Cataract Instruments
Keratorefractive Instruments
Vitreoretinal Instruments
Speciality Products
Sterilising Equipment
Basic Eye Instruments
Titanium Eye Instruments
Cataract Instruments
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Index
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CD

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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
Classic quotes in celebration of PMS’s 20th 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. Peters

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

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 Schnekenburger (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 20th 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.
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 1st, 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.
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

Tuttlingen, home of the instrument making industry for almost 200 years.
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**: WAEL 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
- **HONG KONG**: MILVERTON LIMITED, Tsimshatsui, Kowloon
- **HUNGARY**: OPHTALMIC PRODUCT CENTER LTD., Budapest
- **INDONESIA**: PT. AJIANGUANG 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
- **KOREA, SOUTH**: MEERE TECHNOLOGY CO. LTD., Seoul
- **LEBANON**: HAGE MEDICAL S.A.R.L., Dora, Beirut
- **MALAYSIA**: SURGICAL IMPLANTS AND APPLIANCES, Kuala Lumpur
- **PERU**: GLATT S.A., Surco, Lima
- **PHILIPPINES** --> **SINGAPORE**
- **POLAND**: ELITE SP. ZO.O., Warsaw
- **PORTUGAL**: PRODULAB LDA., Lisbon
- **SAUDI ARABIA**: CIAME MEDICAL DIVISION, Jeddah
- **SINGAPORE**: SURGIPRO PRIVATE LIMITED
- **SPAIN**: BIOLUX S.A., Vigo
- **SWEDEN**: PREISLER INSTRUMENT AB, Lund
- **SYRIA**: KINDA COMMERCIAL COMPANY, Damascus
- **TAIWAN**: CLINICU INC., Juonghe City, Taipei
- **THAILAND**: PS PROSEARCH COMPANY LTD., Bangkok
- **TUNESIA**: OPHTALMOCONSULT, Tunis
- **USA**: VOLKER INSTRUMENTS, Goleta (CA)
- **VIETNAM**: BMS CO. LTD., Hanoi
GENERAL TERMS AND CONDITIONS

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 worldwide 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.

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.

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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
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
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!
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:

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.
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- 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:
- Everything you need to know about the proper care and maintenance of microsurgical instruments please contact: www.A-K-I.org.
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:

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

Requirements of the standards/regulations must be complied with throughout the period of validity of this certificate. This will be ensured through regular monitoring by Bureau Veritas Certification.

Valid until: 22.10.2016
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


and guideline according to

Directive 93/42/EEC from June 14th, 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 strumenti chirurgici riutilizzabili di
Classe I sono conformi ai seguenti standard/norme


ed alle linee guida della
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**

**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

*also available on round titanium handle, please add “T” when ordering

---

**ECED0308F**
BLADE BREAKER, HANDLES & BLADES

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
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
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

Rycraft
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

McIntyre
Aspirating Handpiece
(autoclavable) Teflon, 7.5 cm
male/male Luer connectors
E20-881

ideal for smooth control of irrigation or maintenance of the anterior chamber
IOL & PHACO INSTRUMENTS

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

Sinskey 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

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

introduced in 1975 still
as popular as ever
**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

- **Westcott Tenotomy Scissors**
  - curved, large blades, blunt tips, 11.5 cm
  - E25-334 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

*also available on titanium handle, please add “T” when ordering*
**FORCEPS**

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

**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

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

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

*also available in titanium, see page 44*
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
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

*also available in titanium, see page 41,43,45
NEEDLE HOLDERS

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

Barraquer Needle Holders
13.5 cm
delicate jaws, 10 mm x 0.75 mm ideal for 9-0 to 6-0 sutures

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

curved jaws
"E35-231 without lock
"E35-233 with lock

*also available in titanium, please add “T” when ordering
**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.

---

**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 for E20-300 to E20-319 and Lieberman style aspirating speculae (side connectors)
- SIL-01005 for E20-741, E20-754 to E20-757

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

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**Type**

<table>
<thead>
<tr>
<th>Product No.</th>
<th>Id. (mm)</th>
<th>Wd. (mm)</th>
<th>Od. (mm)</th>
</tr>
</thead>
<tbody>
<tr>
<td>SIL-00301</td>
<td>0.3</td>
<td>0.1</td>
<td>0.5</td>
</tr>
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**DISPOSABLE PRODUCTS**

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

**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

- Highly absorbent sponge for removal of blood, fluids and cellular debris within the operating field
- Latex free
- Crystal clear K Resine material
- White polypropylene material
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.

WHY TITANIUM?

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.

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
**SPECIALITY TITANIUM 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

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**Salz Nucleus Splitter Forceps**
- Cross-action paddle style jaws,
- Textured external surfaces,
- 7.5 cm
- **E30-562T**
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
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
Fukasaku Phaco Splitter and Iris Pusher wedge shaped 90° inferior cutting edge, 12.0 cm

Fukasaku 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

Rosen E15-655T

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

Nagahara Phaco Chopper wedge shaped tip, 12.0 cm

Nagahara 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

Seibel 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
- Nagahara/Sinskey Phaco Spatula 13.0 cm E15-675T
- Masket Phaco Spatula 13.0 cm E15-676T
- Chang Phaco Chopper 13.0 cm E15-677T
- ideal for vertical and horizontal phaco chopping

ECED0308F
AKAHOSHI STYLE NUCLEUS SUSTAINERS

- Nucleus Sustainer microball tip, angled 1.5 mm, 12.0 cm  
  E15-660T°
  - to reduce the stress on the capsular bag and zonules

- Nucleus Sustainer olive shaped tip, angled 1.9 mm, 12.0 cm  
  E15-661T°
  - for stable nuclear support during prechopping

- Nucleus Ring Sustainer  
  1 mm dia. ring, angled 2.5 mm, 12.0 cm  
  E15-662T°
  - 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

° to support the nucleus during prechopping with the Akahoshi Style Prechoppers for counter prechop technique.
AKAHOSHI STYLE PRECHOPPERS

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

ECED0308F

TITANIUM EYE INSTRUMENTS
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

Koch
Paracentesis Fixation Forceps
grooved 0.1 mm tips, 11.0 cm
E30-240T
ideal toatraumatically hold the edge of the
paracentesis during topical anesthesia procedures

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.

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

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
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

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

FOLDABLE LENS FORCEPS

paddles effectively pick up lens for even folding
TYING & LENS HOLDING FORCEPS

Jaffe
Tying Forceps
4 mm platform,
10.5 cm
E30-446T straight
E30-447T curved

Tennant
Tying Forceps
6 mm platform,
10.5 cm
E30-448T straight
E30-449T curved

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

Faulkner
Soft Lens Holding
Forceps, angled
11 mm round jaws,
10.5 cm
E30-645T

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

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**

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

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

All tying platforms are covered with Tungsten Carbide.
NEEDLE HOLDERS

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

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

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

Barraquer (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

*E35-132T straight, with lock
*E35-133T curved, with lock

*also available in stainless steel, please delete “T” from cat. no. when ordering.
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.
CATARACT CLEAR CORNEAL SET

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

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's tissue plane

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

all cannulae are curved to a radius of 30 mm

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

gentle curve facilitates movement
along the contour of the globe with minimal tissue trauma
**EYE SPECULAE**

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

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

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

Solid blades keep eye lashes from entering the surgical field.

To evacuate fluid from the surgical side.
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
E10-516 16 mm ID
for clear cornea incision
for scleral tunnel incision

Fine-Thornton Phaco Fixation Ring
3/4 open swivel ring, multiple blunt teeth
E10-513T 13 mm ID
E10-516T 16 mm ID
for clear cornea incision
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
**CALIPER AND MARKERS**

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
stereile (box of 10)

**52-100**

can be used with any refractive/cornea marking instruments
**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**

**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*
**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

**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

**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.

**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

Fixation 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
**DISPOSABLE EYE KNIVES**

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

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

- **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

- **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

**For initial stab incision**

- 15°
- 30°
- 45°

**For 20GA vitreoretinal infusion port or paracentesis incision**

- 30°
- 45°
- 60°

**For smooth, true point micro sideport incision**

- 30°
- 45°
- 60°

**For accurate width clear cornea or sclera incision**

- 3°

Disposable knives, sterile, 6 per box

*Manufacturer: EAGLE LABS
Rancho Cucamonga, California, USA*
DISPOSABLE PHACO KNIVES

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

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

* 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

* Sideport Knives
  angled blade (double bevel)
  EG-5010 1.0 mm
  EG-5012 1.2 mm
  EG-5014 1.4 mm

for creating a smooth scleral shelf incision
for accurate width phaco incision
for bimanual phaco and micro cataract incision

for creating a self-sealing incision during bimanual phaco procedure

disposable knives, sterile, 6 per box

EAGLE LABS
Rancho Cucamonga, California, USA
**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

**Sapphire Clear Cornea Knives**
- angled, keratome 60° blade (4 cutting edges)
- E10-142 2.8 mm
- E10-143 3.0 mm
- E10-144 3.2 mm
- for accurate clear cornea incisions

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

**Sapphire Crescent Knives**
- angled, facet-free blade (bevel up)
- E10-191 1.5 mm
- E10-192 2.0 mm
- for scleral tunnel incisions

---

**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.

- Lightweight titanium handles have gnarling to aid secure grasping and holding during the procedure.

- Handles are spring action bayonet style for protection of the sapphire when not in use.

- When the plunger is pushed forward the knife is ready for surgery.
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

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

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

only models with width of 1.2 mm or less can be used for sideport incision
Do not use aggressive (alkaline) detergents or any kind of acid based products for cleaning the aluminium handle. Never use BSS for rinsing.

