



Suture material and special products

B. Braun Veterinary Surgery





Information:

The catalog only shows an excerpt from our full wound management portfolio. If you are interested in further products, please do not hesitate to contact us.

E-mail: info@bbraun-vetcare.com



The "Suture materials and special products" brochure is an excerpt from our full catalog.



Order complete catalog – Vet Care

www.bbraun-vetcare.com/ordercompletetecatalog



Website:

www.bbraun-vetcare.com/woundtherapy

Suture materials and special products

Suture materials

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Special products

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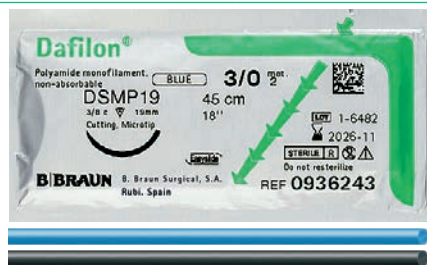
Specialist Information

Overview of suture materials

Absorbable		Absorbable		Absorbable	
Monosyn® Quick		Monosyn®		MonoPlus®	
					
Thread composition:	monofilament	Thread composition:	monofilament	Thread composition:	monofilament
Material:	Glyconate	Material:	Glyconate	Material:	Poly-p-dioxanone
Coating:	none	Coating:	none	Coating:	none
Metric:	0.7 – 4	Metric:	0.7 – 4	Metric:	0.5 – 5
USP:	6/0 – 1	USP:	6/0 – 1	USP:	7/0 – 2
Colors:	undyed	Colors:	dyed, undyed	Colors:	dyed
Loss of tensile strength:	~ 6 – 7 days 50 %	Loss of tensile strength:	~ 14 days 50 %	Loss of tensile strength:	~ 35 days 50 %
Material absorption:	~ 56 days	Material absorption:	~ 60 – 90 days	Material absorption:	~ 180 – 210 days
Indications		Indications		Indications	
<ul style="list-style-type: none"> Intracutaneous skin closure Gynecology, urology Dental surgery 		<ul style="list-style-type: none"> Skin, mucosa Gynecology, urology, gastro. tract Sub- and intracutaneous sutures 		<ul style="list-style-type: none"> Orthopedic surgery, capsular suturing Colon surgery Abdominal wall closure 	
Absorbable		Absorbable			
Novosyn® Quick		Novosyn®			
					
Thread composition:	braided	Thread composition:	braided		
Material:	Polyglactin 910	Material:	Poly(glycolide-co-l-lactide 90/10)		
Coating:	Polyglactin 370 + calcium stearate	Coating:	Poly(glycolide-co-l-lactide 35/65) Calcium stearate		
Metric:	0.7 – 4	Metric:	0.2 – 5		
USP:	6/0 – 2	USP:	8/0 – 2		
Colors:	undyed	Colors:	dyed		
Loss of tensile strength:	~ 5 days 50 %	Loss of tensile strength:	~ 21 days 50 %		
Material absorption:	~ 42 days	Material absorption:	~ 56 – 70 days		
Indications		Indications			
<ul style="list-style-type: none"> Intracutaneous skin closure Dental surgery 		<ul style="list-style-type: none"> Ligatures Ophthalmology Gynecology, urology, abdominal wall closure 		<p>Information: Resorption times may vary from case to case. Evidence is available upon request.</p>	

Non-absorbable

Dafilon®



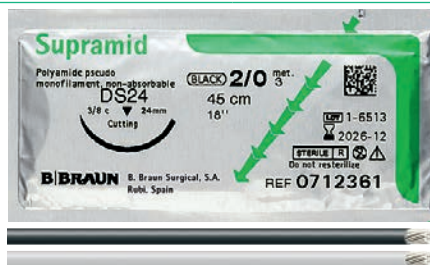
Thread composition:	monofilament
Material:	Polyamide 6.6
Coating:	none
Metric:	0.1 – 4
USP:	11/0 – 1
Colors:	blue, black

Indications

- Skin closure

Non-absorbable

Supramid®



Thread composition:	pseudomonofilament
Material:	Polyamide 6.6
Coating:	none
Metric:	0.7 – 5
USP:	6/0 – 3
Colors:	black, white

Indications

- Skin closure

Non-absorbable

PremiCron®



Thread composition:	braided
Material:	Polyester
Coating:	Silicone
Metric:	0.7 – 7
USP:	6/0 – 5
Colors:	green, white

Indications

- Skin closure
- Vascular surgery

Non-absorbable

Optilene®



Thread composition:	monofilament
Material:	Polypropylene & polyethylene
Coating:	none
Metric:	0.2 – 4
USP:	10/0 – 0
Colors:	blue

Indications

- Hernias and vessel surgery
- Tendons and capsular suturing
- Skin closure

Non-absorbable

Steelex®



Thread composition:	twisted
Material:	corrosion-resistant surgical steel
Coating:	none or polyethylene
Metric:	1 – 3
USP:	5/0 – 2/0
Colors:	metallic

Indications

- Orthopedic surgery
- Tendons, ligaments
- Sternal sutures

Specialist Information



Tissue-specific application recommendations – thread diameter

Dogs	USP metric						
	5/0 1	4/0 1.5	3/0 2	2/0 3	0 3.5	1 4	2 5
Skin		✓	✓	✓			
Subcutis		✓	✓				
Mucosa	✓	✓	✓				
Small intestine, colon	✓	✓	✓				
Bladder (infected)	✓	✓					
Ureter/urethra	✓	✓					
Uterus		✓	✓	✓			
Parenchymal organs		✓	✓	✓			
Ligature			✓	✓	✓		
Muscles			✓	✓	✓		
Abdominal wall/linea alba			✓	✓	✓	✓	
Hernias			✓	✓			
Fascias			✓	✓	✓	✓	
Tendons, ligaments				✓	✓	✓	
Joint capsule			✓	✓	✓		
Blood vessels	✓	✓	✓	✓			
Dental	✓	✓	✓	✓			
Edge of eye lid	✓	✓					



Cats	USP metric						
	5/0 1	4/0 1.5	3/0 2	2/0 3	0 3.5	1 4	2 5
Skin		✓					
Subcutis		✓	✓				
Mucosa	✓	✓					
Small intestine, colon	✓	✓					
Bladder (infected)	✓	✓					
Ureter/urethra	✓						
Uterus		✓	✓				
Parenchymal organs		✓	✓				
Ligature			✓	✓			
Muscles			✓	✓			
Abdominal wall/linea alba			✓	✓			
Hernias			✓	✓			
Fascias			✓	✓			
Tendons, ligaments			✓	✓			
Joint capsule			✓				
Blood vessels	✓						
Dental	✓	✓	✓				
Edge of eye lid	✓	✓					

