



CARDIO-THORACIC  
SURGERY

# AESFULAP<sup>®</sup> PREMIUM SOLUTION FOR VATS

VIDEO-ASSISTED THORACOSCOPIC SURGERY



# AESFULAP® PREMIUM SOLUTION FOR VATS

VIDEO-ASSISTED THORACOSCOPIC SURGERY

---

## INTRODUCTION

4 - 5	Foreword Dr. T. Kiefer
6 - 7	AESFULAP® Premium Solution for VATS
8 - 9	AESFULAP® VATS Instruments - Features

---

## AESFULAP® VATS INSTRUMENTS

10 - 17	Forceps / Clamps
16 - 17	Scissors
18 - 19	Needle Holders
20	Additional Instruments
21	Spare Parts
22 - 23	VATS Storage Sample
24 - 25	Disassembly and Assembly Instructions

---

## AESFULAP® 3D VISUALIZATION

26 -27	EinsteinVision® 3D EndoTower
--------	------------------------------

---

## AESFULAP® ADVANCED BIPOLAR SEAL AND CUT TECHNOLOGY

28 - 29	Caiman®
---------	---------

---

## AESFULAP® LIGATION CLIPS

30 - 31	Challenger® Ti-P
32 - 33	Titanium Ligation Clips

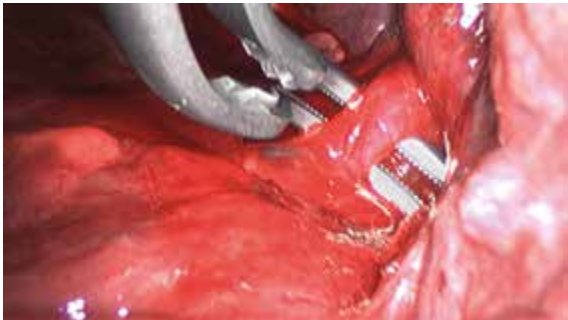
---

## AESFULAP® ACCESSORIES

34 - 35	Thoracoscopy Trocars
36 - 37	Monopolar Electrodes
38	Monopolar Connecting Cable
39	Nelson® deluxe Electrosurgical Generator
40	Knot Pusher and Exploratory Probes
41	Retrieval Bags Single use
42 - 44	Sutures
45	Hemostats

# AESCULAP® PREMIUM SOLUTION FOR VATS

VIDEO-ASSISTED THORACOSCOPIC SURGERY





## FOREWORD

Minimally invasive thoracic surgery – particularly where anatomic lung resection is concerned – is high-tech surgery that requires a high degree of precision.

To ensure this precision, certain components are required:

- Visualization
- Minimally invasive instruments
- Several options for the treatment of
  - Vessels
  - Parenchyma
  - Bronchus

B. Braun Aesculap® offers solutions that enable complex thoracoscopic operations to be performed safely and cost-effectively with the required precision:

- With the new instruments designed specifically for minimally invasive thoracic surgery, you can safely handle any situation during the operation with high precision. The modular system offers the maximum level of flexibility. Ergonomic handles with and without ratchet are available. The ratched is easy to lock and can be easily operated with one hand. The ability to take the tube shaft instruments apart makes cleaning them to today's high standards easier.
- The EinsteinVision® 3.0 camera system offers outstanding 3D image quality, enabling anatomical structures to be visualized with greater brilliance.
- Using the Caiman® seal and cut instrument, pulmonary veins and arteries can be safely sealed and cut.
- Clips and classic techniques using suture or (suture) ligature are other options for treating vessels. Practical and proven solutions are also available for these options.

Instruments developed in cooperation with:

Dr. Thomas Kiefer,  
Constance, Germany

Prof. Peter Kleine,  
Frankfurt, Germany

Prof. Frank Detterbeck,  
Yale, USA

Dr. med. Thomas Kiefer, MD  
Head of Thoracic Surgery, Klinikum Konstanz

# AESCULAP® PREMIUM SOLUTION FOR VATS

VIDEO-ASSISTED THORACOSCOPIC SURGERY

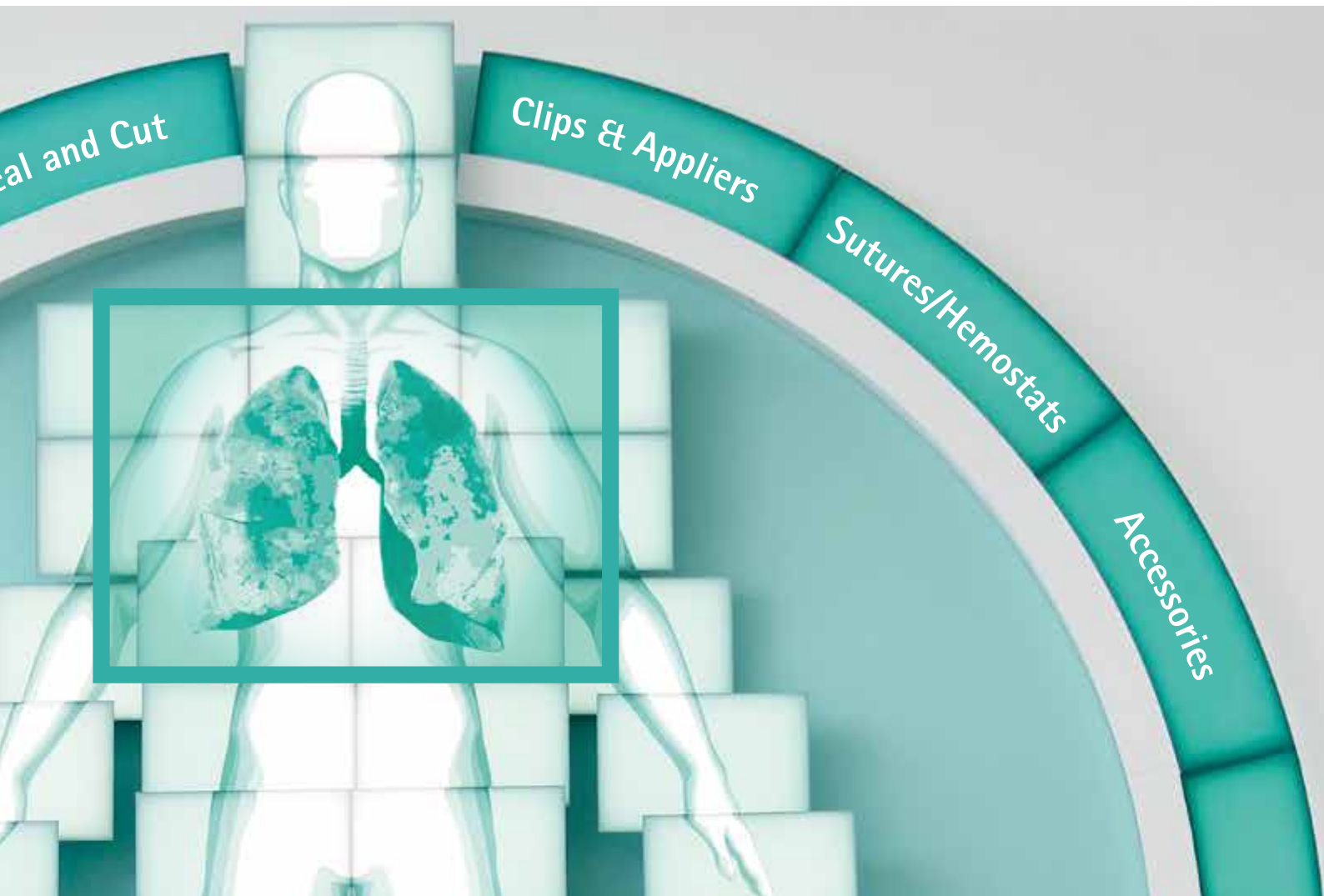
B. Braun is a global manufacturer and provider of innovative high-quality products and services to set guiding standards for the healthcare market.

B. Braun offers effective solutions to protect and improve health sustainably and product systems out of a large portfolio in order to optimize processes and therapies.



## Sharing Expertise:

B. Braun promises constructive dialog and collaboration with customers and partners to find solutions that are evolving and progressive. B. Braun is a globally active family company committed to efficient and sustainable behavior.



## AESCULAP ACADEMY. Forum for contemporary medicine

Technical developments, new treatment methods, hospital management – the requirements placed on today's medical professionals are varied, which is why high-quality continuing professional development is more important than ever. This is precisely what Aesculap Academy stands for.

Its aim is clear: The Aesculap Academy wants to keep medical and specialist staff in hospitals and practices fit for the future. Founded in 1995 under the B. Braun Group, the Aesculap Academy is seen today around the world as an important forum for medical training and further professional education. It works with an interdisciplinary, independent and international approach and it strives for long-term partnerships. Thanks to tailored and interrelated modules, the participants can continually develop and build up their knowledge and skills throughout their career. This means they are always as well prepared as possible for their daily work and future tasks.