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:
  - 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!
### SAPPHIRE BLADES - BLADE HOLDER

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

<table>
<thead>
<tr>
<th>Blade Shapes</th>
<th>Width in mm</th>
<th>Removable Holder with Sapphire Blade</th>
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<tbody>
<tr>
<td>Lancet</td>
<td>2.8</td>
<td>E10-222</td>
</tr>
<tr>
<td></td>
<td>3.0</td>
<td>E10-223</td>
</tr>
<tr>
<td></td>
<td>3.2</td>
<td>E10-224</td>
</tr>
<tr>
<td>Keratome</td>
<td>2.8</td>
<td>E10-242</td>
</tr>
<tr>
<td></td>
<td>3.0</td>
<td>E10-243</td>
</tr>
<tr>
<td></td>
<td>3.2</td>
<td>E10-244</td>
</tr>
<tr>
<td>Tapered Spear</td>
<td>2.5/2.9</td>
<td>E10-252</td>
</tr>
<tr>
<td></td>
<td>2.5/3.2</td>
<td>E10-253</td>
</tr>
<tr>
<td></td>
<td>2.5/3.4</td>
<td>E10-254</td>
</tr>
<tr>
<td>Crescent</td>
<td>1.5</td>
<td>E10-291</td>
</tr>
<tr>
<td></td>
<td>2.0</td>
<td>E10-292</td>
</tr>
<tr>
<td></td>
<td>2.8</td>
<td>E10-293</td>
</tr>
<tr>
<td>Trapezoid</td>
<td>0.9/1.2</td>
<td>E10-270</td>
</tr>
<tr>
<td></td>
<td>1.3/1.5</td>
<td>E10-271</td>
</tr>
<tr>
<td></td>
<td>1.8/2.4</td>
<td>E10-272</td>
</tr>
<tr>
<td>Zaldivar Style</td>
<td>0.55/1.0</td>
<td>E10-281</td>
</tr>
</tbody>
</table>

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

- Choose your own handle and blade style

New

SAPPHIRE BLADES - BLADE HOLDER

- New for controlled clear cornea and sclera incision
- New for accurate clear cornea incision
- New for precise phaco incision
- New for smooth scleral shelf incision
- New for ultra small bimanual phaco incision
- New for anterior segment procedures, initial groove, side-port, sclera tunnel, clear cornea technique, etc.
DIAMOND KNIVES

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

**Diamond Phaco Knives**
- lancet shaped 60° blade (double edge)
  - E10-322 2.8 mm
  - E10-323 3.0 mm
  - E10-324 3.2 mm

**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

**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

**Diamond Tunnel Knives**
- crescent shaped (9 facet) blade
  - E10-391 1.5 mm
  - E10-392 2.0 mm

ECED0308F

for Clear Corneal and Scleral Incisions
Angled diamond knives in new titanium handle with bayonet mechanism.

Individual Designs and Special Mountings on Request.
**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

*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.
CARE PRODUCTS FOR DIAMOND KNIVES

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

- 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

Cannula tips of reusable maintainers are attached to 180 mm long silicone tubing with Luer-Lock adaptor.
ANTERIOR CHAMBER IRRIGATORS

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

supplied without instruments

for secure positioning of conventional cannulae and handpieces
DISPOSABLE IRRIGATING CYSTOTOMES

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, hydroelineation 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 TECHNIQUES

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

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

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.

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.
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.

**CAPSULOREXIS FORCEPS**

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

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

**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...

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

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 operation

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

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.*
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

Also available on pages 95, 107 and 131

NUCLEUS MOBILISATION INSTRUMENTS

CATARACT INSTRUMENTS
**NUCLEUS REMOVAL CANNULAE**

**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
**IRRIGATION AND ASPIRATION CANNULAE**

**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

**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

**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.**

**IRRIGATION**

**Aspiration**

**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

- **Aspirating Syringe (Disposable)**
  - with spring and LL cone, sterile (box of 10)
  - 300-03 3 ml
  - 300-05 5 ml

- **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
**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
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

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

ECED0308F
CATARACT (ECCE) SET

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
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E15-553  Sinskey 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
Cataract (ECCE) Set Add...

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

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

Miscellaneous Products Add
30601 Eye Spears, page 27
E45-113 Sterilising Tray
(see section)
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
118-275 disposable

Pearce
Nucleus Hydrodissector
25GA/0.5 x 20 mm tube,
angled 7 mm flattened tip
E20-205

Kellan
Hydrodissection/Hydroelineation Cannula
25GA/0.5 x 20 mm curved tube
E20-211 flattened blunt tip
for hydrodissection
E20-213 bevelled blunt tip
for hydroelineation

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.

disposable cannulae, sterile, 10 per box
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.

**Disposal Cannula**
25 mm tube, curved round tip
113-27 27GA/0.4 mm
113-30 30GA/0.3 mm

disposable cannulae, sterile, 10 per box
PHACO CHOICES - FIXATION RINGS

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

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.
**Phaco Choices - Eye Speculae**

**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

**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

**These speculae provide unobstructed access to the globe during phaco and other eye surgical procedures**
Diamond Phaco Knives
lancet shaped 60° blade
(double edge)
E10-322 2.8 mm
E10-323 3.0 mm
E10-324 3.2 mm

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

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

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.
<table>
<thead>
<tr>
<th>blade shapes</th>
<th>width in mm</th>
<th>removable holder with sapphire blade</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lancet</td>
<td>2.8</td>
<td>E10-222</td>
</tr>
<tr>
<td></td>
<td>3.0</td>
<td>E10-223</td>
</tr>
<tr>
<td></td>
<td>3.2</td>
<td>E10-224</td>
</tr>
<tr>
<td>Keratome</td>
<td>2.8</td>
<td>E10-242</td>
</tr>
<tr>
<td></td>
<td>3.0</td>
<td>E10-243</td>
</tr>
<tr>
<td></td>
<td>3.2</td>
<td>E10-244</td>
</tr>
<tr>
<td>Tapered Spear</td>
<td>2.5/2.9</td>
<td>E10-252</td>
</tr>
<tr>
<td></td>
<td>2.5/3.2</td>
<td>E10-253</td>
</tr>
<tr>
<td></td>
<td>2.5/3.4</td>
<td>E10-254</td>
</tr>
<tr>
<td>Crescent</td>
<td>1.5</td>
<td>E10-291</td>
</tr>
<tr>
<td></td>
<td>2.0</td>
<td>E10-292</td>
</tr>
<tr>
<td></td>
<td>2.8</td>
<td>E10-293</td>
</tr>
</tbody>
</table>

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.

**EXCELLENT BACK UP** for expensive diamond knives

New

Sterilising Tray E45-113 excellent for safe positioning of sapphire and diamond knives.

60° Sapphire blade is fully mounted in a stainless steel shaft with thread.
PHACO CHOICES - EZChange® HANDLES

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

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

Do not use acid or alkali detergents or any kind of abrasives for cleaning the aluminium handle.
Never use balanced salt solution for rinsing.
**PHACO CHOICES - EZChange® REMOVABLE TIPS**

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

- **Rosen Phaco Splitter**
  - E15-655R

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

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

- **Drysdale Nucleus Manipulator**
  - E15-465R

- **Chang Nucleus Manipulator**
  - E15-464R

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

- **“Connor Wand” Nucleus Manipulator**
  - E15-467R

- **Koch Phaco Chopper**
  - E15-657R

- **Seibel Phaco Chopper**
  - E15-669R

**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.

For detailed product description, please see page 34, 36 and 80.
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
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

**Nucleus Splitter/Completer**
- 1.5 mm dia ring shaped jaws, 12.2 cm
  - E30-572T the latest development, suitable for all prechopping techniques

**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

**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

**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

**Hybrid Prechopper**
- Hooked jaws with sharp angular edge, 12.2 cm
  - E30-569T
    - for initial split and prechopping nucleus (grades 1-4)

**Tip drawings of forceps are shown on page 38 and 39**
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+ Ultra 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
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 Viscoject® 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)

Viscoject® is a registered trademark of Medicel AG
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
  - used to split the nucleus in two parts

  **Kansas-Alfonso**
  - **Universal Nucleus Trisector**
    - angled semicircular blade with sharp cutting edges, 11.0 cm
    - 1.5 mm wide
    - E15-431T
    - 2.5 mm wide
    - E15-432T
    - used to divide the nucleus in three parts

  **Kansas-Alfonso**
  - **Universal Cutting Platform**
    - angled 10 mm solid blade, 11.0 cm
    - 2 mm wide
    - E15-433T
    - 3 mm wide
    - for use with E15-432T
    - 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
  - 2 mm wide
  - E20-242
  - 3 mm wide
  - E20-243
  - ideal to remove nuclear fragments

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

- **PHACO CHOICES - MANUAL FRACTURE INSTRUMENTS**
  - 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.
PHACO CHOICES - MANUAL FRACTURE INSTRUMENTS

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.
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

Cortex Aspirating 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

Bimanual I/A Cortex Removal System consisting of 1 piece each 21GA/0.8 mm

Irrigating cannula, dual 0.4 mm side ports,
Aspirating 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

*Manufacturer:
EAGLE LABS
Rancho Cucamonga, California, USA

*disposable products, sterile, 10 per box
PHACO CHOICES - TODAY’S GLAUCOMA INSTRUMENTS

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
**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

**Lunzy-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.

**Schott Lid Speculum**

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

E40-001 Fenestrated

E40-003 Solid blades

**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 EZ® Load® Sterilisation Container

E45-111 EZ® Wash® Sterilising Tray
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.

NOTE:
This instrument is ineffective on an eye which has not been properly medicated preoperatively.
**PHACO CHOICES - SMALL PUPIL MANAGEMENT**

**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.

---

**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

- Ultrata 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

**Biotech Vision Care Ltd.**
Kratraj, Gandhinagar
India

**Video available**
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.

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.
PHACO CHOICES - POSTERIOR CAPSULE RUPTURE

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®
I/A Tip System
for easy and effective cortex removal

**EZLock®**
I/A Handpiece
ergonomically handle with
male/female Luer slip fittings,
compatible with all I/A and phaco systems
E20-400EL

**EZLock®**
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

**EZLock®**
Aspirating Tips without
silicone irrigation sleeve
E20-403ELS straight
E20-403ELA angled 45°
provides tight seal around wound
and anterior chamber stability

**EZLock®**
Silicone Irrigation Sleeve
non-sterile (pack of 5)
E20-403ELI

**EZLock®**
I/A Tip curved
E20-404EL
for initial
cortex removal

Buerki Innomed AG,
Switzerland
**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.

**EZFit**

Luer Adaptor
2 x male fittings
E20-421EF reusable
191-01 disposable (box of 50)

**EZFit**

Luer-Lock Adaptor
2 x female connectors
E20-422EF

adaptors to fit any conventional
cannulae (reusable and disposable)

**EZLock**

I/A Tip angled 45°
E20-405EL
for peripheral cortex removal

**EZLock**

I/A Tip angled 90°
E20-406EL
for peripheral and superior cortex removal

**EZLock**

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

**MONOMANUAL INTERCHANGEABLE I/A TIP SYSTEM...**...makes the monomnaul 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.

**EZFit**

Luer-Lock Adaptor
female/male fittings
E20-420EF

reusable

191-01 disposable (box of 50)

**EZFit**

Luer-Lock Adaptor
2 x female connectors
E20-422EF

adaptors to fit any conventional
cannulae (reusable and disposable)

**EZFit**

Luer Adaptor
2 x male fittings
E20-421EF reusable
191-01 disposable (box of 50)

**EZFit**

Luer-Lock Adaptor
2 x female connectors
E20-422EF

adaptors to fit any conventional
cannulae (reusable and disposable)
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.

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
BIMANUAL ORIGINAL I/A SYSTEM

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

**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

**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

**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

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

For standard reusable and disposable cannulae
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 top open port
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, exchangeable 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...

• 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 top open port

BSD 500 system with rough aspirating tip

BSD 510 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

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

Buerki Innomed AG,
Switzerland
Your favourite Phaco Chopper is now available with irrigation!

- **Nichamin Irrigating Chopper**
  "Quick Chop", wedge shaped tip

- **Rosen Irrigating Chopper**
  wedge shaped tip, blunt front end

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

- **Aspirating Handpieces**
  curved 17 mm round cannula, smooth tip, 0.35 mm top port
  E20-450S20 20GA/0.9 mm
  E20-450S18 18GA/1.2 mm

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

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.

