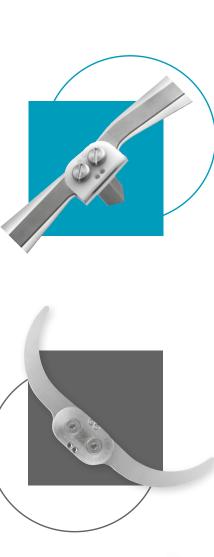
**Product Catalogue** 



## Articulated Side Bars for Knee Orthoses

August 2022







Introduction Content

#### Dear Customer,

This catalogue presents our product range for the producing custom-made of knee orthoses. Besides special materials, you can also find tools developed by us for making a negative cast that ensure a more precise result. If you visit our website www.fior-gentz.com, you can find further information such as processing instructions, production techniques and information materials.

Please note that articulated side bars for knee orthoses are not suited for producing orthoses for patients with paralyses. For that purpose, please consider our product catalogue "System Joints and Articulated System Side Bars".



Orthosis
Configurator

In order to select the most suitable articulated side bars for knee orthoses, we recommend our Orthosis Configurator www.orthosis-configurator.com.

Our product range is constantly being optimised and reasonably expanded. It is always based on scientific knowledge as well as your and our many years of practical experience. The orthotic field is innovative and still evolving. Our goal is to provide you with an optimum support in both products and service to ensure your patients being treated in the best possible way; with high quality, functionality and according to cutting-edge standards.

We would like to thank you for your cooperation and are already excited about the shared journey still ahead!

Jörg Fior and Ralf Gentz

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<sup>\*</sup> The order of the articulated side bars for knee orthoses within the catalogue is based on the indication. For an overview see page A9.

#### IN-HOUSE CUSTOMER SERVICE

Our competent in-house team can be contacted for orders and the processing of your customer data. You will also receive the best possible consultation in case of technical questions. It is available from Monday to Friday between 8 am and 5 pm.

+49 4131 24445-0

#### **SALES STAFF**

Our sales representatives will advise you on all questions regarding technical orthopaedics. They offer qualified, face-to-face technical support and service at your site by consultations, trainings and sales services.

You will find the sales representative responsible for your area on our website. Contact them directly or call our head office to be connected.

#### WWW.FIOR-GENTZ.COM

→ CONTACT & SUPPLIER SEARCH

#### **TECHNICAL SUPPORT**

For a technical consultation on the selection of system components and questions about our system joints, materials, tools or a configuration, we offer telephone support from Monday to Friday between 8 am and 5 pm from our headquarters in Lüneburg.

Contact us at +49 4131 24445-0. We will then put you through for technical advice. You can also contact us at support@fior-gentz.de.

With prior arrangement, a video call is also possible.

Your advantage: the professional personal consultation provides the basis for a detailed offer on the products and your configuration that you can also use for preparing a calculation for the health insurance.





Our concept 360° orthotics describes the 6 steps for producing an orthosis:

physical examination, planning the orthosis, model technique, producing, handing over and maintenance the orthosis. In addition, we offer a wide range of materials

to supportyou in implementing our orthosis concept. Visit our website, where we offer helpful online tutorials for each of the 6 steps.

WWW.FIOR-GENTZ.COM

→ ONLINE TUTORIALS

#### 1. PHYSICAL EXAMINATION

- + recording and documenting of all relevant patient data with orthotic treatment sheets
- + basis for the communication with our Technical Support
- + foundation for using the Orthosis Configurator

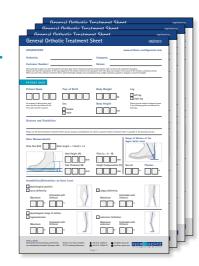


#### WWW.FIOR-GENTZ.COM

→ DOWNLOADS/ORTHOTIC TREATMENT SHEETS

## 2. PLANNING THE ORTHOSIS

- + optimal, efficient combination of all system components through recommendations for the orthosis construction in the Orthosis Configurator
- + recommendations for materials, tools and more
- + calculation based on the configuration for the cost bearer
- + integration of the webshop for offer requests and orders







WWW.ORTHOSIS-CONFIGURATOR.COM

#### 3. MODEL TECHNIQUE

- + positioning of the mechanical pivot points at ankle and knee height
- + making the negative and the positive cast as basis for the construction of the orthosis
- + modifying the positive cast in preparation for an ideal fit and harmonious look of the orthosis

#### 4. PRODUCING THE ORTHOSIS

- + producing a complete orthosis following the instructions in our online tutorials
- + short, specific tutorials for certain production techniques and specific products
- + complete production techniques or specific examples for individual steps and system joints
- + system components and materials according to the FIOR & GENTZ orthosis concept

