System side bars and system anchors are connecting elements. A system side bar can, for example, directly connect a system knee joint with a system ankle joint. A system anchor connects a system knee joint or a system ankle joint with the shell of a laminated orthosis. It is embedded into the laminate. System side bars can be processed using a production technique of your choice.

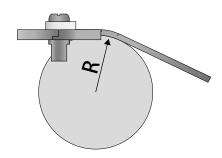
System side bars and system anchors are available in different system widths and materials for three production techniques which can be used for unilateral as well as bilateral constructions.

To ensure an optimum choice of system side bar and system anchor material for each orthosis type, use our Orthosis Configurator. It determines the most suitable system side bar and system anchor material based on the patient data and the desired production technique and according to the principle As light as possible and as strong as necessary!

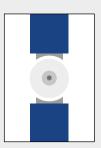
Information Conc	Information Concerning Material Properties							
Description	Material	Strength	<b>Breaking Elongation</b>	Weight	Calculation of the Min. Bending Radius [R]			
AL	aluminium	high	average	low	R = 11 x material thickness			
TI G2	titanium grade 2	high	high	average	$R = 5 \times \text{material thickness}$			
TI G5	titanium grade 5	very high	low	average	R = 10 x material thickness			

To avoid fractures when bending a system side bar/system anchor, make sure not to fall below the radii indicated in the table.

The bending radius depends on the thickness of the material (see table).



## **Production Techniques**



Joint Lamination/Prepreg Technique In this production technique, the system anchors and the joints' system cases are embedded into the laminate.

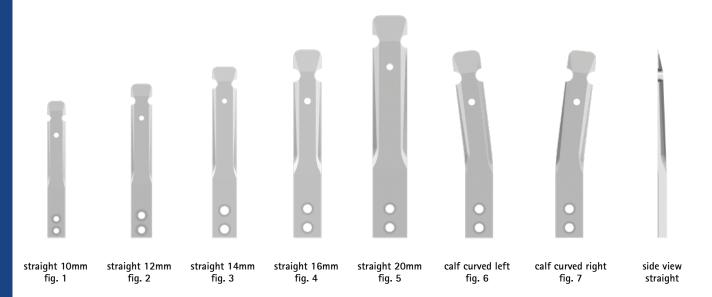


Anchor Lamination/Prepreg Technique In this production technique, only the system anchors are embedded into the laminate. The joints' system cases remain free.



Side Bar Shell Technique
System side bars can be processed using a production technique of your choice.

All system side bars and system anchors can withstand the load only if they are processed correctly according to the production technique and mounted correctly into the orthosis. For information about system side bar and system anchor processing read the Instructions for Use for Orthotists or Qualified/Trained Experts System Side Bars and System Anchors (PB1000-SA-DE/GB) which is included in the scope of delivery. You will find detailed information about our production techniques in the section "Online Tutorials" and "Producing the Orthosis" on our website www.fior-gentz.com.

