

Howard

Instruments

"Products Focused On The Total Eye"

Effective May 1, 1998

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HOWARD INSTRUMENTS

GUARANTEE

All **Howard Instruments, Inc.** products are unconditionally guaranteed against defects in materials and workmanship.

ORDERS

Please call (205) 553-4453 or telefax us at (205) 556-9267 to place an order with our Customer Service Department.

PRICES

Prices are listed in our current price list,
BUT ARE SUBJECT TO CHANGE WITHOUT NOTICE.

Prices for products of other manufacturers, distributed by **Howard Instruments, Inc.**, change only when the manufacturer changes those prices. Requests for formal quotations should be sent to **Howard Instruments, Inc.** in Tuscaloosa. Firm quotations may be provided by our representatives. Quotations are for immediate acceptance and are valid for sixty days on **Howard Instruments, Inc.** products and for thirty days on distributed products of other manufacturers.

MINIMUM ORDER

Howard Instruments, Inc. has a minimum order of \$20.00, except on repair charges.

FINANCING AND LEASING

Howard Instruments, Inc. offers a variety of financing and leasing programs for orders over \$6,000. Contact our representatives or Customer Service Department for details.

RESIDENCE ASSISTANCE

Howard Instruments, Inc. offers special prices and terms for surgical residents. Details can be obtained by contacting your **Howard Instruments, Inc.** representative.

TERMS OF PAYMENT

Invoices are payable upon receipt of goods; net ten days.

SHIPMENT OF GOODS

Shipments are made by UPS. Please advise if you need special handling i.e., second-day air, next-day air, Federal Express, etc. ALL SHIPMENTS F.O.B. TUSCALOOSA, ALABAMA.

TAXES

Sales, use or occupational taxes will be added to all purchases unless **Howard Instruments, Inc.** has a tax exemption certificate on file.

RETURNS POLICY

MERCHANDISE IS RETURNABLE FOR CREDIT ONLY with a prior written "Return Goods Authorization" form. This form will be sent to you from **Howard Instruments, Inc.** Customer Service Department in Tuscaloosa upon notification of your desire to return merchandise. Returns should not be given to your **Howard Instruments, Inc.** Representative as they are not authorized to accept returns. Upon receipt of a Return Goods Authorization form, returns must be shipped, prepaid to **Howard Instruments, Inc.** in Tuscaloosa. Full credit will be given on items returned within thirty days of invoice date except as noted herein. Items must be in unused and resalable condition. If items must be refurbished or repackaged, a service charge will be deducted from the amount of credit. Return of major equipment items are subject to substantial restocking charges plus the payment of freight charges.

The following merchandise may not be returned for credit or exchange:

- Merchandise held longer than thirty days
- Sterile Products (except as a result of **Howard Instruments, Inc.** error)
- Custom made instruments or products
- Discontinued products
- Incomplete sets (items purchased as sets must be returned as sets)
- Partial or broken cases

LEGEND

CATALOG NUMBER: Each item has a specific and unique catalog number.
All alpha and numeric characters must be used.

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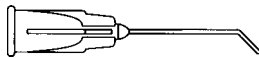
HOWARD INSTRUMENTS

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DISPOSABLE INSTRUMENTS

2-4



10000

Healon Anterior Chamber Cannula

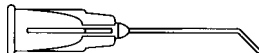
- 21 gauge
- Angled 45 degrees
- 4mm from end



10010

Anterior Chamber Air Injection Cannula

- 30 gauge
- Angled 45 degrees
- 4mm from end



10020

Anterior Chamber Air Injection Cannula

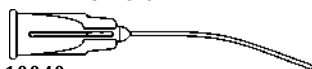
- 25 gauge
- Angled 45 degrees
- 4mm from end



10030

Anterior Chamber Air Injection Cannula

- 27 gauge
- Angled 45 degrees
- 4mm from end



10040

Curved Lachrymal Cannula

- 25 gauge



10050

Retrobulbar Needle

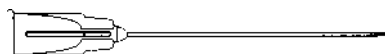
- 25 gauge
- 38mm



10060

Retrobulbar Needle

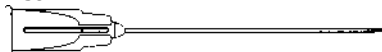
- 23 gauge
- 38mm



10070

Atkinson Retrobulbar Needle

- 25 gauge
- 38mm



10080

Atkinson Retrobulbar Needle

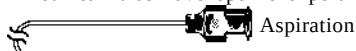
- 23 gauge
- 38mm



10100 Irrigation Aspiration

Double Irrigating/Aspirating Cannula

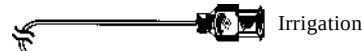
- 21 gauge irrigating
- 21 gauge aspirating
- Both cannulas have open end port



10130

Simcoe Irrigating/Aspirating Cannula

- 23 gauge thin wall irrigating
- 23 gauge thin wall aspirating
- 0.30mm aspiration port
- Silastic tubing: ID-1mm, OD-2.5mm

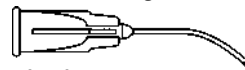


Aspiration - Irrigation

10135

Simcoe Irrigating/Aspirating Cannula (Reverse)

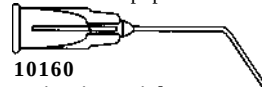
- 23 gauge thin wall irrigating
- 23 gauge thin wall aspirating
- 0.30 aspiration port
- Silastic tubing: ID-1mm, OD-2.5mm



10140

Simcoe Cortex Extractor

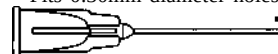
- 23 gauge
- 13mm
- 0.30mm top port



10160

Irrigating Dialer

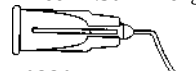
- 30 gauge
- Angled 45 degrees, 10mm from end
- Fits 0.30mm diameter holes and larger



10210

J-Shaped Cannula

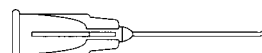
- 21 gauge
- 22mm
- 0.50mm open end port
- Hook 2.50mm long x 3mm wide



10220

Irrigating Cystotome Formed

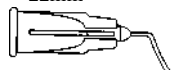
- 25 gauge
- 22mm



10230

Irrigating Cystotome Straight

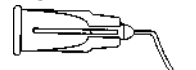
- 25 gauge
- 22mm



10240

Irrigating Cystotome Formed

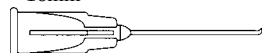
- 27 gauge
- 19mm



10250

Irrigating Cystotome Formed

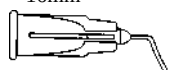
- 30 gauge
- 16mm



10260

Irrigating Cystotome Straight

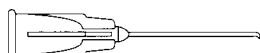
- 30 gauge
- 16mm



10270

Irrigating Cystotome Formed

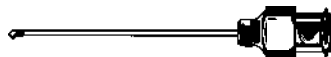
- 23 gauge
- 19mm



10280

Irrigating Cystotome Straight

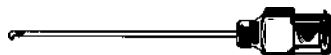
- 23 gauge
- 19mm



10320

Irrigating Sharp Cystotome

- 22 gauge
- 25mm



10330

Irrigating Double Cutting Sharp Cystotome

- 22 gauge
- 25mm
- For push-pull cutting



10340

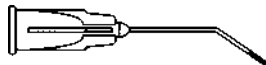
Irrigating Sharp Cystotome Formed

- 23 gauge

10350

Capsule Polisher

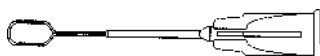
- 21 gauge
- Side port
- Angled 35 degrees
- 9mm from end



10360

Capsule Polisher

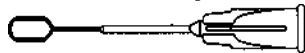
- 23 gauge
- Side port
- Angled 35 degrees
- 9mm from end



10380

Irrigating Vectus

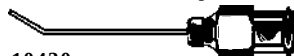
- 25 gauge
- 3mm width
- One 0.25mm end port



10390

Irrigating Vectus

- 25 gauge
- 4mm width
- Two 0.25mm end ports



10430

Anterior Chamber Washout Cannula

- 19 gauge
- 8mm
- Angled 30 degrees
- 6mm from end



10610

Angled Iris Hook and IOL Dialer

- Angled 45 degrees
- 15mm from tip to bend



10660

Lens Manipulating Hook

- Sinskey II
- Blunt tip
- Fits 0.20mm diameter holes and larger



10670

Lens Manipulating Hook

- Sinskey II
- Blunt tip
- Angled 45 degrees
- 15mm from tip to bend
- Fits 0.20mm diameter holes and larger



10780

Nucleus Rotator

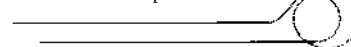
- Blunt forked tip
- Angled 45 degrees
- 9mm from tip to bend



10840

Button Tip Manipulator

- 0.50mm diameter button tip
- Angled 45 degrees
- 15mm from tip to bend



10940

Lachrymal Intubation Set

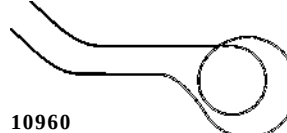
- Stainless steel probes
- 23 gauge
- Silicone tubing length 30cm: ID-0.3mm, OD-0.64mm



10950

DCR Set - Straight

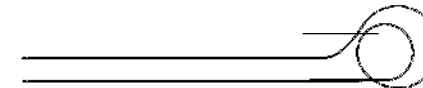
- Stainless steel probes
- 20 gauge
- Solid silicone rod length 40cm, diameter 0.80mm



10960

DCR Set - Curved

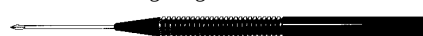
- Stainless steel probes
- 20 gauge
- Solid silicone rod length 40cm, diameter 0.80mm



10970

Lachrymal Intubation device with Retrieval Device

- Stainless steel probes
- 23 gauge
- Silicone tubing length 35.5cm: ID-0.3mm, OD-0.64mm



10980

Stiletto (MVR) Knife

- 1.15mm width
- Provides precise incision for insertion of 20 gauge cannula

CANNULAE

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CYSTOTOME CANNULAE

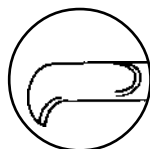
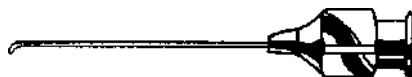
CYSTOTOME CANNULAE



20000

KELMAN CYSTOTOME KNIFE

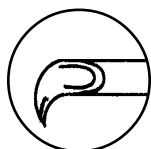
- 22 gauge shaft
- Sharp tip
- Length 32mm



20120

LIEPPMAN CYSTOTOME

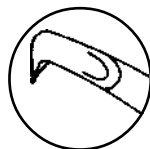
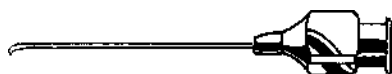
- 22 gauge shaft
- Small cutting tip
- Length 23mm



20020

KELMAN CYSTOTOME KNIFE

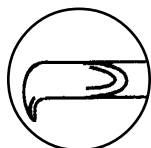
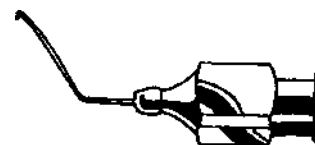
- 22 gauge shaft
- Blunt tip
- Length 32mm



20140

KRATZ ANGLED CYSTOTOME

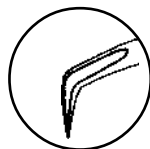
- 22 gauge shaft
- Angled 60 degrees
- 5mm hub to angle
- 12mm angle to tip
- Length 13mm



20040

KNOLLE-KELMAN SHARP CYSTOTOME

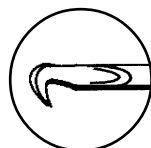
- 22 gauge shaft
- Sharp tip
- Long bevel
- Length 32mm



20180

AZAR CURVED CYSTOTOME

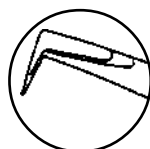
- 30 gauge shaft
- Gentle curve and sharp tip
- Length 10mm



20060

AIR CYSTOTOME LARGE HOOK

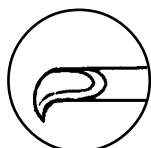
- 22 gauge shaft
- Sharp tip
- Length 32mm



20220

DREWS CYSTOTOME

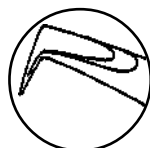
- 27 gauge
- Sharp tip
- 4 mm from tip to first 80 degree bend, 3mm to second 50 degree bend, 8mm from bend to tip
- Length 15mm



20100

NEVYAS DOUBLE SHARP CYSTOTOME

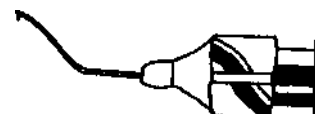
- 22 gauge shaft
- Length 32mm



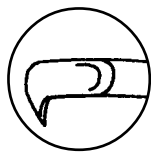
20240

DREWS CYSTOTOME

- 30 gauge
- Sharp tip
- 4 mm from tip to first 80 degree bend, 3mm to second 50 degree bend, 8mm from bend to tip
- Length 15mm



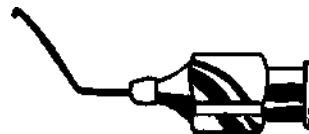
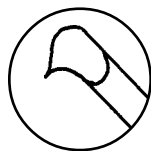
HOWARD INSTRUMENTS



20260

KRATZ-KELMAN CYSTOTOME

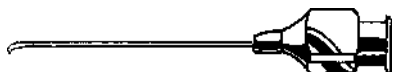
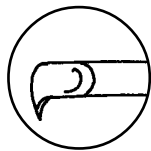
- 22 gauge shaft
- Angled and curved 45 degrees
- Length 32mm



20360

EMERY CYSTOTOME SOLID ANGLED

- Solid shaft, angled 45 degrees
- Double sharp
- Length 30mm
- Available with or without handle



20280

STEWART-KELMAN CYSTOTOME

- 22 gauge shaft
- Angled and curved
- Inner edge sharp
- Length 32mm



20300

KELMAN CYSTOTOME DOUBLE SHARP

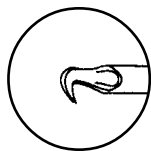
- 22 gauge shaft
- Length 32mm



20320

KELMAN CYSTOTOME DOUBLE SHARP

- 22 gauge shaft
- Micro size
- Length 20mm



20335

KELMAN DOUBLE BLADED CYSTOTOME

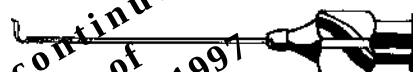
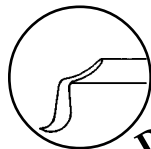
- 22 gauge shaft
- Length 32mm



20340

EMERY CYSTOTOME SOLID STRAIGHT

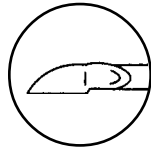
- Solid shaft, straight
- Double sharp
- Length 30mm
- Available with or without handle



21000

HOFFER FOWARD CUTTING KNIFE CANNULA

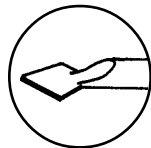
- 22 gauge shaft
- Length 32mm



21020

KRATZ-ZIEGLER KNIFE

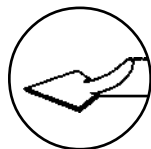
- 22 gauge shaft
- 1.5mm knife tip
- Length 25mm



21040

SPIZZIRI KNIFE CANNULA

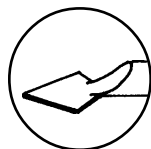
- 27 gauge shaft
- Sharp point
- Length 16mm



21060

RIZZUTI-SPIZZIRI

- 25 gauge shaft, with stop
- Triangular sharp blade
- Length 16mm



20180

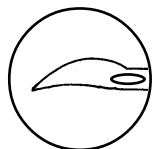
RIZZUTI-SPIZZIRI

- 30 gauge shaft, with stop
- Triangular shaped blade
- Length 16mm

KNIFE CANNULAE

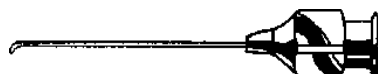
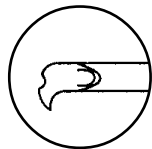
*Discontinued
as of
March 1, 1997*

KNIFE CANNULAE



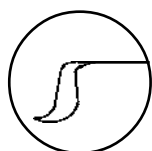
**21100
MAUMENEE CONIOTOMY KNIFE**

- 23 gauge shaft
- Length 26mm



**21110
GAHAGAN KNIFE**

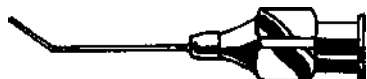
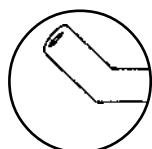
- 22 gauge shaft
- Length 32mm



**21120
PANNU SMALL PUPIL CYSTOTOME**

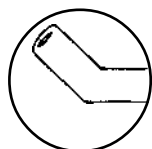
- 22 gauge shaft

CORTEX EXTRACTORS



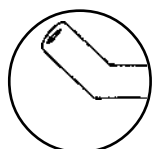
**22000
GILLS/WELSH CORTEX EXTRACTOR**

- 25 gauge shaft
- 3mm tip
- 12mm from hub to bend



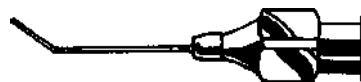
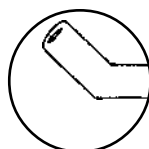
**22020
GILLS/WELSH CORTEX EXTRACTOR**

- 25 gauge shaft
- 5mm tip
- 12mm from hub to bend



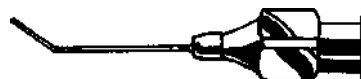
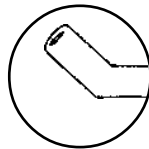
**22040
GILLS/WELSH CORTEX EXTRACTOR**

- 25 gauge shaft
- 7mm tip
- 12mm from hub to bend



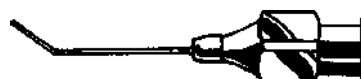
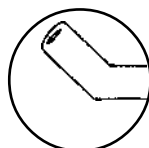
**22060
GILLS/WELSH CORTEX EXTRACTOR**

- 25 gauge shaft
- 8mm tip
- 12mm from hub to bend



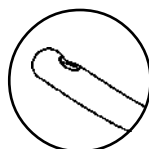
**22080
GILLS/WELSH CORTEX EXTRACTOR**

- 25 gauge shaft
- 9mm tip
- 12mm from hub to bend



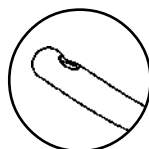
**22100
GILLS/WELSH CORTEX EXTRACTOR**

- 25 gauge shaft
- 10mm tip
- 12mm from hub to bend



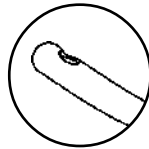
**22120
SIMCOE CORTEX EXTRACTOR**

- 23 gauge shaft
- 0.3mm port
- Length 13mm



**22130
SIMCOE CORTEX EXTRACTOR**

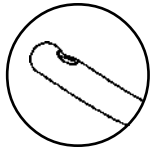
- 23 gauge shaft
- 0.3mm port
- Length 13mm, sandblasted



**22140
SIMCOE CORTEX EXTRACTOR**

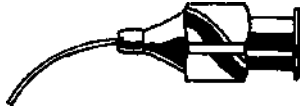
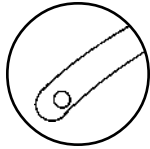
- 23 gauge shaft
- 0.3mm port
- Length 21mm

HOWARD INSTRUMENTS



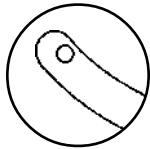
**22150
SIMCOE CORTEX EXTRACTOR**

- 23 gauge thin wall
- 0.4mm port
- Length 21mm



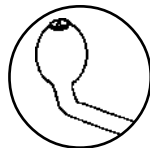
**22160
LEWICKY CORTEX EXTRACTOR**

- 23 gauge
- 0.3mm aspiration port set at 45 degrees left
- Curved shaft
- Length 13mm



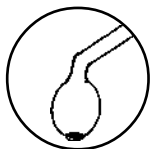
**22180
LEWICKY CORTEX EXTRACTOR**

- 23 gauge
- 0.3mm aspiration port set at 45 degrees right
- Curved shaft
- Length 13mm



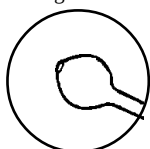
**22200
WELSH CORTEX EXTRACTOR
WITH FLAT OLIVE TIP**

- 25 gauge
- Right
- Length 25mm



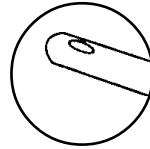
**22220
WELSH CORTEX EXTRACTOR
WITH FLAT OLIVE TIP**

- 25 gauge
- Left
- Length 25mm



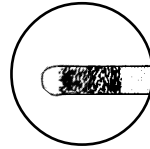
**22240
WELSH CORTEX EXTRACTOR
WITH FLAT OLIVE TIP**

- 25 gauge
- Straight
- Length 25mm



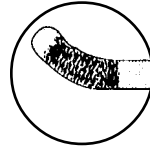
**22260
WELSH CORTEX EXTRACTOR**

- 23 gauge
- 10mm angled to tip
- Length 21mm



**22280
ANIS CORTEX ASPIRATING CANNULA**

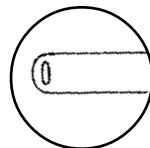
- 23 gauge
- 3mm straight sandblasted tip
- Length 25mm



**22300
ANIS CORTEX ASPIRATING CANNULA**

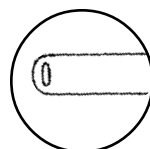
- 23 gauge
- 3mm curved sandblasted tip
- Length 25mm

AIR INJECTION CANNULAE



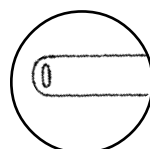
**23000
AIR INJECTION CANNULA**

- 27 gauge
- 5mm from tip to bend
- Length 19mm



**23005
AIR INJECTION CANNULA**

- 25 gauge
- 5mm from tip to bend
- Length 19mm



**23010
AIR INJECTION CANNULA**

- 27 gauge
- Angled 45 degree 7mm from tip to bend
- Length 19mm

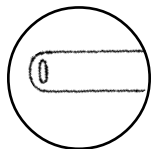
AIR INJECTION CANNULAE



Call customer service at (205) 553-4453 or fax us at (205) 556-9267

HOWARD INSTRUMENTS

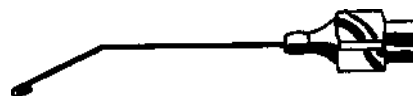
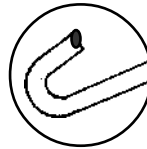
IRRIGATING CANNULAE



23015

AIR INJECTION CANNULA

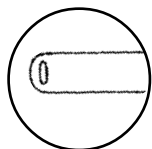
- 30 gauge
- 7mm from tip to bend
- Length 19mm



24020

BINKHORST IRRIGATING CANNULA

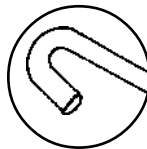
- 22 gauge shaft
- Hook tip curved right
- Length 35mm



23020

AIR INJECTION CANNULA

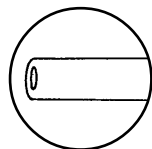
- 30 gauge
- Angled 45 degree 5mm from tip to bend
- Length 19mm



24040

BINKHORST HOOKED CANNULA

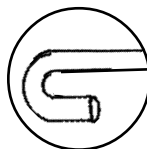
- 22 gauge shaft
- Hook tip curved left
- Length 35mm



23040

HEALON CANNULA

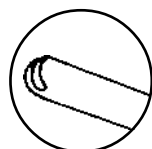
- 21 gauge
- 7mm tip
- Length 32mm



24041

"J" SHAPED CANNULA

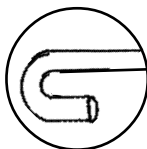
- 21 gauge shaft



23080

RAININ AIR INJECTION CANNULA

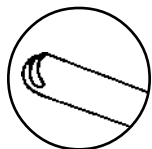
- 30 gauge
- 7mm spatulated tip
- Length 32mm



24042

"J" SHAPED CANNULA

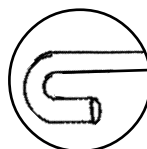
- 23 gauge shaft



23100

RAININ AIR INJECTION CANNULA

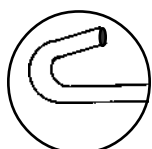
- 27 gauge
- 7mm spatulated tip
- Length 32mm



24043

"J" SHAPED CANNULA

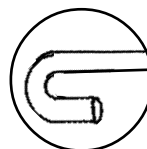
- 25 gauge shaft



24000

BINKHORST STRAIGHT IRRIGATING CANNULA

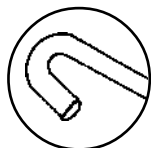
- 22 gauge shaft
- Smooth blunt tip
- Length 35mm



24044

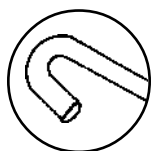
"J" SHAPED CANNULA

- 26 gauge shaft



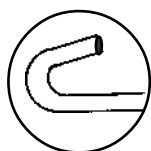
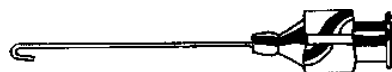
24045
WILBRANDT-BINKHORST IRRIGATING CANNULA

- 23 gauge shaft
- Straight shaft



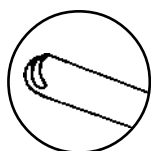
24050
WILBRANDT-BINKHORST IRRIGATING CANNULA

- 23 gauge shaft
- Left



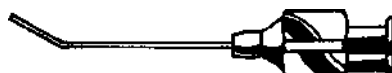
24055
WILBRANDT-BINKHORST IRRIGATING CANNULA

- 23 gauge shaft
- Right



24060
BISHOP-HARMON IRRIGATING CANNULA

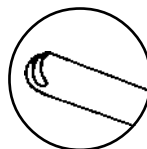
- 19 gauge shaft
- 7mm tip flattened blunt tip
- Length 24mm



24065
BISHOP-HARMON ADAPTOR

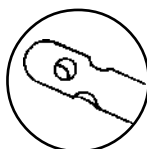
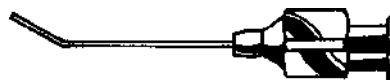
24067
SILICONE BULB

24070
COMPLETE SET



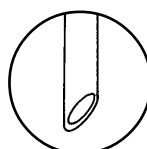
24075
BISHOP-HARMON IRRIGATING CANNULA

- 21 gauge shaft
- 7mm tip flattened blunt tip
- Length 24mm



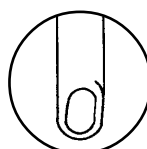
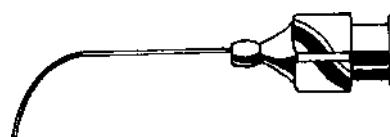
24080
PARK IRRIGATING CANNULA

- 19 gauge shaft
- 14mm angled to tip
- Flattened tip with 5 ports
- Length 32mm



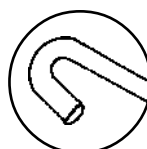
24100
BRACKEN ANTERIOR CHAMBER CANNULA

- 19 gauge shaft
- Curved 90 degree flattened beveled tip
- Length 28mm



24120
ANTERIOR CHAMBER CANNULA

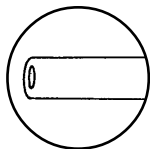
- 19 gauge shaft
- Curved flattened tip
- Length 21mm



24130
GIMBEL FORWARD IRRIGATING CANNULA

- 30 gauge shaft
- Length 28mm

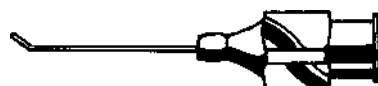
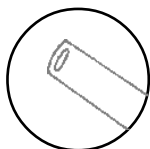




24140

SCHEIE ANTERIOR CHAMBER CANNULA

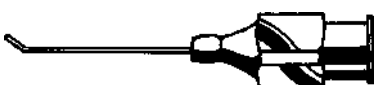
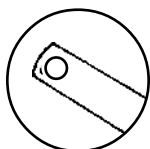
- 27 gauge shaft
- Straight blunt tip
- Length 19mm



24150

FRIEDLANDER INCISION IRRIGATING CANNULA

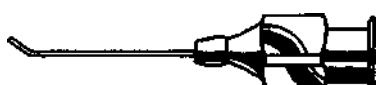
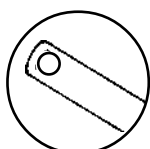
- 27 gauge shaft
- Length 30mm



24160

KNOLLE ANTERIOR CHAMBER

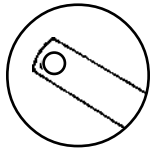
- 23 gauge shaft
- 2mm angled tip
- Blunt tip
- Length 19mm



24180

KNOLLE ANTERIOR CHAMBER

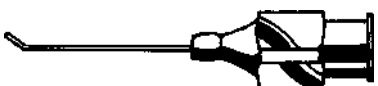
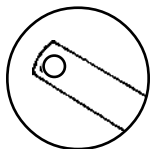
- 25 gauge shaft
- 2mm angled tip
- Blunt tip
- Length 19mm



24190

KNOLLE ANTERIOR CHAMBER

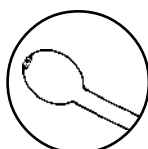
- 27 Gauge shaft
- 2mm angled tip
- Blunt tip
- Length 19mm



24200

KNOLLE ANTERIOR CHAMBER

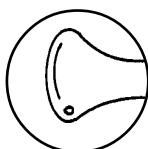
- 30 gauge shaft
- 2mm angled tip
- Blunt tip
- Length 19mm



24220

TROUTMAN ALPHA-CHYMOTRYPSIN IRRIGATING CANNULA

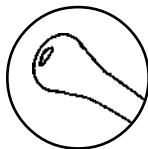
- 25 gauge shaft
- Light curve
- Smooth bulbous tip
- Length 28mm



24240

ROPER ALPHA-CHYMOTRYPSIN CANNULA

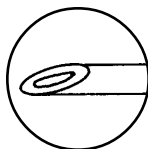
- 19 gauge
- Smooth round tip with ports on both sides
- Bayonet shaft
- Polished finish
- Length 33mm



24260

GILLS/WELSH OLIVE TIP

- 25 gauge
- Angled 45 degree shaft, 10mm from tip to bend
- 1mm smooth bulbous tip
- Polished finish
- Length 26mm



24280

WILLS EYE

- 24 gauge shaft
- Length 25mm

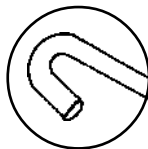


24300

McINTYRE-BINKHORST IRRIGATING CANNULA

- 26 gauge shaft
- Length 18mm

old catalog #: 35470



24320

McINTYRE-BINKHORST IRRIGATING CANNULA

- 26 gauge shaft
- Length 18mm

old catalog #: 35480

HOWARD INSTRUMENTS



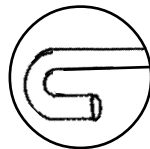
24340

McINTYRE-BINKHORST IRRIGATING CANNULA

- 26 gauge shaft
- Length 18mm



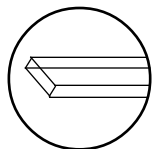
old catalog #: 35490



24440

HYDRO DISSECTION IRRIGATING CANNULA

- 25 gauge shaft
- Straight
- "J" hook



24360

HYDRO DISSECTION IRRIGATING CANNULA

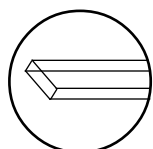
- 25 gauge shaft
- Straight



24460

HYDRO DISSECTION IRRIGATING CANNULA

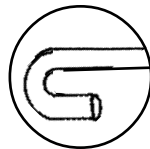
- 25 gauge shaft
- Angled
- "J" hook



24380

HYDRO DISSECTION IRRIGATING CANNULA

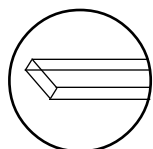
- 27 gauge shaft
- Straight



24480

HYDRO DISSECTION IRRIGATING CANNULA

- 27 gauge shaft
- Straight
- "J" hook



24390

HYDRO DISSECTION IRRIGATING CANNULA

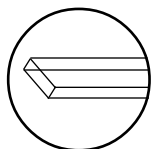
- 27 gauge shaft
- Angled



24490

HYDRO DISSECTION IRRIGATING CANNULA

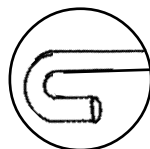
- 27 gauge shaft
- Angled
- "J" hook



24400

HYDRO DISSECTION IRRIGATING CANNULA

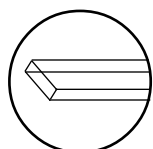
- 25 gauge shaft
- Angled



24500

HYDRO DISSECTION IRRIGATING CANNULA

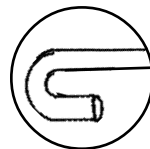
- 30 gauge shaft
- Straight
- "J" hook



24420

McINTYRE-BINKHORST IRRIGATING CANNULA

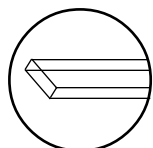
- 30 gauge shaft
- Straight



24510

HYDRO DISSECTION IRRIGATING CANNULA

- 30 gauge shaft
- Angled
- "J" hook



24430

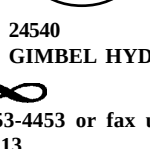
McINTYRE-BINKHORST IRRIGATING CANNULA

- 30 gauge shaft
- Angled



24520

CUMMINGS HYDRO DISSECTION



24540

GIMBEL HYDRO DISSECTION

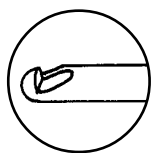


IRRIGATING CANNULAE



Call customer service at (205) 553-4453 or fax us at (205) 556-9267

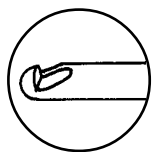
ASPIRATING CANNULAE



25000

GASS CATARACT ASPIRATING CANNULA

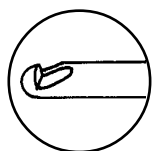
- 22 gauge shaft
- Closed blunt end
- Notched side opening
- Length 10mm



