EVOLUTION IN VITREORETINAL INSTRUMENTS

Disposable Products for the posterior segment
Rumex International Co. is one of the leading manufacturers of high precision ophthalmic instruments for hand held surgery. Since 1994, our company has been working closely with honorable surgeons all over the world. The distinguished ergonomic design of our instruments, and high quality materials they are composed of, will ensure that every surgical manipulation is gentle and precise.

Our vitreoretinal product line is a result of professional experience and manufacturing skills accumulated over many years. Following the latest trends of vitreoretinal surgery, we launched lines of 27 Ga instruments and disposable products for the posterior segment.

If your surgical technique or professional preference require a custom-made instrument, we will create it for you.

We respect long-term relationships and are always looking for new partners. Our brand is presented in 100 countries by now, and should you be interested to become a distributor of Rumex products, please contact us for further details.

Rumex International Co. manufactures vitreoretinal instruments for other well known brands. Please feel free to contact us if you are interested in OEM business.
FEATURED PRODUCTS

REUSABLE INSTRUMENTS
Vitreoretinal Instruments
Scissors
Internal Limiting Membrane Forceps
Epiretinal Forceps
Pick / Subretinal Forceps
Foreign Body Removal Forceps
Membrane Instruments
23 Gauge Instruments
25, 27 Gauge Instruments
One-Piece Instruments
Two-Step Trocar Systems

DISPOSABLE PRODUCTS
One-Piece Instruments
One Step Trocar Systems
Vitrectomy Cutters
Backflush Instruments
Cannulas
Silicone Oil
Silicone Oil Infusion Systems

Vitreoretinal Sets
Sterilization & Care
Universal End Grasping Forceps with Asymmetrical Branches

Universal End Grasping Forceps allow the performing of ILM peeling and safe removal of epiretinal membranes. Asymmetrical design of branches provides for ideal maneuverability and excellent visualization of the grasped tissue.

End Grasping Forceps

The special design of the tips promotes delicate, precise and safe ILM peeling. The strengthened jaws ensure enhanced gripping power. Expanded space between branches contributes to greater visualization of the grasped membrane in the macular area.

Gripping Forceps with a ‘Crocodile’ Platform

Designed for the removal of epiretinal membranes. Blunt, atraumatic serration intensifies grasping capacity and prevents tissue shredding.
Vitreoretinal Instrument Tips, Manual Cleaning: Gauge Conversion Chart, Color Code System

We offer various models of vitreoretinal tips that can be adjusted to Universal Handles (12-001T or 12-003T).

**Gauge Conversion Chart**

<table>
<thead>
<tr>
<th>Gauge (inch)</th>
<th>(mm)</th>
</tr>
</thead>
<tbody>
<tr>
<td>19 Ga</td>
<td>0.043</td>
</tr>
<tr>
<td>20 Ga</td>
<td>0.036</td>
</tr>
<tr>
<td>21 Ga</td>
<td>0.032</td>
</tr>
<tr>
<td>22 Ga</td>
<td>0.028</td>
</tr>
<tr>
<td>23 Ga</td>
<td>0.025</td>
</tr>
<tr>
<td>25 Ga</td>
<td>0.020</td>
</tr>
<tr>
<td>27 Ga</td>
<td>0.016</td>
</tr>
</tbody>
</table>

**Color Code System**

Color code system is used to indicate vitreoretinal tips, their function and size.

<table>
<thead>
<tr>
<th>Function</th>
<th>Pink</th>
<th>Green</th>
</tr>
</thead>
<tbody>
<tr>
<td>Scissors</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Forceps</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Gauge</th>
<th>17</th>
</tr>
</thead>
<tbody>
<tr>
<td>Grey</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Color</th>
<th>Pink</th>
<th>Green</th>
<th>Blue</th>
<th>Yellow</th>
</tr>
</thead>
<tbody>
<tr>
<td>Manual Cleaning</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Proper cleaning of the instrument is necessary to preserve its working condition.

Rumex manufactures interchangeable microincisional and vitreoretinal instrument tips that can be cleaned with a regular syringe.

Product images, including color, may slightly differ from actual product appearance due to the 3D effect applied.

*Handles are sold separately! **Colors of details may differ slightly from those displayed in this catalog.
HANDLES FOR VITREORETINAL INSTRUMENTS*

Rumex International Co is pleased to provide you with two models of Universal Handles that can be used with interchangeable tips. *

- Made of titanium
- Corrosion resistant
- Can be used with tips of any gauge 20/23/25/27 (and other gauges)

Ergonomic Model
Two Fingers Control Squeeze Handle
12-003T

- Two fingers linear actuation
- Ergonomic handle with specially designed gripping area for amplified control over the instrument
- Optimal diameter round handle allows 360° rotation
- Non compatible with the following tips: 12-206, 12-313, 12-321, 12-335, 12-412

Classic Model
One Finger Control Handle
12-001T

- One finger linear actuation
- Classic design approved by decades of work
- Compatible with all models of tips

Adjustable screw mechanism (to customize the opening of branches before manipulation)
**SCISSORS**

Designed for cutting membranes and junction zones of the proliferative tissue.

