

TRANSNASAL NEUROENDOSCOPY

MINOP® TREND

TRansnasal ENDoscopic System



"When looking at recent publications on transsphenoidal surgery, it will be clear that TRanssphenoidal ENDoscopy is TREND-setting! However, this endoscopic technique is not in routine use everywhere and neurosurgeons are often reluctant to use it: One is often cautious about an endoscopic endonasal dissection because the permanent contamination of the endoscope with blood and nasal secretions hinders orientation. In addition, the para-endoscopic and biportal dissection is very unfamiliar requiring an unacceptably steep learning curve.

Nevertheless, endoscopic visualization and para-endoscopic dissection without using the surgical microscope offers several undisputable advantages. Advantages in visualization increases light intensity in the deep-seated surgical field and clearly displays patho-anatomical details. In addition, the extended viewing angle of endoscopes enables surgeons to observe hidden parts of the surgical field. The major benefit in surgical dissection is the unhindered approach to these clearly visible structures: Without using a nasal speculum, surgical manipulation is not impeded and the instruments are freely mobile. In addition, a pure endoscopic technique avoids the need

for rhinoseptal submucosal dissection providing a direct and quicker approach to the sphenoid sinus. This method avoids the need for postoperative nasal packing, thus causing less pain and discomfort after surgery, providing better nasal airflow and a shorter hospital stay.

Pre-conditions of transsphenoidal endoscopy are the basic endoscopic experience and anatomical studies in the laboratory; however, it is indispensable to use a dedicated endoscopic system to further shorten the learning phase. The endoscope for transsphenoidal skull base surgery must provide a brilliant image quality with true colors, high contrast and highly realistic images. This simplifies the differentiation between healthy or pathological structures. It is essential to have an effective cleaning function in order to free the endoscope lens from fog, blood or mucosal secretions. The endoscope must offer a highly ergonomic design and sufficient working length for extended approaches. For selected cases, it is also necessary to connect the endoscope to a navigation system or a holding device."

André Grotenhuis



André Grotenhuis
Nijmegen, Netherlands

MINOP® TREND

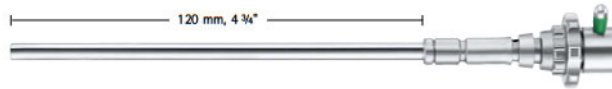
TRansnasal ENDoscopic System – Trocars, Handle and Accessories

- Suction, cleaning and irrigation function controlled via handle
- Handle rotatable around the endoscope shaft for improved flexibility in positioning the endoscope
- No irrigation pump needed



FH610R

MINOP® TREND suction and irrigation trocar
for 0° endoscope PE487A
Diam.: 4.5 / 6 mm



FH611R

MINOP® TREND suction and irrigation trocar
for 30° endoscope PE507A
Diam.: 4.5 / 6 mm



FH615

Handle with irrigation button
for MINOP® TREND trocars
FH610R and FH611R

RT099R

Adapter for fixation of MINOP® TREND handle FH615 to AEscULAP® holding arm



FH605SU

Single-use suction and irrigation tube, sterile packed,
Length 4.5 m, 2 puncture needles, for MINOP® TREND handle
FH615, Sales unit: PAK = Package of 10 tubes



"No other system that I have used combines as many helpful features in a single instrument". The lens cleaning is rapid and conveniently controlled with a button, instead of a pedal. The suction is effective. The ability to rotate the scope easily and quickly within the handle improves angled viewing. Overall, these features make the MINOP TREND an asset for endonasal surgery."