#### 5. HANDING OVER THE ORTHOSIS

- + checking the alignment, function and the comfortable fit of the orthosis
- + quality control on the workbench as well as statically and dynamically dynamically on the patient
- + documentation of the treatment results with the Protocol for Checking the Orthosis Function

#### WWW.FIOR-GENTZ.COM

→ ONLINE TUTORIALS\HANDING OVER THE ORTHOSIS

## PROCES to Certain but Develor Endors Comment of the Comment of Co

#### 6. MAINTENANCE OF THE ORTHOSIS

- + checking the system joint for wear and functionality
- + checking for play and free movement
- + cleaning and checking the individual system components



#### **WEBSHOP**

The webshop provides you with the entire FIOR & GENTZ product range in an user-friendly and interactive interface — from system joints to orthosis shoes. You will also always find the corresponding tools, materials and accessories associated with the selected product.





#### WEBSHOP.FIOR-GENTZ.DE/EN



#### **ORTHOSIS CONFIGURATOR**

With the Orthosis Configurator, you can create a reproducible orthosis and save the orthosis data — an important element for your documented treatment. Use the completed orthotic treatment sheet and visit the Orthosis Configurator via our website or at www.orthosis-configurator.com. You will then be guided through the following steps:



### 1 Patient Data

In the first step, you enter all patient data that are relevant for planning your orthosis.



## 2 System Components

In this central step, you receive recommendations regarding the orthosis' design and the system components. The recommendations are functionally adjusted to the patient data and will withstand all expected loads.



3 Individual Adjustments

In the third step, you can adapt the shape and material of your system joints.



4 Result

In the last step, you can save, send and print your configuration result for your treatment documentation. You can furthermore generate a calculation and order products directly from our webshop.





#### FIOR & GENTZ ON SOCIAL MEDIA

Whether you are a user or an orthotist: share your photos and stories with our products with #fiorgentz.

We welcome any feedback and would like to use this platform to enable a lively exchange of experiences and the sharing of insights.

Together, we will make orthoses visible and tell the stories behind the posts.

## **FOLLOW US ON INSTAGRAM** AND USE OUR HASHTAG: #FIORGENTZ

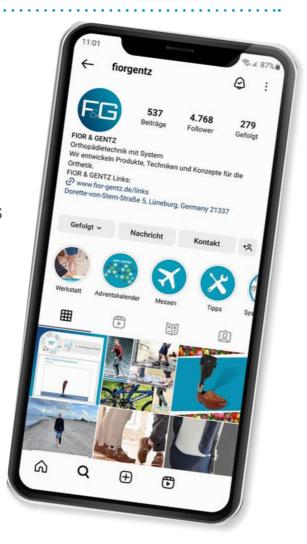












#### **EXPERTMAIL**



In our newsletter EXPERTMAIL, you will find all news at a glance. We discuss topics from areas like orthosis production, new functions of system joints and the Orthosis Configurator as well as latest information on new products, changes and additions.

Available to orthotists and all interested parties. Subscribe to the EXPERTMAIL on our website.



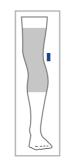
WWW.FIOR-GENTZ.COM **COMPANY\EXPERTMAIL** 

#### **APPLICATION**

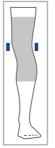
The articulated side bars for knee orthoses are exclusively for use for orthotic treatment of the knee joint and not suitable for the treatment with a knee-ankle-foot orthosis (KAFO) with foot piece.

Contraindications: please note that the articulated side bars for knee orthoses must not be used for the production of orthoses for patients with paralyses. Use the system joints from our product catalogue System Joints and Articulated System Side Bars. If the contraindications are not taken into account, the guarantee becomes void. Also note our General Terms and Conditions of Business Transactions, Sales, Delivery and Payment.

#### **ORTHOSIS TYPE**



Knee orthosis with an **Unilateral System Knee Joint** 



Knee orthosis with a Medial and Unilateral System Knee Joint

#### PRODUCTION TECHNIQUE



To form the carbon fibre side bar wings, they are screwed onto the corresponding joint retainer and heated to 175 °C using a hot-air gun (temperature marker see page E10.4).



#### Bending Iron

To form the steel and titanium side bar wings, they are screwed onto the corresponding joint retainer and bent on the model using a bending iron.

To avoid fractures, note and respect that side bar wings must not be bent in too narrow radii. The bending radius depends on the thickness of the material (see table).

Material	Calculating the Min. Bending Radius [R]**
steel	$R = 3 \times material thickness$
titanium G5	R = 10 x material thickness

\* Calculation example: a side bar wing made of titanium is 2mm thick. Multiply the material thickness by 10, the bending radius is 20mm. This value is the minimum radius.