Tuttlingen | Berlin | Bochum

# AESFULAP® VATS INSTRUMENTS

VIDEO-ASSISTED THORACOSCOPIC SURGERY

Innovative, efficient and ergonomic VATS Instruments made by AESFULAP®.

The innovative instrument design enables Thoracic Surgeons to perform VATS procedures more efficient and comfortable and simplifies the daily work of CSSD staff.



## FUNCTIONALITY

The instrument design provides an excellent tactile feedback with a high transmission of force at the same time. Preparation and dissection of vascular structures can be performed safe and fast, also with the possibility to work with monopolar HF. 180° rotation by repositioning the instrument shaft is possible.

## EFFICIENCY

The uniform design and function across the entire instrument portfolio enable a smooth process and allow the surgeon to focus on the patient rather than on how to use the instrument.





## COST-EFFECTIVENESS

The VATS Instruments **components** can be **ordered individually**. This means that the components can be replaced easily and quickly on-site instead of being repaired or a new purchase being necessary.

Your advantage: Surgical sets are available again immediately and replacement also may be cheaper than a repair.



## ERGONOMIC

The ergonomic handle with its **unique ratchet design** allows comfortable working. The ratchet is **easy to use with one hand** and can be **deactivated uncomplicated** if necessary.

## SAFETY

Hygiene plays a vital role in hospitals. The Aesculap VATS Instruments can be **easily disassembled for cleaning**, meet today's **decontamination requirements** and support **patient safety**.

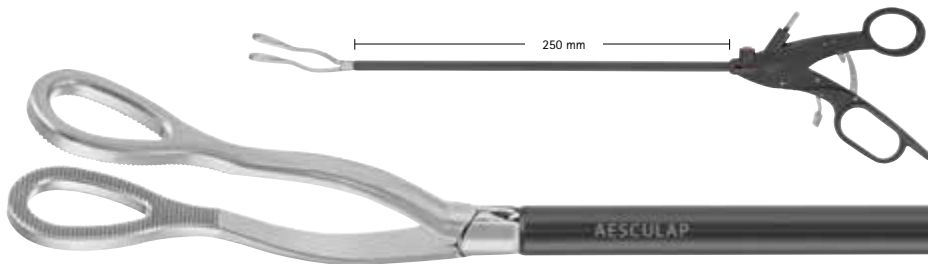
# AESCULAP® VATS INSTRUMENTS

VIDEO-ASSISTED THORACOSCOPIC SURGERY

Forceps / Clamps | Diam. 7 mm | Usable length 250 mm

## STANDARD INSTRUMENT - COMPLETE

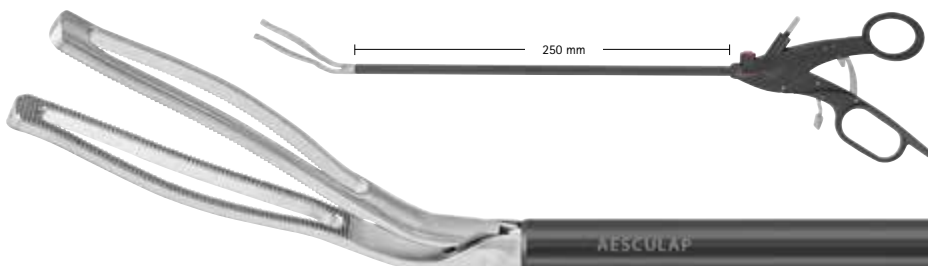
Description



### FOERSTER LUNG GRASPER

15 mm oval ring jaws,  
15° angled,  
63 mm jaw length,  
both sides opening

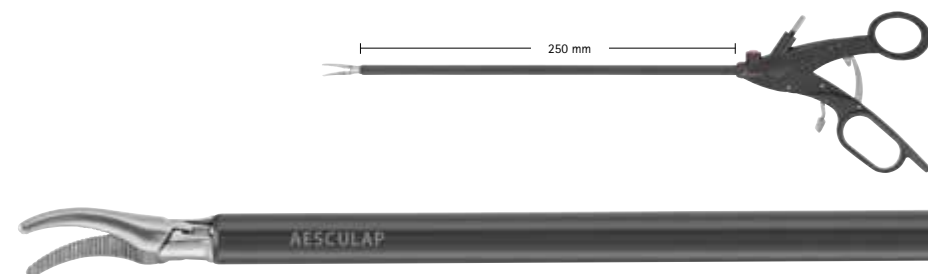
1/1 FC810R



### TISSUE GRASPING FORCEPS

30° angled,  
65 mm jaw length,  
one side opening

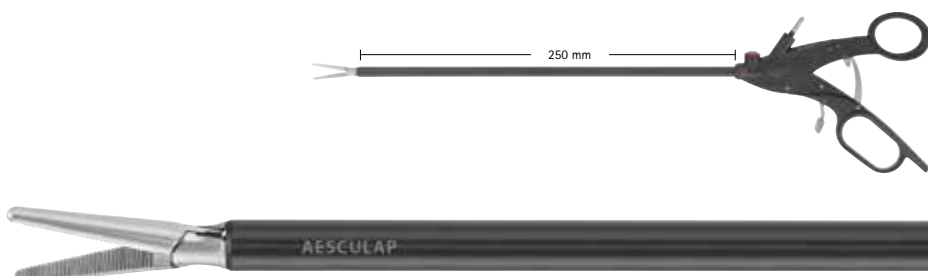
1/1 FC811R



### MARYLAND DISSECTING FORCEPS

curved,  
21 mm jaw length,  
both sides opening

1/1 FC812R










### DISSECTING FORCEPS

straight,  
25 mm jaw length,  
both sides opening

1/1 FC813R



SINGLE COMPONENTS

Jaw Insert	Insulated outer tube	Handle
 <p>1/2</p> <p>FC860R</p>		
 <p>1/2</p> <p>FC861R</p>		 <p>without ratchet</p> <p>FC800R</p>
 <p>1/2</p> <p>FC862R</p>	 <p>FC808P</p>	 <p>with ratchet, disengageable</p> <p>FC801R</p>
 <p>1/2</p> <p>FC863R</p>		