Specialist Information

Tissue-specific application recommendations

Absorbable					
	Monosyn® Quick	Monosyn®	Novosyn® Quick	Novosyn®	MonoPlus®
	monofilament glyconate	monofilament glyconate	braided polyglactin 910 coated	braided poly(glycolide-co-l-lactide 90/10) coated	monofilament poly-p-dioxanone
Absorbable 50 % loss of tensile strength	Short-term ~ 6 – 7 days	Mid-term ~ 14 days	Short-term ~ 5 days	Mid-term ~ 21 days	Long-term ~ 35 days
Skin	+	++	+	+	++
Subcutis	+	++	+	++	+
Mucosa	++	++	++	+	+
Small intestine	+	++	-	-	++
Colon	-	++	-	+	++
Bladder (infected)	+	++	-	-	++
Ureter/urethra	+	++	-	-	++
Uterus	++	++	-	+	+
Parenchymal organs	-	++	-	+	+
Ligature	-	++	-	++	+
Muscles	-	++	-	++	++
Abdominal wall/linea alba	-	+	-	+	++
Hernias	-	-	-	-	+
Fascias	-	+	-	-	++
Tendons, ligaments	-	-	-	-	++
Joint capsule	-	-	-	+	++
Blood vessels	-	-	-	-	++
Dental	++	++	++	+	+
Edge of eye lid	-	++	+	+	+
Eye	-	-	-	++	-

Material of choice

++ very good

+ good

- unsuitable

Non-absorbable

	Dafilon® monofilament Polyamide 6/6.6	Supramid® pseudo- monofilament Polyamide 6/6.6	PremiCron® braided Polyester coated	Optilene® polypropylene polyethylene
Skin	++	++	+	++
Subcutis	-	-	-	-
Mucosa	+	+	+	+
Small intestine	-	-	-	-
Colon	-	-	-	-
Bladder (infected)	-	-	-	-
Ureter / urethra	-	-	-	-
Uterus	-	-	-	-
Parenchymal organs	-	-	-	-
Ligature	+	+	+	+
Muscles	-	-	-	-
Abdominal wall / linea alba	+	+	+	+
Hernias	+	+	+	++
Fascias	+	+	+	++
Tendons, ligaments	+	+	+	++
Joint capsule	+	+	+	++
Blood vessels	+	-	+	++
Dental	+	+	+	++
Edge of eye lid	++	-	-	++
Eye	++	-	+	++

Material of choice

++ very good

+ good

- unsuitable

Specialist Information

Pharmacopoeia

Strength classification for surgical suture material

USP	METRIC	Thread diameter (mm)
12-0	0.01	0.001-0.009
11-0	0.1	0.010-0.019
10-0	0.2	0.020-0.029
9-0	0.3	0.030-0.039
8-0	0.4	0.040-0.049
7-0	0.5	0.050-0.069
6-0	0.7	0.070-0.099
5-0	1	0.100-0.149
4-0	1.5	0.150-0.199
3-0	2	0.200-0.249
2-0	2.5	0.250-0.299
2-0	3	0.300-0.349
0	3.5	0.350-0.399
1	4	0.400-0.499
2	5	0.500-0.599
3	6	0.600-0.699
5	7	0.700-0.799

USP – United States Pharmacopoeia

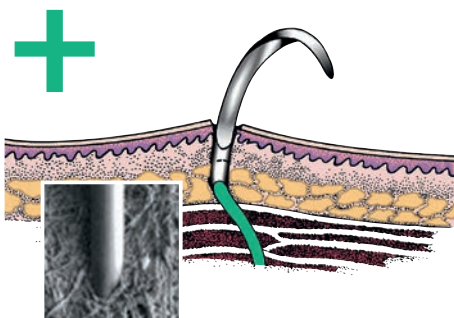
In the classification of the United States Pharmacopoeia, the classifications are randomly made and are not directly related to the thread diameter.

Metric – European Pharmacopoeia

In the strength specification of the European Pharmacopoeia, the filament diameters are given in 1/10 mm. Thus, a 1 metric thread is 0.1 mm thick.

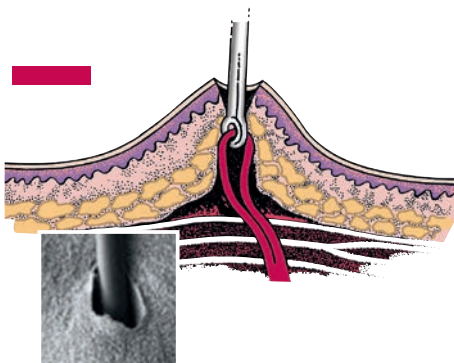
The description allows precise conclusions to be drawn about the filament diameter.

In the market, the historically developed USP thickness specifications have become established worldwide. For this reason, the USP value is highlighted in the packaging marking. However, the metric value is still indicated.



Atraumatic needle-thread combinations*

- Minimal wound trauma
- Secure union of needle and thread
- Smooth transition between needle and thread
- Always new, sterile and sharp needles
- No time-consuming threading
- Needle and thread diameter determined according to the indication



Spring eye needles – Traumatic*

- Wound trauma through doubling of the thread
- Damage to the thread caused by catching in the spring eye
- No secure fit of the thread in the needle eye
- Time-consuming threading of the thread in the normal eye

