

AESCULAP® **SO**.line® Laparoscopic Clip Appliers

Such **Q**uality



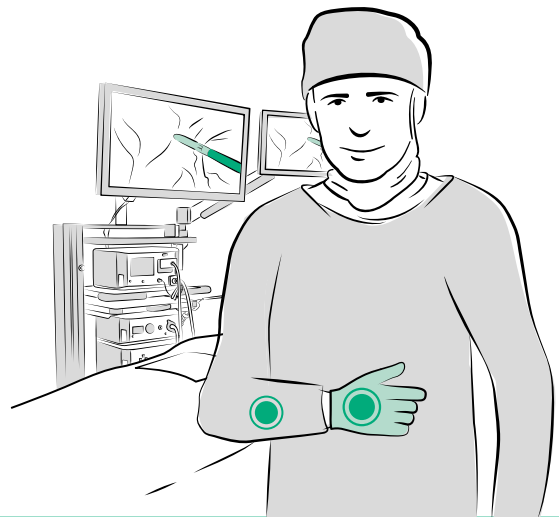
AESCULAP® SQ.line®

Laparoscopic clip appliers

Reliable vessel occlusion

The proper and safe fit of ligation clips on the clipped structure is a crucial step during surgical procedures and can often be impacted by poorly designed equipment. Therefore, a high level of comfort during the handling of clip appliers is a basic requirement.

The SQ.line® laparoscopic clip appliers meet these requirements, enabling a low-fatigue handling and reducing the risk of discomfort.

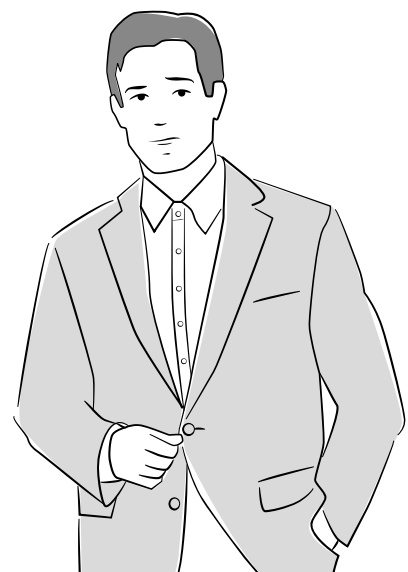


So **Q**omfortable

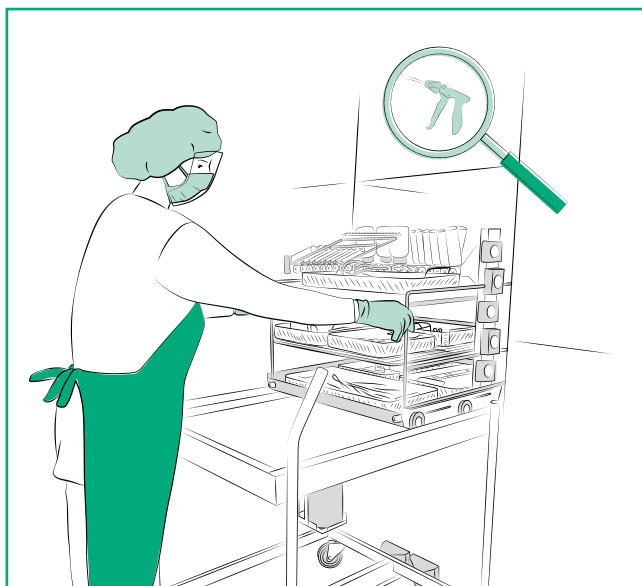
Lifetime of laparoscopic instruments

The longevity of laparoscopic instruments must be a given. If required, replacement costs over the life cycle should be as low as possible.

The SQ.line® laparoscopic clip appliers are made of proven materials with a modular construction.



So **Q**onsistent



Cleanliness of laparoscopic instruments

Validated cleaning and disinfection are essential. In daily practice, the question towards the cleanliness of a tubular shaft instrument arises regularly.

The SQ.line® laparoscopic clip applicators are easy to clean modular instruments that help you improve your reprocessing cycle.

So **Q**lean



Well performing laparoscopic instruments

Correct assembly of laparoscopic instruments can be very time consuming and complex, resulting in expenditure of time in a high-pressure environment.

The SQ.line® laparoscopic clip applicators can be easily disassembled at the push of a button and reduce the risk of confusion due to universal combination of handle, push rod and shaft.

