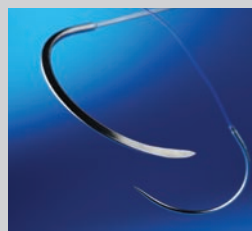
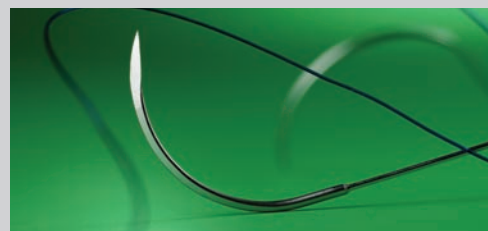
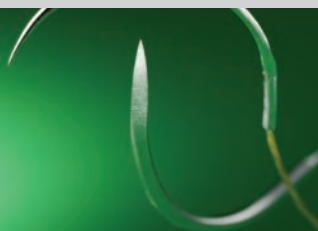


Catgut
included



Needle-Suture-Combinations



REF. **HR37102**  **STERILE EO**
12 Units

HR 37

CATGUT
 Plain
 Absorbable / resorbierbar

USP metric cm
1 5 75

LOT C3-060
 2008-02

ACUFIRM
 Ernst Kratz Nadelfabrik
 GERMANY

REF. **HR262052**  **STERILE EO**
12 Units

HR 26

CATGUT
 Chromic
 Absorbable / resorbierbar

USP metric cm
2/0 3,5 75

LOT C3-066
 2008-02

ACUFIRM
 Ernst Kratz Nadelfabrik
 GERMANY

REF. **HR372022**  **STERILE EO**
12 Units

HR 37

POLYPROPYLENE
 Monofil Blue / Blau,
 Non Absorbable/nicht resorbierbar

USP metric cm
2/0 3 75

LOT G3-172
 2008-06

ACUFIRM
 Ernst Kratz Nadelfabrik
 GERMANY

REF. **DS302092**  **STERILE R**
12 Units

DS 30

POLYESTER
 Green Braided/grün geflochten
 Non Absorbable/nicht resorbierbar

USP metric cm
2/0 3 75

LOT E3-105
 2008-04

ACUFIRM
 Ernst Kratz Nadelfabrik
 GERMANY

REF. **HR134011**  **STERILE R**
12 Units

HR 13

SILK / SEIDE
 Black Braided / schwarz geflochten
 Non Absorbable / nicht resorbierbar

USP metric cm
4/0 1,5 45

LOT E3-106
 2008-04

ACUFIRM
 Ernst Kratz Nadelfabrik
 GERMANY

REF. **HR136081**  **STERILE EO**
12 Units

HR 13

PDO
 Monofil
 Absorbable / resorbierbar

USP EP cm
6/0 0,7 45

LOT C3-045
 2006-02

ACUFIRM
 Ernst Kratz Nadelfabrik
 GERMANY

REF. **DS175061**  **STERILE EO**
12 Units

DS 17

NYLON
 Monofil Black/schwarz
 Non Absorbable/nicht resorbierbar

USP metric cm
5/0 1 45

LOT H2 - 043
 2007 - 07

ACUFIRM
 Ernst Kratz Nadelfabrik
 GERMANY

REF. **DS204032**  **STERILE EO**
12 Units

DS 20

PGA
 Braided Coated/geflochten
 beschichtet
 Absorbable / resorbierbar

USP metric cm
4/0 1,5 75

LOT E3-104
 2008-04

ACUFIRM
 Ernst Kratz Nadelfabrik
 GERMANY

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About ACUFIRM

ACUFIRM Needle-Suture-Combinations

ACUFIRM needle-suture-combinations meet the highest standards set by modern surgery today. The constant, high quality level of our needle-suture-combinations is based on more than a 100 years of experience, on knowledge of the latest scientific development and their technical applications.

ACUFIRM Needles

are manufactured out of high quality strength stainless steel, using specially adapted manufacturing.

ACUFIRM Needle-Suture-Combinations

are attached with much precision, to guarantee a smooth and atraumatic changeover from needle to thread.

ACUFIRM Sutures

Beside our standard program of needle-suture-combinations we offer you pre-cut sutures in various lengths and quantity per pouch.

ACUFIRM Packing

ACUFIRM needle-suture-combinations are delivered in boxes of 12, 24 or 36 pieces, which are made out of environmentally friendly cardboard paper. A cellophane wrapping guarantees additional protection. Each needle-suture-combination are individually sterile-packed.

Furthermore ...

... in addition to our vast standard program, we also take special care to attend to the individual wishes and demands of our customers. To fulfil our customers special requests we require an accurate design or the necessary information pertaining to the product. We also produce needle-suture-combinations with special geometrical details and remain totally flexible where the combination is material and needle are concerned.

Order Advice



In case you do not mention the item number,
please indicate:







characteristics	example	additional information
needle shape	DR	needle diameter
needle length in mm	30	special needle tip
suture	nylon	special needle body
suture diameter	USP 2/0 or metric 3	special packing (non-sterile, bulk)
thread length in cm	75	other packing units

ACUFIRM Needle Information





needle body shape

R	round body	
S	reverse cutting	

needle curving

H	1/2 circle	
D	3/8 circle	
F	5/8 circle	
G	straight	











tip shape

	taper point	
T	trocar point	
	cutting point	
TC	taper cutting point	

additional

X	heavy needle
O	slim needle
2x	double armed

Micro Needles

HLZ	1/2 circle, lancet tip (spatulated)	
DLZ	3/8 circle, lancet tip (spatulated)	
VLZ	1/4 circle, lancet tip (spatulated)	
BLZ	bicurved, lancet tip (spatulated)	
HRS	1/2 circle, taper point	
DRS	3/8 circle, taper point	
DDS	3/8 circle, round body, trocar point	
DDSL	3/8 circle, round body, soft-cutting (contrast)	
HDK	1/2 circle, cutting, micro point	
DDK	3/8 circle, cutting, micro point	


needle types

HR	1/2 circle, round body, taper point
DR	3/8 circle, round body, taper point
FR	5/8 circle, round body, taper point
GR	straight, round body, taper point
HRT	1/2 circle, round body, trocar point
HRTC	1/2 circle, round body, taper cutting point
DRT	3/8 circle, round body, trocar point
DRTC	3/8 circle, round body, taper cutting point
HS	1/2 circle, reverse cutting, cutting point
DS	3/8 circle, reverse cutting, cutting point
GS	straight, reverse cutting, cutting point
HC	1/2 circle, conventional cutting, cutting point
DC	3/8 circle, conventional cutting, cutting point

Excerpt from the European Pharmacopoe (Ph. Eur.):

USP	metric	thread diameter in 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	0,10 - 0,149
4/0	1,5	0,15 - 0,199
3/0	2,0	0,20 - 0,249
2/0	3	0,30 - 0,339
0	3,5	0,35 - 0,399
1	4	0,40 - 0,499
2	5,0	0,50 - 0,599
3+4	6	0,60 - 0,699








Explanation of the needle codes example DR 30

D: 3/8 circle R: round body 30: length of the needle in mm 

General Instructions

- Storage temperature: 10-40°C, in dry and dark room
- Remove plastic wrapping from cardboard box before use
- Do not use damaged and/or wet packaging
- Do not use product with passed expiry date
- For single use only, do not resterilize
- For medical use only
- Keep product out of reach of children

Explanation of the symbols used on the packaging

Symbols	Explanation
	The CE symbol and the reference numbers of the notified body denote that the product fulfils the basic requirements in accordance with Appendix I of the Medical Device Directive (MDD) 92/42/EEG (ECC).
	The LOT-number denotes the individual batch number under which the product was manufactured.
	This symbol followed by a date denotes the expiry date of the product.
	This symbol denotes that the product is sterile and has been sterilised by ethylene oxide.
	This symbol denotes that the product is sterile and has been sterilised using ionising radiation.
	This symbol denotes that the product is only suitable for single use, and is not reusable.
REF	This symbol denotes the purchase order number.
USP	denotes the thread diameter to the United States Pharmacopoeia
metric	denotes the thread diameter according to the European Pharmacopoeia
	Observe instructions on leaflet inside the packaging












PGA (Polyglycolic Acid)

PGA is a precision-braided and coated, synthetic, absorbable suture made from the polymer of glycolic acid. It is absorbed into the body by simple hydrolysis, causing minimal tissue reaction. PGA is characterised by its high initial tensile strength, smooth passage while suturing and its excellent knotting ability.


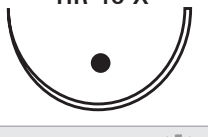
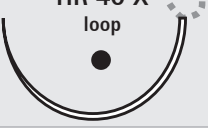
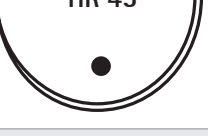
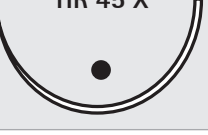
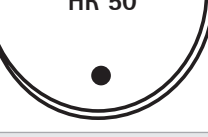

Suture material made of PGA is marked **violet**.

suture type	PGA
Colour	violet or undyed
made of (raw material)	the polymer of polyglycolic acid
Coating	Polycaprolactone
material type	synthetic, braided, coated
Absorption	with simple hydrolysis, after approx. 60-90 days PGA-rapid - with simple hydrolysis, after approx. 40-45 days
Characteristics	high initial tensile strength, good tissue compliance
Recommended application	cutaneous and subcutaneous sutures, plastic surgery, ophthalmology, dental, gastrointestinal, fascia, vascular, gynaecology, urology
tensile strength	approx. 85% of the initial tensile strength after two weeks less than 1% of initial strength after five weeks PGA-rapid – approx. 50% after 7 days < 1% after 10-15 days
Knotting strength	excellent
Tissue reaction	minimal
Sterilisation method	ethylene oxid PGA-rapid – gamma irradiation
Packaging	one, two or three dozenwise in environmental friendly cardboard boxes
Shelf life	5 years
CE-mark	CE 0481
Standard sizes	USP: 10/0 until 2 - metric size: 0,2 until 5










USP	6/0	5/0	4/0	3/0	2/0	0	1	2	suture length in cm
metric	0,7	1	1,5	2	3	3,5	4	5	
needle type	order number								

