection	254
-Phaco	34-39, 96-97
-Phaco-Trabeculectomy	104-105
-PRK	156-157
-Strabismus	252-253
-Vitreoretinal	179-187
Titanium Eye Instruments by product family,	
-Caliper	33, 208
-Forceps	40-45, 142-145, 233, 235, 251
-Forceps, Vitreoretinal	180-182, 185-187, 202, 207
-Fixation Ring	33, 56
-Keratometer	33, 160
-Knife, Diamond	68-69, 164-165
-Lens Cutter	132-133
-Lens Injector	128
-Marker, LRI	163-164
-Needle Holder	46, 144, 235
-Manipulator, IOL and Nucleus	34-35, 235
-Nucleus Sustainer	38
-Phaco Chopper	36, 235
-Phaco Spatula	37
-Prechopper, Akahoshi	39
-Punch, Trabeculectomy	104-105, 263
-Scissors, Stainless Steel-Titanium	22, 235
-Scissors, Vitreoretinal	179, 184, 186, 207
-Speculum	32, 148, 168
Tonometer, Schioetz	269
Toric IOL/ LRI Marker	163
Toric Lens, MicroSiR	166
Toric/LRI Slit Lamp Marker	164
Towel Clamp	16, 266
Towel Forceps	266
Trabeculectomy Instrument, Phaco-	104-105
Trabeculectomy Punch	104-105
Trabeculotomy Probe, Harms	263
Tray, Insert Instrument	291
Tray, Insert Screen	285
Tray, Insert Wire	279, 285
Tray, Instrument Sterilization	276
Tray, Micro Instrument Sterilization	294
Tray, Silicone Instrument	159, 293
Tray-in-Tray Sterilization System	274-277
Trephine Blade, Corneal	138-139
Trephine Blade Handle	138
Trephine Blade Holder	139
Trephine Punch, Corneal	139
Trephine, LASEK	158



Trephine, Vacuum ..... 140  
 Trisector, Nucleus ..... 100  
 Trocar Cannula ..... 200  
 Trocar Cannula Kit ..... 201  
 Trocar Cannula Inserter ..... 200  
 Trocar Cannula System ..... 200-205  
 Trocar Fixation Plate ..... 200  
 Troutman Alpha-Chymotrypsin Cannula ..... 53  
 Troutman Corneal Section Scissors ..... 147, 235, 248  
 Troutman Needle Holder ..... 241  
 Troutman Superior Rectus Forceps ..... 254  
 Troutman Suturing Forceps ..... 250  
 Troutman Tying Forceps ..... 250  
 Troutman-Barraquer Corneal Forceps ..... 144  
 Troutman-Chris Blade Breaker & Holder ..... 18  
 Troutman-O'Brien Micro Needle Holder ..... 237  
 Tubing Kit, Backflush Handle ..... 194  
 Tubing, Silicone ..... 26  
 Tunnel Knife, Diamond ..... 68  
 Tunnel Knife, Sapphire ..... 64, 67  
 Tying Forceps ..... 250  
 - French Style ..... 236  
 - Italian Design ..... 240  
 - Klassik Eye ..... 232  
 - McPherson ..... 250  
 - Titanium ..... 43, 234

**U**

Universal Corneal Scissors ..... 248  
 Universal Eye Scissors ..... 262  
 Urrets-Zavalia Scleral Depressor-Fixation Pick ..... 210  
 US Army Utility Scissors, Smith ..... 280  
 USC Scleral Planer ..... 104  
 USC Scleral Shaver ..... 104  
 Uthoff-Vannas Capsulotomy Scissors ..... 79  
 Utility Forceps, Barraquer-Colibri ..... 23  
 Utility Forceps, Nugent ..... 256  
 Utility Scissors ..... 281  
 Utrata Capsulorhexis Forceps,  
 - French Style ..... 236  
 - Italian Design ..... 240  
 - Klassik Eye ..... 232  
 - Micro ..... 120-121  
 - MICS ..... 233, 251  
 - Standard ..... 76-77, 251  
 - Titanium ..... 41, 234, 251

**V**

Vacuum Trephine, Hessburg-Barron Corneal ..... 140  
 Vannas Capsulotomy Scissors ..... 78  
 Vectis, Irrigating ..... 81, 102  
 Vidaurri LASIK Cannula ..... 154  
 Vinciguerra Spatula/Knife ..... 159  
 Vinzenz Infant Wire Speculum ..... 226  
 Viscoelastic Injection Cannula ..... 102  
 Viscous Fluid Delivery System ..... 216-217  
 Viscous Fluid Pressure Injector ..... 217  
 Vitrectomy Lens, disposable ..... 221  
 Vitrectomy Lens Forceps ..... 221  
 Vitreo Cleaning Adaptor ..... 183  
 Vitreo Flushing Tube ..... 183  
 VR Backflush Instrument ..... 194-196, 203  
 VR Forceps Standard 20G ..... 180-181, 185  
 VR Forceps Micro 23G ..... 186, 202  
 VR Forceps Miniature 25G ..... 207  
 VR Forceps Tip, removable ..... 185-187, 209  
 VR Foreign Body Instrument ..... 187