Specialist Information

Knot types and techniques

Knot types

correct



Square knot, weaver's knot

- Reliable
- Secure closure
- Good for ligatures

incorrect



The granny knot

- Unreliable
- Tends to loosen

correct



Surgical knot

- Very secure
- Good tension
- Not for ligatures

correct



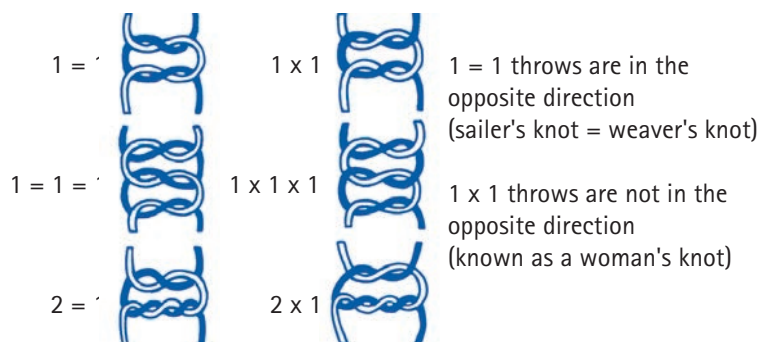
Sliding knot

- Good for knots deep down
- Good for ligatures

Knot technique

correct

incorrect



Tips for the right knot

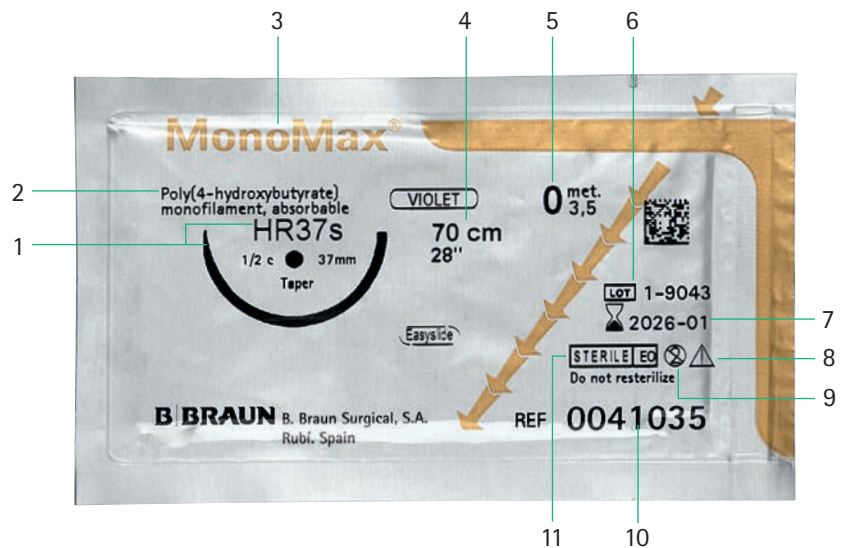
- The knot should not be placed directly on the wound edge, but parallel to it in order to avoid wound irritation.
- Unnecessary friction and manipulation of the suture material should be avoided (risk of thread breakage).
- The choice of knot depends on the suture material and indication.
- Knots and ligatures should be tensioned to ensure the necessary strength and to ensure safety and prevent subsequent slipping.
- Ligatures require complete occlusion of vessels, while a sutured wound tissue strangulation should be avoided to prevent ischemia and necrosis.
- Suture thickness, number of knots, and length of endings determine the size of the knots and thus the irritation of the tissue. The selection of the correct thread thickness and the number of knots should therefore be suitable for the indication. The ends should be shortened to 3 mm for synthetic material.

Specialist Information

Suture material packaging

Labeling of the packaging and film

1	Needle description and illustration
2	Description of the thread / material
3	Product name
4	Thread length
5	Thread diameter
6	Batch number
7	Use by: year and month
8	Observe the instructions for use
9	Do not re-sterilize, single-use product
10	Article number
11	Sterilization method



Explanation of the symbols

For single use only	
Use by: year and month	
Sterilization by ethylene oxide (EO)	STERILE EO
Sterilization by gamma irradiation (R)	STERILE R
CE mark and identification number of the notified body. The product complies with the requirements of the Medical Device Directive 93/42/EEC	CE 0123
Batch number	LOT
Please observe the instructions for use	
Article number / Order number	REF

Handling steps

RacePack®

DDP (Direct Dispense Packaging)

Open non-sterile outer package



Transfer to sterile field



Tear-off opening system,
indicated by colored arrows



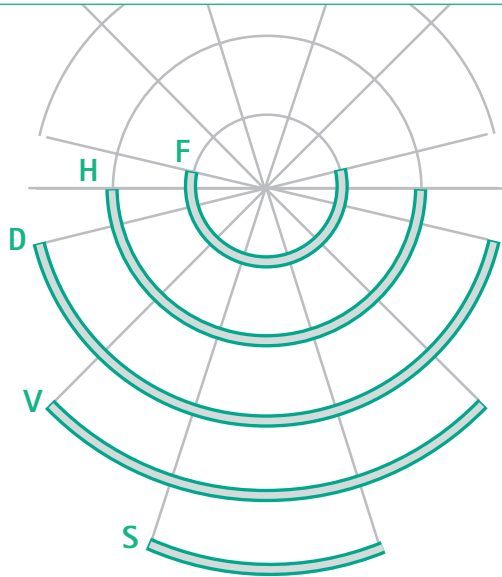
Quick and direct gripping of the needle



Specialist Information

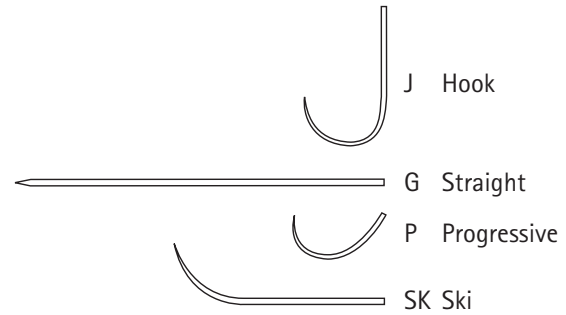
Needles for veterinary surgery

Needle angle of curvature



- S 1/8 circle
- V 1/4 circle
- D 3/8 circle
- H 1/2 circle
- F 5/8 circle

Others



A	B	C	12	D
Needle curvature	Needle body	Needle tip	Needle length	Further information
S 1/8 circle	G Trapezoidal micro engraved body	T Trocar tip	The numbers indicate the distance in mm between the needle tip and needle end, measured on the external curve of the needle.	f Thin-bodied needle
V 1/4 circle	R Round body	N Blunt tip		ff Extra-thin-bodied needle
D 3/8 circle	S Cutting	S Cutting tip		s Strong needle body
H 1/2 circle	L Lancet	C Short, cutting tip		ss Very strong needle body
F 5/8 circle		M Micro-point		v Break-off needle
G Straight		MP Microtip / Precision		b Black needle
P Progressive / Asymptotic		m Micro-needle		TO Take-Off removable needle. With a straight tug of the needle holder, the needle can be removed from the suture fiber
J Hook		mV Micro vascular		
SK Ski				

Easyslide
300 Quality Steel

Easyslide B
Easyblack
black, glare-free needles

Dermaslide
Dermaslide®
Needle especially for skin closure

CV Pass
CV-Pass
needles for cardiovascular surgery

CV Pass easyblack
CV-Pass easyblack
black, glare-free needles for cardiovascular surgery

Example:
HRT 37s = 1/2 circle round-bodied needle with trocar tip, length 37 mm, strong needle body

Needle overview

Cutting needles

DS HS

Cutaneous needles: The three-edged external cutting body of the needle is ideal for suturing tough tissue. The three edges run along the entire needle length and provide optimum piercing capability alongside a reliable, cosmetic result.



Cutting needles with microtips

DSMP / DGMP New

The cutting tip of this slimline precision needle is hand-cut and, with minimal trauma, allows very good tissue penetration, fine sutures in tough tissue and good cosmetic results.