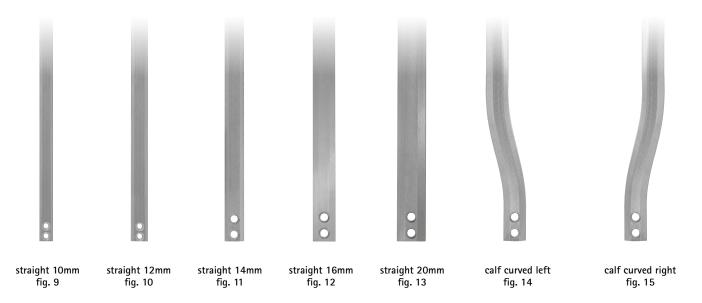


Aluminium System Anchors*						
Fig.	Article Number	Description	Length x Width x Thickness [mm]	Weight [g]		
1	SA1040-AL	system anchor for 10mm system joints, straight	80 x 10 x 3	5		
2	SA1041-AL	system anchor for 12mm system joints, straight	90 x 12 x 3.5	7		
3	SA1042-AL	system anchor for 14mm system joints, straight	100 x 14 x 4	11		
4	SA1063-AL	system anchor for 16mm system joints, straight	110 x 16 x 5	17		
5	SA1085-AL	system anchor for 20mm system joints, straight	130 x 20 x 6	30		
6	SA1241-L/AL	system anchor for 12mm system joints, calf curved left	90 x 12 x 3.5	7		
6	SA1242-L/AL	system anchor for 14mm system joints, calf curved left	100 x 14 x 4	11		
6	SA1263-L/AL	system anchor for 16mm system joints, calf curved left	110 x 16 x 5	17		
6	SA1285-L/AL	system anchor for 20mm system joints, calf curved left	130 x 20 x 6	30		
7	SA1241-R/AL	system anchor for 12mm system joints, calf curved right	90 x 12 x 3.5	7		
7	SA1242-R/AL	system anchor for 14mm system joints, calf curved right	100 x 14 x 4	11		
7	SA1263-R/AL	system anchor for 16mm system joints, calf curved right	110 x 16 x 5	17		
7	SA1285-R/AL	system anchor for 20mm system joints, calf curved right	130 x 20 x 6	30		

<sup>\*</sup> The scope of delivery of a system anchor always contains two fastening screws.

Fastening Screw for System Side Bars and System Anchors (Fig. 8)				
Article Number	System Width	Description	Unit	
SC5303-L05	10mm	raised countersunk head screw with hexalobular socket, M3 x 5	piece	
SC5404-L06	12mm	raised countersunk head screw with hexalobular socket, M4 x 6	piece	
SC5405-L08	14 and 16mm	raised countersunk head screw with hexalobular socket, M5 x 8	piece	
SC5405-L09	20mm	raised countersunk head screw with hexalobular socket, M5 x 9	piece	





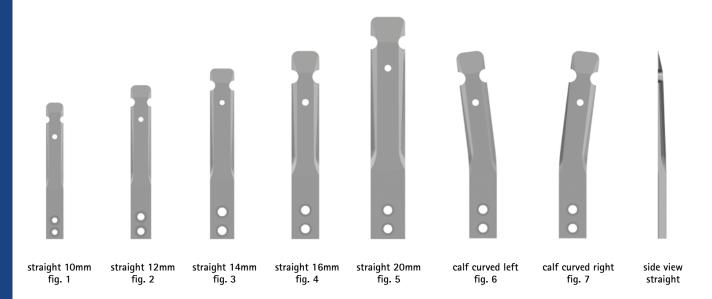
Aluminiu	Aluminium System Side Bars*							
Fig.	Article Number	Description	Length x Width x Thickness [mm]	Weight [g/cm]				
9	SS1040-AL	system side bar for 10mm system joints, straight	200 x 10 x 3	0.8				
10	SS1041-AL	system side bar for 12mm system joints, straight	225 x 12 x 3.5	1.1				
11	SS1042-AL	system side bar for 14mm system joints, straight	250 x 14 x 4	1.5				
12	SS1063-AL	system side bar for 16mm system joints, straight	410 x 16 x 5	2.1				
13	SS1085-AL	system side bar for 20mm system joints, straight	480 x 20 x 6	3.1				
14	SS1241-L/AL	system side bar for 12mm system joints, calf curved left	265 x 12 x 3.5	1.1				
14	SS1242-L/AL	system side bar for 14mm system joints, calf curved left	300 x 14 x 4	1.5				
14	SS1263-L/AL	system side bar for 16mm system joints, calf curved left	450 x 16 x 5	2.1				
14	SS1285-L/AL	system side bar for 20mm system joints, calf curved left	530 x 20 x 6	3.1				
15	SS1241-R/AL	system side bar for 12mm system joints, calf curved right	265 x 12 x 3.5	1.1				
15	SS1242-R/AL	system side bar for 14mm system joints, calf curved right	300 x 14 x 4	1.5				
15	SS1263-R/AL	system side bar for 16mm system joints, calf curved right	450 x 16 x 5	2.1				
15	SS1285-R/AL	system side bar for 20mm system joints, calf curved right	530 x 20 x 6	3.1				

<sup>\*</sup> The scope of delivery of a system side bar always contains two fastening screws.