25020

GASS CATARACT ASPIRATING CANNULA

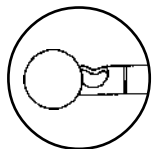
- 22 gauge
- Closed blunt end
- Notched side opening
- Length 12mm



25040

GASS CATARACT ASPIRATING CANNULA

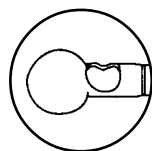
- 22 gauge
- Closed blunt end
- Notched side opening
- Length 14mm



25060

GASS VITREOUS ASPIRATING CANNULA

- 16 gauge ball shaped tip with side opening
- Markings at 5mm intervals, starting at 15mm
- Length 33mm



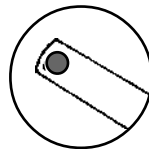
25080

GASS VITREOUS ASPIRATING CANNULA

- 16 gauge thin wall
- Ball tip with side opening
- Markings at 5mm intervals starting at 15mm
- Angled
- Length 25mm

25085

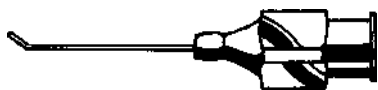
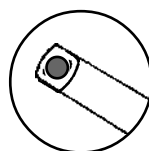
**CORTICAL CLEAVING
HYDRO DISSECTION**



25087

KELLAN HYDRO DISSECTION

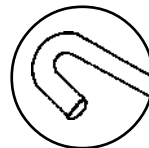
- 25 gauge shaft
- Curved tip
- Length 18mm



25090

KELLAN HYDRO DISSECTION

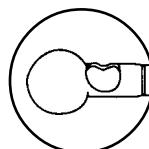
- 25 gauge shaft
- Curved and flattened tip
- Length 18mm



25095

THORNTON ASPIRATING CAPSULE POLISHER

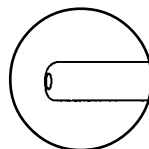
- 27 gauge shaft
- "U" shaped tip
- Sandblasted tip
- Length 23mm



25100

MAUMENE VITREOUS ASPIRATING CANNULA

- 18 gauge thin wall
- Straight needle with blunt tip
- Markings at 5mm, 10mm, & 15mm from hub
- Length 25mm

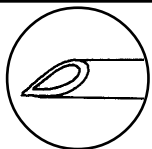


25110

MORRISON ASPIRATING CANNULA

- 23 gauge shaft
- Smooth blunt tip
- 7mm angled tip
- Length 25mm

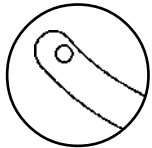
HOWARD INSTRUMENTS



25120

SCHEIE CATARACT ASPIRATING CANNULA

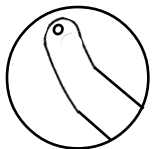
- 19 gauge thin wall
- Atkinson sharp
- Round point



25140

OSHER CATARACT ASPIRATING CANNULA

- 19 gauge thin wall
- Atkinson sharp
- Round point



25160

FISH ASPIRATING CANNULA

- Straight

25180

FISH ASPIRATING CANNULA

- Right

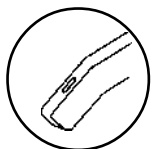
25200

FISH ASPIRATING CANNULA

- Left



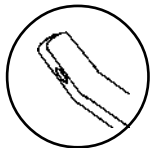
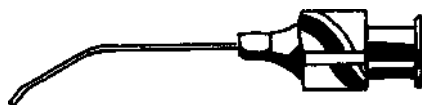
SPATULATED CANNULAE



26000

KELMAN CYCLODIALYSIS CANNULA

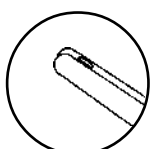
- 19 gauge shaft
- Flattened with right side opening
- Length 32mm



26020

KELMAN CYCLODIALYSIS CANNULA

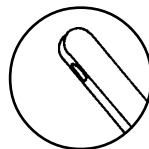
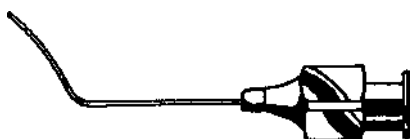
- 19 gauge shaft
- Flattened with left side opening
- Length 32mm



26040

GANS CYCLODIALYSIS CANNULA

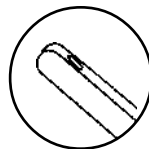
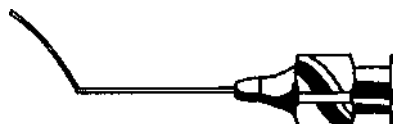
- 19 gauge shaft
- Right side opening
- Length 32mm



26060

GANS CYCLODIALYSIS CANNULA

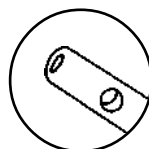
- 19 gauge shaft
- Left side opening
- Length 32mm



26080

GANS CYCLODIALYSIS CANNULA

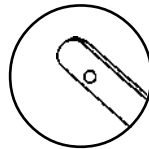
- 19 gauge shaft
- Openings on both sides
- Length 32mm



26100

SHEETS CYCLODIALYSIS CANNULA

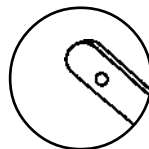
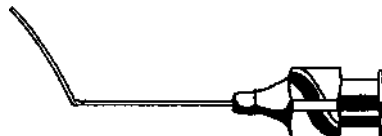
- 19 gauge shaft
- 12mm angled tip
- Flattened with ports on front and sides
- Length 32mm



26120

CASTROVIEJO CYCLODIALYSIS CANNULA

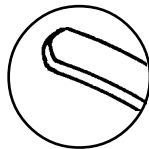
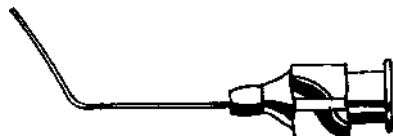
- 19 gauge shaft
- Semi-sharp sides
- Front opening
- Angled 10mm
- Length 26mm



26140

CASTROVIEJO CYCLODIALYSIS CANNULA

- 19 gauge shaft
- Semi-sharp sides
- Front openings
- Angled 15mm
- Length 26mm



26160

RANDOLPH CYCLODIALYSIS CANNULA

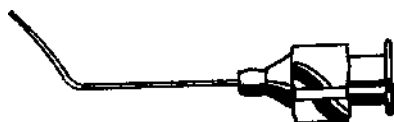
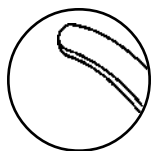
- 19 gauge shaft
- 12mm angled tip
- Front opening
- Length 32mm



SPATULATED CANNULAE

HOWARD INSTRUMENTS

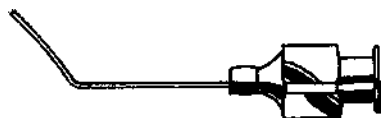
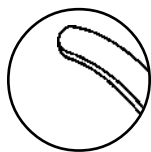
IRRIGATING/ASPIRATING CANNULAE



26180

RANDOLPH CYCLODIALYSIS CANNULA

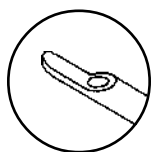
- 21 gauge shaft
- 12mm angled tip
- Front opening
- Length 32mm



26200

RANDOLPH CYCLODIALYSIS CANNULA

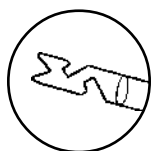
- 21 gauge shaft
- 12mm angled tip
- Front opening
- Delicate
- Length 32mm



26220

SIMCOE NUCLEUS SPATULA

- 25 gauge shaft
- 2mm flattened tip
- Length 18mm

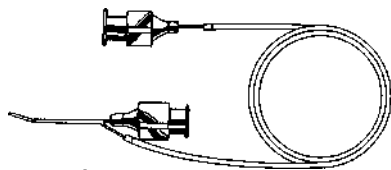
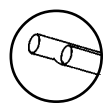


26240

SIMCOE IRRIGATING NOTCHED SPATULA

- 25 gauge shaft
- 3 notches
- 10mm angled
- Length 18mm

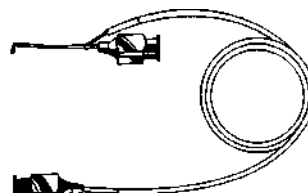
IRRIGATING/ASPIRATING CANNULAE



27000

GILLS/WELSH DOUBLE-BARRELED IRRIGATING/ASPIRATING CANNULA

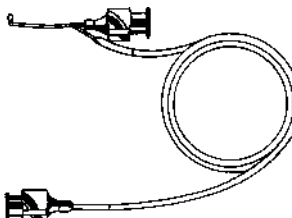
- 23 gauge thin wall irrigation
- 25 gauge thin wall aspiration
- Curved
- Length 23mm



27040

GILLS/WELSH IRRIGATING/ASPIRATING CANNULA WITH FLAT OLIVE TIP

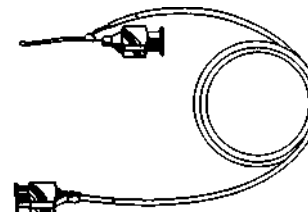
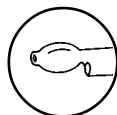
- 23 gauge thin wall irrigation
- 25 gauge thin wall aspiraton
- Curved left
- Length 25mm



27060

GILLS/WELSH IRRIGATING/ASPIRATING CANNULA WITH FLAT OLIVE TIP

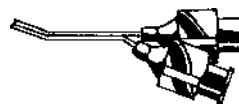
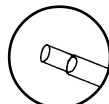
- 23 gauge thin wall irrigation
- 25 gauge thin wall aspiration
- Curved right
- Length 25mm



27080

GILLS/WELSH IRRIGATING/ASPIRATING CANNULA WITH FLAT OLIVE TIP

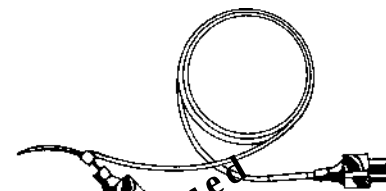
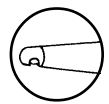
- 23 gauge thin wall irrigation
- 25 gauge thin wall aspiration
- Straight
- Length 25mm



27100

GILLS IRRIGATING/ASPIRATING CANNULA

- 23 gauge thin wall irrigation
- 25 gauge thin wall aspiration
- 15mm from hub to angle
- 8mm from angle to tip
- Length 23mm



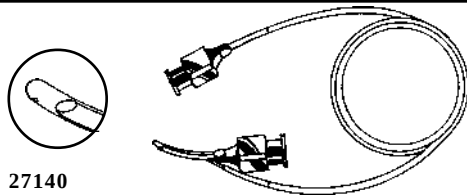
27120

SIMCOE IRRIGATING/ASPIRATING UNIT

- 23 gauge cannula
- 0.3mm aperture
- Length 21mm

Discontinued
as of
January 1, 1997

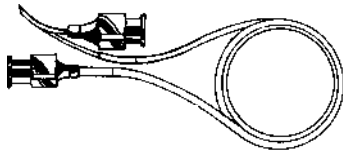
HOWARD INSTRUMENTS



27140

SIMCOE DOUBLE BARRELED IRRIGATING/ASPIRATING UNIT

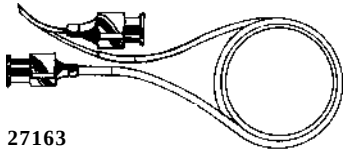
- 23 gauge thin wall irrigating and aspirating
- 0.3mm aspiration port
- Curved shaft
- Length 15mm



27160

SIMCOE REVERSE IRRIGATING/ASPIRATING CANNULA

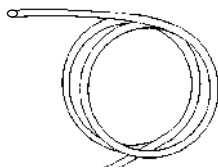
- 23 gauge thin wall irrigation
- 23 gauge thin wall aspiration, port facing into curve
- Aspiration on the needle hub
- Irrigation on tubing hub
- Length 15mm



27163

SWISS DOUBLE BARRELED IRRIGATING/ASPIRATING CANNULA

- 23 gauge thin wall irrigation
- 23 gauge thin wall aspiration
- 0.3mm port on left side of aspiration tubing
- Length 15mm



27165

SILICONE TUBING

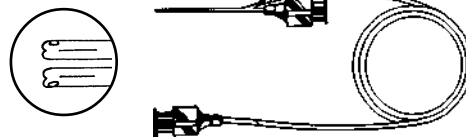
- For use with #27140 and #27160
- 0.030 ID x 0.065 OD
- Length 10 feet



27180

JENSEN THOMAS ANTERIOR CAPSULE IRRIGATING/ASPIRATING CANNULA

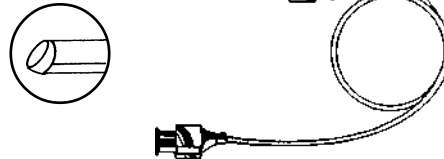
- 23 gauge irrigation/aspiration
- Side-by-side irrigation/aspiration
- 0.3mm ports
- Length 32mm



27200

THOMAS IRRIGATING/ASPIRATING CANNULA

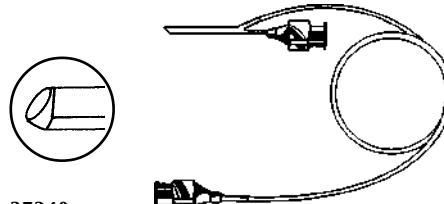
- 20 gauge irrigation/aspiration
- Side-by-side irrigation/aspiration
- 0.5mm ports
- Length 22mm



27220

O'GAWA IRRIGATING/ASPIRATING TWO-WAY CANNULA

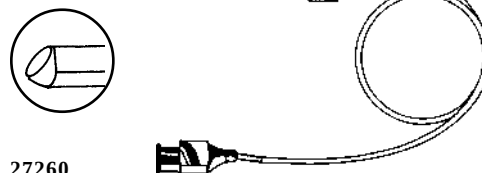
- 16 gauge shaft
- Beveled tip
- Straight shaft
- Length 30mm



27240

O'GAWA IRRIGATING/ASPIRATING TWO-WAY CANNULA

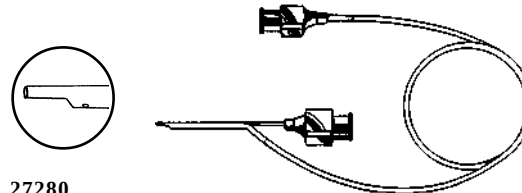
- 18 gauge shaft
- Beveled tip
- Straight shaft
- Length 30mm



27260

O'GAWA IRRIGATING/ASPIRATING TWO-WAY CANNULA

- 20 gauge shaft
- Beveled tip
- Straight shaft
- Length 30mm



27280

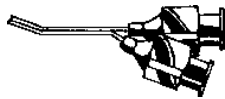
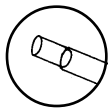
THURMOND IRRIGATING/ASPIRATING TWO-WAY CANNULA

- 27 gauge double barrel
- Working end
- Length 33mm

IRRIGATING/ASPIRATING CANNULAE



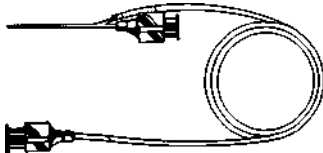
Call customer service at (205) 553-4453 or fax us at (205) 556-9267



27300

GILLS IRRIGATING/ASPIRATING CANNULA

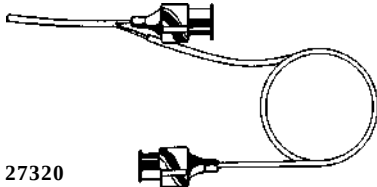
- 23 gauge thin wall x 25 gauge thin wall
- Curved
- 0.75mm between tips
- Both ports exit forward
- Length 25mm



27310

PANNU HEALON ASPIRATING CANNULA

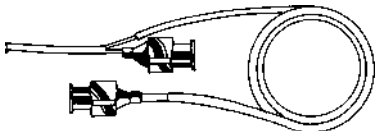
- 22 gauge x 22 gauge
- .5mm ports
- Aspirating port exits top
- Irrigating port exits side
- Length 15mm



27320

GRANDON "01" IRRIGATING/ASPIRATING CANNULA

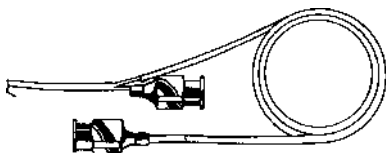
- 23 gauge x 23 gauge
- Curved
- 3mm between tips
- Aspirating port faces into curve
- Irrigating port exits to side
- Length 27mm



27340

GRANDON "02" IRRIGATING/ASPIRATING CANNULA

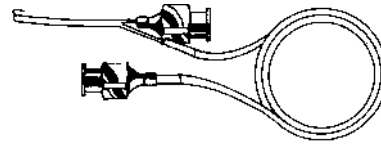
- 23 gauge x 23 gauge
- Curved
- 3mm between tips
- Aspirating port faces into curve
- Irrigating port exits in end opening
- Length 27mm



27360

GRANDON "03" IRRIGATING/ASPIRATING CANNULA

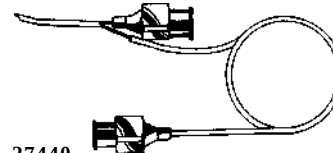
- 23 gauge x 23 gauge
- Aspirating port exits top
- Curved left
- Irrigating port exits to side
- 3mm between tips
- Length 27mm



27380

GRANDON "04" IRRIGATING/ASPIRATING CANNULA

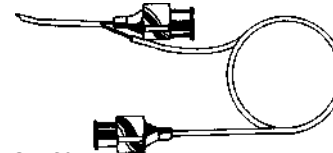
- 23 gauge x 23 gauge
- Aspirating port exits top right
- Irrigating port exits to side
- 3mm between tips
- Length 27mm



27440

MORRISON IRRIGATING/ASPIRATING CANNULA

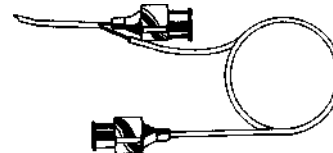
- 23 gauge thin wall x 25 gauge thin wall
- Angled 7mm from tip
- 1.5mm between tips
- Aspirating port exits forward
- Irrigating exits to side
- Length 22mm



27460

"J" SHAPED IRRIGATING/ASPIRATING CANNULA

- 23 gauge aspirating
- 23 gauge irrigating



27480

OSHER AIR BUBBLE REMOVAL CANNULA

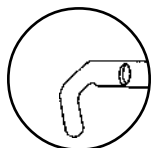
- 27 gauge double barrel
- Angled 45 degrees shaft, 8mm from tip to bend
- Aspirating port exits upward
- Polished finish
- Length 21mm

27500

HYDE-FROG IRRIGATING/ASPIRATING CANNULA

- Cannula only

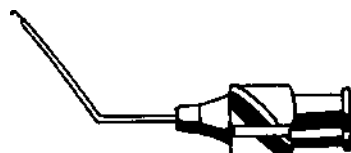
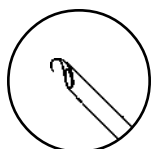
HOOKED CANNULAE



28000

OSHER IRRIGATING IMPLANT HOOK

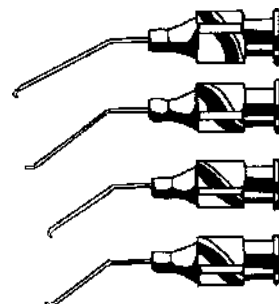
- 24 gauge shaft
- 30 gauge working tip
- Length 23mm



28020

SIMCOE MICRO HOOK

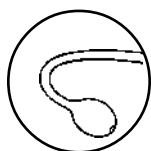
- 30 gauge shaft
- 15mm angled 60 degrees
- Length 15mm



28040

SIMCOE IRRIGATING POSITIONING NEEDLES

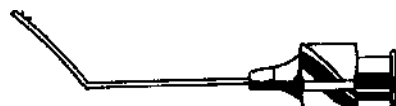
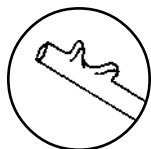
- Set of four 30 gauge cannulas:
angled-up, down, right, and left
- Angled portion 9mm
- Length 12mm



28060

HIRSCHMAN HOOKED CANNULA

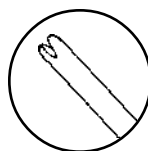
- 25 gauge shaft
- Malleable tip and shaft
- Olive tip
- Length 30mm



28080

KRATZ "K" IRIS PUSH-PULL HOOK

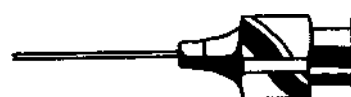
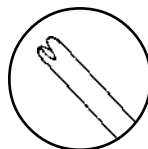
- 30 gauge shaft
- Front portion 18mm long
- 14mm from tip to bend
- Length 28mm



28100

BECHERT CANNULA

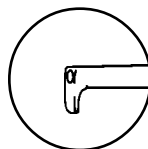
- 27 gauge shaft
- 5mm tip with horizontal groove
- Length 19mm



28120

BECHERT CANNULA

- 27 gauge shaft
- 5mm tip with vertical groove
- Length 19mm

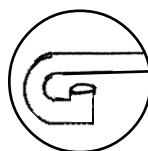


28140

FREEMAN POSITIONING CANNULA "BLUE MAX"

- 27 gauge shaft
- 8mm tip
- Length 18mm

old catalog #: 34020

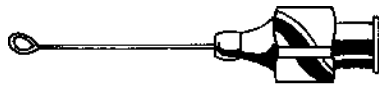
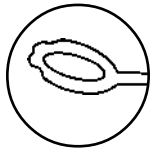


28160

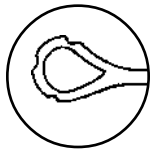
KELMAN MANIPULATOR HOOK

- 30 gauge shaft
- Angled tip
- Curved shaft
- Length 23mm

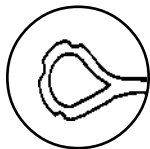
LENS LOOPS



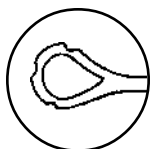
- 29000**
CLAYMAN-KNOLLE IRRIGATING LENS LOOP
- 24 gauge shaft
 - Three irrigating ports, 2.5mm
 - Length 22mm



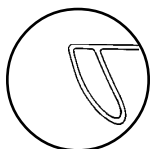
- 29020**
DREWS-KNOLLE IRRIGATING LENS LOOP
- 23 gauge thin wall
 - One outer irrigating port and two inner ports
 - Length 38mm



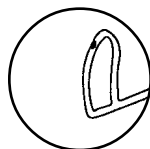
- 29040**
KNOLLE-PIERCE IRRIGATING LENS LOOP
- 23 gauge thin wall shaft
 - Three irrigating ports: 12, 10, and 2 o'clock on outer side
 - Length 38mm



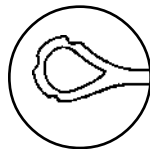
- 29060**
SHEETS IRRIGATING VECTUS
- 21 gauge thin wall shaft
 - Three irrigating ports: 12, 10, 2 o'clock
 - With or without serrations
 - Length 38mm



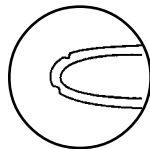
- 29080**
SIMCOE NUCLEUS DELIVERY
- 25 gauge thin wall
 - Torpedo-shaped
 - Two ports
 - Loop 13mm long, 4mm wide
 - Serrations on loop
 - Left



- 29100**
SIMCOE NUCLEUS DELIVERY
- 25 gauge thin wall
 - Torpedo-shaped
 - Two ports
 - Loop 13mm long, 4mm wide
 - Serrations on loop
 - Right



- 29120**
SHEETS IRRIGATING VECTUS
- 16 gauge shaft
 - 23 gauge thin wall loop
 - Three ports: 12, 10, and 2 o'clock
 - Angled
 - With or without serrations
 - Length 35mm



- 29140**
HOFFMAN IRRIGATING VECTUS
- 16 gauge shaft
 - 25 gauge thin wall loop
 - Length 45mm



- 29160**
ANIS IRRIGATING VECTUS
- 16 gauge shaft
 - 23 gauge heart shaped loop
 - Two front ports to retract iris and capsular flap when irrigating
 - Length 35mm

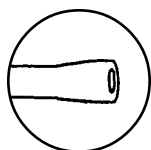


- 29180**
TIRE TOOL CANNULA
- 25 gauge shaft
 - Two 0.2mm ports
 - Inside curve for nucleus delivery
 - Length 19mm

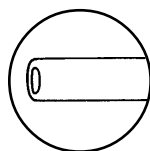


HOWARD INSTRUMENTS

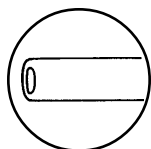
LACHRYMAL CANNULAE



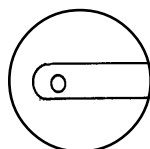
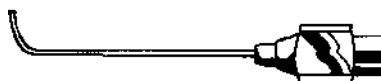
- 30000
LACHRYMAL CANNULA**
- 23 gauge
 - Straight
 - Length 25mm



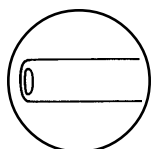
- 30280
BAILEY LACHRYMAL CANNULA**
- 23 gauge shaft
 - 7mm exposed tip
 - 8mm reinforced
 - Length 15mm



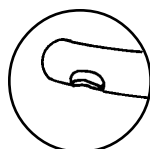
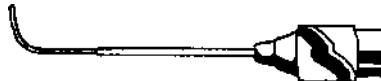
- 30020
LACHRYMAL CANNULA**
- 23 gauge working tip
 - Straight
 - Reinforced 20mm
 - Length 32mm



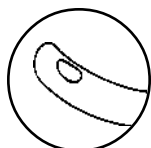
- 30300
LACHRYMAL CANNULA**
- 19 gauge
 - Blunt tip with side opening
 - Length 28mm



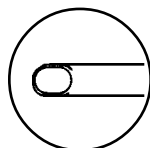
- 30060
LACHRYMAL CANNULA**
- 23 gauge shaft with working tip
 - Curved
 - Reinforced 20mm
 - Length 35mm



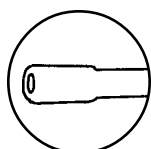
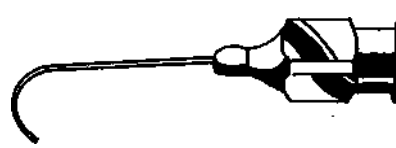
- 30320
WEST LACHRYMAL CANNULA**
- 23 gauge shaft
 - Blunt tip with inner side opening
 - Gently curved shaft
 - Length 30mm



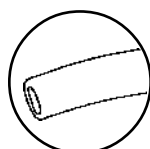
- 30240
WEIL LACHRYMAL CANNULA**
- 20 gauge shaft working tip
 - Blunt tip with top port
 - Curved shaft
 - Length 34mm



- 30360
FASANELLA LACHRYMAL CANNULA**
- 23 gauge
 - Curved tip
 - Length 15mm



- 30260
LACHRYMAL CANNULA**
- 22 gauge
 - Probe point
 - Length 19mm



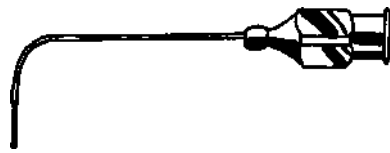
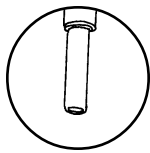
- 30380
FASANELLA LACHRYMAL CANNULA**
- 19 gauge cannula with reinforced shaft
 - 23 gauge front portion
 - Lightly curved with 23mm tip
 - Length 42mm



LACHRYMAL CANNULAE

HOWARD INSTRUMENTS

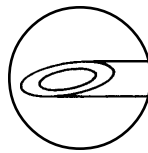
NEEDLE CANNULAE



30400

KEISLAR LACHRYMAL CANNULA

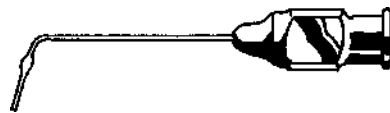
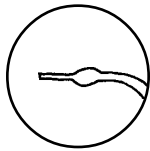
- 23 gauge shaft
- 5mm tip
- Curved
- Length 30mm



31060

ATKINSON RETROBULBAR NEEDLE

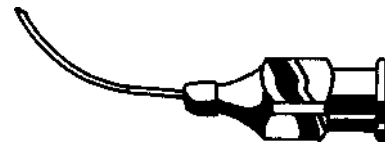
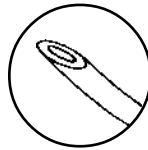
- 25 gauge
- Length 35mm



30420

TULEVECH LACHRYMAL CANNULA

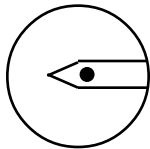
- 25 gauge
- Length 30mm



31080

SIMCOE ANTERIOR CHAMBER RECEIVING NEEDLE

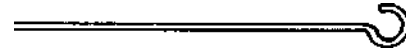
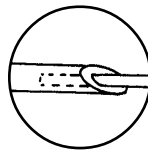
- 25 gauge
- Beveled tip
- 4mm angle
- Length 8mm



30440

SHAHINIAN LACHRYMAL CANNULA

- 23 gauge
- Blunt tapered with side port
- Length 11mm

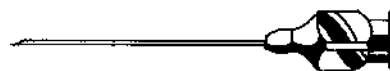
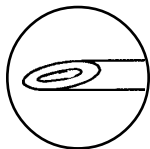


31100

SIMCOE ANTERIOR CHAMBER RETAINING NEEDLE

- 0.007 inch wire
- Length 16mm

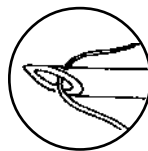
NEEDLE CANNULAE



31000

ATKINSON RETROBULBAR NEEDLE

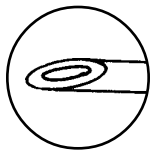
- 19 gauge
- Length 35mm



31120

SIMCOE SUTURING NEEDLE

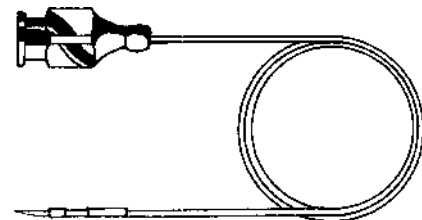
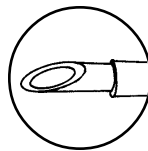
- 30 gauge
- Beveled sharp tip with hole for intraocular suturing
- Length 18mm



31020

ATKINSON RETROBULBAR NEEDLE

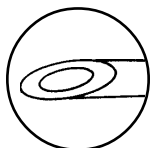
- 20 gauge
- Length 35mm



31140

GIRARD ANTERIOR CHAMBER NEEDLE SET

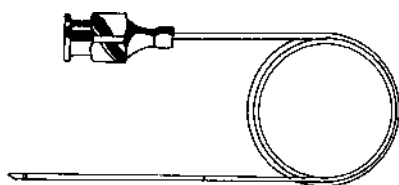
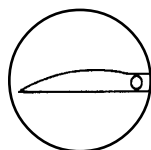
- 23 gauge
- Blunt needle without hub
- 7.5mm working end
- Uses 15cm of Silastic® tubing



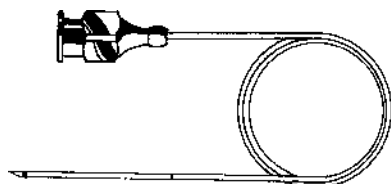
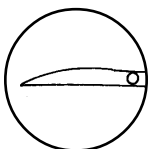
31040

ATKINSON RETROBULBAR NEEDLE

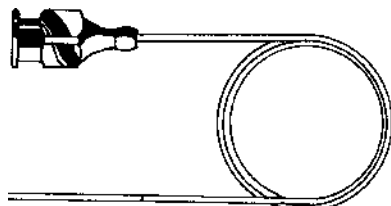
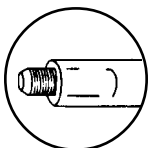
- 23 gauge
- Length 35mm



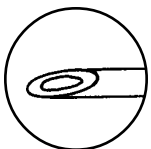
- 31160**
LEWICKY MAINTENANCE NEEDLE CANNULA
- 25 gauge
 - One hole
 - 25mm working end, with silastic tubing



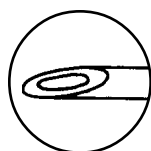
- 31180**
LEWICKY MAINTENANCE NEEDLE CANNULA
- 25 gauge
 - Three hole
 - 25mm working end, with silastic tubing



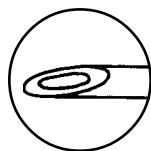
- 31200**
LEWICKY THREADED INFUSION CANNULA
- 20 gauge
 - Self retaining with silastic tubing



- 31240**
WILLS RETROBULBAR
- 22 gauge shaft
 - Length 38mm

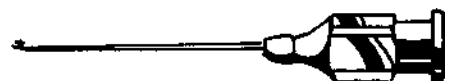
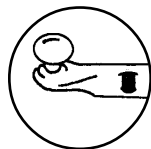