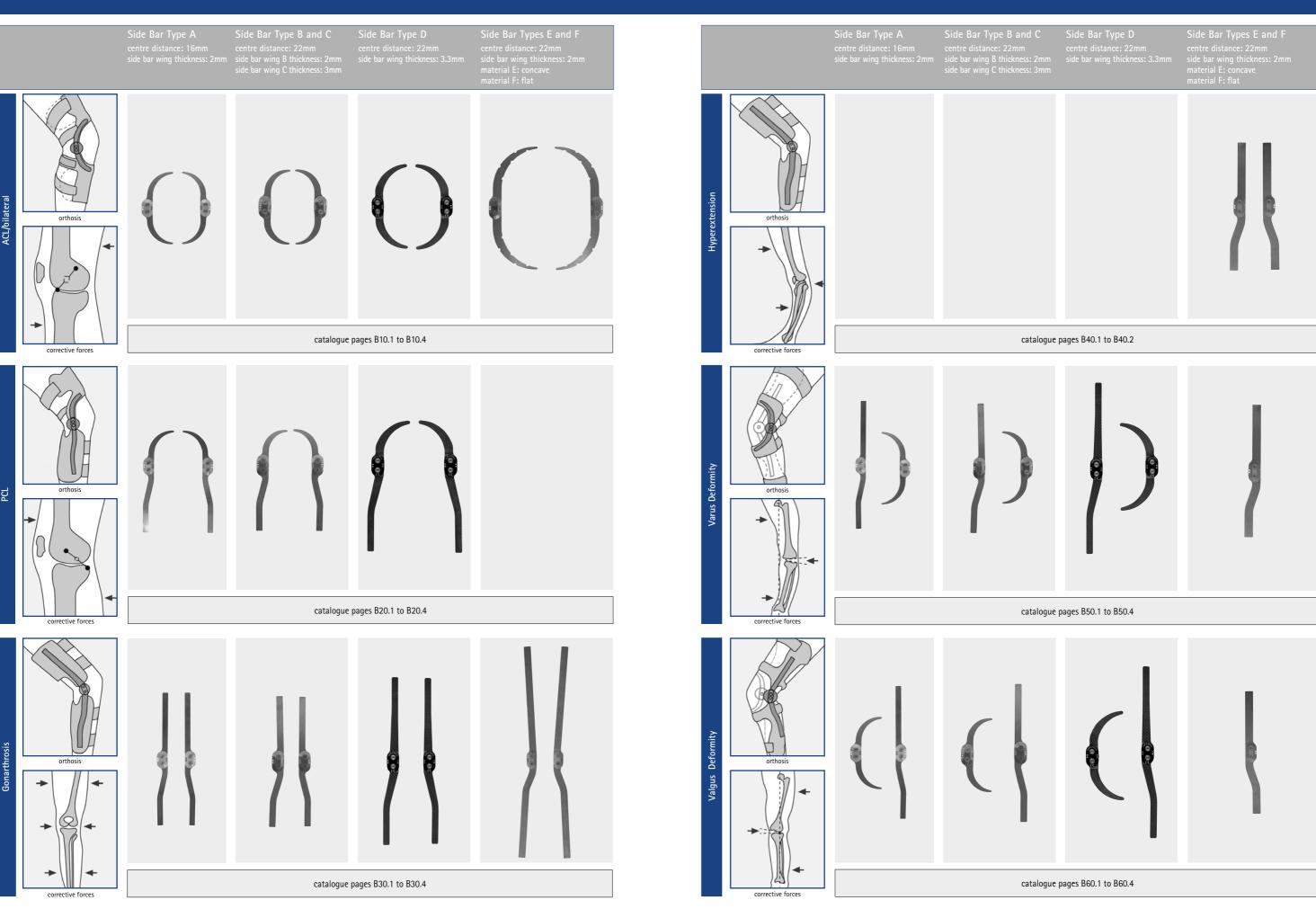




Varus Deformity

Valgus Deformity

Accessory Parts



## Indication

- injury to the anterior cruciate ligament ACL
- injury to the medial collateral ligament MCL
- injury to the lateral collateral ligament LCL
- uni- and multiaxial instabilities

#### Contraindication

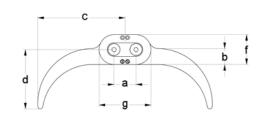
#### Not suited for:

- patients with paralyses
- KAFOs with foot piece
- patients with genu recurvatum