<table>
<thead>
<tr>
<th>Product No.</th>
<th>Description</th>
<th>GA</th>
<th>OD (mm)</th>
<th>ID (mm)</th>
<th>Port diameter (mm)</th>
<th>Flow rate*</th>
</tr>
</thead>
<tbody>
<tr>
<td>E20-483</td>
<td>Nichamin, front port</td>
<td>20</td>
<td>ø0.9 mm</td>
<td>ø0.5 mm</td>
<td>1 x ø 0.5 mm</td>
<td>52/min</td>
</tr>
<tr>
<td>E20-485</td>
<td>Rosen, front port</td>
<td>20</td>
<td>ø0.9 mm</td>
<td>ø0.5 mm</td>
<td>1 x ø 0.5 mm</td>
<td>52/min</td>
</tr>
<tr>
<td>E20-486</td>
<td>Nagahara 60°, front port</td>
<td>20</td>
<td>ø0.9 mm</td>
<td>ø0.5 mm</td>
<td>1 x ø 0.5 mm</td>
<td>55/min</td>
</tr>
<tr>
<td>E20-487</td>
<td>Nagahara 60°, dual side ports</td>
<td>20</td>
<td>ø0.9 mm</td>
<td>ø0.5 mm</td>
<td>2 x ø 0.5 mm</td>
<td>50/min</td>
</tr>
<tr>
<td>E20-489</td>
<td>Nagahara 90°, front port</td>
<td>20</td>
<td>ø0.9 mm</td>
<td>ø0.5 mm</td>
<td>1 x ø 0.5 mm</td>
<td>55/min</td>
</tr>
<tr>
<td>E20-493</td>
<td>Nichamin, front port</td>
<td>18</td>
<td>ø1.2 mm</td>
<td>ø0.8 mm</td>
<td>1 x ø 0.8 mm</td>
<td>75/min</td>
</tr>
<tr>
<td>E20-495</td>
<td>Rosen, front port</td>
<td>18</td>
<td>ø1.2 mm</td>
<td>ø0.8 mm</td>
<td>1 x ø 0.8 mm</td>
<td>75/min</td>
</tr>
<tr>
<td>E20-496</td>
<td>Nagahara 60°, front port</td>
<td>18</td>
<td>ø1.2 mm</td>
<td>ø0.8 mm</td>
<td>1 x ø 0.8 mm</td>
<td>75/min</td>
</tr>
<tr>
<td>E20-497</td>
<td>Nagahara 60°, dual side ports</td>
<td>18</td>
<td>ø1.2 mm</td>
<td>ø0.8 mm</td>
<td>2 x ø 0.8 mm</td>
<td>70/min</td>
</tr>
</tbody>
</table>

*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

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

Video available

for use with
AMO Sovereign
B&L Millenium
Fritz Ruck Pentasy
CLEANING AND MAINTENANCE

- Monomnal 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 destilled 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 adapter 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
• Monomanual 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**

**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

- **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

- **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

- **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

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 synechiae, performing small pupil iridotomies and enlargement of the capsular bag

Alio II
Micro Capsulorhexis/Iridectomy Forceps
23GA/0.6 x 22 mm curved shaft, very fine grasping tips, 14.0 cm
*R30-623S

ideal for easy pick up of the iris, for creating and grasping the capsular tag and performing the capsulorhexis in one maneuver

Fine-Ikeda
Micro Capsulorhexis Forceps
23GA/0.6 x 17 mm curved shaft, extra fine tips, 14.0 cm
*R30-624S

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
*R30-625S

for secure grip of the anterior capsule in the presence of viscoelastics

The PMS range of 23GA/0.65 mm MICS Instruments is also available with EZ Change® removable tips.

<table>
<thead>
<tr>
<th>Brief Description</th>
<th>Product No. (complete)</th>
<th>Product No. (tip only)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alio Scissors</td>
<td>E25-623S</td>
<td>E25-623R</td>
</tr>
<tr>
<td>Alio II Forceps</td>
<td>E30-623A</td>
<td>E30-623R</td>
</tr>
<tr>
<td>Fine-Ikeda Forceps</td>
<td>E30-624F</td>
<td>E30-624R</td>
</tr>
<tr>
<td>Ikeda II Forceps</td>
<td>E30-625I</td>
<td>E30-625R</td>
</tr>
</tbody>
</table>
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

Bechert-McPherson
Lens Holding Forceps
angled 10 mm smooth jaws
with platform, 10.5 cm
*E30-465

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

Blaydes Style
Lens Forceps
narrow smooth jaws, 11.0 cm
*E30-623
forceps grasping approximately half of lens optic for easy implantation

Gold-plated handles for easy identification.

*also available in titanium, please add “T” to cat. no.
**IOL INSTRUMENTS - SOFT LENS FORCEPS**

**HOLD**

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

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

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

**PICK UP**

Faulkner Lens Holding Forceps
angled 11 mm rounded
smooth jaws, 10.5 cm
E30-645

**FOLD**

**TRANSFER**

*also available in titanium, please add “T” to cat. no.*
Foldable Lens Inserters are best to implant acrylic lenses through a small incision.

**Buratto Lens Forceps**
- angled 8 mm shanks,
- biconvex smooth jaws,
- 10.5 cm
- E30-646T

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

**Ernest-McDonald Soft Lens Insertion Forceps**
- cross-action design, angled 15 mm shanks,
- low profile biconvex smooth jaws,
- 10.0 cm
- E30-663T

**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.

**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.

**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.

**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.

**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

designed to fold today's soft IOLs

extended flat tips are useful to implant superior haptic.
The EZ way to implant...

**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

The **EZject®** Foldable Lens Injectors can be used with the Medicel ViscoJet™ Cartridge Sets #LP604235/#LP604240M and other injector cartridge systems.

**VISCOJECT™ CARTRIDGE SETS FOR 1-PIECE LENSES**
- **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**

**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.
**INSTRUCTIONS FOR LOADING**

1. Open cartridge and fill the loading chamber with viscoelastic.
2. Place lens into the open cartridge. Adjust lens always in the axis of the cartridge.
3. Use E30-651LF forceps or E30-651LM pusher to gently press the centered lens into the tube.
4. 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.

**Video available**

OvalGlide™ and MicroGlide™ are registered trademarks of Medical AG
innovative IOL injection system

EZject II Lens Injector
lightweight titanium handle with single hand plunger mechanism
E30-652T
for 1-piece and 3-piece Acrylic IOLs using the Monarch II A, B and C cartridges

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

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 EZpect Lens Injectors E30-652T and E30-653T

Patent pending

injection of 1-piece AcrySof IOL through a 2.2 mm micro incision

Gold tip for good visibility through the cartridge

Specially designed handle with finger rest and removable thumb ring allows firm grip and precise control of the implantation procedure.

AcrySof and Monarch are registered trademarks of Alcon Laboratories, Inc.
THE BENEFITS OF MODERN CATARACT SURGERY

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.
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.

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!

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

Neyyas
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

Sinskey 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
IOL INSTRUMENTS - LENS EXPLANTATION

Just got easier!

**EZ Cut**
- 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

**EZ Cut**
- 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

**EZ Cut**
- 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

**EZ Cut**
- Osher IOL Cutting Scissors
  - angled to side, 8 mm serrated blades, blunt tips, 10.0 cm
  - E25-466
  - for “crisscross technique” IOL removal
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 held 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.
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
- 19GA/1.1 mm curved shaft

E30-655T

**Dr. Schmidt**

Capsular Tension Ring PMMA with eyelet, total diameter 11.0 mm to 13.0 mm, disposable (1 unit)

**EZject®**

Tension Ring Manipulator/Forceps
- 20GA/0.9 mm curved shaft, disc shaped lower jaw with hole to accommodate the manipulator, 15.0 cm

E30-655S stationary tip
E30-655N removable tip

The manipulator can be used independently and in combination with the disc as a forceps.

necessary in modern cataract surgery

ideal to stabilize the capsule in cases of damaged or missing zonules, luxation of IOLs and zonulolysis
**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.

**Tension Ring Injector**
- Lightweight titanium handle with single hand plunger mechanism
- 19GA/1.1 mm curved shaft

**Dr. Schmidt**
- Capsular Tension Ring PMMA with eyelet, total diameter 11.0 mm to 13.0 mm, disposable (1 unit)

**Tension Ring Manipulator/Forceps**
- 20GA/0.9 mm curved shaft, disc shaped lower jaw with hole to accommodate the manipulator, 15.0 cm

**IOL INSTRUMENTS - INTRAOCULAR NEEDLE INJECTOR**

**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

**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**
**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.

**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.

**New**

- **Universal Trephine Handle**
  - adjustable spring arms to fit short trephine blades E40-530S+
  - **E40-531**

- **Universal Hub Diameter**
  - 10 mm dia.

- **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

---

*E40-530L+ and E40-530S+ series of trephine blade are NOW available in disposable, sterile version upon request!*
**Corneal Trephine Instruments**

- **E40-530S+** size available in 0.25 mm increments from 6.0 mm through 9.5 mm dia.
- **E40-533**

**“Free Hand” corneal graft trephination**

*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.

**Trehpine Blade Holder**

- Adjustable, fits with the series of short trephine blade E40-530S+

**Corneal Trephine Punch**

- With Teflon base plug, to fit E40-533 Trephine Blade Holder

**Replacement Base Plug**

- (15 mm x 9 by 4 mm depth)

**Corneal Transplant Block**

- (22 mm dia. x 8 mm depth)

**Base Plug Shield**

- (27 mm dia. x 22 mm depth) fits over base plugs E40-542 and E40-543

**Large Teflon Cutting Block**

- For universal use

**Internal surface has multiple radii shape to closely approximate to the corneal scleral profile**

**“Free Hand” corneal graft trephination**

**By turning the back of the handle you can raise or lower the mm size that the handle accommodates.**

**supplied without E40-533 handle**

---

**ECED0308F**
All Trephines and Punches include a marking pen and are supplied completely assembled and ready for use.

The Hessburg Barron Vacuum Trephine for cutting the recipient cornea is a single use, sterile instrument for lamellar or penetrating keratoplasty.

A precise calibrated rotating mechanism allows the surgeon to advance the blade depth 0.25 mm with each 360° rotation.

Not for sale in the UK and USA.
**CORNEAL MARKERS**

**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

**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

**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

**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*
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

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 SCISSORS**

**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

**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**

<table>
<thead>
<tr>
<th>Blade Size</th>
<th>Small</th>
<th>Medium</th>
<th>Large</th>
<th>Xlarge</th>
</tr>
</thead>
<tbody>
<tr>
<td>Length</td>
<td>8.0 - 9.0</td>
<td>10.0 - 11.5</td>
<td>14.5 - 16.0</td>
<td>17.5+</td>
</tr>
<tr>
<td>Aperture</td>
<td>4.5 - 5.5</td>
<td>5.5 - 6.0</td>
<td>7.0 - 9.0</td>
<td>10.0+</td>
</tr>
</tbody>
</table>

*Aperture angle = blade length from angle, therefore cutting edge*
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.
CORNEAL SUTURE FORCEPS

Donor Cornea sutured in place using...  