- 31260**
WILLS RETROBULBAR
- 20 gauge shaft
 - Length 38mm

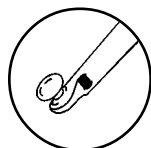


- 31280**
WILLS RETROBULBAR
- 18 gauge shaft
 - Length 38mm

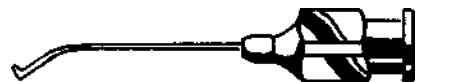
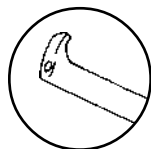
RETRACTOR CANNULA



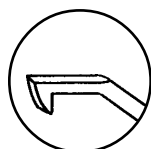
- 32000**
GRAETHER COLLAR BUTTON
- 23 gauge
 - Straight shaft
 - Roughened posterior surface
 - Length 25mm



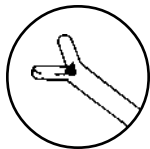
- 32020**
GRAETHER COLLAR BUTTON
- 23 gauge
 - Angled shaft
 - Roughened posterior surface
 - Length 25mm



- 32040**
THURMOND NUCLEUS IRRIGATING CANNULA WITH IRIS RETRACTOR
- 19 gauge
 - Angled cannula
 - 1mm iris retractor
 - Length 23mm



- 32080**
SCHULTZ IRIS RETRACTOR CANNULA
- 19 gauge shaft
 - Length 24mm



32100

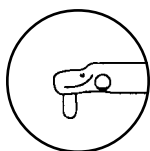
BECHART-KRATZ NUCLEUS ROTATOR

- 22 gauge
- Angled shaft
- Split, "Y" shape tip
- 20 mm from hub to bend, 7mm from bend to tip
- Length 27mm

32105

NEWELL NUCLEUS ROTATOR

- 22 gauge
- Angled shaft
- Length 29mm



32110

KUGLEN LENS MANIPULATOR

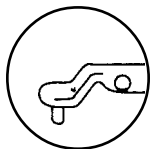
- 25 gauge shaft
- Disc shaped tip
- 0.25mm pin protruding from the center



32115

KUGLEN LENS MANIPULATOR

- 25 gauge shaft
- Disc shaped tip
- 0.25mm pin protruding from the center
- Angled



32120

ANIS KUGLEN LENS MANIPULATOR

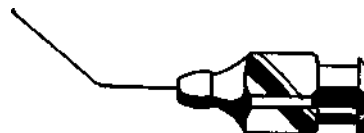
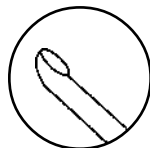
- 25 gauge shaft
- Disc shaped tip
- 0.25mm pin protruding from the center
- Bayonet bend

32140

BARRETT IRRIGATING LENS MANIPULATOR

- 22 gauge
- Forked tip and mushroom shaped button
- Length 25mm

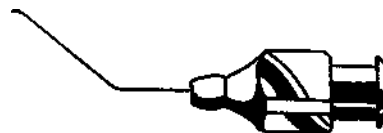
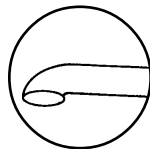
SCRAPERS & POLISHERS



33000

SIMCOE ANTERIOR CAPSULE SCRUBBER

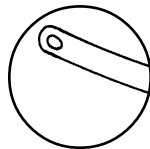
- 23 gauge shaft
- Sandblasted tip, angled 45 degrees
- Length 19mm



33020

SIMCOE POSTERIOR CAPSULE SCRUBBER

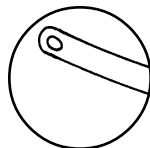
- 23 gauge shaft
- Sandblasted tip, angled 45 degrees
- Length 19mm



33040

SIMCOE CAPSULE SCRUBBER

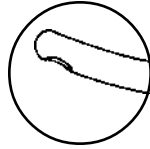
- 23 gauge shaft
- Sandblasted distal tip, curved
- Length 13mm



33050

SIMCOE CAPSULE SCRUBBER

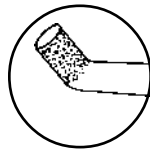
- 21 gauge shaft
- Sandblasted distal tip, curved
- Length 13mm



33060

SIMCOE POSTERIOR CAPSULE SCRUBBER

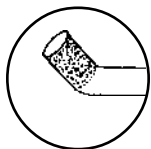
- 23 gauge shaft
- Reverse aperture
- Length 13mm



33080

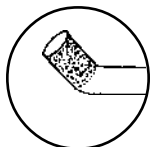
KRATZ CAPSULE SCRAPER

- 23 gauge shaft
- 1mm sandblasted tip
- Angled 30 degrees
- Length 21mm



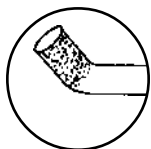
33090
KRATZ CAPSULE SCRAPER

- 23 gauge shaft
- 1mm sandblasted posterior tip
- Angled 30 degrees
- Length 21mm



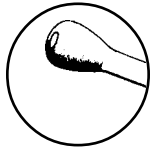
33100
KNOLLE CAPSULE WALL SCRAPER

- 23 gauge shaft
- 2mm sandblasted tip
- Angled 45 degrees
- Length 19mm



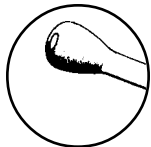
33120
KNOLLE CAPSULE WALL SCRAPER

- 30 gauge shaft
- 2mm sandblasted tip
- Angled 45 degrees
- Length 19mm



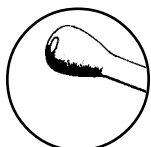
33140
JENSEN CAPSULE POLISHER

- 27 gauge shaft
- Very rough, sandblasted
- Length 28mm



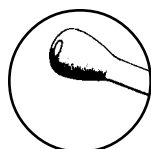
33145
JENSEN CAPSULE POLISHER

- 25 gauge shaft
- Very rough, sandblasted
- Length 28mm



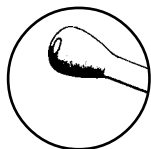
33147
JENSEN CAPSULE POLISHER

- 27 gauge shaft
- Very rough, sandblasted posterior only
- Length 28mm



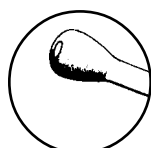
33150
JENSEN CAPSULE POLISHER

- 23 gauge shaft
- Very rough, sandblasted
- Length 28mm



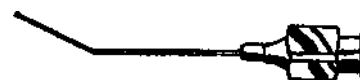
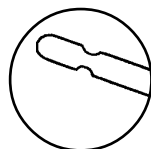
33155
JENSEN CAPSULE POLISHER

- 25 gauge shaft
- Very rough, sandblasted posterior only
- Length 28mm



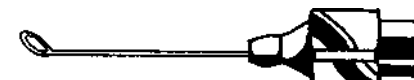
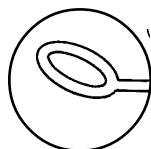
33157
JENSEN CAPSULE POLISHER

- 23 gauge shaft
- Very rough, sandblasted posterior only
- Length 28mm



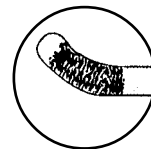
33160
FREEMAN POSTERIOR CAPSULE POLISHER

- 19 gauge shaft
- Three hole tip and sides
- Length 28 mm



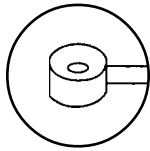
33180
DREWS CAPSULE POLISHER

- 25 gauge cannula
- Port on side at 6 o'clock
- Roughened posterior surface, smooth anterior surface
- Length 22mm



33200
RUBMAN-KATZIN POSTERIOR CAPSULE POLISHER

- 22 gauge shaft
- 0.3mm inside facing port
- 3mm blunt sandblasted tip

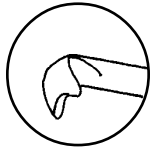


33210

**KRAFF POSTERIOR CAPSULE
POLISHING CURRETTE**

- 25 gauge shaft
- 1.75mm diameter cup with semi-sharp edge
- Irrigating port in center

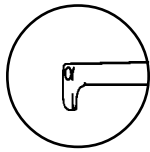
MISCELLANEOUS CANNULAE



34000

de la VEGA

- Anterior chamber lens pusher
- Right angled "U" shaped tip
- Length 22mm



34020

**FREEMAN POSITIONING CANNULA
"BLUE MAX"**

- 27 gauge shaft
- 8mm tip
- Length 18mm

moved to #: 28140



34030

JENSEN CAPSULE HOOK

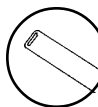
- 27 gauge shaft
- Hook for lens manipulation
- Angled
- Length 20mm



34040

**KELMAN DIPSTICK
FOR ANTERIOR CHAMBER MEASUREMENT**

- 19 gauge shaft
- Markings at 5mm, 6mm, and 7mm
- Two irrigating ports on side
- Length 32mm



34080

**SHEPARD RADIAL KERATOTOMY
INCISION IRRIGATING CANNULA**

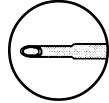
- 30 gauge shaft
- Length 19mm



34100

ROWSEY FIXATION CANNULA

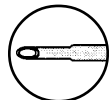
- 19 gauge shaft
- Sandblasted tip for global fixation
- 24mm from hub to bend
- 8mm from bend to tip
- Length 32mm



34120

HESLIN INFUSION CANNULA

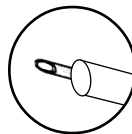
- 25 gauge shaft
- Sandblasted finish
- 9mm long



34140

HESLIN INFUSION CANNULA

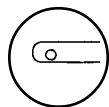
- 23 gauge shaft
- Sandblasted finish
- 9mm long



34150

FISH INFUSION CANNULA

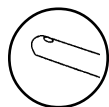
- Beveled 14 gauge shaft
- Beveled 23 gauge tip
- 7mm long



34160

IRRIGATION NEEDLE

- Side port
- Straight
- Available in gauge sizes of 23, 20, 19, and 18
- Length 30mm



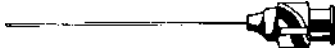
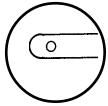
34180

IRRIGATION NEEDLE

- Side port
- Angled
- Available in gauge sizes of 23, 20, 19, and 18
- Length 30mm



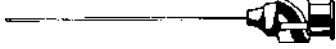
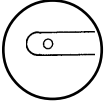
McINTYRE CANNULAS



35000

McINTYRE INNER CANNULA

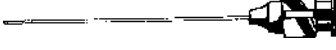
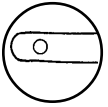
- 23 gauge shaft
- 0.2mm side port
- Length 46mm



35010

McINTYRE INNER CANNULA

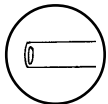
- 23 gauge shaft
- 0.25mm side port
- Length 46mm



35020

McINTYRE INNER CANNULA

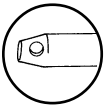
- 23 gauge shaft
- 0.3mm side port
- Length 46mm



35040

McINTYRE STRAIGHT INNER CANNULA

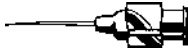
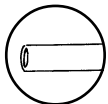
- 23 gauge shaft
- Straight end opening
- Length 46mm



35060

McINTYRE TRUNCATED OUTER CANNULA

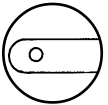
- 19 gauge shaft
- Tapered tip with two side ports
- Length 17mm



35080

McINTYRE STRAIGHT OUTER CANNULA

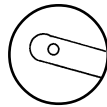
- 19 gauge shaft
- Straight untapered end
- Length 17mm



35100

McINTYRE STRAIGHT LACHRYMAL CANNULA

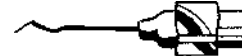
- 23 gauge shaft
- Closed end, two side ports at 0.3mm
- Straight shaft
- Length 46mm



35120

McINTYRE CURVED LACHRYMAL CANNULA

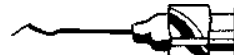
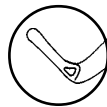
- 23 gauge shaft
- Closed end, side ports at 0.3mm
- Curved shaft
- Length 46mm



35140

McINTYRE IRRIGATING SPATULA RIGHT

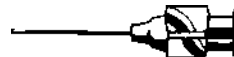
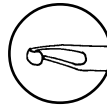
- 23 gauge shaft
- For use in the left hand by right handed surgeons
- Length 22mm



35160

McINTYRE IRRIGATING SPATULA LEFT

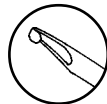
- 23 gauge shaft
- For use in the right hand by left handed surgeons
- Length 22mm



35180

McINTYRE STRAIGHT IRRIGATING MICRO HOOK

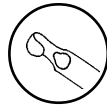
- 26 gauge shaft
- Length 17mm



35200

McINTYRE ANGLED IRRIGATING MICRO HOOK

- 26 gauge shaft
- Angled 12mm 45 degrees
- Length 17mm



35220

McINTYRE IRRIGATING IRIS HOOK

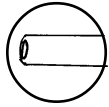
- 23 gauge shaft
- Angled 12mm 45 degrees
- Length 17mm



35240

McINTYRE IRRIGATING IRIS HOOK

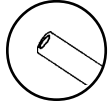
- 23 gauge shaft
- Straight
- Length 17mm



35260

**McINTYRE STRAIGHT
ANTERIOR CHAMBER CANNULA**

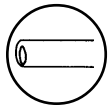
- 23 gauge shaft
- Smooth round tip
- Length 17mm



35280

**McINTYRE ANGLED
ANTERIOR CHAMBER CANNULA**

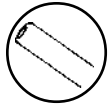
- 23 gauge shaft
- Angled
- Length 17mm



35300

**McINTYRE STRAIGHT
ANTERIOR CHAMBER CANNULA**

- 26 gauge shaft
- Straight
- Length 17mm



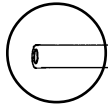
35320

**McINTYRE ANGLED
ANTERIOR CHAMBER CANNULA**

- 26 gauge shaft
- Angled
- Length 17mm

35330

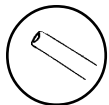
NYLON CONNECTOR



35340

**McINTYRE STRAIGHT
ANTERIOR CHAMBER CANNULA**

- 30 gauge shaft
- Straight
- Length 17mm



35360

**McINTYRE ANGLED
ANTERIOR CHAMBER CANNULA**

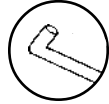
- 30 gauge shaft
- Angled
- Length 17mm



35380

McINTYRE STRAIGHT IRIS MANIPULATOR

- 30 gauge shaft
- Angled 90 degrees, 1mm tip
- Length 17mm



35400

McINTYRE ANGLED IRIS MANIPULATOR

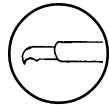
- 30 gauge shaft
- Angled 90 degrees, 1mm tip
- Shaft angled 45 degrees, 12mm from tip to bend
- Length 17mm



35440

McINTYRE REVERSE CYSTOTOME

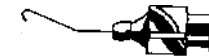
- 23 gauge shaft
- Angled 45 degrees
- Sharp tip
- Length 15mm



35460

McINTYRE GUARDED CYSTOTOME (INNER)

- 23 gauge shaft
- 10mm from tip to angle
- Length 49mm

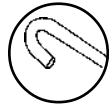


35470

McINTYRE-BINKHORST IRRIGATING CANNULA

- 26 gauge shaft
- Right
- Length 18mm

moved to #: 24300

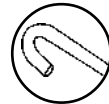


35480

McINTYRE-BINKHORST IRRIGATING CANNULA

- 26 gauge shaft
- Left
- Length 18mm

moved to #: 24320



35490

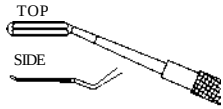
McINTYRE-BINKHORST IRRIGATING CANNULA

- 26 gauge shaft
- Straight
- Length 18mm

moved to #: 24340



FOR NUCLEUS SPLITTING



35500

McINTYRE NUCLEUS SPATULA

- Ridged for supporting nucleus during cutting



35520

McINTYRE NUCLEUS CUTTER

- Single blade



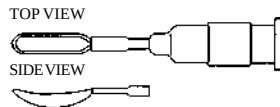
35540

McINTYRE NUCLEUS CUTTER

- Double blade

**Discontinued
as of
MAY 1, 1997**

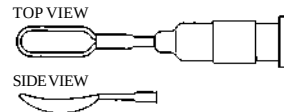
FOR NUCLEUS REMOVAL



35560

McINTYRE NUCLEUS SPOON

- 3mm x 12mm
- Irrigating



35580

McINTYRE NUCLEUS SPOON

- 4.5mm x 12mm
- Irrigating

HANDPIECES



36000

IRRIGATING/ASPIRATING HANDPIECE

- Stainless steel
- Original model
- Length 5 inches



36020

IRRIGATING/ASPIRATING HANDPIECE

- Stainless steel
- Finger cut-off hole
- Length 5 inches



36040

IRRIGATING/ASPIRATING HANDPIECE

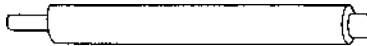
- Stainless steel
- New short model
- Length 3 inches



36060

McINTYRE HANDPIECE

- Autoclavable plastic
- Length 3 inches



36180

HANDPIECE

- Stainless steel
- With double conus
- Length 3 inches

CAPSULE POLISHERS



36300

ANIS CAPSULE POLISHER

- 1.5mm flat disk shape
- Sandblasted tip
- Round knurled handle



36320

ANIS CAPSULE POLISHER

- Ball tip
- Sandblasted tip
- Round knurled handle

36340

ANIS CAPSULE POLISHER

- Reverse ball tip
- Sandblasted tip
- Round knurled handle

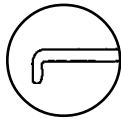
LENS MANIPULATORS

30-33

*Many of the catalog numbers in this section,
"Lens Manipulators," have been changed.*

*Please give special attention to this problem
when placing your order.*





37000

SINSKEY LENS MANIPULATOR

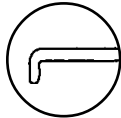
- Lens manipulating hook 0.25mm diameter blunt tip
- For posterior chamber IOL holes with 0.03 to 0.04mm diameter
- Straight



37010

SINSKEY LENS MANIPULATOR

- Lens manipulating hook 0.25mm diameter blunt tip
- For posterior chamber IOL holes with 0.03 to 0.04mm diameter
- Angled



37020

SINSKEY II LENS MANIPULATOR

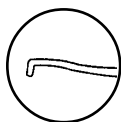
- Lens manipulating hook 0.20mm diameter blunt tip
- For posterior chamber IOL holes with 0.03 to 0.04mm diameter
- Straight



37030

SINSKEY II LENS MANIPULATOR

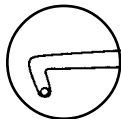
- Lens manipulating hook 0.20mm diameter blunt tip
- For posterior chamber IOL holes with 0.03 to 0.04mm diameter
- Angled



37040

SINSKEY III LENS MANIPULATOR

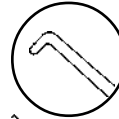
- Lens manipulating hook 0.15mm diameter tip
- Special double curved shaft



37050

IRRIGATING SINSKEY

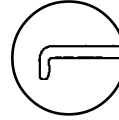
- Sinskey angled on round irrigating handle



37060

CLAYMAN GUIDE

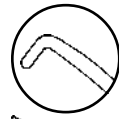
- Lens manipulating hook 0.20mm diameter
- Blunt tip
- Shaft angled 10mm



37070

AZAR LENS MANIPULATOR

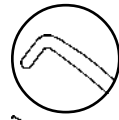
- Lens manipulating hook 0.20mm diameter
- Blunt tip
- Malleable shaft



37080

LEWICKY LENS MANIPULATOR

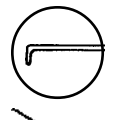
- Lens manipulating hook 0.15mm diameter blunt tip
- For posterior chamber IOL holes with 0.02 to 0.03mm diameter
- Angled with curved shaft



37090

LEWICKY LENS MANIPULATOR

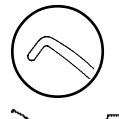
- Lens manipulating hook 0.2mm diameter blunt tip
- For posterior chamber IOL holes with 0.02 to 0.03mm diameter
- Angled with curved shaft



37100

JAFFE LENS MANIPULATOR

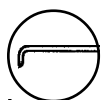
- 0.15mm diameter blunt tip
- For posterior chamber IOL holes with 0.02 to 0.03mm diameter
- Straight shaft



37110

CLAYMAN-JAFFE LENS MANIPULATOR

- Lens manipulating hook 0.15mm diameter
- Blunt tip for posterior chamber IOL hole with 0.02 to 0.03mm diameter
- Angled shaft



**37120
HARRIS-SINSKEY LENS MANIPULATOR**

- 0.25 diameter
- Angled



**37130
TENNANT LENS MANIPULATOR**

- Shaft angled up at 45 degrees at 13mm from tip
- Blunt hook
- Curved left



**37140
FENZL LENS MANIPULATOR**

- Lens manipulating hook 0.20mm diameter tip
- Angled 45 degrees 10mm from tip



**37150
FENZL LENS MANIPULATOR**

- Lens manipulating hook 0.15mm diameter tip
- Angled 45 degrees 10mm from tip



**37160
FENZL LENS MANIPULATOR**

- Lens manipulating hook 0.15mm diameter
- Straight shaft 10mm from tip



**37170
FENZL LENS MANIPULATOR**

- Lens manipulating hook 0.20mm diameter tip for IOLs having hole in the center
- Straight shaft

**37180
OSHER MINI NON-IRRIGATING HOOK**

- Lens manipulating hook 0.2mm diameter tip for IOLs having hole in the center
- Straight shaft

**37190
BARRETT MUSHROOM MANIPULATOR**

- Round knurled handle
- Overall length 118mm



**37200
MALTZMAN-FENZL LENS MANIPULATOR**

- Lens manipulating hook 0.20mm diameter
- V-shaped tip
- Angled shaft



**37210
MALTZMAN-FENZL LENS MANIPULATOR**

- Lens manipulating hook 0.15mm diameter
- V-shaped tip
- Straight shaft



**37220
JAFFE-MALTZMAN LENS MANIPULATOR**

- Lens manipulating hook 0.15mm diameter
- V-shaped tip
- Angled shaft

**37230
BAHR-MALTZMAN HOOK**

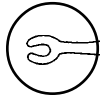
- Lens manipulating hook 0.15mm diameter
- Vaulted
- Angled shaft



37240

GALAND IOL MANIPULATOR

- IOL manipulator
- Angled



37250

HYDE LENS MANIPULATOR

- Lens manipulator angled 45 degrees, 9mm from tip



37260

ANIS-FENZL MANIPULATOR

- Angled hook with bayonet tip
- Shaft angled 45 degrees
- 12mm from tip to bend



37270

BOATHOOK IOL MANIPULATOR

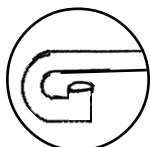
- Can be used as an iris/capsule retractor or pusher/manipulator for IOLs with or without holes



37280

COLLIER IOL HAPTIC MANIPULATOR

- Double prong



37290

**KELMAN MANIPULATING HOOK
NON-IRRIGATING**

37300

RAPPAZZO IRIS AND IOL HOOK

- 1mm tip
- Angled 90 degrees
- Curved right



37310

SHEPARD IRIS HOOK

- U-shaped
- Sharp tip



37540

LENS LOOP MANIPULATOR



37550

SIMCOE LENS HOLDER

Discontinued
as of
March 1, 1997

Discontinued
as of
January 1, 1997

Discontinued
as of
January 1, 1997

HOOKS

Iris Hooks	35
Muscle Hooks	37

*Many of the catalog numbers in this section,
"Hooks", have been changed.*

*Please give special attention to this problem
when placing your order.*

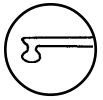


HOWARD INSTRUMENTS

IRIS HOOKS



- 37400
KUGLEN IRIS HOOK**
- Iris hook and lens manipulator
 - Push-pull model
 - Straight



- 37410
KUGLEN IRIS HOOK**
- Iris hook and lens manipulator
 - Push-pull model
 - Angled

- 37420
KUGLEN IRIS HOOK AND LENS MANIPULATOR**
- Iris hook and lens manipulator
 - 0.5mm hook

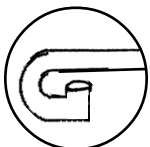


- 37430
KUGLEN IRIS HOOK**
- Iris hook and lens manipulator
 - Clover-leaf model

- 37440
OSHER NUCLEUS MANIPULATOR**



- 37450
KNOLLE IRIS HOOK**
- Blunt tip
 - Very delicate



- 37460
OSHER MICRO IRIS RETRACTOR**



- 37470
JAFFE-KNOLLE IRIS HOOK**
- Extra small
 - Blunt
 - Angled



- 37480
SHEPARD IRIS HOOK**
- 1mm hook
 - Blunt tip
 - Straight shaft



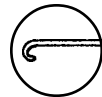
- 37490
JAFFE IRIS HOOK**
- 1.2mm hook
 - Blunt
 - Straight



- 37500
HIRSHMAN IRIS HOOK**
- 1mm notched hook
 - Blunt
 - Angled shaft



- 37510
BONN MICRO-IRIS HOOK**
- Blunt
 - Slight curve on hook



- 37520
RAININ IRIS HOOK**
- Blunt
 - Straight shaft



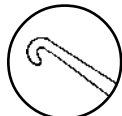
- 37530
MAUMENEE IRIS HOOK**
- Sharp
 - 1.5mm hook

IRIS HOOKS



**37540
MAUMENEE IRIS HOOK**

- Blunt
- Delicate tip
- 1.0mm hook



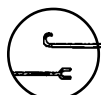
**37550
CLAYMAN IRIS HOOK**

- Iris hook angled 45 degrees 9mm from tip



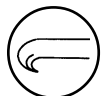
**37560
HIRSHMAN IRIS HOOK**

- 9mm hook
- Angled shaft at 45 degrees



**37570
GAHAGAN IRIS PUSHER AND HOOK**

- Double ended
- "U" shaped pusher on one end
- Bonn Micro-Iris Hook on other (37510)



**37580
SHEETS IRIS HOOK**

- Delicate
- Sharp point



**37590
TYRELL IRIS HOOK**

- Sharp point
- No guard



**37600
TWIST FIXATION HOOK**

- 0.3mm twist hook
- Right
- Round knurled handle



**37610
TWIST FIXATION HOOK**

- 0.3mm twist hook
- Left
- Round knurled handle



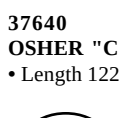
**37620
TWIST FIXATION HOOK**

- 0.5mm twist hook
- Right
- Round knurled handle



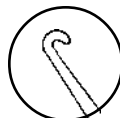
**37630
TWIST FIXATION HOOK**

- 0.5mm twist hook
- Left
- Round knurled handle



**37640
OSHER "C" HOOK**

- Length 122mm



**37650
OSHER IRIS TUCK ELIMINATOR**

- 0.5mm hook
- Angled 9mm

HOWARD INSTRUMENTS

MUSCLE HOOKS



38000
JAMESON MUSCLE HOOK
• Large



38020
JAMESON MUSCLE HOOK
• Small



38040
CULLER RECTUS MUSCLE HOOK
• Delicate
• 1mm angled tip



38060
CULLER RECTUS MUSCLE HOOK
• 1mm angled tip



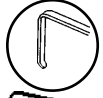
38080
SCOBEE OBLIQUE MUSCLE HOOK
• Curved shaft
• Flat 1mm tip



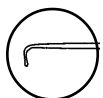
38100
CATALANO MUSCLE HOOK
• 12mm angled at 60 degrees
• 2mm wide angled tip



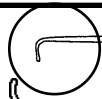
38120
CHARLES MUSCLE HOOK



38140
GREEN STRABISMUS HOOK



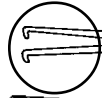
38160
VON GRAEFE STRABISMUS-NO. 1
• 8mm



38180
VON GRAEFE STRABISMUS-NO. 2
• 10mm



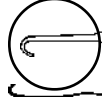
38200
VON GRAEFE STRABISMUS-NO. 3
• Curved 10mm
• Shaft 3mm longer



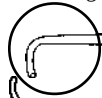
38220
MANSON DOUBLE END STRABISMUS
• 3mm angled blades
• Blades spread 3.75mm



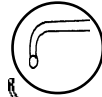
38240
STEVENS CURVED TENOTOMY
• Curved 5mm



38260
HARDESTY TENOTOMY
• Curved
• Markings at 14mm and 20mm



37280
SMITH EXPRESSOR
• Curved 11.5mm



38300
GASS RETINAL DETACHMENT HOOK
• Flattened Graefe type
• Oblong hole



38320
GRAEFE STRABISMUS HOOK
• Size 2
• Non-magnetic



38340
GASS RETINAL DETACHMENT HOOK
• Flattened Graefe type
• Oblong hole



38345
CHARLES MUSCLE HOOK

MUSCLE HOOKS

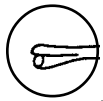
LENS PUSHERS

38-39

*Many of the catalog numbers in this section,
"Lens Pushers", have been changed.*

*Please give special attention to this problem
when placing your order.*





37500

AKER LENS PUSHER

- Smooth fish mouth shaped
- Jaws may be removed from the eye without engaging IOL loop or iris



37520

LESTER LENS PUSHER

- 0.25mm diameter and hour glass shaped tip
- Straight shaft



37540

LESTER LENS PUSHER

- 0.25mm diameter and hour glass shaped tip
- Angled shaft



37560

LESTER IOL MANIPULATOR

- Vaulted shank for lenses with or without holes
- 0.2mm tip



37580

MALONEY IOL MANIPULATOR

- Vaulted shank for lenses with or without holes
- Straight shaft



37600

TENNANT LENS PROBE

- Lens probe 0.40mm diameter tip with collar for 0.50mm diameter anterior chamber lens holes

37620

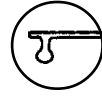
LITTLE LENS PUSHER

- No hole lens manipulator
- Straight
- Length 115mm

37640

LITTLE LENS PUSHER

- No hole lens manipulator
- Angled
- Length 115mm



37660

LESTER II IOL MANIPULATOR

- Straight shaft
- 0.2mm tip



37680

LESTER II IOL MANIPULATOR

- Angled shaft
- 0.2mm tip



37700

OSHER "Y" HOOK

- Straight shaft
- 11.5mm



37720

OSHER "Y" HOOK

- Angled shaft
- 11.5mm



37740

HUNKELER IOL MANIPULATOR

- Ball tip
- For lenses without holes



37760

TENNANT NUCLEUS MANIPULATOR

SPATULAS

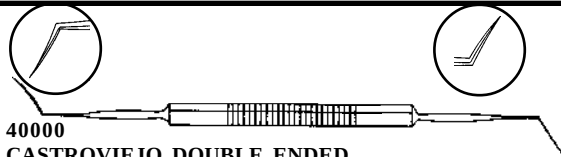
40-43

*Many of the catalog numbers in this section,
"Spatulas", have been changed.*

*Please give special attention to this problem
when placing your order.*

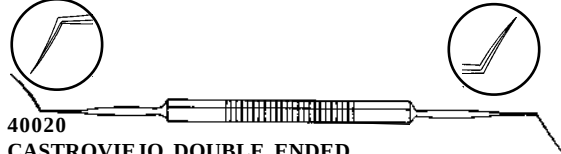


HOWARD INSTRUMENTS



40000
CASTROVIEJO DOUBLE ENDED
SYNECHIAE SPATULA

- 0.50mm x 10mm angled
- 0.50mm x 15mm angled
- Both ends sharp



40020
CASTROVIEJO DOUBLE ENDED
CYCLODIALYSIS SPATULA

- 0.50mm wide
- Both ends sharp



40040
CASTROVIEJO DOUBLE ENDED
CYCLODIALYSIS SPATULA

- 0.25mm wide
- Both ends sharp



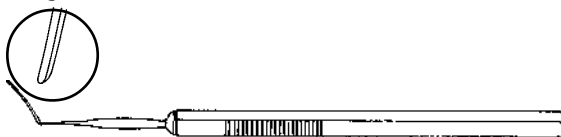
40060
CASTROVIEJO CYCLODIALYSIS SPATULA

- Angled blade 1mm x 10mm



40080
CASTROVIEJO CYCLODIALYSIS SPATULA

- Delicate
- Angled blade 0.75mm x 10mm



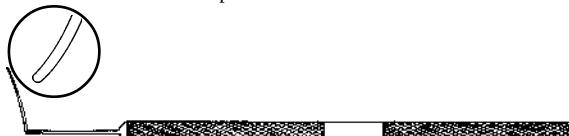
40100
CASTROVIEJO CYCLODIALYSIS SPATULA

- Angled
- Blade 1mm x 15mm



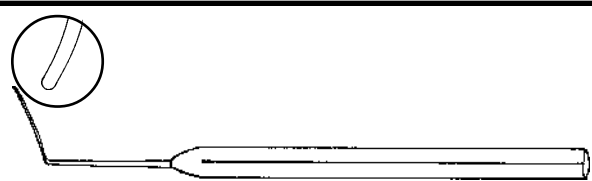
40140
LIEPPMAN SPATULA

- Sharp
- Semi-circle knife-like tip



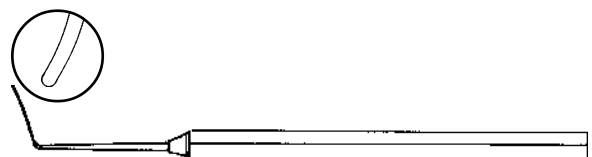
40160
BARRAQUER CYCLODIALYSIS SPATULA

- 0.50mm diameter
- Round rather than flat
- Smoothly pointed tip



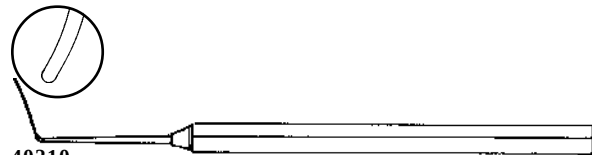
40180
BARRAQUER IRIS SPATULA

- Short handle 0.50mm diameter
- Round rather than flat
- 15mm angled tip



40200
BARRAQUER SPATULA

- 0.25mm diameter
- Round rather than flat



40210
CLEASBY IRIS SPATULA

- 0.5mm diameter short handle
- Round rather than flat
- 12mm angled tip



40220
MAUMENEE-BARRAQUER VITREOUS SWEEP

- Right
- Round rather than flat
- 0.25mm diameter

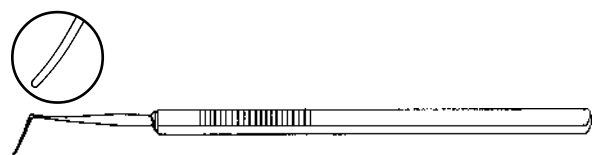


40240
MAUMENEE-BARRAQUER VITREOUS SWEEP

- Left
- Round rather than flat
- 0.25mm diameter

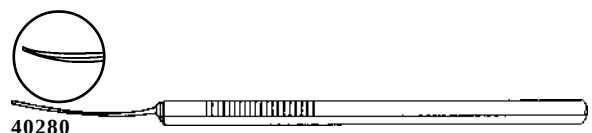
40250
GIMBLE NUCLEUS SPATULA

- 0.25mm diameter
- Round rather than flat



40260
ELSCHMIG CYCLODIALYSIS SPATULA

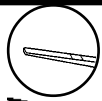
- 1mm wide blade



40280
IRIS SPATULA

- Malleable
- 1.0mm wide

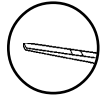
SPATULAS



40300

KNOLLE LENS NUCLEUS SPATULA & GAUGE

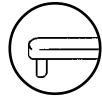
- Markings at 5mm, 6mm and 7mm



40320

**KNOLLE LENS NUCLEUS SPATULA
AND ANTERIOR CHAMBER GAUGE**

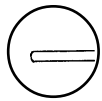
- Markings at 5mm, 6mm, and 7mm
- 0.50mm deep notch on tip