<table>
<thead>
<tr>
<th>Type</th>
<th>Description</th>
<th>Compatibility</th>
<th>Model</th>
<th>Ga</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vertical Scissors</td>
<td>70 Degrees Sharp tips</td>
<td></td>
<td>12-202</td>
<td>20</td>
</tr>
<tr>
<td></td>
<td>12-202-23</td>
<td></td>
<td>23 Ga</td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>COMPATIBLE</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>WITH 12-003T ONLY</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>Horizontal Scissors</strong></td>
<td></td>
<td>12-206</td>
<td>20</td>
</tr>
<tr>
<td></td>
<td>55 Degrees</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>Klaus Lucke Retinotomy Scissors</strong></td>
<td></td>
<td>12-208</td>
<td>20</td>
</tr>
<tr>
<td></td>
<td>With bulbous tip</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>Horizontal Scissors</strong></td>
<td></td>
<td>12-2085</td>
<td>20</td>
</tr>
<tr>
<td></td>
<td>Angled 45 Degrees</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Regular blades (2.20 mm in the closed position)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>Horizontal Scissors</strong></td>
<td></td>
<td>12-208</td>
<td>20</td>
</tr>
<tr>
<td></td>
<td>Angled 45 Degrees</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Short blades (1.70 mm in the closed position)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>Horizontal Scissors</strong></td>
<td></td>
<td>12-2029</td>
<td>25</td>
</tr>
<tr>
<td></td>
<td>45 Degrees</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>Straight Scissors</strong></td>
<td></td>
<td>12-211</td>
<td>20</td>
</tr>
<tr>
<td></td>
<td>Blunt tips</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>Side Curved Scissors</strong></td>
<td></td>
<td>12-215</td>
<td>20</td>
</tr>
<tr>
<td></td>
<td><strong>Curved Subretinal Scissors</strong></td>
<td></td>
<td>12-210</td>
<td>20</td>
</tr>
<tr>
<td></td>
<td>Curvature radius 12 mm</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>MOST POPULAR</strong></td>
<td></td>
<td>12-209</td>
<td>20</td>
</tr>
<tr>
<td></td>
<td><strong>MOST POPULAR</strong></td>
<td></td>
<td>12-209-23</td>
<td>23</td>
</tr>
<tr>
<td></td>
<td><strong>MOST POPULAR</strong></td>
<td></td>
<td>12-2099</td>
<td>25</td>
</tr>
<tr>
<td></td>
<td><strong>Horizontal Scissors</strong></td>
<td></td>
<td>12-2084</td>
<td>20</td>
</tr>
<tr>
<td></td>
<td>Angled 45 Degrees</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>With illumination</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

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*Handles are sold separately: 12-003T and 12-001T.
INTERNAL LIMITING MEMBRANE (ILM) FORCEPS

Delicate branches for ILM peeling

**Universal End Grasping Forceps** allow the performing of ILM peeling and safe removal of epiretinal membranes. Asymmetrical design of branches provides for ideal maneuverability and excellent visualization of the grasped tissue.

**ILM**

**End Grasping Forceps**
- Standard branches, 28 mm tube (23 Ga)
  - 12-420-23  23 Ga
  - 12-420-25  25 Ga
  - 12-420-27  27 Ga
- Elongated branches, 30 mm tube
  - Designed for myopic eyes
  - 12-4202-23  23 Ga
  - Enhanced visualization!

**Eckardt End Gripping Forceps**
- New
- 12-410  20 Ga
- 12-410-23  23 Ga
- 12-410-25  25 Ga
- 12-410-27  27 Ga

**Tano Asymmetrical End Gripping Forceps**
- 12-411  20 Ga
- 12-411-23  23 Ga
- 12-411-25  25 Ga

**Tanaka Macularhexis Forceps**
- 12-414  23 Ga

**Kawai ILM Forceps**
- 12-415  25 Ga

The special design of the tips promotes delicate, precise and safe ILM peeling. The strengthened jaws ensure enhanced gripping power. Expanded space between branches contributes to greater visualization of the grasped membrane in the macular area.

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*Handles are sold separately: 12-003T and 12-001T.*
**EPIRETINAL FORCEPS**

- Strengthened jaws for the removal of epiretinal membranes
- Gripping function is enhanced by diamonized / serrated platform or nail shaped jaws

**ERM**

**Gripping Forceps**
With a diamond dusted platform
- 12-301  20 Ga
- 12-301-23  23 Ga
- 12-3019  25 Ga

- 12-304  20 Ga
- 12-304-23  23 Ga
- 12-304-25  25 Ga

**Lucke Multipurpose Forceps**
12-3044  20 Ga

**End Gripping Forceps**
With extended gripping area at the end of the tip
- 12-401  20 Ga
- 12-4012  23 Ga

**End Gripping Forceps**
With serrated micro jaws
12-400  20 Ga

**End Gripping Forceps**
With nail shaped jaws
- 12-402  20 Ga
- 12-402-23  23 Ga
- 12-4089  25 Ga

*Handles are sold separately: 12-003T and 12-001T.