One-Metre System Side Bars				
Fig.	Article Number	Description	Length x Thickness [mm]	Weight [g/cm]
similar to fig. 10 without bore	SS1041-AL/00	one-metre system side bar for 12mm system joints	1000 x 3.5	1.1
similar to fig. 11 without bore	SS1042-AL/00	one-metre system side bar for 14mm system joints	1000 x 4	1.5
similar to fig. 12 without bore	SS1063-AL/00	one-metre system side bar for 16mm system joints	1000 x 5	2.1
similar to fig. 13 without bore	SS1085-AL/00	one-metre system side bar for 20mm system joints	1000 x 6	3.1

Fastening Screw for System Side Bars and System Anchors (Fig. 16)			
Article Number	System Width	Description	Unit
SC5303-L05	10mm	raised countersunk head screw with hexalobular socket, M3 x 5	piece
SC5404-L06	12mm	raised countersunk head screw with hexalobular socket, M4 x 6	piece
SC5405-L08	14 and 16mm	raised countersunk head screw with hexalobular socket, M5 x 8	piece
SC5405-L09	20mm	raised countersunk head screw with hexalobular socket, M5 x 9	piece



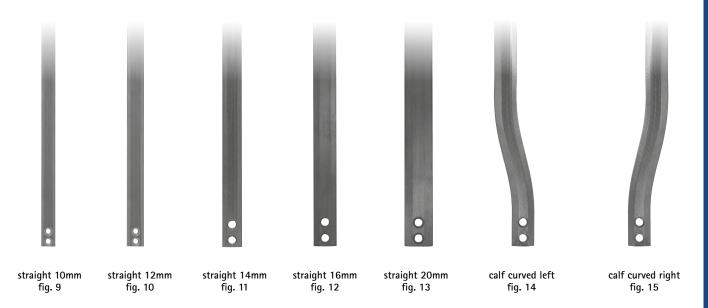


Titanium	Grade 2 System Ar	nchors*		
Fig.	Article Number	Description	Length x Width x Thickness [mm]	Weight [g]
1	SA1040-TI	system anchor for 10mm system joints, straight	80 x 10 x 3	8
2	SA1041-TI	system anchor for 12mm system joints, straight	90 x 12 x 3.5	12
3	SA1042-TI	system anchor for 14mm system joints, straight	100 x 14 x 4	18
4	SA1063-TI	system anchor for 16mm system joints, straight	110 x 16 x 5	28
5	SA1085-TI	system anchor for 20mm system joints, straight	130 x 20 x 6	51
6	SA1241-L/TI	system anchor for 12mm system joints, calf curved left	90 x 12 x 3.5	12
6	SA1242-L/TI	system anchor for 14mm system joints, calf curved left	100 x 14 x 4	18
6	SA1263-L/TI	system anchor for 16mm system joints, calf curved left	110 x 16 x 5	28
6	SA1285-L/TI	system anchor for 20mm system joints, calf curved left	130 x 20 x 6	51
7	SA1241-R/TI	system anchor for 12mm system joints, calf curved right	90 x 12 x 3.5	12
7	SA1242-R/TI	system anchor for 14mm system joints, calf curved right	100 x 14 x 4	18
7	SA1263-R/TI	system anchor for 16mm system joints, calf curved right	110 x 16 x 5	28
7	SA1285-R/TI	system anchor for 20mm system joints, calf curved right	130 x 20 x 6	51

<sup>\*</sup> The scope of delivery of a system anchor always contains two fastening screws.