#### Scope of Delivery

- 1 pair of articulated side bars with gear segments
- orthosis joint grease, 3g
- orthosis joint grease for joints with gear segments, 3g
- assembly/lamination dummy

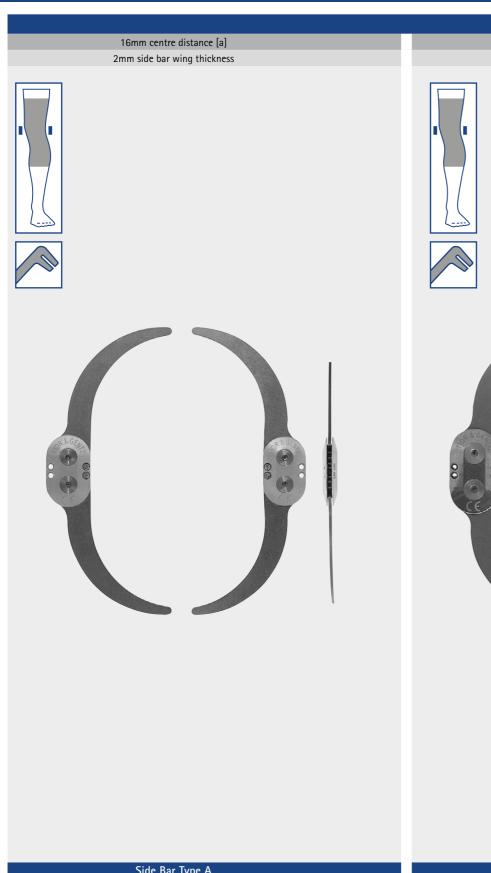
You will find alignment and lamination tools on catalogue page D10.1ff.



Articulated Side Bar Dimensions [mm]			Side	Bar 1	ype	
Dimension	Description	Α	В	С	D	Е
а	centre distance	16	22	22	22	22
b	side bar width	14	16	16	16	21
С	side bar length	80	80	80	100	140
d	side bar height	50	50	50	65	100
f	f cover plate width		30	30	30	30
g cover plate height		42	52	52	52	52
joint head thickness		9	9	10	12	9
	side bar wing thickness	2	2	3	3.3	2

Articulated Side Bar Weights* [g]	le Bar Weights* [g] Side Bar Type					
Material	Α	В	С	D	Е	
steel	116	209	262	-	299	
titanium	82	166	195	-	217	
carbon fibre	-	-	-	122	-	

\* per sales unit

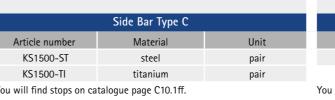


	Side Bar Type A			Side Bar Type B
Article Number	Material	Unit	Article Number	Material
KS1001-ST	steel	pair	KS1000-ST	steel
KS1001-TI	titanium	pair	KS1000-TI	titanium
You will find stops on cat	alog page C10.1ff.		You will find stops on catalogue page	C10.1ff.

2mm side bar wing thickness	
Side Bar Type B	

Joint Lamination/Prepreg Technique

e Bar Type B		
Material	Unit	Article
steel	pair	KS1
titanium	pair	KS1
f.		You will fir



22mm centre distance [a]

3mm side bar wing thickness

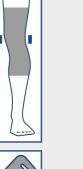
Side Bar Type D									
Article Number	Material	Unit							
KS1000-C	carbon fibre	pair							

22mm centre distance [a]

3.3mm side bar wing thickness

You will find stops on catalogue page C10.1ff.

#### Joint Lamination/Prepreg Technique | Side Bar Shell Technique 22mm centre distance [a] 2mm side bar wing thickness

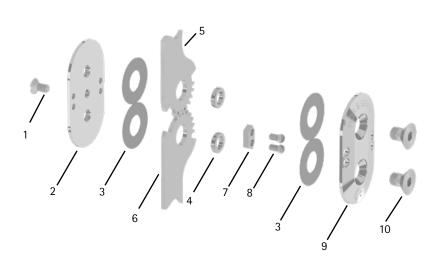


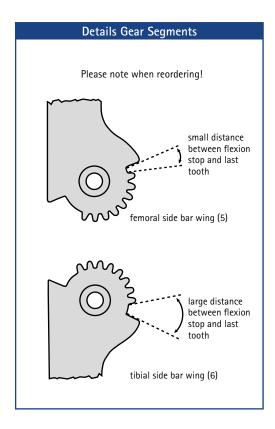




	Side Bar Type E	
Article Number	Material	Unit
KS1100-ST	steel	pair
KS1100-TI	titanium	pair

You will find stops on catalogue page C10.1ff.