Round-bodied needles

HR GR

The round body of the needle tapers into a fine, sharp needle tip. The body flattens out in the middle section of the needle, which ensures a secure fit in the needle holder. Round-bodied needles only pierce the tissue, they do not cut it, so they are highly suitable for suturing soft tissue.



Round-bodied needle with trocar tip

DRT HRT

The round-bodied needle has a four-sided cutting tip. This allows tough tissue to be easily pierced with minimal trauma.



Round-bodied needle with short, cutting tip

HRC DRC

The specially shaped round-bodied needle with short cut tip makes tough tissue easier to pierce. The specialist needle for fine anastomoses and difficult tissue conditions.



Lancet (spatula) needles

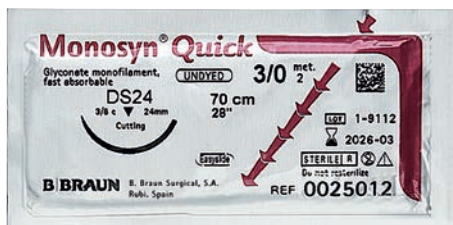
DLM

The lancet needle is a variant of the spatula needle. Its special needle tip is designed to pass through ophthalmic structures without damaging the upper and lower layer of stroma.



Monosyn® Quick

Absorbable suture material



Monosyn® Quick









~ 6-7 days absorption time

- Easy handling
- Quick absorption
- High knot pull tensile strength
- Good flexibility and elongation
















Structure:	Monofilament, uncoated
Chemical composition:	Glyconate
Diameter:	USP 6/0 – USP 1
Color:	undyed
Absorption time:	~ 6 – 7 days
Knot tensile strength retention:	~ 6 - 7 days p. i. 50%
Mass absorption:	~ 56 days

Indications

- Intracutaneous skin closure
- Gynecology, urology
- Dental surgery

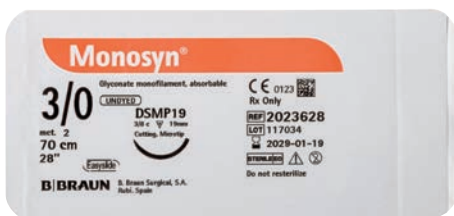
Needle			Thread	USP (metric)							
Angle	Length mm	Diameter microns	Length cm Color	6/0 (0.7)	5/0 (1)	4/0 (1.5)	3/0 (2)	2/0 (3)	0 (3.5)	1 (4)	2 (5)
1/2 circle round-bodied needle											
			45 undyed		C0025194	C0025195					
											
			70 undyed		C0025051	C0025052	C0025053				
											
			70 undyed				C0025245	C0025246			
											
			70 undyed				C0025057	C0025058	C0025059		
											



Needle			Thread	USP (metric)							
Angle	Length mm	Diameter microns	Length cm Color	6/0 (0.7)	5/0 (1)	4/0 (1.5)	3/0 (2)	2/0 (3)	0 (3.5)	1 (4)	2 (5)
1/2 circle round-bodied needle, trocar tip											
			70 undyed		C0025152						
3/8 circle cutting needle											
			45 undyed		C0025135						
			70 undyed			C0025007	C0025008				
			70 undyed			C0025011	C0025012	C0025013			
3/8 circle cutting needle, precision tip											
			45 undyed	C0025023	C0025024						
			45 undyed		C0025028	C0025029					
			45 undyed		C0025031						
			70 undyed			C0025036	C0025037				

Monosyn®

Absorbable suture material



Monosyn®

~ 14 days absorption time

- Wide indication field
- High knot pull tensile strength
- For universal use in soft tissue surgery and intracutaneous sutures.

Monosyn® is comparable to a braided suture in upper-GI tract and small bowel anastomosis.

- Wide range of needle-thread combinations











Structure:	Monofilament, uncoated
Chemical composition:	Glyconate
Diameter:	USP 7/0 – USP 2
Color:	undyed, dyed
Absorption time:	~ 14 days
Knot tensile strength retention:	~ 14 days p. i. 50%
Mass absorption:	~ 60 – 90 days

Indications











- Gynecology, urology, gastro. tract
- Skin, mucosa
- Sub- and intracutaneous sutures

Needle			Thread	USP (metric)							
Angle	Length mm	Diameter microns	Length cm Color	6/0 (0.7)	5/0 (1)	4/0 (1.5)	3/0 (2)	2/0 (3)	0 (3.5)	1 (4)	2 (5)













1/2 circle round-bodied needle

		70 violet		C2022003 G2022003	C2022004 G2022004						
		70 violet			C2022014 G2022014	C2022015 G2022015	C2022016				
		70 violet			C2022024	C2022025 G2022025	C2022026 G2022026	C2022027			
		70 violet				C0022085	C2022086	C0022087			













Needle			Thread	USP (metric)							
Angle	Length mm	Diameter microns	Length cm Color	6/0 (0.7)	5/0 (1)	4/0 (1.5)	3/0 (2)	2/0 (3)	0 (3.5)	1 (4)	2 (5)
1/2 circle round-bodied needle											
			70 violet					C2022035	C0022036	C2022037	
											
			70 violet						C2022046 G2022046	C2022047	C2022048
											
1/2 circle cutting needle											
			70 violet					C2022236	C2022237		
											
			70 violet						C2022242	C2022243	
											
			70 violet						C2022247	C2022248	C2022249
											

Absorbable suture material

Needle			Thread	USP (metric)							
Angle	Length mm	Diameter microns	Length cm Color	6/0 (0.7)	5/0 (1)	4/0 (1.5)	3/0 (2)	2/0 (3)	0 (3.5)	1 (4)	2 (5)
3/8 circle round-bodied needle, short cutting tip											
	DRC 12 		70 violet	C0022392	C0022403						
	DRC 22 		70 violet			C2022354	C2022355				
1/2 circle round-bodied needle, trocar tip											
	HRT 17 		70 violet		C0022323 G0022323	C0022324					
	HRT 26 		70 violet				C2022305	C2022306			
3/8 circle round-bodied needle, trocar tip											
	DRT 18 		70 violet		C0022343						
	DRT 26 		70 violet					C2022366			



Needle			Thread	USP (metric)							
Angle	Length mm	Diameter microns	Length cm Color	6/0 (0.7)	5/0 (1)	4/0 (1.5)	3/0 (2)	2/0 (3)	0 (3.5)	1 (4)	2 (5)
3/8 circle cutting needle											
			45 violet		C2022419						
											
			70 violet			C2022204 G2022204	C2022205 G2022205				
											
			70 violet			C2022214	C2022215 G2022215	C2022216 G2022216	C2022217 G2022217		
											
			70 violet						C2022232	C2022233	
											
3/8 circle cutting needle, precision tip											
			45 undyed	C0023602	C2023603						
											
