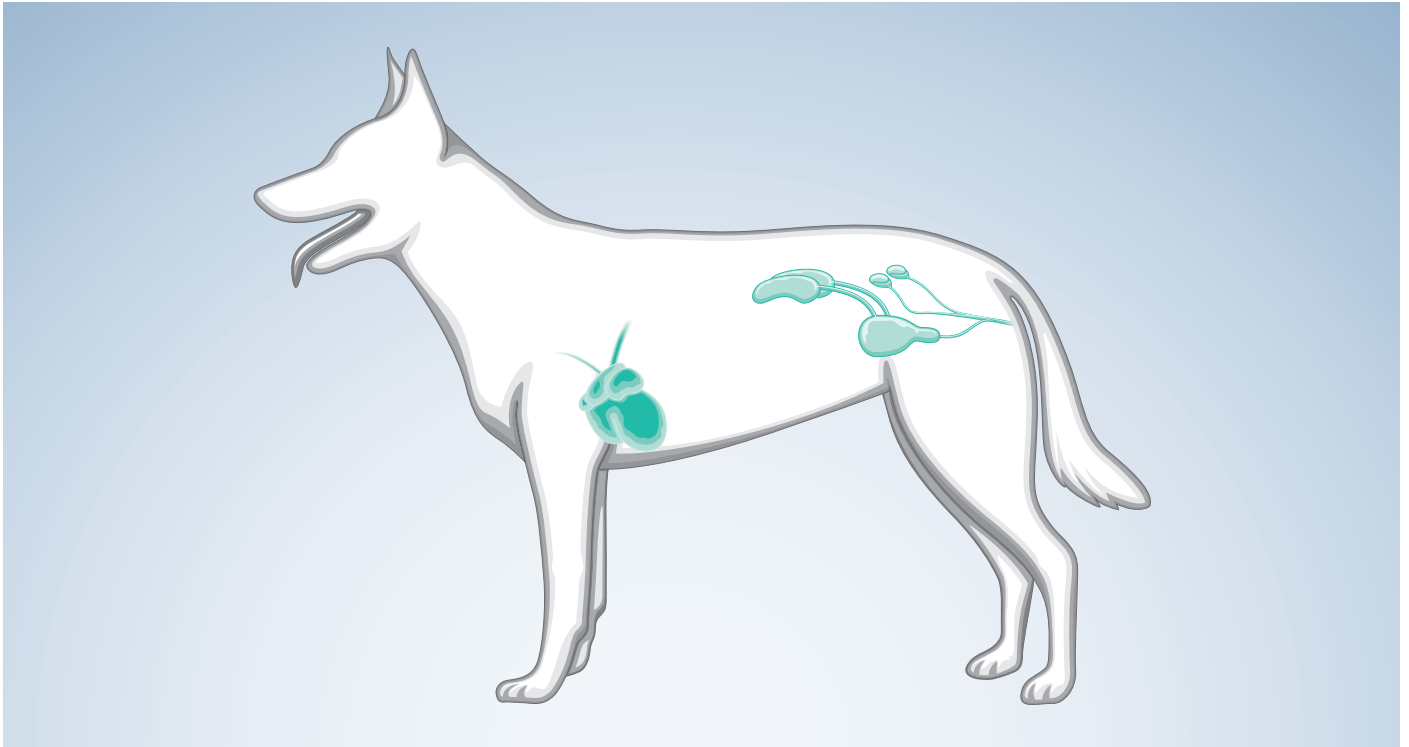


# MINIMALLY INVASIVE SURGERY AND ELECTROSURGERY



# INTRODUCTION



## LAPAROSCOPY, THORACOSCOPY; SMALL SURGICAL ACCESS, GENTLE INTERVENTION

Every surgical intervention is a stress on the patient. In laparoscopy and thoracoscopy, gentler intervention and a shorter convalescence can be achieved through minimally invasive surgical accesses. The animal is free of pain quicker and can transition back to normal activity. Yet, at the same time, there are no compromises. The anticipated therapeutic success must be the same or greater than that of an open surgery.

We aim to shape and participate in the progress of minimally invasive surgery. We see new approaches particularly in visualization, seal & cut solutions and high-precision instruments. That's why we are focusing on consistent advancement of camera systems, including 3D technology, and on products for vessel closure such as Caiman® and DS-Clips and handheld instruments.

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Abdominal Access Seal and Cut

Abdominal Access	
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# ABDOMINAL ACCESS



## MINIMALLY INVASIVE TROCAR SYSTEM (SILICON FLAP VALVE)



In the development of the trocar, we have paid particular attention to the aspects highlighted by end users:

- High instrument friction
- Damage to the instrument surface or the endoscope and instrument tips
- No permanent CO2 seal
- Cost efficiency considerations

Our trocar line has taken all these aspects into consideration and results in a product which meets the market requirements. A resterilisable silicone flap valve is the center-piece of these trocars.