...double continuous
acc. to F. Hoffmann (1978)

...single continuous

...single interrupted
suture technique

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 corneascleral fixation,
grasping conjunctiva and fine suture tying

Pauifique
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

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.
### CORNEAL TRANSPLANT SURGERY SET

Instrument sets are presented as guidelines only

<table>
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<tr>
<th>Item</th>
<th>Description</th>
<th>Page</th>
</tr>
</thead>
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<td>E42-120</td>
<td>CORNEAL TRANSPLANT SET complete, consisting of the following:</td>
<td></td>
</tr>
<tr>
<td>E30-902</td>
<td>Halstead Mosquito Forceps</td>
<td>16</td>
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<tr>
<td>E30-934</td>
<td>Dieffenbach Bulldog Clamp</td>
<td>16</td>
</tr>
<tr>
<td>E30-965</td>
<td>Baby Jones Towel Clamp</td>
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<td>E20-001</td>
<td>Bishop-Harmon Irrigator</td>
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<td>E20-030</td>
<td>Rycroft Irrigating Cannula</td>
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<td>E40-104</td>
<td>Liebermann Eye Speculum</td>
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<td>E40-618</td>
<td>Scleral Fixation Ring</td>
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<td>E10-548</td>
<td>Anis Host Bed Marker</td>
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<td>E10-522+</td>
<td>Optic Zone Marker</td>
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<td>E40-530N+</td>
<td>Trephine Blade</td>
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<td>E40-532</td>
<td>New Trephine Handle</td>
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<td>E10-114</td>
<td>Sapphire Universal Knife</td>
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<td>E25-100</td>
<td>Corneal Transplant Scissors</td>
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<tr>
<td>E25-101</td>
<td>Corneal Transplant Scissors</td>
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<td>E25-313</td>
<td>Jaffe Micro Stitch Scissors</td>
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<td>E25-333</td>
<td>Westcott Tenotomy Scissors</td>
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<td>E30-081</td>
<td>Harms Corneal Forceps</td>
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<td>E30-093T</td>
<td>Maumanee Corneal Forceps</td>
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<tr>
<td>E30-106</td>
<td>Bishop-Harmon Forceps</td>
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<tr>
<td>E30-450</td>
<td>Castroviejo Suture Forceps</td>
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<tr>
<td>E30-460</td>
<td>McPherson Tying Forceps</td>
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<td>E35-251</td>
<td>Barraquer Needle Holder</td>
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<td>E35-133</td>
<td>Castroviejo Needle Holder</td>
<td>25</td>
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<tr>
<td>E40-682</td>
<td>Paton Spatula &amp; Spoon</td>
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<tr>
<td>E10-690T</td>
<td>Maloney Keratometer</td>
<td>160</td>
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donor cornea being placed on the host bed

**FOR CORNEAL TRANSPLANT SURGERY ADD**

- A7034 Hessburg-Barron Vacuum Trephine, page 140
- A7048 Barron Donor Marking Punch, page 140
- E40-5305+ Corneal Trephine Blade, page 139
- E40-533 Trephine Blade Holder, page 139
- E40-540 Corneal Trephine 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

**FOR CORNEAL SUTURING ADD**

- E30-411 St. Martin’s Micro Suture Forceps, page 145
- E30-418 Paufique Universal Suture Forceps, page 145
- E35-211 Barraquer Micro Needle Holder, page 145

**MISCELLANEOUS PRODUCTS**

- 37-405 PVA Eye Spears, page 155
- 52-100 Ink Marking Pen, page 151
- EZWash® Sterilising Trays, see section
**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*
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).

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.

Kershner Style
Reversible LASIK Speculum
solid 14 mm blades, 7.7 cm
E40-105 stainless steel
E40-105T titanium

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 Instruments

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
LASIK 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
LASIK INSTRUMENTS

**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

- formed jaws follow the curvature of the cornea
- spatulated tips and beveled edges to enter, lift and smooth the flap
- smooth inside jaw surfaces foratraumatically grasping the flap

**Perone**
LASIK Flap Forceps
curved, extra delicate
2 mm ring tips,
11.0 cm
E30-332T

ideal for atraumatically grasping and securely lifting the flap

**Manche**
LASIK Flap Forceps
curved jaws, oval tips, smooth inside surfaces, 11.0 cm
E30-333T
used to manipulate the flap with minimal risk of tearing and trauma

**Hersh**
LASIK Retreatment Forceps
curved shafts, U-shaped 3 mm spread, double notched tips,
11.0 cm
E30-335T

used for controlled peeling of the flap from the stroma

Flap Forceps - have specially designed jaws with smooth inner surfaces to easily enter, grasp, elevate and smooth the flap.
**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

**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

---

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
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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
DISPOSABLE LASIK PRODUCTS

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 Spearspre-expanded, broad tip, sterile (20 packs of 2)
37-800
to remove excess fluid and aligning and smoothing the corneal flap

PVA LASIK Drain Ringsterile (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

photographs do not correspond to the actual size
EZWash\textsuperscript{\textregistered} Sterilising Tray without silicone mat and instruments E45-113

**PRK INSTRUMENT SET**

- **BASIC PRK INSTRUMENT SET**
  - E42-123
    - 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

- **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
LASIK INSTRUMENT SET

Incisional and ablative corneal procedures

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

**EZWash® Sterilising Tray**
without instruments
E45-113

**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 Buratto Flap Protector, page 152
- E20-522 Vidaurri LASIK Cannula, page 154
- E30-330T Mendez LASIK Forceps, page 153
**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 Epithelial Flap Repositor**
curved, blunt tip with smooth edges, 10.5 cm
E15-317
...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 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

**LASEK Epithelial Spatula**
angled, extra delicate tip, 10.5 cm
E15-313
...is performed in the pre-cut margin of the epithelium

**LASEK Epithelial Micro Hoe**
semi-circular 2 mm wide tip, 10.5 cm
E15-315
...is gently detached and folded over to the 12 o’clock position

**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
"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 Trephine
- 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
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

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

A simple method of marking the steep meridian is with the Bores axis marker aligned in the Mendez degree gauge.

*also available on titanium round handle, add “T” to cat. no.
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

“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

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
**LRI INSTRUMENTS**

**LRI Degree Gauge** - are designed to determine Limbal Relaxing Incision axis. Multiple fixation teeth are ideal to stabilise the globe during marking.

- **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 INSTRUMENTS**

**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](image)

**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/Degree Gauge](image)

**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

![Toric IOL/LRI Marker](image)
**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

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
for more information visit
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.
MicroKer® CORNEAL RINGS

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, Projekt-Hochlinie Promenade 28-30, Bechum D-44866, Germany; +49-2327-883500; fax: +49-2327-88171; e-mail: jk@krumeich.de.

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

MATERIAL Ceralloy-Ti made from an alloy of
- 69% Cobalt
- 24% Steel
- 4.5% Molybdenum
- 2% Titanium

In the eyes where the ring was implanted, the immune rejection rate was significantly lower than in the control group.

— Jörg H. Krumeich, MD
**IMPLANTABLE CONTACT LENS INSTRUMENTS**

**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
**ICL® is a trademark of STAAR Surgical Company**

- **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**
**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

**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

**ICL® is implanted into the posterior chamber**  
Picture courtesy: STAAR Surgical Company

**ICL® is a trademark of STAAR Surgical Company**

**for Iridectomy add**

**E25-621Z**  
Kershner Micro Iridectomy Forceps  
rotatable 360° tip, 23GA/0.6 x 22 mm curved shaft,  
vertical cutting 2.0 mm curved blades with sharp tips, 15.0 cm

**E25-623K**  
for iris pickup

**EZChange®**  
Kershner Micro Iridectomy Forceps  
rotatable 360° tip, 23GA/0.6 x 22 mm curved shaft, 15.0 cm

**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

**for easy iris cutting through side port incision**

**fold for Iridectomy**  
Picture courtesy: STAAR Surgical Company

**Instrument sets are presented as guidelines only**
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

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:

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

New
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.

For punching the endothelial donor button:
- A7048 8.0 mm
- A7050 8.5 mm
- A7052 9.0 mm
- A7053 9.5 mm

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.

more information on page 140

A7034 7.5 mm
A7036 8.0 mm
A7038 8.5 mm
A7040 9.0 mm

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
DSAEK INSTRUMENTS

for patient preparation

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 Decement’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
DSAEK INSTRUMENTS

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

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
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

NOTE:
The medical information is not intended as instructional materials for
the performance of the demonstrated procedures or techniques.
PMS offers one of the widest ranges of stainless steel and special alloy products for a unique engineering miracle: THE HUMAN EYE.

PMS EZGrip®, EZChange® and EZCut® 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.
Welcome to the PM S World of Vitreoretinal Products.

PM S offers one of the widest ranges of stainless steel and special alloy products for a unique engineering miracle: THE HUMAN EYE.

PMS, and 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.

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We invite you to learn about all the outstanding products we have to offer.

20GA/0.9 MM EZCut® STANDARD SCISSORS

- **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

- **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

<table>
<thead>
<tr>
<th>Type</th>
<th>Blade Length</th>
</tr>
</thead>
<tbody>
<tr>
<td>Straight</td>
<td>2.9-3.0 mm</td>
</tr>
<tr>
<td>Curved</td>
<td>2.9-3.0 mm</td>
</tr>
<tr>
<td>Angled</td>
<td>1.5-3.0 mm</td>
</tr>
<tr>
<td>Vertical</td>
<td>1.6-1.9 mm</td>
</tr>
</tbody>
</table>

Scissors have sharp tipped blades, unless otherwise indicated.
**Crocodile Forceps**
straight, serrated jaws
*E30-672S
for general purpose membrane grasping

**Hockeystick Forceps**
angled 45° grooved jaws
*E30-679S
for membrane peeling and stripping

**Pic Forceps**
angled 45° smooth jaws
*E30-681S
for grasping fine membranes adherent to the retina surface

**Side Gripping Forceps**
angled 45° jaws (vertical action)
*E30-683S
for grasping peripheral membranes along the equator

**Foreign Body Forceps**
three fine prongs
*E30-686S
for foreign body removal

**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

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**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
20GA/0.9 MM EZGrip® STANDARD ILM FORCEPS

excellent for “maculorhexis” and ILM peeling

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
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
CARE AND CLEANING ACCESSORIES

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 Adapter
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 1.1 mm/45° blade
E25-605RK

tips and handle sold singly
**20GA/0.9 MM EZChange® STANDARD FORCEPS TIPS**

- **Crocodile Forceps Tip**
  - Serrated 3.3 mm jaws
  - E30-672R

- **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

**VITREORETINAL INSTRUMENTS**

- **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

**Instruments tips are coloured for easier identification:**
- **BLUE** for forceps and
- **MAGENTA** for scissors

**Titanium “squeeze handle” with thread for removable instrument tips, 10.0 cm**
- E10-010T

**20GA/0.9 MM EZChange® STANDARD FORCEPS TIPS**

**Tips and handle sold singly**
**23GA/0.65 MM EZChange® MICRO INSTRUMENT TIPS**

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

**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*

excellent 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
**20GA/0.9 MM EZChange® IOFB FORCEPS AND MAGNET**

**Foreign Body Forceps**
- three 1.9 mm long arms, slightly angled inwards
  - E30-693F removable tip
  - E30-693S stationary tip

**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

**Tagawa**
Precision Magnetic Probe
- gold plated, 13.3 cm
  - 1.0-1000

**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

**Intraocular Foreign Body Magnet**
for atraumatic removal of non-encapsulated metallic invaders

sleek 19GA/1.1 mm probe can be utilized with a limbal, open sky and/or pars plana approach
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 destilled 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.
- 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.
- 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.