Jeremy Greenlee, Iowa City, USA

MINOP® TREND

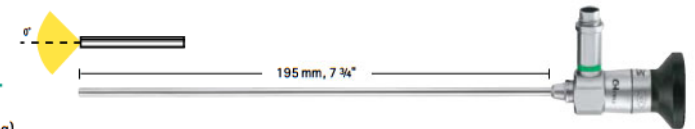
TRansnasal ENDoscopic System – Endoscopes

- Full HD compatible
- Optimized optical components leading to an enlarged image area, higher image quality, brightness and contrast
- Autoclavable / Sterrad®



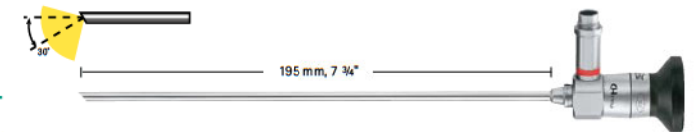
PE487A

MINOP® TREND endoscope
Direction of view: 0° (green ring)
Shaft diam.: 4 mm



PE507A

MINOP® TREND endoscope
Direction of view: 30° (red ring)
Shaft diam.: 4 mm



"The view through the operating microscope allows a purely coaxial visualisation in transsphenoidal surgery: laterally located structures are concealed behind the nasal speculum. Blind tumor removal involves a higher risk of iatrogenic damage to neurovascular structures and a possible increase in tumor remnants. With the use of the MINOP TREND endoscope for transnasal procedures, these laterally located parts of the field are directly visible and therefore surgically better approachable. In the past several years of endoscopic transnasal surgery, the use of endoscopes has proven to be not only indispensable but rather mandatory for a safe and effective transnasal surgery in de sellar and parasellar region."

André Grotenhuis, Nijmegen, Netherlands



MINOP® TREND

TRansnasal ENDoscopic System – Sterilization and Storage

- Basket for MINOP® TREND trocar, endoscopes, handle and adapter



FF357R Dimensions (L/W/H) 406 x 253 x 56 mm

Basket with silicone mat, instrument racks with silicone and lid (instruments not included)

- 3/4 Sterile container (basic version) for basket FF357R



consisting of:

JK740

Bottom 3/4

without base perforation

Outside/Inside dimensions with inner lid:

L/W/H 470 x 285 x 108 mm

L/W/H 421 x 258 x 75 mm

JK786

Inner lid 3/4

blue



- For further details about the AESCULAP® Sterile Container System see brochure no. C40402.

MINOP[®] TREND

TRansnasal ENDoscopic System - TREND Instruments

Bayonet shaped with golf ball handle design

FA041R-FA068R

Working length:
130 mm, 5 1/8"

Total length:
280 mm, 11"

diam. 6.5 mm	diam. 6.5 mm		
NICOLA FA041R	NICOLA FA042R	HARDY FA043R	HARDY FA044R
Curette semi-sharp 45° vertical angled long neck shaft malleable	Curette semi-sharp 45° horizontal angled short neck shaft malleable	Enucleator blunt up cvd. left cutting shaft malleable	Enucleator blunt up cvd. right cutting shaft malleable
diam. 4 mm	diam. 4 mm	diam. 4 mm	diam. 4 mm
HARDY FA045R	HARDY FA046R	HARDY FA047R	HARDY FA060R
Curette semi-sharp 90° left angled long neck shaft malleable	Curette semi-sharp 90° left angled short neck shaft malleable	Curette semi-sharp 90° right angled long neck shaft malleable	Curette semi-sharp 90° right angled short neck shaft malleable

diam. 4 mm	diam. 4 mm	diam. 6 mm	diam. 6 mm
HARDY FA061R	HARDY FA062R	HARDY FA063R	HARDY FA064R
Curette semi-sharp 45° horizontal, left angled short neck shaft malleable	Curette semi-sharp 45° horizontal, right angled short neck shaft malleable	Curette semi-sharp 90° left angled long neck shaft malleable	Curette semi-sharp 90° left angled short neck shaft malleable
diam. 6 mm	diam. 6 mm	tip length 1.7 mm	width 2 mm
HARDY FA065R	HARDY FA066R	LANDOLT- REULEN FA067R	LANDOLT- REULEN FA068R
Curette semi-sharp 90° right angled long neck shaft malleable	Curette semi-sharp 90° right angled short neck shaft malleable	Micro hook blunt shaft rigid	Dissector blunt shaft rigid



MINOP® TREND

TRansnasal ENDoscopic System - TREND Instruments

Straight shape with golf ball handle design

140 mm, 5 1/2"
265 mm, 10 1/2"