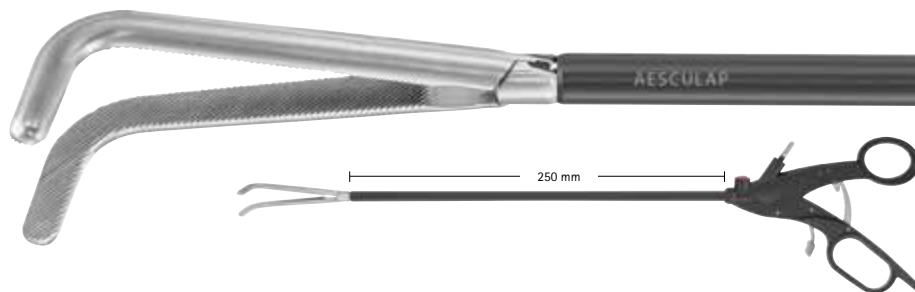


# AESCULAP® VATS INSTRUMENTS

VIDEO-ASSISTED THORACOSCOPIC SURGERY

Forceps / Clamps | Diam. 7 mm | Usable length 250 mm

STANDARD INSTRUMENT - COMPLETE



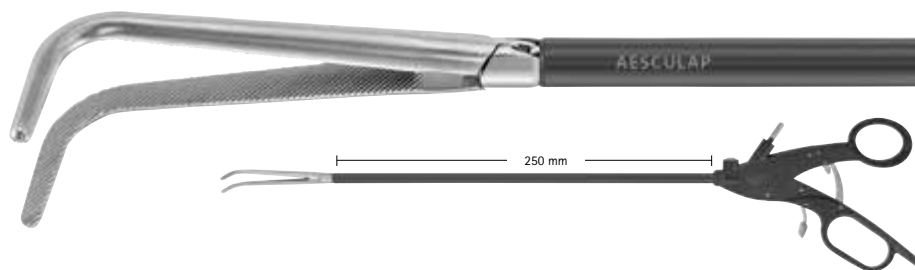
1/1

FC814R

Description

**OVERHOLT DISSECTING FORCEPS 90°**

65 mm jaw length,  
both sides opening

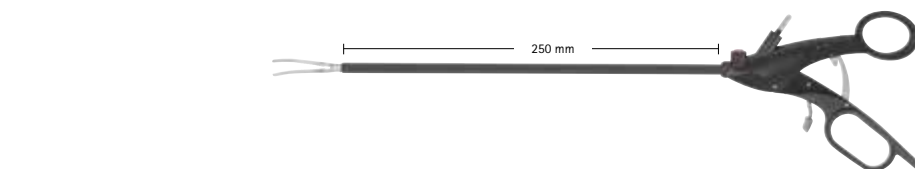


1/1

FC815R

**OVERHOLT DISSECTING FORCEPS 90°**

delicate,  
64 mm jaw length,  
both sides opening



1/1

FC816R

**OVERHOLT DISSECTING FORCEPS 60°**

40 mm jaw length,  
both sides opening

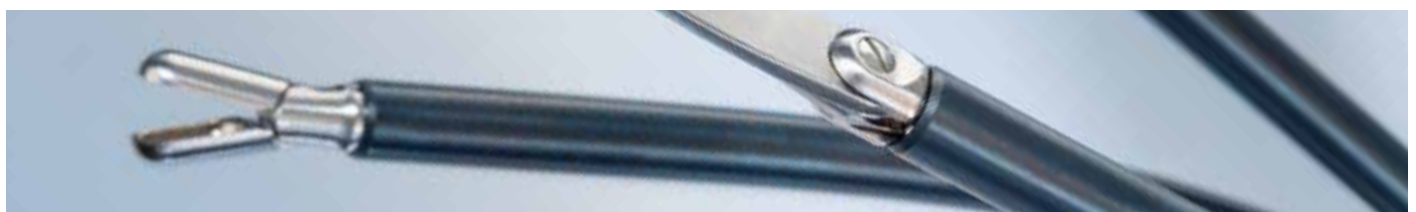


1/1








FC820R

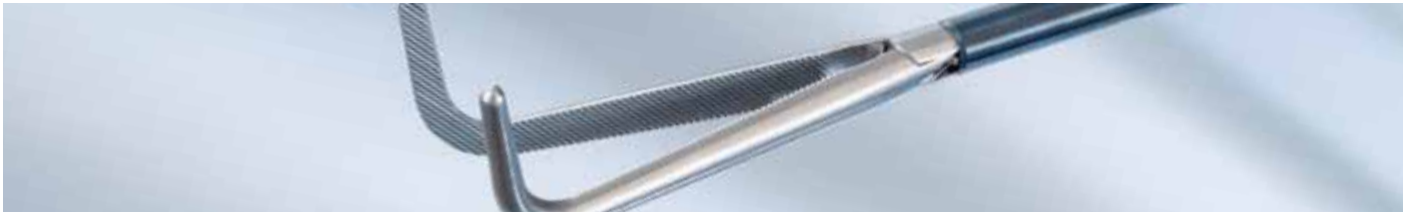
**BIOPSY FORCEPS**

30° curved,  
14 mm jaw length,  
both sides opening



SINGLE COMPONENTS

Jaw Insert	Insulated outer tube	Handle
 <p style="text-align: right;">1/2</p> <p>FC864R</p>		
 <p style="text-align: right;">1/2</p> <p>FC865R</p>		 <p>without ratchet</p> <p>FC800R</p>
 <p style="text-align: right;">1/2</p> <p>FC866R</p>	 <p>FC808P</p>	 <p>with ratchet, disengageable</p> <p>FC801R</p>
 <p style="text-align: right;">1/2</p> <p>FC870R</p>		