HR 13 	HR136031	HR135031	HR134031						45
	recommended application: urology, gastrointestinal								
HR 17 			HR174032	HR173032					75
	recommended application: urology, gastrointestinal, paediatric								
HR 20 			HR204032	HR203032					75
	recommended application: urology, gastrointestinal								
HR 22 			HR224032	HR223032	HR222032				75
	recommended application: urology, gastrointestinal								
HR 26 			HR264032	HR263032	HR262032	HR26032	HR26132		75
	recommended application: skin, subcuticular								
HR 30 				HR303032	HR302032	HR30032	HR30132		75
	recommended application: gastrointestinal, paediatric								
HR 37 				HR373032	HR372032	HR37032	HR37132	HR37232	75
	recommended application: gynaecology								
HR 37 X 					HRX372032	HRX37032	HRX37132	HRX37232	75
	recommended application: gynaecology								
HR 40 					HR402032	HR40032	HR40132	HR40232	75
					HR402033	HR40033	HR40133	HR40233	90
	recommended application: gynaecology								






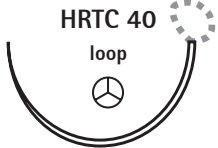

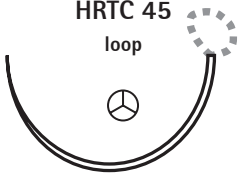
PGA (Polyglycolic Acid)

USP	6/0	5/0	4/0	3/0	2/0	0	1	2	suture length in cm
metric	0,7	1	1,5	2	3	3,5	4	5	
needle type	order number								
 HR 40 loop						HR40034	HR40134		150
	recommended application: abdominal closure, orthopaedics								
 HR 40 X						HRX40032	HRX40132	HRX40232	75
	recommended application: gastrointestinal, fascia, paediatric								
 HR 40 X loop						HRX40034	HRX40134		150
	recommended application: abdominal closure, orthopaedics								
 HR 45						HR45032	HR45132	HR45232	75
	recommended application: fascia								
 HR 45 X						HRX45032	HRX45132	HRX45232	75
	recommended application: fascia								
 HR 50						HR50032	HR50132	HR50232	75
						HR50033	HR50133	HR50233	90
	recommended application: fascia								
 HR 50 loop						HR50034	HR50134		150
	recommended application: abdominal closure, orthopaedics								










USP	6/0	5/0	4/0	3/0	2/0	0	1	2	suture length in cm
metric	0,7	1	1,5	2	3	3,5	4	5	
needle type	order number								

DR 13 	DR135031	DR134031							45
	recommended application: urology, gastrointestinal, paediatric								
DR 17 		DR174031							45
	recommended application: urology, gastrointestinal, paediatric								
FR 37 					FR372032	FR37032			75
	recommended application: urology								
HRT 17 				HT173032					75
	recommended application: urology, gastrointestinal								
HRT 37 				HT373033	HT372033	HT37033	HT37133		90
	recommended application: gastrointestinal								
HRT 48 							HT48133	HT48233	90
	recommended application: orthopaedics								
HRT 48 loop 						HT48034	HT48134		150
	recommended application: abdominal closure, orthopaedics								
DRT 17 			DT174032						75
	recommended application: urology, gastrointestinal								
DRT 37 			DT374032						75
	recommended application: urology, gastrointestinal								






PGA (Polyglycolic Acid)

USP	6/0	5/0	4/0	3/0	2/0	0	1	2	suture length in cm	
metric	0,7	1	1,5	2	3	3,5	4	5		
needle type	order number									
HRTC 17 			HTC174032						75	
	recommended application: urology, gastrointestinal									
HRTC 26 						HTC262032			75	
	recommended application: urology, gastrointestinal									
HRTC 30 						HTC302032	HTC30032	HTC30132	75	
	recommended application: urology, gastrointestinal									
HRTC 37 						HTC372033	HTC37033	HTC37133	HTC37233	90
	recommended application: urology, gastrointestinal									
HRTC 40 						HTC402033	HTC40033	HTC40133	HTC40233	90
	recommended application: urology, gastrointestinal									
HRTC 40 loop 							HTC40034	HTC40134		150
	recommended application: abdominal closure, orthopaedics									
HRTC 45 						HTC452033	HTC45033	HTC45133	HTC45233	90
	recommended application: urology, gastrointestinal									
HRTC 45 loop 							HTC45034	HTC45134		150
	recommended application: abdominal closure, orthopaedics									





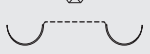


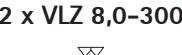



USP	6/0	5/0	4/0	3/0	2/0	0	1	2	suture length in cm
metric	0,7	1	1,5	2	3	3,5	4	5	
needle type	order number								

HS 20 			HS204031	HS203031	HS202031				45
	recommended application: oral, dental, cuticular								
HS 30 				HS303032	HS302032	HS30032			75
	recommended application: orthopaedics								
HS 37 					HS372032	HS37032	HS37132		75
	recommended application: orthopaedics								
HS 37 X 					HSX372032	HSX37032	HSX37132		75
	recommended application: orthopaedics								
HS 40 					HS402032	HS40032	HS40132	HS40232	75
	recommended application: orthopaedics								
HS 48 						HS48033	HS48133	HS48233	90
	recommended application: fascia, orthopaedics								
DS 13 	DS136031	DS135031	DS134031						45
	recommended application: plastic, skin, subcuticular, ophthalmology								
DS 17 		DS175032	DS174032	DS173032					75
	recommended application: plastic, skin, subcuticular, ophthalmology								
DS 20 		DS205031	DS204031	DS203031					45
		DS205032	DS204032	DS203032					75
	recommended application: plastic, skin, subcuticular								

PGA (Polyglycolic Acid)

USP	6/0	5/0	4/0	3/0	2/0	0	1	2	suture length in cm
metric	0,7	1	1,5	2	3	3,5	4	5	
needle type	order number								
DS 24 			DS244032	DS243032	DS242032				75
recommended application: plastic, skin, subcuticular									
DS 26 				DS263032	DS262032				75
recommended application: plastic, skin, subcuticular									
DS 30 				DS303032	DS302032				75
recommended application: plastic, skin, subcuticular									
DS 37 				DS373032	DS372032				75
recommended application: plastic, skin, subcuticular									
GS 60 				GS603032	GS602032				75
recommended application: plastic, skin, subcuticular									

pre-cut sutures (without needle)									
USP	5/0	4/0	3/0	2/0	0	1	2	suture length in cm	
metric	1	1,5	2	3	3,5	4	5		
quant. sutures	order number								
10 pcs.			S303110	S203110	S03110			45	
3 pcs.			S30313	S20313	S0313			45	
2 pcs.			S30322	S20322	S0322			75	
1 pcs.			S30341	S20341	S0341	S1341		150	







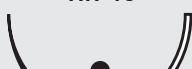


micro-sutures								
USP	11/0	10/0	9/0	8/0	7/0	6/0	5/0	suture length in cm
metric	0,1	0,2	0,3	0,4	0,5	0,7	1	
needle type	order number							
HRS 6,4-200 				M13642831	M13642731			45
	recommended application: vascular							
DRS 6,4-200 				M23642831	M23642731			45
	recommended application: vascular							
DLZ 6,4-200 					M20642736	M20642636		30
	recommended application: ophthalmology							
DLZ 8,5-350 						M208535636	M208535536	30
	recommended application: ophthalmology							
2 x HLZ 8,0-200 				M6082836				30
	recommended application: ophthalmology							
2 x DLZ 6,0-150 		M70615036						30
	recommended application: ophthalmology							
2 x DLZ 6,0-200 				M7062836	M7062736			30
				M7062831	M7062731			45
	recommended application: ophthalmology							
2 x VLZ 8,0-300 						M8083631	M8083531	45
	recommended application: ophthalmology							
DDK 11,0-300 						M26113631		45
	recommended application: ophthalmology							
2 x DDK 8,0-250 						M76825631		45
	recommended application: ophthalmology							
2 x DDK 10,0-300 						M76103631		45
	recommended application: ophthalmology							

PDO (Polydioxanone)










PDO is a monofil, synthetic absorbable suture made from the polymer of polydioxanone. The resorption time is between 150-180 days. PDO has also excellent knotting abilities and after five weeks still 50% of its original tensile strength.

Suture material made of PDO is marked **purple**.








suture type	PDO
Colour	violet
made of (raw material)	the polymer of polydioxanone
material type	synthetic, monofilament
Absorption	with simple hydrolysis, after approx. 150-180 days
Characteristics	longlasting tensile strength and longer absorption time as with PGA
Recommended application	for skin sutures with slow wound healing, plastic surgery, gastrointestinal, gynaecology, urology, orthopaedics
tensile strength	less than 50% of the initial tensile strength after five weeks
Knotting strength	good
Tissue reaction	minimal
Sterilisation method	ethylene oxid
Packaging	one, two or three dozenwise in environmental friendly cardboard boxes
Shelf life	5 years
CE-mark	CE 0481
Standard sizes	USP: 6/0 until 1 - metric size: 0,7 until 4

USP	6/0	5/0	4/0	3/0	2/0	0	1	2	suture length in cm
metric	0,7	1	1,5	2	3	3,5	4	5	
needle type	order number								
HR 13 	HR136081								45
recommended application: general closure, gastrointestinal									
HR 20 			HR204082						75
recommended application: general closure, gastrointestinal									
HR 26 			HR264082	HR263082	HR262082	HR26082	HR26182		75
recommended application: skin, subcuticular									
HR 30 				HR303082	HR302082	HR30082	HR30182		75
recommended application: gastrointestinal, paediatric									
HR 37 				HR373082	HR372082	HR37082	HR37182		75
recommended application: gynaecology									
HR 37 X 					HRX372082	HRX37082	HRX37182		75
recommended application: gynaecology									
HR 40 						HR40082	HR40182		75
recommended application: gynaecology									
HR 40 loop 						HR40084	HR40184		150
recommended application: abdominal closure, orthopaedics									
HR 40 X 						HRX40082	HRX40182		75
recommended application: gastrointestinal, fascia, paediatric									