Fastening Screw for System Side Bars and System Anchors (Fig. 8)				
Article Number	System Width	Description	Unit	
SC5303-L05	10mm	raised countersunk head screw with hexalobular socket, M3 x 5	piece	
SC5404-L06	12mm	raised countersunk head screw with hexalobular socket, M4 x 6	piece	
SC5405-L08	14 and 16mm	raised countersunk head screw with hexalobular socket, M5 x 8	piece	
SC5405-L09	20mm	raised countersunk head screw with hexalobular socket, M5 x 9	piece	





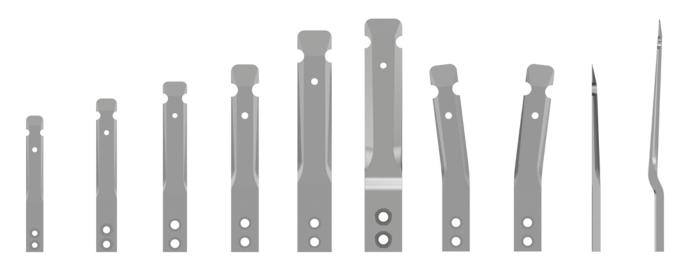
Titanium (	Grade 2 System Si	de Bars*		
Fig.	Article Number	Description	Length x Width x Thickness [mm]	Weight [g/cm]
9	SS1040-TI	system side bar for 10mm system joints, straight	200 x 10 x 3	1.3
10	SS1041-TI	system side bar for 12mm system joints, straight	225 x 12 x 3.5	1.8
11	SS1042-TI	system side bar for 14mm system joints, straight	250 x 14 x 4	2.4
12	SS1063-TI	system side bar for 16mm system joints, straight	410 x 16 x 5	3.4
13	SS1085-TI	system side bar for 20mm system joints, straight	480 x 20 x 6	5.0
14	SS1241-L/TI	system side bar for 12mm system joints, calf curved left	265 x 12 x 3.5	1.8
14	SS1242-L/TI	system side bar for 14mm system joints, calf curved left	300 x 14 x 4	2.4
14	SS1263-L/TI	system side bar for 16mm system joints, calf curved left	450 x 16 x 5	3.4
14	SS1285-L/TI	system side bar for 20mm system joints, calf curved left	530 x 20 x 6	5.0
15	SS1241-R/TI	system side bar for 12mm system joints, calf curved right	265 x 12 x 3.5	1.8
15	SS1242-R/TI	system side bar for 14mm system joints, calf curved right	300 x 14 x 4	2.4
15	SS1263-R/TI	system side bar for 16mm system joints, calf curved right	450 x 16 x 5	3.4
15	SS1285-R/TI	system side bar for 20mm system joints, calf curved right	530 x 20 x 6	5.0

<sup>\*</sup> The scope of delivery of a system side bar always contains two fastening screws.

One-Metre System Side Bars						
Fig.	Article Number	Description	Length x Thickness [mm]	Weight [g/cm]		
similar to fig. 10 without bore	SS1041-TI/00	one-metre system side bar for 12mm system joints	1000 x 3.5	1.8		
similar to fig. 11 without bore	SS1042-TI/00	one-metre system side bar for 14mm system joints	1000 x 4	2.4		
similar to fig. 12 without bore	SS1063-TI/00	one-metre system side bar for 16mm system joints	1000 x 5	3.5		
similar to fig. 13 without bore	SS1085-TI/00	one-metre system side bar for 20mm system joints	1000 x 6	4.5		

Fastening Screw for System Side Bars and System Anchors (Fig. 16)			
Article Number	System Width	Description	Unit
SC5303-L05	10mm	raised countersunk head screw with hexalobular socket, M3 x 5	piece
SC5404-L06	12mm	raised countersunk head screw with hexalobular socket, M4 x 6	piece
SC5405-L08	14 and 16mm	raised countersunk head screw with hexalobular socket, M5 x 8	piece
SC5405-L09	20mm	raised countersunk head screw with hexalobular socket, M5 x 9	piece





straight 10mm	straight 12mm	straight 14mm	straight 16mm	straight 20mm	bent 24mm	calf curved left	calf curved right	side view	side view
fig. 1	fig. 2	fig. 3	fig. 4	fig. 5	fig. 6	fig. 7	fig. 8	straight	bent