40340

KNOLLE LENS NUCLEUS SPATULA

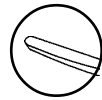
- 0.2mm pin on bottom



40360

KNOLLE LENS NUCLEUS SPATULA

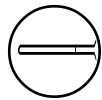
- 0.5mm wide
- Malleable shaft



40380

SINSKEY NUCLEUS SPATULA

- Used to mash overlooked pieces of nucleus



40400

McPHERSON IRIS SPATULA

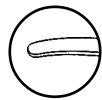
- 1.0mm wide



40420

HIRSHMAN LENS SPATULA

- Small notches for manipulating IOLs
- 0.50mm wide flat blade



40440

WHEELER DOUBLE ENDED CYCLODIALYSIS

- 1.75mm x 38mm
- Malleable



40460

CLAYMAN NUCLEUS ROTATOR

- 0.50mm wide
- "V" notched tip
- Angled shaft



40480

CLAYMAN ANGULATED NUCLEUS ROTATOR

- 0.50mm by 10mm
- Angled blade
- Blunt tip



40500

BECHERT LENS NUCLEUS ROTATOR

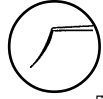
- Blunt forked tip
- Angled at 7mm from tip



40510

JAFFE BECHERT LENS NUCLEUS ROTATOR

- Blunt forked tip
- Angled at 9mm



40520

GIRARD SYNECHIAE SPATULA

- Semi sharp tip
- 0.50mm wide



40540

OBSTBAUM LENS SPATULA

- 0.25mm wide blade



40580

SHEETS LENS SPATULA

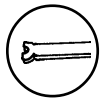
- Large notches for manipulating IOLs
- 0.75mm wide flat blade



40600

JAFFE LENS SPATULA

- 0.50mm wide flat
- Smooth, angled shaft



40640

RAININ LENS SPATULA

- Angled
- Three notches
- For anterior chamber & posterior chamber IOLs



40660

CHAMBERS SPATULA

- Angled
- Vertical blade
- Front notch for anterior chamber IOLs



40680

LIEPPMAN SIDEPORT NUCLEUS SPATULA

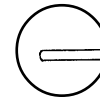
- 0.5mm diameter
- Blunt
- Forked tip



40700

JOHNSON SPATULA

- 0.25mm by 10mm



40720

CULLER IRIS SPATULA

- 1mm wide by 28mm long



40740

KIMURA SPATULA

- 4mm wide by 17.5mm flat spatula

RETRACTORS

44-46

*Many of the catalog numbers in this section,
"Retractors", have been changed.*

*Please give special attention to this problem
when placing your order.*





41000

BECHERT LENS NUCLEUS ROTATOR

- Blunt forked tip
- Angled at 7mm from tip



41020

JAFFE BECHERT LENS NUCLEUS ROTATOR

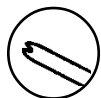
- Blunt forked tip
- Angled at 9mm from tip



41040

MACKOOL-BECHERT LENS NUCLEUS ROTATOR

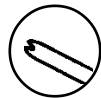
- Blunt forked tip
- Angled at 10mm



41060

CLAYMAN NUCLEUS ROTATOR

- 0.5mm wide
- "V" notched tip
- Angled shaft



41080

MALONEY NUCLEUS ROTATOR

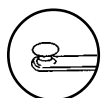
- Length 135mm
- 12mm from angle to tip



41100

MALONEY NUCLEUS ROTATOR WITH FORKED TIP

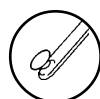
- Length 135mm
- 12mm from angle to tip



41120

GRAETHER COLLAR BUTTON

- Micro iris retractor
- Posterior capsule polisher
- Straight shaft



41140

GRAETHER COLLAR BUTTON

- Micro iris retractor
- Posterior capsule polisher
- Angled shaft

41160

IRRIGATING GRAETHER

- Round irrigating handle
- Angled



41180

FENZL IRIS RETRACTOR

- Angled hook 10mm from tip

41200

MACKOOL IRIS REPOSITOR

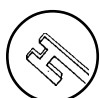
- Length 125mm



41220

MANN-HUNKELER CAPSULE RETRACTOR

- 0.3mm hemi ball



41240

MACKOOL CAPSULE RETRACTOR

- Designed for use with the Heslin-MacKool procedure for posterior lens manipulation

old catalog #: 41080

41260

LESTER PADDLE

41280

DRYSDALE NUCLEUS ROTATOR

41300

PISACANO NUCLEUS ROTATOR

HOWARD INSTRUMENTS

RETRACTORS

41320
KOCH-PHACO MANIPULATOR

41340
KOCH-PHACO MANIPULATOR
WITH NOTCHES



41360
HUTCHISON IRIS RETRACTOR
• Left



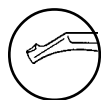
41380
HUTCHISON IRIS RETRACTOR
• Right



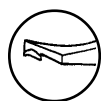
41400
ROSENBAUM-DREWS IRIS RETRACTOR
• 4mm wide blade
• Left
• Autoclavable
• No guard



41420
ROSENBAUM-DREWS IRIS RETRACTOR
• 4mm wide blade
• Right
• Autoclavable
• No guard



41440
AZAR IRIS RETRACTOR
• 4mm wide
• Angled; Left
• Autoclavable
• No guard



41460
AZAR IRIS RETRACTOR
• 4mm wide
• Angled; Right
• Autoclavable
• No guard



DESMARRES LID RETRACTOR

41480-SIZE 0	11mm wide blade
41500-SIZE 1	13mm wide blade
41520-SIZE 2	15mm wide blade
41540-SIZE 3	17mm wide blade
41560-SIZE 4	19mm wide blade

KNIVES

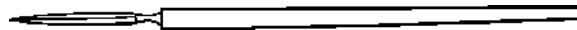
47-48

KNIVES



HOWARD INSTRUMENTS

KNIVES



**43100
SMITH-GREEN CATARACT KNIFE**
• 30mm



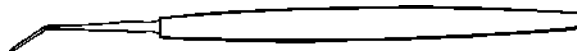
**43120
SMITH-GREEN CATARACT KNIFE**
• 33mm



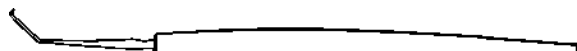
**43140
GREEN CATARACT KNIFE**
• 30mm



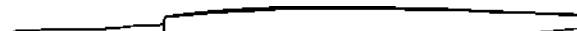
**43380
GRAEFE CYSTOTOME**
• Straight



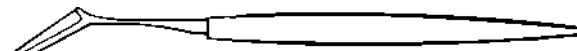
**43400
GRAEFE CYSTOTOME**
• Angled left



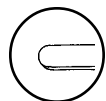
**43420
GRAEFE CYSTOTOME**
• Angled right



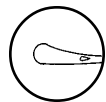
**43440
WILDER CYSTOTOME**
• 1.5mm blade



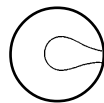
**43480
LUNDSGUARD SCLEROTOME**
• Angled tip



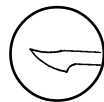
**43520
TOOKE CORNEAL KNIFE**
• Smooth 3mm x 18mm blade
• No guard



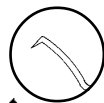
**43560
GILLS CORNEAL KNIFE**
• Lightly curved
• 3mm wide
• No guard



**43580
GILLS CORNEAL KNIFE**
• Straight
• 3mm wide
• No guard



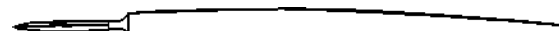
**43600
BARKAN GONIOTOMY**
• 2mm blade
• No guard



**43640
LEWICKY CYCLODIALYSIS KNIFE**
• 10mm angled at tip
• No guard



**43660
GRAEFE CYCLODIALYSIS KNIFE**
• Malleable shaft
• 3.5mm
• No guard



KNAPP IRIS KNIVES

43680-SIZE 1

43700-SIZE 2

43720-SIZE 3

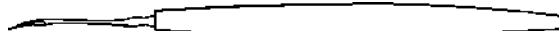


ZIEGLER IRIS KNIVES

43740-SIZE 0

43760-SIZE 1

43780-SIZE 2



**43820
DEAN KNIFE NEEDLE**



**43840
VON GRAEFE KNIFE NEEDLE**

SPUDS

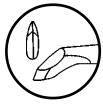
49-50

SPUDS



HOWARD INSTRUMENTS

SPUDS



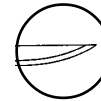
44000 GOLF CLUB SPUD

- Left
- Angled
- Lightly rounded tip



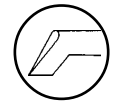
44160 DIX EYE NEEDLE AND SPUD

- Double ended



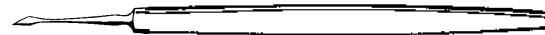
44020 FOREIGN BODY SPUD

- Flag shaped
- No guard
- Straight



44060 FRANCIS SPUD

- Flag shaped
- Length 120mm



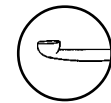
44180 FOREIGN BODY NEEDLE

- Straight



44200 FOREIGN BODY NEEDLE

- Curved



44240 HOLIDAY POSTERIOR CAPSULE POLISHER AND CURETTE

- 0.5mm curette
- Roughened bottom surface
- No guard

44080 DAVIS FOREIGN BODY SPUD

- Straight
- Round blade
- Length 125mm

44100 ELLIS SPUD

- Small
- Curved
- Round blade
- Length 120mm

44120 O'BRIEN SPUD

- Fine
- Sharp
- Pointed blade
- Right angled

44140 STANDARD PHACO CHOPPER

- Specify 45, 60 or 90 degrees



LENS LOOPS

51-52

LENS LOOPS





45000
LEWIS LENS LOOP
• 6mm x 7mm loop



45020
GILLS-WELSH LENS LOOP
• Thin blade



45040
GILLS-WELSH LENS LOOP
• Olive tip
• Long taper



45060
GILLS-WELSH MORRISON LENS LOOP
• Olive tip
• 25% additional curve on loop



45080
KIRBY INTRA-CAPSULAR LENS LOOP
• Double curve



45100
NEW ORLEANS EYE AND EAR LENS LOOP
• 5mm loop



45120
WILDER LENS LOOP
• Serrated loop



45130
KANSAS LENS LOOP
• 3mm wide
• Serrated loop



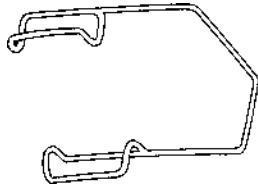
45140
SIMCOE NUCLEUS LENS LOOP
• Double ended
• Serrated loop



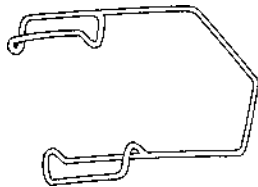
WIRE SPECULUMS AND RETRACTORS

53-55

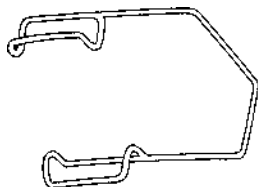




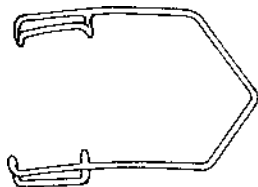
46000
BARRAQUER WIRE SPECULUM
• 10mm



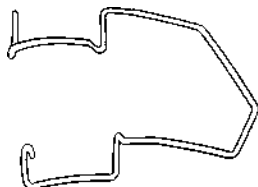
46005
BARRAQUER INFANT WIRE SPECULUM
• 8mm



46010
BARRAQUER DELICATE WIRE SPECULUM
• 4mm



46020
BARRAQUER WIRE SPECULUM
• Large
• 15mm



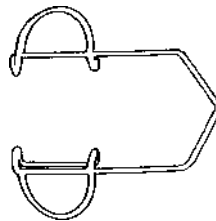
46100
KRATZ-BARRAQUER WIRE SPECULUM
• Open blades
• Specify size

46105
THORTON/OPEN WIRE

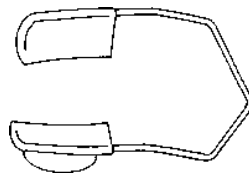
46107
KRATZ-BARRAQUER "U" SHAPE WIRE SPECULUM

46110
THORTON SPECULUM WITH WINGS

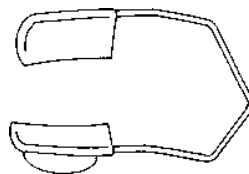
46115
KRATZ-BARRAQUER WITH WINGS



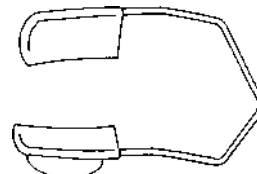
46120
FLOYD-BARRAQUER WIRE SPECULUM
• With wings



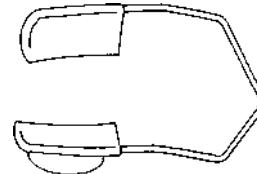
46140
BARRAQUER SOLID BLADE
• Large
• Temporal



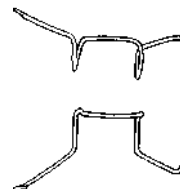
46160
BARRAQUER SOLID BLADE
• Large



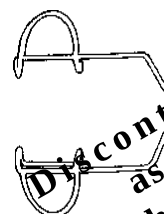
46180
BARRAQUER SOLID BLADE
• Small
• Temporal



46200
BARRAQUER SOLID BLADE
• Small

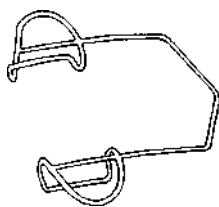


46240
PIERSE EYE SPECULUM
• Open 11mm blades

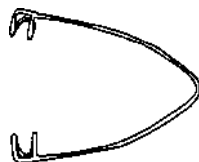


46280
KRATZ EYE SPECULUM
• With wings

Discontinued as of March 1, 1997



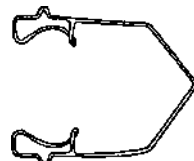
46300
SIMCOE EYE SPECULUM
• Open 14mm blades
• 10mm lifting wings



46500
SAUER INFANT LID SPECULUM
• With slightly curved springs

46580
NEVYAS WIRE SPECULUM

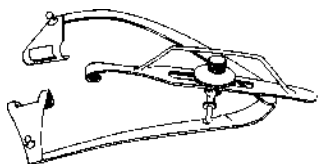
46320
BARRAQUER CLOSED WIRE
• Temporal



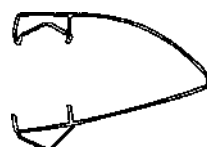
46545
GRANDON-BARRAQUER
WIRE SPECULUM
• Suture notches

46600
ALPHONSO

46340
BARRAQUER OPEN WIRE
• Temporal



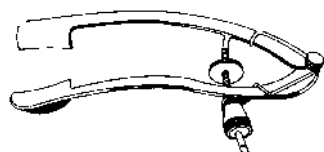
46400
GUYTON-PARK SPECULUM



46640
JAFFE IRRIGATING
WIRE LID RETRACTOR
• Pair

46550
McINTYRE WIRE SPECULUM
• Slightly curved springs
• "V" shaped blades
• Specify open or closed

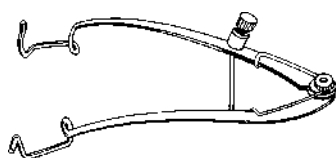
46660
ADJUSTABLE SPECULUM
• Specify blade size



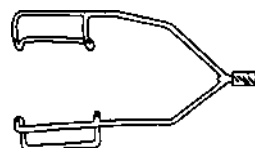
46420
LANCASTER EYE SPECULUM



46555
JAFFE WIRE LID RETRACTOR
• Pair



46480
KNAPP EYE SPECULUM



46560
**PANNU STYLE IRRIGATING/
ASPIRATING SPECULUM**
• 6 ports per wing
• 14 gauge hub
• Specify adult or child
• Specify Kratz or Barraquer style

DILATORS

56-57





47000
WILDER LACHRYMAL DILATOR
• Short taper



47020
WILDER LACHRYMAL DILATOR
• Medium taper



47040
WILDER LACHRYMAL DILATOR
• Long taper



47060
INFANT LACHRYMAL DILATOR
• 0.5mm tip



47080
CASTROVIEJO DILATOR
• Double ended
• Small and medium tip



47120
MULDOON LACHRYMAL DILATOR
• Distal end is straight to act a guide



47140
ZIEGLER DOUBLE ENDED
LACHRYMAL DILATOR
• Curved



47160
RUEDEMANN LACHRYMAL DILATOR
• Short



47180
SIMPSON LACHRYMAL DILATOR
• Medium

RINGS

58-59





**FLIERINGA
FIXATION RING**

47200-9	9mm
47200-10	10mm
47200-11	11mm
47200-12	12mm
47200-13	13mm
47200-14	14mm
47200-15	15mm
47200-16	16mm
47200-17	17mm
47200-18	18mm
47200-19	19mm
47200-20	20mm
47200-21	21mm
47200-22	22mm
47200-23	23mm
47200-24	24mm

- 16 sizes available: 9mm thru 24mm
- Malleable
- Stainless steel



**47210
CALDWELL ASPIRATING FLIERINGA RING**

- 20 gauge
- 8 outside ports
- 18mm inside diameter
- With tubing and hub

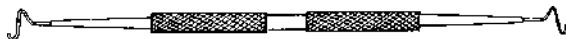


PROBES

60-62



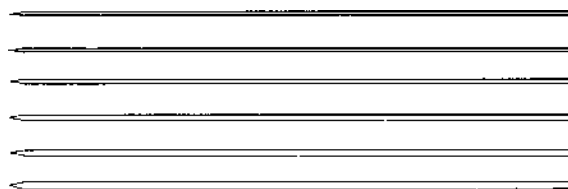
HOWARD INSTRUMENTS



48000

WORST PIGTAIL PROBE

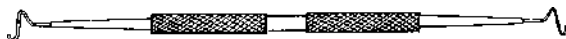
- Crochet hook ends
- Blunt tips



48080

QUICKERT LACHRYMAL PROBES

- Intubation
- One end tapered
- One end Bowman
- Stainless
- Specify size: 00, 0, 1, 2, 3, 4



48010

WORST PIGTAIL PROBE

- Suture eyes



48090

HARMS TRABECULOTOMY PROBE

- Right



48020

PIGTAIL PROBE

- With suture eyes



48095

HARMS TRABECULOTOMY PROBE

- Left



48040

BEYER PIGTAIL PROBE

- With suture eyes



48100

BOWMAN LACHRYMAL PROBES

- Round knurled handpiece
- Malleable stainless steel
- Specify size: 00, 0, 1, 2, 3, 4, 5, 6, 7, 8



48060

BODIAN PIGTAIL PROBE

- 1mm x 2mm blunt ends



48200

MANNIS SUTURE

- Size 3 Bowman probe with 3-0 black suture



48220

MANNIS SUTURE

- Size 2 Bowman probe with 4-0 black suture



PROBES

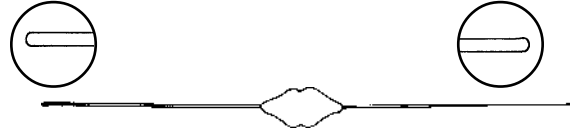
Discontinued
as of
March 1, 1997

Discontinued
as of
March 1, 1997





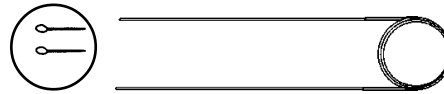
**48240
JACKSON INTUBATION SET**
• 20 gauge thin wall
• With silastic tubing



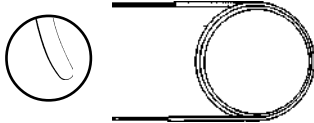
**48400
BOWMAN LACHRYMAL PROBE**
• Silver
• Specify size: 00/0, 0/1, 1/2, 2/3, 3/4, 4/5, 5/6, 6/7, 7/8



**48280
CATALANO INTUBATION SET**
• Malleable
• With silastic tubing



**48600
LACHRYMAL INTUBATION SET**
• Set includes two olive tip stainless steel probes



**48300
BODIAN MINI-LACHRYMAL PROBE**
• With silastic tubing



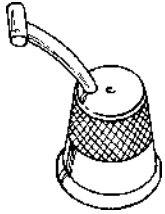
**48610
RETRIEVING HOOK**
• Used for retrieving olive tip probes

DEPRESSORS

63-64

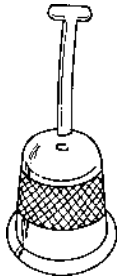
DEPRESSORS





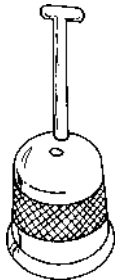
**49000
SCHEPENS SCLERAL DEPRESSOR**

- Small
- 15mm finger opening
- Size 8



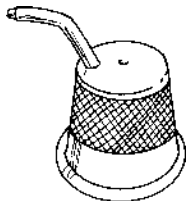
**49020
SCHEPENS SCLERAL DEPRESSOR**

- Medium
- 17mm finger opening
- Size 10



**49040
SCHEPENS SCLERAL DEPRESSOR**

- Large
- 19mm finger opening
- Size 12



**49060
GASS SCLERAL MARKER**

- Shows ring shape when pressure is applied
- Specify size: small, medium, large



**49080
SCLERAL DEPRESSOR WITH HANDLE**

- Same as Schepens only on a round, knurled handle

**49100
DOUBLE ENDED SCHOCKET DEPRESSOR
WITH CLIP**

- 6mm wide bar
- 2.5mm tear drop shaped tips

**49120
WILDER DEPRESSOR**

- 2.5mm diameter
- 15mm long angled tip

Discontinued
as of
March 1, 1997

RADIAL KERATOTOMY

65-68

RADIAL KERATOTOMY





50000

SIMCOE CORNEAL MARKER

- Marks 8 points in 3mm circle



50020

SHEPARD AX INCISION IRRIGATING CANNULA

- 30 gauge
- Flattened on vertical
- Length 19mm



50040

SHEPARD OPTICAL CENTER MARKER

- Available in 0.5mm increments
- Specify size: 3mm through 5mm



50060

HOFFER OPTICAL CENTER MARKER

- With cross hairs
- Available 0.25mm increments
- Specify size: 3mm through 6mm, 7mm, 8mm
- Ring height 1.5mm



50080

THORNTON FIXATION RING

- 16mm inner diameter
- 12 markings on ring



50100

ROWSEY FIXATION CANNULA

- 19 gauge
 - Sandblasted tip for globe fixation
 - 24mm from hub to bend
 - 8mm from bend to tip
- new catalog #: 34110



50120

OSHER-NEUMANN CORNEAL MARKER

- Standard center ring height of 5mm
- Low profile center ring height of 3mm
- Available in 4, 6, 8, 12, and 16 marking sharp blades
- Specify number of blades



50140

NEUMANN-SHEPARD CORNEAL MARKER

- Center indicator for alignment onto cornea
- Available in 0.25mm increments
- Specify size: 3mm through 5mm



50160

NEUMANN-SHEPARD OVAL OPTICAL CENTER MARKER

- For astigmatic correction
- Available in the following sizes:

3 x 4mm	3 x 3.5mm
4 x 5mm	4 x 4.5mm
3.5 x 4mm	3.25 x 3.75mm
4.5 x 5mm	2.75 x 3.25mm



50180

THORNTON LOW PROFILE OPTICAL CENTER MARKER

- Ring height of 1.5mm
- Available in 0.25mm increments
- Specify size: 3mm through 6mm, 7mm, 8mm



50200

KREMER DOUBLE CORNEAL MARKER

- With cross hair
- 3mm and 5mm diameter



50230

GRANDON T-INCISION MARKER

- 2mm, 2.5mm, 3mm, 4mm, 5mm



50235

SUAREZ SPREADER

- 1mm x 2mm angled blade
- Facilitates the creation of peripheral lamellar dissection



50240

MENDEZ DEGREE GAUGE

- Outside diameter 18mm
- Inner diameter 12mm



Call customer service at (205) 553-4453 or fax us at (205) 556-9267

50260

SOLID HEAD CORNEAL MARKER

- Size 4, 6 or 8 blades

50380

THORTON FIXATION RING

- Fixed handle
- Length 16mm

50280

PLAIN MARKER

- Inside bevel
- No center marker

50400

FINE THORTON FIXATION RING

- Fixed handle
- Length 16mm
- C Ring

50300

BERKLEY DOUBLE ENDED

- Sizes 2.5mm through 5.5mm

50420

FINE THORTON FIXATION RING

- Fixed handle
- Length 13mm
- C Ring

50320

**MCDONALD DOUBLE ENDED
WITH CROSSHAIRS**

- Size 6.5mm and 7.0mm

50440

THORTON FIXATION RING

- Swivel handle
- Length 13mm

50340

GRENE VISUAL AXIS MARKER

- 0.5mm tip

50460

FINE THORTON FIXATION RING

- Swivel handle
- Length 13mm
- C Ring

50360

FRIEDLANDER-THORTON DOUBLE ENDED

- Specify size

50480

THORTON FIXATION RING

- Swivel handle
- Length 16mm



50500

FINE THORTON FIXATION RING

- Swivel handle
- Length 16mm
- C Ring

50620

ARCUATE MARKER

- Specify size of 5, 6, 7, or 8mm spread
- Leaves 3mm marks

50520

DIETZ DEPTH GAUGE

- 0.5mm

50640

ARCUATE MARKER

- Specify 15 - 90 degrees

50540

DIETZ DEPTH GAUGE

- 0.55mm

50660

ARCUATE MARKER

- 6mm spread
- Leaves 2mm marks

50560

DIETZ DEPTH GAUGE

- 0.6mm

50680

ARCUATE MARKER

- 6mm by 2mm
- Center pin

50580

BORES AXIS MARKER

- Single

50700

ARCUATE MARKER

- 5/7mm spread
- Leaves 2mm marks

50600

DOUBLE "T" INCISION

- Sizes 5, 6, 7 or 8mm

50720

ARCUATE MARKER

- 5/7mm spread
- Leaves 2mm marks
- Center pin

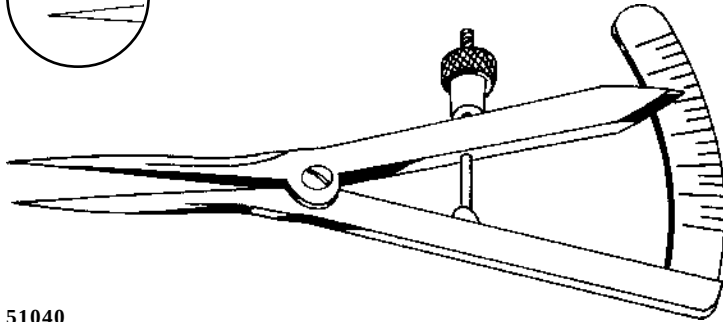
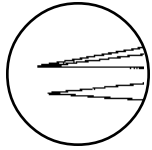


MEASURING CALIPERS

69-70

MEASURING CALIPERS

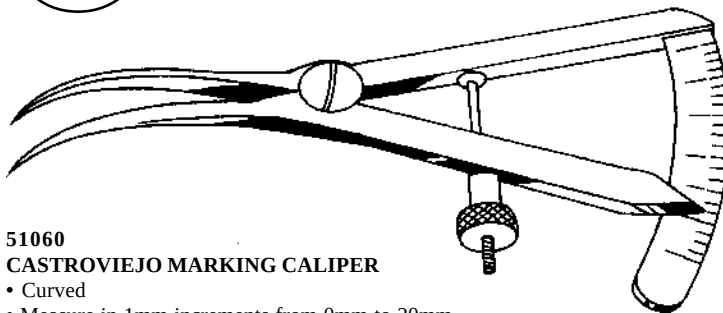
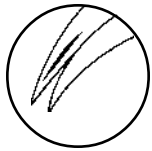




51040

CASTROVIEJO CALIPER

- Measures in 1mm increments from 0mm to 20mm
- Scales read on either side



51060

CASTROVIEJO MARKING CALIPER

- Curved
- Measure in 1mm increments from 0mm to 20mm
- Scales read on either side

CURETTES/SPOONS

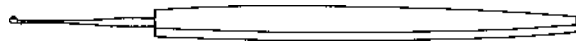
71-72

CURETTES/SPOONS



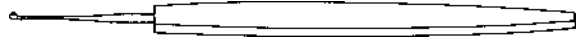
HOWARD INSTRUMENTS

CURETTES



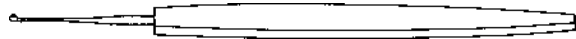
**52020
MEYERHOFFER**

- Size 000
- 0.5mm



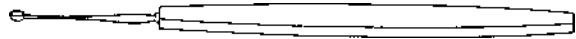
**52040
MEYERHOFFER**

- Size 00
- 1.0mm



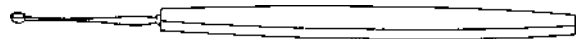
**52060
MEYERHOFFER**

- Size 0
- 1.5mm



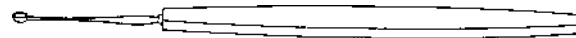
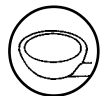
**52080
MEYERHOFFER**

- Size 1
- 1.75mm



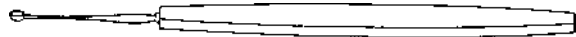
**52100
MEYERHOFFER**

- Size 2
- 2.0mm



**52120
MEYERHOFFER**

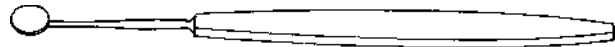
- Size 3
- 2.5mm



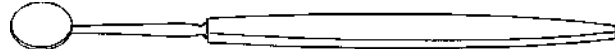
**52140
MEYERHOFFER**

- Size 4
- 3.5mm

SPOONS



**52300
BUNGE EVISCERATION SPOON**
• Small



**52320
BUNGE EVISCERATION SPOON**
• Large

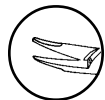
CURETTES/SPOONS

NEEDLE HOLDERS

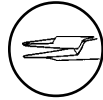
73-74

NEEDLE HOLDERS





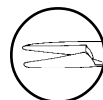
- 53040
BARRAQUER NEEDLE HOLDER**
- Extra delicate
 - Smooth jaws
 - Curved without lock



- 53220
BARRAQUER NEEDLE HOLDER**
- Delicate
 - Smooth jaws
 - Straight without lock



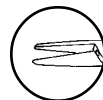
- 53060
BARRAQUER NEEDLE HOLDER**
- Extra delicate
 - Smooth jaws
 - Curved with lock



- 53320
CASTROVIEJO NEEDLE HOLDER**
- Delicate
 - Smooth jaw
 - Straight without lock



- 53080
BARRAQUER NEEDLE HOLDER**
- Extra delicate
 - Smooth jaws
 - Straight with lock



- 53340
CASTROVIEJO NEEDLE HOLDER**
- Delicate
 - Smooth jaw
 - Straight with lock



- 53100
BARRAQUER NEEDLE HOLDER**
- Extra delicate
 - Smooth jaws
 - Straight without lock



- 53360
CASTROVIEJO NEEDLE HOLDER**
- Delicate
 - Smooth jaw
 - Curved with lock



- 53120
BARRAQUER NEEDLE HOLDER**
- Delicate
 - Smooth jaws
 - Tapered
 - Curved with lock