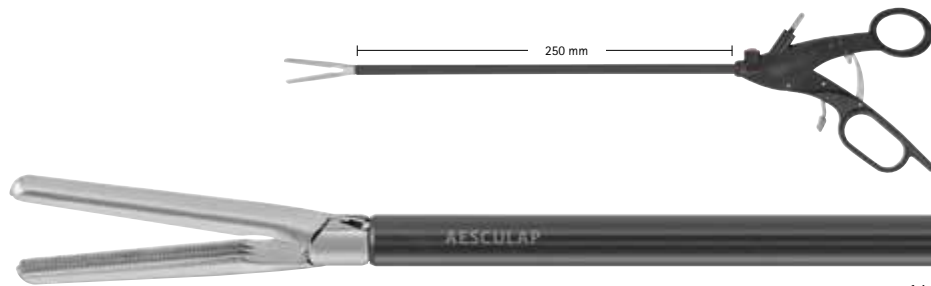
# AESCULAP® VATS INSTRUMENTS

VIDEO-ASSISTED THORACOSCOPIC SURGERY

Forceps / Clamps | Diam. 7 mm | Usable length 250 mm

STANDARD INSTRUMENT - COMPLETE

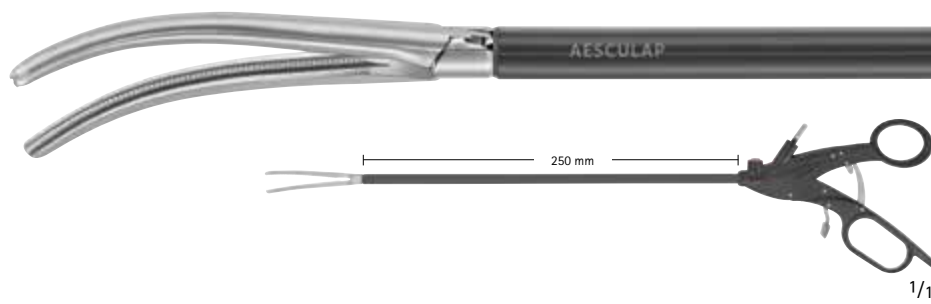
Description



## DEBAKEY CLAMP

2 x 3 DeBakey jaws,  
straight,  
43 mm jaw length,  
both sides opening

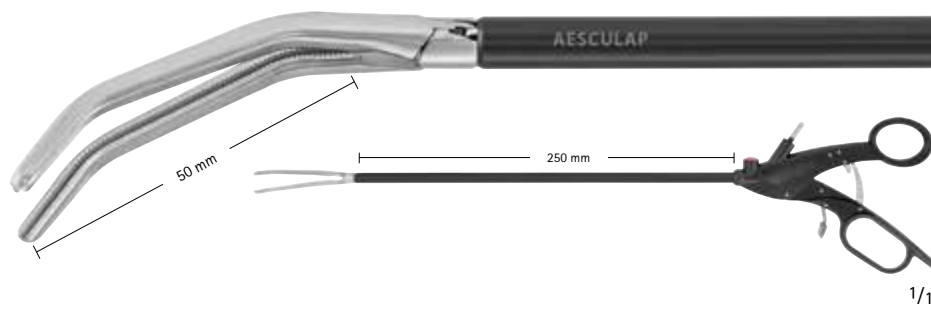
FC824R



## CRAFOORD CLAMP

1 x 2 DeBakey jaws,  
curved,  
55 mm jaw length,  
both sides opening

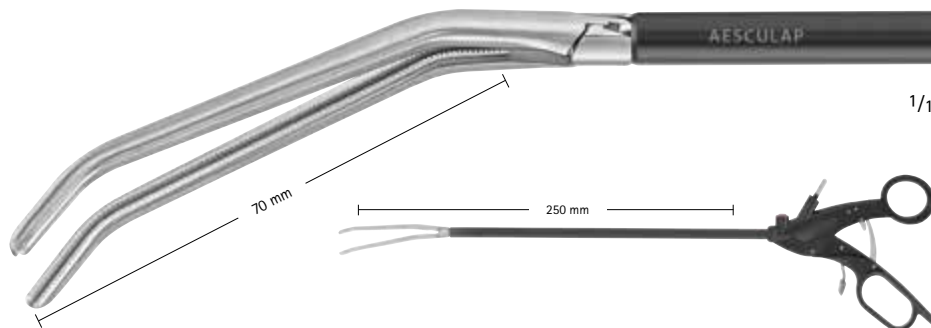
FC825R



## SATINSKY PARENCHYMAL CLAMP

1 X 2 DeBakey jaws,  
55 mm jaw length,  
both sides opening

FC826R



## SATINSKY PARENCHYMAL CLAMP

1 x 2 DeBakey jaws,  
71 mm jaw length,  
both sides opening

FC827R



SINGLE COMPONENTS

Jaw Insert

Insulated outer tube

Handle



1/2

FC874R



1/2

FC875R



1/2

FC876R



1/2

FC877R



FC808P



without ratchet

FC800R



with ratchet, disengageable

FC801R

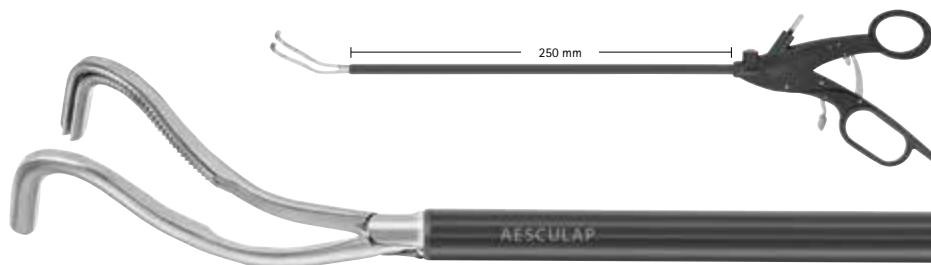


# AESCULAP® VATS INSTRUMENTS

VIDEO-ASSISTED THORACOSCOPIC SURGERY

Forceps / Clamps | Diam. 7 mm | Usable length 250 mm

STANDARD INSTRUMENT - COMPLETE



Description

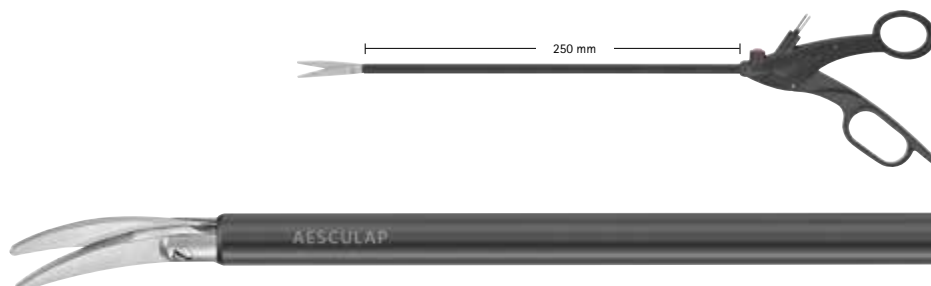
## DEBAKEY PULMONALIS CLAMP

1 x 2 DeBakey jaws,  
50 mm jaw length,  
both sides opening

1/1 FC828R

The Aesculap VATS scissors are made out of a special steel which results in a very high surface hardness and therefore high wear resistance in daily hospital use.

Scissors | Diam. 7 mm | Usable length 250 mm



## METZENBAUM SCISSORS

curved,  
wavecut,  
22 mm jaw length,  
both sides opening

1/1 FC834W



## METZENBAUM SUPERCUT SCISSORS







curved,  
wavecut,  
microtome edge,  
38 mm jaw length,  
both sides opening

1/1 FC835W

Wavecut reduces tissue from slipping out during the cutting process.





SINGLE COMPONENTS		
Jaw Insert	Insulated outer tube	Handle
 <p>1/2</p> <p>FC878R</p>		
	 <p>FC808P</p>	 <p>without ratchet</p> <p>FC800R</p>
 <p>1/2</p> <p>FC884W</p>		 <p>with ratchet, disengageable</p> <p>FC801R</p>
 <p>1/2</p> <p>FC885W</p>		

Microtome Edge - the very sharp cutting edge of the scissors blade facilitates gentle cutting of tissue with minimal use of force

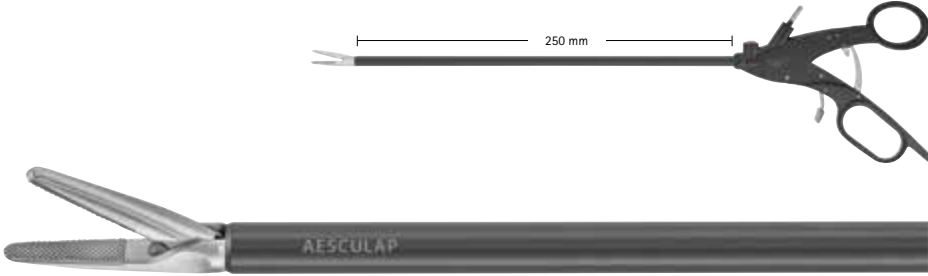
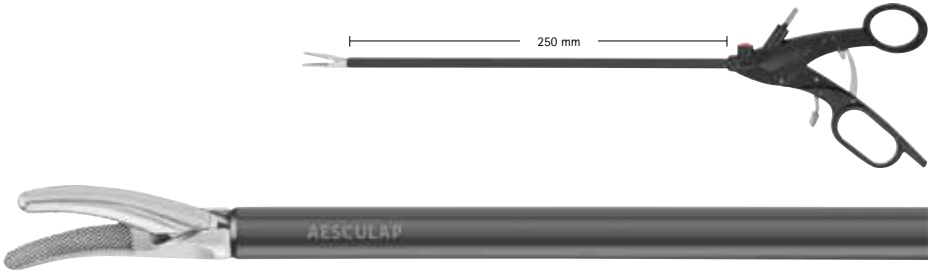
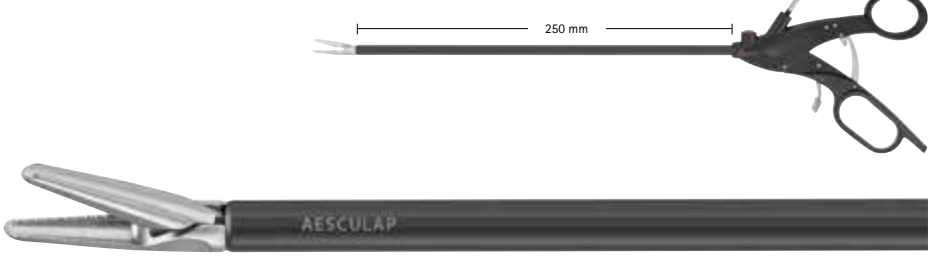


# AESCULAP® VATS INSTRUMENTS

VIDEO-ASSISTED THORACOSCOPIC SURGERY








Needle Holders | Diam. 7 mm | Usable length 250 mm

## STANDARD INSTRUMENT - COMPLETE

		Description
	<p>250 mm</p>	<b>DUROGRIP NEEDLE HOLDER</b> straight, tungsten carbide inserts with 0.5 mm pitch of serration, 25 mm jaw length
	1/1	FC844R
	<p>250 mm</p>	<b>DUROGRIP NEEDLE HOLDER</b> curved, tungsten carbide inserts with 0.5 mm pitch of serration, 25 mm jaw length
	1/1	FC845R
	<p>250 mm</p>	<b>NEEDLE HOLDER SELF-RIGHTING</b> straight, 25 mm jaw length
	1/1	FC846R



SINGLE COMPONENTS

Jaw Insert	Insulated outer tube	Handle
 <p>FC894R</p> <p>1/2</p>	 <p>FC808P</p>	 <p>without ratched</p> <p>FC800R</p>
 <p>FC895R</p> <p>1/2</p>	 <p>FC801R</p>	 <p>with ratchet, disengageable</p> <p>FC801R</p>
 <p>FC896R</p> <p>1/2</p>		



# AESCULAP® VATS INSTRUMENTS

VIDEO-ASSISTED THORACOSCOPIC SURGERY

## Additional Instruments

### STANDARD INSTRUMENT - COMPLETE

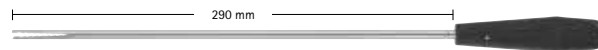


#### Description

#### MONOPOLAR SUCTION TUBE

30° curved,  
diam. 7 mm,  
usable length 250 mm,  
side holes prevent adhering to tissue

<sup>1</sup>/<sub>1</sub> FC852R



#### PLEURA WINDERS




serrated,  
37 mm jaw length,  
diam. 6 mm,  
290 mm usable length



<sup>1</sup>/<sub>1</sub> FC858R



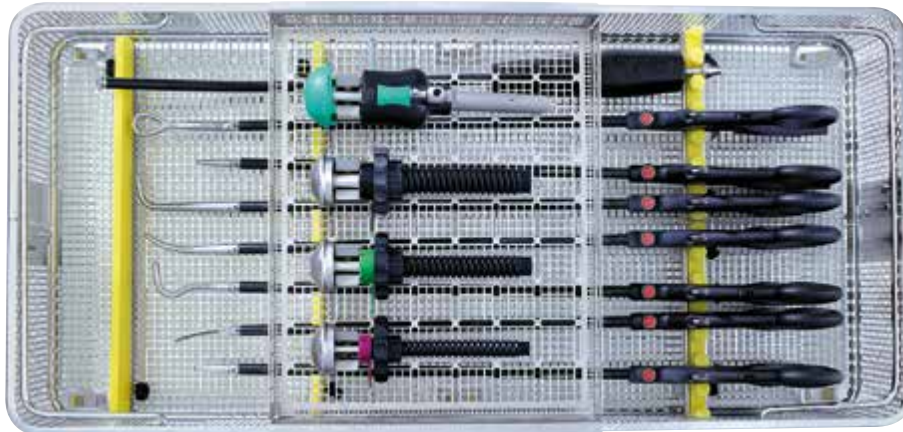
## Spare Parts

		Description
		PUSH ROD FOR VATS INSTRUMENTS straight
	<sup>1</sup> / <sub>2</sub>	FC864810
		PUSH ROD FOR BIOPSY FORCEPS FC870R curved
	<sup>1</sup> / <sub>1</sub>	FC870810
		SUCTION TIP FOR FC852R
	<sup>1</sup> / <sub>1</sub>	FC852202

# AESCULAP® VATS INSTRUMENTS

VIDEO-ASSISTED THORACOSCOPIC SURGERY

## VATS Storage Sample



### Description

Example for sterilization and surgical supply

Note: The reprocessing in a tray must be guaranteed on-site by a corresponding validation. If necessary, use additional cleaning aids (e.g. irrigation sleeves).