Product images, including color, may slightly differ from actual product appearance due to the 3D effect applied.

Designed for the removal of epiretinal membranes. Blunt, atraumatic serration intensifies grasping capacity and prevents tissue shredding.
**PICK / SUBRETINAL FORCEPS**

- **Pick Forceps**
  - 12-325 20 Ga
  - 12-325-23 23 Ga
  - 12-3259 25 Ga

- **Diamonized Angled Gripping Forceps**
  - 12-303 20 Ga

- **De Juan Pick Forceps**
  - 12-413 20 Ga

- **Subretinal Forceps**
  - 3 mm tips
  - 12-343 20 Ga

**FOREIGN BODY REMOVAL FORCEPS**

- **Avci Foreign Body Forceps**
  - 12-412** 17 Ga

- **Spring Gripping Forceps**
  - 12-321** 20 Ga
  - 12-321-23*** 23 Ga

- **Vitreoretinal Forceps**
  - With cup jaws
  - 12-313** 20 Ga

- **Stolyarenko Forceps**
  - For large foreign bodies
  - 12-335** 20 Ga

*Handles are sold separately: 12-003T and 12-001T.
** Compatible with Universal Handle 12-001T only.
*** Compatible with Universal Handles 12-001T and 12-003T.

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MEMBRANE INSTRUMENTS

Delicate Membrane Pick
13-097-23 23 Ga
13-0979 25 Ga
13-097-27 27 Ga

Membrane Scratcher
13-092 20 Ga

Membrane Spatula
13-084 20 Ga

Ogura PVD Spatula
13-1081-23 23 Ga

BRVO Knife
Designed for performing a lateral CRVO incision
13-1091 20 Ga
13-1091-23 23 Ga

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23 GAUGE INSTRUMENTS

**ILM**

**MOST POPULAR**

Eckardt End Gripping Forceps  
12-410-23  23 Ga

Tano Asymmetrical End Gripping Forceps  
12-411-23  23 Ga

End Grasping Forceps  
12-420-23  23 Ga  
Enhanced visualization!

End Grasping Forceps  
Elongated branches, 30 mm  
Designed for myopic eyes  
12-4202-23  23 Ga  
Enhanced visualization!

**ERM**

**MOST POPULAR**

Gripping Forceps  
With a diamond dusted platform  
12-301-23  23 Ga

**MOST POPULAR**

Vertical Scissors  
70 Degrees  
Sharp tips  
12-202-23  23 Ga

Pick Forceps  
12-325-23  23 Ga

End Gripping Forceps  
With extended gripping area at the end of the tip  
12-4012  23 Ga

**MOST POPULAR**

Gripping Forceps  
With a “crocodile” platform  
12-304-23  23 Ga

**MOST POPULAR**

Spring Gripping Forceps  
12-321-23  23 Ga

**MOST POPULAR**

Curved Subretinal Scissors  
Curvature radius 12 mm  
12-209-23  23 Ga

**POPULAR**

End Gripping Forceps  
With nail shaped jaws  
12-402-23  23 Ga

*Handles are sold separately: 12-003T and 12-001T.*

Product images, including color, may slightly differ from actual product appearance due to the 3D effect applied.
25 GAUGE INSTRUMENTS

**ILM**

**POPULAR**
Eckardt End Gripping Forceps  
12-410-25  25 Ga

Tano Asymmetrical End Gripping Forceps  
12-411-25  25 Ga

**ERM**

**Gripping Forceps**  
With a diamond dusted platform  
12-3019  25 Ga

**Vertical Scissors**  
45 Degrees  
Sharp tips  
12-2029  25 Ga

**POPULAR**
Curved Subretinal Scissors  
Curvature radius 12 mm  
12-2099  25 Ga

**LMM**

**NEW**
Eckardt End Gripping Forceps  
12-410-27  27 Ga

End Grasping Forceps  
Enhanced visualization!

End Grasping Forceps  
12-420-27  27 Ga

Enhanced visualization!

**POPULAR**
Gripping Forceps  
With a “crocodile” platform  
12-304-25  25 Ga

**POPULAR**
Pick Forceps  
12-3259  25 Ga

**End Gripping Forceps**  
With nail shaped jaws  
12-4089  25 Ga

*Handles are sold separately: 12-003T and 12-001T.