VR Foreign Body Magnetic Probe ..... 187  
 VR GasMate® Gas Tamponade ..... 220  
 VR Illuminated Instrument ..... 190-191  
 VR Membrane Instrument ..... 192-193  
 VR Membrane Tip, removable ..... 192-193, 207  
 VR Miscellaneous Instrument ..... 208-211  
 VR Perfluorocarbon Liquid ..... 218-219  
 VR Purified Silicone Oil ..... 214-215  
 VR Scissors Standard 20G ..... 179  
 VR Scissors Micro 23G ..... 186-202  
 VR Scissors Miniature 25G ..... 207  
 VR Scissors Tip, removable ..... 184  
 VR Subretinal Cannula ..... 216  
 VR Subretinal Diamond Knife ..... 182  
 VR Subretinal Forceps ..... 182  
 VR Subretinal Scissors ..... 182  
 VR Surgical Instrument Set ..... 213  
 VR Trocar Cannula System ..... 200-205  
 Vukich ICL® Manipulator ..... 171

**W**

Wagner Silicone Oil Cannula ..... 216  
 Waring Suture Forceps, Castroviejo- ..... 236  
 Watzke Sleeve Spreading Forceps ..... 223  
 Wells Enucleation Spoon ..... 267  
 West Lacrimal Cannula ..... 260  
 West Lacrimal Chisel ..... 261  
 Westcott Conjunctiva Scissors, McPherson- ..... 59  
 Westcott Stitch Scissors ..... 22  
 Westcott Tenotomy Scissors ..... 22, 59  
 Wide Field Vitrectomy Lens ..... 221  
 Wilder Lacrimal Dilator ..... 258  
 Williams Soft IOL Cutter ..... 132  
 Wire Speculum ..... 17, 54, 226-227  
 Wire Speculum, Aspirating ..... 54-55, 148, 228  
 Wire, Snare ..... 101, 267  
 Worst Micro Capsulotomy Scissors ..... 237  
 Worst Pigtail Probe ..... 262  
 Woven Drape, Classic ..... 283, 285, 287  
 Wright Fascia Needle ..... 256  
 Wright Muscle Recession Hook ..... 254

**Y**

Yamakawa Scleral Flap Retractor ..... 230  
 Yoshitomi Meibomian Gland Compressor (MGC) .... 255

**Z**

Zaldivar Diamond Knife ..... 69  
 Zaldivar Iridectomy Scissors ..... 107, 120, 170  
 Zaldivar Sapphire Blade ..... 67  
 Zaldivar Sapphire Knife ..... 65, 168  
 Zaldivar Soft Lens Insertion Forceps ..... 125  
 Z-Hook Manipulator, DLEK ..... 172

# NUMERICAL INDEX



INDEX

CAT.-NO. ....	PAGE	CAT.-NO. ....	PAGE	CAT.-NO. ....	PAGE
09-401 .....	269	E10-253 .....	67	E10-675 .....	151
09-402 .....	269	E10-254 .....	67	E10-677 .....	151
09-501 .....	269	E10-260 .....	161	E10-690T .....	160
09-502 .....	269	E10-262 .....	161	E15-002 .....	26
09-505 .....	269	E10-263 .....	161	E15-003 .....	26
1001/15 .....	268	E10-270 .....	67	E15-022 .....	183
1001/GB .....	268	E10-271 .....	67	E15-023 .....	183
51-917 .....	259	E10-272 .....	67	E15-100AB .....	94
51-918 .....	259	E10-281 .....	67	E15-214 .....	230
51-922 .....	259	E10-291 .....	67	E15-221T .....	104
51-923 .....	259	E10-292 .....	67	E15-222T .....	104
80100025 .....	269	E10-293 .....	67	E15-300 .....	158
81807000 .....	269	E10-301SR .....	182	E15-310+ .....	158
81807010 .....	269	E10-302SR .....	182	E15-313+ .....	158
81811100 .....	269	E10-322 .....	68	E15-315 .....	158
81811110 .....	269	E10-323 .....	68	E15-316 .....	159
A4947 .....	268	E10-324 .....	68	E15-317 .....	158
A4947ARM .....	268	E10-342 .....	68	E15-318 .....	159
A4948 .....	268	E10-343 .....	68	E15-331 .....	172
BU-1S .....	264	E10-344 .....	68	E15-333 .....	172
BU-5S .....	264	E10-352 .....	68	E15-335 .....	172
E10-001B .....	270	E10-353 .....	68	E15-341 .....	172
E10-001C .....	270	E10-354 .....	68	E15-343 .....	172
E10-001E .....	270	E10-360 .....	69	E15-344 .....	175
E10-001K .....	270	E10-361 .....	69	E15-344T .....	175
E10-001S .....	270	E10-362 .....	69	E15-347R .....	192
E10-001T .....	270	E10-367 .....	105	E15-350R .....	192
E10-001V .....	270	E10-380 .....	164	E15-353 .....	157
E10-003BC .....	18	E10-381 .....	69	E15-353T .....	157
E10-003K .....	18	E10-383 .....	165	E15-355R .....	192
E10-010T .....	184	E10-384 .....	165	E15-355T .....	159
E10-042 .....	33	E10-385 .....	165	E15-363 .....	157
E10-043 .....	33	E10-386 .....	165	E15-363R .....	193
E10-044 .....	33	E10-387 .....	165	E15-365R .....	192
E10-064 .....	18	E10-391 .....	68	E15-365T .....	156
E10-065 .....	18	E10-392 .....	68	E15-366T .....	156
E10-067 .....	18	E10-511T .....	56	E15-371R .....	193
E10-069 .....	18	E10-511TM .....	150	E15-371S23 .....	207
E10-112 .....	65	E10-512B .....	150	E15-371S25 .....	207
E10-113 .....	65	E10-512TB .....	150	E15-371T .....	152
E10-114 .....	65	E10-513 .....	56	E15-372 .....	152
E10-116 .....	65	E10-513F .....	162	E15-372T .....	152
E10-121 .....	65	E10-513G .....	150	E15-373P23 .....	207
E10-122 .....	64	E10-513T .....	56	E15-373P25 .....	207
E10-123 .....	64	E10-513TG .....	150	E15-373R .....	193
E10-124 .....	64	E10-516 .....	56	E15-373T .....	156
E10-142 .....	64	E10-516F .....	162	E15-375T .....	156
E10-143 .....	64	E10-516T .....	56	E15-381T .....	152
E10-144 .....	64	E10-517 .....	56	E15-383T .....	152
E10-152 .....	64	E10-521+ .....	173	E15-385T .....	152
E10-153 .....	64	E10-522+ .....	141	E15-400T .....	34
E10-154 .....	64	E10-529 .....	174	E15-408 .....	246
E10-170 .....	65	E10-530+ .....	141	E15-409 .....	246
E10-171 .....	65	E10-548 .....	141	E15-418 .....	246
E10-172 .....	65	E10-561 .....	162	E15-418T .....	34
E10-181 .....	65	E10-562 .....	160	E15-423 .....	246
E10-191 .....	64	E10-563 .....	162	E15-423P .....	171
E10-192 .....	64	E10-572 .....	160	E15-423R .....	95
E10-200AB .....	66	E10-573T .....	163	E15-423T .....	34
E10-222 .....	67	E10-574T .....	163	E15-429 .....	246
E10-223 .....	67	E10-576T .....	163	E15-431T .....	100
E10-224 .....	67	E10-578T .....	163	E15-432T .....	100
E10-242 .....	67	E10-579T .....	163	E15-433T .....	100
E10-243 .....	67	E10-582T .....	164	E15-442T .....	100
E10-244 .....	67	E10-583T .....	164	E15-443T .....	100
E10-252 .....	67	E10-673 .....	151	E15-450 .....	101



