

MonoPlus[®]

Good handling combined with great strength

Synthetic long-term absorbable monofilament suture made of polydioxanone



Sutures

The monofilament advantage

A complete range of benefits



The monofilament advantage...

- Smooth passage through the tissue
- Reliable knot and high knot tensile strength
- Less infection promoting effect ^{1,2}
- Degradation profile adapted to the specific healing process of each tissue layer

B. Braun offers the right monofilament for every indication

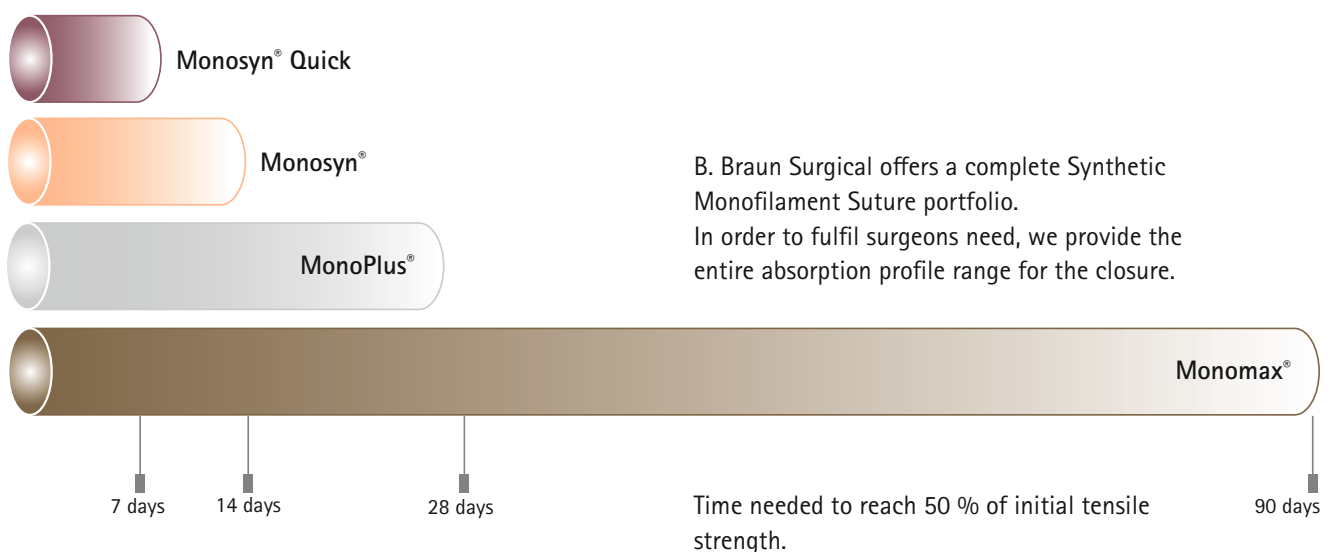
Monosyn® Quick Short term synthetic absorbable monofilament suture. Indicated for fast healing tissue.

Monosyn® Mid term synthetic absorbable monofilament suture. Indicated for soft tissue approximation.

MonoPlus® **Long term synthetic absorbable monofilament suture. Indicated for tissues with prolonged healing.**

Monomax® Extra-long term synthetic absorbable monofilament suture. Specially engineered for Abdominal Wall Closure.

Absorption Profile



B. Braun Surgical offers a complete Synthetic Monofilament Suture portfolio. In order to fulfil surgeons need, we provide the entire absorption profile range for the closure.