**CARE AND HANDLING TIPS**

**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.

**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.
CARE AND HANDLING TIPS

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.

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.

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.

EZWash® Sterilising Tray E45-112 (supplied without instruments)
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
fits Ocutome, Alcon and B&L system

* supplied without Monofilament
ILLUMINATED CHANDELIER AND INFUSION CANNULAE

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 surgeon's 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

*5037

Chandelier illumination ... gives excellent illumination and visualization, and it allows one to perform a proper bimanual vitrectomy ...

— Amar Agarwal, MS, FRCS, FRCOphth, and colleagues
Removable Instrument Tips

- 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.

Tips and handle sold singly

Aluminium Handle for removable tips E15-100AB

Other colours see pages 94 & 130

Contact PMS for further information.

Also available with stationary tips in all titanium (*) and/or stainless steel.
Membrane Spatula Tip
angled 130° 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.

Aluminium Handle
for removable tips
E15-100AB
PMS® picks, rakes, and spatulas can meet all your needs for easy, controlled membrane manipulation and peeling around the retina surface.

Membrane Spatula Tip
angled 130° blunt spatula
*E15-363R
for blunt dissection and delamination of membranes from the retina surface.

Membrane Pick Tip
angled 130° blunt spatula
*E15-373R
ideal for blunt dissection and epiretinal membrane peeling.

PMS EZChange® picks, rakes, and spatulas can meet all your needs for easy, controlled membrane manipulation and peeling around the retina surface.
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.

**20GA/0.9 MM REUSABLE BACKFLUSH 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

**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 with Luer-Lock cone
add “L” to cat. no., e.g. E20-710L

** 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.

**E20-731LL** Luer-Lock male
E20-731LM Luer male

**E20-741LL** male Luer-Lock and hose end
E20-741LM male/male Luer cone

** also available sterile, 5 per box

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

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

supplied without cannula

** also available sterile, 5 per box
CLEANING AND HANDLING INSTRUCTIONS

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

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.

MANUAL CLEANING
1) Wash the handpiece and backflush reservoir thoroughly, rinse well and allow to dry before reassembling. 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.

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.

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 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.

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.
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 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.

SILICONE OIL

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.

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
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

Reusuable 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

for further VFI instruments for manual delivery of heavy liquids are shown on pages 212 - 213
Reusuable Scleral Plugs  
non-sterile (4 per tablet)  
*R19-1000  19GA/1.1 mm, gold  
*R20-1000  20GA/0.9 mm, silver

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

Directions for use  
Note: This item is sold as NON-STERILE  
1. Sterilize (gas or steam autoclave) scleral plugs.  
2. Forceps attached to head, place tip of plug into sclerotomy.  
3. Cross-action forceps, grasp plug head and lift from the holder.  
4. Sterilize scleral plug properly positioned in sclerotomy, remove forceps.
23GA/0.65 MM REUSABLE TROCAR SYSTEM

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

Cannula Loading Forceps
titanium, angled 9 mm shanks with biconvex curved jaws, 10.5 cm
E30-779T

sterilise before use

cross-action design for insertion and removal of 23GA/0.65 mm trocar cannulae
... efficient, two step technique

23GA/0.65 mm Reusable Trocar System

- 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)

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.
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
23GA/0.65 MM BACKFLUSH INSTRUMENTS AND ACCESSORIES

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,
erable (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,
mae 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 intravitreous fluid
through blunt tip extrusion cannula.
**23GA/25GA DISPOSABLE TROCAR CANNULA SYSTEMS**

**DIRECTION FOR USE**

Self-sealing cannulae are pre-mounted on the trocar insertion tools. Slide the trocal 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.

**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

The unique cannula inserter works together with an ergonomically designed knife to accomplish oblique cannula insertion directly into the eye via pars plana.

**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

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.

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Not for sale in Europe
23GA/25GA OBLIQUE INSERTION TECHNIQUE

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

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.
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.
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

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*
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

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

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.

Simple to use!

Marking sclerotomy site for pars plana vitrectomy

* Not for sale in Europe
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)
- Universal Sclerotomy Caliper titanium, blunt tips, 4.0 cm
- Braunstein Fixed Sclerotomy Caliper titanium, blunt tips, 7.0 cm
- EAGLE Stiletto MVR Knives 23GA/0.65 mm shaft, 0.75 mm wide lancet blade, disposable, sterile (box of 6)
- MISCELLANEOUS - FLEXIBLE IRIS RETRACTOR

- IrisMate® Flexible Translimbal Iris Retractors
- Reusable Retinal Nail 20GA/0.9 mm trocar tip of 2.85 mm working length, non-sterile (4 per tablet)
- 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

Video available

Manufacturers:
- Howard Instruments, Inc. Tuscaloosa, AL USA
- Biotech Vision Care Ltd. Khatraj, Gandhinagar India

Flexible nylon hooks can be easily inserted and removed through four evenly spaced translimbal incisions.
Urrets-Zavalia
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

Shinja Hara
Scleral Depressor
6 mm wide bar and 7 mm angled hook
with 2 mm teardrop shaped tip, 13.5 cm
E40-612S

O’Connor-Schockett
Scleral Depressor-Marker
6 mm wide bar and 1.5 mm
Gass Marker, 13.5 cm
E40-612C

Schockett
Scleral Depressor
6 mm wide bar and 2.5 mm
teardrop shaped tip, 13.5 cm
E40-613 stainless steel
E40-613T titanium

The 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.

Teardrop shaped tip for making a sharp protrusion at the side of mid-peripheral lesion or retinal tear.

Gass marker

Threphine-like 1.5 mm tip produces a ring shaped mark on the sclera when pressure is applied.

Rounded end designed for depressing sclera and curved marking end for reaching behind the globe.

Video available.
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

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
**VITRECTOMY SURGICAL INSTRUMENT SET**

E42-140 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

**E25-6025** Vitrectomy Scissors, page 175

**E30-6725** Vitrectomy Forceps, page 176

**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

**FOR 23GA/0.65 MM OBLIQUE INSERTION**

- E20-723R Reusable Trocar System, page 197
- 5700 Disposable Cannula System, page 200

**MISCELLANEOUS TO VITRECTOMY**

- Fiber Optic Light Probes, page 186
- Bipolar Cautery Pencils, page 202

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**Directions for use**

**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 sclerotomty, remove forceps.

**REMOVAL:**

1. Grasp scleral plug head with forceps and gently remove from sclerotomy.
AlfaSIL PURIFIED SILICONE OIL 1000 CST

naturally pure, highly purified

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

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(CH₃)₂O]ₙ
Viscosity: 1000 cSt at 25°C
Refractive index 1.405 at 24°C
Density: 0.965 g/cm³ 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
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

GENERAL DESCRIPTION
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Viscosity: 1000 cSt at 25°C
Refractive index 1.405 at 24°C
Density: 0.965 g/cm³ at 24°C

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.

Purified Silicone Oil is available in the following:
in 10 ml sterile vial
SO-1000 1000 cSt
SO-1300 1300 cSt
SO-2000 2000 cSt
SO-5000 5000 cSt
in 10 ml sterile syringe
SO-1000-S 1000 cSt
SO-1300-S 1300 cSt
SO-2000-S 2000 cSt
SO-5000-S 5000 cSt

The choice of viscosity offers an optimum balance between easy injection and a stable temporary tamponade.

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
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• as well as other retinal detachment, which can not be treated with other forms of therapy.

Purified Silicone Oil is available in the following:
in 10 ml sterile vial
SO-1000 1000 cSt
SO-1300 1300 cSt
SO-2000 2000 cSt
SO-5000 5000 cSt
in 10 ml sterile syringe
SO-1000-S 1000 cSt
SO-1300-S 1300 cSt
SO-2000-S 2000 cSt
SO-5000-S 5000 cSt

The choice of viscosity offers an optimum balance between easy injection and a stable temporary tamponade.

CE0120 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.
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 extention 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
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

sterilise before use

pictures shown are smaller/larger than actual sizes indicated
VITRION PERFLUOROCARBON LIQUID

GENERAL DESCRIPTION
Vitrion is made by 98% of Octadecafluorodecanydronaphthalene. 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/cm³ at 25°C
- Boiling point: 141°-143°C

DESTINATION OF USE
Perfluorocarbon liquid is a high intensity 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
Vitrion 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.

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
**VITRON**
Perfluorocarbon Liquid sterile (vial of 5 ml)

*REF 100VTO*

**GENERAL DESCRIPTION**
Vitrion is made by 98% of Octadecafluorodecanydronaphthalene. 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.

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**INDICATIONS FOR USE** refer to page 209

**PACKAGING AND STERILISATION**
Vitrion 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.

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**DECALINEMATE® PERFLUOROCARBON**

**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_{10}F_{18}
- Molecular weight: 462
- Refractive index: 1.310 at 20°C
- Density: 1.93 g/cm³
- Boiling point: 142°C
- Surface tension: 19.0 at 25°C
- Interface tension: 57.8 at 20°C

**Dual Bore PFC I/A Cannulae**
- 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)

**Dual Bore Subretinal BSS Injection Needle**
- 20GA/0.9 tube with 41GA/0.1 mm tip
- disposable, sterile (box of 1)

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

**CE 0120 APPROVED FOR SALE IN ALL EUROPEAN UNION COUNTRIES**
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 C3F8, C2F6 or SF6 (your choice)
- 1 x sterile disposable syringe (60 ml),
- 1 x sterile high quality filter,
- 1 x sterile valve

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.
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: Perfluoropropane
  - GMC2F6-PURE: Hexafluoroethane
  - GMSF6-PURE: Sulfur Hexafluoride

- **PRE-MIXED WITH DRY NITROGEN**
  - GMC3F8-MIXED: Perfluoropropane
  - GMC2F6-MIXED: Hexafluoroethane
  - GMSF6-MIXED: Sulfur Hexafluoride

Contact us for specific mixtures.