CAT.-NO. ....	PAGE	CAT.-NO. ....	PAGE	CAT.-NO. ....	PAGE
E15-452 .....	101	E15-677T .....	37	E20-428 .....	239
E15-464R .....	95	E15-727 .....	200	E20-429 .....	239
E15-465 .....	246	E20-001 .....	20	E20-431EF .....	103
E15-465R .....	95	E20-002 .....	20	E20-432EF .....	103
E15-465T .....	34	E20-003 .....	20	E20-433EF .....	103
E15-466 .....	80	E20-004 .....	20	E20-434EF .....	103
E15-466R .....	95	E20-018SF .....	72	E20-435EF .....	103
E15-467R .....	95	E20-020SR .....	174	E20-437 .....	239
E15-467T .....	34	E20-020ST .....	72	E20-438 .....	239
E15-500 .....	21	E20-023AT .....	108	E20-439 .....	239
E15-500R .....	131	E20-023FT .....	72	E20-440 .....	112
E15-501 .....	246	E20-023PT .....	72	E20-441 .....	112
E15-501P .....	171	E20-023TT .....	72	E20-442 .....	112
E15-501R .....	131	E20-025 .....	158	E20-445 .....	112
E15-501T .....	35	E20-030 .....	20	E20-446 .....	112
E15-516P .....	171	E20-031 .....	20	E20-447 .....	112
E15-517P .....	171	E20-032 .....	20	E20-450 .....	113
E15-518P .....	171	E20-033 .....	81	E20-451 .....	113
E15-552 .....	21	E20-034 .....	81	E20-452 .....	113
E15-553 .....	21	E20-043 .....	73	E20-453 .....	113
E15-557R .....	131	E20-045 .....	73	E20-454 .....	113
E15-558R .....	131	E20-046 .....	73	E20-455 .....	113
E15-560R .....	131	E20-047 .....	73	E20-457 .....	117
E15-560T .....	35	E20-048 .....	73	E20-480 .....	239
E15-561 .....	246	E20-049 .....	73	E20-481 .....	174
E15-561P .....	171	E20-055 .....	102	E20-482 .....	239
E15-561R .....	131	E20-064 .....	102	E20-485 .....	239
E15-561T .....	35	E20-065 .....	102	E20-486 .....	239
E15-562R .....	131	E20-066 .....	102	E20-489 .....	239
E15-562T .....	35	E20-089 .....	53	E20-522 .....	154
E15-564 .....	21	E20-141 .....	84	E20-523 .....	154
E15-564R .....	131	E20-142 .....	84	E20-525 .....	154
E15-565 .....	21	E20-145 .....	84	E20-526 .....	154
E15-565P .....	171	E20-151 .....	83	E20-529 .....	154
E15-565R .....	131	E20-152 .....	83	E20-600 .....	260
E15-565T .....	35	E20-153 .....	83	E20-601 .....	260
E15-567 .....	246	E20-154 .....	83	E20-602 .....	260
E15-571 .....	106	E20-164 .....	81	E20-612 .....	260
E15-572 .....	106	E20-167 .....	81	E20-613 .....	260
E15-573 .....	106	E20-169 .....	81	E20-615 .....	260
E15-602 .....	80	E20-201 .....	88	E20-617 .....	260
E15-602T .....	35	E20-203 .....	88	E20-622 .....	260
E15-603 .....	80	E20-205 .....	88	E20-623 .....	260
E15-603T .....	35	E20-211 .....	88	E20-630 .....	260
E15-607 .....	246	E20-213 .....	88	E20-631 .....	260
E15-610 .....	246	E20-231 .....	81	E20-642 .....	260
E15-611 .....	246	E20-242 .....	100	E20-643 .....	260
E15-613 .....	246	E20-243 .....	100	E20-645 .....	260
E15-653R .....	95	E20-300 .....	20	E20-646 .....	258
E15-653T .....	36	E20-301 .....	20	E20-647 .....	258
E15-655R .....	95	E20-325 .....	218	E20-672 .....	52
E15-655T .....	36	E20-400 .....	239	E20-673 .....	52
E15-656 .....	246	E20-400EL .....	110	E20-674 .....	52
E15-656P .....	171	E20-401EL .....	110	E20-683 .....	53
E15-656R .....	95	E20-402EL .....	110	E20-685 .....	53
E15-656T .....	36	E20-403ELA .....	110	E20-687 .....	108
E15-657R .....	95	E20-403ELI .....	110	E20-689 .....	53
E15-659 .....	246	E20-403ELS .....	110	E20-700 .....	194
E15-659P .....	171	E20-404EL .....	110	E20-704 .....	194
E15-659R .....	95	E20-405EL .....	111	E20-710 .....	194
E15-659T .....	36	E20-406EL .....	111	E20-716 .....	217
E15-660T .....	38	E20-410 .....	111	E20-719 .....	217
E15-661T .....	38	E20-413 .....	239	E20-720 .....	194
E15-662T .....	38	E20-414 .....	239	E20-720K .....	201
E15-669R .....	95	E20-415 .....	239	E20-720NS .....	209
E15-669T .....	36	E20-423 .....	239	E20-723C .....	200
E15-673T .....	37	E20-425 .....	239	E20-723K .....	201
E15-675T .....	37	E20-426 .....	239	E20-723P .....	200
E15-676T .....	37	E20-427 .....	239	E20-723R .....	201