Instrument	Diameter	Description	Shaft Property
NICOLA FA030R	diam. 6.5 mm	Curette semi-sharp 45° vertical angled long neck	shaft malleable
NICOLA FA031R	diam. 6.5 mm	Curette semi-sharp 45° horizontal angled short neck	shaft malleable
HARDY FA032R	diam. 6.5 mm	Enucleator blunt up cvd. left cutting	shaft malleable
HARDY FA033R	diam. 6.5 mm	Enucleator blunt up cvd. right cutting	shaft malleable
HARDY FA034R	diam. 4 mm	Curette semi-sharp 90° angled long neck	shaft malleable
HARDY FA035R	diam. 4 mm	Curette semi-sharp 90° angled short neck	shaft malleable
FA030R-FA040R			
Working length: 140 mm, 5 1/2"			
Total length: 265 mm, 10 1/2"			
HARDY FA036R	diam. 4 mm	Curette semi-sharp 45° angled short neck	shaft malleable
HARDY FA037R	diam. 6 mm	Curette semi-sharp 90° angled long neck	shaft malleable
HARDY FA038R	diam. 6 mm	Curette semi-sharp 90° angled short neck	shaft malleable
LANDOLT-REULEN FA039R	diam. 1.7 mm	Micro hook blunt	shaft rigid
LANDOLT-REULEN FA040R	diam. 2 mm	Dissector blunt	shaft rigid

MINOP® TREND

TRansnasal ENDoscopic System - Transsphenoidal Specula

PAPAVERO-CASPAR	
Art. No.	Blade size
FF589R	80 x 11 mm
FF590R	90 x 13 mm
FF591R	100 x 15 mm

FF590B
Noir® Transsphenoidal specula
incl. TE749R

TE749R
Key for socket-head screw for FF589R, FF590R, FF591R, FF590B

Slim profile and lightweighted specula for transsphenoidal surgery
incl. key TE749R

MINOP® TREND

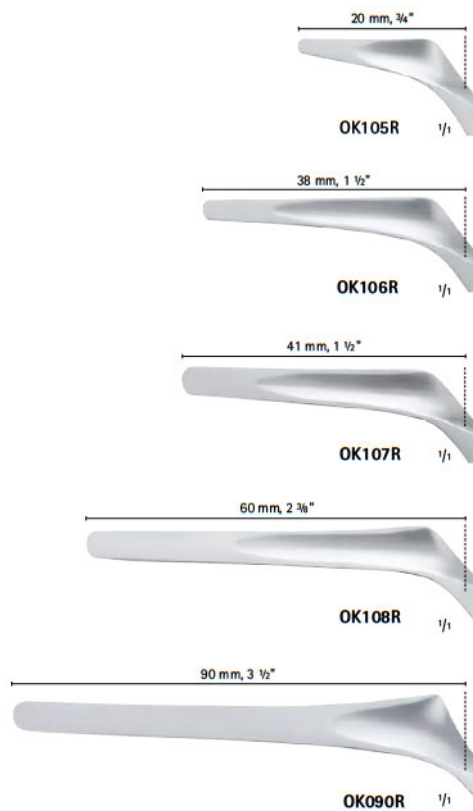
TRansnasal ENDoscopic System - Nasal Specula



COTTLE

OK105R-OK108R
OK090R

with aseptic joint, set-screw,
with extra thin blades
140 mm, 5 1/2"