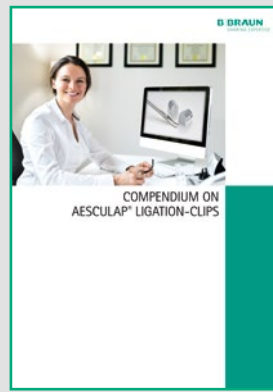
So **Q**onvenient

AESFULAP® SQ.line®

Laparoscopic clip appliers

So Qonvenient

- **Universal handle**
No risk of confusion due to incorrect assembly, confirmed by 100% of interviewed surgical staff (1)
- **Integrated overload protection**
Constant force distribution on the clipped structure (2)
- **Reliable**
The DS-Clips provide a firm hold on the clipped structure. For reference, please compare the existing Clip Compendium
- The SQ.line® clip appliers are compatible to the existing AESFULAP® Clip Portfolio





So Comfortable

Reduced hand force required for placing ligation clips



— Place of the maximum discomfort/highest surface pressure

— Place of maximum comfort/lowest surface pressure

Measurement of SQ.line® clip applicator with a pressure measuring foil (3)

- **Ergonomically designed instruments**
100% of interviewed surgeons confirmed a low-fatigue handling, reducing the risk of discomfort due to poor ergonomics (1)
- **Reduction of pressure points**
The SQ.line® clip applicators cause 50% less pressure points compared to the previous generation (1, 3)
- **Suitable to glove size 6–9**
Surgeons are diverse. 100% surveyed confirmed the applicator suitable to their hand size (4)