Titanium Grade 5 System Anchors*					
Fig.	Article Number	Description	Length x Width x Thickness [mm]	Weight [g]	
1	SA2040-TI	system anchor for 10mm system joints, straight	80 x 10 x 3	8	
2	SA2041-TI	system anchor for 12mm system joints, straight	90 x 12 x 3.5	12	
3	SA2042-TI	system anchor for 14mm system joints, straight	100 x 14 x 4	18	
4	SA2063-TI	system anchor for 16mm system joints, straight	110 x 16 x 5	25	
5	SA2085-TI	system anchor for 20mm system joints, straight	130 x 20 x 6	41	
6	SA2197-TI	system anchor for 24mm system joints, bent	150 x 24 x 6	66	
7	SA2241-L/TI	system anchor for 12mm system joints, calf curved left	90 x 12 x 3.5	12	
7	SA2242-L/TI	system anchor for 14mm system joints, calf curved left	100 x 14 x 4	18	
7	SA2263-L/TI	system anchor for 16mm system joints, calf curved left	110 x 16 x 5	25	
7	SA2285-L/TI	system anchor for 20mm system joints, calf curved left	130 x 20 x 6	41	
8	SA2241-R/TI	system anchor for 12mm system joints, calf curved right	90 x 12 x 3.5	12	
8	SA2242-R/TI	system anchor for 14mm system joints, calf curved right	100 x 14 x 4	18	
8	SA2263-R/TI	system anchor for 16mm system joints, calf curved right	110 x 16 x 5	25	
8	SA2285-R/TI	system anchor for 20mm system joints, calf curved right	130 x 20 x 6	41	

<sup>\*</sup> The scope of delivery of a system anchor always contains two fastening screws.

Fastening Screw for System Side Bars and System Anchors (Fig. 9)			
Article Number	System Width	Description	Unit
SC5303-L05	10mm	raised countersunk head screw with hexalobular socket, M3 x 5	piece
SC5404-L06	12mm	raised countersunk head screw with hexalobular socket, M4 x 6	piece
SC5405-L08	14 and 16mm	raised countersunk head screw with hexalobular socket, M5 x 8	piece
SC5405-L09	20mm	raised countersunk head screw with hexalobular socket, M5 x 9	piece
SC5406-L10	24mm	raised countersunk head screw with hexalobular socket, M6 x 10	piece