## VATS Storage Sample

Unit	Article Code	Description	Dimension
<b>Tray for VATS Instruments</b>			
1 Piece	JC224R	Aesculap Tray with feet (4mm perforation)	536 x 253 x 100 mm
2 Pieces	JG324	Instrument rack for angled instruments	123 x 45 mm
1 Piece	JG310	Instrument rack type 2	240 x 40 mm
1 Piece	JG360	Silicone divider	243 x 41 mm
<b>Tray for Trocars</b>			
1 Piece	JF110R	Tray insert 1/2 Size	196 x 252 x 34 mm
4 Pieces	JG352R	Metal clamp with silicone inlay	15 - 20 mm
<b>Container</b>			
1 Piece	JK442	Bottom for 1/1 Container	592 x 274 x 135 mm
1 Piece	JK489	Inner Lid, basis, silver	
<b>Others</b>			
1 Package (10 Pieces)	JG300	Fixation Pin for Storage Devices	-
1 Piece	JG302	Screwdriver	-



# AESCLAP® VATS INSTRUMENTS

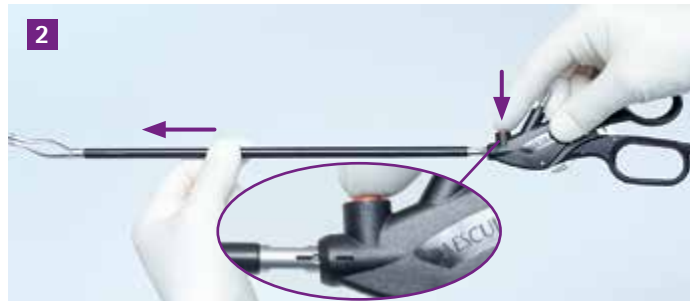
VIDEO-ASSISTED THORACOSCOPIC SURGERY

## Disassembly and Assembly Instructions

### DISASSEMBLY



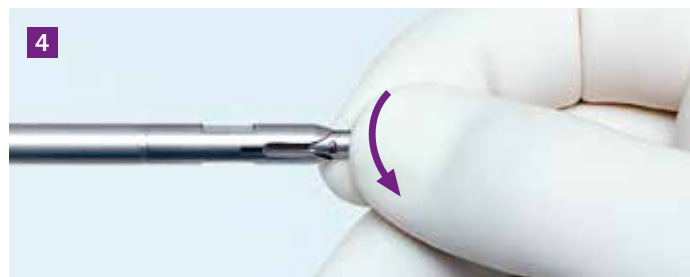
**1**  
**Release the locking mechanism on ratchet handle**  
Push the actuating lever forward.



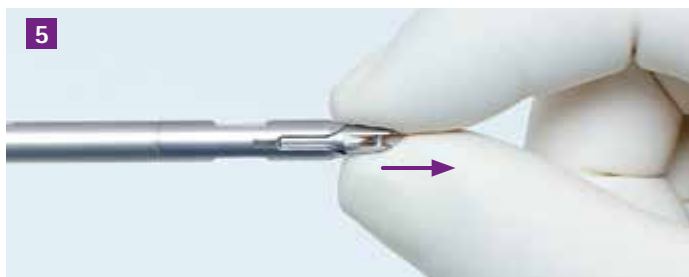
**2**  
**Disconnect shaft and handle**  
Press the red button, remove the shaft by pulling the instrument shaft out of the handle. **IMPORTANT:** Do not hold on the movable part of the handle (lower handle component).



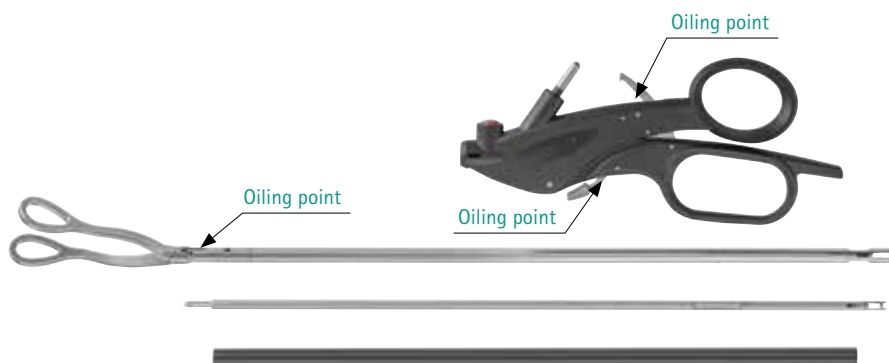
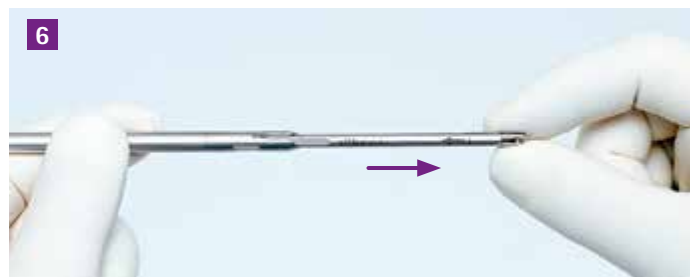
**3**  
**Disassemble shaft I**  
Hold the jaw insert at the tip and remove the outer insulation tube.



**4**  
**Disassemble shaft II**  
Rotate the push rod 90° counterclockwise.



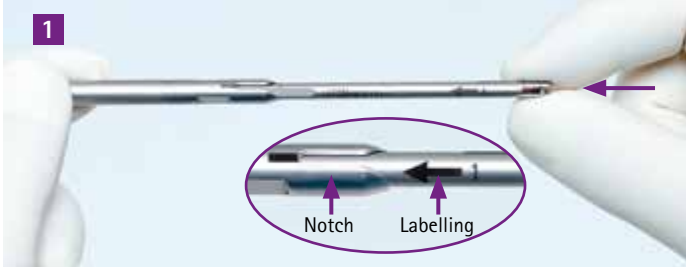
**5**  
**Disassemble shaft III**  
Remove the push rod.



JG600  
including 2 spray nozzles  
Aesculap Oil spray in  
spray cans (CFC-free)  
for instrument care prior  
to sterilization



## ASSEMBLY



### Assemble shaft I

Slide the push rod into the jaw insert as far as it will go. Making sure that the labelling on the push rod (←1) is in line with the notch of the jaw part.



### Assemble shaft II

Rotate the push rod 90° clockwise until it locks into place.



### Assemble shaft III

The labelling on the push rod (←2) is in line with the notch.



### Assemble shaft IV

Slide the black outer tube as far as it will go over the jaw insert.



### Connect shaft and handle I

Release the locking mechanism on the ratchet handle by pushing the actuating lever forward. Hold the tip of the shaft (do not hold on the black outer tube). With the other hand, hold the handle at the labelling. **IMPORTANT:** Do not touch the moveable part of the handle (lower handle component).



### Connect shaft and handle II

Slide the shaft into the handle until it locks into place. Observe the markings. The moveable part of the handle will move down.

Test the assembly of the instrument by opening and closing the handle to ensure that jaw is opening and closing.