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- 1 x sterile disposable syringe (60 ml),
- 1 x sterile high quality filter,
- 1 x sterile valve

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**DISPOSABLE VITRECTOMY LENSES**

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)
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.

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
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.

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- Soft and elastic
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- Non-antigenic
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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

RETINAL IMPLANTS ON REQUEST
Circling styles:
40, 41, 42, 240

Stripst
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

Sleeves
Round styles:
70, 71, 72, 270

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
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).

**Gooved**

**Part-Thickness**
Styles: 510, 511, 515, 517

**Round**
Styles: 503, 504, 505

**Oval/Oblong**
Styles: 501, 506, 507, 509

all dimensions are in millimeters, pictures shown are larger than actual sizes indicated
INNOVATIVE EYE SPECULAE . . 226-229
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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

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

pictures are not actual size
INNOVATIVE ASPIRATING SPECULAE

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

- Thorlakson
  Eye Speculum
  E40-100AT with aspiration
  E40-100TO without aspiration
  ideal for use with femtosecond laser

- Lieberman K-Wire, 4.5 mm long
  slit ports, open 15 mm blade
  E40-100AL

- Chu Reversible, 3 ports
  solid 15 mm blade
  E40-100AC

- Chu Reversible, 3 ports
  solid 15 mm blade
  E40-100AC

- 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

can be used with operating room suction or a 50 cc syringe

Centrally aligned aspiration ports allow the speculum to be used either nasally or temporally.

New for improved fluid control

ideal for use with femtosecond laser
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 conventitonal 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.

SuperDrainer Surgical Aspirator
- complete, 400 mm long silicone tubing with LL-adaptor
  - SP20340 large, 9 x 5 mm
  - SP20341 small, 7 x 5 mm

SuperDrainer Suction Speculum
- E40-016A Markomanolakis long suction tube with bevel blunt tip
- E40-015A Maeda short suction tube with silicone tip

Patent No. 3006788

We turn your good ideas into reality.

SuperDrainer inserted into the conjunctival sac of the eye ball designed by Dr. Syuji Maeda, Maeda Ophthalmic Clinic, Aizuwakamatsu City, Japan
It is not easy to insert a trabeculotome with one hand while holding the scleral flap with the other during a trabeculotomy, 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 trabeculotomy. 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.

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

Lunty-Dodick Trabeculectomy Punch

E40-995 all stainless steel

E40-995T titanium handle

more punches are shown on page 263

Metric dimensions (mm)

<table>
<thead>
<tr>
<th>Weight</th>
<th>0.17g</th>
</tr>
</thead>
<tbody>
<tr>
<td>Length</td>
<td>11</td>
</tr>
<tr>
<td>Width of jaws</td>
<td>3.5</td>
</tr>
<tr>
<td>Closing force</td>
<td>37.8 gms</td>
</tr>
</tbody>
</table>
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.

**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

**Maeda**
Glaucoma Speculum
fenestrated 14 mm blades with hooks for securing traction sutures

- E40-039

...be part of our experience

other helpful instruments for today's glaucoma surgery are illustrated on page 104 and 105.

**Solutions for Glaucoma**

**Video available**

designed by Syuji Maeda, MD,
Maeda Ophthalmic Clinic, Aizuwakamatsu City, Japan
...have micro-miniature 0.1 mm tips and 1x2 teeth of .06 mm in height.

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 Pierse, 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
 PERFECT CAPSULORHESIS FORCEPS

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 capsulorhesis 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

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

Capsulorhesis 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

* also available with laser lines at 2.5 mm and 5 mm from the tip to gauge a precisely sized 5 mm capsulotomy

dashed line is the intended capsulorhesis size of 5.0 mm

curved and vaulted (Giannetti)
curved shaft (Masket)
straight shaft (Utrata)

PERFECT CAPSULORHESIS FORCEPS

at the Peak of Performance

- thin profile straight and curved 11 mm shafts
- triangular grasping tips to use as a cystotome
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E30-585T Nevyas, titanium

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E30-589T Masket, titanium

* also available with laser lines at 2.5 mm and 5 mm from the tip to gauge a precisely sized 5 mm capsulotomy

dashed line is the intended capsulorhesis size of 5.0 mm
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.

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

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
COLOR UP YOUR SURGERY

Think pink!

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  Phacoit 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

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

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

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  Ultral 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

Cataract Extraction

starts with an appropriately constructed 2.2 mm incision
**CONCOURS D’ÉLÉGANCE**

**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 suture 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

* avec les lignes Laser 2.5 et 5 mm pour mesurer la capsulorhexis
**Micro-ciseaux de Worst**  
(longues lames fines de 9 mm)  
FS17000 - courbes - mousses  
FS17001 - courbes - pointus  
FS17005 - demi-courbes - mousses  

**Micro-ciseaux de Vannas**  
(lames mousses très fines de 5 mm)  
E25-402 - droits  
E25-403 - courbes  

**Micro-ciseaux de Gills**  
(lames pointues, affinées de 11 mm)  
E25-430 - Welsh, droits  
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  

**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  

* d’autres micro ciseaux à cornée, conjonctive et ténotomie sont illustrés dans le catalogue général ophtalmologique PMS pages 59 et 248.
**Tous les modèles sont aussi disponibles avec un manche en titane de couleur, s'il vous plaît vous référer à la page 242**

**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-Sinskey 0.2 mm
- FS13227 de Lester, “bouton de col”
- FS13228 de Kuglen, “Push & Pull”

**Spatules à iris**
- FS07820 de Barraquer, ronde et mousse
- FS07825 de Barraquer, avec une petite boule

**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

**CONCOURS D’ÉLÉGANCE**

Tige et bout fabriqué d’un seul morceau d’acier inox, extrémités ultra fines, tige de 10 mm angulée.

D’autres blépharostats sont illustrés dans le catalogue général ophtalmologique PMS pages 226-228 et 245.
**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

**Manuel 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°, arrondis
- E20-486 Thibaut 60°, mousse
- E20-489 Nagahara 90°, mousse

**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

*Gamme de canule pour aspiration avec embout silicone*
Progettata per le migliori prestazioni, performance ottimali e precisione nel controllo di ogni procedura chirurgica.

**Pinze serrafili**
(con piani delicati da 6 mm)
- ID3207.1 Tennant, retta
- ID3207.0 Tennant, curva

**Pinze serrafili, 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 smussate 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

con controllo di apertura 1.8mm
**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’ghi 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’ghi 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

(consigliato per suture 8-0 a 11-0)
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, sabbia 
*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

Blefarostati
E40-011 Barraquer, valve da 15 mm
E40-012 Barraquer, valve da 10 mm
E40-031 Krazt-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
**Sistema nuova coassiale I/A per Irrigazione/Aspirazione**

* composto da manico e punte intercambiabili

**Monopezzo 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

**Monopezzo per aspirazione di colore oro**
(con cannula curva a foro superiore Ø 0.35 mm)

- E20-437 Ø 0.7 mm, punta sabbiata
- E20-438 Ø 0.8 mm, punta sabbiata
- E20-439 Ø 0.8 mm, punta smussa

**Manipulatore del nucleo irrigante**
(20G/0.9 mm, a 2 fori laterali Ø 0.6 mm)

- E20-480 Neuhann, punta a forcella

**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

**Sistema nuova coassiale I/A per Irrigazione/Aspirazione**

* composto da manico e punte intercambiabili

**New**

**Monopezzo per aspirazione di colore oro**
(con cannula curva a foro superiore Ø 0.35 mm)

- E20-437 Ø 0.7 mm, punta sabbiata
- E20-438 Ø 0.8 mm, punta sabbiata
- E20-439 Ø 0.8 mm, punta smussa

**Monopezzo per aspirazione di colore oro**
(con cannula curva a foro superiore Ø 0.35 mm)

- E20-437 Ø 0.7 mm, punta sabbiata
- E20-438 Ø 0.8 mm, punta sabbiata
- E20-439 Ø 0.8 mm, punta smussa

**Manipulatore del nucleo irrigante**
(20G/0.9 mm, a 2 fori laterali Ø 0.6 mm)

- E20-480 Neuhann, punta a forcella

**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*

<table>
<thead>
<tr>
<th>Punte p. sleeve silicone</th>
<th>21GA/0.8 mm</th>
<th>23GA/0.65 mm</th>
</tr>
</thead>
<tbody>
<tr>
<td>Punta curva</td>
<td>E20-413</td>
<td>E20-423</td>
</tr>
<tr>
<td>Punta angolata 45°</td>
<td>E20-414</td>
<td>E20-425</td>
</tr>
<tr>
<td>Sleeve in silicone</td>
<td>E20-415 c/S</td>
<td>E20-426 c/6</td>
</tr>
<tr>
<td>Manico I/A</td>
<td>E20-400</td>
<td>E20-400</td>
</tr>
</tbody>
</table>
### 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

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**POPULAR EYE INSTRUMENTS**

- **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
NUCLEUS MANIPULATORS
- E15-418 Koch II, curved notched tip
- E15-423 Jaffe-Bechert, angled forked tip
- E15-429 Ligabue, vaunted 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
- E15-611 Nichamin 90° ball shaped tip - horizontal
- E15-656 Nagahara 60° blunt tip - horizontal
- E15-659 Nagahara 90° blunt tip - horizontal
- E15-613 Phacofanit 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 Sinskey II, 0.2 mm tip
- E15-567 Kuglen, “Push-Pull” tip

Used to dial and position IOLs, to retract iris; and for manipulations in the anterior segment.

IRIS REPOSITORS & HOOKS
- 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.

Graefe
- Strabismus Hook
  - E40-771 #1 small
  - E40-772 #2 medium
  - E40-773 #3 large

Shafts angled 10 mm from tips are made of one-piece medical grade stainless steel.
... 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
**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

**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.**
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, 0.12 mm/45°, 7.5 cm  
E30-087

St. Martin’s (Pauifique)  
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.
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

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

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-

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

precisely engineered ...

ideal ...

for 8-0 to ...

11-0 sutures
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 shanks, triangular tips, 10.0 cm
- E30-583
- E30-583T titanium

**Masket Capsulorhexis Forceps**
- vaulted 11 mm shanks, triangular tips, 10.0 cm
- E30-590
- E30-590T titanium

**Giannetti 1.8 mm MICS Capsulorhexis Forceps**
- vaulted and curved 11 mm shanks, fine pointed grasping tips, 10.0 cm
- E30-597

**Inamura Style 1.5 mm MICS Capsulorhexis Forceps**
- very thin vaulted 13 mm shanks, 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.
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

- **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

- **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

All instruments are also available in lightweight, durable titanium, when ordering please add “T” to end of catalog number.
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
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

**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

designed for use during a Muller’s muscle-conjunctival resection ptosis procedure
**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

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.