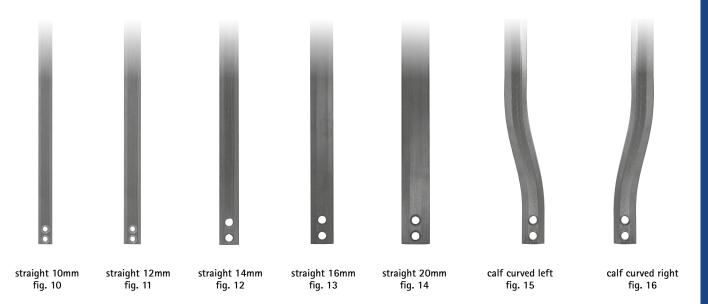


Fig.	Article Number	Description	Length x Width x Thickness [mm]	Weight [g/cm]
10	SS2040-TI	system side bar for 10mm system joints, straight	200 x 10 x 3	1.3
11	SS2041-TI	system side bar for 12mm system joints, straight	225 x 12 x 3.5	1.8
12	SS2042-TI	system side bar for 14mm system joints, straight	250 x 14 x 4	2.4
13	SS2063-TI	system side bar for 16mm system joints, straight	410 x 16 x 4.5	3.0
14	SS2085-TI	system side bar for 20mm system joints, straight	480 x 20 x 6	4.1
15	SS2241-L/TI	system side bar for 12mm system joints, calf curved left	265 x 12 x 3.5	1.8
15	SS2242-L/TI	system side bar for 14mm system joints, calf curved left	300 x 14 x 4	2.4
15	SS2263-L/TI	system side bar for 16mm system joints, calf curved left	450 x 16 x 4.5	3.0
15	SS2285-L/TI	system side bar for 20mm system joints, calf curved left	530 x 20 x 6	4.1
16	SS2241-R/TI	system side bar for 12mm system joints, calf curved right	265 x 12 x 3.5	1.8
16	SS2242-R/TI	system side bar for 14mm system joints, calf curved right	300 x 14 x 4	2.4
16	SS2263-R/TI	system side bar for 16mm system joints, calf curved right	450 x 16 x 4.5	3.0
16	SS2285-R/TI	system side bar for 20mm system joints, calf curved right	530 x 20 x 6	4.1

<sup>\*</sup> The scope of delivery of a system side bar always contains two fastening screws.

One-Metre System Side Bars					
Fig.	Article Number	Description	Length x Thickness [mm]	Weight [g/cm]	
similar to fig. 11 without bore	SS2041-TI/00	one-metre system side bar for 12mm system joints	1000 x 3.5	1.8	
similar to fig. 12 without bore	SS2042-TI/00	one-metre system side bar for 14mm system joints	1000 x 4	2.4	
similar to fig. 13 without bore	SS2063-TI/00	one-metre system side bar for 16mm system joints	1000 x 5	3.1	
similar to fig. 14 without bore	SS2085-TI/00	one-metre system side bar for 20mm system joints	1000 x 6	4.2	

Fastening Screw	Fastening Screw for System Side Bars and System Anchors (Fig. 17)				
Article Number	System Width	Description	Unit		
SC5303-L05	10mm	raised countersunk head screw with hexalobular socket, M3 x 5	piece		
SC5404-L06	12mm	raised countersunk head screw with hexalobular socket, M4 x 6	piece		
SC5405-L08	14 and 16mm	raised countersunk head screw with hexalobular socket, M5 x 8	piece		
SC5405-L09	20mm	raised countersunk head screw with hexalobular socket, M5 x 9	piece		



# System Side Bars and System Anchors for Carbon System Joints

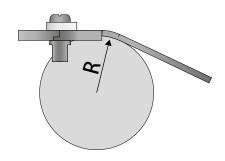
System side bars and system anchors are connecting elements. The system anchor for water-resistant carbon system joints connects the system joint to the shell of a laminated orthosis. We developed this anchor for the production of a laminated orthosis using the anchor lamination technique. In this production technique, the system anchors are embedded into the laminate. System side bars can be processed using a production technique of your choice.

The system anchor for water-resistant carbon system joints can be used for unilateral as well as bilateral constructions.

Information Concerning Material Characteristics						
Description Material Strength Breaking Elongation Weight Calculation of the Min. Bending Radius [R]						
AL	aluminium	high	average	low	$R = 11 \times material thickness$	

To avoid fractures when bending a system anchor, make sure not to fall below the radii indicated in the table.

The bending radius depends on the thickness of the material (see table).



### **Production Techniques**



### Anchor Lamination/Prepreg Technique

In this production technique, only the system anchors are embedded into the laminate. The joints' system cases remain free.

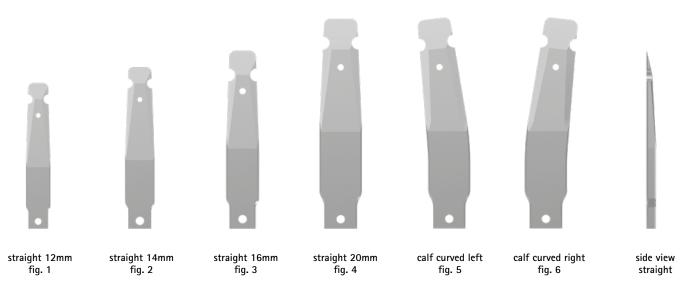


### Side Bar Shell Technique

System side bars can be processed using a production technique of your choice.