PDO (Polydioxanone)

USP	6/0	5/0	4/0	3/0	2/0	0	1	2	suture length in cm
metric	0,7	1	1,5	2	3	3,5	4	5	
needle type	order number								
 HR 45 X						HRX45083	HRX45183		90
	recommended application: gastrointestinal, fascia, paediatric								
 DR 13			DR134081						45
	recommended application: urology, paediatric								
 FR 37						FR37082			75
	recommended application: urology								
 HRT 17				HT173082					75
	recommended application: gastrointestinal, urology								
 HRT 37				HT373083					90
	recommended application: gastrointestinal								
 DRT 17			DT174082						75
	recommended application: gastrointestinal, urology								
 HRTC 26					HTC262082				75
	recommended application: gastrointestinal, urology								
 HRTC 37					HTC372082	HTC37082			75
	recommended application: gastrointestinal, urology								
 HS 20				HS203081					45
	recommended application: orthopaedics								

USP	6/0	5/0	4/0	3/0	2/0	0	1	2	suture length in cm
metric	0,7	1	1,5	2	3	3,5	4	5	
needle type	order number								

 HS 37 X					HSX372082	HSX37082	HSX37182		75
	recommended application: orthopaedics								
 HS 48							HS48183		90
	recommended application: fascia, orthopaedics								
 DS 17		DS175081	DS174081	DS173081					45
		DS175082	DS174082	DS173082					75
	recommended application: plastic, skin, subcuticular								
 DS 20			DS204082	DS203082					75
	recommended application: plastic, skin, subcuticular								
 DS 24				DS243082	DS242082				75
	recommended application: plastic, skin, subcuticular								
 DS 40							DS40183		90
	recommended application: skin								
 GS 60				GS603082	GS602082				75
	recommended application: skin								

pre-cut sutures (without needle)

USP	5/0	4/0	3/0	2/0	0	1	2	suture length in cm
metric	1	1,5	2	3	3,5	4	5	
quant. sutures	order number							










2 pcs.			S30822	S20822	S0822			75
1 pcs.			S30841	S20841	S0841	S1841		150

Catgut plain









Catgut plain is made of twisting together strands of purified collagen taken from intestines. It is characterised through its uniform diameter and good knotting properties. This natural material is absorbed by enzymatic degradation.

Suture material made of Catgut plain is marked **golden**.








suture type	Catgut plain
Colour	light beige
made of (raw material)	Submucosa (sheep) , Serosa (cattle)
material type	natural, twisted
Absorption	enzymatic degradation after approx. 70 - 90 days
Characteristics	uniform diameter, high pliancy, good knotting properties
Recommended application	skin and subcutaneous sutures, urology, fascia, gastrointestinal sutures
tensile strength	after 7 - 10 days at almost 0%
Knotting abilities	very good
Tissue reaction	minimal
Sterilisation method	ethylene oxide
Packaging	one, two or three dozenwise in environmental friendly cardboard boxes
Shelf life	5 years
CE-mark	none
Standard sizes	USP 5/0 until 2, metric size 1 until 5

USP	5/0	4/0	3/0	2/0	0	1	2	suture length cm
metric	1	1,5	2	3	3,5	4	5	
needle type	order number							
HR 17 		HR174002	HR173002	HR172002				75
	recommended application: urology							
HR 20 			HR203002					75
	recommended application: urology							
HR 22 			HR223002	HR222002	HR22002			75
	recommended application: urology							
HR 26 			HR263002	HR262002	HR26002			75
	recommended application: gastrointestinal							
HR 30 			HR303002	HR302002	HR30002	HR30102		75
	recommended application: gastrointestinal							
HR 37 			HR373002	HR372002	HR37002	HR37102		75
	recommended application: gastrointestinal							
HR 37 X 				HRX372002	HRX37002	HRX37102		75
	recommended application: gynaecology, general closure							
HR 40 				HR402002	HR40002	HR40102		75
	recommended application: gynaecology, general closure							
HR 48 X 				HRX482002	HRX48002	HRX48102	HRX48202	75
	recommended application: gynaecology, general closure							

Catgut plain

USP	5/0	4/0	3/0	2/0	0	1	2	suture length cm
metric	1	1,5	2	3	3,5	4	5	
needle type	order number							
HR 75 X 			HRX753002					75
recommended application: urology, general closure								
DR 17 		DR174002						75
recommended application: tonsil, genital								
DR 20 			DR203002					75
recommended application: tonsil, genital								
DR 30 				DR302002				75
recommended application: gastrointestinal								
HRT 37 					HT37002			75
recommended application: gynaecology, general closure								
HS 20 		HS204002						75
recommended application: mucosa								
HS 26 			HS263002					75
recommended application: fascia, mucosa								
HS 40 						HS40102		75
recommended application: gynaecology								

USP	5/0	4/0	3/0	2/0	0	1	2	suture length cm
metric	1	1,5	2	3	3,5	4	5	
needle type	order number							

DS 13 	DS135002	DS134002						75
	recommended application: subcuticular, mucosa							
DS 20 		DS204002	DS203002					75
	recommended application: subcuticular							
DS 24 			DS243002	DS242002				75
	recommended application: subcuticular, fascia							
DS 30 				DS302002				75
	recommended application: subcuticular, fascia							
DS 37 				DS372002				75
	recommended application: subcuticular, fascia							
GS 60 				GS602002				75
	 recommended application: skin, subcuticular							










pre-cut sutures (without needle)								
USP	5/0	4/0	3/0	2/0	0	1	2	suture length cm
metric	1,5	2	3	3,5	4	5	6	
quant. sutures	order number							
2 pcs.			S30022	S20022	S0022	S1022	S2022	75
1 pcs.			S30041	S20041	S0041			150

Catgut chromic










Catgut chromic is the same raw material as Catgut plain, but is additionally treated with chromicisation to allow approximately the double stitch holding time of Catgut plain.

Suture material made of chromic Catgut is marked **beige**.










suture type	Catgut chromic
Colour	dark brown
made of (raw material)	Submucosa (sheep) , Serosa (cattle)
material type	natural, twisted, treated with chromicisation
Absorption	enzymatic degradation after approx. 90 - 120 days
Characteristics	uniform diameter, high pliancy, good knotting properties
Recommended application	skin and subcutaneous sutures, urology, fascia, gastrointestinal
tensile strength	after 21 - 28 days at almost 0%
Knotting abilities	very good
Tissue reaction	minimal
Sterilisation method	ethylene oxide
Packaging	one, two or three dozenwise in environmental friendly cardboard boxes
Shelf life	5 years
CE-mark	none
Standard sizes	USP 5/0 until 2, metric size 1 until 5

USP	5/0	4/0	3/0	2/0	0	1	2	suture length cm
metric	1	1,5	2	3	3,5	4	5	
needle type	order number							
HR 17 	HR175052	HR174052	HR173052					75
	recommended application: urology							
HR 20 			HR203052					75
	recommended application: gastrointestinal							
HR 26 		HR264052	HR263052	HR262052	HR26052	HR26152		75
	recommended application: gastrointestinal							
HR 30 			HR303052	HR302052	HR30052	HR30152		75
	recommended application: gastrointestinal							
HR 37 			HR373052	HR372052	HR37052	HR37152		75
	recommended application: gastrointestinal							
HR 37 X 			HRX373052	HRX372052	HRX37052	HRX37152		75
	recommended application: gynaecology, general closure							
HR 40 				HR402052	HR40052	HR40152		75
	recommended application: gynaecology, general closure							
HR 40 X 				HRX402052	HRX40052	HRX40152	HRX40252	75
	recommended application: gynaecology, general closure							
HR 45 				HR452052	HR45052	HR45152		75
	recommended application: subcutaneous, fascia, muscles							

Catgut chromic



USP	5/0	4/0	3/0	2/0	0	1	2	suture length cm
metric	1	1,5	2	3	3,5	4	5	
needle type	order number							
 HR 45 X					HRX45052	HRX45152	HRX45252	75
	recommended application: fascia, muscles, genital							
 HR 48						HR48152	HR48252	75
	recommended application: gynaecology, general closure							
 HR 48 X				HRX482052	HRX48052	HRX48152	HRX48252	75
	recommended application: gynaecology, general closure							
 DR 17	DR174032							75
	recommended application: genital, gastrointestinal							
 DR 30				DR302052	DR30052			75
	recommended application: genital, gastrointestinal							
 DR 45				DR452052				75
	recommended application: gastrointestinal							
 FR 37					FR37052			75
	recommended application: genital							
 GR 45				GR452052				75
	recommended application: gastrointestinal							
 GR 50			GR503052	GR502052	GR50052			75
	recommended application: gastrointestinal							

USP	5/0	4/0	3/0	2/0	0	1	2	suture length cm
metric	1	1,5	2	3	3,5	4	5	
needle type	order number							

 HRT 37	HT372052							75
	recommended application: gynaecology, general closure							
 HS 17	HS175052							75
	recommended application: subcuticular, mucosa							
 HS 20		HS204052						75
	recommended application: mucosa, skin							
 HS 26				HS262052				75
	recommended application: mucosa, skin							
 HS 30				HS302052				75
	recommended application: gynaecology, genital							
 HS 40					HS40052			75
	recommended application: gynaecology, genital							
 HS 48						HS48152		75
	recommended application: subcutaneous							
 DS 13	DS135052	DS134052						75
	recommended application: subcuticular, mucosa							
 DS 17		DS174052	DS173052					75
	recommended application: subcuticular, mucosa							