- 53400
CASTROVIEJO NEEDLE HOLDER**
- Standard
 - Smooth jaw
 - Straight with lock



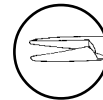
- 53140
BARRAQUER NEEDLE HOLDER**
- Delicate
 - Smooth jaws
 - Tapered
 - Curved without lock



- 53420
CASTROVIEJO NEEDLE HOLDER**
- Standard
 - Smooth jaw
 - Curved with lock



- 53200
BARRAQUER NEEDLE HOLDER**
- Delicate
 - Smooth jaws
 - Straight with lock



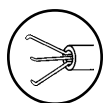
- 53425
COHAN NEEDLE HOLDER**
- Extra delicate
 - Straight with lock
 - Order 53435 without lock



FORCEPS

Retinal Forceps	76
Dressing & Tissue Forceps	76
Iris Forceps	77
Suture Forceps	79
IOL Forceps	82
Tying Forceps	82
Capsule Forceps	83
Fixation Forceps	84
Utility Forceps	85
Chalazion Forceps	86
Bipolar Equipment & Forceps	87





54000

WILSON VITREOUS FOREIGN BODY FORCEPS

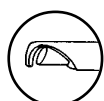
- Three 2mm prongs
- 1mm angled tips
- Squeeze handle



54020

SINSKEY-WILSON BODY FORCEPS

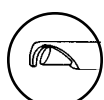
- With irrigator
- Three 2mm prongs
- 1mm angled tip
- Squeeze handle



54040

SIMCOE POSTERIOR CHAMBER LENS FORCEP

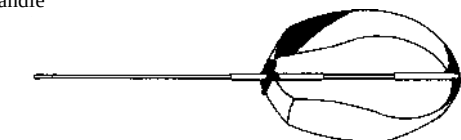
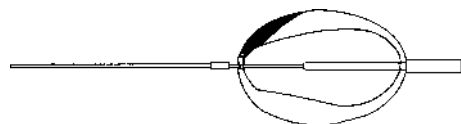
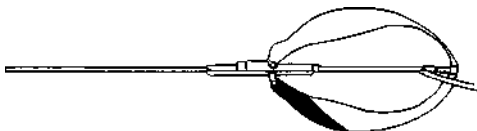
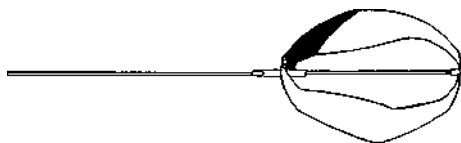
- 23 Gauge
- Irrigation
- Squeeze handle



54060

SIMCOE POSTERIOR CHAMBER LENS FORCEP

- 25 Gauge
- Grasps only the proximal loop of posterior chamber lens



DRESSING/TISSUE FORCEPS



55000

DRESSING FORCEPS

- Delicate
- Serrated
- Straight



55020

DRESSING FORCEPS

- Delicate
- Serrated
- Slight curve



55040

DRESSING FORCEPS

- Delicate
- Serrated
- Strong curve



55060

DRESSING FORCEPS

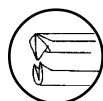
- Standard
- Serrated
- Straight



55100

DRESSING FORCEPS

- Standard
- Serrated
- Curved

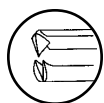


55200

TISSUE FORCEPS

- Delicate
- 1 x 2 teeth
- Straight

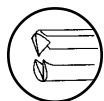




55220

TISSUE FORCEPS

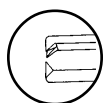
- Delicate
- 1 x 2 teeth
- Slight curve



55240

TISSUE FORCEPS

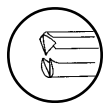
- Delicate
- 1 x 2 teeth
- Strong curve



55260

TISSUE FORCEPS

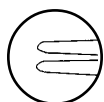
- Standard
- 1 x 2 teeth
- Straight



55280

TISSUE FORCEPS

- Standard
- 1 x 2 teeth
- Curved



55300

BISHOP-HARMON FORCEPS

- Cross serrations



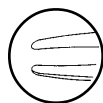
IRIS FORCEPS



56140

BRACKEN IRIS FORCEPS

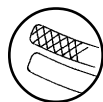
- Serrated tips



56160

GRAEFE IRIS FORCEPS

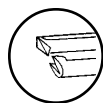
- Serrated tips
- Straight



56180

GRAEFE IRIS FORCEPS

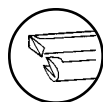
- Serrated tips
- Curved



56200

GRAEFE IRIS FORCEPS

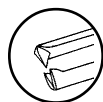
- 1 x 2 teeth
- Straight



56220

GRAEFE IRIS FORCEPS

- 1 x 2 teeth
- Curved



56240

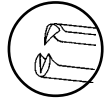
BOTVIN IRIS FORCEPS

- Bayonet tips
- 1 x 2 teeth
- Angled

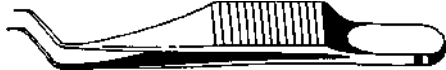




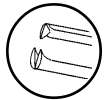
56260
BOTVIN IRIS FORCEPS
• Serrated tips



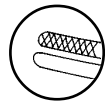
56280
GILL-HESS IRIS FORCEPS
• 1 x 2 teeth



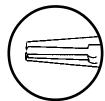
56320
GILL-HESS IRIS FORCEPS
• Downward teeth



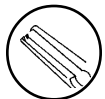
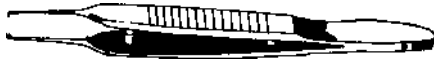
56340
GILL CHANDLER IRIS FORCEPS
• Curved tips
• 1 x 2 teeth



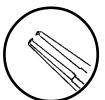
56360
GILL CHANDLER IRIS FORCEPS
• Curved tips
• Serrated



56460
McPHERSON CORNEAL FORCEPS
• Tying platforms
• 1 x 2 teeth
• Straight



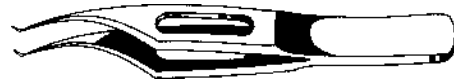
56480
McPHERSON CORNEAL FORCEPS
• Tying platforms
• 1 x 2 teeth
• Angled



56500
KELMAN-McPHERSON IRIS FORCEPS
• Tying platform
• 1 x 2 teeth
• Angled



56520
PIERSE COLIBRI
• Extra delicate
• 1 x 2 teeth



56540
PIERSE COLIBRI
• 1 x 2 teeth



56560
PIERSE CORNEAL FORCEPS
• 1 x 1 teeth
• 0.1mm



56580
PIERSE CORNEAL FORCEPS
• 1 x 1 teeth
• 0.3mm



56600
PIERSE CORNEAL FORCEPS
• Standard handle
• 1 x 1 teeth
• 0.1mm



56620
PIERSE CORNEAL FORCEPS
• Standard handle
• 1 x 1 teeth
• 0.3mm



56640
BISHOP-HARMON FORCEPS
• Extra delicate
• 0.3mm

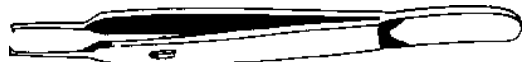


56660
BISHOP-HARMON FORCEPS
• Delicate
• 0.8mm

SUTURE FORCEPS



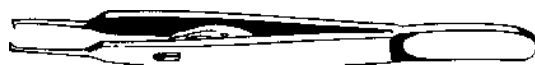
56700
JERVEY IRIS FORCEPS
• Curved



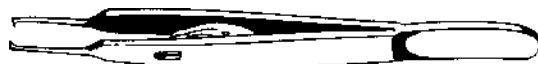
56720
STEVENS IRIS FORCEPS
• Straight
• Without catch



56740
STEVENS IRIS FORCEPS
• Curved
• Without catch



56760
STEVENS IRIS FORCEPS
• Straight
• With catch



56780
STEVENS IRIS FORCEPS
• Curved
• With catch



56820
O'CONNOR IRIS FORCEPS
• 1 x 2 teeth



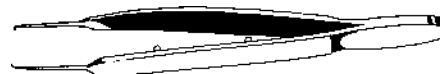
57000
CASTROVIEJO SUTURE FORCEPS
• 0.12mm
• Straight
• 2 x 2 Teeth
• With tying platform



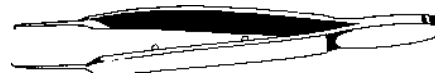
57010
CASTROVIEJO SUTURE FORCEPS
• 0.3mm
• Straight
• 2 x 2 teeth
• With tying platform



57020
CASTROVIEJO SUTURE FORCEPS
• Straight
• 1 x 2 teeth
• 0.5mm



57030
CASTROVIEJO SUTURE FORCEPS
• Straight
• 1 x 2 teeth
• 0.9mm



57040
CASTROVIEJO SUTURE FORCEPS
• Straight
• 1 x 2 teeth
• 1.5mm



57050
CASTROVIEJO SUTURE FORCEPS
• Wide handle
• 1 x 2 teeth
• Straight
• 0.12mm



57060
CASTROVIEJO SUTURE FORCEPS
• Wide handle
• 1 x 2 teeth
• Straight
• 0.3mm



**57070
CASTROVIEJO SUTURE FORCEPS**

- Wide handle
- 1 x 2 teeth
- Straight
- 0.5mm



**57090
CASTROVIEJO SUTURE FORCEPS**

- Wide handle
- 1 x 2 teeth
- Straight
- 0.9mm



**57100
CASTROVIEJO SUTURE FORCEPS**

- Wide handle
- 1 x 2 teeth
- Straight
- 1.5mm



**57110
MacGREGOR CONJUNTIVAL FORCEPS**

- Delicate
- Serrated tip



**57115
STERN-CASTROVIEJO SUTURE FORCEPS**

- Straight shafts with 0.5mm teeth
- 6mm tying platforms
- 1 x 2 teeth
- Wide serrated handle with thumb catch lock



**57120
BONN SUTURE FORCEPS**

- Original 3 inches long
- 1 x 2 teeth
- 0.12mm
- 3 Inches Long



**57130
BONN SUTURE FORCEPS**

- Standard 3 3/4 inches long
- 1 x 2 teeth
- 0.12mm
- 3 3/4 Inch Long



**57140
COLIBRI UTILITY FORCEPS**

- Extra delicate
- 1 x 2 teeth
- 0.12mm
- Without tying platform



**57150
COLIBRI UTILITY FORCEPS**

- 1 x 2 teeth
- 0.3mm
- Without tying platform



**57160
COLIBRI UTILITY FORCEPS**

- 1 x 2 teeth
- 0.3mm
- Tying platform



**57170
CASTROVIEJO COLIBRI FORCEPS**

- Wide handle
- Extra delicate
- 1 x 2 teeth
- 0.12mm



**57180
GIRARD CORNEAL SCLERAL FORCEPS**

- Right
- 1 x 2 teeth
- Tying platform
- 0.12mm



**57190
GIRARD CORNEAL SCLERAL FORCEPS**

- Left
- 1 x 2 teeth
- Tying platform
- 0.12mm



**57200
GIRARD CORNEAL FORCEPS**

- Smooth tips
- Tying platform
- 0.5mm wide

HOWARD INSTRUMENTS



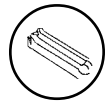
**57210
CASTROVIEJO SUTURE FORCEPS**

- Angled
- 0.12mm
- Tying platform



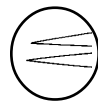
**57300
LIEBERMAN-POLACK DOUBLE CORNEAL FORCEPS**

- 1 x 1 teeth
- Pierse
- 0.1mm



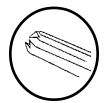
**57220
CASTROVIEJO SUTURE FORCEPS**

- Angled
- 0.3mm
- Tying platform



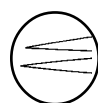
**57340
JEWELER'S #3**

- Straight
- 0.117mm



**57230
CASTROVIEJO SUTURE FORCEPS**

- Angled
- 0.5mm
- Tying platform



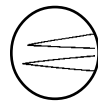
**57350
JEWELER'S #3C**

- Straight
- 0.110mm



**57260
HYDE SUTURE FORCEPS**

- Wide handle
- Tying platform
- 2 x 2 teeth
- 0.3mm



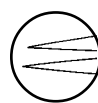
**57360
JEWELER'S #4**

- Straight



**57270
POLACK DOUBLE CORNEAL FORCEPS**

- 1 x 2 teeth
- 0.12mm



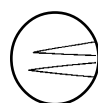
**57370
JEWELER'S #5**

- Straight delicate



**57280
POLACK DOUBLE CORNEAL FORCEPS**

- 1 x 1 teeth
- Pierse
- 0.1mm



**57380
JEWELER'S #7**

- Curved

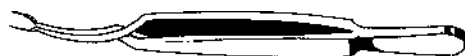


**57290
LIEBERMAN-POLACK DOUBLE CORNEAL FORCEPS**

- 1 x 2 teeth
- 0.12mm

FORCEPS

IOL FORCEPS



58000
BINKHORST IOL FORCEPS
• Cross-action



58010
JENSEN IOL FORCEPS
• Cross-action



58020
HIRSCHMAN IOL FORCEPS
• Grooved tip



58030
BINKHORST-GILL IOL FORCEPS
• Cross-action



58040
BINKHORST-GILL IOL FORCEPS
• With irrigation
• Cross-action



58050
CHOYCE IOL FORCEPS
• Angled groove



58060
SHEPARD III IOL FORCEPS
• Cross-action
• Notched tip



58070
GASKIN FRAGMENT FORCEPS
• Angled jaw
• Extra delicate



58080
DODICK IOL FORCEPS
• Smooth jaw
• With platform
• Left



58090
DODICK IOL FORCEPS
• Smooth jaw
• With platform
• Right



58100
SHEETS McPHERSON IOL FORCEPS
• Extra delicate
• Parallel
• With platform
• Serrated tips

TYING FORCEPS



59000
KELMAN-McPHERSON TYING FORCEPS
• Angled
• Tying platform



59020
McPHERSON TYING FORCEPS
• Straight
• 0.3mm tip width



59040
McPHERSON TYING FORCEPS
• Angled
• 0.3mm tip width



59050
BECHERT-McPHERSON TYING FORCEPS
• Angled
• 10mm Tying Platforms



59060
KELMAN-McPHERSON TYING FORCEPS
• Round handle
• Angled



59080
KELMAN-McPHERSON TYING FORCEPS
• Round handle
• Angled
• With teeth



59100
KELMAN-McPHERSON TYING FORCEPS
• Round handle
• Straight
• Tying platform



59120
HARMS TYING FORCEPS
• Smooth jaw
• 0.5mm tip width
• Straight



**59140
HARMS TYING FORCEPS**

- Smooth jaw
- 0.5mm tip width
- Curved



**59160
JAFJE TYING FORCEPS**

- Extra delicate
- Straight



**59180
JAFJE TYING FORCEPS**

- Extra delicate
- Curved



**59200
TENNANT TYING FORCEPS**

- Extra-delicate
- Round handle
- Straight



**59220
TENNANT TYING FORCEPS**

- Extra-delicate
- Round handle
- Curved



**59240
FINE TYING FORCEPS**

- Curved
- Wide handle



**59260
DODICK TYING FORCEPS**

- Gentle curve
- Tying platform



**59280
CASTROVIEJO TYING FORCEPS**

- Extra-delicate
- Straight



**59300
BISHOP-HARMON FOREIGN BODY FORCEPS**

- Extra-delicate
- Sharp smooth jaw



CAPSULE FORCEPS



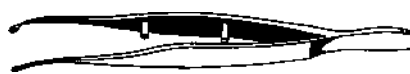
**60000
ARRUGA CAPSULE FORCEPS**

- New curve



**60020
ARRUGA CAPSULE FORCEPS**

- Standard



**60040
ARRUGA CAPSULE FORCEPS**

- Gill handle
- New curve



**60100
FUCHS EXTRA CAPSULAR FORCEPS**

- Angled jaw
- 4 x 5 teeth



**60120
SCHWEIGER EXTRA CAPSULAR FORCEPS**

- Curved jaw
- 4 x 5 teeth



**60200
UTRATA CAPSULAR FORCEPS**

- Very delicate grasping tips
- Extremely thin 11mm long vaulted shanks



**60400
MASKET CAPSULAR FORCEPS**

- Very thin delicate grasping tips
- Extremely thin 11mm long curved vaulted shanks

FIXATION FORCEPS



- 61020**
VON GRAEFE FIXATION FORCEPS
• 8 x 8 teeth
• Without catch



- 61080**
VON GRAEFE FIXATION FORCEPS
• 8 x 8 teeth
• With catch



- 61160**
GREEN FIXATION FORCEPS
• 5mm
• With catch



- 61180**
GREEN FIXATION FORCEPS
• 10mm
• With catch



- 61200**
GREEN FIXATION FORCEPS
• 5mm
• Without catch



- 61220**
GREEN FIXATION FORCEPS
• 10mm
• Without catch



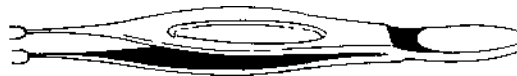
- 61260**
ELSCHING FIXATION FORCEPS
• 1 x 2 teeth
• Angled



- 61280**
O'BRIEN FIXATION FORCEPS
• Delicate
• 1 x 2 teeth angled



- 61320**
ALVIS FIXATION FORCEPS
• 1 x 1 teeth



- 61440**
BORES FIXATION FORCEPS
• 1 x 2 teeth
• 0.12mm
• Straight



- 61460**
RUBMAN-BORES FIXATION FORCEPS
• 1 x 2 teeth
• 0.12mm
• Curved



- 61480**
BORES FIXATION FORCEPS
• 0.5mm
• Angled



- 61500**
ARROWSMITH FIXATION FORCEPS
• With lock
• 1 x 2 teeth
• Straight
• 0.12mm



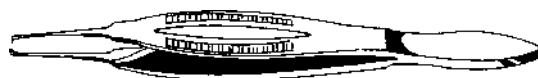
- 61520**
ARROWSMITH FIXATION FORCEP
• With lock
• 1 x 2 teeth
• Curved
• 0.12mm



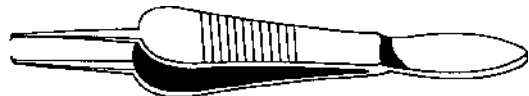
- 61540**
KREMER FIXATION FORCEPS
• With lock
• 1 x 2 teeth
• 0.12mm
• Straight



- 61560**
KREMER FIXATION FORCEPS
• With lock
• 1 x 2 teeth
• 0.12mm
• Curved



61580
THORPE FIXATION FORCEPS
• 2 X 3 teeth
• 0.12mm



61600
SAUER SUTURING FORCEPS
• 1 X 2 teeth
• 0.6mm



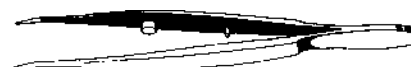
61620
NOYES FIXATION FORCEPS
• With catch
• Curved



61630
NOYES FIXATION FORCEPS
• Without catch
• Curved



62200
BONACCOLTO UTILITY FORCEPS
• Jeweler's type
• Cross serrated
• Pointed tip



62220
BARRAQUER CILIA FORCEPS
• Slight angle



62240
TROUTMAN SUPERIOR RECTUS FORCEPS
• 1 x 2 teeth

UTILITY FORCEPS



62000
WILLS EYE HOSPITAL UTILITY FORCEPS
• Standard handle
• Fine cross serration



62140
BONACCOLTO UTILITY FORCEPS
• Standard handle
• 1.2mm jaw



62160
BONACCOLTO UTILITY FORCEPS
• Standard handle
• 1.7mm jaw

CHALAZION FORCEPS



63000
LAMBERT CHALAZION FORCEPS
• Jaw fenestrated
• Smooth 8 x 8mm



63075
FRANCIS CHALAZION FORCEPS
• Jaw 14 x 11mm



63020
AYER CHALAZION FORCEPS
• With screw



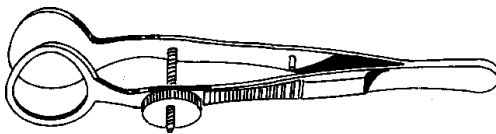
63085
HUNT CHALAZION FORCEPS
• Jaw 12 x 12mm



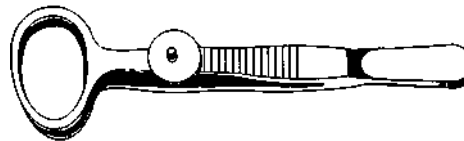
63040
DESMARRES CHALAZION FORCEPS
• 16mm wide lower plate
• Open upper plate



63095
HEATH CHALAZION FORCEPS
• Jaw 11 x 14mm



63060
DESMARRES CHALAZION FORCEPS
• 20mm wide lower plate
• Open upper plate



63105
BAIRD CHALAZION FORCEPS
• Jaw fenestrated
• Smooth 8 x 8mm



63065
WIES CHALAZION FORCEPS
• Fenestrated
• Serrated
• Jaw 12 x 9mm

SCISSORS

RIBBON HANDLE	89
STANDARD HANDLE	89
SPRING HANDLE	90

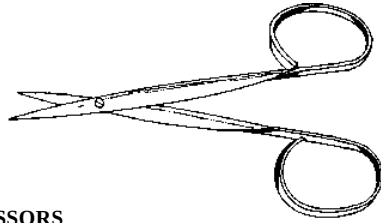
SCISSORS

HOWARD INSTRUMENTS

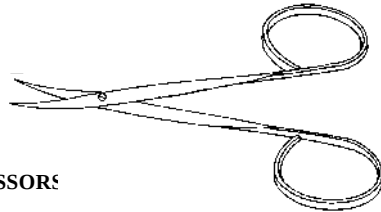
RIBBON/STANDARD HANDLE SCISSORS

RIBBON HANDLE SCISSORS

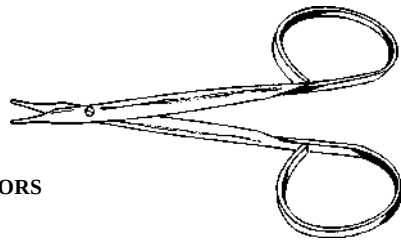
65060
STRABISMUS SCISSORS
• Straight



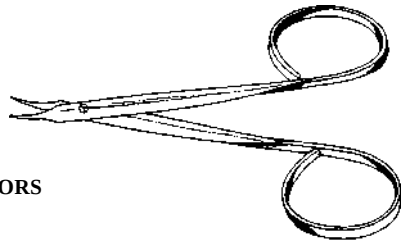
65080
STRABISMUS SCISSORS
• Curved



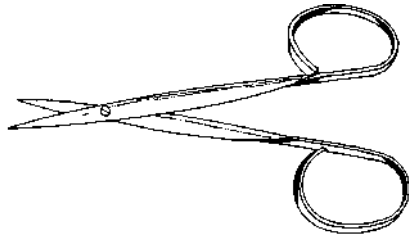
65100
STEVENS SCISSORS
• Straight



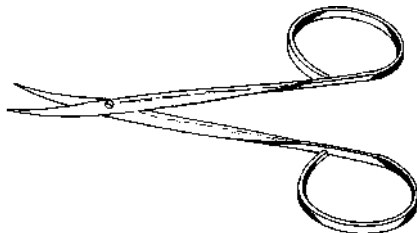
65120
STEVENS SCISSORS
• Curved



65180
IRIS SCISSORS
• Pointed
• Straight

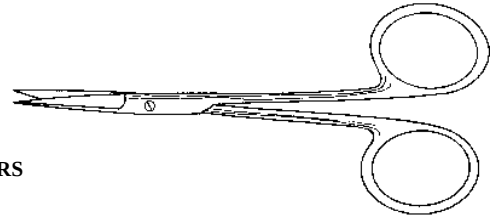


65200
IRIS SCISSORS
• Pointed
• Curved

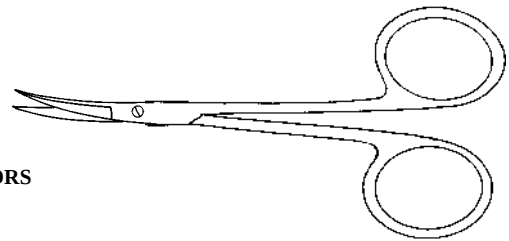


STANDARD HANDLE SCISSORS

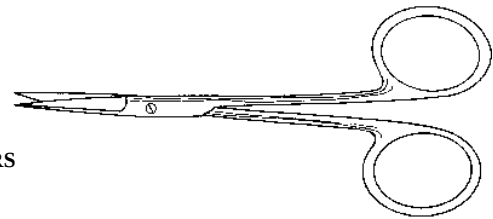
66000
IRIS SCISSORS
• 10.5cm
• Two sharp
• Straight



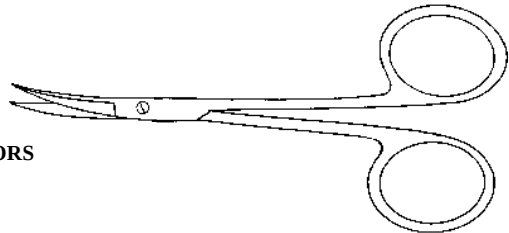
66060
IRIS SCISSORS
• 10.5cm
• Two sharp
• Curved



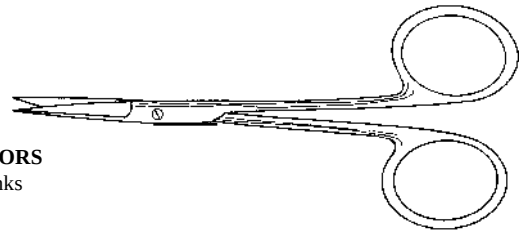
66120
IRIS SCISSORS
• 9cm
• Two sharp
• Straight



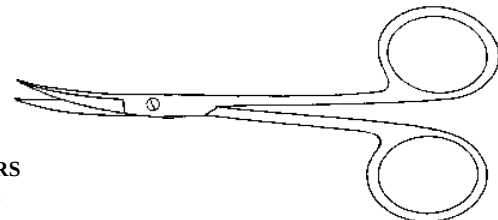
66140
IRIS SCISSORS
• 9cm
• Two sharp
• Curved



66160
IRIS SCISSORS
• Round shanks
• 10.5cm
• Straight



66180
IRIS SCISSORS
• Round shanks
• 10.5cm
• Curved



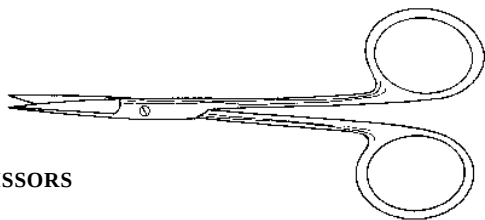
Call customer service at (205) 553-4453 or fax us at (205) 556-9267

HOWARD INSTRUMENTS

SPRING HANDLE SCISSORS

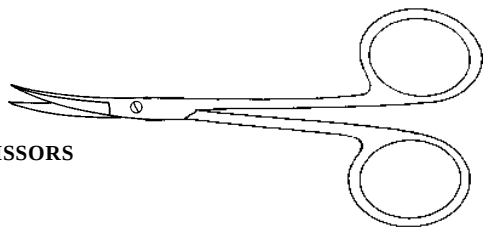
66200 IRIS SCISSORS

- Delicate
- Straight
- 10.5cm



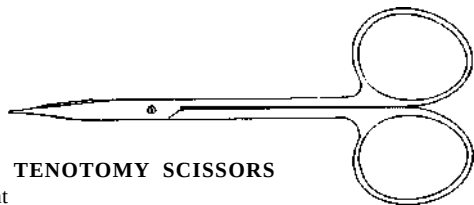
66220 IRIS SCISSORS

- Delicate
- Curved
- 10.5cm



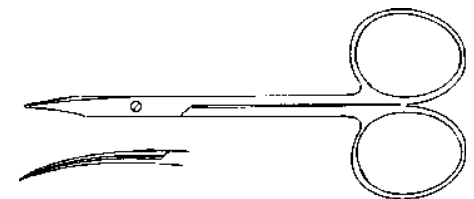
66320 STEVENS TENOTOMY SCISSORS

- Two blunt
- Straight
- 10cm



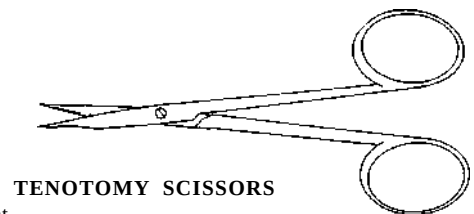
66340 STEVENS TENOTOMY SCISSORS

- Two blunt
- Slightly curved
- 10cm



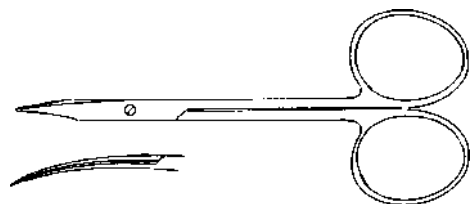
66360 STEVENS TENOTOMY SCISSORS

- Two blunt
- Straight
- 11cm



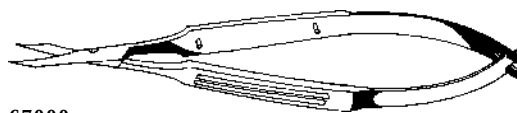
66380 STEVENS TENOTOMY SCISSORS

- Two blunt
- Slightly curved
- 11cm



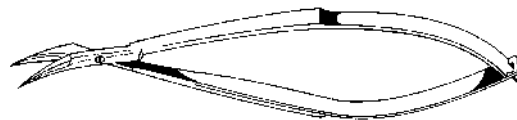
67000 WESTCOTT STITCH SCISSORS

- Two sharp
- 12cm



67100 NOYES IRIS SCISSORS

- Straight
- Two sharp
- 12cm



67120 WESTCOTT TENOTOMY SCISSORS

- Two blunt
- 12cm



67130 WESTCOTT IRIS SCISSORS

- Blunt
- 11cm



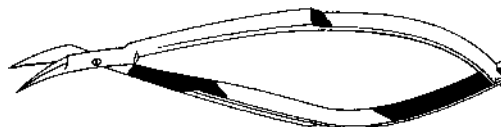
67160 WESTCOTT IRIS SCISSORS

- Rounded tips
- 11cm



67240 CASTROVIEJO CORNEAL SCISSORS

- Curved
- Medium blades
- Blunt tips



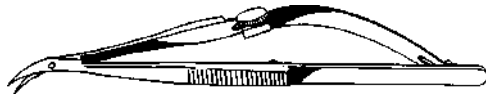
STANDARD HANDLE SCISSORS



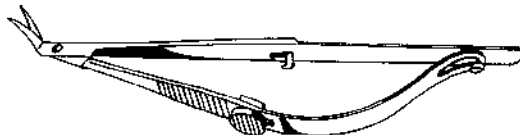
67260
CASTROVIEJO CORNEAL SCISSORS
• Large
• Right



67280
CASTROVIEJO CORNEAL SECTION SCISSORS
• Large
• Left



67340
TROUTMAN-CASTROVIEJO CORNEAL SECTION SCISSORS
• Right
• With lock
• 11cm



67360
TROUTMAN-CASTROVIEJO CORNEAL SECTION SCISSORS
• Left
• With lock
• 11cm



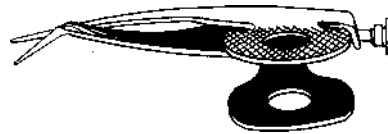
67380
DeWECKER IRIS SCISSORS
• One sharp, one blunt
• Delicate
• 11cm



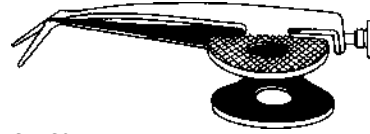
67400
DeWECKER IRIS SCISSORS
• Two sharp
• Delicate
• 11cm



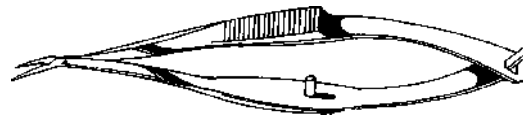
67420
DeWECKER IRIS SCISSORS
• Two blunt
• Delicate
• 11cm



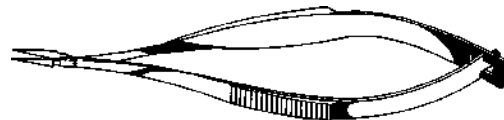
67440
BARRAQUER IRIS SCISSORS
• Two blunt
• Delicate
• 5.5cm



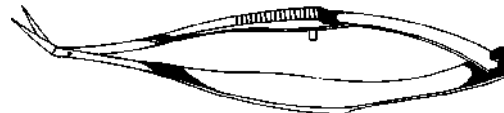
67460
BARRAQUER IRIS SCISSORS
• One blunt, one sharp
• Delicate
• 5.5cm



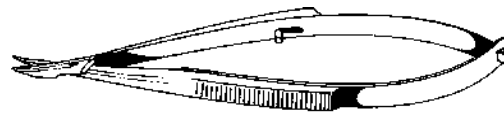
67500
VANNAS MICRO-SCISSORS
• Curved
• 8cm



67520
VANNAS MICRO-SCISSORS
• Angled on flat
• 8cm



67540
VANNAS MICRO-SCISSORS
• Angled to side
• 8cm



67580
McPHERSON-WESTCOTT SCISSORS
• Curved
• Sharp
• 10cm

TREPHINES AND ACCESSORIES

92-93

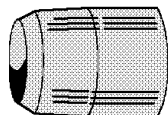
TREPHINES/HANDLES



HOWARD INSTRUMENTS

TREPHINES/HANDLES

68000-68425 DISPOSABLE TREPHINE BLADES SHORT - STERILE



- Available in 0.25mm increments, 6mm thru 9.5mm
- Available in 0.5mm increments, 2.5mm thru 5.5mm and 9.5mm thru 11mm
- Length 9mm, 0.350 inches

REGULAR SHORT TREPHINES

68000	6.00mm	68200	8.00mm
68025	6.25mm	68225	8.25mm
68050	6.50mm	68250	8.50mm
68075	6.75mm	68275	8.75mm
68100	7.00mm	68300	9.00mm
68125	7.25mm	68325	9.25mm
68150	7.50mm	68350	9.50mm
68175	7.75mm		

SPECIAL SHORT TREPHINES

67700-S	2.50mm	67800-S	11.50mm
67710-S	3.00mm	67820-S	12.00mm
67720-S	3.50mm	67840-S	12.50mm
67730-S	4.00mm	67860-S	13.00mm
67740-S	4.50mm	67880-S	13.50mm
67750-S	5.00mm	67900-S	14.00mm
67760-S	5.50mm	67920-S	14.50mm
68375-S	10.00mm	67940-S	15.00mm
68400-S	10.50mm	67960-S	15.50mm
68425-S	11.00mm	67980-S	16.00mm

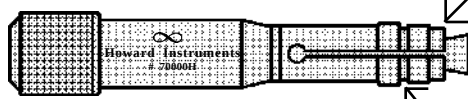
REGULAR LONG TREPHINES

68600-L	6.00mm	68800-L	8.00mm
68625-L	6.25mm	68825-L	8.25mm
68650-L	6.50mm	68850-L	8.50mm
68675-L	6.75mm	68875-L	8.75mm
68700-L	7.00mm	68900-L	9.00mm
68725-L	7.25mm	68925-L	9.25mm
68750-L	7.50mm	68950-L	9.50mm
68775-L	7.75mm		

SPECIAL LONG TREPHINES

68525-L	2.50mm	68975-L	10.00mm	68998-L	13.50mm
68530-L	3.00mm	68980-L	10.50mm	69000-L	14.00mm
68535-L	3.50mm	68985-L	11.00mm	69002-L	14.50mm
68540-L	4.00mm	68987-L	11.50mm	69005-L	15.00mm
68545-L	4.50mm	68992-L	12.00mm	69007-L	15.50mm
68550-L	5.00mm	68994-L	12.50mm	69010-L	16.00mm
68555-L	5.50mm	68996-L	13.00mm		

70000H HOWARD UNIVERSAL TREPHINE HANDLE



- For use with the series of short trephine blades
- By turning the back of the handle you can raise or lower the mm size that the handle accommodates
- With the center of the shaft made of solid metal, it allows a **POSITIVE LOCK** on the trephine. This eliminates movement of the trephine at the end of the handle.