Pre Cuts											
3 threads of 45 cm			3 x 45 violet		C0020005	C0020006 G0020006	C0020007				

MonoPlus®

Absorbable suture material



MonoPlus®

~ 35 days absorption time

- Degradation profile designed where extended wound support is desirable
- Wide range of needle-thread combinations
- Good knot pull tensile strength retention

Indications

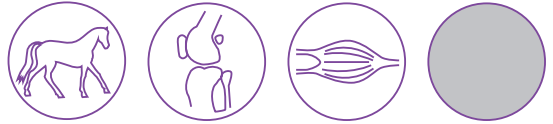
- Orthopedic surgery, capsular suturing
- Colon surgery
- Abdominal wall closure










Structure:	Monofilament, uncoated
Chemical composition:	Poly-p-dioxanone
Diameter:	USP 7/0 – USP 2
Color:	violet
Absorption time:	~ 35 days
Knot tensile strength retention:	~ 35 days p. i. 50%
Mass absorption:	~ 180 - 210 days

Needle			Thread	USP (metric)							
Angle	Length mm	Diameter microns	Length cm Color	6/0 (0.7)	5/0 (1)	4/0 (1.5)	3/0 (2)	2/0 (3)	0 (3.5)	1 (4)	2 (5)

1/2 CIRCLE ROUND-BODIED NEEDLE

			70 violet					C0024205	C0024206	C0024207		
			70 violet		C0024013	C0024014	C0024015					
			70 violet						C0024131			
			70 violet			C2024134	C2024135 G2024135	C0024136				
			70 violet				C2024025	C2024026 G2024026	C2024027 G2024027			



Needle			Thread	USP (metric)							
Angle	Length mm	Diameter microns	Length cm Color	6/0 (0.7)	5/0 (1)	4/0 (1.5)	3/0 (2)	2/0 (3)	0 (3.5)	1 (4)	2 (5)
1/2 circle round-bodied needle											
			70 violet				C0024085	C2024086	C2024087		
			70 violet					C2024036	C2024037	C0024038	
			70 violet						C2024057	C2024058 G0024058	
			150 violet							B0024098	
1/2 circle round-bodied needle, trocar tip											
			70 violet	C0024283	C0024284						
			70 violet		C0024294	C0024295					
			70 violet					C0024316			
			90 violet						C0024517	C0024518	
1/2 circle cutting needle											
			70 violet				C0024185	C2024186	C2024187		
3/8 circle cutting needle											
			70 violet				C2024520 G2024520	C2024990			

Novosyn® Quick

Absorbable suture material



Novosyn® Quick

- High suture tensile strength
- Optimal handling in terms of smooth surface and pliability
- Good flexibility performance





Indications

- Intracutaneous skin closure
- Dental surgery

Thread composition:	braided
Material:	Polyglactin 910
Coating:	Polyglactin 370 + calcium stearate
Metric:	0.7 - 4
USP:	6/0 - 2
Color:	undyed
Loss of tensile strength:	~ 5 days 50%
Material absorption:	~ 42 days

Needle			Thread	USP (metric)							
Angle	Length mm	Diameter microns	Length cm Color	6/0 (0.7)	5/0 (1)	4/0 (1.5)	3/0 (2)	2/0 (3)	0 (3.5)	1 (4)	2 (5)
1/2 circle round-bodied needle											
 HR 17 Easyslide			70 undyed		C3046012	C3046013					
 HR 22 Easyslide			70 undyed			C3046029					



Needle			Thread	USP (metric)							
Angle	Length mm	Diameter microns	Length cm Color	6/0 (0.7)	5/0 (1)	4/0 (1.5)	3/0 (2)	2/0 (3)	0 (3.5)	1 (4)	2 (5)
3/8 circle cutting needle											
			70 undyed		C3046212	C3046213	C3046421				
											
			70 undyed				C3046235	C3046236			
											

Absorbable suture material



Novosyn®

~ 21 days absorption time

- Improved knot pull tensile strength
- Good flexibility performance

Indications

- Ligatures
- Ophthalmology
- Gynecology, urology, abdominal wall closure

Structure:	Polyfilament braided, coated
Chemical composition:	Poly(glycolide-co-l-lactide 90/10)
Coating:	Poly(glycolide-co-l-lactide 35/65) + CaSt
Diameter:	USP 8/0 – USP 2
Color:	violet
Absorption time:	~ 21 days
Knot tensile strength retention:	~ 21 days p. i. 50%
Mass absorption:	~ 56 - 70 days

Needle			Thread	USP (metric)							
Angle	Length mm	Diameter microns	Length cm Color	4/0 (1.5)	3/0 (2)	2/0 (3)	0 (3.5)	1 (4)	2 (5)	3 (6)	4 (6)
1/2 circle round-bodied needle											
<p>HR 30</p>			70 violet				C0068047N1	C0068048N1	C0068049		
<p>HR 65</p>			240 violet						B0068930		
1/2 circle round-bodied needle, short cutting tip											
<p>HRC 26</p>			70 violet				C0068335	C0068336	C0068343		



Needle			Thread	USP (metric)							
Angle	Length mm	Diameter microns	Length cm Color	8/0 (0.4)	7/0 (0.5)	6/0 (0.7)	5/0 (1)	4/0 (1.5)	3/0 (2)	2/0 (3)	0 (3.5)

PRE CUTS

2 threads of 70 cm	2 x 70 violet				C0058406	C0058407	C0058409				
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1/2 circle round-bodied needle





 HR 17	70 violet							C0068013			
 HR 22	70 violet							C0068029N1	C0068030N1	C0068031N1	
 HR 26	70 violet							C0068041N1 G0068041N1	C0068042N1 G0068042N1	C0068043N1	

Angle	Length mm	Diameter microns	Length cm Color	5/0 (1)	4/0 (1.5)	3/0 (2)	2/0 (3)	0 (3.5)	1 (4)	2 (5)	3 (6)
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1/2 circle round-bodied needle


















 HR 37s	70 violet							C0068096N1	C0068097N1	C0068098	
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1/2 circle cutting needle

 HS 15	45 violet			C0068204							
 HS 26s	70 violet						C0068290	C0068291			
 HS 37s	70 violet						C0068298	C0068296N1	C0068297		
 HS 48	90 violet									B0068463	