# AESCLAP® 3D VISUALIZATION

VIDEO-ASSISTED THORACOSCOPIC SURGERY

EinsteinVision® 3.0 | Benchmark in 3D Surgery



## *EinsteinVision® 3.0*

- „All-in-one“ 3D camera unit with integrated light cable
- Full HD native resolution in both left and right video channel
- Innovative sterile product handling concept based on sterile drape
- Integrated anti-fog function
- Integrated video enhancement algorithms
- Autofocus function
- Digital zoom
- Automatic plug and play recognition of 2D or 3D camera
- Favorites setting control on camera unit
- Long-life LED light source with increased luminous efficiency
- Automatic light intensity control
- 2D/3D archiving system (picture and video) in full HD resolution
- Comprehensive data security concept
- Supports DICOM 3.0 and HL7 standards
- Available WLAN connectivity

Article no.	Description
PV630	3D camera control unit
PV631	EinsteinVision 3.0 camera head, 0°, 10mm
PV632	EinsteinVision 3.0 camera head, 30°, 10mm
PV641SU	Sterile drape for 0° camera head (pack of 10)
PV642SU	Sterile drape for 30° camera head (pack of 10)
PV482	2D CMOS camera head (optional)
PV646	3D Full HD monitor 32"
OP950	LED light source
PV640	Eddy 3D documentation system
PV904	2D Full HD monitor 21.5"
PV621	3D standard glasses (pack of 15)
PV622	3D anti-fog glasses (pack of 5)
PV623	3D clip-on glasses (pack of 1)
PV624	3D eye shield glasses (pack of 1)
PG150	Flow50 Insufflator (For insufflation accessories please ask for our brochure C94202)
PV800	Trolley (For trolley accessories please ask for our brochure C94402)



For 2D solution refer to brochure C46702



# AESCULAP® ADVANCED BIPOLAR SEAL AND CUT

## VIDEO-ASSISTED THORACOSCOPIC SURGERY

### Caiman®

Caiman is intended to be used as a multipurpose vessel sealing instrument in laparoscopic and open surgery within the surgical fields of general surgery, gynecology, urology and thoracic surgery.

#### ■ ONE SEAL CONFIDENCE

State of the art vessel sealing with only one energy activation

#### ■ UNIFORM TISSUE COMPRESSION

Leads to consistent sealing quality from distal to proximal tip\*



#### ■ TIP FIRST CLOSURE

Retains tissues within the jaws for improved compression



#### ■ LONG JAW TIP

Enlarged vessel sealing length and improved surgical efficiency



#### 80° ARTICULATING JAW







The Caiman line are the first RF tissue and vessel sealing instruments with an articulating jaw – providing a more flexible, agile device for surgical procedures.

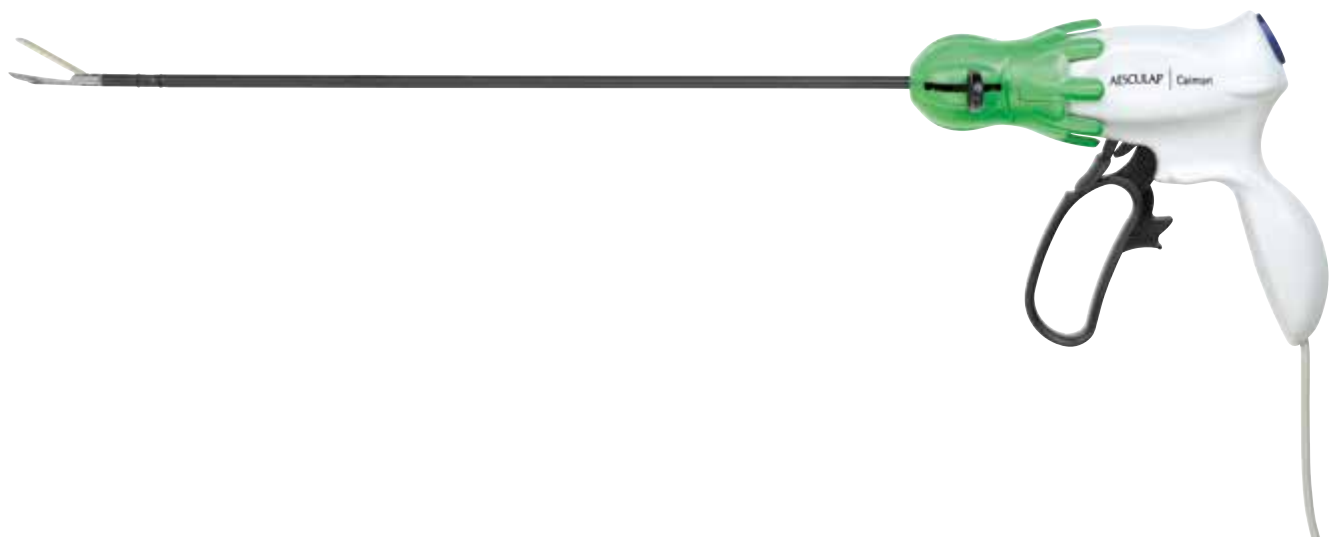
**CAIMAN INSTRUMENTS SEAL** vessels up to 7 mm in diameter and feature an average thermal spread of less than 1 mm.\* Effectively seals with virtually no adhesion or charring.



Learn more about Caiman Seal and Cut instruments by visiting [www.caiman-aesculap.com](http://www.caiman-aesculap.com)

# TECHNOLOGY

		Shaft diameter	Working length	Pcs per pack
<b>CAIMAN 5, NON ARTICULATING JAW</b>				
	PL718SU** / PL738SU***	5 mm	24 cm	6
	PL720SU** / PL740SU***	5 mm	36 cm	6
	PL722SU** / PL742SU***	5 mm	44 cm	6
<b>CAIMAN 5, ARTICULATING JAW</b>				
	PL719SU** / PL739SU***	5 mm	24 cm	6
	PL721SU** / PL741SU***	5 mm	36 cm	6
	PL723SU** / PL743SU***	5 mm	44 cm	6
<b>LEKTRAFUSE RF-GENERATOR (WITHOUT MAIN CABLE)</b>				
	GN200			
<b>LEKTRAFUSE RF-GENERATOR ACCESSORIES</b>				
	TE780 / TE730	Main Cable, Grounding-type European plug, 1.5 m / 5 m		
	TE734	Main Cable for Great Britain and Ireland, 5 m		
	TE735	Main Cable for USA, Canada and Japan, 3.5 m		
	TE676 / TE736	Main Cable, IEC 60320 connector (non-heating equipment), 1 m / 2.5 m		
	GN330	Unit cart with sliding handle for electrosurgical units W x H x D: 520 x 900 x 570 mm		
	PV951R	Wire basket W x H x D: 370 x 225 x 285 mm		
	GN201	Single pedal foot switch for GN200		



\*\* Ordering number for the following countries: CN, KR, BR, JP, RU, BO, CO, MY, SG, AR, EC, TW

\*\*\* Ordering number for the following countries: UK, DE, FR, ES, PL, IT, SE, CZ, NL, BE, LU, PT, AT, CH, BA, DK, FI, IE, SK, NO, TR, HU, RO, BG, CY, SI, GR, KZ, US, ID, PH, AU, NZ, HK, MX, PE, AZ, CL, JO, KW, LY, NC, IN

# AESCULAP® LIGATION CLIPS

VIDEO-ASSISTED THORACOSCOPIC SURGERY

Challenger® Ti-P - first pneumatic driven multifire clip system



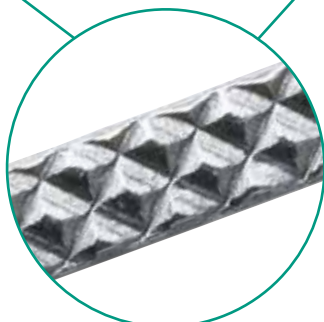
## First pneumatic driven multifire clip applicator

- Simple disassembly
- Innovative technology – pneumatic clip loading
- Reusable System – reusable applicator and single use clip cartridge
- One System with different shafts



# ML

# SM



- Diamond-shaped inner clip profile provides an enlarged contact surface



- The special closing characteristic of the clip allows a repositioning of the clip and reduces undesirable tissue slippage out of the clip

Description



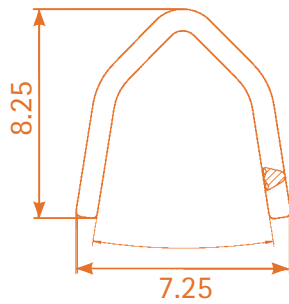
**CLIP APPLICATOR**  
diameter 10 mm  
working length 370 mm

PL606R



**CLIP APPLICATOR**  
diameter 10 mm  
working length 260 mm

PL608R



**CLIP BOX**  
with 12 sterile cartridges of  
8 titanium clips and 12 CO<sub>2</sub> cylinders,  
last clip color-coded

clip size: **medium-large (ML)**

PL579T



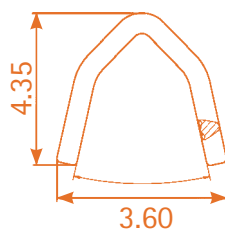
**CLIP APPLICATOR**  
diameter 5 mm  
working length 310 mm

PL604R



**CLIP APPLICATOR**  
diameter 5 mm  
working length 205 mm

PL603R



**CLIP BOX**  
with 12 sterile cartridges of  
12 titanium clips and 12 CO<sub>2</sub> cylinders,  
last clip color-coded

clip size: **small-medium (SM)**

PL574T

# AESCULAP® LIGATION CLIPS

VIDEO-ASSISTED THORACOSCOPIC SURGERY

## Titanium Ligation Clips



The AEscULAP® clip applicators offer the following advantages:

- Narrow, delicate instrument tips enable an improved overview
- Product variety - versatile application due to wide product portfolio
  - 150 mm, 203 mm and 280 mm instrument lengths
  - 25°, 65° and 90° jaw angulation
- Color coding simplifies the identification of suitable clip applicators and cartridges

The clip applicators in conjunction with the proven AEscULAP® Titanium Ligation Clips, a reliable combination!