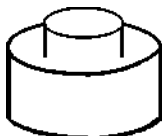
Trephines from 6mm to 9.5mm are placed here.

Trephines from 10mm to 11mm are placed here.

70000BP BASE PLUG TO BE USED WITH CORNEAL PUNCH 22mm diameter X 9mm depth

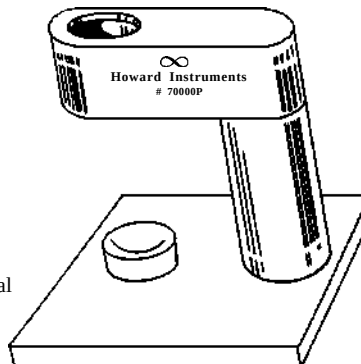


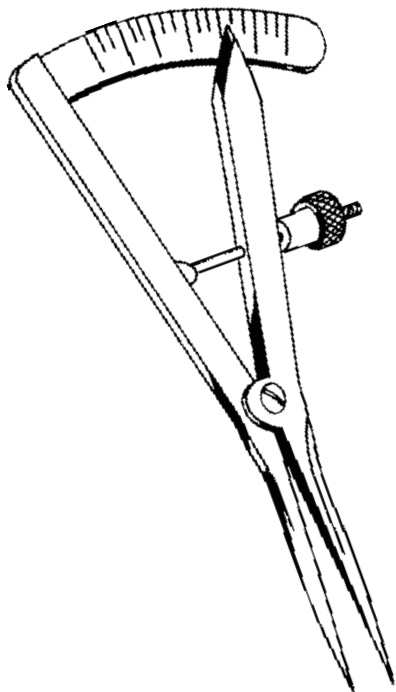
70000BPS BASE PLUG SHIELD TO COVER CORNEAL TISSUE (FITS OVER BASE PLUG) 27mm diameter X 22mm depth



70000P HOWARD PUNCH

- To be used with Universal handles 70000H and 70016H
- Has self-aligning mechanism for easy insertion of the Howard Universal Trephine Blade





∞
Howard Instruments, Inc.

**presents
our
Titanium Instruments**

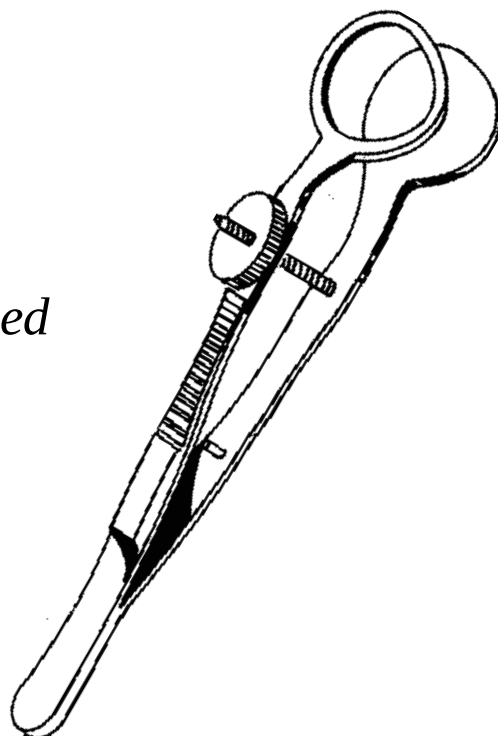


Call Customer Service for Details!



*If the Titanium Instrument you need
is not listed, please let us know.*

*In the future, we will try
to make it available to you.*



TITANIUM INSTRUMENTS



HOWARD INSTRUMENTS

ALL OF THE FOLLOWING INSTRUMENTS ARE AVAILABLE IN TITANIUM

CATALOG #	DESCRIPTION
SCISSORS, TITANIUM	
T3304	Scissors, Castroviejo Corneal Section: Right
T3305	Scissors, Castroviejo Corneal Section: Left
T3321	Scissors, Wescott Stitch: Sharp Point Tips
T3320R	Scissors, Wescott Tenotomy: Right
T3386	Scissors, Vannas Capsulotomy: Straight
T3387	Scissors, Vannas Capsulotomy: Curved
NEEDLE HOLDERS, TITANIUM	
T3862	Needle Holder, Castroviejo: Delicate, Straight
T3861	Needle Holder, Castroviejo: Delicate, Straight, with Lock
T3849	Needle Holder, Castroviejo: Delicate, Curved
T3848	Needle Holder, Castroviejo: Delicate, Curved, with Lock
T3828	Needle Holder, Barraquer: Delicate, Curved
T3828CW	Needle Holder, Barraquer: Delicate, Curved, with Lock
T0004	Needle Holder, Wexler: Delicate, Straight
T0004L	Needle Holder, Wexler: Delicate, Straight, with Lock
FORCEPS, TITANIUM	
T2002R	Forceps, Utrata Capsulorhexis: Blunt Tip, Round Handle
T2002S	Forceps, Utrata Capsulorhexis: Cystotome Tip, Round Handle
T2002	Forceps, Utrata Capsulorhexis: Blunt Tip, Flat Handle
T3198	Forceps, Colibri, Troutman-Barraquer: .12mm, 1x2 Teeth
T3205	Forceps, Castro-Colibri: .12mm, 90 Degrees, 1x2 Teeth
T1796	Forceps, Suture, Castroviejo: .12mm, 1x2 Teeth
T1797	Forceps, Suture, Castroviejo: .3mm, 1x2 Teeth
T1798	Forceps, Suture, Castroviejo: .5mm, 1x2 Teeth
T1802	Forceps, Suture, Castroviejo: .9mm, 1x2 Teeth
T1809	Forceps, Bonn, Short: .12mm, 90 Degrees, 1x2 Teeth
T1811	Forceps, Bonn, Long: .12mm, 90 Degrees, 1x2 Teeth
T1815S	Forceps, McPherson: Straight, 4mm Plat
T1815A	Forceps, McPherson: Angled, 4mm Plat
T1815AK	Forceps, Kelman-McPherson: Angled, 5mm Plat
T3192TS	Forceps, Tennant Tying: Delicate, Straight
T3192T	Forceps, Tennant Tying: Delicate, Curved
T1500	Forceps, Bishop-Harmon: 1x2 Teeth, Fine, .8mm
T1502	Forceps, Bishop-Harmon: 1x2 Teeth, Delicate, .3mm
T1506	Forceps, Bishop-Harmon: Crisscross Serrated Teeth
T2604	Forceps, Desmarres, Chalazion: 23mm plate, 12x20mm
T2610	Forceps, Francis Chalazion: 17mm plate, 12x14mm
T2618	Forceps, Hunt Chalazion: 15mm plate, 12mm
T0028	Forceps, Nucleus Cracker: Flat Handle, 75mm
T0033	Forceps, Universal IOL: Second Generation, Angled Tip
MISCELLANEOUS TITANIUM	
T2404	Caliper, Castroviejo: Straight
T4937	Spatula, Bechert: Lens Nucleus Rotator, 7mm
T0001	Spatula, Jaffe-Bechert: Lens Nucleus Rotator, 9mm

TITANIUM INSTRUMENTS



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RETINAL ACCESSORIES

Polly's Vitreous Cutter	96
Polly's Vitreous Microscissors	98
Disposable Vitreous Cutter	99
Vitreo Retinal Cannulae	101
Scleral Plugs	102
Infusion Cannulae	103
Light Pipes	115
Bipolar Machine	117
Bipolar Forceps	117
I/A Handpieces & Tips	118
Phaco Handpieces & Tips	119
PhacoJack Phacosystem	121
Reusable Tubing Sets	123

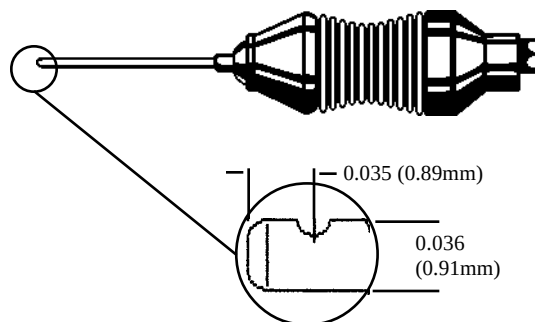


HOWARD INSTRUMENTS

POLLY'S VITREOUS CUTTERS

J-225-M20G

- 20 gauge
- 30 psi
- For Microvit type machines, also for Daisy, Premier and Nidek type machines
- Port is 17/1000" from the tip
- Port size 0.9mm
- J-225-I, irrigation sleeve, needed for anterior segment surgery
- Double lumen tubing provided



J-225-M20GA

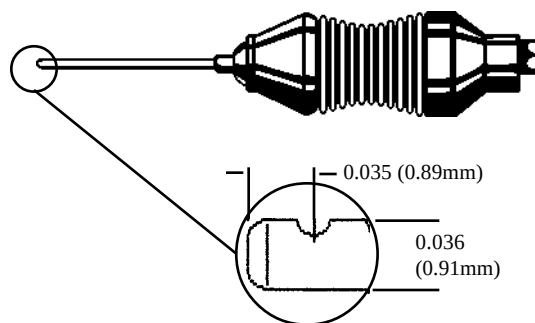
- 20 gauge
- 30psi
- For Microvit type machines, also for Daisy, Premier and Nidek type machines
- Port is 17/1000" from the tip
- Port size is adjustable
- J-225-I, irrigation sleeve, needed for anterior segment surgery
- Double lumen tubing provided

J-225-M20GBN

- 20 gauge
- 30 psi
- 90 degree bent needle
- For Microvit type machines

J-225-M23G

- 23 gauge
- 30 psi
- For Microvit, Daisy and Premiere type machines
- Port is 17/1000" from the tip
- Double lumen tubing provided

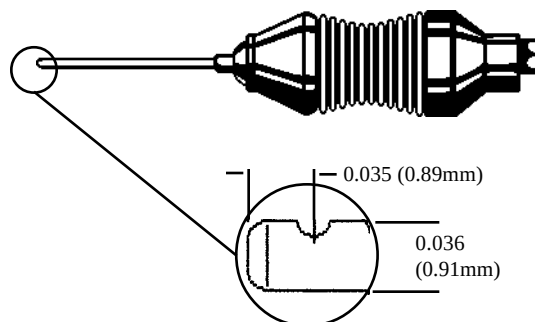


J-225-M23GBN

- 23 gauge
- 30 psi
- 90 degree bent needle
- For Microvit type machines

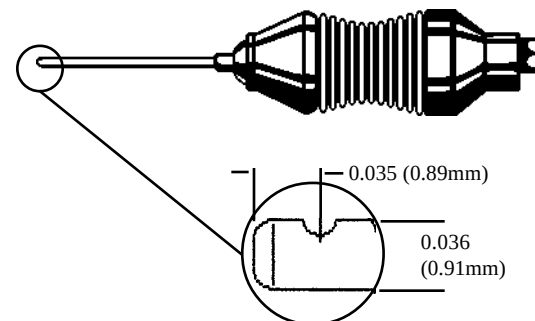
J-225-M23GH

- 23 gauge
- 30 psi
- For Microvit, Daisy and Premiere type machines
- Port is 17/1000" from the tip
- Hook at end of port for easier guiding of scar tissue into the cutting port
- Placement of hook often makes forceps unnessecary
- Used during the more delicate stages of scar tissue removal
- Used for primary debulking of scar tissue
- Double lumen tubing provided



J-225-M25G

- 25 gauge
- 30 psi
- For Microvit, Daisy and Premiere type machines
- Port is 17/1000" form the tip
- Double lumen tubing provided tubing



J-225-O20G

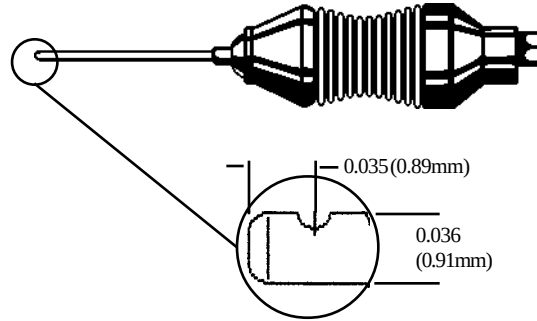
- 20 gauge
- 20 psi
- For Ocuture I and II
- Port 17/1000" from the tip
- Port size 0.9mm
- J-225-I, irrigation sleeve, needed for anterior segment surgery
- Double lumen tubing provided

HOWARD INSTRUMENTS

POLLY'S VITREOUS CUTTERS

J-225-O20GA

- 20 gauge
- 20psi
- For Ocutome I and II
- Port is 17/1000" from the tip
- Port size is adjustable
- J-225-I, irrigation sleeve, needed for anterior segment surgery
- Double lumen tubing provided

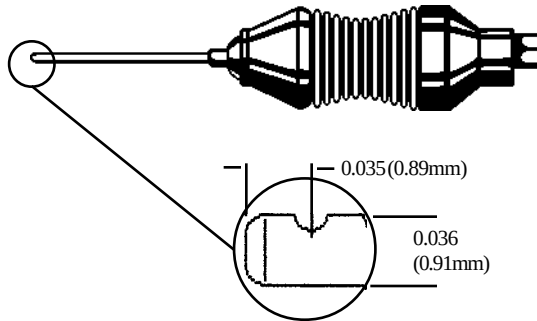


J-225-O20GBN

- 20 gauge
- 20 psi
- 90 degree bent needle
- For Ocutome type machines

J-225-O23G

- 23 gauge
- 20 psi
- For Ocutome type machines
- Port is 17/1000" from the tip
- Double lumen tubing provided

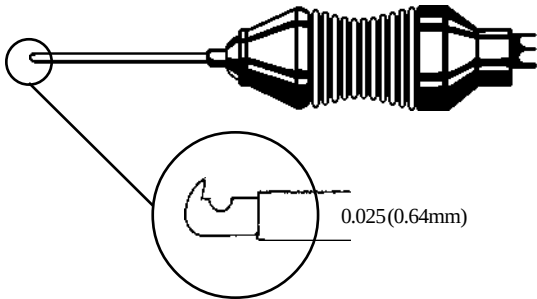


J-225-O23GBN

- 23 gauge
- 20 psi
- 90 degree bent needle
- For Ocutome type machines

J-225-O23GH

- 23 gauge
- 20 psi
- For Ocutome type machines. Port is 17/1000" from the tip.
- Port is 17/1000" from the tip
- Hook at end of port for easier guiding of scar tissue into the cutting port
- Placement of hook often makes forceps unnecessary
- Used during the more delicate stages of scar tissue removal
- Used for primary debulking of scar tissue
- Double lumen tubing provided

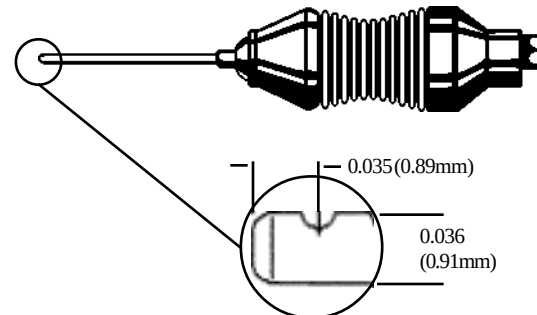


J-225-O25G

- 25 gauge
- 20 psi
- For Ocutome type machines
- Port is 17/1000" from the tip
- Double lumen tubing provided

J-225-10000

- 20 gauge
- 20 psi
- For Alcon 10000/20000 type machines
- Port is 17/1000" from the tip
- J-225-I, irrigation sleeve, needed for anterior segment surgery
- Double lumen tubing provided



J-225-AMO

- 20 gauge
- 20 psi
- For AMO type machines
- Port is 17/1000" from the tip.
- J-225-I, irrigation sleeve, needed for anterior segment surgery
- Double lumen tubing provided

HOWARD INSTRUMENTS

POLLY'S VITREOUS CUTTERS

J-225-C20G

- 20 gauge
- 22 psi
- For Chiron type machines
- Port is 17/1000" from the tip
- J-225-I, irrigation sleeve, needed for anterior segment surgery
- Double lumen tubing provided

J-225-INTRA

- 20 gauge
- 30 psi
- For Intraoptic type machines
- Port is 17/1000" from the tip
- J-225-I, irrigation sleeve, needed for anterior segment surgery
- Double lumen tubing provided

J-225-OMS

- 20 gauge
- 12 psi
- For OMS type machines
- Port is 17/1000" from the tip
- J-225-I, irrigation sleeve, needed for anterior segment surgery
- Double lumen tubing provided

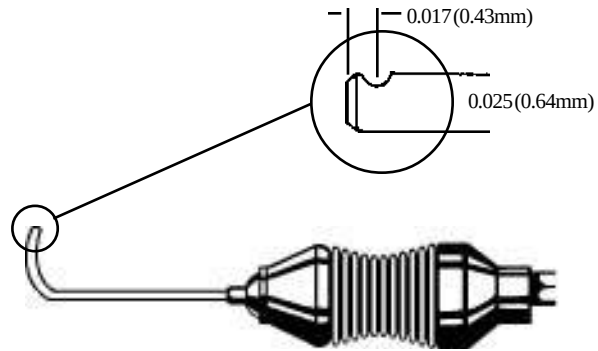
J-225-SD

- 20 gauge
- For Surgical Design type machines
- Port is 17/1000" from the tip
- J-225-I, irrigation sleeve, needed for anterior segment surgery
- Double lumen tubing provided

J-225-I

Infusion Sleeve

- For Anterior Vitrector



POLLY'S VITREOUS MICROSCISSORS

Vertical Microscissors

J-225-VS30

- 30 psi
- For Microvit and similar machines

J-225-VS20

- For Ocutome and similar machines
- 20 psi

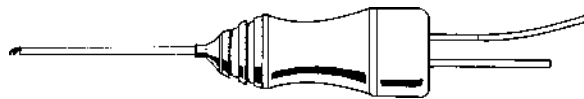
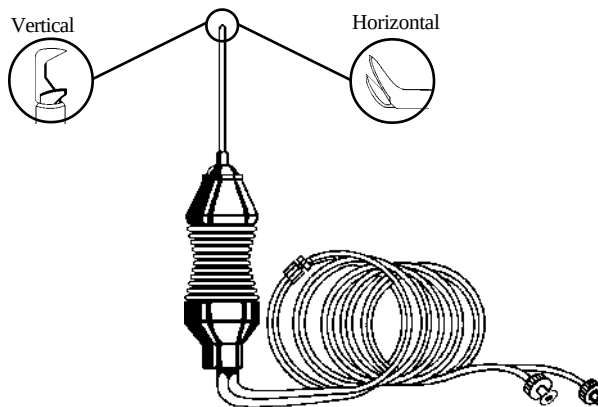
Horizontal Microscissors

J-225-HS30

- For Microvit and similar machines
- 30 psi

J-225-HS20

- For Ocutome and similar machines
- 20 psi



J-225-MGHS

GOLD VERTICAL MICROSCISSORS

- Gold coated
- For Microvit and similar machines
- 30psi
- Unique combination of cutting blades to ensure the easiest and cleanest microsurgical retinal cut



10980

STILETTO (MVR) KNIFE

- 1.15mm width
- Provides precise incision
- For insertion of 20 gauge cannula



Call customer service at (205) 553-4453 or fax us at (205) 556-9267

DISPOSABLE CUTTERS

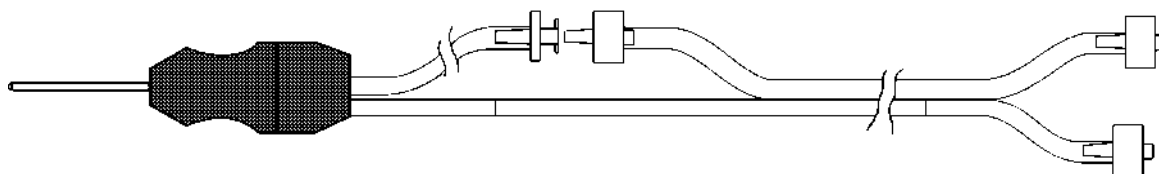
98-99

DISPOSABLE CUTTERS



HOWARD INSTRUMENTS

DISPOSABLE VITREOUS CUTTERS



J-225-DM

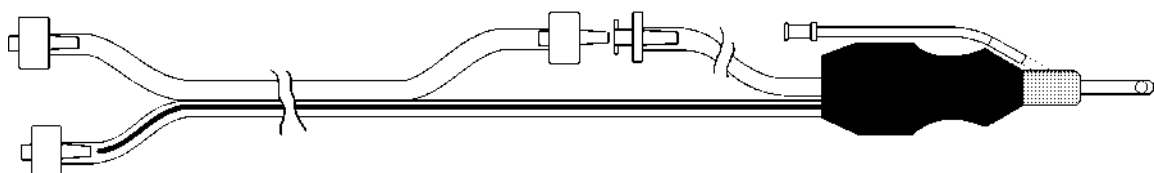
- 30 psi
- For the Microvit and Premiere
- May also be used for DORC machine

J-225-DO

- 20 psi
- For Ocutome 800 and 8000 machines

J-225-DMG

- 30 psi
- For the Fritz Ruck machine



J-225-DAM

- 30 psi
- For Microvit and Premiere
- With irrigation sleeve

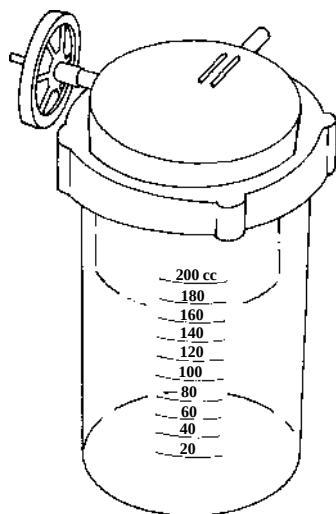
J-225-DA10000

- 20 psi
- For Alcon 10000 and Alcon 20000 machine.
- With irrigation sleeve

J-225-PJD

- 30 psi
- For PhacoJack machine
- With irrigation sleeve

DISPOSABLES FOR OCUTOME 800, 800A AND 8000



J-100 COLLECTION JAR

To be used with the **800**, **800A**, and the **8000 Ocutome** type machines and the James Surgical System.



J-100F Disposable Fluid Filter

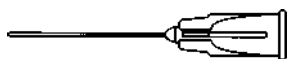
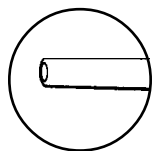
Box of 50

For use with the **800**, **800A** and the **8000 Ocutome** type machines and the James Surgical System.

HOWARD INSTRUMENTS

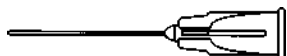
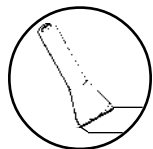
SPECIAL VITRO-RETINAL CANNULAE

DISPOSABLE VITRO-RETINAL CANNULA



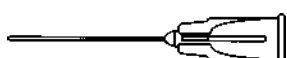
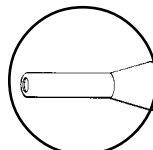
VR1020

- Sterile
- Disposable Blunt Ended Cannula for Vitreous Surgery
- 20 gauge
- Length 32mm



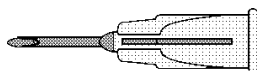
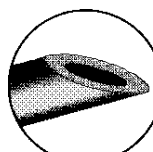
VR1030

- Sterile
- Disposable Curved Blunt Ended Cannula for Vitreous Surgery
- 20 gauge hub with 24 gauge tip
- Length 36mm
- Same as VR1040 with curved tip, 45° bend



VR1040

- Sterile
- Disposable Tapered Cannula for Vitreous Surgery
- 20 gauge hub with 24 gauge tip
- Length 35mm

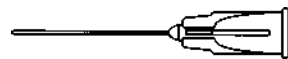
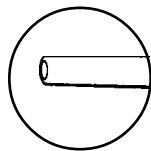


VR002

SILICONE OIL CANNULA

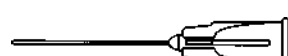
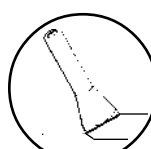
- Sterile
- 16 gauge
- Used to inject or aspirate high viscosity silicone oil in the repair of retinal detachments
- Length 9mm

REUSABLE VITRO-RETINAL CANNULA



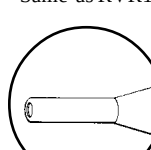
RVR1020

- Non sterile
- Reusable Blunt Ended Cannula for Vitreous Surgery
- 20 gauge
- Length 32mm



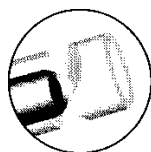
RVR1030

- Non sterile
- Reusable Curved Blunt Ended Cannula for Vitreous Surgery
- 20 gauge hub with 24 gauge tip
- Length 36mm
- Same as RVR1040 with curved tip, 45° bend



RVR1040

- Non sterile
- Reusable Tapered Cannula for Vitreous Surgery
- 20 gauge hub with 24 gauge tip
- Length 35mm



VR021

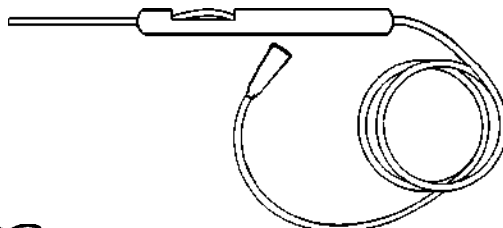
SUBRETINAL FLUID CANNULA

- Sterile
- 20 gauge cannula tapered to 25 gauge
- Straight terminal segment with 0.5 inch flexible tubing overmount
- Length 34mm

FLUTE AND BACK FLUSH NEEDLES

VR1001

- Disposable flashback handle for vitreous surgery

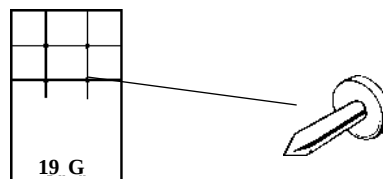


HOWARD INSTRUMENTS

SCLERAL PLUGS AND TABLET

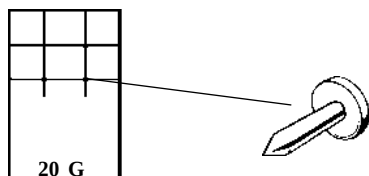
REUSABLE SCLERAL PLUGS AND TABLET

- Supplied with 4 plugs
- Color-coded
- Steam autoclavable silicone rubber tablet
- Raised supports for easy grip with forceps (not included)



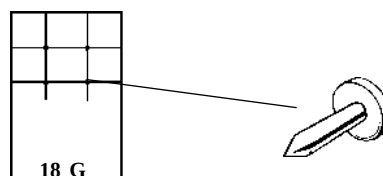
R19-1000

- 19 gauge
- Gold plated scleral plugs (4)
- Blue silicone tablet



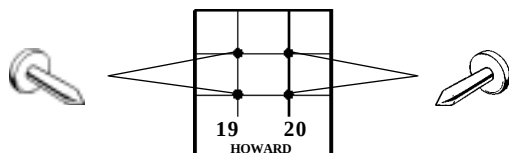
R20-1000

- 20 gauge
- Silver colored scleral plugs (4)
- Off white silicone tablet



R18-1000

- 18 gauge
- Silver colored scleral plugs
- Gray silicone tablet



DISPOSABLE SCLERAL PLUGS AND TABLET

RDP-1000

- 20 gauge
- Silver colored scleral plugs (2)
- 19 gauge
- Gold plated scleral plugs (2)
- With silicone tablet



RCA-1000

Scleral Plug Forceps

- Lightweight
- Developed for use with virtually any traditional plug set available
- Manufactured from the highest quality American stainless steel

FOR SALE OUTSIDE THE U.S. ONLY!



SILICONE OIL

SO-1000

- Sterile
- 1000 centistoke
- 10ml

SO-2000

- Sterile
- 2000 centistoke
- 10ml

SO-3000

- Sterile
- 3000 centistoke
- 10ml

SO-4000

- Sterile
- 4000 centistoke
- 10ml

SO-5000

- Sterile
- 5000 centistoke
- 10ml



PERFLOURDECALINE

H-2850

- Sterile
- 5ml

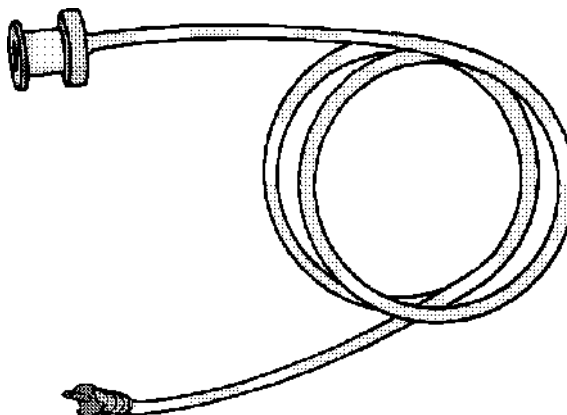
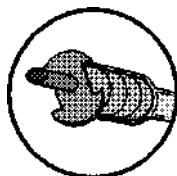
H-2855

- Sterile
- 7ml



Call customer service at (205) 553-4453 or fax us at (205) 556-9267

INFUSION CANNULAE



DISPOSABLE INFUSION CANNULA

- 20 Gauge
- Luer lock adapter
- Uses 260mm of Silastic® tubing
- Length 270mm, 10.6 inches

IS-1025

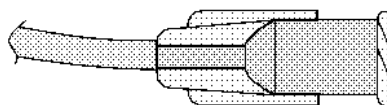
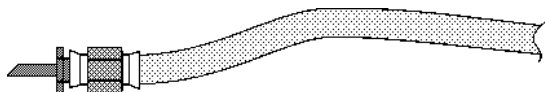
- 2.5mm
- 45 degree beveled tip

IS-1040

- 4.0mm
- 45 degree beveled tip

IS-1060

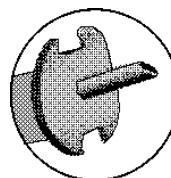
- 6.0mm
- 45 degree beveled tip



HIGH VISCOSITY DISPOSABLE METAL INFUSION CANNULA

MIS-1040

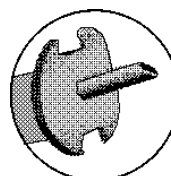
- 4.0mm tip
- 20 Gauge
- 45 degree beveled tip
- Can be used as standard infusion cannula
- Designed for easy injection of high viscosity substance such as silicone oil
- Tubing length 270mm, 10.6 inches

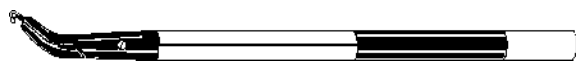


HIGH VISCOSITY DISPOSABLE METAL INFUSION CANNULA

MIS-1060

- 6.0mm tip
- 20 Gauge
- 45 degree beveled tip
- Can be used as standard infusion cannula
- Designed for easy injection of high viscosity substance such as silicone oil
- Tubing length 270mm, 10.6 inches



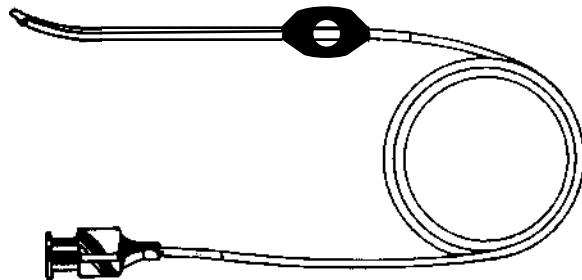


**H-103A
ADJUSTABLE IRIS RETRACTOR**

- For left and right side use
- 5mm
- Also available in 3mm

**H-106
LACRYMAL PROBE**

- Although lacrymal probing is a routine procedure for removing an obstruction in a blocked tear duct, it does not mean this intervention will guarantee 100% success.
- Probing in small children may especially give you problems, because the probe sometimes takes a false route, thus damaging the tissue around the tear duct.
- When a probe is made of silver, it tends to bend easily and can lead to damage. Lacrymal probes made of springsteel are more rigid and less pliable.
- The Howard Instruments, Inc. lacrymal probes are made of springsteel with an olivetip on one end and straight tip on the opposite end.
- There are three sizes: 0.5 mm, 0.8 mm and 1.0 mm.