All system side bars and system anchors can withstand the load only if they are processed correctly according to the production technique and mounted correctly into the orthosis. For information about the processing of system side bars and system anchors for water-resistant carbon system joints, read the Instructions for Use for Qualified Specialists in Orthopaedic Technology System Side Bars and System Anchors for Carbon System Joints (PB5000-SA-DE/GB) which is included in the scope of delivery.

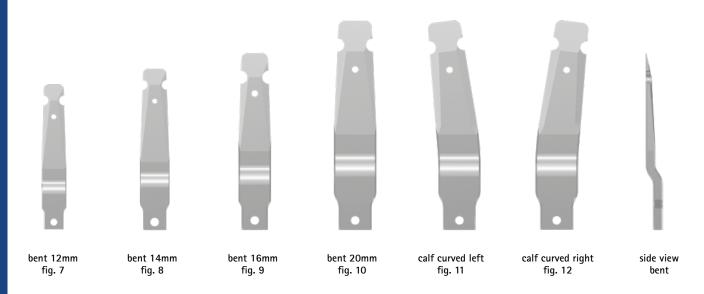
You will find detailed information about our production techniques in the section "Online Tutorials" and "Producing the Orthosis" on our website www.fior-gentz.com.



Straight System Anchors for the NEURO SWING Carbon System Ankle Joint						
Fig.	Article Number	Description	Length x Width x Thickness [mm]	Weight [g]		
1	SA5051-AL	system anchor for 12mm system joints, straight	90 x 15 x 4.7	12		
2	SA5052-AL	system anchor for 14mm system joints, straight	100 x 18 x 4.9	17		
3	SA5063-AL	system anchor for 16mm system joints, straight	110 x 20 x 5.9	25		
4	SA5075-AL	system anchor for 20mm system joints, straight	130 x 26 x 7	47		

Straight System Anchors for the NEURO CLASSIC Carbon System Ankle Joint					
Fig.	Article Number	Description	Length x Width x Thickness [mm]	Weight [g]	
3	SA5063-AL	system anchor for 16mm system joints, straight	110 x 20 x 5.9	25	

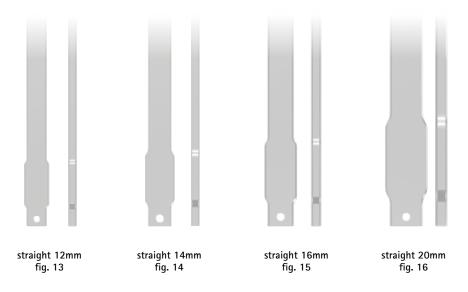
Strai	Straight System Anchors for the NEURO LOCK Carbon and the NEURO CLASSIC Carbon System Knee Joints					
Fig.	Article Number	Description	Length x Width x Thickness [mm]	Weight [g]		
2	SA5052-AL	system anchor for 14mm system joints, straight	100 x 18 x 4.9	17		
3	SA5063-AL	system anchor for 16mm system joints, straight	110 x 20 x 5.9	25		
4	SA5075-AL	system anchor for 20mm system joints, straight	130 x 26 x 7	47		
5	SA5252-L/AL	system anchor for 14mm system joints, calf curved left, straight	100 x 18 x 4.9	17		
5	SA5263-L/AL	system anchor for 16mm system joints, calf curved left, straight	110 x 20 x 5.9	25		
5	SA5275-L/AL	system anchor for 20mm system joints, calf curved left, straight	130 x 26 x 7	47		
6	SA5252-R/AL	system anchor for 14mm system joints, calf curved right, straight	100 x 18 x 4.9	17		
6	SA5263-R/AL	system anchor for 16mm system joints, calf curved right, straight	110 x 20 x 5.9	25		
6	SA5275-R/AL	system anchor for 20mm system joints, calf curved right, straight	130 x 26 x 7	47		