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ONE-PIECE INSTRUMENTS: TIP WITH HANDLE

**ILM**

Eckardt End Gripping Forceps
12-410-23H  23 Ga
12-410-25H  25 Ga

End Gripping Forceps
12-420-23H  23 Ga
12-420-25H  25 Ga

Tano Asymmetrical End Gripping Forceps
12-411-23H  23 Ga
12-411-25H  25 Ga

**ERM**

Gripping Forceps
With a “crocodile” platform
12-304-23H  23 Ga
12-304-25H  25 Ga

Gripping Forceps
With a diamond dusted platform
12-301-23H  23 Ga
12-301-25H  25 Ga

**POPULAR**

Pick Forceps
12-325-23H  23 Ga
12-325-25H  25 Ga

End Gripping Forceps
With nail shaped jaws
12-402-23H  23 Ga
12-402-25H  25 Ga

**MOST POPULAR**

Curved Subretinal Scissors
Curvature radius 12 mm
12-209-23H  23 Ga
12-209-25H  25 Ga

Vertical Scissors
Sharp tips
12-202-23H  23 Ga
12-202-25H  25 Ga

Other models of tips in 20/23/25 and 27 Ga are available upon request.
Product images, including color, may slightly differ from actual product appearance due to the 3D effect applied.
DISPOSABLE ONE-PIECE INSTRUMENTS

Most popular models of scissors and forceps in 23 and 25 Ga
All instruments are supplied sterile, in a box of 6

**ILM**
- Disposable Eckardt End Gripping Forceps
  - 12-410-23D 23 Ga
  - 12-410-25D 25 Ga

**ERM**
- Disposable Gripping Forceps
  - With a “crocodile” platform
  - 12-304-23D 23 Ga
  - 12-304-25D 25 Ga

**ILM**
- Disposable End Grasping Forceps
  - 12-420-23D 23 Ga
  - 12-420-25D 25 Ga

**ERM**
- Disposable Pick Forceps
  - 12-325-23D 23 Ga
  - 12-325-25D 25 Ga

**ERM**
- Disposable Gripping Forceps
  - 12-301-23D 23 Ga
  - 12-301-25D 25 Ga

- Disposable Curved Scissors
  - 12-209-23D 23 Ga
  - 12-209-25D 25 Ga

*Not available in the US*
**Watzke Sleeve Spreading Forceps**
- Used to stretch the silicone sleeve placed around the eyeball
- Serrated tips aid in gripping the sleeve and allow for adjustable traction

**Reusable Trocar System with closure valves**
Package includes:
- Trocar Cannula with closure valves – 5 pcs
- Loading Forceps – 1 pc
- Fixation Plate – 1 pc
- Blunt Cannula Inserter – 3 pcs
- Universal Infusion Line – 1 pc
- Sterilizing Tray – 1 pc

12-5173-23
12-5173-25

**Loading Forceps**
1 per box
12-5186 23/25 Ga

**Instrument Cannula Inserter**
1 per box
12-5187-23 23 Ga
12-5187-25 25 Ga

**Fixation Plate**
1 per box
12-5188 23/25 Ga

**MVR Knives**
Multifacet Blade, sterile, 6 per box

<table>
<thead>
<tr>
<th>Straight</th>
<th>Angled</th>
</tr>
</thead>
<tbody>
<tr>
<td>VRS-19 - 19 Ga</td>
<td>VRA-19 - 19 Ga</td>
</tr>
<tr>
<td>VRS-20 - 20 Ga</td>
<td>VRA-20 - 20 Ga</td>
</tr>
<tr>
<td>VRS-23 - 23 Ga</td>
<td>VRA-23 - 23 Ga</td>
</tr>
</tbody>
</table>

**Trocar Cannula Set**
The set includes:
- Instrument Cannula – 2 pcs
- Cannula Plugs – 2 pcs
- Sterile

12-5189 23 Ga – 1 set per box

**Scleral Plugs Forceps**
Cross-action mechanism reduces hand fatigue

12-5086S 20 Ga

**Watzke Sleeve Spreading Forceps**
- Used to stretch the silicone sleeve placed around the eyeball
- Serrated tips aid in gripping the sleeve and allow for adjustable traction

4-2201T

Product images, including color, may slightly differ from actual product appearance due to the 3D effect applied.
DISPOSABLE TROCAR SYSTEMS

NEW Marker
Scleral marker at the distal part of the handpiece allows for making the incision right after marking without turning the instrument.

Improved Retractable Blade
Modified spear point (MVR style) blade helps create a smooth incision and provides for low pressure insertion and superior sealing.

Self-Sealing Cannulas
Stainless steel cannulas are equipped with redesigned beveled silicone valves, that eliminate need for plugs and promote easy instrument insertion.

High-Flow Infusion
RUMEX stainless steel cannula is designed to work with a high flow infusion tube connection, offering the maximum diameter channel possible for infusion flow.