Catgut chromic

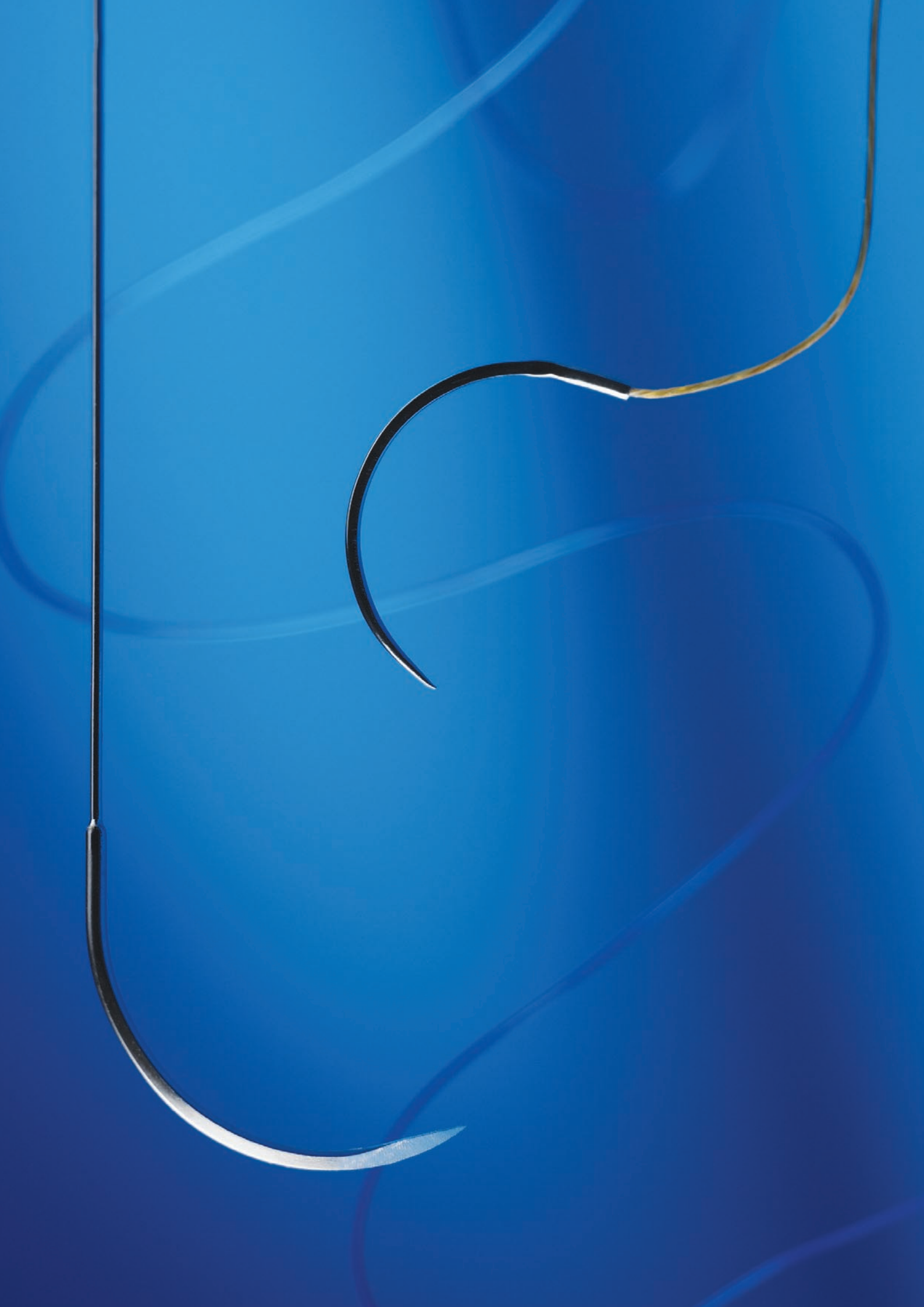
USP	5/0	4/0	3/0	2/0	0	1	2	suture length cm
metric	1	1,5	2	3	3,5	4	5	
needle type	order number							

 DS 20		DS204052						75
	recommended application: cuticular, fascia							
 DS 24				DS242052				75
	recommended application: cuticular, fascia							

pre-cut sutures (without needle)

USP	5/0	4/0	3/0	2/0	0	1	2	suture length cm
metric	1,5	2	3	3,5	4	5	6	
quant. sutures	order number							

2 pcs.			S30022	S20022	S0022	S1022	S2022	75
1 pcs.			S30041	S20041	S0041			150












Polypropylene

Polypropylene is a monofil, non-absorbable surgical suture material with a smooth non-porous surface enabling it to slip cleanly and evenly through tissue. As a result of its non-hydrolic nature, it is particularly suitable for permanent stitches.

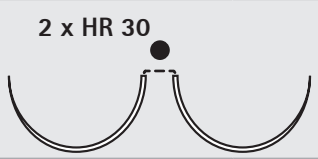




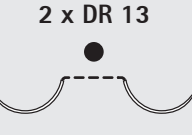


Suture material made of polypropylene is marked **dark blue**.

suture type	Polypropylene
Colour	blue, USP 10/0 and 9/0 blue/black
made of (raw material)	Polypropylene
material type	synthetic, monofilament
Absorption	none
Characteristics	smooth, pore-free surface, not absorbable by hydrolysis therefore consistent tensile strength
Recommended application	for sunk and long-lasting implanted stitches as the suture reacts almost inert, cardiac surgery, plastic surgery
tensile strength	very good
Knotting strength	good
Tissue reaction	minimal
Sterilisation method	ethylene oxide
Packaging	one, two or three dozenwise in environmental friendly cardboard boxes
Shelf life	5 years
CE-mark	CE 0481
Standard sizes	USP: 11/0 until 2 - metric size: 0,1 until 5









USP	6/0	5/0	4/0	3/0	2/0	0	1	2	suture length in cm
metric	0,7	1	1,5	2	3	3,5	4	5	
needle type	order number								

HR 13 	HR136022	HR135022	HR134022						75
	recommended application: cardiovascular								
2 x HR 13 	2HR136033	2HR135022	2HR134022						75
	recommended application: cardiovascular								
HR 17 		HR175022	HR174022	HR173022					75
	recommended application: cardiovascular								
2 x HR 17 		2HR175023	2HR174023	2HR173023					90
	recommended application: cardiovascular								
HR 20 				HR203022					75
	recommended application: cardiovascular								
2 x HR 20 		2HR205023	2HR204023	2HR203023	2HR202023	2HR20023			90
	recommended application: cardiovascular								
HR 26 				HR263022	HR262022	HR26022			75
	recommended application: cardiovascular								
2 x HR 26 		2HR265023	2HaR264023	2HR263023	2HR262023	2HR26023			90
	recommended application: cardiovascular								
HR 30 					HR302022	HR30022			75
	recommended application: general surgery								

Polypropylene

USP	6/0	5/0	4/0	3/0	2/0	0	1	2	suture length in cm
metric	0,7	1	1,5	2	3	3,5	4	5	
needle type	order number								
 <p>2 x HR 30</p>				2HR303023	2HR302023				90
recommended application: cardiovascular									
 <p>HR 37</p>					HR372022	HR37022			75
recommended application: general surgery									
 <p>HR 40</p>						HR40022	HR40122	HR40222	75
							HR40023	HR40123	HR40223
recommended application: general surgery									
 <p>HR 45</p>							HR45122	HR45222	75
recommended application: general surgery									
 <p>HR 45 X</p>							HRX45122	HRX45222	75
recommended application: cardiovascular									
 <p>DR 13</p>	DR136022	DR135022	DR134022						75
recommended application: cardiovascular									
 <p>2 x DR 13</p>	2DR136022	2DR135022	2DR134022						75
recommended application: cardiovascular									
 <p>DR 17</p>		DR175022	DR174022	DR1373022					75
recommended application: cardiovascular									
 <p>HRT 26</p>				HT263022	HT262022				75
recommended application: cardiovascular									

USP	6/0	5/0	4/0	3/0	2/0	0	1	2	suture length in cm
metric	0,7	1	1,5	2	3	3,5	4	5	
needle type	order number								




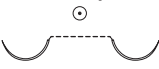







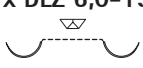

 <p>2 x HRT 26</p>			2HT264023	2HT263023	2HT262023				90
	recommended application: cardiovascular								
 <p>HRT 37</p>							HT37023		90
	recommended application: cardiovascular								
 <p>DRT 17</p>				DT173022					75
	recommended application: cardiovascular								
 <p>DS 13</p>	DS136022	DS135022	DS134022						75
	recommended application: ophthalmology, skin closure								
 <p>DS 17</p>		DS175022	DS174022	DS173022					75
	recommended application: skin closure								
 <p>DS 26</p>			DS264021	DS263021					45
			DS264022	DS263022					75
	recommended application: skin closure								
 <p>DS 30</p>				DS303022					75
	recommended application: skin closure								
 <p>GS 60</p>				GS603022					75
	recommended application: skin closure								