- Diamond-shaped inner clip profile provides an enlarged contact surface
- The special closing characteristic of the clip reduces undesirable tissue slippage out of the clip
- Special soft load clip cartridge for easy clip release
- Indentations on the cartridge sides for more reliable handling
- Adhesive surface on the cartridge for a strong hold

Tip-first closing characteristic of the clips


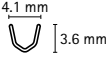

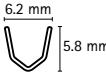

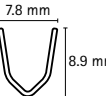

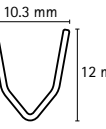


**FB270R**  
Clip tray to fix clip cartridges





Diamond-shaped inner clip profile








	Color code	1:1 Illustration	Article code	pack of
SMALL			<b>PL565T</b>	30 cartridges of 6 clips
MEDIUM			<b>PL567T</b>	30 cartridges of 6 clips
MEDIUM-LARGE MEDIUM-LARGE (Z)			<b>PL568T</b>	20 cartridges of 6 clips
LARGE LARGE (Z)			<b>PL561T</b>	20 cartridges of 6 clips

#### Clip Appliers

SMALL 	<b>FB222R</b>	<b>FB223R</b>	<b>FB226R</b>	<b>FB224R</b>	<b>FB227R</b>	
Angled	25°	25°	65°	25°	65°	
Length	150 mm	203 mm	203 mm	280 mm	280 mm	
MEDIUM 	<b>FB234R</b>	<b>FB235R</b>	<b>FB238R</b>	<b>FB236R</b>	<b>FB239R</b>	
Angled	25°	25°	65°	25°	65°	
Length	150 mm	203 mm	203 mm	280 mm	280 mm	
MEDIUM-LARGE 	<b>FB240R</b>	<b>FB243R</b>	<b>FB254R</b>	<b>FB242R</b>	<b>FB245R</b>	<b>FB255R</b>
Angled	25°	65°	90°	25°	65°	90°
Length	203 mm	203 mm	203 mm	280 mm	280 mm	280 mm
LARGE 	<b>FB246R</b>	<b>FB249R</b>	<b>FB252R</b>	<b>FB248R</b>	<b>FB251R</b>	<b>FB253R</b>
Angled	25°	65°	90°	25°	65°	90°
Length	203 mm	203 mm	203 mm	280 mm	280 mm	280 mm

#### Endoscopic Clip Appliers

MEDIUM 	<b>PL504R</b>
Shaft diam.	10 mm
Length	330 mm
MEDIUM-LARGE 	<b>PL503R</b>
Shaft diam.	10 mm
Length	330 mm
LARGE 	<b>PL528R</b>
Shaft diam.	12 mm
Length	330 mm

# AESCU LAP<sup>®</sup> ACCESSORIES

VIDEO-ASSISTED THORACOSCOPIC SURGERY

Thoracoscopy Trocars | 75 mm length

				Description
 <p>EJ839R</p>	 <p>Package of 3 pcs. EJ804P</p>	 <p>Package of 20 pcs. EJ417255</p>	 <p>1/2 EJ347P</p>	<p><b>TROCAR COMPLETE</b> without valve, teflon trocar sleeve, 75 mm plastic body sealing cap canulated obturator, blunt diameter 7 mm</p>
 <p>EJ361R</p>	 <p>Package of 1 pc. EJ814200</p>	 <p>Package of 20 pcs. EJ449255</p>	 <p>1/2 EJ342P</p>	<p><b>TROCAR COMPLETE</b> without valve, teflon trocar sleeve, 75 mm plastic body sealing cap blunt obturator, not canulated diameter 10 mm</p>
 <p>EJ359R</p>	 <p>Package of 3 pcs. EJ824P</p>	 <p>Package of 20 pcs. EJ450255</p>	 <p>1/2 EJ352P</p>	<p><b>TROCAR COMPLETE</b> without valve, teflon trocar sleeve, 75 mm plastic body sealing cap canulated obturator, blunt diameter 13 mm</p>

Description



EINSTEIN VISION 2.0 TROCAR SLEEVE

smooth, with tap  
diameter 10 mm  
working length 60 mm

1/2

EK043R



TROCAR PIN

conical blunt  
diameter 10 mm  
length 110 mm

1/2

EK058R



UNIVERSAL SEALING UNIT

for trocars with diam. 10/12 mm  
20 units  
accommodates 5 -12 mm instruments

1/2

EK002SU



SEALING UNIT

for trocars with diam. 10/12 mm  
accommodates 10 - 12 mm instruments

1/2

EK086P

# AESCULAP® ACCESSORIES

VIDEO-ASSISTED THORACOSCOPIC SURGERY

## Monopolar Electrodes



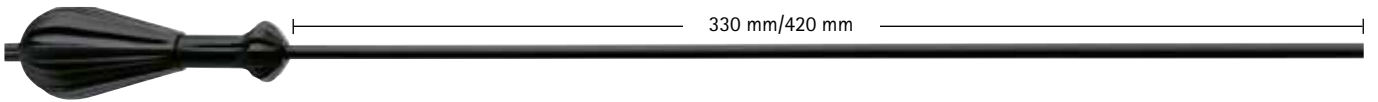
### Modular System

- Easy disassembling
- Bayonet connection
- Optimized cleaning abilities
- Individual combination
- Quick exchange of single components

### HF Safety

- Robust ceramic tips
- Complete insulation up to the working
- Heat resistant outer tube insulation

Description



4 mm 

HANDLE FOR  
MONOPOLAR LAPAROSCOPY ELECTRODES  
diam. 5 mm

	working length
GK372R	330 mm
GK374R	420 mm



HOOK ELECTRODE

J-shaped

GK383R



HOOK ELECTRODE TIP

L-shaped

GK384R



BALL ELECTRODE

GK385R



SPATULA ELECTRODE

GK386R



HOOK ELECTRODE TIP

J-shaped

GK393R



HOOK ELECTRODE TIP

J-shaped, 90° curved to the right

GK394R



BALL ELECTRODE

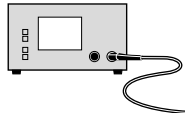









curved

GK395R

# AESCULAP® ACCESSORIES

VIDEO-ASSISTED THORACOSCOPIC SURGERY

## Monopolar Connecting Cable

Equipment side	Instrument side	Description
		Monopolar connecting cable 3.5 m on the instrument side for a 4 mm contact pin
	 4 mm $\varnothing$ socket	<b>GN202</b> AESCULAP, ACMI, Berchtold, Martin
 5 mm $\varnothing$	 4 mm $\varnothing$ socket	<b>GK239</b> ERBE ICC /ACC, KARL STORZ
 4 mm $\varnothing$	 4 mm $\varnothing$ socket	<b>GK245</b> ERBE T
 8 mm $\varnothing$	 4 mm $\varnothing$ socket	<b>GK246</b> Valleylab, ACMI, Conmed, Eschmann, Erbe ICC Intern., US-Norm

## Accessories



**GK299**  
Wire brush for cleaning the electrodes

# Units



## Description

**GN640** Nelson® deluxe  
Electrosurgical generator,  
monopolar/bipolar

## FEATURES

- Starts with the push of a button
- Individually programmable (e.g., according to indication or surgeon)
- 14 separate memories
- Clear information display in color
- Monopolar and bipolar cutting and coagulating
- Freely selectable cutting quality
- Safety features
- Nelson deluxe automatically recognizes coded instruments

### ■ Mains supply

100 - 240 V / 50 / 60 Hz

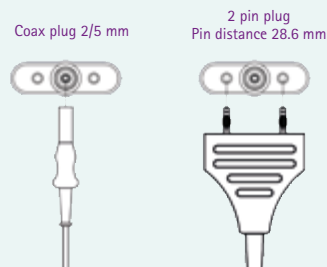
### monopolar (Watt)

POWERCUT 1	300
POWERCUT 2	250
POWERCUT 3	200
POWERCUT 4	150
MICROCUT 1 + 2	300
SEALCUT	100
SOFTCOAG	100
CONTACTCOAG	120
FORCED COAG	120
SPRAYCOAG	120

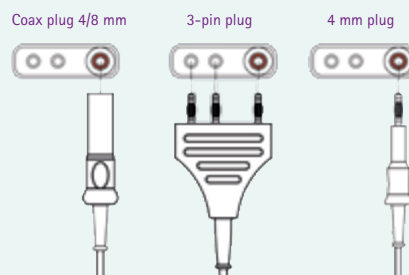
### bipolar (Watt)