Available in 23/25/27 Ga

<table>
<thead>
<tr>
<th>Item</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>RMTR.23</td>
<td>Disposable One Step Trocar System, 23 Ga</td>
</tr>
<tr>
<td>RMTR.25</td>
<td>Disposable One Step Trocar System, 25 Ga</td>
</tr>
<tr>
<td>RMTR.27</td>
<td>Disposable One Step Trocar System, 27 Ga</td>
</tr>
</tbody>
</table>

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VITRECTOMY CUTTERS

Reusable: posterior

12-5100
AMO®
B&L®
Optikon®
Carl Zeiss Meditec® / IOL Tech®
Fritz Ruck®
Croma Pharma® / Corneal®
Alcon®
Nidek®
MID Labs®
Syntec®

Gemin™
Premiere™, Millennium™, Daisy™
Pulsar 2™, Assistant™
Pentasys™
Pentasys™
Open Phaco™
Microtome™, MVS™, STTO Dx™
CV-24000™, VT-5000™
MVS™, SupraVit™
VitMan™

800 CPM
25 PSI
20 Ga
Without Irrigation Sleeve

Disposable: anterior

12-5068
Alcon®
AMO®
Staar Surgical®
Surgical Design®
American Optisurgical®
Nidek®

Legacy™, STTO™, STTM™, Universal™
Sovereign™, Signature™, AMO Plus®, Prestige™
Wave™
Ocusystem™
Horizon™
CV-12000™, CV-6000™, CV-7000™

800 CPM
20 PSI
20 Ga
Without Irrigation Sleeve

Disposable: posterior

12-5064  12-5172
Alcon®
DORC®

Accurus™
Harmony Total TTC™

Accurus™
Associate™

800 CPM
2500 CPM

20 Ga
23 Ga

Without Irrigation Sleeve
Without Irrigation Sleeve

Product images, including color, may slightly differ from actual product appearance due to the 3D effect applied.
BI-BLADE CUTTERS – REVOLUTIONARY PRODUCT

The best choice for vitreoretinal surgery

Constant Aspiration Flow
Highly mobile bi-directional blade keeps the port open throughout the entire cutting cycle ensuring constant aspiration flow and increasing the efficiency of vitreous removal.

Double Cutting Rate
Cutting action on both forward and backward strokes of the probe creates the speed up to 16,000 cpm (standard speed is 8,000 cpm).

Various Gauges
Cutters are available in 23/25/27 Gauges, compatible with major brands.

<table>
<thead>
<tr>
<th>Item</th>
<th>Description</th>
<th>Type of Machine</th>
</tr>
</thead>
<tbody>
<tr>
<td>RMVIT.23CON</td>
<td>23 Ga Bi-blade cutter; 16,000 cpm</td>
<td>Constellation, Alcon (compatible)</td>
</tr>
<tr>
<td>RMVIT.25CON</td>
<td>25 Ga Bi-blade cutter; 16,000 cpm</td>
<td>Stellaris PC, Bausch+Lomb (compatible)</td>
</tr>
<tr>
<td>RMVIT.27CON</td>
<td>27 Ga Bi-blade cutter; 16,000 cpm</td>
<td>EVA, D.O.R.C. (tubing)</td>
</tr>
<tr>
<td>RMVIT.23STEL</td>
<td>23 Ga Bi-blade cutter; 16,000 cpm</td>
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<tr>
<td>RMVIT.25STEL</td>
<td>25 Ga Bi-blade cutter; 16,000 cpm</td>
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<td>RMVIT.27STEL</td>
<td>27 Ga Bi-blade cutter; 16,000 cpm</td>
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<tr>
<td>RMVIT.23EVA</td>
<td>23 Ga Bi-blade cutter; 16,000 cpm</td>
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<tr>
<td>RMVIT.25EVA</td>
<td>25 Ga Bi-blade cutter; 16,000 cpm</td>
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</tr>
<tr>
<td>RMVIT.27EVA</td>
<td>27 Ga Bi-blade cutter; 16,000 cpm</td>
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</table>

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BACKFLUSH HANDLES

Titanium Backflush Handle
Active Aspiration
12-6000

Titanium Backflush Handle
Passive Aspiration
12-6010

Backflush Handle
Passive Aspiration
Sterile
5 per box
12-5197

Replacement Reservoir for Backflush Handle
Active
Sterile
10 per box
12-5159

Replacement Reservoir for Backflush Handle
Passive
Sterile
10 per box
12-5147

Product images, including color, may slightly differ from actual product appearance due to the 3D effect applied.
CANNULAS FOR BACKFLUSH INSTRUMENTS

Charles Flute Cannulas
Designed to aspirate blood and debris from the posterior segment. Smooth, finished tip provides atraumatic entry and reduces risk of trauma to surrounding tissue.
Disposable, 5 per box
12-5164 23 Ga
12-5492 27 Ga

Brush Tip Cannulas
For atraumatic brushing of retina.
Disposable, 5 per box
12-5017 20 Ga
12-5162 23 Ga
12-5160 25 Ga

Soft Tip Cannulas
Flexible tip allows atraumatic entry through retinal or macular tears or holes and enables aspiration of subretinal fluid.
Disposable, 5 per box
12-5063 20 Ga
12-5161 23 Ga
12-5152 25 Ga

DUAL BORE CANNULAS
For simultaneous infusion and aspiration of liquids.