**Protective Eye Shell**

for lid surgery with suction cup, autoclavable, available on request: with and without handle
LID-CONJUNCTIVA/PTOSIS INSTRUMENTS

Berke
Ptosis Forceps
+E30-832 20 mm long
E30-833 27 mm long

Desmarres
Chalazion Forceps
+E30-821 20 mm
E30-822 26 mm

Wright
Fascia Needle
with 1 mm by 6 mm oval hole, 13.0 cm
may be used with Ptose-Up
E40-991

Jaeger
Lid Plate
metal, 11.0 cm
+E40-128

Berke
Ptosis Forceps
+E30-832 20 mm long
E30-833 27 mm long

Desmarres
Chalazion Forceps
+E30-821 20 mm
E30-822 26 mm

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
E25-552 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
E40-128 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

Barraquer
Cilia Forceps
angled jaws with platform, 11.0 cm
E30-773

Nugent
Utility Forceps
angled jaws, 11.0 cm
E30-286 smooth
E30-287 serrated

Gillies
Skin Hook
single end sharp, 17.0 cm
+E40-754 small
E40-756 large

popular
non-toothed

forceps
**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

**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

**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

**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

**Moorfield’s**
Conjunctiva Forceps with serrations and groove
E30-385 fine, 10.0 cm
E30-386 standard, 10.7 cm

**English pattern**

**popular**

**forceps**

**on request also available in titanium**
**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)
- **Sisler**: Punctum Dilator with graduated shaft 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)
- **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)
- **Bangert**: 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)

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**Size Scale of Lacrimal Dilators Tips**

<table>
<thead>
<tr>
<th>mm</th>
<th>0.3</th>
<th>0.4</th>
<th>0.5</th>
<th>0.6</th>
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<tbody>
<tr>
<td>fig.</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
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</tbody>
</table>

**Size Scale of Lacrimal Probe Tips**

<table>
<thead>
<tr>
<th>mm</th>
<th>0.5</th>
<th>0.6</th>
<th>0.7</th>
<th>0.8</th>
<th>0.9</th>
<th>1.1</th>
<th>1.3</th>
<th>1.4</th>
<th>1.5</th>
<th>1.6</th>
</tr>
</thead>
</table>
**LACRIMAL INTUBATION SETS**

**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)

**DCR BODKINS**
20 G/0.9 mm OD x 45 mm long probe attached to 400 mm silicone tube
- Straight, reusable, 1 piece
  - E40-924
- Angled, reusable, 1 piece
  - E40-923
- Straight, disposable, box of 3
  - 51-922
- Angled, disposable, box of 3
  - 51-923

**QUICKERT**
Lacrimal Intubation Probe from 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.
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.

<table>
<thead>
<tr>
<th>Gauge</th>
<th>ID (in)</th>
<th>OD (in)</th>
<th>ID (mm)</th>
<th>OD (mm)</th>
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</thead>
<tbody>
<tr>
<td>23g</td>
<td>.013</td>
<td>.025</td>
<td>.33</td>
<td>.60</td>
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<tr>
<td>25g</td>
<td>.010</td>
<td>.020</td>
<td>.25</td>
<td>.50</td>
</tr>
</tbody>
</table>

**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°

**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

**Irrigating Syringe**
5 ml with Luer-Lock cone
- E20-805 all glass, reusable
- 300-05SP plastic, disposable, sterile box of 10
LACRIMAL SURGERY SET

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 sted, 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
Stevenson
Lacrimal Sac Retractor
curved 3x3 teeth, 9.0 cm
+E40-823

Knapp
Lacrimal Retractor
blunt four prongs, 13.5 cm
+E40-812

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

Beyer
Bone Rongeur
curved 3 mm jaws, 18.0 cm
+E30-991

Worst
Lacrimal Pigtail Probe
with suture eyes, 14.0 cm
+E40-922 adult size
+E40-921 child size

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

Agricola
Lacrimal Sac Retractor
3x3 sharp prongs, 4.5 cm
E40-820
**BONE AND TISSUE PUNCHES**

- **Luntz-Dodick**
  - Trabeculectomy Punch
  - Exchangeable cutting head of 1.0 mm ø with 0.5 mm deep bite, 11.5 cm
  - E40-995

- **Gass**
  - Corneoscleral Punch
  - Rotatable 1.5 mm diameter head with 0.75 mm deep bite, 9.0 cm
  - E40-996

- **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

- **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

**BULLET-SHAPED TIP**
With angled cutting edge can be pre-set in one of four directions.

**ROTATABLE CYLINDRICAL PUNCH ACTION TIP**
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 burrs of 0.5 and 1.0 mm dia.

- E40-420

Replacement Burrs (tungsten-carbide)

<table>
<thead>
<tr>
<th>Non-sterile head dia.</th>
<th>Sterile (b/5)</th>
</tr>
</thead>
<tbody>
<tr>
<td>E40-421 0.5 mm</td>
<td>BU-5S</td>
</tr>
<tr>
<td>E40-422 1.0 mm</td>
<td>BU-1S</td>
</tr>
</tbody>
</table>

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
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
  - E42-135 PTERGYIUM 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

**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
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

Surgical Scissors
standard, straight blades, 14.5 cm
E25-574 blunt tips
E25-576 sharp and blunt tips
E25-578 sharp tips

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
E30-146 -Graefe, 6x7 teeth
E30-147 -Brown, 7x7 teeth

further Utility Scissors
are illustrated on page 280 and 281
**ENUCLEATION INSTRUMENTS**

**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

**Foster**
- Enucleation Snare
  - Complete with 12 snare wires, 14.5 cm
  - + E40-722

**Twisted Snare Wire**
- Package of 12, 13.5 cm
  - E40-723

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**EA2-136 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

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**NON-Sterile, autoclavable Enucleation and Orbital Implants are available on request**

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**Enucleation and Orbital Implants are available on request**

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**Lucite PMMA spheres**
Schioetz 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)

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 Tybing Forceps, straight smooth platform page 250
E40-554 Castroviejo Eye Caliper, straight 0-20 mm scale, page 244
E10-3015R 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 Schioetz Tonometer Specification #3, stainless steel construction, inclined scale, page 268

* Caution: these products are made of latex which may cause allergic reactions
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

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

The PMS changeable tip and battery cauteries are excellent for office, emergency room and clinical procedures.

ичноwBIPOLAR 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

Jeweler’s Style
delicate 0.25 mm tip, 11.0 cm
81811100 straight jaws
81811110 angled jaws

highly polished instrument tips, minimizing unwanted tissue adhesion

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
PROTECTS WELL YOUR VALUABLE INSTRUMENTS

The right tools for the ophthalmic surgeon are handcrafted 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
Everything you need to know about the proper care and maintenance of microsurgical instruments please contact


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.
The PMS 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.

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.

**FEATURES:**

- Wire mesh to allow high degree of liquid penetration on to the instrument surfaces.

- Electrolitically 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.
**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

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

**EZWash®® Ash 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.

**EZHold® 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**
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**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

**EZWash®® Ash 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.
created to meet both the growing demand toward standardisation of instruments sets and your individualised surgical needs.

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.

<table>
<thead>
<tr>
<th>External dimension (mm)</th>
<th>Tray sizes</th>
<th>with silicone support</th>
<th>with silicone finger mat</th>
<th>with silicone nap plate</th>
<th>holding capacity</th>
</tr>
</thead>
<tbody>
<tr>
<td>275 x 178 x 24</td>
<td>1/1</td>
<td>E45-111</td>
<td>*E45-121</td>
<td>*E45-131</td>
<td>16 + items</td>
</tr>
<tr>
<td>178 x 140 x 24</td>
<td>1/2</td>
<td>E45-112</td>
<td>*E45-122</td>
<td>*E45-132</td>
<td>8 +</td>
</tr>
<tr>
<td>178 x 90 x 24</td>
<td>1/3</td>
<td>E45-113</td>
<td>*E45-123</td>
<td>*E45-133</td>
<td>5 +</td>
</tr>
</tbody>
</table>

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
PMS EZWash® TRAY-IN-TRAY ACCESSORIES

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)

- removable silicone mats feature cone shaped nubbins to accommodate all kinds of microsurgical instruments

- with venting holes, raised protrusions on the underside to enhance air sterilant penetration and to facilitate rapid drainage of fluid

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.
New reprocessing procedures require new instrument trays. The PMS EZWash® Wire Baskets enable microsurgical instruments to be washed and sterilised using modern automated methods.

**EZWash® STAINLESS STEEL WIRE BASKETS**

- **Deluxe Wire Basket (double level)**
  - 363 x 146 x 60 mm, complete with E45-434, E45-435, E45-437, E45-441 and E45-442

- **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.

**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

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

**EZWash® Insert Instrument Rack**
190 x 60 x 22 mm, with 3-slots instrument bars to be used with E45-434

**EZWash® Insert Cannula Holder**
120 x 15 x 30 mm removable bar, complete with 4x male LL / 1x female LL hub, tubing connector, L-bracket with set of screws and simple quick connection to washing machine
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

**EZHold® Fixation Pins**
smooth to stack ring instruments
slotted to adapt partition sheets

**EZHold® Partition Sheets**
stainless steel, 20 mm height
50 mm
130 mm
225 mm
460 mm

---

*Supplied without instruments*
**EZHold® SILICONE FINGER MATS**

Four finger configurations allow utilisation of the silicone finger mats with a variety of surgical 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

- **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

- **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

- **E45-129**
  - Large sheet, 520 x 240 mm

---

Soft material, with extra narrow spaced nubbins for delicate instruments

Semi-soft material with wide spaced, coarse pins for standard eye surgical instruments

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

Extra soft material, light blue, with narrow spaced fine nubbins for microsurgical instruments
EZHold® SILICONE STORAGE INSERTS

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

Plastic Holding Post
- 1.4”/3.5 mm
  - E45-524

Movable Posts
- Short 1.2”/3.0 mm
  - E45-525
- Long 2.0”/5.0 mm
  - E45-526

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

Utility Scissors
  - Straight, blunt blades, 14.5 cm
  - E25-714

The instrument holding bar can be attached anywhere in the tray with screws; silicone instrument holders are inserted into the instrument holding bars.

A NURSE’S BEST FRIENDS
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).

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

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.

<table>
<thead>
<tr>
<th>External dimension (mm)</th>
<th>Removable lids, perforated</th>
<th>Bottoms, silver coloured perforated - unperforated</th>
<th>Container, complete with perforated - bottom - unperforated</th>
</tr>
</thead>
<tbody>
<tr>
<td>310 x 190</td>
<td>E45-310+ colour</td>
<td>E45-312/4 - E45-313/4</td>
<td>E45-314+ - E45-324+</td>
</tr>
<tr>
<td>310 x 190 x 40</td>
<td></td>
<td>E45-312/6 - E45-313/6</td>
<td>E45-316+ - E45-326+</td>
</tr>
<tr>
<td>310 x 190 x 65</td>
<td></td>
<td>E45-312/8 - E45-313/8</td>
<td>E45-318+ - E45-328+</td>
</tr>
<tr>
<td>310 x 190 x 80</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

LOCKING SYSTEM
EZLock® quick-release with positive action spring mechanism on the lid.
EZLoad® STANDARD CONTAINER ACCESSORIES

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:
- E45-330 Silver
- E45-330 Yellow
- E45-330 Red
- E45-330 Azure
- E45-330 Green
- E45-330 Violet
- E45-330 Orange
- E45-330 Brown

Drape Fixation Clamps
stainless steel (set of 4)
E45-334
to hold drape; slip on to the sides

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

Drape Retainer
flexible, tension frame
(310 x 190 mm)
E45-335
to hold woven drapes in place

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.