CAT.-NO. ....	PAGE	CAT.-NO. ....	PAGE	CAT.-NO. ....	PAGE
E20-723S .....	201	E25-415 .....	78	E25-605R .....	184
E20-723T .....	200	E25-430 .....	79	E25-605R23 .....	186
E20-723U .....	200	E25-431 .....	79	E25-605RK .....	184
E20-730 .....	194	E25-433 .....	79	E25-605S .....	179
E20-731 .....	194	E25-435 .....	79	E25-605S23 .....	202
E20-731LL .....	195	E25-440 .....	78	E25-605S25 .....	207
E20-731LM .....	195	E25-442 .....	78	E25-605SK .....	179
E20-731XL .....	203	E25-451 .....	241	E25-607R .....	184
E20-732 .....	194	E25-453 .....	241	E25-607R23 .....	186
E20-732XL .....	203	E25-460 .....	78	E25-608S .....	179
E20-740 .....	194	E25-460R .....	78	E25-609R .....	184
E20-741 .....	194	E25-461 .....	78	E25-620R .....	107
E20-741LL .....	195	E25-461R .....	78	E25-620Z .....	107
E20-741LM .....	195	E25-462 .....	78	E25-621N .....	104
E20-742 .....	194	E25-462R .....	78	E25-621NR .....	104
E20-743 .....	194	E25-466 .....	132	E25-621Z .....	170
E20-752 .....	198	E25-471 .....	173	E25-621ZR .....	170
E20-754 .....	198	E25-472 .....	173	E25-623A .....	121
E20-756 .....	198	E25-473 .....	173	E25-623R .....	121
E20-801 .....	20	E25-500 .....	265	E25-623S .....	121
E20-802 .....	20	E25-501 .....	265	E25-714 .....	281
E20-805 .....	20	E25-510 .....	16	E25-715+ .....	281
E20-820 .....	217	E25-511 .....	16	E25-718+ .....	281
E20-821 .....	217	E25-512 .....	16	E25-816 .....	280
E20-880 .....	83	E25-513 .....	16	E25-818 .....	280
E20-881 .....	83	E25-514 .....	16	E25-820 .....	280
E20-882T .....	100	E25-515 .....	16	E30-006T .....	45
E20-883T .....	100	E25-530 .....	262	E30-008T .....	44
E25-002 .....	248	E25-531 .....	262	E30-028T .....	144
E25-003 .....	248	E25-532 .....	262	E30-030T .....	144
E25-004 .....	248	E25-533 .....	262	E30-032T .....	144
E25-005 .....	248	E25-534 .....	262	E30-034T .....	144
E25-006 .....	248	E25-535 .....	262	E30-036T .....	144
E25-007 .....	248	E25-556 .....	16	E30-038T .....	144
E25-011 .....	248	E25-557 .....	16	E30-044T .....	144
E25-013 .....	248	E25-561 .....	265	E30-045T .....	144
E25-015 .....	248	E25-564 .....	59	E30-046T .....	144
E25-019 .....	143	E25-565 .....	59	E30-047T .....	144
E25-040 .....	143	E25-566 .....	59	E30-051 .....	23
E25-041 .....	143	E25-567 .....	59	E30-051T .....	44
E25-050 .....	143	E25-571 .....	267	E30-052T .....	44
E25-051 .....	143	E25-573 .....	267	E30-061 .....	61
E25-060 .....	143	E25-574 .....	266	E30-061T .....	44
E25-061 .....	143	E25-576 .....	266	E30-063 .....	61
E25-062 .....	248	E25-578 .....	266	E30-081 .....	249
E25-063 .....	248	E25-580 .....	212	E30-081T .....	44
E25-070 .....	147	E25-581 .....	212	E30-085 .....	249
E25-071 .....	147	E25-582 .....	212	E30-085T .....	44
E25-100 .....	248	E25-583 .....	212	E30-087T .....	142
E25-101 .....	248	E25-584 .....	212	E30-088T .....	142
E25-200 .....	22	E25-585 .....	212	E30-089T .....	142
E25-250 .....	22	E25-600R .....	184	E30-093 .....	249
E25-251 .....	22	E25-600S .....	179	E30-094 .....	249
E25-311 .....	59	E25-600T .....	78	E30-100 .....	247
E25-313 .....	59	E25-602R .....	184	E30-103 .....	247
E25-315 .....	22	E25-602R23 .....	186	E30-106 .....	247
E25-315T .....	22	E25-602S .....	179	E30-110 .....	247
E25-331 .....	59	E25-602S23 .....	202	E30-112 .....	247
E25-333 .....	59	E25-602S25 .....	207	E30-114 .....	247
E25-334 .....	22	E25-603R .....	184	E30-120 .....	247
E25-334T .....	22	E25-603R23 .....	186	E30-122 .....	247
E25-335 .....	22	E25-603S .....	179	E30-124 .....	247
E25-400 .....	22	E25-603S23 .....	202	E30-130 .....	266
E25-401 .....	22	E25-603S25 .....	207	E30-132 .....	266
E25-402 .....	22	E25-603SI .....	190	E30-140 .....	266
E25-403 .....	22	E25-604R2 .....	184	E30-142 .....	266
E25-405 .....	78	E25-604R4 .....	184	E30-146 .....	266
E25-410 .....	78	E25-604S .....	179	E30-147 .....	266
E25-411 .....	78	E25-604SR .....	182	E30-213T .....	253