Dual Bore PFC Cannula
Simultaneous infusion of heavy liquids and aspiration of intraocular fluids. Dual bore for constant control of intraocular pressure during injection.
Disposable, 5 per box
12-5203 23 Ga (0.60 mm)

Dual Bore BSS Injection Needle
Enables to control subretinal injection of BSS. Dual bore cannula combined with aspiration capability.
Disposable, 1 per box
12-5194 20 Ga / 41 Ga (0.10 mm) tip

INFUSION CANNULAS

Reusable:
Infusion Cannula
12-024 20 Ga 2.50 mm
12-025 20 Ga 4.00 mm
12-026 20 Ga 6.00 mm

Disposable:
Self-Retaining Silicone Oil Cannula
12-5165 23 Ga 4.00 mm 5 per box
12-5222 23 Ga 6.00 mm 5 per box

Product images, including color, may slightly differ from actual product appearance due to the 3D effect applied.
ULTRA PURIFIED SILICONE OIL

For Vitreoretinal Surgery

- Maximum interfacial tension and minimum interactions between tissues, cells and endo-tamponades media
- Optimal combination of specific gravity, refractive index and surface tension
- Different viscosity indexes enable easy injection (1000 cSt) and stable temporary tamponade (5000 cSt)

No risk of emulsification

SOLVENT FREE

<table>
<thead>
<tr>
<th>Product</th>
<th>Viscosity</th>
</tr>
</thead>
<tbody>
<tr>
<td>SmartSil 1000</td>
<td>1000 cSt</td>
</tr>
<tr>
<td>SmartSil 5000</td>
<td>5000 cSt</td>
</tr>
</tbody>
</table>

Physicochemical properties

- Interfacial tension at 37°C: 43.2 mNm⁻¹
- Density: 0.97 g/cm³
- Viscosity: 1000 cSt / 5000 cSt
- Refractive index: 1.404
- Volatility: 0.06%
- Polydispersity: 2.33
- Elements potentially toxic: < 3 ppm
- Low molecular weights: D4–D9: < 24 ppm
  D10–D20: 4 ≤ ppm

Product images, including color, may slightly differ from actual product appearance due to the 3D effect applied.

*Not available in the US
### SILICONE OIL INFUSION SYSTEMS

<table>
<thead>
<tr>
<th>Surgical System</th>
<th>Reusable</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ioltech® Pentasys™</td>
<td>12-RTUB-1</td>
</tr>
<tr>
<td>Optikon® Antares™</td>
<td></td>
</tr>
<tr>
<td>Alcon® STTO™</td>
<td></td>
</tr>
<tr>
<td>Storz® Premiere™</td>
<td>12-RTUB-2</td>
</tr>
<tr>
<td>DORC® Harmony Budget™</td>
<td></td>
</tr>
<tr>
<td>DORC® Associate™</td>
<td></td>
</tr>
<tr>
<td>Alcon® Constellation™, Accurus™</td>
<td></td>
</tr>
<tr>
<td>B&amp;L® Millenium™, Stellaris™</td>
<td></td>
</tr>
<tr>
<td>Oerlti® Orbit™, Faros™, OS3™</td>
<td>12-RTUB-3</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Surgical System</th>
<th>Disposable</th>
</tr>
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<tbody>
<tr>
<td>Ioltech® Pentasys™</td>
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</tr>
<tr>
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<td></td>
</tr>
<tr>
<td>Oerlti® Orbit™, Faros™, OS3™</td>
<td>12-DTUB-3</td>
</tr>
</tbody>
</table>

### Viscous Fluid Injection Cannula

- 10 mm polyimide tip allowing injection of viscous fluids such as silicone oil through 23 Ga trocar cannula
- Disposable, 5 per box
- 12-5248 23 Ga

Product images, including color, may slightly differ from actual product appearance due to the 3D effect applied.
SET OF VITREORETINAL INSTRUMENTS, 20 GAUGE

<table>
<thead>
<tr>
<th>Reference</th>
<th>Key</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>12-001T</td>
<td>1</td>
<td>Universal Instrument Handle, One Finger Control</td>
</tr>
<tr>
<td>12-003T</td>
<td>2</td>
<td>Universal Instrument Handle, Squeeze Model, Two Fingers Control</td>
</tr>
<tr>
<td>12-202</td>
<td>3</td>
<td>Vertical Vitreoretinal Scissors, 20 Ga, Tip only</td>
</tr>
<tr>
<td>12-209</td>
<td>4</td>
<td>Curved Subretinal Scissors, 20 Ga, Tip only</td>
</tr>
<tr>
<td>12-410</td>
<td>5</td>
<td>Eckardt End Gripping Forceps, 20 Ga, Tip only</td>
</tr>
<tr>
<td>12-411</td>
<td>6</td>
<td>Tano Asymmetrical End Gripping Forceps, 20 Ga, Tip only</td>
</tr>
<tr>
<td>12-301</td>
<td>7</td>
<td>Vitreoretinal Forceps with a Diamond Dusted Platform, 20 Ga, Tip only</td>
</tr>
<tr>
<td>12-304</td>
<td>8</td>
<td>Gobind Forceps with a “Crocodile” Platform, 20 Ga, Tip only</td>
</tr>
<tr>
<td>12-325</td>
<td>9</td>
<td>Pick Vitreoretinal Forceps, 20 Ga, Tip only</td>
</tr>
<tr>
<td>12-335</td>
<td>10</td>
<td>Stolyarenko Forceps for Large Foreign Bodies, 20 Ga, Tip only</td>
</tr>
<tr>
<td>12-313</td>
<td>11</td>
<td>Vitreoretinal Forceps With Cup Jaws, 20 Ga, Tip only</td>
</tr>
<tr>
<td>12-321</td>
<td>12</td>
<td>Spring Gripping Forceps, 20 Ga, Tip only</td>
</tr>
<tr>
<td>12-6000</td>
<td>13</td>
<td>Titanium Backflush Handle Active Aspiration</td>
</tr>
<tr>
<td>12-5063</td>
<td>14</td>
<td>Soft Tip Cannula, 20 Ga, 5 per box</td>
</tr>
<tr>
<td>13-092</td>
<td>15</td>
<td>Membrane Scratcher, 20 Ga</td>
</tr>
<tr>
<td>SmartSil1000</td>
<td>16</td>
<td>Purified Silicone Oil for Retinal Endotamponade, 1000 cSt</td>
</tr>
</tbody>
</table>