**H-109
IRRIGATING LACRYMAL PROBE**

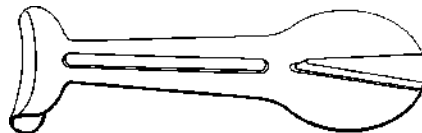
- Howard Instruments, Inc. designed an irrigating lacrymal probe which utilizes the probe and simultaneously injects saline.
- It is not the tip of the probe that takes away the obstruction, but the pressure of the fluid that opens up the tear duct, which is then followed by the probe.
- It is clear that taking a false route is no longer possible. This type of probing is far less traumatic than the usual non-irrigating probing techniques.
- There are three sizes: 0.5 mm, 0.8 mm and 1.0 mm.

**H-113
GONIOTOMY HYDROSTATIC NEEDLE HOLDER**

- Complete with tubing and three needles

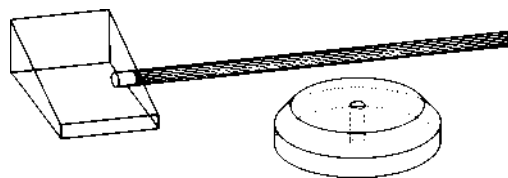
**H-113A
GONIOTOMY HYDROSTATIC NEEDLES**

- Set of three for use with H-113



**H-120L
DISPOSABLE SELF-ADHERING EYELID HOLDERS**

- Sterile
- Box of 25



**H-122
GOBIN'S PRISM**

- Complete with holder
- 15prism Diopter



**H-143A
GOLF CLUB IRRIGATING CANNULA**

- Angled
- With handle and tubing
- In plastic sterilization box



**H-143B
GOLF CLUB IRRIGATING CANNULA**

- Large curved right
- With handle and tubing
- In plastic sterilization box



**H-143C
GOLF CLUB IRRIGATING CANNULA**

- Large curved left
- With handle and tubing
- In plastic sterilization box



**H-143D
GOLF CLUB IRRIGATING CANNULA**

- Short curved right
- With handle and tubing
- In plastic sterilization box



**H-143E
GOLF CLUB IRRIGATING CANNULA**

- Short curved left
- With handle and tubing
- In plastic sterilization box

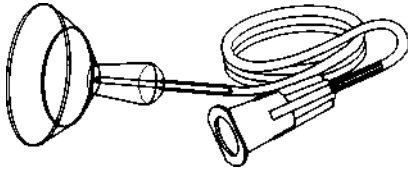


**H-143F
GOLF CLUB IRRIGATING HANDPIECE**

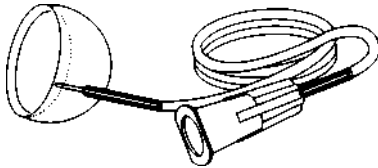
- For any available irrigation or aspiration cannula

HOWARD INSTRUMENTS

DIAGNOSTIC and SURGICAL CONTACT LENSES



H-1120
LOVAC COMBERG CONTACT LENS
• For X-ray localization
• Diagnostic contact lens



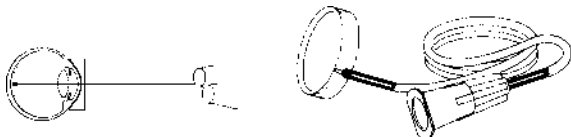
H-1121
LOVAC BARKAN GONIO LENS
• Spherical 2x magnification
• Diagnostic contact lens

H-1122A
SPHERICAL GONIOTOMY LENS
• Large model
• 2x magnification with cannula for irrigation
• Surgical contact lens

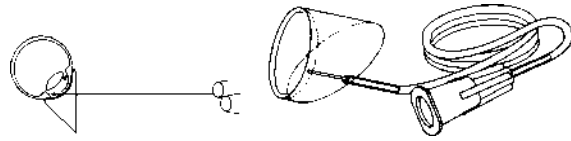
H-1122B
SPHERICAL GONIOTOMY LENS
• Small model
• 2x magnification with cannula for irrigation
• Surgical contact lens

H-1122C
PRISMATIC GONIOTOMY LENS
• Large model
• No magnification with cannula for irrigation
• For use in combination with operating microscope
• Surgical contact lens

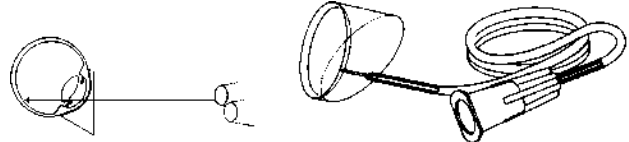
H-1122D
PRISMATIC GONIOTOMY LENS
• Small model
• No magnification with cannula for irrigation
• For use in combination with operating microscope
• Surgical contact lens



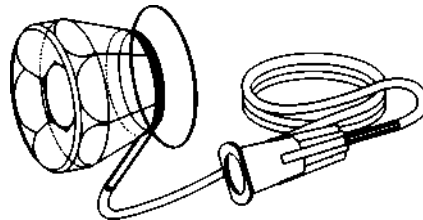
H-1123
LOVAC FUNDUS CONTACT LENS
• Rimless
• Diagnostic contact lens



H-1124A
LOVAC DIRECT GONIO LENS
• 45 degree anterior face
• Diagnostic contact lens



H-1124B
LOVAC PERIPHERAL FUNDUS LENS
• 30 degree anterior face
• Diagnostic contact lens



H-1125
LOVAC SIX MIRROR GONIO LENS
• For gonioscopy and central fundus inspection
• Diagnostic contact lens

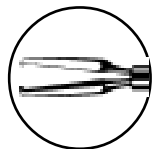
H-1126A
LOVAC ELECTRORETINOGRAPHY LENS OF HENKES
• Standard type
• Electro retinography lens

H-1126B
LOVAC ELECTRORETINOGRAPHY LENS OF HENKES
• With 100 Diopter front lens
• Electro retinography lens

H-1126C
LOVAC ELECTRORETINOGRAPHY LENS OF ECHE & PABST
• With external electrode
• 100 Diopter front lens
• Electro retinography lens

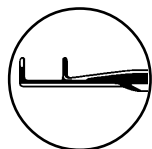
HOWARD INSTRUMENTS

INTRAOCULAR FORCEPS AND SCISSORS



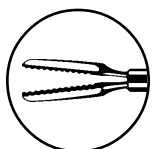
H-1900 END GRIPPING FORCEPS

- Membrane grasping



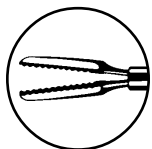
H-1905 SIDE GRIPPING FORCEPS

- Membrane grasping
- With smooth jaws
- For foreign body removal



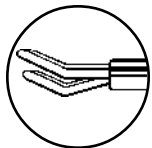
H-1910 END GRIPPING FORCEPS

- Membrane grasping
- With serrated jaws
- Peeling delicate epiretinal membranes



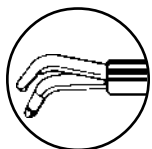
H-1915 MORRIS CURVED FORCEPS

- Serrated jaws
- Grasping posterior subretinal membranes



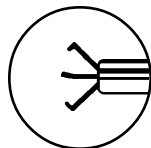
H-1920 PIC FORCEPS

- Membrane peeling

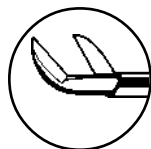


H-1925 HONEYSTICK FORCEPS

- Membrane peeling

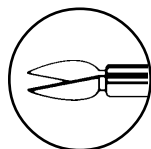


H-1930 FOREIGN BODY FORCEPS



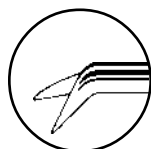
H-1935 MICROSCISSORS

- 90 degrees
- Cutting perpendicular to the retina



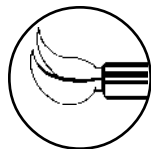
H-1940 SCISSORS

- Straight
- Cutting peripheral membranes



H-1945 SCISSORS

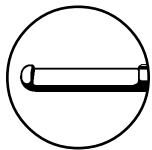
- 135 degree angle
- Epiretinal membrane dissection



H-1950 SCISSORS

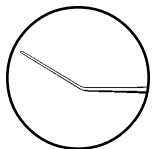
- Curved
- Cutting membranes adherent to the retina

MEMBRANE INSTRUMENTS



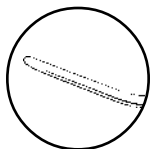
H-2100
MEMBRANEPEELER

- Blunt tip
- Locating and stripping membranes from the retinal surface



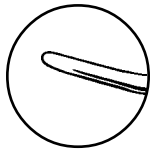
H-2105
MEMBRANESPATULAKNIFE

- Separating and cutting membranes adherent to the retina



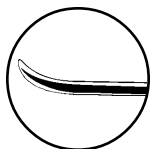
H-2110
MEMBRANESPATULA

- Hooked
- 5.0mm
- Separating fibrovascular membranes from the retina



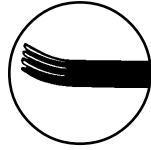
H-2115
MEMBRANESPATULA

- Hooked
- 2.5mm
- Separating fibrovascular membranes from the retina



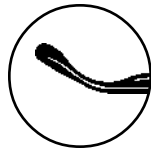
H-2120
MEMBRANESPATULA

- Curved
- All purpose membrane manipulation



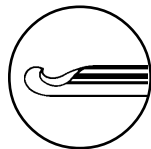
H-2125
MEMBRANESCRATCHER

- Cleaning tissue from the retinal surface



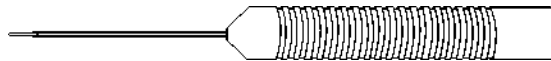
H-2130
KNOBSPATULA

- Atraumatic retina massage and manipulation



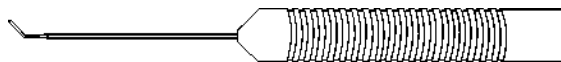
H-2135
MEMBRANEPIC

- With infusion



H-2140
SUBRETINALEXTRUSIONHANDPIECE

- Straight

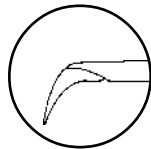


H-2145
SUBRETINALEXTRUSIONHANDPIECE

- Curved



H-2150
SUBRETINALPIC



H-2155
SATOKNIFE

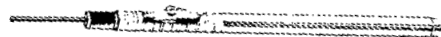
- For preparation and manipulation of retinal membranes



H-2200

CHARLES FLUTE NEEDLE

- For passive aspiration of subretinal fluid



H-2205

BACKFLUSH NEEDLE

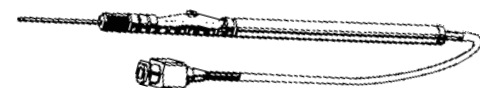
- Flute needle with capability of retrograde flushing
- Interchangeable needle of different diameter and curvatures
- Holds either wrinkled or torn retina tissue for repositioning using the retrograde flushing system



H-2210

BRUSH BACK FLUTE NEEDLE

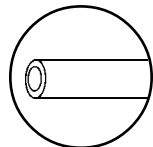
- Capable of retrograde flushing and nontraumatic cleaning and wiping the retina



H-2215

BACKFLUSH ASPIRATING NEEDLE

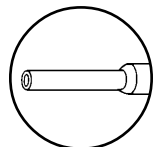
- With tubing and connector for syringe or aspiration systems



H-2220

STRAIGHT NEEDLE

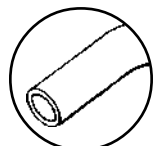
- For backflush and flute needle



H-2225

STRAIGHT NEEDLE

- For backflush and flute needle
- 23 gauge
- With tapered tip 0.6mm



H-2230

HOOKED NEEDLE

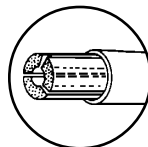
- For Charles flute needle and back flush needle



H-2235

CURVED NEEDLE

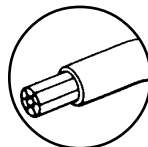
- For Charles flute needle and back flush needle



H-2240

SEMIDISPOSABLE BRUSH NEEDLES

- Set of 12
- For use with brush back flute needles H-2210



H-2245

CURVED SEMIDISPOSABLE BRUSH NEEDLES

- Set of 12
- For use with brush back flute needles H-2210

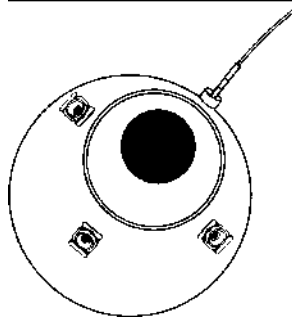


STN-1000

DISPOSABLE SOFT TIP NEEDLE

- 20 gauge

MICRO PORT SYSTEM



System includes:



H-2305

- Set of four cannulas for 0.9mm (20 gauge) instruments
- Silicone ring in cannula maintains airtight/watertight seal during surgical procedures



H-2310

- Trocar for introduction of cannula into sclerotomy



H-2315

- Set of four plugs
- For insertion into the cannula to prevent fluid and air loss

HOWARD INSTRUMENTS

H-2325
INFUSION CANNULA FOR FLUID/AIR EXCHANGE

H-2330
INFUSION CANNULA FOR SILICONE OIL

H-2325
INFUSION CANNULA FOR CEPS

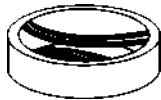
VITRECTOMY LENS SYSTEM



H-2400
KILP FLAT LENS
• 60 Diopter
• Field of view, 20 degrees
• Central posterior pole and central vitreous



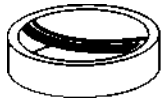
H-2405
MACHEMER FLAT LENS
• Field of view, 20 degrees
• Central posterior pole and central vitreous



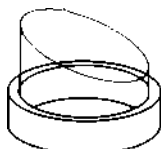
H-2410
LANDERS BICONCAVE LENS
• 93 Diopter
• Clear view of the fundus in the air filled phakic eye



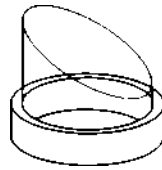
H-2415
MACHEMER MAGNIFYING LENS
• Visualization of structures deep in the vitreous cavity or on the retina surface



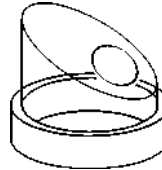
H-2420
PEYMAN WIDE FIELD LENS
• Field of view, 30 degrees
• Central posterior fundus



H-2425
TOLENTINO 20 DEGREE PRISM LENS
• Posterior peripheral fundus and posterior peripheral vitreous



H-2430
TOLENTINO 30 DEGREE PRISM LENS
• Peripheral viewing beyond the equator

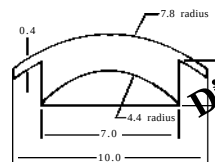


H-2435
WOLDOFF PRISMATIC BICONCAVE LENS
• Allows clear view of retinal periphery in gas filled pseudophakic eyes

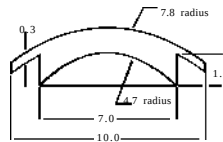


H-2440
BIOMECKHARDT LENS
• For use with Oculus biom system

KERATOPROSTHESIS FOR PARS PLANA VITRECTOMY



H-2480
ECKHARDT TEMPORARY SILICONE KERATOPROSTHESIS
• For pars plana vitrectomy in eyes with corneal opacities, type 1



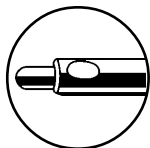
H-2485
ECKHARDT TEMPORARY SILICONE KERATOPROSTHESIS
• For pars plana vitrectomy in eyes with corneal opacities, type 11

RETINAL ACCESSORIES

HOWARD INSTRUMENTS

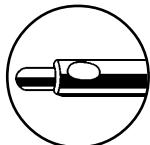
RETINAL ACCESSORIES

ACCESSORIES FOR INFUSION/ASPIRATION



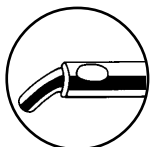
H-250 INFUSION/ASPIRATION HANDPIECE

- Straight
- Aspiration thru 0.3mm port
- Infusion thru two 0.8mm ports



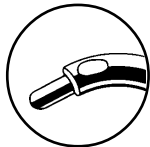
H-2505 INFUSION/ASPIRATION HANDPIECE

- Straight
- Aspiration thru 0.4mm port
- Infusion thru two 0.8mm ports



H-2510 INFUSION/ASPIRATION HANDPIECE

- Curved tip



H-2515 INFUSION/ASPIRATION HANDPIECE

- Curved
- Aspiration thru 0.3mm port
- Infusion thru 0.6mm port



H-2520 UNIVERSAL IRRIGATION HANDPIECE

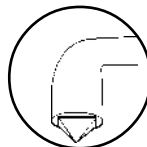
- Universal cannula holder
- To be used in combination with any type of irrigation cannula

ANTERIOR AND POSTERIOR SEGMENT SURGERY



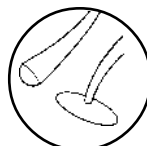
H-2700 STILLETTO BLADE

- 0.9mm (20 gauge)
- 1.4mm wide
- 9mm long blade for stab incisions to insert round instruments of 0.9mm diameter through the sclera



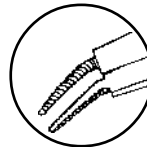
H-2705 DEPRESSOR AND FIXATION PIC

- 3mm
- 90 degree angled tip
- 0.5mm pick on the top of the depressor having sufficient sharpness to allow rotation of the globe



H-2710 SCLERAL DEPRESSOR

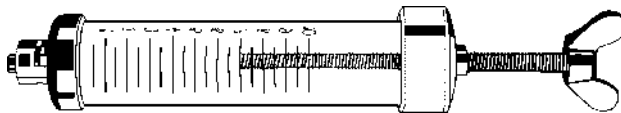
- Double ended
- 2.4mm diameter conical tip
- Slightly curved 32mm shaft
- 6.5mm wide bar tip heavily curved 35mm shaft



H-2715 SLEEVE SPREADING FORCEPS

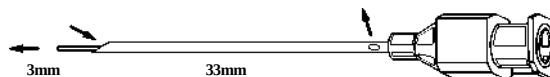
- Designed to spread silicone sleeves for circling bands
- Angled 30 degrees
- Serrated 10mm tips
- Semicircular

VISCOUS FLUID INJECTION AND EXTRACTION



H-2800 VISCOUS FLUID INJECTOR

- 10ml glass syringe with screw activated plunger to inject viscous fluids during posterior segment procedures



H-2860 PERFLUORODECALINE INJECTION NEEDLE

- With aspiration channel for passive aspiration of intraocular fluid during injection of Perfluorodecaline
- Tip length is 3mm
- Total length is 36mm



H-2900

VISCOUS FLUID EXTRACTION HANDPIECE

- For connection to all aspiration and irrigation/ aspiration systems



H-2905

VACUUM NEEDLE

- 20 gauge
- 0.9mm
- With end port



H-2910

VACUUM NEEDLE

- 20 gauge
- 0.9mm
- With side port



H-5050

DISPOSABLE KERATOSCOPIES

- Sterile
- Box of 6



H-5060

CANALICULUS INTUBATION SETS

- Sterile
- Set of 3

VISCOUS FLUID EXTRACTION



H-2915

VACUUM NEEDLE

- 1.2mm
- With end port



H-2920

VACUUM NEEDLE

- 1.2mm
- With side port

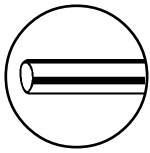


H-2925

VACUUM NEEDLE

- 2.0mm
- With end port

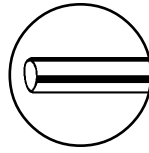
INTRAOCULAR MAGNET



H-3000

INTRAOCULAR MAGNET PROBE

- Goldplated
- 0.9mm (20 gauge)
- Complete with sterilization tray

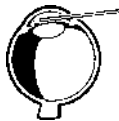


H-3005

INTRAOCULAR MAGNET PROBE

- Goldplated
- 1.65mm (16 gauge)
- Complete with sterilization tray

LIMBAL



OPEN SKY



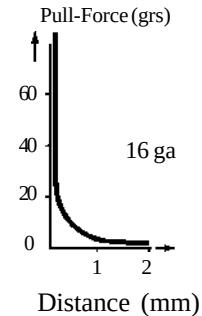
PARS PLANA



NOMINAL SPECIFICATIONS

	20 ga	16 ga	8 ga
Pull Force: Lifts pure iron ball	1/2" (12.5mm) dia	3/4" (19mm) dia	1 1/2" (38mm) dia
Tip diameter	0.89mm	1.65mm	3.2mm
Tip length	30mm	42mm	50mm
Probe size	7.5mm diameter x 100mm long		
Protecting material	24 carat gold (mil. specs.)		
Life expectancy	Indefinite		
Sterilization	Autoclave & ETO		

The manufacturer reserves the right to modify the specifications to improve the product



The intraocular magnet can be utilized in the management of intraocular trauma caused by magnetic foreign bodies through either the anterior or posterior segment approaches.

The intraocular magnet has been designed for the atraumatic removal of magnetic intraocular foreign bodies. The precision magnetic probe is non-reactive with tissues due to its 24K gold plating. The sleek design, available 0.9mm (20 gauge) and 1.65mm (16 gauge), can be utilized with a limbal, open sky or pars plana approach.

Its characteristics minimize the "jumping effect" commonly observed with electromagnetic devices.

The maneuverability and precision of the device minimize the possibility of secondary foreign body incarceration.

This precision instrument comes complete with its own autoclavable storage tray. The tray is designed to facilitate sterilization and to store and protect the instrument.

HOWARD INSTRUMENTS

INSTRUMENT SETS

RETINAL DETACHMENT MICRO-SURGICAL SET

Set consisting of:

H-2705
DEPRESSOR AND FIXATION PIC

H-2740
CASTROVIEJO SUTURE FORCEPS

H-2770
RETRACTOR

H-2715
SLEEVES SPREADING FORCEPS

H-2745
BONN TYING MICRO TEETH FORCEPS

H-2775
KUHN T DISSECTOR

H-2720
SERREFINES

H-2750
PAFIQUE TYING FORCEPS

H-2780
MEYER-SCHWICKERATH MARK-
ING INSTRUMENTS

H-2725
BARRAQUER SPECULUM

H-2755
HARTMAN-MOSQUITO CLAMPS

H-2785
GRAF MUSCLE HOOK: LARGE

H-2730
MICRO SCISSORS

H-2760
STRAIGHT SCISSORS

H-2790
GRAF MUSCLE HOOK: SMALL

H-2735
CASTROVIEJO MARKING CALIPERS

H-2765
STEVENS SCISSORS

H-2795
CASTROVIEJO
NEEDLE HOLDER

VITRECTOMY MICRO-SURGICAL SET

Set consisting of:

H-1900
END GRIPPING FORCEPS

H-2335
SCLERAL PLUG FORCEPS

H-2730
MICRO SCISSORS

H-1905
SIDE GRIPPING FORCEPS

H-2400
KILP FLAT LENS

H-2735
CASTROVIEJO MARKING CALIPER

H-1935
MICRO SCISSORS

H-2600
SET OF 4 SCLERAL PLUGS: 20 GAUGE

H-2740
CASTROVIEJO SUTURE FORCEPS

H-2100
MEMBRANE PEELER

H-2720
SERREFINES

H-2745
BONN TYING
MICRO TEETH FORCEPS

H-2110
HOOKED MEMBRANE SPATULA

H-2722
BONN SCISSORS

H-2750
PAFIQUE TYING FORCEPS

H-2125
MEMBRANE SCRATCHER

H-2725
BARRAQUER SPECULUM

H-2775
KUHN T DISSECTOR

H-2205
BACK FLUSH NEEDLE

H-2727
EL SCHNIG FIXATION FORCEPS

CAPSULECTOMY SET

Set consisting of:

H-1925
HOCKEY STICK FORCEP

H-1945
ANGLED SCISSORS

H-1990
PLASTIC STERILIZATION TRAY

H-1940
STRAIGHT SCISSORS

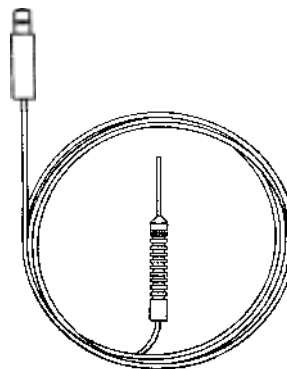
HOWARD INSTRUMENTS

LIGHTPIPES

LP-1000-P
Disposable light pipe for Ocutome type machines.

LP-1000-M
Disposable light pipe for Microvit type machines.

LP-1000-D
Disposable light pipe for Daisy and Premier type machines.



SPATULATED NEEDLES

NEEDLE TYPE	NEEDLE SPECIFICATIONS				SUTURE SPECIFICATIONS				USP SIZE ORDER CODE	
	FORM	LENGTH	ARC	WIRE	TYPE	COLOR	ARM	LENGTH		10-0
CB  [CU-1]	3/8 Circle	6.0mm	140	0.15mm	Nylon Mono	Black	Double	12"	2CB-90B-12	2CB-100B-12
							Single	6"		CB-100B-6
KP  [CU-5]	1/2 Circle	5.5mm	160	0.15mm	Nylon Mono	Black	Double	12"	2KP-90B-12	2KP-100B-12
							Single	6"		KP-100B-6
AC  [CU-2]	1/2 Circle	7.0mm	175	0.15mm	Nylon Mono	Black	Double	12"	2AC-90B-12	2AC-100B-12
							Single	6"		AC-100B-6
LB [CU-6]	Bi- Curve	6.0mm	105/85	0.15mm	Nylon Mono	Black	Single	6"		LB-100B-6
SB [CU-8]	Bi- Curve	5.0mm	90/0.15	0.15mm	Nylon Mono	Black	Single	6"		SB-100B-6

[] -- Equivalent Needle



Call customer service at (205) 553-4453 or fax us at (205) 556-9267

EQUIPMENT 115-122

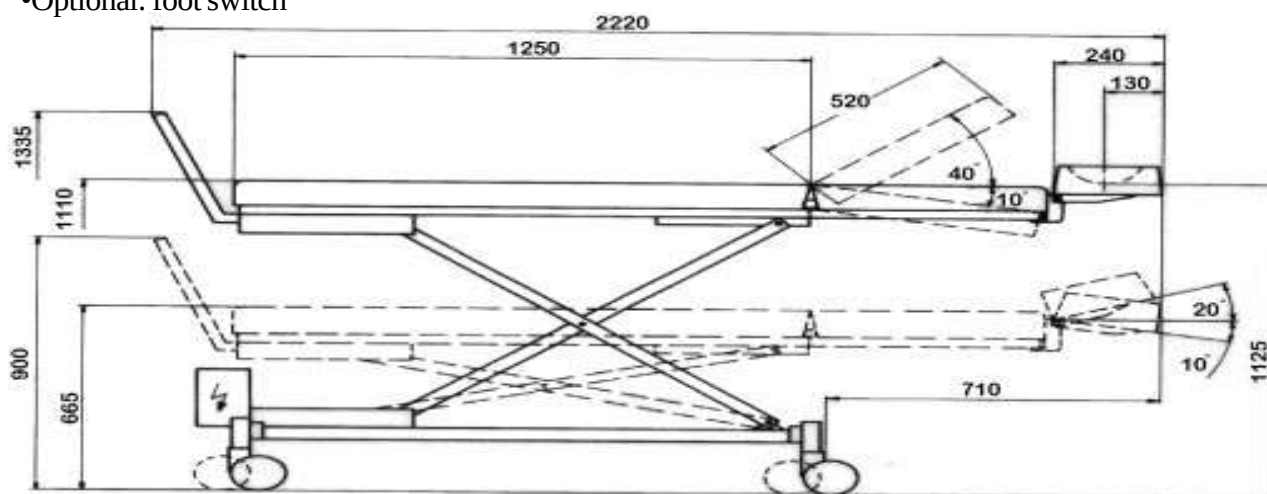
EQUIPMENT



OP-Table (KOP 621) - "PREPARATION - OPERATION - RECOVERY" SYSTEM, developed and manufactured by AKRUS, is a stable, versatile, mobile Operating-/ Treatment- Table for various treatments: electr. height- and back support; adjustable headrest (infinitely); primarily designed for ophthalmic surgery; ample space for doctor's knees as well as space for one instrument table.

STANDARD EQUIPMENT

- powder coated steel frame in RAL 9002 (grey-white). A central steering / braking system with the 4 wheel locking casters, antistatic, providing easy maneuverability in all directions and on all floors
- electric height adjustments: OP-Table 445 mm; back rest from - 100 to + 40 degrees; manually: headrest from -10 to + 20 degrees
- upholstery - abrasion-resistant, airpermeable material, anthracite with additional plastic cover protecting foot area; headrest antistatic
- installed battery allows 5 minutes usage (without current)
- surgical rails on both sides provides you for mounting various accessories
- Optional: foot switch



Technical Specification:

Total Length	2220 mm
Total Width	750 mm
Upholstery Length (w/o headrest)	1850 mm
Upholstery Width	650 mm
Min. Height	665 mm
Max. Height	1110 mm
Elevation Speed	abt. 20 mm/sec
Weight	95 Kg
Short usage	25% on 10 min
Current	230V / 50 /Hz 110V / 60 Hz (Optional)

Technical changes reserved

Our Laser OP- Table is a new development. Due to this latest „microprocessor supported” technique, a new concept could be realised; high stability, adaptability to individual requirements, high operating comfort, excellent price - efficiency relationship.