Article Number for Side Bar Wings (5 and 6)								
Side Bar Typ	Side Bar Type A Side Bar Wing Thickness for:							
		Steel Titanium						
Item	Description	2mm	2mm					
5	femoral side bar wing, curved	KS0050-ST	KS0050-TI					
6	tibial side bar wing, curved	KS0051-ST	KS0051-TI					

Side Bar Type	es B to E	Side Bar Wing Thickness for:						
		Steel				Titanium		Carbon Fibre
		2mm 3mm		2mm 3mn			3.3mm	
Item	Description	В	E	С	В	E	С	
5	femoral side bar wing, curved	KS0010-ST	KS0014-ST	KS0024-ST	KS0010-TI	KS0014-TI	KS0024-TI	KS0010-C
6	tibial side bar wing, curved	KS0011-ST	KS0015-ST	KS0025-ST	KS0011-TI	KS0015-TI	KS0025-TI	KS0011-C

Other Spare	Parts	Article Number for Side Bar Type						
Item	Description	Α	В	С	D	E		
1	slotted countersunk flat head screw	SC1104-L05	SC1104-L05	SC1104-L05	SC1104-L05	SC1104-L05		
2	base plate	KS0150-AL	KS0100-ST	KS0100-ST	KS0210-AL	KS0100-ST		
3	sliding washer	GS1609-050	GS2210-050	GS2210-050	GS2210-025*	GS2210-050		
4	bronze bushing**	BB855x-**	BB966x-**	BB966x-**	BB106x-**	BB966x-**		
7	0° extension stop	KS9402-E000	KS9401-E000	KS9301-E000	KS9121-E000	KS9401-E000		
8	slotted pan head screw	SC2103-L05	SC2103-L05	SC2103-L06	SC2103-L08	SC2103-L05		
9	cover plate	KS0151-AL/FG	KS0101-ST/FG	KS0101-ST/FG	KS0211-AL/FG	KS0101-ST/FG		
10	countersunk flat head screw with hexagon socket	SC1015-L09	SC1016-L09	SC1016-L11	SC1016-L13	SC1016-L09		
without fig.	assembly/lamination dummy	KS0250	KS0200	KS0200	KS0200	KS0200		

 $<sup>\</sup>ensuremath{^{\star}}$  The sliding washer for side bar type D (carbon fibre) is self-adhesive.

<sup>\*\*</sup> Note and respect the engraved bushing heights when reordering. If the engraving is illegible, measure the exact height to the second decimal digit (e.g. 2.03mm). You will find bronze bushings on catalogue page C10.4.

- injury to the posterior cruciate ligament PCL
- uni- and multiaxial instabilities

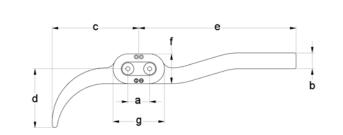
#### Not suited for:

- patients with paralyses
- KAFOs with foot piece
- patients with hyperextension

#### Scope of Delivery

- 1 pair of articulated side bars with gear segments
- orthosis joint grease, 3g
- orthosis joint grease for joints with gear segments, 3g
- assembly/lamination dummy

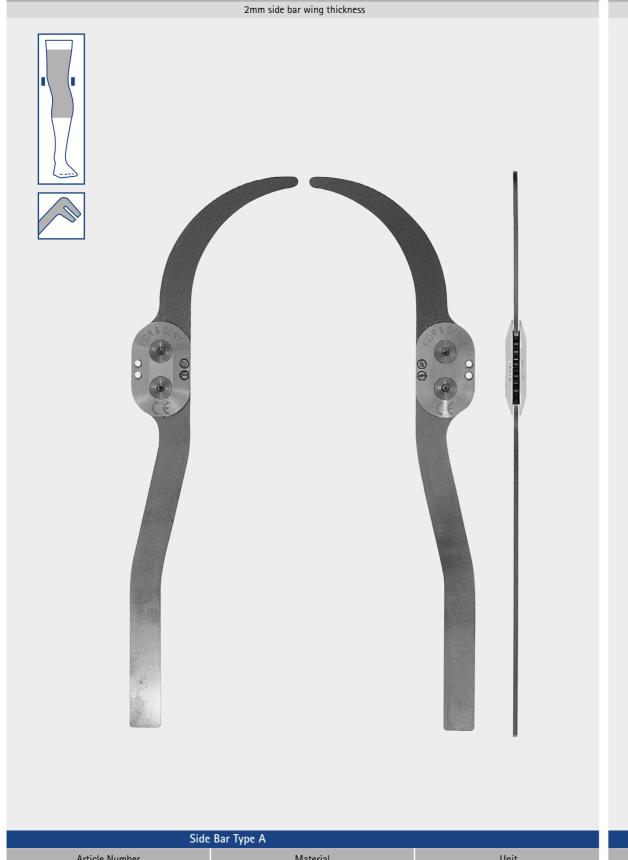
You will find alignment and lamination tools on catalogue page D10.1ff.