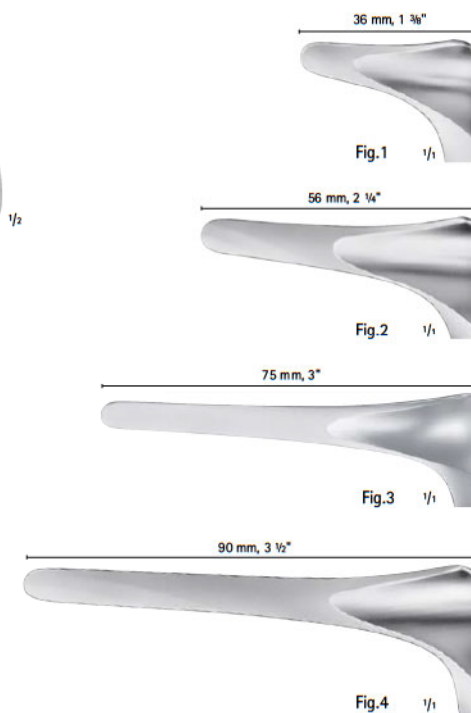


KILLIAN

OK081R Fig. 1	OK091R Fig. 1
OK082R Fig. 2	OK092R Fig. 2
OK083R Fig. 3	OK093R Fig. 3
OK084R Fig. 4	OK094R Fig. 4

with aseptic joint
145 mm, 5 3/4"

with screw joint
145 mm, 5 3/4"

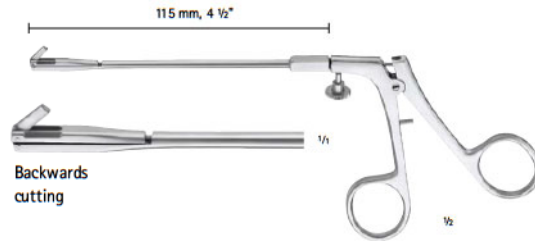


MINOP® TREND

TRansnasal ENDoscopic System - Antrum and Sinus Punches

FA076R



Antrum punch
for removal of posterior nasal
septum
Rotating sheath 360°



OK602R-OK609R

Sinus punches



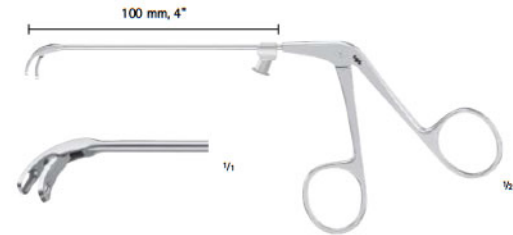
		6 x 1.5 mm ^{2/1}	8 x 3 mm ^{2/1}	11.5 x 3.5 mm ^{2/1}
	straight	OK608R forward through cutting	MACKAY-GRUNEWALD OK602R forward through cutting	MACKAY-GRUNEWALD OK603R forward through cutting
	45° upwards angled	OK609R forward through cutting	MACKAY-GRUNEWALD OK606R forward through cutting	MACKAY-GRUNEWALD OK607R forward through cutting