STANDARDEQUIPMENT

- corpus - in two colours (grey I white) powder-coated, on adjustable feet.
- upholstery - abrasion - resistant, airpermeable material, black with additional plastic cover to protect the foot area
- all functions are controlled by a handswitch, including three freely programmable memory - positions
- height adjustment - with a smooth start - up (allows for a comfortable positioning I focusing underneath the microscope I laserhead)
- horizontal adjustment - (forth I back) movement with a smooth start - up
- headrest - very stable, easy to adjust (from + 280 I to - 150)

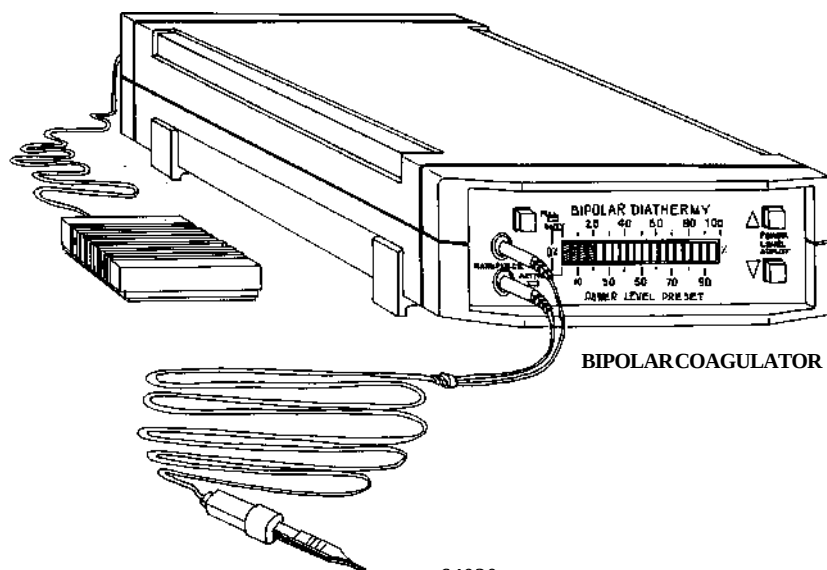
OPTIONALEQUIPMENT

- sideways positioning (is helpful when eye-tracking) - 100 mm (right I left) with a smooth start - up (LOP 603)
- foot switch - only for up I down function
- castor (roller) system - stable, electrical conductive (antistatic)1 blockable steering and I or rotation by a footlever, fingertip easy moving, also on carpets; can be installed afterwards without changing the mm. height of 585 mm of the OP- Table

TECHN.DATAS

length	1850mm
width	600mm
min.height	605 mm (650 mm LOP 603)
elevation (vertical)	200 mm (4mmlsec)
elevation (forthlback)	300 mm (6mmlsec)
weight (about)	135 kilo
current	230V 150Hz
special current upon inquiry	

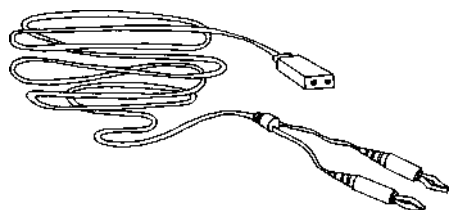
Technical cnanges reserved



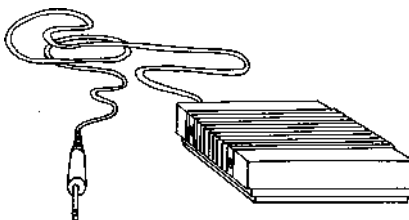
BIPOLAR COAGULATOR

64000
BIPOLAR COAGULATOR
with FOOT PEDAL

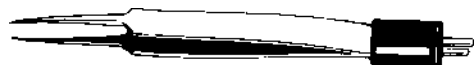
64020
BIPOLAR COAGULATOR
with FOOT PEDAL, CORD & FORCEP



64040
BIPOLAR COAGULATOR CORD
• Autoclavable



64045
BIPOLAR FOOT PEDAL



64080
JEWELER'S BIPOLAR FORCEPS
• Straight tip
• Non-insulated



64320
COAPTATION BIPOLAR FORCEPS
• Fine tips
• Non-insulated



64240
McPHERSON BIPOLAR FORCEPS
• Straight
• Non-insulated



64325
COLIBRI BIPOLAR FORCEPS
• Angled tips
• Non-insulated



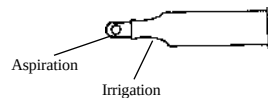
64260
McPHERSON BIPOLAR FORCEPS
• Angled
• Non-insulated

THE LIGHT-WEIGHT HANDPIECE AND TIPS



HP-120
IRRIGATING/ASPIRATING HANDPIECE

- Without tips
- Round knurled handle

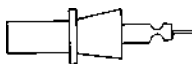


TIP-131
IRRIGATING/ASPIRATING COAXIAL TIP

- Straight
- Hub not pictured

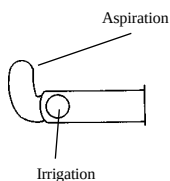
TIP-132
IRRIGATING/ASPIRATING COAXIAL TIP

- Curved



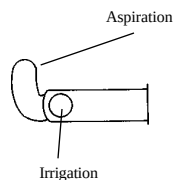
TIP-134
UNIVERSAL LUER ADAPTOR

- For irrigation only



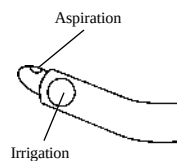
TIP-135A
IRRIGATING/ASPIRATING COAXIAL TIP

- With aspiration tip
- Bent 45 degrees
- Hub not pictured



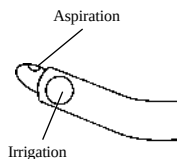
TIP-135B
IRRIGATING/ASPIRATING COAXIAL TIP

- With aspiration tip
- Bent 90 degrees
- Hub not pictured



TIP-136A
IRRIGATING/ASPIRATING COAXIAL TIP

- With aspiration tip
- Bent left
- Hub not pictured

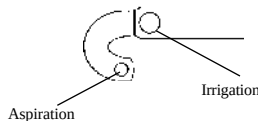


TIP-136B
IRRIGATING/ASPIRATING COAXIAL TIP

- With aspiration tip
- Bent right
- Hub not pictured

TIP-142
IRIS RETRACTOR

- With irrigation

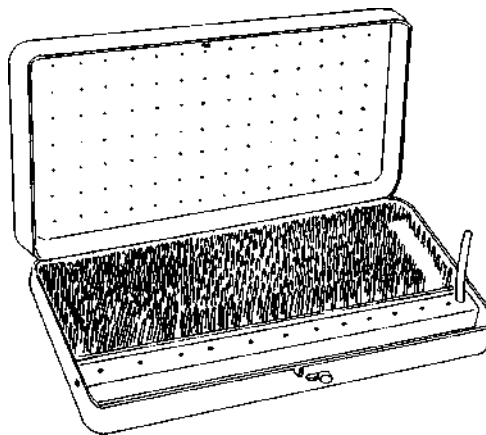


TIP-200
IRRIGATING/ASPIRATING COAXIAL BINKHORST TIP

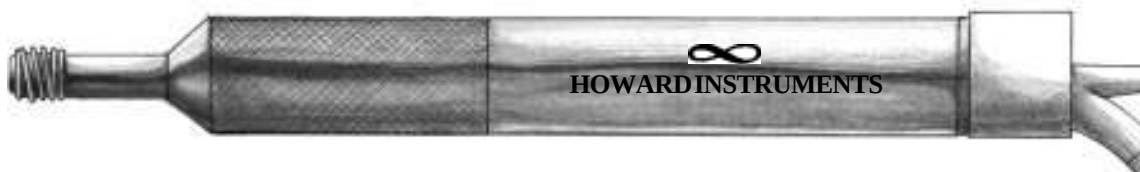
- Designed for 11-1 o'clock cortex removal for small capsulorhexis

TRAY-330
MULTI-INSTRUMENT ALUMINUM TRAY

- With tilt up display



HOWARD INSTRUMENTS



PHACOMATE® PHACO HANDPIECE

Available for leading Phaco machines:

- **ALCON 10000 SERIES® & 9000 SERIES®**
- **AMO PHACO PLUS® & PHACO IV PLUS®**
- **STORZ**
- **CHIRON**

Features:

- **Round knurled handle**
- **Non-glare finish**
- **Smoother operation during phacoemulsification**
- **Most cost effective handpiece on the market**

Catalog

AL-9000	Handpiece for Alcon 9000 series machines
AL-10000	Handpiece for Alcon 10000 series machines
AMO-4000	Handpiece for AMO Phaco Plus® and IV Plus® machines
SP-1000R	Handpieces for Storz Premiere® machine
SP-1000L	Left-Hand Thread Handpiece for Storz Premiere® machine
OMS-1000	Handpiece for OMS Diplomat® machine
CHI-1000	Handpiece for Chiron Gold® machine
DORC-1000	Handpiece for DORC machine: 40kHz

Try our no cost evaluation of the **PHACOMATE®** Handpiece.

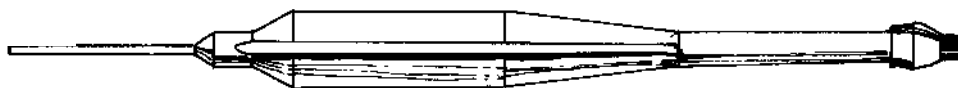
Use our **PHACOMATE®** in surgery. If you like it, keep it and we will bill you.

If not, return the handpiece at no charge.

Alcon®, AMO®, and other handpiece repairs available. Call for information.

AVIT® handpieces repaired and sold.

AVIT HANDPIECES



AVIT-1000

Avit HANDPIECE

- For Alcon machines: model 9000 and 10000

AVIT-1010

Avit HANDPIECE

- For Alcon machineS: model 7500

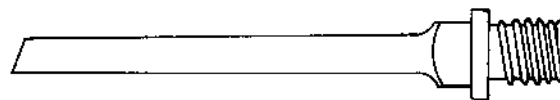


Call customer service at (205) 553-4453 or fax us at (205) 556-9267

HOWARD INSTRUMENTS

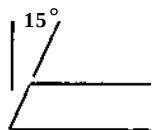
PHACO NEEDLES

Length - 0.75 inches
These are standard 440
non-metric threads.



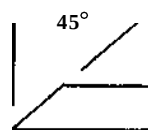
2000-15-R 15 Degree round needle

2000-15-O 15 Degree oval needle



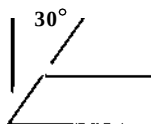
2000-45-R 45 Degree round needle

2000-45-O 45 Degree oval needle



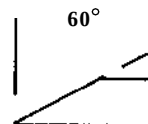
2000-30-R 30 Degree round needle

2000-30-O 30 Degree oval needle



2000-60-R 60 Degree round needle

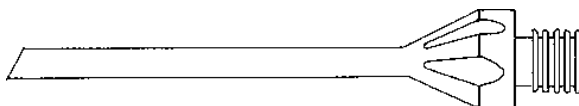
2000-60-O 60 Degree oval needle



PHACOMATE® TIPS

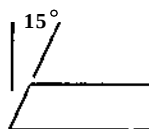
LOW TURBULENCE PHACO NEEDLE

To reduce cavitation during phaco procedure. Length - 0.75 inches



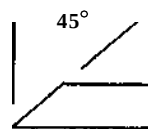
LT-15-R 15 Degree round needle

LT-15-O 15 Degree oval needle



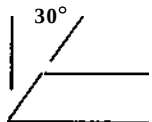
LT-45-R 45 Degree round needle

LT-45-O 45 Degree oval needle



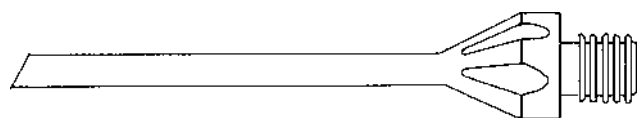
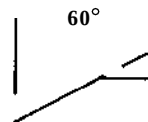
LT-30-R 30 Degree round needle

LT-30-O 30 Degree oval needle



LT-60-R 60 Degree round needle

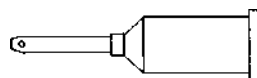
LT-60-O 60 Degree oval needle



LT-FRAG

LOW TURBULENCE FRAGMENTATION NEEDLE

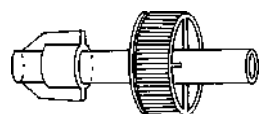
- Length 1.05 inches
- Available in 0, 15, 30, 45, and 60 Degrees



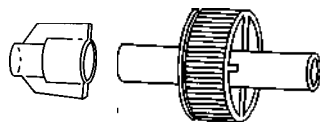
BIS-1000

BLUE IRRIGATION SLEEVES

- Fits all leading Phaco and I/A Handpieces
- 10 per pack



with cap on



with cap off

LTNW-1000

NEEDLE WRENCH AND CAP

- For low-turbulence Phaco Needles



TC-1000

TEST CHAMBERS

- Fits all leading Phaco and I/A Handpieces
- 10 per pack

LT-FRAGNW

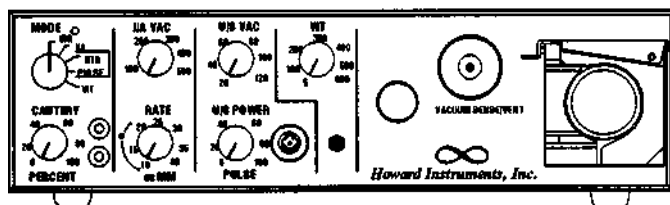
Needle wrench and cap for Fragmentation Needle

NEW

NEW

Howard Instruments, Inc.
introduces

PHACOJACK[®]



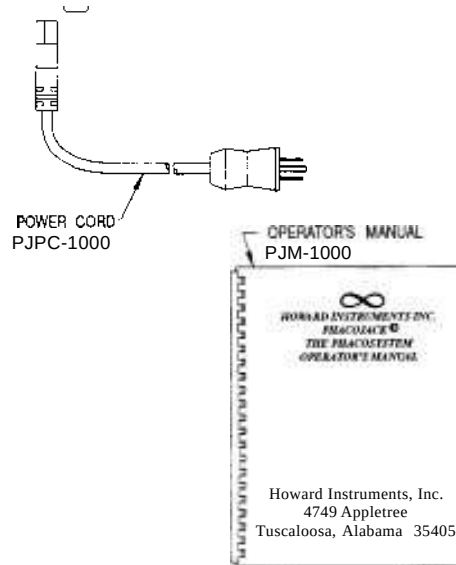
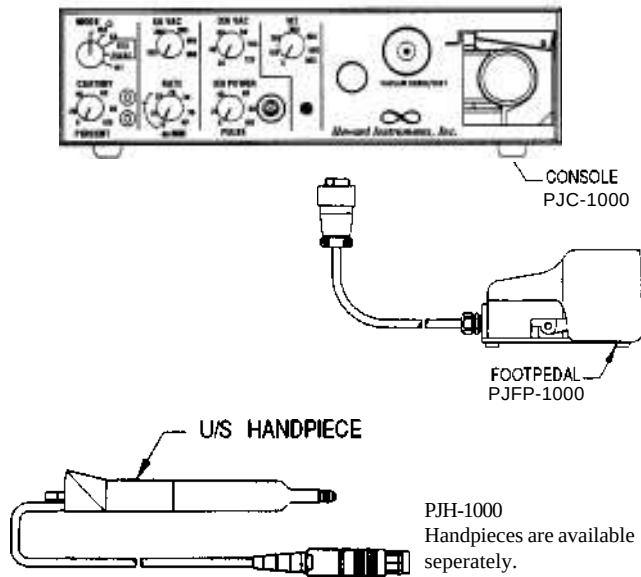
THE PHACOSYSTEM

- A sophisticated surgical tool designed for Ophthalmic Surgeons
- Designed and manufactured to be *reliable, safe* and *easy to operate*
- Full two year warranty (one year for ultrasonic handpiece)
- Quality product at an affordable price! Includes one Phaco Handpiece!
- Contact our Customer Service Department for more information or to request a demonstration



HOWARD INSTRUMENTS

PHACOJACK® BASIC SYSTEM COMPONENTS



ACCESSORIES & DISPOSABLES

AVAILABLE FOR THE SYSTEM AT AN EXTRA CHARGE.



PJTS-1000 TUBINGSET

- Reusable
- Contains: irrigation manifold, aspirator manifold, drainage bag, tip sleeve, test chamber, tip wrench.

PJTS90 TUBINGSET

- Sterile
- 90 inch irrigation set

PJF-1000 FILTERASSEMBLY (required)

- Disposable
- Non-Sterile
- 0.45 micron PTFE 25mm diameter syringe filter
- Case is polypropylene

64240 CAUTERYFORCEP

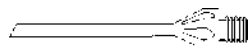
64040 CAUTERYCABLE

PJ-STAND

- Stand for PhacoJack System with motorized I.V. Pole

J-225-PJD DISPOSABLE VITRECTOR

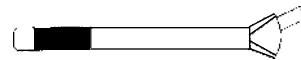
Available for the PhacoJack



ULTRASONIC TIPS

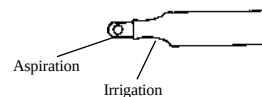
LOW TURBULENCE PHACONEEDLES

- Available in 15, 30, 45, and 60 degrees
- Available round or oval shaped tip
- Needle wrench included



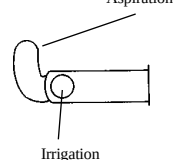
HP-120 IRRIGATING/ASPIRATING HANDPIECE

- Without tips
- Round knurled handle



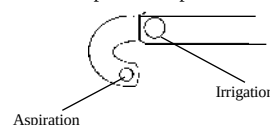
TIP-131 IRRIGATING/ASPIRATING COAXIAL TIP

- Straight



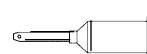
TIP-135A & B IRRIGATING/ASPIRATING COAXIAL TIP

- With aspiration tip bent 45 degrees or 90 degrees



TIP-200 IRRIGATING/ASPIRATING COAXIAL TIP

- Binkhorst



BIS-1000 BLUE IRRIGATION SLEEVES

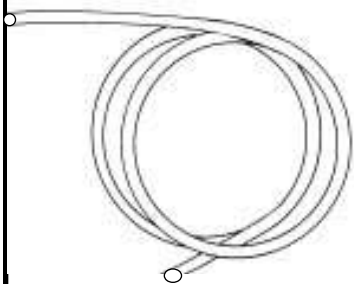
- Fits all leading Phaco and I/A Handpieces
- 10 per pack

TC-1000 TEST CHAMBERS

- Fits all leading Phaco and I/A Handpieces
- 10 per pack

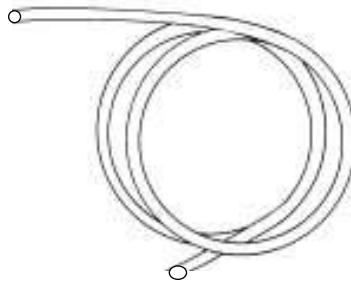
REUSABLE TUBING

**Unsterile, reusable tubing sets available.
Contact Customer Service for more information!!**



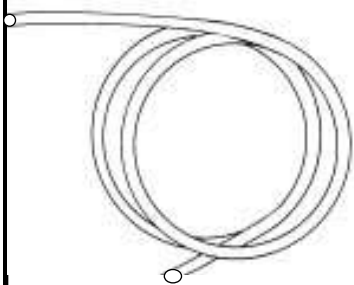
**KPE-240
Reusable Tubing Set
for Storz Premiere Equipment**

- Unsterile
- Does not include Cassette
- Includes:
I/A Tubing Set
Test Chamber
Tip Sleeve



**IA-7500-R
Reusable I/A Tubing Set for Alcon 7500**

- Unsterile
- Includes:
I/A Tubing Set
Test Chamber
Tip Wrench
Tip Sleeve



**IA-OMNI-R
Reusable I/A Tubing Set
for Omni machine by Fritz Ruck**

- Unsterile
- Includes:
I/A Tubing Set
Test Chamber
Tip Wrench
Tip Sleeve

REUSABLE TUBING



OPHTHALMIC DRAPES

124-126

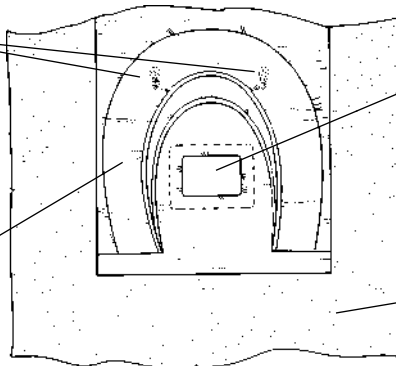
OPHTHALMIC DRAPES



"The Drape For Total Fluid Control"

TWO DRAINS UNDERNEATH 500CC
BAG TO BE CONNECTED TO
HOSPITAL SUCTION FOR UNLIM-
ITED FLUID CONTROL

500CC BAG SURROUNDING THE
EYE FOR FLUID COLLECTION

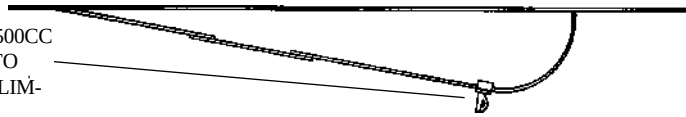


4" x 4" NON-FENESTRATED,
RECTANGULAR INCISIVE
ADHESIVE AREA

HEAD VIEW

NON-LINTING FOAM

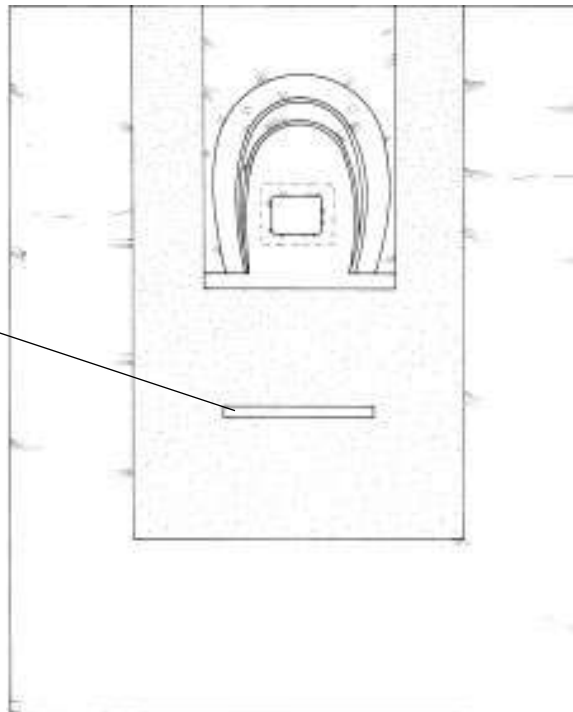
TWO DRAINS UNDERNEATH 500CC
BAG TO BE CONNECTED TO
HOSPITAL SUCTION FOR UNLIM-
ITED FLUID CONTROL



**CROSS
SECTION**

VELCRO-STRIP CORD
HOLDER

OVERALL SIZE
85" x 92"



FULL VIEW

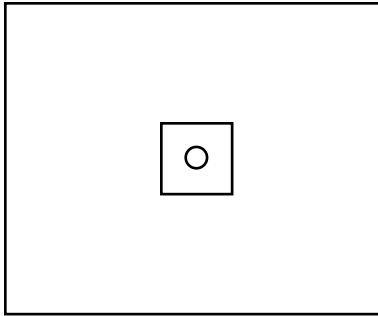
**CATALOG #
ED-0029**

HOWARD INSTRUMENTS

OPHTHALMIC DRAPE

OPHTHALMIC DRAPE
WITH ADHESIVE AREA WITH
CIRCULAR FENESTRATION

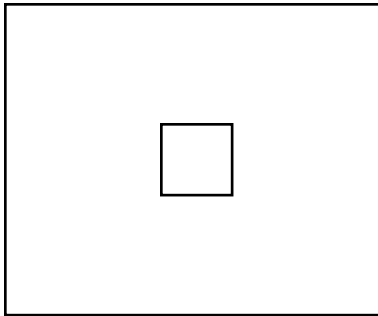
OVERALL SIZE
18"x18"



ED-1020

OPHTHALMIC DRAPE
WITH ADHESIVE AREA
NON-FENESTRATED

OVERALL SIZE
18"x18"

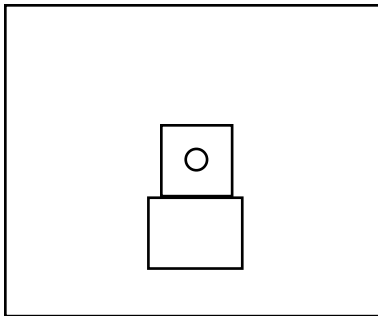


ED-1020 NON

OPHTHALMIC DRAPE
WITH ADHESIVE AREA WITH
CIRCULAR FENESTRATION

WITH POUCH

OVERALL SIZE
18"x18"

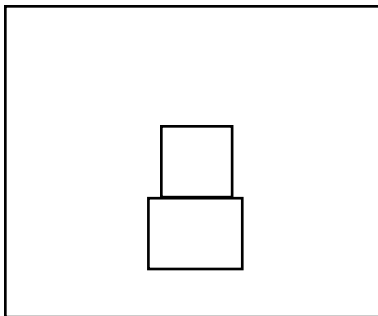


ED-1021

OPHTHALMIC DRAPE
WITH ADHESIVE AREA
NON-FENESTRATED

WITH POUCH

OVERALL SIZE
18"x18"



ED-1021 NON

ED-1060

- 51"x48" w/ 5"x5" Adhesive Area
- Adhesive area fenestrated

ED-1060 NON

- 51"x48" w/ 5"x5" Adhesive Area
- Adhesive area non fenestrated

ED-1061

- 51"x48" w/ 5"x5" Adhesive Area
- Adhesive area fenestrated
- With pouch

ED-1061 NON

- 51"x48" w/ 5"x5" Adhesive Area
- Adhesive area non fenestrated
- With Pouch

ED-1035

- 51"x48" w/ 6"x8" Adhesive Area
- Adhesive area fenestrated



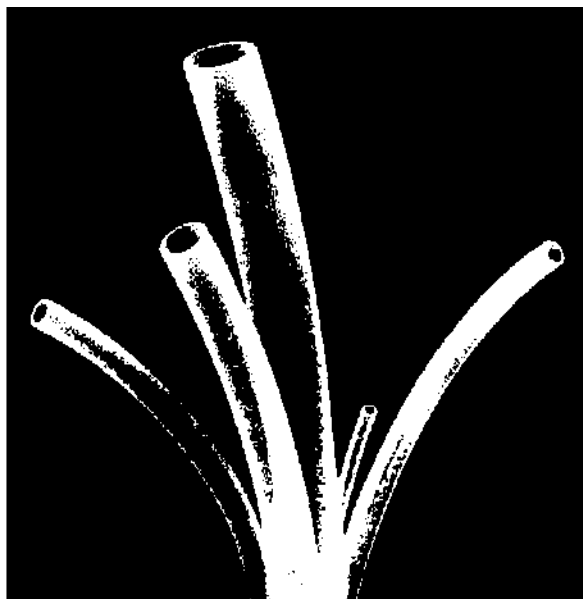
Call customer service at (205) 553-4453 or fax us at (205) 556-9267

TUBING 127-128



HOWARD INSTRUMENTS

PLATINUM OR PEROXIDE CURED, MEDICAL GRADE, SINGLE LUMEN SILICONE TUBING USP CLASS VI



SF 1303 Standard Sizes Available

Platinum Cured Part No.	Peroxide Cured Part No.	I.D.	Wall	O.D. Ref	lbs/1000 ft	Burst psi	O.D. Ref
SFM3-1050	SFM1-1050	.012 +/- .003	.007 +/- .002	.025	0.25	25	50
SFM3-1350	SFM1-1350	.020 +/- .003	.009 +/- .002	.037	0.45	25	50
SFM3-1550	SFM1-1550	.025 +/- .003	.011 +/- .002	.047	0.74	35	50
SFM3-1750	SFM1-1750	.030 +/- .004	.018 +/- .002	.065	1.55	45	50
SFM3-1850	SFM1-1850	.031 +/- .004	.063 +/- .003	.156	10.90	70	50
SFM3-2050	SFM1-2050	.040 +/- .004	.023 +/- .003	.085	2.62	45	50
SFM3-2350	SFM1-2350	.058 +/- .005	.009 +/- .003	.077	1.20	30	50
SFM3-2650	SFM1-2650	.062 +/- .005	.017 +/- .003	.095	2.41	40	50
SFM3-2850	SFM1-2850	.062 +/- .005	.032 +/- .003	.125	5.49	44	50
SFM3-2950	SFM1-2950	.062 +/- .005	.063 +/- .003	.188	14.68	65	50
SFM3-3050	SFM1-3050	.078 +/- .005	.024 +/- .003	.125	4.45	40	50
SFM3-3250	SFM1-3250	.104 +/- .005	.044 +/- .003	.192	12.14	43	50
SFM3-3650	SFM1-3650	.125 +/- .005	.063 +/- .003	.250	21.85	43	50
SFM3-3350	SFM1-3350	.132 +/- .005	.025 +/- .003	.183	7.49	30	50
SFM3-4050	SFM1-4050	.187 +/- .005	.063 +/- .004	.312	29.07	29	50
SFM3-4250	SFM1-4250	.187 +/- .005	.094 +/- .004	.375	49.25	43	50
SFM3-4450	SFM1-4450	.250 +/- .006	.063 +/- .004	.375	36.42	21	50
SFM3-4650	SFM1-4650	.250 +/- .006	.094 +/- .004	.437	59.98	31	50
SFM3-4850	SFM1-4850	.250 +/- .010	.125 +/- .008	.500	87.40	43	50
SFM3-4950	SFM1-4950	.312 +/- .007	.063 +/- .005	.437	43.64	17	50
SFM3-5050	SFM1-5050	.312 +/- .007	.094 +/- .005	.500	71.16	25	50
SFM3-5250	SFM1-5250	.375 +/- .010	.063 +/- .007	.500	50.98	14	50
SFM3-5450	SFM1-5450	.375 +/- .010	.094 +/- .007	.562	81.67	20	50
SFM3-5650	SFM1-5650	.375 +/- .010	.125 +/- .010	.625	116.53	29	50
SFM3-6050	SFM1-6050	.500 +/- .010	.063 +/- .007	.625	65.55	11	25
SFM3-6250	SFM1-6250	.500 +/- .015	.094 +/- .007	.687	103.46	16	25
SFM3-6450	SFM1-6450	.500 +/- .015	.125 +/- .010	.750	145.66	22	25
SFM3-6850	SFM1-6850	.625 +/- .025	.125 +/- .015	.875	174.79	18	25
SFM3-7050	SFM1-7050	.750 +/- .025	.125 +/- .015	1.000	203.93	15	25

*Choose from custom lengths, bulk or cut to length
Available in multi lumen, radiopaque, striped and color coded

Call customer service at (205) 553-4453 or fax us at (205) 556-9267

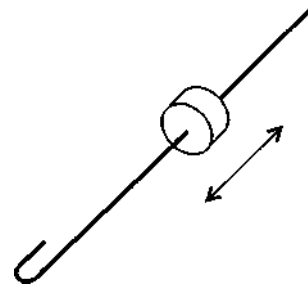
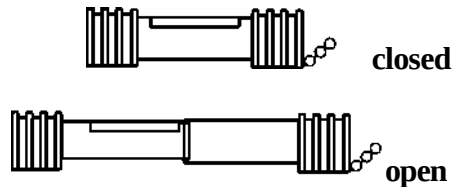
NEW REUSABLE

IRIS-MATE™

FLEXIBLE TRANSLIMBAL IRIS RETRACTORS

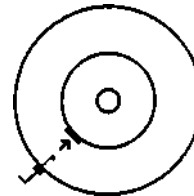
IRIS RETRACTORS

- Flexible nylon hook retracts iris with minimal damage to the tissue
- Unique sterilization container for multiple use

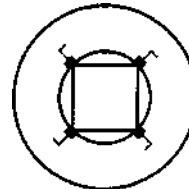


- Multiple use bead chain for tracking uses
- Specially designed silicone cinch provides superior grip
- Works through 0.3mm - 0.5mm self sealing incision
- Safely used in Aphakic, Pseudophakic and Phakic Eyes

Insert Retractor



Position Complete Set



HOWARD CATALOG #IRIS-1000



••• Intraocular Lenses are for *EXPORT* out of U.S. *ONLY* ••• This is *NOT* FDA approved at this time

Howard Instruments, Inc. is committed to reducing world blindness by providing precision quality, single piece, intraocular lens below market prices. Our unique computerized manufacturing process incorporates the most dramatic technological advances in its field. All of our lenses are manufactured with Perspex CQUV, the original and most widely accepted implantable PMMA. Plus, our lenses contain an additional UV absorbing component which provides a full range of UV protection. This feature approximates the UV absorbing characteristics of the natural crystalline lens. Also, our uniquely smooth, one-piece construction minimizes the risks of cell accumulation at the optic-haptic junction.

All of our lenses are produced with 1:1 Anterior-to-Posterior Curvature Ratio. This "Equiconvex" design permits the thinnest possible lenses, which will provide outstanding optical imaging with less spherical aberration than conventional IOL's. With the added benefit of no detectable shift in the optical plane to haptic force vector relationship, providing consistent power predictability throughout the dioptric range.

The haptics on our whole range of lenses are step-vaulted, which is now becoming an industry standard. With this design technique, the haptic is initially angled upward then flattened. This step-vaulting of haptics facilitates "in-the-bag" implantation and holds the IOL gently against the posterior capsule. Stability "in the bag" is assured by the stresses being distributed evenly along the flat portion of the haptic.

Posterior chamber LENSES are available in Modified C configuration with optic diameters of 5.25mm, 5.5mm, 6.0mm, and 6.5mm. Anterior chamber lenses with a 6.0mm optic diameter are available in 12.0mm, 12.5mm and 13.0mm overall lengths. All lenses are available in powers from +10.0D to +30.0D, with 0.5D powers available from +17.0 to +24.0D. Diopter powers outside this range may be requested on a "special order" basis.



Model Number	"A" Constant	A/C Depth	Optic Diameter	Over All Length	Vault Depth	# of Holes	Equivel Angle
LS-101	118.1A	5.02mm	5.25mm	12.0mm	0.265mm	0	4.43
LS-102	118.1A	5.02mm	5.50mm	12.5mm	0.286mm	0	4.012
LS-103	118.1A	5.02mm	5.50mm	13.0mm	0.250mm	0	4.287
LS-104	118.0A	4.96mm	5.00mm	12.0mm	0.400mm	0	3.13
LS-106	118.4A	5.20mm	6.00mm	13.0mm	0.500mm	0	5.096
(Fuller C Design)							
LS-107	118.4A	5.20mm	6.00mm	13.0mm	0.500mm	0	5.096
(Modified C Design)							
LS-108	118.4A	5.20mm	6.50mm	13.0mm	0.500mm	0	5.096
LS-109	118.2A	5.09mm	6.50mm	13.0mm	0.500mm	2	4.731
LS-111	118.4A	5.20mm	6.50mm	13.5mm	0.500mm	0	6.47
LS-112	118.4A	5.20mm	6.50mm	13.5mm	0.500mm	2	6.47
LS-116	118.1A	5.02mm	7.00mm	13.5mm	0.500mm	0	4.389
LA-500	115.3A	3.30mm	6.00mm	13.0mm	0.500mm	0	6.78
LA-501	115.3A	3.30mm	6.00mm	12.5mm	0.500mm	0	6.78
LA-502	115.3A	3.30mm	6.00mm	12.0mm	0.500mm	0	6.78

ALL OF THE ABOVE MODEL NUMBERS ARE EQUICONVEX.

*The "A" constants listed on this product sheet are estimated and not based on clinical data. These values should be considered guidelines only. Surgeons should develop their own values based on individual experiences, equipment, techniques, and postoperative results.

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