Articulated S	Side Bar Dimensions [mm]		Side Bar	Туре
Dimension	Description	Α	В	С
а	centre distance	16	22	22
b	side bar width	14	16	16
С	side bar length	80	80	80
d	side bar height	50	60	60
e	side bar length	160	160	160
f	cover plate width		30	30
g	g cover plate height		52	52
	joint head thickness		8	10
	side bar wing thickness	2	2	3

Articulated Side Bar Weights* [g]	Side	Bar Ty	pe
Material	А	В	С
steel	147	241	311
titanium	100	185	222

\* per sales unit



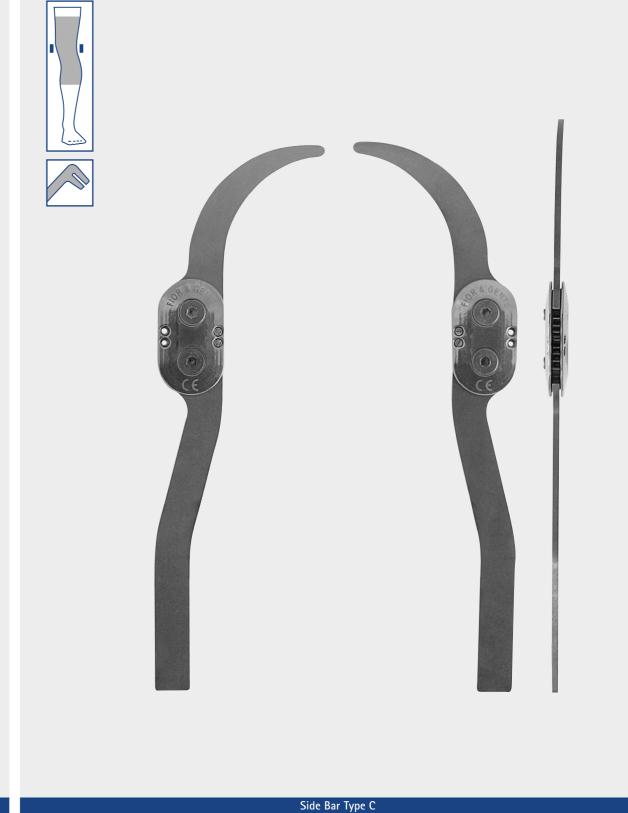
Bar Type A		
Material	Unit	Article Number
steel	pair	KS2000-ST
titanium	pair	KS2000-TI
		You fill find stops on catalogue page C10.1ff.
	Material steel	Material Unit steel pair



Joint Lamination/Prepreg Technique

2mm side bar wing thickness

Unit	Article Nu
pair	KS2500-ST
pair	KS2500-TI
	For stops see catalogue pa



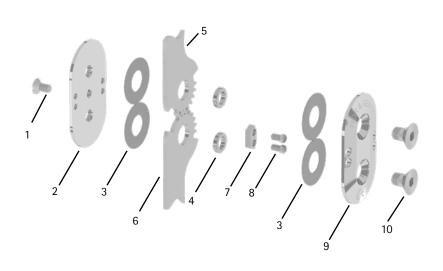
steel

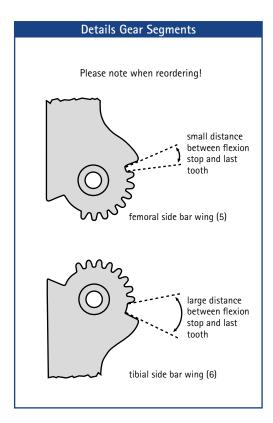
3mm side bar wing thickness

age C10.1ff.

FIOR & GENTZ

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Article Nu	Article Number for Side Bar Wings (5 and 6)							
Side Bar Typ	e A	Side Bar Wing Thickness for:						
		Steel	Titanium					
Item	Description	2mm	2mm					
5	femoral side bar wing, curved	KS0050-ST	KS0050-TI					
6	tibial side bar wing, calf curved	KS0053-ST	KS0053-TI					

Side Bar Type	es B to D	Side Bar Wing Thickness for:						
		Steel		Tita	nium	Carbon Fibre		
Item	Description	2mm 3mm		2mm	3mm	3.3mm		
5	femoral side bar wing, curved	KS0010-ST	KS0024-ST	KS0010-TI	KS0024-TI	KS0010-C		
6	tibial side bar wing, calf curved	KS0013-ST KS0027-ST k		KS0013-TI	KS0027-TI	KS0013-C		