### Complete Trocars

5.5 mm x 110 mm	10 mm x 110 mm	13 mm x 110 mm
EJ701R	EJ751R	EJ580R

With insufflation connection



## MINIMALY INVASIVE TROCAR SYSTEM (SILICON FLAP VALVE)

Standard Trocar Body		Special Trocar Body (Manual Opening)		Trocar Shaft (S-Steel, smooth)		Trocar Shaft (S-Steel, with thread)	
Ø 5.5 mm	Article No	Ø 5.5 mm	Article No	Ø 5.5 mm	Article No	Ø 5.5 mm	Article No
5.5 mm	EJ700R	EJ710R			EJ702R 60mm		EJ703R 60mm
					EJ712R 110mm		EJ713R 110mm
					EJ722R 150mm		
Ø 10 mm	Article No	Ø 10 mm	Article No	Ø 10 mm	Article No	Ø 10 mm	Article No
10 mm	EJ750R	EJ760R			EJ752 110mm		EJ753R 110mm
					EJ762R 150mm		
Ø 13 mm	Article No	Ø 13 mm	Article No	Ø 13 mm	Article No	Ø 13 mm	Article No
13 mm	EJ581R	EJ582R 110mm			EJ583R 110mm		EJ584R 110mm
							





# MINIMALLY INVASIVE TROCAR SYSTEM (SILICON FLAP VALVE)

Trocar shaft threaded (Plastic)		Trocar Body Triangle obturator		Trocar Shaft Conical obturator (Sharp)		Trocar Shaft Conical obturator (Blunt)	
Ø 5,5 mm	Article No	Ø 5.5 mm	Article No	Ø 5.5 mm	Article No	Ø 5.5 mm	Article No
5.5 mm		EJ704P 60mm		EJ705R 60mm		EJ706R 60mm	
		EJ714P 110mm		EJ715R 110mm		EJ716R 110mm	EJ718R 110mm
		EJ725R 150mm				EJ720R 150mm	
Ø 10 mm	Article No	Ø 10 mm	Article No	Ø 10 mm	Article No	Ø 10 mm	Article No
10 mm		EJ754P 110mm		EJ755R 110mm		EJ756R 110mm	EJ558R 110mm
		EJ764P 150mm		EJ765R 150mm		EJ766R 150mm	EJ568R 150mm
Ø 13 mm	Article No	Ø 13 mm	Article No	Ø 13 mm	Article No	Ø 13 mm	Article No
13 mm		EJ585R 110mm		EJ586R 110mm		EJ587R 110mm	EJ588R 110mm

# REDUCING SLEEVES AND SEALING CAPS




Reducing Sleeves	Working Length	Diameter	Guide	Sealing Cap	Pack Size
PL650R	150 mm	5 mm	4 mm	PL650/250	20 pcs.
EJ601R	165 mm	10 mm	5.5 mm	EJ601/250	20 pcs.
EJ602R	165 mm	13.0 mm	5.5 mm	EJ646P	20 pcs.
EJ604R	165 mm	13.0 mm	10 mm	EJ645P	20 pcs.
EJ609R	165 mm	15 mm	10 mm	EJ021P	10 pcs.
EJ614R	190 mm	20 mm	10 mm	EJ624P	10 pcs

Sealing Cap	Diameter	Pack Size	Article No.
	5.5 mm	20 pcs.	EJ446
	10.0 mm	20 pcs.	EJ449
	12.5 mm	20 pcs.	EJ450
	13.0 mm	20 pcs.	EJ643P

# REDUCING SLEEVES AND SEALING CAPS





Sealing Cap Set	Article No.	Pack Size
	Black: 5 x 10 x 12.5 mm EJ641P  Yellow: 5 x 10 x 13.0 mm EJ642P	5 pcs.

Sealing Cap Set	Article No.	Pack Size
	EJ640P	5 pcs.


# AESCULAP SINGLE USE TROCARS

Single use Trocar set, consisting of: trocar sleeve, sealing unit, dilating trocar pin

Smooth with Stopcock		
Ø 5 mm	Article No	Pack Size
	EK210SU 60 mm	6
	EK214SU 110 mm	
	EK218SU 150 mm	

Threaded with Stopcock		
Ø 5 mm	Article No	Pack Size
	EK212SU 60 mm	6
	EK216SU 110 mm	

Single use sleeve consisting of: trocar sleeve and sealing unit


Smooth with Stopcock		
Ø 5 mm	Article No	Pack Size
	EK110SU 60 mm	6
	EK114SU 110 mm	
	EK118SU 150 mm	

Smooth without Stopcock		
Ø 5 mm	Article No	Pack Size
	EK111SU 60 mm	6
	EK115SU 110 mm	