MINOP® TREND

TRansnasal ENDoscopic System - Antrum Grasping Forceps

OK680R

jaw opening backwards,
curved downwards



OK681R

jaw opening backwards,
curved upwards



OK682R

jaw opening backwards,
curved to right



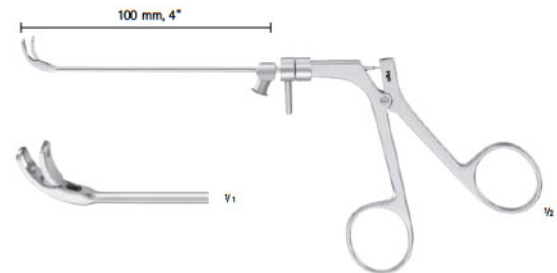
OK683R

jaw opening backwards,
curved to left



OK684R

jaw opening backwards,
jaw 360° rotatable

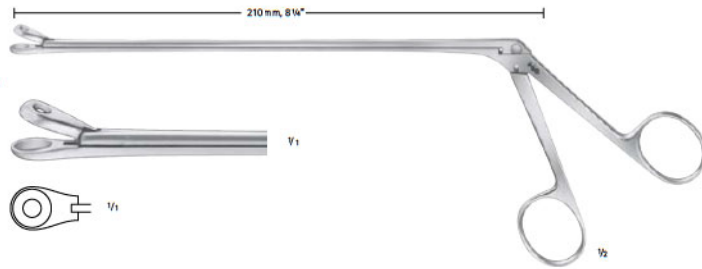


MINOP® TREND

TRansnasal ENDoscopic System - Nasal Forceps

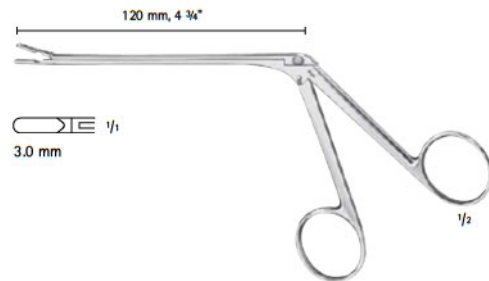
LANDOLT FF345R

Tumor grasping forceps,
blunt, straight
Diam. 9.0 mm

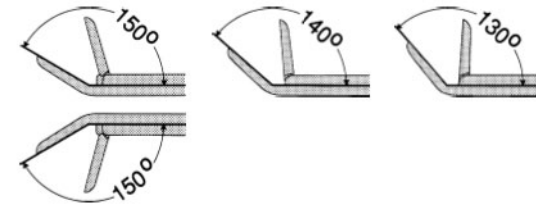


TAKAHASHI OK525R

Rongeur, straight



Angled positions for rongeurs

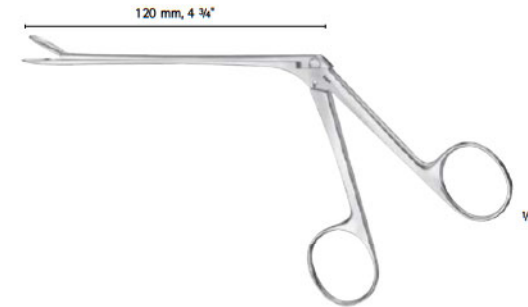


WEIL-BLAKESLEY

OK505R-OK509R

Ethmoidal forceps, straight

- | | | | |
|--------|--------|--|-----|
| OK505R | 3.0 mm | | 1/1 |
| OK506R | 3.6 mm | | 1/1 |
| OK507R | 4.2 mm | | 1/1 |
| OK508R | 4.8 mm | | 1/1 |
| OK509R | 5.6 mm | | 1/1 |



WEIL-BLAKESLEY

OK520R-OK522R

Ethmoidal forceps, upwards curved, 140°

- | | | | |
|--------|--------|--|-----|
| OK520R | 3.6 mm | | 1/1 |
| OK521R | 4.2 mm | | 1/1 |
| OK522R | 4.8 mm | | 1/1 |



■ For more information on AESCULAP® Functional Endoscopic Sinus Surgery instruments see brochure no. C87511.

MINOP® TREND

TRansnasal ENDoscopic System - Nasal Scissors

OK560R

straight, blades serrated

OK561R

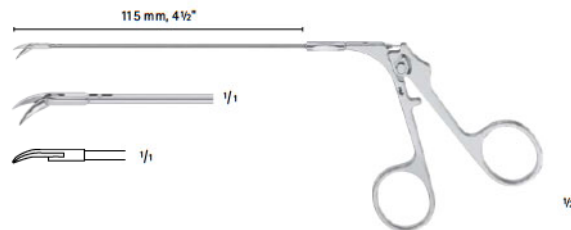
left curved, blades serrated

OK562R

right curved, blades serrated



OK560R - OK562R
Nasal scissors



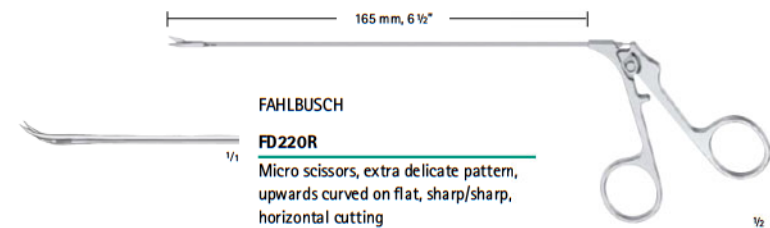
CASPAR

FD228R

Micro scissors, curved rotatable 360°, detachable for cleaning

MINOP® TREND

TRansnasal ENDoscopic System - Pituitary Scissors and Forceps



FAHLBUSCH

FD220R

Micro scissors, extra delicate pattern, upwards curved on flat, sharp/sharp, horizontal cutting