CAT.-NO. ....	PAGE	CAT.-NO. ....	PAGE	CAT.-NO. ....	PAGE
E30-214 .....	253	E30-458T .....	45	E30-632T .....	132
E30-214T .....	253	E30-460 .....	250	E30-633 .....	125
E30-216 .....	253	E30-460T .....	43	E30-633T .....	125
E30-217 .....	253	E30-461 .....	250	E30-636T .....	133
E30-223 .....	254	E30-461T .....	43	E30-643 .....	123
E30-232 .....	247	E30-463 .....	250	E30-645 .....	123
E30-233 .....	247	E30-463T .....	43	E30-645T .....	43
E30-238 .....	256	E30-465 .....	250	E30-646 .....	125
E30-239T .....	60	E30-465T .....	122	E30-646T .....	124
E30-240T .....	60	E30-503 .....	264	E30-648 .....	125
E30-241T .....	60	E30-504 .....	264	E30-648T .....	124
E30-242T .....	60	E30-505 .....	264	E30-650LC .....	127
E30-244 .....	247	E30-506 .....	264	E30-650LP .....	126
E30-286 .....	256	E30-507 .....	264	E30-651LC .....	127
E30-287 .....	256	E30-513 .....	264	E30-651LF .....	126
E30-290 .....	264	E30-541 .....	173	E30-651LM .....	127
E30-291 .....	264	E30-541T .....	173	E30-651LP .....	126
E30-330T .....	175	E30-549T .....	175	E30-652T .....	128
E30-331T .....	153	E30-562T .....	101	E30-653T .....	128
E30-332T .....	153	E30-563T .....	101	E30-654T .....	128
E30-333T .....	153	E30-564T .....	97	E30-655N .....	134
E30-335T .....	153	E30-565T .....	97	E30-655S .....	134
E30-341 .....	257	E30-566T .....	97	E30-655T .....	134
E30-343 .....	257	E30-567 .....	101	E30-658T .....	135
E30-347 .....	257	E30-567T .....	97	E30-659 .....	135
E30-348 .....	257	E30-567TA .....	101	E30-661 .....	123
E30-349 .....	257	E30-567TK .....	101	E30-663 .....	125
E30-385 .....	257	E30-568T .....	97	E30-663T .....	124
E30-386 .....	257	E30-569T .....	97	E30-665T .....	124
E30-410 .....	249	E30-572T .....	96	E30-666T .....	124
E30-411T .....	145	E30-581 .....	233	E30-667T .....	123
E30-412 .....	61	E30-581S .....	24	E30-672R .....	185
E30-413 .....	249	E30-581T .....	233	E30-672R23 .....	186
E30-413T .....	145	E30-583 .....	251	E30-672S .....	180
E30-415 .....	249	E30-583S .....	24	E30-672S23 .....	202
E30-415T .....	145	E30-583T .....	251	E30-672S25 .....	207
E30-418 .....	249	E30-585 .....	233	E30-672SI .....	190
E30-418T .....	145	E30-585T .....	233	E30-672T .....	180
E30-422 .....	24	E30-589 .....	233	E30-673R .....	185
E30-423 .....	24	E30-589T .....	233	E30-673R23 .....	186
E30-426 .....	252	E30-590 .....	251	E30-673S .....	181
E30-427 .....	252	E30-590T .....	251	E30-673S23 .....	202
E30-428 .....	250	E30-591 .....	251	E30-673S25 .....	207
E30-429 .....	250	E30-591T .....	251	E30-673T .....	181
E30-430 .....	249	E30-597 .....	251	E30-674S .....	180
E30-431 .....	24	E30-598 .....	233	E30-674T .....	180
E30-432 .....	24	E30-599 .....	233	E30-676S .....	181
E30-433 .....	24	E30-601 .....	169	E30-678S .....	181
E30-438 .....	250	E30-601T .....	169	E30-679R .....	185
E30-446 .....	250	E30-602 .....	169	E30-679S .....	180
E30-446T .....	43	E30-602T .....	169	E30-679T .....	180
E30-447 .....	250	E30-604T .....	169	E30-681R .....	185
E30-447T .....	43	E30-605T .....	169	E30-681S .....	180
E30-448 .....	250	E30-621R .....	120	E30-681SR .....	182
E30-448T .....	43	E30-621U .....	120	E30-682SR .....	182
E30-449 .....	250	E30-622 .....	122	E30-683S .....	180
E30-449T .....	43	E30-623 .....	122	E30-683SR .....	182
E30-450 .....	250	E30-623A .....	121	E30-687R .....	185
E30-450T .....	145	E30-623K .....	120	E30-687R23 .....	186
E30-451 .....	250	E30-623R .....	121	E30-687S .....	181
E30-451T .....	145	E30-623S .....	121	E30-687S23 .....	202
E30-452 .....	250	E30-624F .....	121	E30-687S25 .....	207
E30-452T .....	145	E30-624R .....	121	E30-687SI .....	190
E30-453 .....	253	E30-624S .....	121	E30-687T .....	181
E30-453T .....	145	E30-625I .....	121	E30-689S23 .....	202
E30-455 .....	253	E30-625R .....	121	E30-690N .....	209
E30-456 .....	250	E30-625S .....	121	E30-690R .....	209
E30-456T .....	45	E30-630T .....	132	E30-692F18 .....	187
E30-458 .....	250	E30-631T .....	132	E30-692F20 .....	187