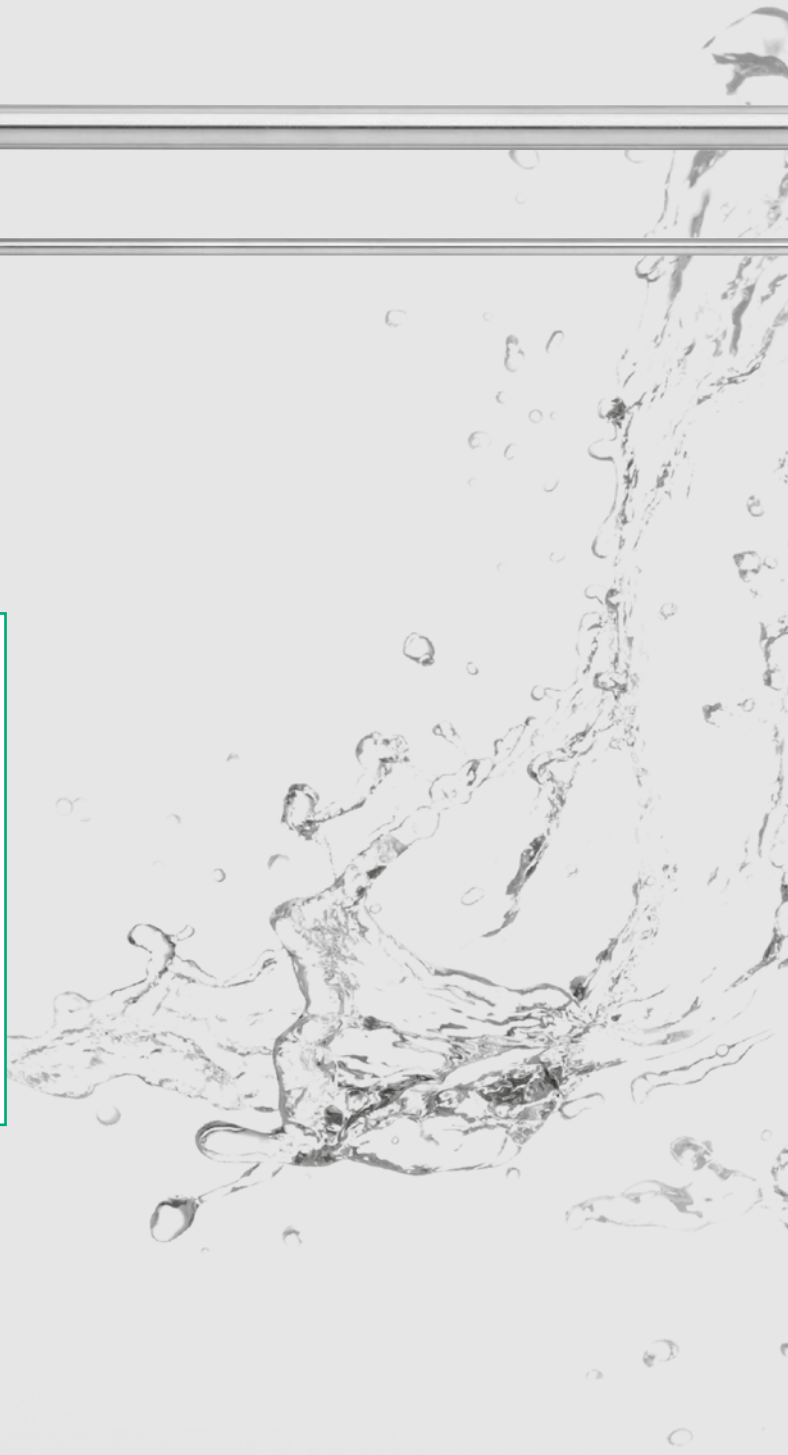
AESCULAP® SQ.line®

Laparoscopic clip appliers



So Qlean

- **Easy disassembly of the SQ.line® clip appliers for cleaning**
All interviewed OR-Staff confirmed easy disassembly to three parts at the push of a button (1)
- **Easy-to-clean instruments**
>80% of CSSD-Staff rated the SQ.line® clip appliers as easy-to-clean, improving the reprocessing cycle accordingly (1)
- All surveyed CSSD-Staff highly rated the ease of cleaning (5)





So **Q**onsistent

- **Modular design**
3 component parts can reduce costs during repairs as well as replacement of individual components
- **Usage of proven materials**
Stainless steel and PEEK (wear-resistant and sterilization proof)

So **Q**ommitted

- **Resource saving**
The modular design enables simple exchange and repair of individual components, minimizing waste. One handle fits all shafts.
- **B. Braun Sustainability Report**
B. Braun has been implementing various measures in the area of sustainability for years. Details can be found on our website (6)

AESCULAP® SQ.line®

Laparoscopic clip appliers



Simplicity

Push-button for disassembly

Connection for shaft cleaning

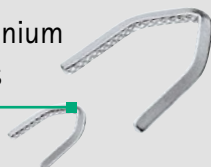
Comfortable

Rotation knob for stepless rotation

Lifetime

Modular system

Standard Titanium
Ligation Clips



Available for two
different clip systems



Comfortable

Handle with multi-finger rest, offering high user comfort

Color-coding of shaft and marking for identification of clip size and clip system

One handle for different shaft diameters and clip systems (DS-Clips and Standard clips)



DS Titanium Ligation Clips

AESCU LAP[®] DS Titanium Ligation Clips



DS Titanium Ligation Clips

Innovative, reliable, convenient

- **Innovative:** This system is innovative and unique in the segment of Titanium Ligation Clips.
- **Reliable:** The DS-Clip provides a firm hold on the clipped structure.
- **Convenient:** The system is easy to use. It does not require an adaption of the order of operation.
- **Material:** titanium
- The DS-Clip has a clip shape with parallel arranged bars with a gap between which compresses the tissue. They stabilize the clip against axial dislodgement.
- The clip closes from the tip.
- A diamond-shaped inner clip profile leads to an enlarged contact surface with the tissue.
- Selective clip sizes are also available with latch, which additionally prevents the clip from slipping.



Clip Cartridges

- simple clip removal from the cartridge
- simplified identification of empty slots by protruding wings
- lateral indentations on the cartridge for a comfortable handling
- delivery in cartridges à 6 clips
- the supply is carried out in dispenser boxes, which can be stored in the OR
- sterile supply of the clips

Closing behavior of the clip



DS Appendectomy-Clip

Innovative, reliable, convenient, cost effective

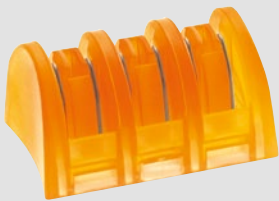
- **Reliable:** The DS-Clip provides a firm hold on the appendix
- **Cost effective:** A cost-effective system due to reusable clip applicators

Double-shank Clip

- a latch at the distal end of the clip additionally prevents the clip from slipping
- delivery in cartridges à 4 clips and 12 cartridges per sales unit

Standard Titanium Ligation Clips

Standard Titanium Ligation Clips



- Reliable vessel occlusion
- A 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 the risk of tissue slippage out of the clip
- Special soft load clip cartridge for easy clip release
- Indentations on the cartridge sides for a more reliable handling
- Adhesive surface at the cartridge back for precise fixation