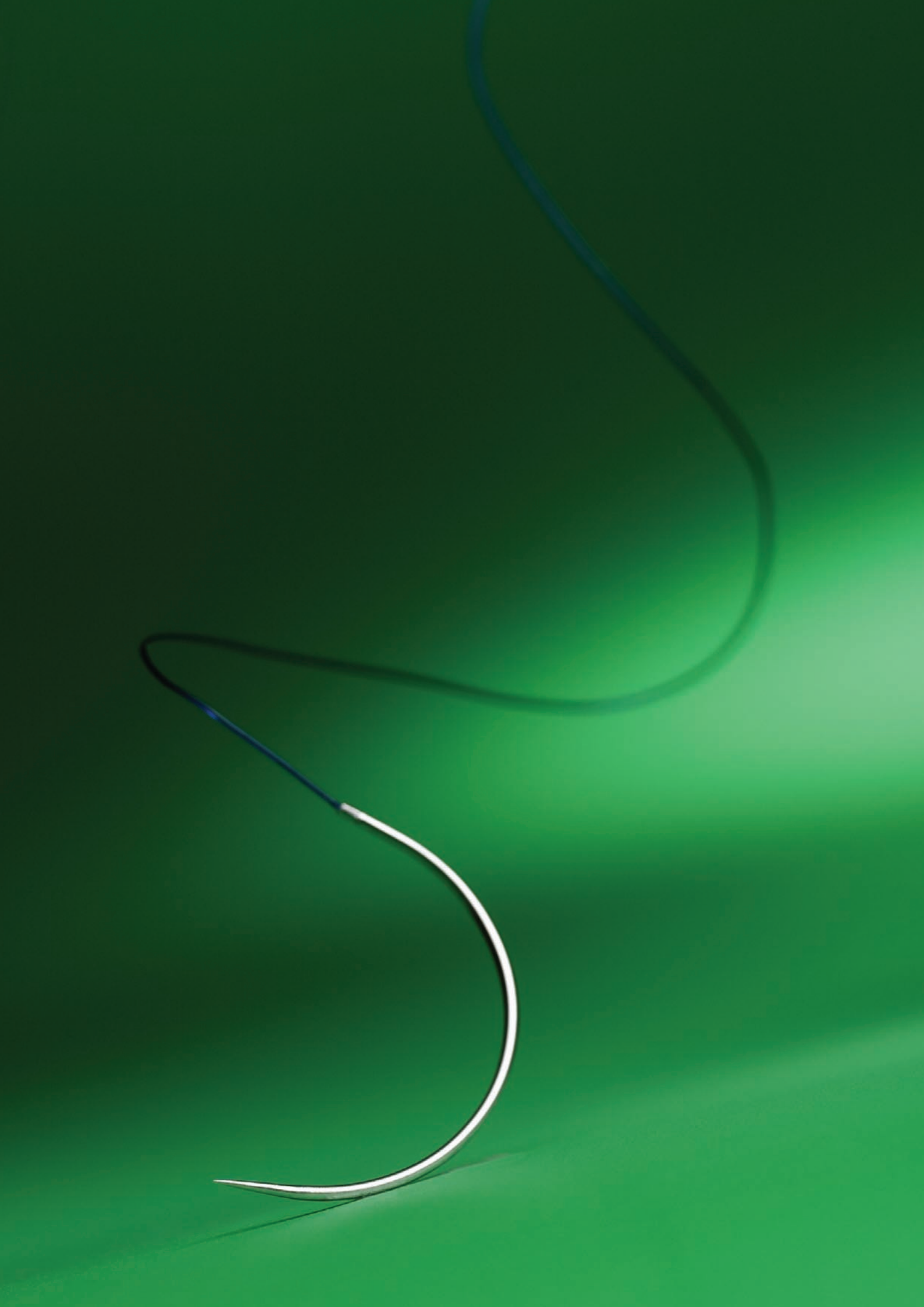
pre-cut sutures (without needle)

USP	6/0	5/0	4/0	3/0	2/0	0	1	2	suture length in cm
metric	0,7	1	1,5	2	3	3,5	4	5	
quant. sutures	order number								

1 pcs.			S40241	S30241	S20241	S0241			150
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Polypropylene

micro-sutures								
USP	11/0	10/0	9/0	8/0	7/0	6/0	5/0	suture length in cm
metric	0,1	0,2	0,3	0,4	0,5	0,7	1	
needle type	order number							
HRS 6,4-200 					M13642722			75
recommended application: vascular								
DRS 5,0-100 		M2351020						15
recommended application: vascular								
DRS 6,4-140 				M236414820				15
recommended application: vascular								
2 x DRS 8,0-230 					M73823722	M73823622		75
recommended application: vascular								
DRS 9,5-230 					M239523722	M239523622		75
recommended application: vascular								
2 x DRS 9,5-230 						M739523622		75
recommended application: vascular								
2 x DDS 8,0-230 					M75823725			60
recommended application: cardiovascular								
2 x DDSL 9,7-230 					M779723722			75
recommended application: cardiovascular								
2 x DDSL 13-250 						M771325621		45
recommended application: cardiovascular								
HLZ 6,4-200 					M10642726			30
recommended application: ophthalmology								
DLZ 6,0-150 		M20615026						30
recommended application: ophthalmology								
2 x DLZ 6,0-150 	M70615126	M70615026						30
recommended application: ophthalmology								
2 x DLZ 8,0-230 					M70832721	M70823621		45
recommended application: ophthalmology								












PVDF (Polyvinylidenfluoride)










PVDF (Polyvinylidenfluoride) is a monofil, non-absorbable surgical suture. The characteristics of this suture is its excellent tensile strength; slips very smooth through tissue. PVDF has extremely inert biological and chemical properties. PVDF is more resistant than polypropylene.

Suture material made of PVDF is marked **light grey**.

suture type	PVDF
Colour	USP 8/0 until 2 blue, USP 10/0 and 9/0 - black
made of (raw material)	polyvinylidenfluoride
material type	monofilament
Absorption	none
Characteristics	excellent knotting properties with less and tighter knots
Recommended application	cardiac and vascular, skin sutures
tensile strength	very high
Knotting strength	excellent
Tissue reaction	minimal
Sterilisation method	ethylene oxide
Packaging	one, two or three dozenwise in environmental friendly cardboard boxes
Shelf life	5 years
CE-mark	CE 0481
Standard sizes	USP: 10/0 until 2 - metric size: 0,2 until 5




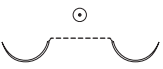

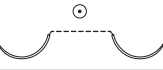

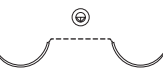

USP	6/0	5/0	4/0	3/0	2/0	0	1	2	suture length in cm
metric	0,7	1	1,5	2	3	3,5	4	5	
needle type	order number								
HR 13 	HR136042	HR135042	HR134042						75
	recommended application: cardiovascular								
2 x HR 13 	2HR136042	2HR135042	2HR134042						75
	recommended application: cardiovascular								
HR 17 		HR175042	HR174042	HR173042					75
	recommended application: cardiovascular								
2 x HR 17 		2HR175043	2HR174043	2HR173043					90
	recommended application: cardiovascular								
HR 20 				HR203042					75
	recommended application: cardiovascular								
HR 26 				HR263042	HR262042	HR26042			75
	recommended application: cardiovascular								
2 x HR 26 		2HR265043	2HR264043	2HR263043	2HR262043	2HR26043			90
	recommended application: cardiovascular								
HR 30 					HR302042	HR30042			75
	recommended application: general surgery								
HR 37 					HR372042	HR37042			75
	recommended application: general surgery								

PVDF (Polyvinylidenfluoride)

USP	6/0	5/0	4/0	3/0	2/0	0	1	2	suture length in cm
metric	0,7	1	1,5	2	3	3,5	4	5	
needle type	order number								
 <p>HR 40</p>							HR40142		75
	recommended application: general surgery								
 <p>DR 17</p>			DR174042						75
	recommended application: cardiovascular								
 <p>HRT 26</p>					HRT262042				75
	recommended application: cardiovascular								
 <p>2 x HRT 26</p>					2HT262043				90
	recommended application: cardiovascular								
 <p>DRT 17</p>				DT173042					75
	recommended application: cardiovascular								
 <p>HS 45 X</p>							HSX45142	HSX45242	75
	recommended application: cardiovascular								
 <p>DS 13</p>	DS136041	DS135041	DS134041						45
	recommended application: ophthalmology, skin closure								
 <p>DS 30</p>				DS303042					75
	recommended application: skin closure								
 <p>GS 60</p>				GS603042					75
	recommended application: skin closure								

pre-cut sutures (without needle)									
USP	6/0	5/0	4/0	3/0	2/0	0	1	2	suture length in cm
metric	0,7	1	1,5	2	3	3,5	4	5	
quant. sutures	order number								
1 pcs.			S40441	S30441	S20441	S0441			150

micro-sutures									
USP	11/0	10/0	9/0	8/0	7/0	6/0	5/0	suture length in cm	
metric	0,1	0,2	0,3	0,4	0,5	0,7	1		
needle type	order number								










HRS 6,4-200 					M13642742			75	
recommended application: vascular									
DRS 5,0-100 	M2351040							15	
recommended application: vascular									
DRS 6,4-140 				M236414840				15	
recommended application: vascular									
2 x DRS 8,0-230 					M73823742	M73823642		75	
recommended application: vascular									
DRS 9,5-230 					M239523742	M239523642		75	
recommended application: vascular									
2 x DRS 9,5-230 						M739523642		75	
recommended application: vascular									
2 x DDS 8,0-230 					M75823745			60	
recommended application: cardiovascular									
2 x DDSL 9,7-230 					M779723742			75	
recommended application: cardiovascular									
2 x DDSL 13-250 						M771325642		75	
recommended application: cardiovascular									

Nylon (Polyamide)










Nylon/Polyamide is a monofil, non-absorbable surgical suture material made of polyamide. Owing to its uniformly smooth surface nylon slips easily through tissue. Nylon is particularly noted for its very good knotting features and high tensile strength.

Suture material made of nylon is marked **green**.




suture type	Nylon
Colour	black
made of (raw material)	Polyamide 6.6
material type	synthetic, monofilament
Absorption	none
Characteristics	characterized by high strength and good knotting abilities
Recommended application	skin closure, ophthalmology
tensile strength	very high
Knotting strength	very good
Tissue reaction	minimal
Sterilisation method	ethylene oxide
Packaging	one, two or three dozenwise in environmental friendly cardboard boxes
Shelf life	5 years
CE-mark	CE 0123
Standard sizes	USP: 12/0 until 2 - metric size: 0,01 until 5

USP	6/0	5/0	4/0	3/0	2/0	0	1	2	suture length in cm
metric	0,7	1	1,5	2	3	3,5	4	5	
needle type	order number								
HR 13 	HR136062	HR135062	HR134062						75
	recommended application: cardiovascular								
HR 15 		HR155062	HR154062	HR153062					75
	recommended application: cardiovascular								
HR 17 			HR174062	HR173062					75
	recommended application: cardiovascular								
HR 20 				HR203062	HR202062				75
	recommended application: cardiovascular								
HR 26 				HR263062	HR262062				75
	recommended application: cardiovascular								
HR 30 						HR30062	HR30162		75
	recommended application: general closure								
HR 37 						HR37062	HR37162		75
	recommended application: general closure								
HR 40 						HR40062	HR40162	HR40262	75
	recommended application: general closure								
DR 17 		DR175062	DR174062						75
	recommended application: cardiovascular								

Nylon (Polyamide)