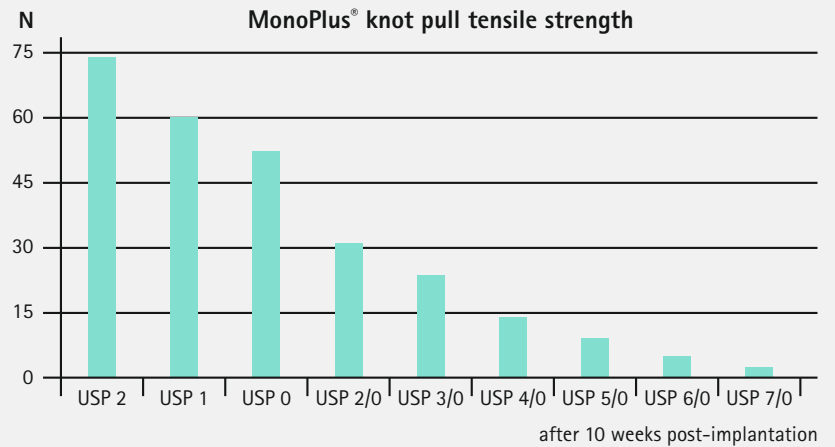
1 Mangram AJ, Horan TC, Pearson ML, Silver LC, Jarvis WR. Guideline for prevention of surgical site infection, 1999. Hospital Infection Control Practices Advisory Committee. Infect Control Hosp Epidemiol. 1999 Apr;20(4):250-78.
 2 Choi HJ, Chae HD. Comparison of E. coli infiltration between new synthetic absorbable sutures. J Korean Surg Soc. 2009;77(1):1-6.

MonoPlus®

Good handling combined with great strength...

Outstanding strength retention

The special melt spinning process of the poly-dioxanone fibers leads to a superior strength retention and extended wound support for up to 10 weeks after implantation.



Approx. original strength remaining	Post-Implantation
50 %	35 days USP 3/0 and larger
	28 days USP 4/0 and smaller

MonoPlus®

...a proven combination for use in long-term wound support

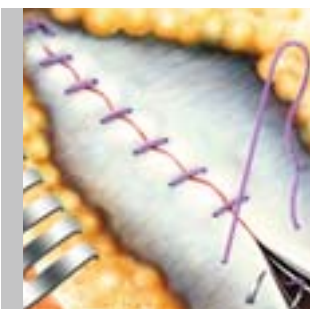
MonoPlus® loop – The convenient choice

MonoPlus® Loop consists of a thread of 150 cm attached to a single needle to be used for the mass closure of the abdominal wall.

The closure of the abdominal wall with a loop offers many advantages:

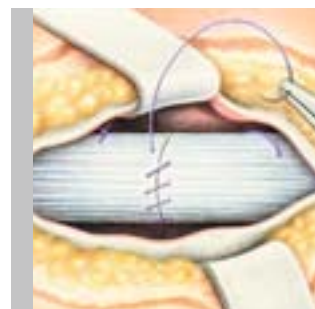
- No need to knot the first stitch
- The continuous suturing with a double thread gives exceptional strength to the wound closure
- Rapid and secure suturing technique

Indicated for extended wound support



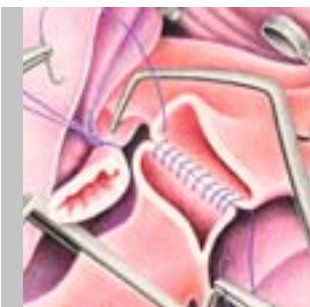
Abdominal closure

- Fascia



Orthopaedics

- Tendons
- Ligaments
- Nerves
- Small vessels



Paediatric cardiovascular surgery and autologous peripheral vessels

- Anastomosis of veins or arteries

NEW

Now available with Black Needles **Easyblack***.

Easyslide



Maintaining needle penetration even after several stitches

Superior bending strength

300 series stainless steel

Superior needle-thread attachment



* **Easyblack:** Exclusive needles to avoid glare effect for a better visual control and comfort when suturing.










MonoPlus®

Product Features




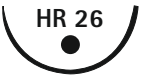



Structure	Monofilament
Chemical composition	Polydioxanone
Color	Violet (D&C Violet No. 2)
Sizes	USP 2 (metric 5) to USP 7/0 (metric 0.5)
Knot tensile strength retention	28 days post implantation 50 % (≤USP 4/0 -metric 1.5) 35 days post implantation 50 % (≥USP 3/0 -metric 2)
Mass absorption	Degradation by hydrolysis within 180 – 210 days
Indications	General soft tissue approximation, specially in cases where an extended wound support of more than 4 weeks is desirable, paediatric cardiovascular surgery and for the suturing of autologous peripheral vessels
Sterilisation	Ethylene oxide