DON'T FORGET TO BUY

Two racks tray
with silicone finger tip mat
Two levels base and insert tray
254×152.4×38 mm
10.00×6.00×1.50 in
18-305 extra large

Product images, including color, may slightly differ from actual product appearance due to the 3D effect applied.
SET OF VITREORETINAL INSTRUMENTS, 23 GAUGE

<table>
<thead>
<tr>
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<th>Key</th>
<th>Description</th>
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<tbody>
<tr>
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<td>Universal Instrument Handle, One Finger Control</td>
</tr>
<tr>
<td>12-003T</td>
<td>2</td>
<td>Universal Instrument Handle, Squeeze Model, Two Fingers Control</td>
</tr>
<tr>
<td>12-202-23</td>
<td>3</td>
<td>Vertical Vitreoretinal Scissors, 23 Ga, Tip only</td>
</tr>
<tr>
<td>12-209-23</td>
<td>4</td>
<td>Curved Subretinal Scissors, 23 Ga, Tip only</td>
</tr>
<tr>
<td>12-410-23</td>
<td>5</td>
<td>Eckardt End Gripping Forceps, 23 Ga, Tip only</td>
</tr>
<tr>
<td>12-4013</td>
<td>6</td>
<td>End Grasping Forceps, Expanded Space between Branches, 23 Ga, Tip only</td>
</tr>
<tr>
<td>12-301-23</td>
<td>7</td>
<td>Gripping Forceps with a Diamond Dusted Platform, 23 Ga, Tip only</td>
</tr>
<tr>
<td>12-304-23</td>
<td>8</td>
<td>Vitreoretinal Forceps with a &quot;Crocodile&quot; Platform, 23 Ga, Tip only</td>
</tr>
<tr>
<td>12-325-23</td>
<td>9</td>
<td>Pick Vitreoretinal Forceps, 23 Ga, Tip only</td>
</tr>
<tr>
<td>12-321-23</td>
<td>10</td>
<td>Spring Gripping Forceps, 23 Ga, Tip only</td>
</tr>
<tr>
<td>12-6000</td>
<td>11</td>
<td>Titanium Backflush Handle Active Aspiration</td>
</tr>
<tr>
<td>12-5161</td>
<td>12</td>
<td>Soft Tip Cannula, 23 Ga, 5 per box</td>
</tr>
<tr>
<td>13-097-23</td>
<td>13</td>
<td>Delicate Membrane Pick, 23 Ga</td>
</tr>
<tr>
<td>12-6173-23</td>
<td>14</td>
<td>Reusable Trocar System, 23 Ga</td>
</tr>
<tr>
<td>SmartSil1000</td>
<td>15</td>
<td>Purified Silicone Oil for Retinal Endotamponade, 1000 cSt</td>
</tr>
</tbody>
</table>

**DON’T FORGET TO BUY**

**Bi-Blade Vitrectomy Cutter**
23 Ga
16,000 cpm
compatible with Constellation/Stellaris PC/EVA
see page 20 for details

Product images, including color, may slightly differ from actual product appearance due to the 3D effect applied.
SET OF VITREORETINAL INSTRUMENTS, 25 GAUGE

Reference   Key   Description
12-001T      1     Universal Instrument Handle, One Finger Control
12-003T      2     Universal Instrument Handle, Squeeze Model, Two Fingers Control
12-2029      3     Vertical Vitreoretinal Scissors, 25 Ga, Tip only
12-2099      4     Curved Subretinal Scissors, 25 Ga, Tip only
12-410-25    5     Eckardt End Grasping Forceps, 25 Ga, Tip only
12-420-25    6     End Grasping Forceps, 25 Ga, Tip only
12-3019      7     Vitreoretinal Forceps with a Diamond Dusted Platform, 25 Ga, Tip only
12-304-25    8     Vitreoretinal Forceps with a “Crocodile” Platform, 25 Ga, Tip only
12-3259      9     Pick Vitreoretinal Forceps, 25 Ga, Tip only
12-6000      10    Titanium Backflush Handle with Active Aspiration
12-5160      11    Brush Tip Cannula, 25 Ga, 5 per box
12-5173-25   12    Reusable Trocar System, 25 Ga
13-0979      13    Delicate Membrane Pick, 25 Ga
SmartSil1000  14    Purified Silicone Oil for Retinal Endotamponade, 1000 cSt