NICOLA

FD222R

Forceps, scoop-shaped, diam. 2.5 mm
YASARGIL-NICOLA

FD224R

Grasping forceps with long conical jaw

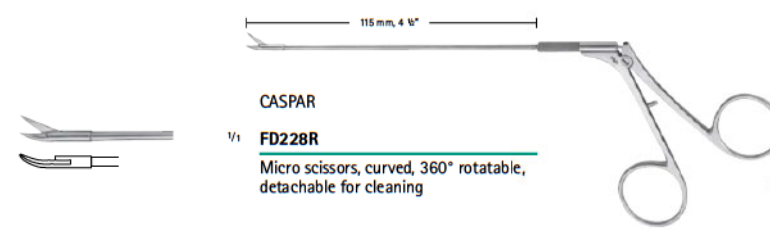
NICOLA

FD226R

Micro scissors, straight, diam. 2.5 mm

FD220R-FD226R

Extra delicate tubular shaft scissors and grasping instruments for pituitary & skull base surgery



CASPAR

FD228R

Micro scissors, curved, 360° rotatable, detachable for cleaning

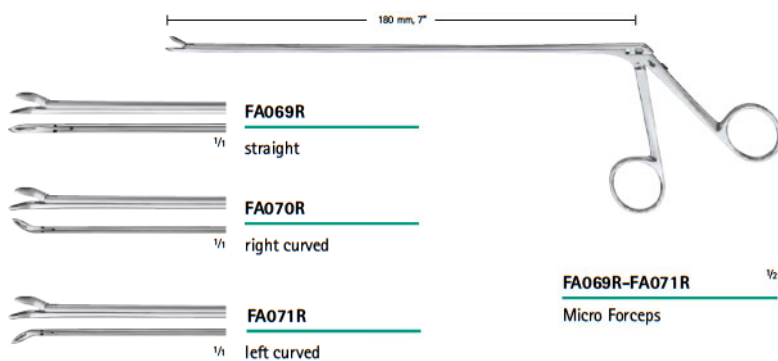
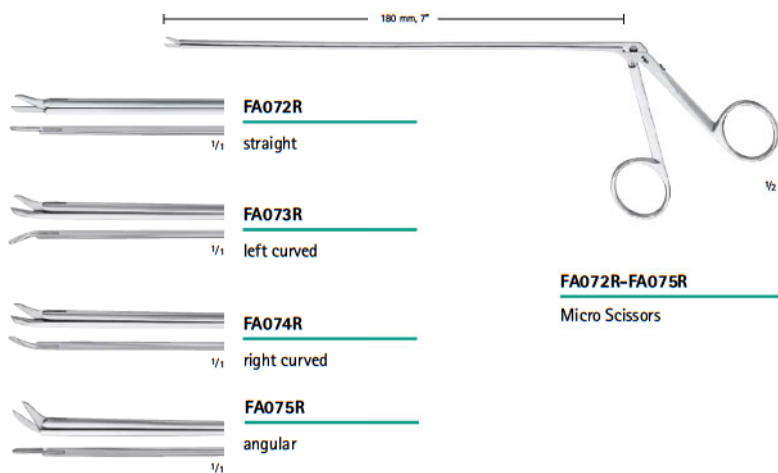


"Essential part of the endoscopic transnasal surgery is the nasal dissection, using special pituitary instruments. Goal is the maximum exploration of the target area, but also minimally invasive nasal traumatism, thus avoiding mucosal lacerations and unnecessary bony fractures. This influences patients postoperative quality of life enormously."