MonoPlus®

Needle-thread combination 









Needle length mm	Thread length cm colour	USP metric							
		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	C0024902	C0024903						
	70 Violet	C0024002	C0024003	C0024004					
	4 x 70 Violet		C0024807						
	4 x 70 Violet		C0024705						
	"Take off"								
	70 Violet	C0024602	C0024603						
	70 Violet				C0024205	C0024206	C0024207		
	45			C0024889					
	70 Violet	C0024012	C0024013	C0024014	C0024015				
	70		C0024613	C0024614					
	90 Violet		C0024443	C0024444					
	70 Violet					C0024131			
	70 Violet			C0024679					
	70 Violet		C0024133	C0024134	C0024135	C0024136			

polydioxanone
 long-term absorbable
 uncoated
 violet monofilament










Needle length mm	Thread length cm colour	USP metric							
		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 22	4 x 45 Violet			C0024764	C0024765				
	"Take off" 8 x 45 Violet			M0024381	M0024684				
 2xHR 22	70 90 Violet			C0024634 C0024238	C0024635				
	HR 22s 70 Violet					C0024146	C0024147		
 2xHR 22s	70 Violet					C0024164			
 HR 26	70 90 Violet		C0024433	C0024024	C0024025 C0024435	C0024026 C0024436	C0024027		
	HR 26 "Take off" 4 x 45 4 x 70 Violet			C0024774 C0024724	C0024775 C0024725				
 HR 26	8 x 45 8 x 70 Violet			M0024869 M0024961	M0024698 M0024962	M0024871			
	2xHR 26 70 90 Violet			C0024624 C0024437	C0024625 C0024438	C0024626 C0024441			
 HR 26s	70 Violet				C0024085	C0024086	C0024087	C0024088	
 HR 30	70 90 Violet			C0024034 C0024439	C0024035 C0024440	C0024036	C0024037	C0024038	
	2xHR 30 90 Violet					C0024945			

MonoPlus®

Needle-thread combination 












Needle length mm	Thread length cm colour	USP metric								
		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 90 Violet				C0024045	C0024046		C0024447	C0024448	
	4 x 45 Violet							B0024925	B0024912	
"Take off"	8 x 45 Violet							M0024792		
	70 90 Violet				C0024639	C0024646				
	70 90 Violet				C0024055	C0024056	C0024057 C0024452	C0024058 C0024453		
	8 x 45 Violet						M0024948	M0024949	M0024950	
"Take off"										
	70 90 Violet				C0024040	C0024062		C0024457	C0024458	
	70 90 Violet				C0024466	C0024066	C0024067 C0024467	C0024068 C0024468	C0024469	
	8 x 45 Violet							M0024959		
	150 Violet							B0024567	B0024568	
Loop										

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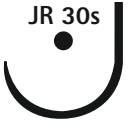
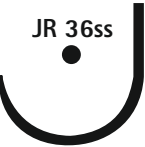
Needle length mm	Thread length cm colour	USP metric								
		6/0 0.7	5/0 1	4/0 1.5	3/0 2	2/0 3	0 3.5	1 4	2 5	
1/2 circle round bodied needle										
	90 Violet							C0024401	C0024402	
	70 90 Violet				C0024589	C0024063	C0024077	C0024078	C0024079	
	240 Violet								B0024398	
	8 x 45 Violet							M0024759	M0024760	
	150 Violet							C0024090	B0024091	
	140 Violet								B0024500	
	2 x 70 Violet								C0024097	
	120 150 240 250 Violet							C0024094	B0024339 B0024130 B0024107 B0024100	
	70 Violet							B0024033	B0024099	

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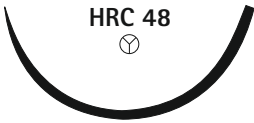
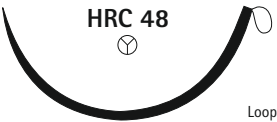





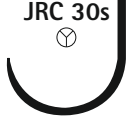

Needle-thread combination 

Needle length mm	Thread length cm colour	USP metric								
		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	
1/2 circle round bodied needle										
 HR 76	150 Violet									B0024098
3/8 circle round bodied needle										
 2xDR 8	45 Violet		C0024714							
 DR 10	45 Violet	C0024981								
 2xDR 10	70 Violet	C0024801	C0024802							
 DR 12	70 Violet		C0024512	C0024513						
 2xDR 12	70 Violet		C0024812	C0024813	C0024814					
 DR 15	70 Violet			C0024523	C0024524	C0024525				
 2xDR 15	70 Violet			C0024823	C0024824	C0024825				
 DR 18	70 Violet		C0024532	C0024533	C0024534	C0024528				
 2xDR 18	70 Violet			C0024833	C0024834					
 DR 18 Loop	40 Violet					C0024529				