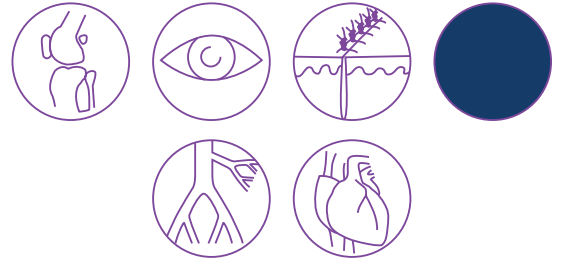


Absorbable suture material

Needle			Thread	USP (metric)								
Angle	Length mm	Diameter microns	Length cm Color	5/0 (1)	4/0 (1.5)	3/0 (2)	2/0 (3)	0 (3.5)	1 (4)	2 (5)	3 (6)	
3/8 circle cutting needle												
	DS 19 		70 violet		C0068420 G0068420	C0068421N1						
	DS 24 		70 violet			C0068235N1 G0068235N1	C0068236N1 G0068236N1	C0068237 G0068237				
	DS 30 		70 violet				C0068247N1	C0068248	C0068249			
Angle	Length mm	Diameter microns	Length cm Color	8/0 (0.4)	7/0 (0.5)	6/0 (0.7)	5/0 (1)	4/0 (1.5)	3/0 (2)	2/0 (3)	0 (3.5)	
1/4 circle lancet needle, micro tip												
	2xVLM 8 		45 violet					G0068735				
3/8 circle round-bodied needle, micro tip												
	DRm 6 		35 violet	G0068146								
3/8 circle lancet needle, micro tip												
	DLm 6 		15 violet	G0068615								
	DLm 6s 		30 violet		G0068621							
	2xDLm 6s 		45 violet		G0068711							

Optilene®

Non-absorbable suture material


















Optilene®

- Soft and smooth
- Outstanding elasticity and elongation properties
- Controlled knot run-down
- Proven reliable tensile strength

Structure:	Monofilament, uncoated
Chemical composition:	Polypropylene / Polyethylene
Diameter:	USP 10/0 – USP 2
Color:	blue
Knot tensile strength retention:	non-absorbable

Indications

- Hernias and vessel surgery
- Tendons and capsular suturing
- Skin closure

Needle			Thread	USP (metric)								
Angle	Length mm	Diameter microns	Length cm Color	8/0 (0.4)	7/0 (0.5)	6/0 (0.7)	5/0 (1)	4/0 (1.5)	3/0 (2)	2/0 (3)	0 (3.5)	
1/2 circle round-bodied needle												
			75 blue					C3090040	C3090041	C3090042	C3090043	
3/8 circle cutting needle												
			45 blue			C3090206	C3090207	C3090208				
			75 blue					C3090520	C3090521			
			75 blue					C3090234	C3090235	C3090236		
			75 blue							C3090247	C3090248	

Dafilon®

Non-absorbable suture material



Dafilon®

- Soft and smooth
- Smooth tissue passage



Structure:	Monofilament, uncoated
Chemical composition:	Polyamide (Nylon)
Diameter:	USP 11/0 – USP 5
Color:	blue, black
Knot tensile strength retention:	non absorbable

Indications

- Skin closure
- Fixation of drains/catheters
- Ophthalmology

Needle			Thread	USP (metric)							
Angle	Length mm	Diameter microns	Length cm Color	6/0 (0.7)	5/0 (1)	4/0 (1.5)	3/0 (2)	2/0 (3)	0 (3.5)	1 (4)	2 (5)

3/8 circle cutting needle

	75 blue			C0935190	C0933244	C0933252					
	75 blue				C0933384	C0933392	C0933406				
	75 blue						C0935468	C0935476	C0935484	C0935492	
	90 blue										B0934579






Needle			Thread	USP (metric)							
Angle	Length mm	Diameter microns	Length cm Color	6/0 (0.7)	5/0 (1)	4/0 (1.5)	3/0 (2)	2/0 (3)	0 (3.5)	1 (4)	2 (5)

Straight cutting needle


 <p>GS 51</p>			90 blue						C0935611		C0935573
 <p>GS 60</p>			75 blue				C0932655	C0932663			

3/8 circle cutting needle, precision tip

 <p>DSMP 11</p>			45 blue	C0936022							
  <p>DSMP 24</p>			75 blue				C0936812	C0936820			

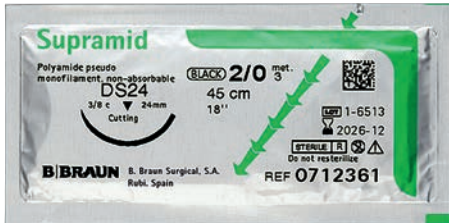
Angle	Length mm	Diameter microns	Length cm Color	10/0 (0.2)	9/0 (0.3)	8/0 (0.4)	7/0 (0.5)	6/0 (0.7)	5/0 (1)	4/0 (1.5)	3/0 (2)
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3/8 circle lancet needle, micro tip

 <p>DLm 6</p>			15 black	G1118722							
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Supramid®

Non-absorbable suture material



Supramid®

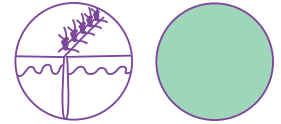
- High tensile strength
- Soft and smooth
- Good handling properties

Indications

- Skin

Structure:	Pseudomonofilament uncoated
Chemical composition:	Polyamide 6.6
Coating:	Polyamide 6.6
Diameter:	USP 2 – USP 6/0
Color:	black, white
Knot tensile strength retention:	non-absorbable
Mass absorption:	2 – 4 years

Needle			Thread	USP (metric)							
Angle	Length mm	Diameter microns	Length cm Color	6/0 (0.7)	5/0 (1)	4/0 (1.5)	3/0 (2)	2/0 (3)	0 (3.5)	1 (4)	2 (5)
1/2 circle cutting needle											
<p>HS 21</p>			45 black		C0712248	C0712256	C0712264				
<p>HS 26</p>			75 black				C0712418	C0712426	C0712434		
3/8 circle cutting needle											
<p>DS 16</p>			45 black		C0712124	C0712132					



Needle			Thread	USP (metric)							
Angle	Length mm	Diameter microns	Length cm Color	5/0 (1)	4/0 (1.5)	3/0 (2)	2/0 (3)	0 (3.5)	1 (4)	2 (5)	3 (6)
3/8 circle cutting needle											
	45 black					C0712213					
	75 black				C0714208	C0714216 G0714216					
	45 black						C0712361				
	75 black					C0714356	C0714364				
	45 white						C0712477		C0712493		
	75 white							C0694487			
	75 black						C0712558	C0712566	C0712574		

PremiCron®



Non-absorbable suture material



PremiCron®

- Reliable knotting
- Good handling









Indications

- Cardiological surgery
- Hernias
- Orthopedic surgery

Structure:	Polyfilament braided coated
Chemical composition:	Polyester
Coating:	Silicone
Diameter:	USP 5 – USP 6/0
Color:	green, white
Knot tensile strength retention:	non-absorbable