André Grotenhuis, Nijmegen, Netherlands

MINOP® TREND

TRansnasal ENDoscopic System - Pituitary Scissors and Forceps

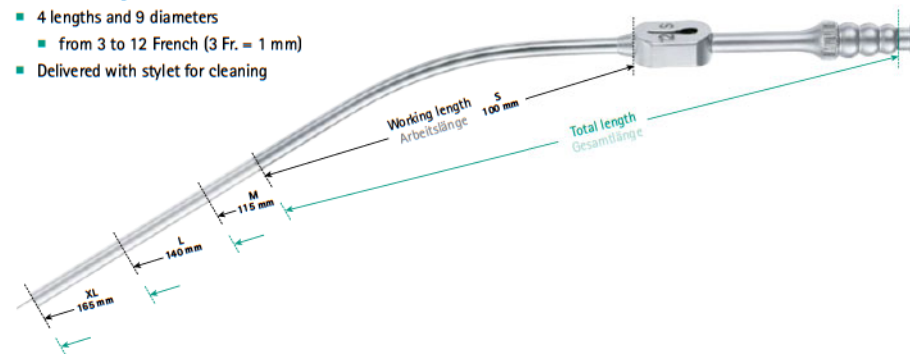


MINOP® TREND

TRansnasal ENDoscopic System - FUKUSHIMA Suction Instruments

Fukushima Design

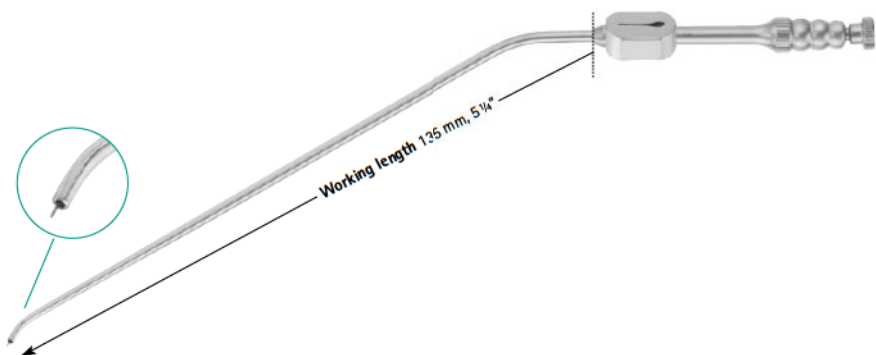
- Teardrop shaped thumb control for suction regulation
- Malleable material for individual forming of the suction hose
- Conical design of suction cannulas
- 4 lengths and 9 diameters
 - from 3 to 12 French (3 Fr. = 1 mm)
- Delivered with stylet for cleaning



	⊙S	⊙M	⊙L	⊙XL
Working length	100 mm, 4"	115 mm, 4 1/2"	140 mm, 5 1/2"	165 mm, 6 1/2"
Total length	165 mm, 6 1/2"	180 mm, 7"	205 mm, 8"	230 mm, 9"
3 Fr.	GF401R	GF391R	GF411R	GF421R
4 Fr.	GF402R	GF392R	GF412R	GF422R
5 Fr.	GF403R	GF393R	GF413R	GF423R
6 Fr.	GF404R	GF394R	GF414R	GF424R
7 Fr.	GF405R	GF395R	GF415R	GF425R
8 Fr.	GF406R	GF396R	GF416R	GF426R
9 Fr.	GF407R	GF397R	GF417R	GF427R
10 Fr.	GF408R	GF398R	GF418R	GF428R
12 Fr.	GF409R	GF399R	GF419R	GF429R

MINOP® TREND

TRansnasal ENDoscopic System - Curved FUKUSHIMA Suction Instruments



	Outer diameter	Inner diameter	Angled tip	Working length
GF431R	2.7 mm	2.0 mm	Right angled tip	135 mm, 5 1/4"
GF432R	2.7 mm	2.0 mm	Left angled tip	135 mm, 5 1/4"



MINOP® TREND

TRansnasal ENDoscopic System - Bipolar Forceps

GK826R

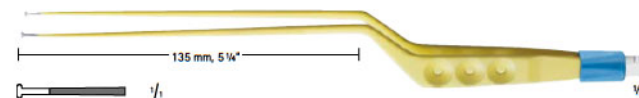
Bipolar coagulation forceps
with slender jaws
Total length 255 mm, 10"
Aesculap tab connector — II



Special pin between the branches opens the tip of the forceps by additional compression of the handle – allowing for coagulation in narrow and deep seated surgical field.