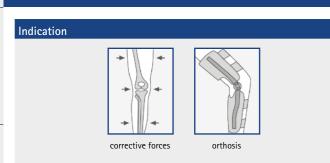
Other Spare	Parts	Article Number for Side Bar Type							
Item	Description	А	В	С	D				
1	slotted countersunk flat head screw	SC1104-L05	SC1104-L05	SC1104-L05	SC1104-L05				
2	base plate	KS0150-AL	KS0100-ST	KS0100-ST	KS0210-AL				
3	sliding washer	GS1609-050	GS2210-050	GS2210-050	GS2210-025*				
4	bronze bushing**	BB855x-**	BB966x-**	BB966x-**	BB106x-**				
7	0° extension stop	KS9402-E000	KS9401-E000	KS9301-E000	KS9121-E000				
8	slotted pan head screw	SC2103-L05	SC2103-L05	SC2103-L06	SC2103-L08				
9	cover plate	KS0151-AL/FG	KS0101-ST/FG	KS0101-ST/FG	KS0211-AL/FG				
10	countersunk flat head screw with hexagon socket	SC1015-L09	SC1016-L09	SC1016-L11	SC1016-L13				
without fig.	assembly/lamination dummy	KS0250	KS0200	KS0200	KS0200				

 $<sup>\</sup>mbox{\ensuremath{^{\ast}}}$  The sliding washer for side bar type D (carbon fibre) is self-adhesive.

<sup>\*\*</sup> Note and respect the engraved bushing heights when reordering. If the engraving is illegible, measure the exact height to the second decimal digit (e.g. 2.03mm). You will find the bronze bushings on catalogue page C10.4.

2mm side bar wing thickness, material: flat

Joint Lamination/Prepreg Technique | Side Bar Shell Technique

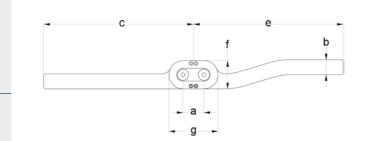


- gonarthrosis (knee joint osteoarthritis)

#### Not suited for:

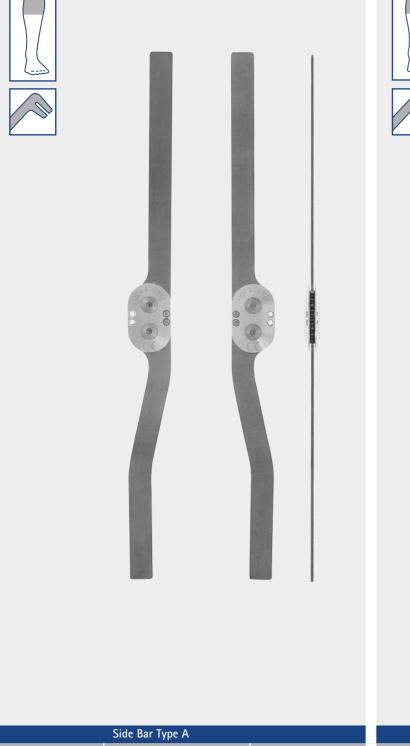
- patients with paralyses
- KAFOs with foot piece patients with hyperextension
- Scope of Delivery
- 1 pair of articulated side bars with gear segments
- orthosis joint grease, 3g
- orthosis joint grease for joints with gear segments, 3g - assembly/lamination dummy

You will find alignment and lamination tools on catalogue page D10.1ff.



Articulated Dimension	Side Bar Type						
Dimension	Description	А	В	С	D	Е	F
а	centre distance	16	22	22	22	22	22
b	side bar width	14	16	16	16	21	21
С	side bar length	160	160	160	205	340	340
e	side bar length	160	160	160	205	300	300
f	cover plate width	26	30	30	30	30	30
g	cover plate height	42	52	52	52	52	52
	joint head thickness	8	8	10	12	8	8
	side bar wing thickness	2	2	3	3.3	2	2

Articulated Side Bar Weights* [g] Side Bar Type								Side Bar Type A	
Material	А	В	С	D	Е	F		Article Number	Materia
steel	176	273	359	-	528	-		KS3001-ST	steel
titanium	118	206	250	-	-	342		KS3001-TI	titaniur
carbon fibre	-	-	-	148	-	-		You will find stops on catal	ogue page C10.1ff.



titanium

2mm side bar wing thickness

KS3000-TI

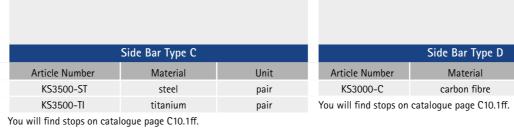
You will find stops on catalogue page C10.1ff.