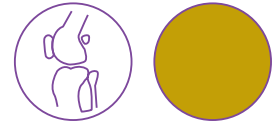
Needle			Thread	USP (metric)							
Angle	Length mm	Diameter microns	Length cm Color	5/0 (1)	4/0 (1.5)	3/0 (2)	2/0 (3)	0 (3.5)	1 (4)	2 (5)	3 (6)

3/8 circle cutting needle

 DS 19 	45 green					C0026553					
	75 green				C0026231						
 DS 30 	75 green						C0026531	C0026532			
 DS 39 	75 green										C0026332

1/2 circle cutting needle

 HS 37s 	75 green									C0026468	
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Non-absorbable suture material



Steelex®









- Proven strength
- High conductive flexible twisted steel wire



Indications

- Orthopedic surgery
- Tendons
- Ligaments
- Sternal sutures
- Skin

Structure:	Polyfilament twisted
Chemical composition:	corrosion-resistant surgical steel
Diameter:	USP 2/0 – USP 5/0
Color:	metallic
Knot tensile strength retention:	non-absorbable

Needle			Thread	USP (metric)								
Angle	Length mm	Diameter microns	Length cm Color	5/0 (1)	4/0 (1.5)	3/0 (2)	2/0 (3)	0 (3.5)	1 (4)	2 (5)	3 (6)	
3/8 circle cutting needle												
			45 metallic	G0612197								
												
			45 metallic		G0612340	G0612359						
												
			45 metallic			G0612413						
												
			45 metallic				G0612472					
												

B. Braun Sutures

Dermaslide® – DGMP

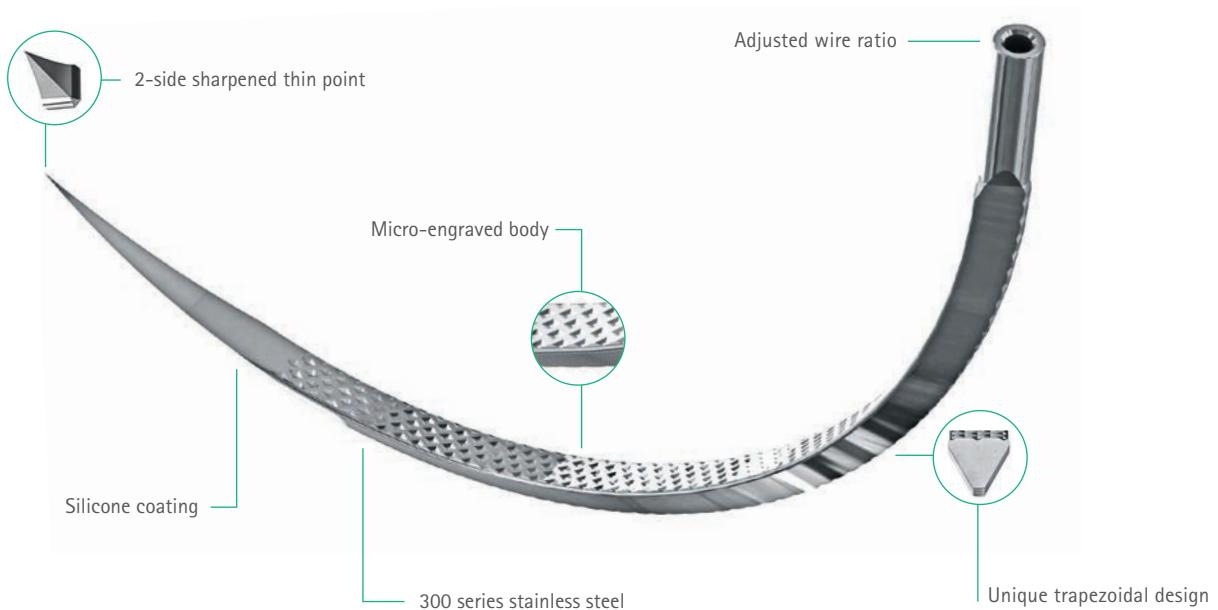
The new needle with micro-engraved body

Advantages

- Glides impressively through tissue
- Continuous sharpness
- Outstanding stability in the needle holder
- Good cosmetic results

Available for:

- Optilene®
- Dafilon®
- Monosyn®
- Monosyn® Quick



Cassettes



Thread	USP (metric)							
Length cm Color	3 (6)	4 (6)	5 (7)	6 (8)	7 (9)	8 (10)	9 (11)	10 (12)
Supramid® 1 thread of 2500 cm white				F1184113				
	4/0 (1.5)	3/0 (2)	2/0 (3)	0 (3.5)	1 (4)	2 (5)	3 (6)	4 (6)
MonoPlus® 1 thread of 2500 cm violet						F0024275		
Supramid® 1 thread of 10000 cm white		F1184040	F1184059					
Supramid® 1 thread of 7500 cm white				F1184067	F1184075			
Supramid® 1 thread of 5000 cm white							F1184091	

Shelf rack and shelf base

Accessories



Description	Size	Art. no.
Shelf rack Each shelf rack can take up to 4 suture boxes.	481 x 140.9 x 71.5 mm	1091255



Description	Art. no.
Shelf base The shelf base can carry up to 10 shelf racks. It can be fixed to the wall.	1091247

Histoacryl® | Histoacryl® Flexible



Histoacryl®

Tissue adhesive consisting of monomeric n-butyl-2-cyanoacrylate

Indications

- Closure of skin for small surgical incisions
- Mesh fixation: Fixation of hernia meshes
- Sclerotherapy

Properties

- Easy and precise handling
- Effective microbial barrier
- Save time and costs
- Only one layer is needed
- Histoacryl® can be used for closing of endoscopic incisions
- Significantly less painful than suture materials

Description	Size / Content	Packaging unit	Art. no.
Histoacryl® blue	5 ampoules of 0.5 ml	5 units	1050052



Histoacryl® Flexible

Tissue adhesive consisting of n-butyl 2-cyanoacrylate and a softener

Indications

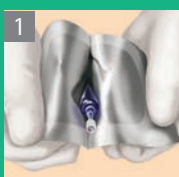
- Allows closure of incisions up to 25 cm

Properties

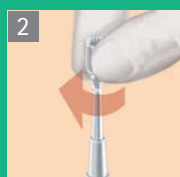
- Ease of use: Ready-to-use product
- Microbial barrier: Polymerized Histoacryl® Flexible adhesive films are an effective microbial barrier
- Good cosmetics: Histoacryl® Flexible yields good cosmetic results

Description	Size / Content	Packaging unit	Art. no.
Histoacryl® Flexible	5 ampoules of 0.5 ml	5 units	1051250P