polydioxanone
long-term absorbable
uncoated
violet monofilament











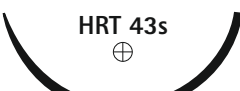
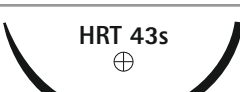
Needle length mm	Thread length cm colour	USP metric								
		7/0 0.5	6/0 0.7	5/0 1	4/0 1.5	3/0 2	2/0 3	0 3.5	1 4	
5/8 circle round bodied needle										
	70 Violet					C0024571		C0024092		
	70 90 Violet					C0024835	C0024836 C0024936			
	90 Violet						C0024780			
Hook needle with taper point										
	45 120 Violet							C0024770 C0024170		
	70 Violet						C0024126			

polydioxanone
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Needle length mm	Thread length cm colour	USP metric							
		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
1/2 circle round bodied needle with short cutting point									
 HRC 48	90 200 Violet								C0024261 B0024278
 HRC 48 Loop	150 Violet							C0024749	B0024750
3/8 circle round bodied needle with short cutting point									
 DRC 10	70 Violet	C0024221	C0024222						
 2xDRC 10	70 Violet	C0024721	C0024722						
 DRC 12	70 Violet		C0024232	C0024233					
 2xDRC 12	70 Violet		C0024732	C0024733					
 DRC 18	70 Violet			C0024243					
Hook curved round bodied needle with short cutting point									
 JRC 30s	70 Violet							C0024168	C0024928
Progressive round bodied needle with short cutting tip									
 PRC 24	120 Violet						C0024850		

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Needle-thread combination 

Needle length mm	Thread length cm colour	USP metric							
		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 with trocar point									
 HRT 17	70 Violet		C0024283	C0024284	C0024285	C0024286			
 HRT 22	70 Violet			C0024294	C0024295				
 HRT 26	70 Violet				C0024305	C0024306	C0024307		
 2xHRT 26	70 Violet				C0024605				
 HRT 30	70 Violet					C0024311			
 HRT 37	70 90 Violet					C0024316	C0024517	C0024518	
 HRT 37s	70 90 Violet					C0024321	C0024322	C0024818 C0024323	
 HRT 40	90 Violet						C0024543		
 HRT 40s	90 Violet						C0024545	C0024546	
 HRT 40s	150 Violet						C0024342	B0024343	
 HRT 43s	90 Violet						C0024352	C0024353	C0024354
 HRT 43s	150 Violet							C0024347	


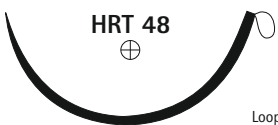
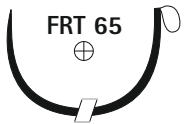





C Box of 36 units

B Box of 24 units

G Box of 12 units





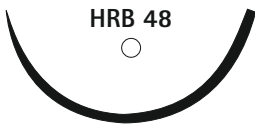
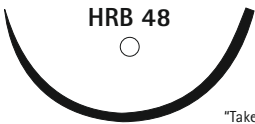
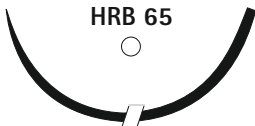
M Box of 6 units

polydioxanone
long-term absorbable
uncoated
violet monofilament

Needle length mm	Thread length cm colour	USP metric								
		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 with trocar point										
	90 Violet							C0024332	C0024333	
	150 180 200 Violet							C0024394 B0024395	B0024393 B0024396 B0024392	B0024391
5/8 circle round bodied needle with trocar point										
	150 Violet							B0024096	B0024390	
1/2 circle round bodied needle with blunt point										
	90 Violet							C0024404		
	8 x 45 Violet							M0024052		
	90 Violet		C0024406							
	90 Violet		C0024408							
	150 200 Violet							B0024357 B0024368	B0024358	