BICUT 1	100
BICUT 2	100
COAG	100

### Electrosurgical unit featuring 2 bipolar outputs











### Electrosurgical unit featuring 2 monopolar outputs



# AESCULAP® ACCESSORIES

VIDEO-ASSISTED THORACOSCOPIC SURGERY

## Knot Pusher and Exploratory Probes

	Description
 <span>1/1</span>	<b>KNOT PUSHER</b> working length 260 mm diameter 5 mm
	<b>FC355R</b>
 <span>1/1</span>	<b>KNOT PUSHER</b> working length 310 mm diameter 5 mm
	<b>PL432R</b>
 <span>1/1</span>	<b>EXPLORATORY PROBE WITH RETENTION FUNCTION AND SCALING</b> working length 400 mm diameter 5 mm
	<b>BN320R</b>
 <span>1/1</span>	<b>EXPLORATORY PROBE WITH RETENTION FUNCTION AND SCALING</b> working length 500 mm diameter 5 mm
	<b>BN321R</b>



## Retrieval Bag - Single use product

Cat. No.	Description	Size (mm)	Volume (ml)	Trocar Ø (mm)	Pieces/Pack
EJ022SU	Retrieval bag with memory wire	85 x 160 mm	210 ml	10 mm	10 pieces
EJ023SU	Detachable retrieval bag	90 x 150 mm	260 ml	10 mm	5 pieces
EJ024SU	Detachable retrieval bag	130 x 170 mm	720 ml	10 mm	5 pieces
EJ025SU	"Simple" retrieval bag	76 x 150 mm	200 ml	10 mm	20 pieces



### Retrieval bag with memory wire

- Easy intra-abdominal opening and insertion of tissue
- Simple intra-abdominal closure
- Especially stable, transparent bag
- Tapered bag design for easier removal
- For use with 10 mm trocars
- Insertion sleeve for easy insertion
- Bag volume 210 ml

### Detachable retrieval bag

- Self-opening with metal ring
- Bag volume 260 ml and 720 ml
- Bag can be opened and closed intraoperatively
- Bag can be intraoperatively detached
- Especially stable, transparent bag
- For use with 10 mm trocars
- Insertion sleeve for easy insertion

### "Simple" retrieval bag

- Simple, low-cost retrieval bag
- Red cord for secure bag holding
- Especially stable, transparent bag
- For use with 10 mm trocars
- Insertion sleeve for easy insertion
- Bag volume 200 ml

# AESCULAP® ACCESSORIES

VIDEO-ASSISTED THORACOSCOPIC SURGERY

## Sutures and Hemostats




B. Braun offers a wide range of absorbable sutures, non-absorbable sutures, customized surgical procedures sutures sets (Pro-Set) and special suture sets, as well as a comprehensive range of meshes, biosurgicals and other products for wound closure.

Absorbable

## Novosyn®



Advantages	Product overview	
<ul style="list-style-type: none"> <li>■ Smooth knot run-down</li> <li>■ Gentle knot repositioning</li> <li>■ High knot holding capacity</li> <li>■ Minimized inflammatory reaction</li> </ul>	Structure	Multifilament, braided
		
	Colour	Violet or undyed
	Chemical composition	Poly(glycolide-co-l-lactid 90 / 10)
	Coating	Poly(glycolide-co-l-lactid 35 / 65) + calcium stearate
	Origen	Synthetic
	Sizes	USP 2 (metric 5) - USP 8 / 0 (metric 0.4)
	Type of absorption	Hydrolysis, complete mass absorption in 56 to 70 days
	Sterilisation	Ethylene oxide

Absorbable

## Monosyn®



### Advantages

- Ideal degradation profile for soft tissue
- Smooth tissue passage
- Easy handling
- High knot-pull tensile strength
- Excellent knot security
- Rapid mass absorption

### Product overview

#### Structure

Monofilament



#### Colour

Violet or undyed

#### Chemical composition

Glyconate (72 % glycolide, 14 % trimethylene carbonate, 14 %  $\epsilon$ -caprolactone)

#### Coating

Uncoated

#### Origin

Synthetic

#### Sizes

USP 7/0 (0.5 metric) to USP 2 (5 metric)

#### Type of absorption

Absorption by hydrolysis

#### Sterilisation

Ethylene oxide

## MonoPlus®



### Advantages

- High knot tensile strength
- Outstanding strength retention for extended wound support
- Very flexible
- Pliable and easy to knot
- Smooth passage through tissue

### Product overview

#### Structure

Monofilament



#### Colour

Violet

#### Chemical composition

Polydioxanone

#### Coating

Uncoated

#### Origin

Synthetic

#### Sizes

USP 7/0 (0.5 metric) to USP 2 (5 metric)

#### Type of absorption

Absorption by hydrolysis

#### Sterilisation

Ethylene oxide

# AESCULAP® ACCESSORIES

VIDEO-ASSISTED THORACOSCOPIC SURGERY

## Sutures and Hemostats

Non-Absorbable

### Optilene®



#### Advantages

- Top level consistent tensile strength
- Excellent surface and smoothness
- Controlled knot run down
- Small tissue drag; Reengineered elasticity
- Controlled suture elongation
- Increased pliability
- Good handling and knot tightness
- Improved thread visibility
- Low memory effect
- CV Pass and CV Pass EasyBlack needles

#### Product overview

Structure	Monofilament
Colour	Blue
Chemical composition	Polypropylene and polyethylene
Coating	Uncoated
Origin	Synthetic
Sizes	USP 10/0 (0.2 metric) to USP 0 (3.5 metric)
Type of absorption	Non-absorbable
Sterilization	Ethylene oxide



### Surgical Loop



#### Product overview

Structure	Tube
Colour	White, blue, yellow, red
Chemical composition	Silicone
Coating	Uncoated
Origin	Synthetic, natural
Sizes	1.5 - 2.5 mm (silicone)
Type of absorption	Non-absorbable
Sterilisation	Ethylene oxide

Colour / code

Diameter	Length	Units / box	white	blue	yellow	red
1.5 mm	2 x 45 cm	24	B1095048	B1095021	B1095030	B1095013
1.5 mm	75 cm	24	B1095242	B1095226	B1095234	B1095218
2.5 mm	2 x 45 cm	24	B1095145	B1095129	B1095137	B1095110
2.5 mm	75 cm	24	B1095544	B1095528	B1095536	B1095510

## Lyostypt®



Lyostypt® is a collagen hemostat indicated for topical hemostasis in cases of capillary bleeding, oozing hemorrhages, suture hole bleeding and as a supportive measure for other hemostatic techniques.

Lyostypt® demonstrated its better hemostatic performance and easier handling versus oxidized regenerated cellulose in the COBBANA trial.

### Lyostypt®

- Collagen hemostat
- Fleece presentation

### Benefits

- Immediate attachment to bleeding site
- Repositioning possible
- Excellent hemostasis
- Biocompatible
- Cost-effective
- Can be combined with fibrin glue<sup>2</sup> and/or antibiotics
- Absorbable

### Indications

- Capillary bleeding
- Oozing
- Suture hole bleeding

## Cellistypt®



Cellistypt® is an oxidized resorbable cellulose hemostat of 100 % vegetal origin, available in three different formats which allows you to choose the most suitable one for every occasion.

### Benefits

- Easy to use
- Biocompatible
- Absorbable
- Adaptable
- Free of human and animal components

### Indications

For hemostasis of capillary bleeding, oozing and minor venous and arteriolar bleeding

### Cellistypt®

- Basic format
- Flexible
- Can be cut or folded
- Can form a scarf around anastomoses

### Cellistypt® D-K

- Dense knitted format
- Can be used to wrap organs and structures
- Can be sutured

### Cellistypt® F

- Fibrillar format
- Versatile
- Can be applied in small layers
- Easy to position in hard to reach places

# AESCULAP® PREMIUM SOLUTION FOR VATS

VIDEO-ASSISTED THORACOSCOPIC SURGERY





This brochure includes several products, independently of one another. For the exact indication, please refer to the respective instructions for use at <https://extranet.bbraun.com>.

# AESCULAP<sup>®</sup> – a B. Braun brand

Aesculap AG | Am Aesculap-Platz | 78532 Tuttlingen | Germany  
Phone +49 7461 95-0 | Fax +49 7461 95-2600 | [www.aesculap.com](http://www.aesculap.com)

The main product trademark "Aesculap" is a registered trademark of Aesculap AG.

Subject to technical changes. All rights reserved. This brochure may only be used for the exclusive purpose of obtaining information about our products. Reproduction in any form partial or otherwise is not permitted.