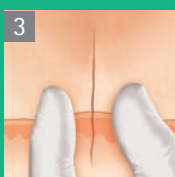
Application



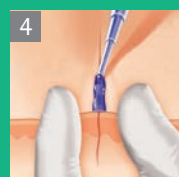
1 Open the peel package



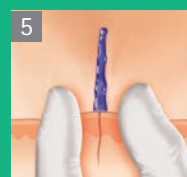
2 Clean the wound
Turn the tip of the ampoule to break it off



3 Prepare the wound edges



4 Apply a thin film of Histoacryl®



5 Hold the wound edges for approx. 1 minute

Optilene® Mesh

Mesh for universal use



Optilene® Mesh

Mesh for the repair of incisional and inguinal hernias

- Universally applicable
- Large pores
- Reduced weight
- Blue unfolding lines
- For all open techniques in incisional hernia surgery (onlay, sublay)
- For all open and laparoscopic techniques in inguinal hernia surgery (Lichtenstein, TEP, TAPP)

Material	Polypropylene
Structure	Monofilament
Basic weight	60 g/m ²
Pore size / thickness	1.5 mm / 0.53 mm
Indication	Inguinal hernia, incisional hernia
Contraindication	Optilene® Mesh must not be inserted into contaminated or infectious tissue.
Sterilization method	Ethylene oxide



Optilene® Mesh Elastic

Mesh for incisional hernias

- Elastic all around
- Lightweight
- Extra large pores
- Blue unfolding lines
- For all open techniques in incisional hernia surgery (onlay, sublay)
- For all open and laparoscopic techniques in inguinal hernia surgery (Lichtenstein, TEP, TAPP)

Material	Polypropylene
Structure	Monofilament
Basis weight	48 g/m ²
Pore size / thickness	3.6 x 2.8 mm / 0.55 mm
Indication	Inguinal hernia, incisional hernia
Contraindication	Optilene® Mesh Elastic must not be inserted into contaminated or infectious tissue.
Sterilization method	Ethylene oxide

Description	Size	Art. no.
Optilene® Mesh	5 x 10 cm	1065020UNI
Optilene® Mesh Elastic	10 x 15 cm	1964920UNI
Optilene® Mesh Elastic	7.5 x 15 cm	1964930UNI

Manipler® AZ 35 W

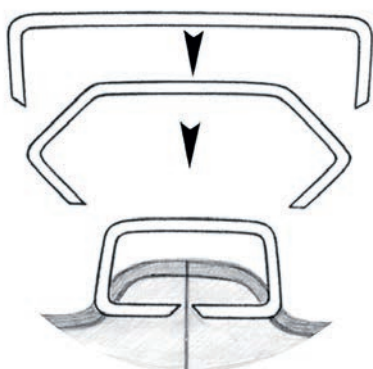
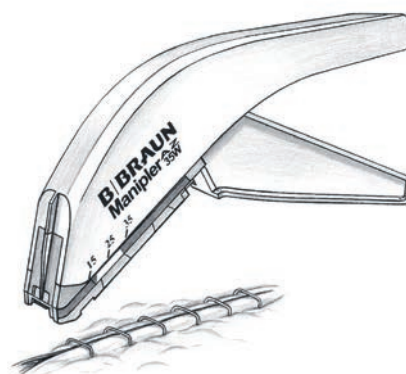
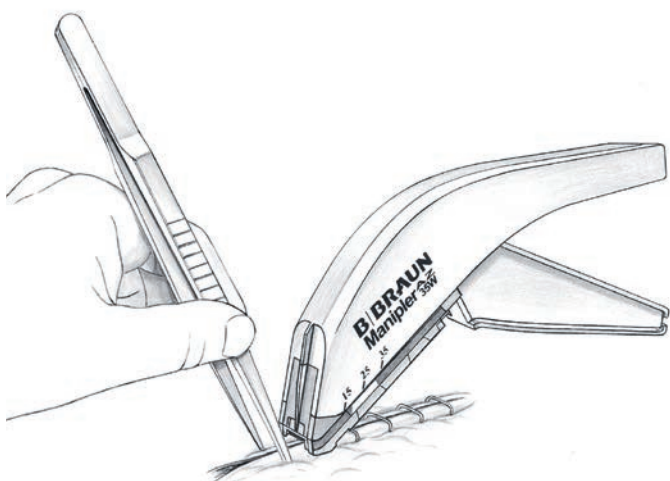
The fast alternative to sutures

Manipler® AZ 35 W

Single-use skin stapler with 35 wide staples.

Staple closing size: width 6.9 mm, height 3.6 mm

- Well balanced weight and ergonomic design
- Slim grip
- Special angled head
- Flexible placement angle
- Alignment indicator



Description

Manipler® AZ 35 W

Reusable skin stapler remover

Art. no.

783100

783101

Special Products

Hemostasis



Lyostypt®

A wet-stable collagen hemostat. Collagen leads to thrombocyte adhesion and to activation of coagulation factor XII.

- Absorbable within ~ 3 – 4 weeks
- Fast and efficient hemostasis reduces blood loss and saves time
- High degree of absorption means less material is needed
- Good affinity to bleeding surfaces
- Can be used as a carrier material for antibiotics or coagulation agents

Indications

- Capillary bleeding
- Parenchymal bleeding

Description	Art. no.
Lyostypt® 3 x 5 cm	1069128

Bone wax – hemostat for bone bleeding

Sterile mixture of natural beeswax and vaseline

- Mechanical hemostasis in bones
- Haemostasis achieved by tamponade effect
- Achieves mechanical occlusion of intraosseous vessels
- Soft, easy to shape and apply "only hand-warm"

Indications

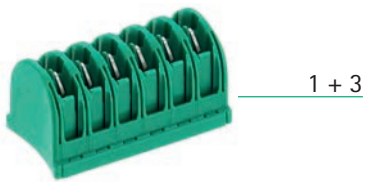
- Thoracic surgery (sternum & ribs)
- Dental, oral and jaw surgery
- Orthopedics and traumatology
- Neurosurgery (trepanation)



Description	Art. no.
Bonewax 24 x 2,5 g	1029754

AESCULAP® DS titanium ligation-clips and clip applicators

for open surgery



Description		No.	Art. no.
DS Titanium Ligation-Clip without latch	Medium-Large	1	PL462SU
DS Titanium Ligation-Clip without latch	Large	2	PL468SU
DS Titanium Ligation-Clip with latch	Medium-Large (z)	3	PL465SU
DS Titanium Ligation-Clip with latch	Large (z)	4	PL471SU
Clip applicators, 190 mm, 25°, for clip size Medium-Large		5	FC204R
Clip applicators, 190 mm, 25°, for clip size Large		5	FC214R

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