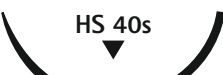


MonoPlus®

Needle-thread combination 

Needle length mm	Thread length cm colour	USP metric								
		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 with protection point										
 HRB 26	8 x 45 Violet				M0024796					
 HRB 37s	90 Violet						C0024462	C0024711		
 HRB 37s "Take off"	8 x 45 Violet					M0024864	M0024865			
 HRB 40s "Take off"	8 x 45 Violet						M0024556	M0024557		
	150 Violet						C0024563	C0024564		
 HRB 48	90 Violet						C0024881	C0024877		
 HRB 48 "Take off"	8 x 45 Violet						M0024875	M0024876		
 HRB 65	90 150 Violet						B0024235	B0024153		

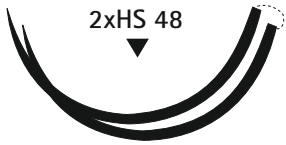










C Box of 36 units	B Box of 24 units	G Box of 12 units	M Box of 6 units
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polydioxanone
long-term absorbable
uncoated
violet monofilament

Needle length mm	Thread length cm colour	USP metric								
		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 reverse cutting needle										
	70 Violet				C0024190					
	70 Violet								C0024108	
	70 Violet				C0024185	C0024186	C0024187	C0024188		
	90 Violet						C0024104	C0024105	C0024106	
	70 90 Violet				C0024191	C0024156 C0024114	C0024157 C0024115	G0024158 C0024116		
	90 Violet							C0024117	C0024118	C0024119
	90 Violet						C0024121	C0024122		
	70 Violet									C0024560
	70 90 Violet							C0024127	C0024202 C0024128	








MonoPlus®

Needle-thread combination 

Needle length mm	Thread length cm colour	USP metric							
		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 reverse cutting needle									
	90 Violet								C0024630
3/8 circle reverse cutting needle									
	45 Violet			C0024193					
	45 70 Violet			C0024535	C0024539				
	45 70 Violet		C0024081	C0024909	C0024102				
			C0024175	C0024536	C0024519				
	45 70 Violet				C0024541	C0024101	C0024520	C0024990	
	70 Violet						C0024992	C0024598	
	90 Violet								C0024538
	45 Violet						C0024976		
Straight cutting needle									
	45 Violet			C0024994	C0024995				
	70 Violet				C0024189				
	70 Violet				C0024861				C0024898

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polydioxanone
long-term absorbable
uncoated
violet monofilament

Needle length mm	Thread length cm colour	USP metric							
		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 reverse cutting needle with precision point									
HSMP 9 	45 Violet			C0024926					
HSMP 15 	45 Violet			C0024921					
3/8 circle reverse cutting needle with precision point									
2xDSMP 11 	45 Violet	C0024176	C0024177						
DSMP 13 	45 Violet	C0024407	C0024916	C0024908					
DSMP 16 	45 Violet		C0024194	C0024970					
DSMP 19 	45 70 Violet		C0024901	C0024907	C0024109 C0024151				
DSMP 24 	45 70 Violet			C0024983	C0024103	C0024988			

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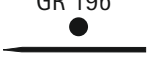
Needle-thread combination



Needle	Thread	USP metric								
		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	
1/2 circle round bodied needle										
 HR 17b 	70 violet			C0024515	C0024521					
	4 x 70 violet			C0024516						
 HR 22b 	70 violet				C0024522	C0024530				
	4 x 70 violet				C0024526					
 2xHR 22b 	75 violet				C0024531					
 HR 26b 	70 violet				C0024547	C0024548	C0024551			
	4 x 45 violet					C0024550				
3/8 circle round bodied needle										
 DR 10b 	75 violet	C0024010								
 DR 13b 	75 violet			C0024008						
 DR 18b 	70 violet		C0024609	C0024610	C0024611					

C Box of 36 units B Box of 24 units G Box of 12 units M Box of 6 units

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Needle length mm	Thread length cm colour	USP metric								
		6/0 0.7	5/0 1	4/0 1.5	3/0 2	2/0 3	0 3.5	1 4	2 5	
Round bodied ski needle										
 SKR 26b 	20 violet			C0024570	C0024572					
Straight round bodied needle										
 GR 19b 	20 violet			C0024573	C0024574					

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	Thread length cm colour	USP metric								
		6/0 0.7	5/0 1	4/0 1.5	3/0 2	2/0 3	0 3.5	1 4	2 5	
Pre-cut sutures										
2 threads of 70 cm	2 x 70 Violet						C0044200	C0044205		

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