# AESCULAP SINGLE USE TROCARS

Single use sleeve consisting of: trocar sleeve and sealing unit

## Threaded with Stopcock

Ø 5 mm	Article No	Pack Size
	EK112SU 60 mm	6
	EK116SU 110 mm	

## Threaded without Stopcock

Ø 5 mm	Article No	Pack Size
	EK113SU 60 mm	6
	EK117SU 110 mm	

## Single use trocar pin

Ø 5 mm	Article No	Pack Size
	EK148SU 60 mm	6
	EK149SU 110 mm	
	EK150SU 150 mm	

## Single use sealing unit for trocars


Ø 5 mm	Article No	Pack Size
	EK001SU 60 mm	20
Ø 10-12 mm	Article No	Pack Size
	EK002SU	20
	Accommodates 5-12 mm instruments	

# AESCULAP SINGLE USE TROCAR

Single use Trocar set, consisting of: trocar sleeve, sealing unit, dilating trocar pin


Smooth with Stopcock			Threaded with Stopcock		
Ø 10 mm	Article No	Pack Size	Ø 10 mm	Article No	Pack Size
	EK224SU 110 mm	6		EK226SU 110 mm	6
	EK228SU 150 mm				

Single use Trocar set, consisting of: trocar sleeve and sealing unit


Smooth with Stopcock			Threaded with Stopcock		
Ø 10 mm	Article No	Pack Size	Ø 10 mm	Article No	Pack Size
	EK124SU 110 mm	6		EK126SU 110 mm	6
	EK128SU 150 mm				

# AESCULAP SINGLE USE TROCAR

## Single use trocar pin

Ø 10 mm	Article No	Pack Size
	EK159SU 110 mm	6
	EK160SU 150 mm	

## HASSON trocar set includes: Trocar sleeve, blunt trocar pin and cone.

Ø 10 mm	Article No	Pack Size
	EK230SU 110 mm	6

## Single use Trocar set, consisting of: trocar sleeve, sealing unit, dilating trocar pin

### Smooth with Stopcock

Ø 12 mm	Article No	Pack Size
	EK234SU 110 mm	6
	EK238SU 150 mm	

### Threaded with Stopcock

Ø 12 mm	Article No	Pack Size
	EK236SU 110 mm	6

# AESCULAP SINGLE USE TROCAR

Single use Trocar set consisting of: trocar sleeve and sealing unit

Smooth with Stopcock		
Ø 12 mm	Article No	Pack Size
	EK134SU 110 mm	6
	EK138SU 150 mm	

Threaded with Stopcock		
Ø 12 mm	Article No	Pack Size
	EK136SU 110 mm	6

Single use trocar pin		
Ø 12 mm	Article No	Pack Size
	EK169SU 110 mm	6
	EK170SU 150 mm	

HASSON trocar set includes: Trocar sleeve, blunt trocar pin and cone.		
Ø 12 mm	Article No	Pack Size
	EK240SU 110 mm	6



# SEAL AND CUT

## AESCULAP® CAIMAN®

### ADVANCED BIPOLAR SEAL AND CUT TECHNOLOGY

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.

#### ■ TISSUE DISSECTION

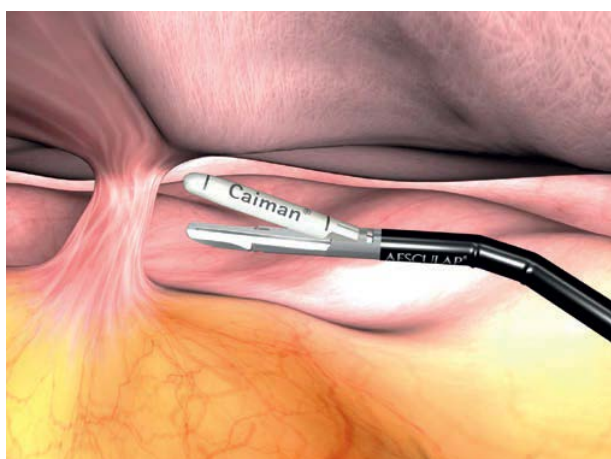
Fine curved Maryland jaw design allows increased dissection performance and enhanced tip visualization.

#### ■ LONG JAW TIP

Enlarged vessel sealing length and improved surgical efficiency.

#### ■ 80 DEGREE ARTICULATION JAW

Allows simplified navigation in challenging anatomy.