DON’T FORGET TO BUY

Bi-Blade Vitrectomy Cutter
25 Ga
16,000 cpm
compatible with Constellation/Stellaris PC/EVA
see page 20 for details

Product images, including color, may slightly differ from actual product appearance due to the 3D effect applied.
CARE AND CLEANING OF VITREORETINAL AND MICROINCISIONAL INSTRUMENTS

Rumex Instruments (ophthalmic scissors and forceps for vitreoretinal and microincisional surgery) are designed for various applications in ophthalmic surgery. It is essential that the instrument is cleaned and sterilized before initial use and after each surgery, following as outlined in this instruction.

Care and handling
The intraocular tips have a delicate precision mechanism inside. Intraocular fluids will enter this mechanism during surgery. If these fluids are not promptly and properly cleaned out, it will lead to corrosion or clogs and the possibility of instrument malfunction. Proteins may also accumulate inside of the mechanism. Ensure the cleaning procedure is implemented after each surgery — warranty shall not extend to instruments that have been improperly handled.

Cleaning
1. Unscrew the tip from the handle, then attach flushing adapter 12-000T.
2. Flush the tip with distilled or deionized water by connecting a syringe filled with water to adapter:

3. Flush the tip with alcohol. This will remove the water and facilitate drying.
4. Dry the tip by forcing one or two syringes full of air through tip. Pressurized air is recommended, as it flushes out debris and fluid more efficiently than syringe forced air. Thoroughly dry handle, tip and cup.
5. Force special thermoresistant instrument milk through the tip, as in No 2 above.
6. Dry with air as in No 4 above.
7. Handle should be soaked in distilled or deionized water for two minutes.
8. Dry with surgical sponge.
9. Lubricate joints in handle with instrument milk and work the mechanism by pressing the key.

Instrument detergents and/or cleaners
Only detergents and cleaners specially designed for use on surgical stainless steel or titanium instruments are acceptable for use in the cleaning process. The cleaning guidelines of the solution manufacturer and your institution should be observed.
Please insert the tips into PTFE protectors as shown in the picture:

1. Match the nut indicating the gauge with the hub, press the tip gently.
   Make sure the branches do not touch the protector.
2. The tips in their final position — safely fixed by the protector.
   Note: the tips should be sterilized in the protector to avoid any contact with other instruments.

Sterilization

Stainless steel and titanium instruments can be sterilized via steam autoclaving, chemical disinfectants, ethylene oxide gas, or even dry hot air. Gas and dry chemical sterilization are the best methods for stainless steel instruments, but they take a lengthy time period to accomplish the desired result.

The most practical method of sterilization is heat or steam, which require less time, however, these methods can be damaging to delicate instruments. Please be sure that you and the members of your staff have read and understood the instructions supplied by the manufacturer of your particular sterilizer.

Sterilization cycles

Finally, the instrument should be sterilized prior to the next surgical procedure. Rumex instruments can be sterilized using any of the following methods:

<table>
<thead>
<tr>
<th></th>
<th>100 % ETO cycles</th>
</tr>
</thead>
<tbody>
<tr>
<td>Concentration ETO</td>
<td>850±50mg/l</td>
</tr>
<tr>
<td>Temperature</td>
<td>37 °C – 47 °C</td>
</tr>
<tr>
<td>Exposure time</td>
<td>3–4 hours</td>
</tr>
<tr>
<td>Humidity</td>
<td>70% RH minimum</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>Steam Autoclaving</th>
<th>“Flash” Autoclaving</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sterilizer Type</td>
<td>Gravity Displacement</td>
<td>Prevacuum</td>
</tr>
<tr>
<td>Sample Config.</td>
<td>wrapped</td>
<td>wrapped</td>
</tr>
<tr>
<td>Temperature</td>
<td>121 °C – 123 °C 250 °F – 253 °F</td>
<td>132 °C – 135 °C 270 °F – 275 °F</td>
</tr>
<tr>
<td>Exposure time</td>
<td>15 to 30 minutes</td>
<td>3 to 4 minutes</td>
</tr>
</tbody>
</table>

The above-mentioned sterilization cycles represent the industry standards and should be capable of producing a sterile device. Due to variations in sterilization equipment and device bioburden in clinical use, Rumex International is not able to provide specific cycle parameters. It is the responsibility of each user to perform the validation and verification of the sterilization cycle to ensure an adequate sterility assurance level for Rumex products.

Inspection

Be sure to inspect every microsurgical instrument at the end of your surgical day. Please conduct this inspection under a microscope or magnification lens. If a damaged instrument is detected, repair or replace it.
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