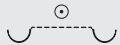






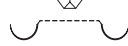

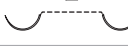



USP	6/0	5/0	4/0	3/0	2/0	0	1	2	suture length in cm
metric	0,7	1	1,5	2	3	3,5	4	5	
needle type	order number								
HS 20 	HS204061								45
	recommended application: cuticular								
DS 13 	DS136061	DS135061	DS134061						45
	recommended application: cuticular, ophthalmology								
DS 17 	DS176061	DS175061	DS174061	DS173061	DS172061				45
	recommended application: cuticular								
DS 20 		DS205061	DS204061	DS203061	DS202061				45
		DS205062	DS204062	DS203062	DS202062				75
	recommended application: cuticular								
DS 24 			DS244062	DS243062	DS242062				75
	recommended application: cuticular								
DS 26 			DS264062	DS263062	DS262062				75
	recommended application: cuticular								
DS 30 				DS303062	DS302062	DS30062	DS30162		75
	recommended application: cuticular								
DS 37 				DS373062	DS372062	DS37062	DS37162		75
	recommended application: cuticular								
DS 40 				DS403062	DS402062	DS40062	DS40162		75
	recommended application: retention								

USP	6/0	5/0	4/0	3/0	2/0	0	1	2	suture length in cm
metric	0,7	1	1,5	2	3	3,5	4	5	
needle type	order number								

 <p>DS 76</p>								DS76162	DS76262	75
	recommended application: cuticular									
 <p>GS 40</p>				GS403062	GS402062					75
	recommended application: cuticular									
 <p>GS 60</p>				GS603062	GS602062					75
	recommended application: cuticular									



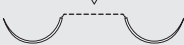
pre-cut sutures (without needle)									
USP	6/0	5/0	4/0	3/0	2/0	0	1	2	suture length in cm
metric	0,7	1	1,5	2	3	3,5	4	5	
quant. sutures	order number								
5 pcs.				S30615	S20615	S0615	S1615		45
1 pcs.				S30641	S20641	S0641	S1641		150

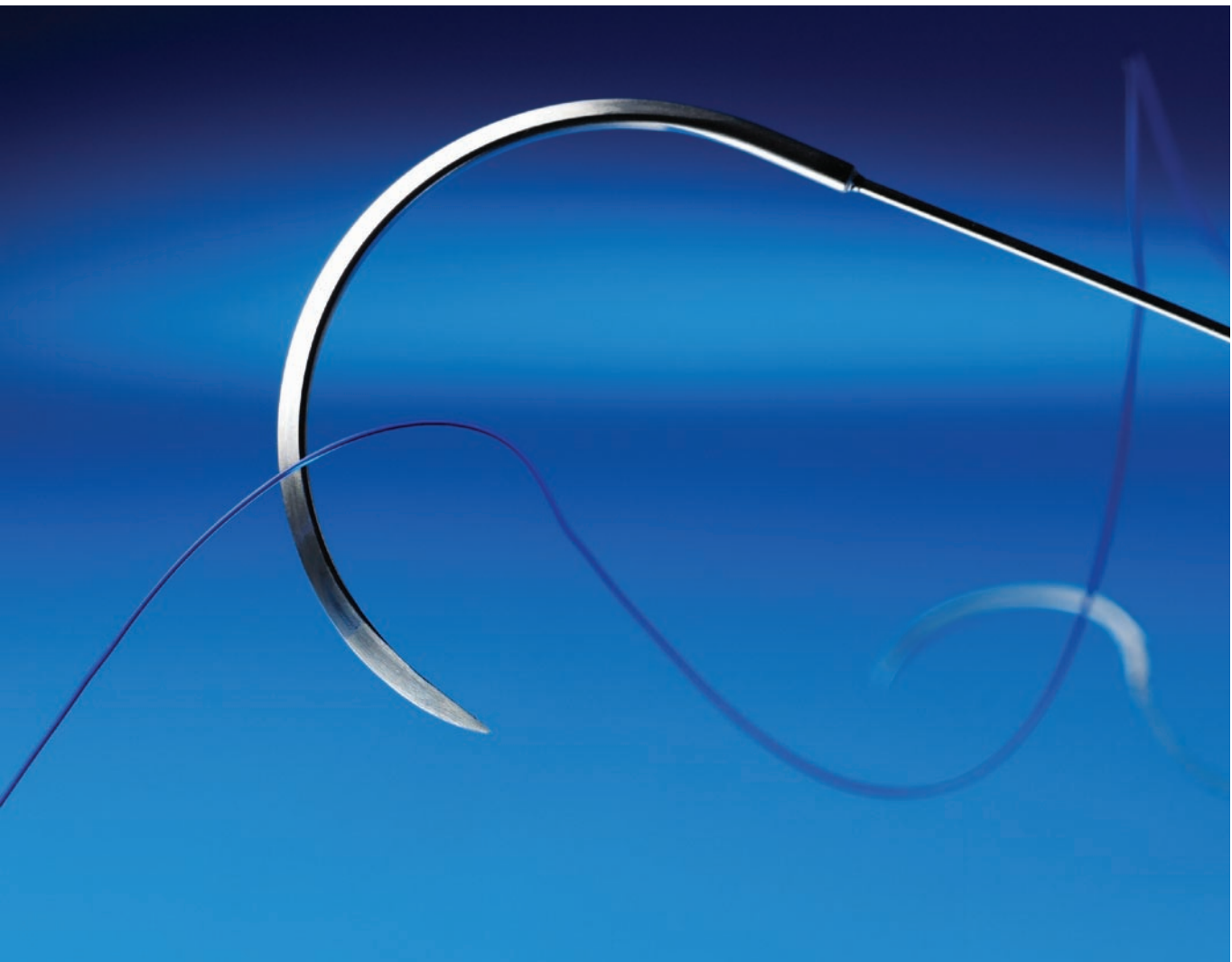
Nylon (Polyamide)

micro-sutures									
USP	12/0	11/0	10/0	9/0	8/0	7/0	6/0	5/0	suture length in cm
metric	0,01	0,1	0,2	0,3	0,4	0,5	0,7	1	
needle type	order number								
2 x HRS 5,0-100 			M635106A						10
	recommended application: vascular								
DRS 4,0-70 		M234716A							10
	recommended application: vascular								
DRS 4,0-100 			M234106A						10
	recommended application: vascular								
DRS 5,0-70 	M235726A								10
	recommended application: vascular								
DRS 5,0-100 			M2351060	M2351960					15
	recommended application: vascular								
DDS 5,0-100 			M2551067	M2551967					20
	recommended application: vascular								
2 x GLZ 16,0-150 			M001615067						20
	recommended application: ophthalmology								
2 x HLZ 6,0-150 			M60615066						30
	recommended application: ophthalmology								
DLZ 5,0-150 			M20515066						30
	recommended application: ophthalmology								
2 x DLZ 6,0-150 			M70615066	M70615966					30
	recommended application: ophthalmology								
2 x DLZ 6,4-200 			M70642066	M70642966					30
	recommended application: ophthalmology								
VLZ 6,4-200 					M30642866				30
	recommended application: ophthalmology								
2 x VLZ 6,4-200 					M80642866				30
	recommended application: ophthalmology								

micro-sutures

USP	12/0	11/0	10/0	9/0	8/0	7/0	6/0	5/0	suture length in cm
metric	0,01	0,1	0,2	0,3	0,4	0,5	0,7	1	
needle type	order number								

2 x BLZ 5,0-150 			M90515067	M90515967					20
	recommended application: ophthalmology								
DDK 10,0-200 							M26102661		45
	recommended application: vascular								
2 x DDK 10,0-200 							M76102662		75
	recommended application: vascular								


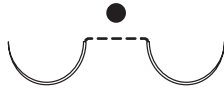

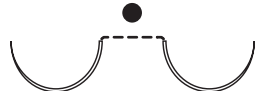







Polyester










Polyester is a braided and coated, non-absorbable suture material. While the areas of application and tissue features of polyester are practically identical to those of polypropylene, polyester provides a long term tensile strength retention, very good tissue compatibility.








Suture material mad of polyester is marked **orange**.

suture size	Polyester
Colour	green
made of (raw material)	polyester
material type	synthetic, braided
Absorption	none
Characteristics	good tissue compatibility and contains for a long time its inital tensile strength
Recommended application	arterial and muscle sutures
tensile strength	very high
Knotting strength	good
Tissue reaction	minimal
Sterilisation method	ethylene oxide
Packaging	one, two or three dozenwise in environmental friendly cardboard boxes
Shelf life	5 years
CE-mark	CE 0123
Standard sizes	USP: 6/0 until 1 - metric size: 0,7 until 4

USP	6/0	5/0	4/0	3/0	2/0	0	1	2	suture length in cm
metric	0,7	1	1,5	2	3	3,5	4	5	
needle type	order number								
HR 17 			HR174092						75
recommended application: mucosa, arterial, cardiovascular									
2 x HR 17 		2HR175093	2HR174093	2HR173093	2HR172093				90
recommended application: arterial, cardiovascular									
HR 20 				HR203092	HR202092				75
recommended application: arterial, cardiovascular									
2 x HR 20 			2HR204093						90
recommended application: arterial, cardiovascular									
HR 26 				HR263092	HR262092				75
recommended application: fascia, mucosa, gastrointestinal									
2 x HR 26 				2HR263093	2HR262093				90
recommended application: gastrointestinal, arterial, muscels, cardiovascular									
HR 30 					HR302092	HR30092			75
recommended application: fascia, muscels, gastrointestinal									
HR 37 					HR372092	HR37092			75
recommended application: general closure									
DR 17 			DR174092						75
recommended application: vascular, nerves									

Polyester

USP	6/0	5/0	4/0	3/0	2/0	0	1	2	suture length in cm
metric	0,7	1	1,5	2	3	3,5	4	5	
needle type	order number								
2 x HRT 17 			2HT174093						90
recommended application: arterial, cardiovascular									
HRT 26 						HT262092			75
recommended application: cuticular, mucosa, tendons, cardiovascular									
2 x HRT 26 			2HT263093						90
recommended application: arterial, cardiovascular									
HRT 37 						HT37092			75
recommended application: arterial, cardiovascular, fascia									
2 x DRT 17 			2DT174093						90
recommended application: arterial, cardiovascular									
HS 20 						HS373091			45
recommended application: tendons, cuticular, mucosa									
HS 37 X 							HSX37192		75
recommended application: cuticular, fascia									
HS 48 						HS48092	HS48192		75
recommended application: general closure									
DS 13 		DS135091							45
recommended application: cuticular									