CAT.-NO. ....	PAGE	CAT.-NO. ....	PAGE	CAT.-NO. ....	PAGE
E30-692R18	187	E35-253	241	E40-100TM	148
E30-692R20	187	E35-253T	46	E40-100TO	228
E30-693F	187	E35-271T	46	E40-100TP	174
E30-693R	187	E35-273T	46	E40-100TR	148
E30-693S	187	E35-301T	46	E40-100TS	32
E30-700	211	E35-303T	46	E40-101	55
E30-701	211	E40-001	105	E40-101S	55
E30-732	254	E40-003	226	E40-101T	32
E30-733	254	E40-004	226	E40-101TS	32
E30-736T	254	E40-005	226	E40-102	55
E30-773	256	E40-007	226	E40-103T	32
E30-774	230	E40-008	226	E40-103TS	32
E30-777T	199	E40-009	226	E40-104	55
E30-778T	199	E40-010	226	E40-104S	55
E30-779T	200	E40-011	245	E40-104T	168
E30-808	257	E40-012	245	E40-104TS	32
E30-812	257	E40-013	54	E40-105	149
E30-814	257	E40-013B	227	E40-105T	149
E30-821	256	E40-013J	227	E40-106	149
E30-822	256	E40-013K	227	E40-107	230
E30-827	255	E40-014	17	E40-108	17
E30-827G	255	E40-015	245	E40-110	245
E30-827T	255	E40-015A	229	E40-111	245
E30-832	256	E40-016	54	E40-112	245
E30-833	256	E40-016A	229	E40-128	256
E30-835	223	E40-017	54	E40-203	261
E30-837T	221	E40-018	245	E40-211	261
E30-900	266	E40-030A	227	E40-215	261
E30-902	266	E40-030D	227	E40-341	265
E30-909	266	E40-030G	227	E40-361	265
E30-913	266	E40-030S	227	E40-411	264
E30-914	266	E40-031	245	E40-412	264
E30-916	266	E40-032	245	E40-413	264
E30-918	266	E40-032A	54	E40-414	264
E30-925	266	E40-033	245	E40-415	264
E30-934	266	E40-033A	228	E40-420	264
E30-950	266	E40-034	245	E40-421	264
E30-965	16	E40-036L	231	E40-422	264
E30-970	266	E40-036R	231	E40-424	264
E30-981	263	E40-039	231	E40-425	264
E30-982	263	E40-041	54	E40-426	264
E30-983	263	E40-041A	228	E40-433	265
E30-991	262	E40-042	54	E40-434	265
E30-993	263	E40-050	230	E40-435	265
E30-994	263	E40-056	91	E40-436	265
E30-995	263	E40-057	91	E40-437	265
E35-001	18	E40-060	91	E40-442	264
E35-010	18	E40-064	226	E40-450	257
E35-100	237	E40-066	254	E40-451	257
E35-101	237	E40-067	254	E40-452	257
E35-102	237	E40-071	265	E40-453	257
E35-103	237	E40-072	265	E40-454	257
E35-130	25	E40-074	226	E40-530L+	138
E35-130T	46	E40-078	17	E40-530N+	138
E35-131	25	E40-079	17	E40-530S+	139
E35-131T	46	E40-080	17	E40-531	138
E35-132	25	E40-086	28	E40-532	138
E35-132T	46	E40-100	55	E40-533	139
E35-133	25	E40-100A	55	E40-540	139
E35-133T	46	E40-100AC	228	E40-541	139
E35-211T	145	E40-100AL	228	E40-542	139
E35-213T	145	E40-100AS	55	E40-543	139
E35-230	25	E40-100AT	228	E40-544	139
E35-231	25	E40-100P	174	E40-552	57
E35-232	25	E40-100S	55	E40-552T	33
E35-233	25	E40-100T	32	E40-554	57
E35-250	241	E40-100TF	148	E40-554T	33
E35-251	241	E40-100TG	148	E40-555	19
E35-251T	46	E40-100TL	148	E40-557T	252