GK800R

T-coagulation forceps
with blunt, t-shaped tips
Total length 255 mm, 10"
Aesculap tab connector — II



MINOP® TREND

TRansnasal ENDoscopic System - Further Instruments

OF601R

Sickle knife, sharp tip
Total length 190 mm, 7 1/2"



BN175R

Frontal sinus ostium seeker,
double ended, curved
Total length 220 mm, 8 3/4"



FM158R

SENSATION Micro tissue
grasping forceps,
bayonet-shaped, straight tip
Total length 245 mm, 9 5/8"



FM156R Tip 0.5 mm

FM157R Tip 0.9 mm

SENSATION Micro Tissue
grasping forceps, angled
bayonet-shaped, straight tip
Total length 240 mm, 9 1/2"



MINOP® TREND

TRansnasal ENDoscopic System - KERRISON Detachable Bone Punches

Jaw position 130°, upbiting

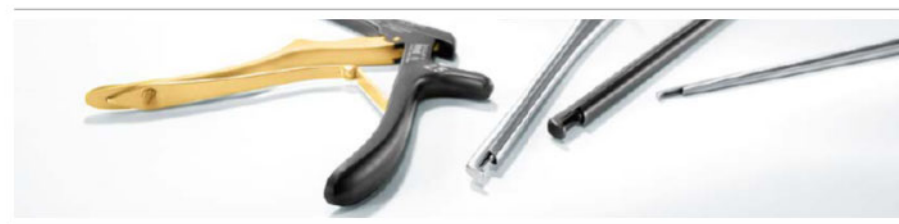


Shaft length	Width	Footplate	Ejector	Jaw opening	Detachable	Noir®, detachable
180 mm, 7"	1.0 mm	thin	-	8 mm	FK906R	FK906B
	1.5 mm	thin	-	9 mm	FK923R	FK923B
	2.0 mm	thin	✓	9 mm	FK907R	FK907B
	2.5 mm	thin	✓	10 mm	FK924R	FK924B
	3.0 mm	thin	✓	10 mm	FK908R	FK908B
	4.0 mm	thin	✓	12 mm	FK909R	FK909B

Jaw position 130°, downbiting



Shaft length	Width	Footplate	Ejector	Jaw opening	Detachable
180 mm, 7"	1.0 mm	thin	-	8 mm	FK936R
	2.0 mm	thin	✓	9 mm	FK937R
	3.0 mm	thin	✓	10 mm	FK938R

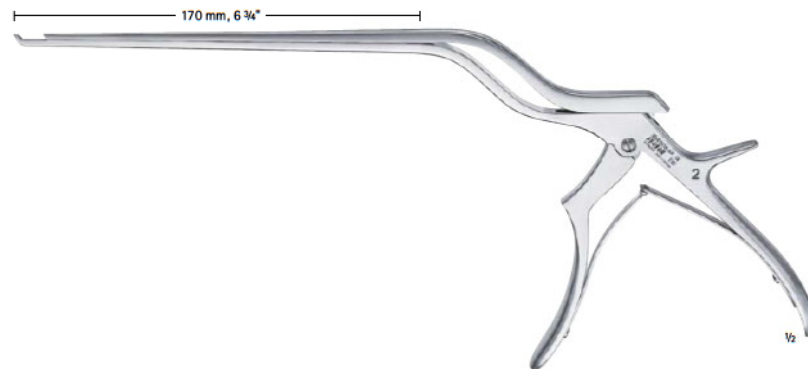


MINOP® TREND

TRansnasal ENDoscopic System - KERRISON Bayonet Bone Punches

Jaw position 130°, upbiting

Shaft length	Width	Working length	Jaw opening	Art. No.
240 mm, 9½"	2.0 mm	170 mm, 6¾"	10 mm	FF496R
	3.0 mm	170 mm, 6¾"	10 mm	FF497R
	4.0 mm	170 mm, 6¾"	10 mm	FF498R
	5.0 mm	170 mm, 6¾"	10 mm	FF499R



■ For more information on transnasal neuroendoscopy see our Practical Atlas no. C26402.



■ For more information on AESCULAP® bone punches see brochure no. C84802.