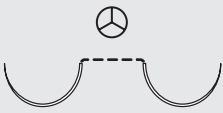



USP	6/0	5/0	4/0	3/0	2/0	0	1	2	suture length in cm
metric	0,7	1	1,5	2	3	3,5	4	5	
needle type	order number								
DS 17 			DS174092	DS173092					75
recommended application: cuticular, subcuticular, plastic, intrakutan									
DS 20 			DS204092	DS203092					75
recommended application: subcuticular, intrakutan, fascia, tendons									
DS 24 				DS243092					75
recommended application: subcuticular, intrakutan, fascia, tendons									
DS 30 					DS302092				75
recommended application: subcuticular, intrakutan, fascia, tendons									
DS 60 							DS60192		75
recommended application: general closure									
GS 40 			GS404092						75
recommended application: intrakutan, tendons									
GS 60 					GS602092	GS60092			75
recommended application: intrakutan, tendons, skin									


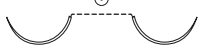
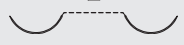

Polyester

pre-cut sutures (without needle)

USP	6/0	5/0	4/0	3/0	2/0	0	1	2	suture length in cm
metric	0,7	1	1,5	2	3	3,5	4	5	
quant. sutures	order number								
5 pcs.			S40915	S30915	S20915	S0915			45
1 pcs.			S40941	S30941	S20941	S0941			150

Suture-Sets (Polyester braided, silikon-coated)

USP	Colour	pcs./foil	pcs./box		2/0	0	suture length in cm
metric					3	3,5	
needle type					order number		
2 x HRTC 17 	white	4	8 x 10	without pledgets	V172024	V17024	75
	green	4			V172034	V17034	90
recommended application: heart/valve							
2 x HRTC 25 	white	4	8 x 10	without pledgets	V252024	V25024	75
	green	4			V252034	V25034	90
recommended application: heart/valve							
2 x HRTC 17 	white	4	8 x 10	mit pledgets	V172124	V17124	75
	green	4			V172134	V17134	90
recommended application: heart/valve							
2 x HRTC 25 	white	4	8 x 10	mit pledgets	V252124	V25124	75
	green	4			V252134	V25134	90
recommended application: heart/valve							

micro-sutures										
USP	12/0	11/0	10/0	9/0	8/0	7/0	6/0	5/0	suture length in cm	
metric	0,01	0,1	0,2	0,3	0,4	0,5	0,7	1		
needle type	order number									
DRS 8,0-250 								M23825691	45	
recommended application: vascular, nerves										
2 x DRS 11,0-250 								M731125695	60	
recommended application: vascular, nerves										
2 x VLZ 8,0-300 								M8083591		
recommended application: plastic, ophthalmology										
DDK 12,0-350 								M261235690	M261235590	15
recommended application: plastic, ophthalmology										









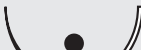


Silk










Silk is a natural, non-absorbable, braided or twisted surgical suture material extracted from the cocoon of the silk (spinning) worm. A special braiding method guarantees ideal resistance to breaking and an even thread structure. It is easy to handle, serum proof and water repellent, while ensuring perfect knot security.

Suture material made of silk is marked **light blue**.









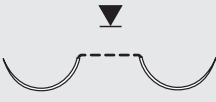
suture size	Silk
Colour	black virgin silk - blue
made of (raw material)	natural silk
Coating	wax and silicone virgin silk non-coated
material type	natural, braided or twisted
Absorption	none
Characteristics	thanks to a special weaving technique a strong-hearable and evenly distributed structure
Recommended application	dental and skin suture, ophthalmology (virgin silk)
tensile strength	very good in the beginning, nearly total decomposition within one year
Knotting strength	good, safest knotting properties
Tissue reaction	minimal
Sterilisation method	ethylenoxide
Packaging	one, two or three dozenwise in environmental friendly cardboard boxes
Shelf life	5 years
CE-mark	CE 0123
Standard sizes	USP: 7/0 until 2 - metric size: 0,5 until 5 Naturseide (virgin silk) USP: 10/0 until 8/0 - metric size: 0,2 until 0,4

USP	6/0	5/0	4/0	3/0	2/0	0	1	2	suture length in cm
metric	0,7	1	1,5	2	3	3,5	4	5	
needle type	order number								








HR 13 	HR135011	HR134011	HR133011	HR132011					45
	recommended application: gastrointestinal, mucosa, cardiovascular, dental								
HR 17 	HR175011	HR174011	HR173011	HR172011					45
	HR175012	HR174012	HR173012	HR172012					75
	recommended application: gastrointestinal, mucosa, cardiovascular, dental								
HR 20 			HR204011	HR203011	HR202011				45
			HR204012	HR203012	HR202012				75
	recommended application: vascular, fascia, gastrointestinal, dental								
HR 22 			HR224011	HR223011	HR222011	HR22011			45
			HR224012	HR223012	HR222012	HR22012			75
	recommended application: gastrointestinal, mucosa, fascia, cardiovascular, dental								
HR 24 			HR244011	HR243011	HR242011	HR24011			45
			HR244012	HR243012	HR242012	HR24012			75
	recommended application: gastrointestinal, mucosa, fascia, cardiovascular, dental								
HR 26 			HR264011	HR263011	HR262011	HR26011			45
			HR264012	HR263012	HR262012	HR26012			75
	recommended application: gastrointestinal, mucosa, fascia, dental								
HR 30 				HR303012	HR302012	HR30012			75
	recommended application: gastrointestinal, mucosa, fascia								
HR 37 				HR373012	HR372012	HR37012	HR37112	HR37212	75
	recommended application: gastrointestinal, mucosa, fascia, general closure								
HR 37 X 							HRX37112	HRX37212	75
	recommended application: gynaecology, gastrointestinal, mucosa, fascia, general closure								

USP	6/0	5/0	4/0	3/0	2/0	0	1	2	suture length in cm
metric	0,7	1	1,5	2	3	3,5	4	5	
needle type	order number								
 <p>HR 40</p>						HR402012	HR40012	HR40112	75
	recommended application: gynaecology, gastrointestinal, mucosa, fascia, general closure								
 <p>HR 48</p>							HR48112	HR48212	75
	recommended application: gynaecology, gastrointestinal, mucosa, fascia, general closure								
 <p>DR 13</p>	DR136012	DR135012	DR134012						75
	recommended application: vascular, nerves, ophthalmology								
 <p>DR 17</p>		DR175012	DR174012						75
	recommended application: vascular								
 <p>GR 20</p>			GR204011	GR203011	GR202011				45
			GR204012	GR203012	GR202012				75
	recommended application: dental								
 <p>GR 25</p>				GR253012	GR252012				75
	recommended application: dental								
 <p>GR 50</p>					GR502012				75
	recommended application: dental								
 <p>HRT 17</p>				HT173011	HT172011				45
				HT173012	HT172012				75
	recommended application: arterial, vascular, dental								
 <p>HRT 26</p>					HT262012				75
	recommended application: arterial, vascular								

USP	6/0	5/0	4/0	3/0	2/0	0	1	2	suture length in cm
metric	0,7	1	1,5	2	3	3,5	4	5	
needle type	order number								

HS 13 	HS135011	HS134011	HS133011	HS132011					45
	recommended application: subcuticular, plastic, ophthalmology, dental								
HS 17 	HS175011	HS174011	HS173011	HS172011					45
	recommended application: subcuticular, plastic, ophthalmology, dental								
HS 20 	HS205011	HS204011	HS203011	HS202011					45
	HS205012	HS204012	HS203012	HS202012					75
	recommended application: subcuticular, plastic, ophthalmology, dental								
HS 22 	HS225011	HS224011	HS223011	HS222011					45
	HS225012	HS224012	HS223012	HS222012					75
	recommended application: subcuticular, plastic, ophthalmology, dental								
HS 26 			HS263011	HS262011	HS26011				45
			HS263012	HS262012	HS26012				75
	recommended application: cuticular, plastic, mucosa, dental								
HS 30 					HS302012	HS30012			75
	recommended application: general closure								
HS 40 							HS40112		75
	recommended application: general closure								
DS 13 	DS136011	DS135011	DS134011						45
	DS136012	DS135012	DS134012						75
	recommended application: subcuticular, plastic, ophthalmology								
2 x DS 13 	2DS136011	2DS135011	2DS134011						45
	recommended application: subcuticular, plastic, ophthalmology								



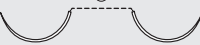




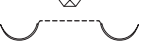
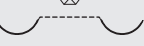



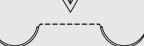
USP	6/0	5/0	4/0	3/0	2/0	0	1	2	suture length in cm
metric	0,7	1	1,5	2	3	3,5	4	5	
needle type	order number								

DS 17 	DS176011	DS175011	DS174011	DS173011	DS172011				45
	recommended application: subcuticular, plastic, dental								
DS 20 		DS205011	DS204011	DS203011	DS202011				45
		DS205012	DS204012	DS203012	DS202012				75
recommended application: subcuticular, plastic, dental									
DS 26 			DS264011	DS263011					45
			DS264012	DS263012					75
recommended application: subcuticular, plastic, dental									
DS 30 				DS303012					75
recommended application: subcuticular, fascia									
DS 37 				DS373012	DS372012				75
recommended application: subcuticular, fascia									
DS 45 						DS45012			75
recommended application: subcuticular, fascia									
DS 60 							DS60112		75
recommended application: subcuticular, fascia									

pre-cut sutures (without needle)

USP	6/0	5/0	4/0	3/0	2/0	0	1	2	suture length in cm
metric	0,7	1	1,5	2	3	3,5	4	5	
quant. sutures	order number								