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.

Forster Filters are suitable for all steam sterilisation methods

≈ 40 cycles
≈ 1200 cycles
You can store a maximum in a minimum of space.

**EZLoad® MINI STERILISATION CONTAINERS**

**Lids**
(300 mm x 140 mm)
anodised, lightweight aluminium,perforated with multiple round holes

E45-300+ colour
- +S
- +Y
- +R
- +A
- +G
- +B

**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+

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.**

<table>
<thead>
<tr>
<th>External dimension (mm)</th>
<th>Removable lids, perforated</th>
<th>Bottoms, silver coloured perforated - unperforated</th>
<th>Container, complete with perforated - bottom - unperforated</th>
</tr>
</thead>
<tbody>
<tr>
<td>300 x 140</td>
<td>E45-300+ colour</td>
<td>E45-304</td>
<td>E45-304+</td>
</tr>
<tr>
<td>300 x 140 x 40</td>
<td></td>
<td>E45-306</td>
<td>E45-306+</td>
</tr>
<tr>
<td>300 x 140 x 70</td>
<td></td>
<td>E45-307</td>
<td>E45-307+</td>
</tr>
</tbody>
</table>
Securely protects your instruments.

**EZLoad® INSERT TRAYS AND ACCESSORIES**

**Insert Screen Tray**  
perforated metal sheet  
268 x 124 x 22 mm  
E45-268  
for use with E45-304+

**Insert Wire Tray**  
stainless steel wire mesh,  
265 x 120 x 45 mm  
E45-265  
for use with E45-306+ and E45-307+

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).

**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

**Silicone Finger Mats**  
pre-cut (260 x 120 mm)  
for use with E45-268  
E45-271

**Silicone Holding Bars** for E45-265 and E45-268 can be adapted to your specific requirements.

**Drape Retainer**  
flexible, tension frame  
(280 x 125 mm)  
E45-328  
to hold woven drapes in place

**Identification Plates**  
see page 283

**Classic Woven Drape**  
reusable, 600 x 400 mm  
E45-336B

**Single use**  
frequent use  
permanent use  
≈ 40 cycles  
≈ 1200 cycles
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.

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.

With the PMS EZLoad® containers can you well sterilise, rational store, and comfortably transport without contamination.

<table>
<thead>
<tr>
<th>External dimension (mm)</th>
<th>Removable lids, perforated</th>
<th>Bottoms, silver coloured perforated - unperforated</th>
<th>Container, complete with perforated - bottom - unperforated</th>
</tr>
</thead>
<tbody>
<tr>
<td>285 x 280</td>
<td>E45-285+</td>
<td>E45-286</td>
<td>E45-286+</td>
</tr>
<tr>
<td>285 x 280 x 55</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>285 x 280 x 85</td>
<td>E45-288</td>
<td>E45-289</td>
<td>E45-288+</td>
</tr>
</tbody>
</table>
**EZLoad® FLAT CONTAINER ACCESSORIES**

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+

**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

**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

**Filter Retainer**
- 185 mm dia.
- E45-284

The filter retainer is locked by pressing down in center of the filter. The opening of the filter retainer succeeds by pressing the plate.

**Drape Retainer**
- flexible, tension frame (255 x 255 mm)
- E45-325
to hold woven drapes in place

**Silicone Finger Mats**
- pre-cut (245 x 245 mm)
  for use with E45-253 to E45-256
  E45-274

**Silicone Finger Mats**
- pre-cut (245 x 245 mm)
  for use with E45-253 to E45-256
  E45-274

**Silicone Finger Mats**
- pre-cut (245 x 245 mm)
  for use with E45-253 to E45-256
  E45-274

The use of reusable wovens cannot guarantee total protection of the sterile barrier.
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.

Suitability of our sterile containers for steam sterilization procedures as per DIN 58953, part 9 (issue May 1987)

<table>
<thead>
<tr>
<th>Sterilization container</th>
<th>Packing</th>
<th>Steam sterilization procedure acc. to DIN 58946, part I</th>
</tr>
</thead>
<tbody>
<tr>
<td>Description</td>
<td>Symbole</td>
<td>Gravitation procedure</td>
</tr>
<tr>
<td>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</td>
<td>+</td>
<td>+</td>
</tr>
<tr>
<td>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</td>
<td>-</td>
<td>+</td>
</tr>
<tr>
<td>Instruments in wire basket acc. to DIN 58952 part III, in sterilization container with filter in bottom acc. to DIN 58952 part I</td>
<td>0</td>
<td>+</td>
</tr>
</tbody>
</table>

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.
Compact design guarantees strength and durability. Electro polished 18/8 stainless steel material inhibits rust and staining of the tray.

**EZHOLD® STAINLESS STEEL INSTRUMENT CASSETTES**

**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+

**EZHOLD® Instrument Holding Bars**
- Slotted silicone strip for holding racks, available for 3, 5 and 10 instruments
  - E45-182+

**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)

**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
18/8 stainless steel, 280 x 180 x 19 mm, perforated lid and bottom, complete with instrument holder for 11 instruments
E45-221

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

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

Storage space for bipolar cords, I/A accessories, etc. accommodates also silicone finger mats and silicone nap plates for best protection of instruments

instrument box to hold E45-246 to E45-248 instrument tray

supplied without instruments and silicone finger mat

please note that only the bottom is coloured
**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

<table>
<thead>
<tr>
<th>Ø x h</th>
<th>Volume</th>
</tr>
</thead>
<tbody>
<tr>
<td>E45-882 40 x 19 mm</td>
<td>0.05 l</td>
</tr>
<tr>
<td>E45-883 61 x 30 mm</td>
<td>0.07 l</td>
</tr>
<tr>
<td>E45-884 80 x 40 mm</td>
<td>0.14 l</td>
</tr>
<tr>
<td>E45-885 128 x 55 mm</td>
<td>0.45 l</td>
</tr>
<tr>
<td>E45-886 147 x 65 mm</td>
<td>0.70 l</td>
</tr>
<tr>
<td>E45-887 167 x 75 mm</td>
<td>1.10 l</td>
</tr>
<tr>
<td>E45-888 187 x 85 mm</td>
<td>1.60 l</td>
</tr>
</tbody>
</table>

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

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

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

all racks supplied without instruments

Each instrument should be placed carefully in the silicone racks or on nap plates to prevent movement and possible damage during handling.
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.

**LIGHT WEIGHT INSTRUMENT STERILISATION TRAYS**

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.

**Minitainer Sterilisation Tray with silicone holding bar for:**
- **E45-001** 1 instrument
- **E45-002** 2 instruments
- **E45-003** 3 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)

**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.

**STEAM**

Base, lid and mat are perforated for steam penetration.
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 specialty 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 1 l 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:

<table>
<thead>
<tr>
<th>Non Sterile</th>
<th>132°C/134°F C</th>
<th>270°C/273°F F</th>
</tr>
</thead>
<tbody>
<tr>
<td>≥10 Min.</td>
<td>≥4 Min.</td>
<td></td>
</tr>
</tbody>
</table>

Regardless of which sterilisation method is used, always follow instructions supplied by the manufacturer of the steriliser.
ALPHABETICAL INDEX ................................................. 298-310
NUMERICAL INDEX .................................................. 311-317
<table>
<thead>
<tr>
<th>PRODUCT DESCRIPTION</th>
<th>PAGE</th>
</tr>
</thead>
<tbody>
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<td>27, 155</td>
</tr>
<tr>
<td>Adaptor, Luer &amp; Luer-Lok</td>
<td>20, 111, 118</td>
</tr>
<tr>
<td>Adson Dissecting Forceps</td>
<td>266</td>
</tr>
<tr>
<td>Adson-Brown Fixation Forceps</td>
<td>266</td>
</tr>
<tr>
<td>Adson-Graefe Fixation Forceps</td>
<td>266</td>
</tr>
<tr>
<td>Agricola Lacrimal Sac Retractor</td>
<td>262</td>
</tr>
<tr>
<td>Air Injection Cannula, Rycroft</td>
<td>20</td>
</tr>
<tr>
<td>Akahoshi Nucleus Splitter/Completer</td>
<td>96</td>
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<td>Akahoshi Nucleus Sustainer</td>
<td>96</td>
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<tr>
<td>Akahoshi Phaco Prechopper</td>
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<td>Akahoshi Universal Micro Forceps</td>
<td>60</td>
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<td>Alcohol Funnel, LASEK</td>
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<td>Alexander Soft IOL Cutter</td>
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<td>AilaSil Silicone Oil</td>
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<td>Alfonso Infant Child Wire Speculum</td>
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<td>Alfonso-Hoffman Nucleus Fragment Cannula</td>
<td>100</td>
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<td>Algerbrush II Corneal Rust Ring Remover</td>
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<tr>
<td>Alio LASIK Wire Speculum</td>
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<td>Alio Micro Capsulorhexis Forceps</td>
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<td>Alio Micro Irideectomy Scissors</td>
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<td>All Glass Syringe</td>
<td>20</td>
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<td>Alpha-Chymotrypsin Cannula, Troutman</td>
<td>53</td>
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<td>66, 94, 130, 192</td>
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<td>291</td>
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<td>Aluminium Sterilizing Container</td>
<td>282-286</td>
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<td>Anel Lacrimal Cannula</td>
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<td>Anesthesia Needle, Atkinson</td>
<td>52</td>
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<tr>
<td>Anis Needle Holder</td>
<td>46</td>
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<td>Anis Suture Placement Marker</td>
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<td>Anterior Chamber Irrigating Cannula</td>
<td>73</td>
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<td>Anterior Chamber Irrigator, Bishop-Harmon</td>
<td>72</td>
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<td>Anterior Chamber Maintainer</td>
<td>72</td>
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<td>Apt’s Muscle Resection Clamp</td>
<td>254</td>
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<td>Arcuate Incision Diamond Knife, Thornton</td>
<td>161</td>
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<tr>
<td>Arcuate Incision Marker (see LRI Marker)</td>
<td>162-163</td>
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<td>Arneodo Nucleus Manipulator</td>
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<td>Aspirating Cannula, Subretinal</td>
<td>216</td>
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<tr>
<td>Aspirating Cannula, Vitreoretinal</td>
<td>216</td>
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<tr>
<td>Aspirating Eyelid Retractor, Jaffe</td>
<td>228</td>
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<tr>
<td>Aspirating Eye Speculum</td>
<td>54-55, 148, 228</td>
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<td>Aspirating Handpiece, Backflush</td>
<td>194-195, 203</td>
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<td>Astigmatic Keratometer, Maloney</td>
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