CAT.-NO. ....	PAGE	CAT.-NO. ....	PAGE	CAT.-NO. ....	PAGE
E40-559 .....	26	E40-894 .....	258	E45-122 .....	276
E40-560+ .....	57	E40-896 .....	258	E45-123 .....	276
E40-561+ .....	57	E40-916 .....	259	E45-126 .....	277
E40-571T .....	208	E40-917 .....	259	E45-127 .....	277
E40-573T .....	208	E40-918 .....	259	E45-128 .....	277
E40-574T .....	208	E40-921 .....	262	E45-129 .....	277
E40-611S .....	210	E40-922 .....	262	E45-131 .....	276
E40-611T .....	210	E40-923 .....	259	E45-132 .....	276
E40-611U .....	210	E40-924 .....	259	E45-133 .....	276
E40-612C .....	210	E40-928 .....	263	E45-136 .....	280
E40-612S .....	210	E40-929 .....	263	E45-137 .....	280
E40-613 .....	210	E40-934 .....	262	E45-138 .....	280
E40-613T .....	210	E40-972 .....	261	E45-139 .....	280
E40-614 .....	160	E40-974 .....	261	E45-150 .....	292
E40-615 .....	160	E40-982 .....	262	E45-151 .....	292
E40-616 .....	160	E40-983 .....	262	E45-152 .....	292
E40-617 .....	160	E40-991 .....	256	E45-160 .....	292
E40-618 .....	160	E40-992 .....	263	E45-161 .....	292
E40-619 .....	160	E40-992T .....	104	E45-162 .....	293
E40-620 .....	160	E40-994T .....	104	E45-168 .....	293
E40-622 .....	160	E40-995 .....	105	E45-172 .....	292
E40-628 .....	160	E40-995T .....	105	E45-175 .....	292
E40-662 .....	80	E40-996 .....	263	E45-180+ .....	290
E40-682 .....	142	E42-100 .....	28	E45-181+ .....	290
E40-682T .....	142	E42-110 .....	86	E45-182+ .....	290
E40-708 .....	267	E42-113 .....	98	E45-205 .....	290
E40-712 .....	267	E42-114 .....	105	E45-208 .....	290
E40-721 .....	267	E42-115T .....	48	E45-210 .....	290
E40-722 .....	267	E42-117 .....	108	E45-216 .....	290
E40-723 .....	267	E42-118 .....	235	E45-221 .....	291
E40-730 .....	267	E42-120 .....	146	E45-226+ .....	291
E40-754 .....	256	E42-123 .....	156	E45-245 .....	291
E40-756 .....	256	E42-124 .....	157	E45-246 .....	291
E40-771 .....	246	E42-125 .....	159	E45-253 .....	287
E40-772 .....	246	E42-127 .....	164	E45-255 .....	287
E40-773 .....	246	E42-128 .....	170	E45-256 .....	287
E40-777 .....	211	E42-129 .....	170	E45-259 .....	280
E40-779T .....	212	E42-130 .....	257	E45-265 .....	285
E40-782 .....	267	E42-131 .....	256	E45-268 .....	285
E40-783 .....	267	E42-132 .....	252	E45-271 .....	280
E40-784T .....	254	E42-133 .....	261	E45-274 .....	280
E40-785T .....	254	E42-135 .....	265	E45-279 .....	280
E40-786T .....	254	E42-136 .....	267	E45-281 .....	287
E40-790 .....	252	E42-138 .....	268	E45-282 .....	287
E40-791 .....	252	E42-140 .....	212	E45-283 .....	287
E40-792 .....	252	E42-141 .....	213	E45-284 .....	287
E40-793 .....	252	E45-001 .....	294	E45-285+ .....	286
E40-795 .....	252	E45-002 .....	294	E45-286 .....	286
E40-796 .....	252	E45-003 .....	294	E45-286+ .....	286
E40-807 .....	252	E45-004 .....	294	E45-288 .....	286
E40-809 .....	252	E45-005 .....	294	E45-288+ .....	286
E40-811 .....	252	E45-008 .....	294	E45-289 .....	286
E40-812 .....	262	E45-015 .....	294	E45-289+ .....	286
E40-813 .....	211	E45-025 .....	294	E45-300+ .....	284
E40-815 .....	211	E45-085 .....	73	E45-304 .....	284
E40-820 .....	262	E45-102 .....	275	E45-304+ .....	284
E40-823 .....	262	E45-103 .....	275	E45-306 .....	284
E40-839 .....	259	E45-104 .....	275	E45-306+ .....	284
E40-840 .....	259	E45-105 .....	275	E45-307 .....	284
E40-841 .....	259	E45-106 .....	275	E45-307+ .....	284
E40-842 .....	259	E45-111 .....	276	E45-310+ .....	282
E40-843 .....	259	E45-112 .....	276	E45-312/4 .....	282
E40-844 .....	259	E45-113 .....	276	E45-312/6 .....	282
E40-850 .....	258	E45-115 .....	277	E45-312/8 .....	282
E40-860 .....	258	E45-116 .....	277	E45-313/4 .....	282
E40-888 .....	258	E45-117 .....	277	E45-313/6 .....	282
E40-891 .....	258	E45-118 .....	277	E45-313/8 .....	282
E40-892 .....	258	E45-119 .....	277	E45-314+ .....	282
E40-893 .....	258	E45-121 .....	276	E45-316+ .....	282