10 pcs.					S201210	S01210	S11210		75
2 pcs.			S40112	S30112	S20112	S0112			45
1 pcs.			S40141	S30141	S20141	S0141	S1141	S2141	150

micro-sutures									
USP	12/0	11/0	10/0	9/0	8/0	7/0	6/0	5/0	suture length in cm
metric	0,01	0,1	0,2	0,3	0,4	0,5	0,7	1	
needle type	order number								
DRS 11,0-200 							M23112616	M23112516	30
recommended application: vascular, nerves									
DRS 12,0-300 							M23123616	M23123516	30
recommended application: vascular, nerves									
2 x DRS 12,0-300 							M73123611	M73123511	45
recommended application: vascular, nerves									
HLZ 6,0-150 			M10615017	M10615917	M10615817				20
recommended application: ophthalmology									
2 x HLZ 6,0-150 			M60615016	M60615916	M60615816				30
recommended application: ophthalmology									
DLZ 6,0-150 					M20615816				30
recommended application: ophthalmology									
2 x DLZ 6,0-150 					M70615811				45
recommended application: ophthalmology									
2 x DLZ 6,4-200 					M70642816				30
recommended application: ophthalmology									
2 x VLZ 6,4-200 				M80642911	M80642811				45
recommended application: ophthalmology									
HDK 8,0-200 				M1682916	M1682816				30
recommended application: plastic, ophthalmology									
2 x HDK 8,0-200 				M6682911	M6682811				45
recommended application: plastic, ophthalmology									
DDK 8,0-200 						M2682716	M2682616		30
recommended application: plastic, ophthalmology									
2 x DDK 8,0-200 						M7682711	M7682611		45
recommended application: plastic, ophthalmology									

also available in Virgin Silk









Stainless Steel

Steel surgical suture are made of high grade implantable steel and distinguish themselves through high resistance to breakage. Using a special attachment process, results in a junction fully free from sharp edges and almost completely exclusion of breakage of the wire from the needle.









Sutures made of stainless steel is marked **light yellow**.

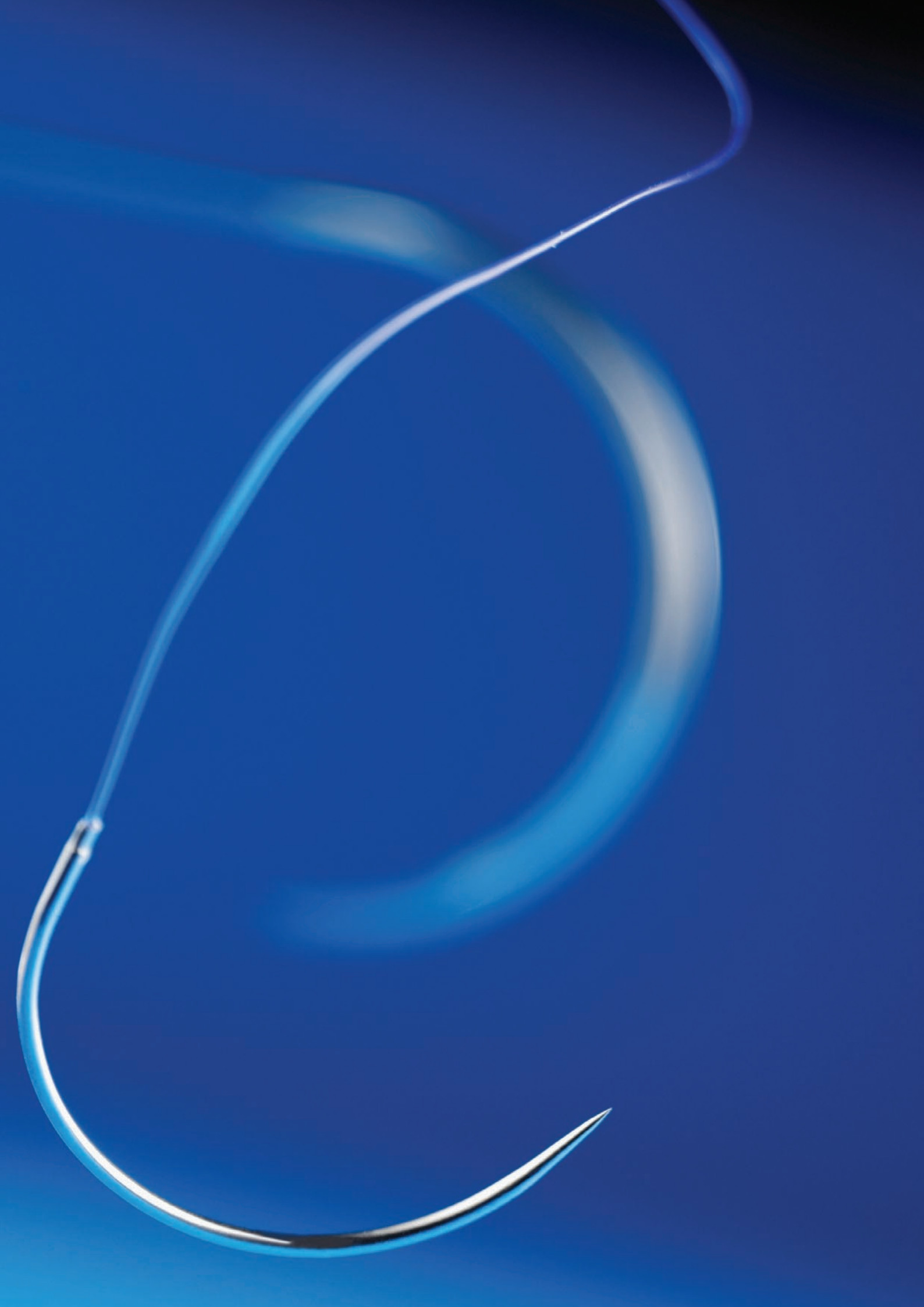
suture type	Stainless Steel
Colour	metallic, high gloss finish
made of (raw material)	implantable stainless steel
material type	monofilament or multifilament-coated
Absorption	none
Characteristics	high tensile strength and high resistance to fraction
Recommended application	sternum closure, orthopaedics, pediatric, cardiac
tensile strength	high with most minimal reduction
Tissue reaction	minimal
Sterilisation method	ionising radiation or ethylene oxide
Packaging	12, 24, 48 or 72 pieces in environmentally cardboard boxes
Shelf life	5 years
CE-mark	CE 0123
Standard sizes	USP: 1 until 7 - metric size: 4 until 9

Stainless Steel (monofil)

USP metric needle type	pcs./foil	1	2	5	6	7	suture length in cm
		4	5	7	8	9	
		order number					
DS 26 	12 x 2	DS2617B2	DS2627B2				35
	12 x 4	DS2617B4	DS2627B4				
	12 x 6	DS2617B6	DS2627B6				
	recommended application: sternum closure, paediatric						
DS 30 	12 x 2	DS3017B2	DS3027B2				35
	12 x 4	DS3017B4	DS3027B4				
	12 x 6	DS3017B6	DS3027B6				
	recommended application: sternum closure, paediatric						
DS 48 	12 x 2			DS485712	DS486712	DS487712	45
	12 x 4			DS485714	DS486714	DS487714	
	12 x 6			DS485716	DS486716	DS487716	
	recommended application: sternum closure						
HS 48 	12 x 2			HS485712	HS486712	HS487712	45
	12 x 4			HS485714	HS486714	HS487714	
	12 x 6			HS485716	HS486716	HS487716	
	recommended application: sternum closure						
HS 58 	12 x 2			HS585712	HS586712	HS587712	45
	12 x 4			HS585714	HS586714	HS587714	45
	12 x 6			HS585716	HS586716	HS587716	45
	12 x 4			HS585724	HS586724	HS587724	75
	recommended application: sternum closure						
HRTC 48 	12 x 2			HTC485712	HTC486712	HTC487712	45
	12 x 4			HTC485714	HTC486714	HTC487714	
	12 x 6			HTC485716	HTC486716	HTC487716	
	recommended application: sternum closure						
HRTC 58 	12 x 2				HTC586712	HTC587712	45
	12 x 4				HTC586714	HTC587714	
	12 x 6				HTC586716	HTC587716	
	recommended application: sternum closure						
HRT 48 	12 x 2			HT485712	HT486712	HT487712	45
	12 x 4			HT485714	HT486714	HT487714	
	12 x 6			HT485716	HT486716	HT487716	
	recommended application: sternum closure						

Stainless Steel (Multifilament)

needle type	order number	suture length in cm
 <p>HR 17 GS 63 Break-off needle</p>	<p>C11763</p> <p>recommended application: Temporary Cardiac Pacing Lead</p>	<p>60</p>
 <p>HR 26 GS 63 Break-off needle</p>	<p>C12663</p> <p>recommended application: Temporary Cardiac Pacing Lead</p>	<p>60</p>
 <p>HR 26 GS 89 Break-off needle</p>	<p>C12689</p> <p>recommended application: Temporary Cardiac Pacing Lead</p>	<p>60</p>
 <p>HR 37 GS 89 Break-off needle</p>	<p>C13789</p> <p>recommended application: Temporary Cardiac Pacing Lead</p>	<p>60</p>
 <p>HRTC 17 GS 63 Break-off needle</p>	<p>C21763</p> <p>recommended application: Temporary Cardiac Pacing Lead</p>	<p>60</p>
 <p>HRTC 26 GS 63 Break-off needle</p>	<p>C22663</p> <p>recommended application: Temporary Cardiac Pacing Lead</p>	<p>60</p>
 <p>HRTC 26 GS 89 Break-off needle</p>	<p>C22689</p> <p>recommended application: Temporary Cardiac Pacing Lead</p>	<p>60</p>
 <p>HRTC 37 GS 89 Break-off needle</p>	<p>C23789</p> <p>recommended application: Temporary Cardiac Pacing Lead</p>	<p>60</p>



Order Form

ERNST KRATZ KG – Nadelfabrik

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Germany

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Fax: **+49 (0) 6103/983-470**
E-Mail: **ernstkratz@acufirm.de**

Please send us:

-
- Catalogue/s „Suture and Injection Needles“
 - Catalogue/s „Needle-Suture-Combinations“
 - Catalogue/s „Veterinary Surgical and Hypodermic Needles“
 - Company leaflet/s „Experience and Progress for Top Quality“
-

We have following suggestions/question:

sender/contact person



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ernstkratz@acufirm.de · www.acufirm.de