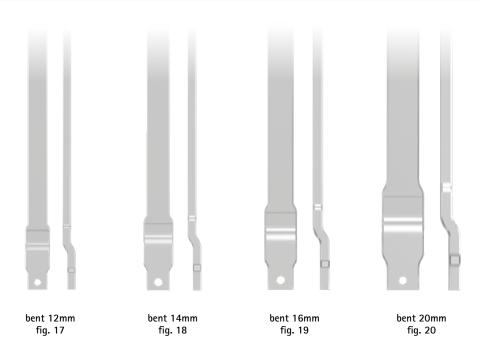
Bent	Bent System Anchors for the NEURO SWING Carbon System Ankle Joint						
Fig.	Article Number	Description	Length x Width x Thickness [mm]	Weight [g]			
7	SA5151-AL	system anchor for 12mm system joints, bent	90 x 15 x 4.7	12			
8	SA5152-AL	system anchor for 14mm system joints, bent	100 x 18 x 4.9	17			
9	SA5163-AL	system anchor for 16mm system joints, bent	110 x 20 x 5.9	25			
10	SA5175-AL	system anchor for 20mm system joints, bent	130 x 26 x 7	47			

Bent	Bent System Anchors for the NEURO CLASSIC Carbon System Ankle Joint					
Fig.	Article Number	Description	Length x Width x Thickness [mm]	Weight [g]		
9	SA5163-AL	system anchor for 16mm system joints, bent	110 x 20 x 5.9	25		

Bent	Bent System Anchors for the NEURO LOCK Carbon and the NEURO CLASSIC Carbon System Knee Joints					
Fig.	Article Number	Description	Length x Width x Thickness [mm]	Weight [g]		
8	SA5152-AL	system anchor for 14mm system joints, bent	90 x 15 x 4.7	12		
9	SA5163-AL	system anchor for 16mm system joints, bent	110 x 20 x 5.9	25		
10	SA5175-AL	system anchor for 20mm system joints, bent	130 x 26 x 7	47		
11	SA5352-L/AL	system anchor for 14mm system joints, calf curved left, bent	110 x 20 x 5.9	17		
11	SA5363-L/AL	system anchor for 16mm system joints, calf curved left, bent	110 x 20 x 5.9	25		
11	SA5375-L/AL	system anchor for 20mm system joints, calf curved left, bent	130 x 26 x 7	47		
12	SA5352-R/AL	system anchor for 14mm system joints, calf curved right, bent	100 x 18 x 4.9	17		
12	SA5363-R/AL	system anchor for 16mm system joints, calf curved right, bent	110 x 20 x 5.9	25		
12	SA5375-R/AL	system anchor for 20mm system joints, calf curved right, bent	130 x 26 x 7	47		



Straight System Side Bars for Carbon System Knee and Ankle Joints						
Fig.	Article Number	Description	Length x Width x Thickness [mm]	Weight [g/cm]		
13	SS5051-AL	system side bar for 12mm system joints, straight	265 x 15 x 4.6	1.6		
14	SS5052-AL	system side bar for 14mm system joints, straight	300 x 18 x 4.9	1.9		
15	SS5063-AL	system side bar for 16mm system joints, straight	450 x 20 x 5.9	2.6		
16	SS5075-AL	system side bar for 20mm system joints, straight	530 x 26 x 6.9	3.8		



Bent System Side Bars for Carbon System Knee and Ankle Joints						
Fig.	Article Number	Description	Length x Width x Thickness [mm]	Weight [g/cm]		
17	SS5151-AL	system side bar for 12mm system joints, bent	265 x 15 x 4.6	1.6		
18	SS5152-AL	system side bar for 14mm system joints, bent	300 x 18 x 4.9	1.9		
19	SS5163-AL	system side bar for 16mm system joints, bent	450 x 20 x 5.9	2.6		
20	SS5175-AL	system side bar for 20mm system joints, bent	530 x 26 x 6.9	3.8		