#### Caiman® INSTRUMENTS

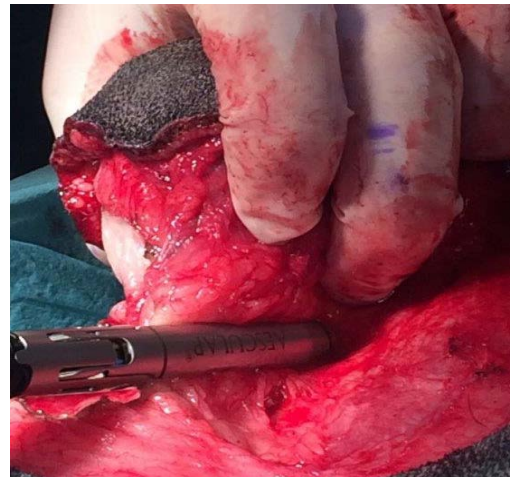
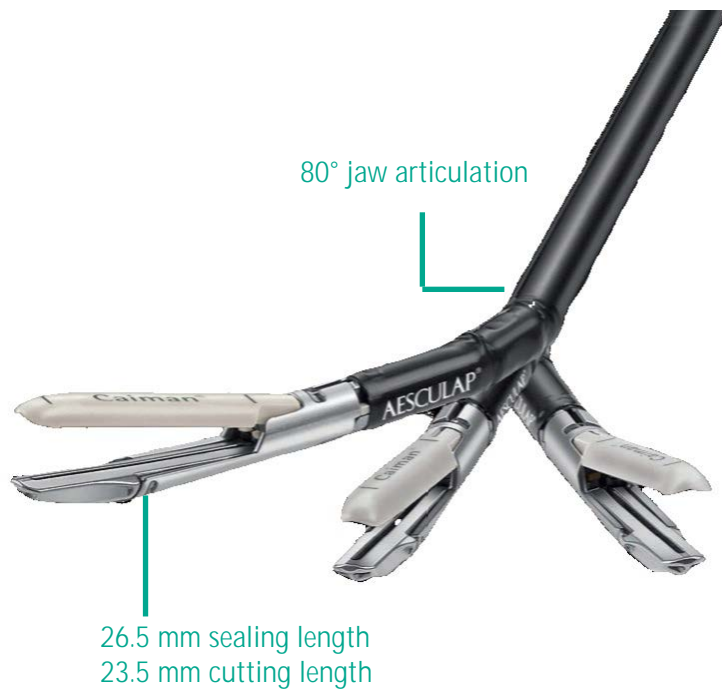
Seal vessels up to 7 mm in diameter and feature an average thermal spread of less than 1 mm.\* Effectively seals with virtually no adhesion or charring.

#### 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.

\*Data on file at Aesculap AG.

Learn more about Caiman® Seal and cut instruments by visiting [www.bbraun.com/caiman](http://www.bbraun.com/caiman)



Tumor removal with 12mm Caiman



Soft Palate resection with 5mm Caiman

### STRONG UNIFORM COMPRESSION

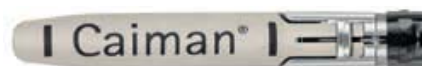
Within the jaw is key to creating a confident seal. Compression force in other devices may decline from proximal to distal end influencing the sealing quality.\* Red represents minimum required pressure (or greater). Blue represents insufficient pressure. Minimum required pressures based on Aesculap calculated requirements. Graphs of minimum required pressure produced on a synthetic tissue model.



\*Data on file at Aesculap AG.

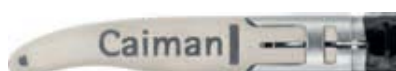
## HAND PIECES AND ACCESSORIES

### AESCULAP® CAIMAN® STANDARD



Description	Articulating	Shaft diameter	Working length	Pcs per pack	Article No.
Caiman® 5	No	5mm	24 cm	6	PL738SU
Caiman® 5	No	5mm	36 cm	6	PL740SU
Caiman® 5	No	5mm	44 cm	6	PL742SU
Caiman® 5	Yes	5mm	24 cm	6	PL739SU
Caiman® 5	Yes	5mm	36 cm	6	PL741SU
Caiman® 5	Yes	5mm	44 cm	6	PL743SU
Caiman® 12	Yes	12mm	24 cm	3	PL730SU
Caiman® 12	Yes	12mm	44 cm	3	PL731SU

### AESCULAP® CAIMAN® MARYLAND



Description	Articulating	Shaft diameter	Working length	Pcs per pack	Article No.
Caiman® 5	No	5mm	12.5 cm	6	PL774SU
Caiman® 5	No	5mm	17cm	6	PL775SU
Caiman® 5	No	5mm	36 cm	6	PL770SU
Caiman® 5	No	5mm	44 cm	6	PL772SU
Caiman® 5	Yes	5mm	36 cm	6	PL771SU



Description	Box Size	Article No.
Lektrafuse RF-Generator (Without main cable)	1	GN200



Description	Size mm	Article No.
Unit cart with sliding handle for electrosurgical units	W x H x D: 520 x 900 x 570	GN330
Wire basket	W x H x D: 370 x 225 x 285	PV951R



Description	Size mm	Article No.
Single pedal foot switch for GN200 (optional activation)	30	GN201

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