CAT.-NO. ....	PAGE	CAT.-NO. ....	PAGE	CAT.-NO. ....	PAGE
E45-318+	282	FS13227	238	IRIS-1000	107
E45-324+	282	FS13228	238	IRIS-2000	107
E45-325+	287	FS13239	236	KE51800	232
E45-326+	282	FS13240	236	KE51900	232
E45-328	285	FS13241	236	KE51902	232
E45-328+	282	FS13242	236	KE52020	232
E45-330	284	FS13243	236	KE52300	232
E45-330+	283	FS13244	237	KE52500	232
E45-331	283	FS13246	236	KE52510	232
E45-332	283	FS13247	236	KE55000	232
E45-333	283	FS13261	236	KE55010	232
E45-334	283	FS13265	236	KE55030	232
E45-335	283	FS17000	237	KE55049	232
E45-336	283	FS17001	237	KE55081	232
E45-336B	285	FS17005	237	KE55083	232
E45-337	287	FS17151	236	KE55084	232
E45-338	283	FS17157	238	KE55088	232
E45-339B	287	FS17160	236	KE55200	232
E45-351	283	FS17161	236	KE55210	232
E45-361	283	FS17162	236	NO. 2820	26
E45-410	279	FS17163	236	S/1002/GB	268
E45-411	279	FS17165	236	SP20340	229
E45-412	279	FS18039	238	SP20341	229
E45-413	279	FS18105	238	TP15423	235
E45-414	279	FS18210	238	TP15561	235
E45-415	279	FS18216	238	TP15565	235
E45-420	278	FS18219	238	TP15611	235
E45-430	278	FS18227	238	TP15613	235
E45-434	279	FS18228	238	TP15615	235
E45-435	279	FS18259	236	TP25011	235
E45-437	279	FS18292	239	TP25070	235
E45-441	279	FS19078	238	TP25071	235
E45-442	279	FS19079	238	TP25315	235
E45-512	281	HB02055	268	TP25334	235
E45-520	281	HB02150	268	TP25400	235
E45-521	281	HB02210	268	TP25401	235
E45-522	281	HB02400	268	TP25411	235
E45-523	281	HB02701	268	TP25435	235
E45-524	281	I.O-1000	187	TP30093	234
E45-525	281	ID2180.2	242	TP30236	234
E45-526	281	ID2180.4	242	TP30430	234
E45-531	281	ID2180.6	242	TP30440	234
E45-535	281	ID2180.9	242	TP30441	234
E45-536	281	ID2182.2	242	TP30443	234
E45-555	281	ID2185.2	242	TP30450	234
E45-556	281	ID2186.4	240	TP30466	234
E45-817	292	ID2188.4	240	TP30467	234
E45-825	292	ID2192.2	242	TP30469	234
E45-827	292	ID2192.7	242	TP30567	235
E45-882	292	ID2192.9	242	TP30583	234
E45-883	292	ID2193.1	242	TP30590	234
E45-884	292	ID2193.6	242	TP35201	235
E45-885	292	ID2407.1	242	TP35203	235
E45-886	292	ID2407.2	242	TP35251	235
E45-887	292	ID3131.0	240	TP35253	235
E45-888	292	ID3131.1	240		
FS00393	238	ID3133.0	240		
FS07252	237	ID3135.1	240		
FS07253	237	ID3161.0	240		
FS07699	238	ID3207.0	240		
FS07820	238	ID3207.1	240		
FS07825	238	ID3272.2	240		
FS08113	238	ID3272.4	240		
FS09911	237	ID3272.6	240		
FS09960	237	ID3272.8	240		
FS09961	237	ID3276.1	240		
FS13160	236	ID3276.5	240		
FS13161	236	ID3276.6	240		
FS13225	238	ID3276.8	240		



# NOTES

A large, curved, dashed gray line forms a semi-circle on the right side of the page, enclosing a series of horizontal dotted lines for writing notes.





**Precision Medical Specialities GmbH**  
Kreuzstraße 5 · D-78532 Tuttlingen  
PO Box 4607 · D-78511 Tuttlingen

Fon: +49 (0) 74 61 / 13 13 1 + 13 14 1  
Fax: +49 (0) 74 61 / 76 69 8

[info@pms-tuttlingen.de](mailto:info@pms-tuttlingen.de)  
[www.pms-tuttlingen.de](http://www.pms-tuttlingen.de)