Diamond-shaped inner clip profile








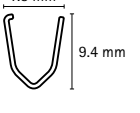

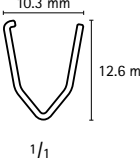

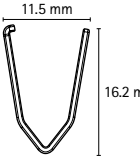





Closing behavior of the clip



AESCULAP® DS Titanium Ligation Clips



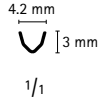

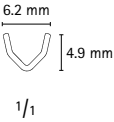

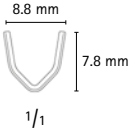

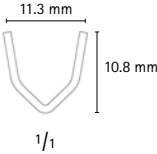
Ordering information




Clip Size	Illustration, clip without latch	Illustration, clip with latch	Clips per cartridge	Cartridges per pack	SO.line® laparoscopic clip applicators (complete applicator)		
					 330 mm 420 mm		
Small	 4.1 mm 3.6 mm 1/1	PL450SU PL452SU (Multipack)	6 24	15 6	PQ900R Ø 5 mm		
Small-Medium	 5.0 mm 4.8 mm 1/1	PL453SU	6	15	PQ901R Ø 5 mm PQ920R Ø 5 mm		
Medium	 6.2 mm 5.8 mm 1/1	PL459SU	6	15	PQ902R Ø 10 mm PQ921R Ø 10 mm		
Medium-Large	 7.8 mm 8.9 mm 1/1	PL462SU	 7.8 mm 9.4 mm 1/1	PL465SU	6	15	PQ903R Ø 10 mm PQ922R Ø 10 mm
Large	 10.3 mm 12 mm 1/1	PL468SU	 10.3 mm 12.6 mm 1/1	PL471SU	6	12	PQ904R Ø 12 mm PQ923R Ø 12 mm
X-Large (DS Appendectomy-Clip)		 11.5 mm 16.2 mm 1/1	PL475SU	4	12	PQ905R Ø 12 mm	

Shaft incl. push rod		Push rod		Handle	Open-surgical clip appliers			Laparoscopic removal forceps
								
330 mm	420 mm	330 mm	420 mm		150 mm	190 mm	280 mm	310 mm
PQ910R Ø 5 mm		PQ961R		PQ960R	FC171R 25°	FC174R 25° FC175R 65°	FC177R 25° FC178R 65° FC179R 90°	
PQ911R Ø 5 mm	PQ930R Ø 5 mm	PQ961R	PQ962R	PQ960R	FC181R 25°	FC184R 25° FC185R 65°	FC187R 25° FC188R 65°	
PQ912R Ø 10 mm	PQ931R Ø 10 mm	PQ961R	PQ962R	PQ960R	FC191R 25°	FC194R 25° FC195R 65° FC196R 90°	FC197R 25° FC198R 65° FC199R 90°	PL816R
PQ913R Ø 10 mm	PQ932R Ø 10 mm	PQ961R	PQ962R	PQ960R		FC204R 25° FC205R 65° FC206R 90°	FC207R 25° FC208R 65° FC209R 90°	PL817R
PQ914R Ø 12 mm	PQ933R Ø 12 mm	PQ961R	PQ962R	PQ960R		FC214R 25° FC215R 65° FC216R 90°	FC217R 25° FC218R 65° FC219R 90°	PL818R
PQ915R Ø 12 mm		PQ961R		PQ960R			FC230R 25° FC231R 65°	

AESCULAP® Standard Titanium Ligation Clips

Ordering information

Clip Size	Illustration, clip	Clips per cartridge	Cartridges per pack	SQ.line® laparoscopic clip applicators (complete applicator)	
				 330 mm	
Small	  4.2 mm 3 mm 1/1	PL565T	6	30	
Medium	  6.2 mm 4.9 mm 1/1	PL567T	6	30	PQ940R Ø 10 mm
Medium-Large	  8.8 mm 7.8 mm 1/1	PL568T	6	20	PQ941R Ø 10 mm
Large	  11.3 mm 10.8 mm 1/1	PL561T	6	20	PQ942R Ø 12 mm

Shaft incl. push rod	Push rod	Handle	Open-surgical clip appliers			Open-surgical removal forceps
						
330 mm	330 mm		150 mm	203 mm	280 mm	310 mm
			FB222R 25°	FB223R 25° FB226R 65°	FB224R 25° FB227R 65° FB225R 90°	FB282R
PQ950R Ø 10 mm	PQ961R	PQ960R	FB234R 25°	FB235R 25° FB238R 65°	FB236R 25° FB239R 65°	FB282R
PQ951R Ø 10 mm	PQ961R	PQ960R		FB240R 25° FB243R 65° FB254R 90°	FB242R 25° FB245R 65° FB255R 90°	FB282R
PQ952R Ø 12 mm	PQ961R	PQ960R		FB246R 25° FB249R 65° FB252R 90°	FB248R 25° FB251R 65° FB253R 90°	FB282R

- (1) Usability Test/Survey with 15 surgeons, 10 OR-Staff and 8 CSSD-Staff
- (2) Internal Jaw part surface pressure test
- (3) Handle comfort evaluation report: SQ.line laparoscopic X-Large clip applier
- (4) User survey Handle Design among 34 respondents
- (5) Usability Test/Survey with 15 surgeons, 10 OR-Staff and 8 CSSD-Staff; judgment from the respondents with an average of 1.5 on a scale from easy (equivalent to 1) to hard (equivalent to 4)
- (6) <https://www.bbraun.com/en/about-us/responsibility.html>

AESCULAP® – a B. Braun brand

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