Joint Lamination/Prepreg Technique

2mm side bar wing thickness



3mm side bar wing thickness



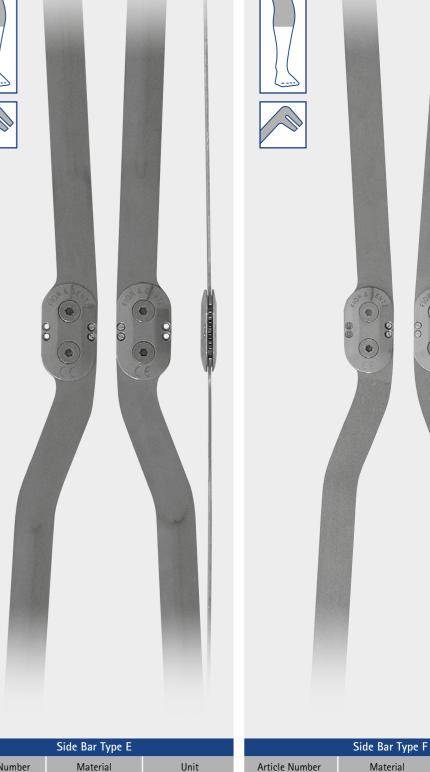
KS3500-TI



steel

steel

2mm side bar wing thickness, material: concave



|--|--|

KS3200-TI

KS3200-TI/AS\*\*

For stops see catalogue page C10.1 ff.

titanium

titanium

\* per sales unit

Side Bar Type D

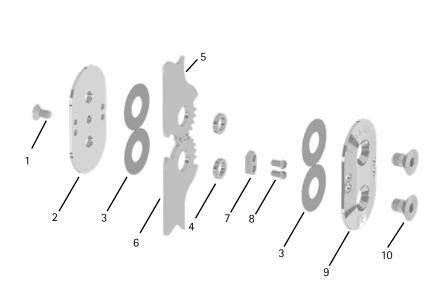
carbon fibre

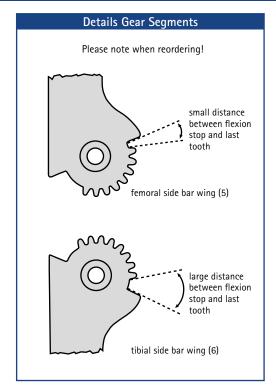
KS3200-ST

KS3200-ST/AS\*\*

For stops see catalogue page C10.1 ff.

3.3mm side bar wing thickness





Article Nu	Article Number for Side Bar Wings (5 and 6)								
Side Bar Typ	e A	Side Bar Wing Thickness for:							
		Steel	Titanium						
Item	Description	2mm	2mm						
5	femoral side bar wing, straight	KS0052-ST	KS0052-TI						
6	tibial side bar wing, calf curved	KS0053-ST	KS0053-TI						

Side Bar Typ	oes B to D	Side Bar Wing Thickness for:				
		Steel Titanium C			Carbon Fibre	
Item	Description	2mm	3mm	2mm	3mm	3.3mm
5	femoral side bar wing, straight	KS0012-ST	KS0026-ST	KS0012-TI	KS0026-TI	KS0012-C
6	tibial side bar wing, calf curved	KS0013-ST	KS0027-ST	KS0013-TI	KS0027-TI	KS0013-C

Side Bar Types E to F						
		Side Bar Wing Thickness for:				
		Steel Co	Titanium			
		2mr	2mm			
Item	Description	left	right			
5	femoral side bar wing, straight	KS0016-L/ST	KS0016-R/ST	KS0016-TI		
6	tibial side bar wing, calf curved	KS0017-L/ST	KS0017-R/ST	KS0017-TI		

Further Spare Parts Article Number for Side Bar Type							
Item	Description	А	В	С	D	Е	F
1	slotted countersunk flat head screw	SC1104-L05	SC1104-L05	SC1104-L05	SC1104-L05	SC1104-L05	SC1104-L05
2	base plate	KS0150-AL	KS0100-ST	KS0100-ST	KS0210-AL	KS0100-ST	KS0100-ST
3	sliding washer	GS1609-050	GS2210-050	GS2210-050	GS2210-025*	GS2210-050	GS2210-050
4	bronze bushing**	BB855x-**	BB966x-**	BB966x-**	BB106x-**	BB966x-**	BB966x-**
7	0° extension stop	KS9402-E000	KS9401-E000	KS9301-E000	KS9121-E000	-	-
7	6° extension stop	-	-	-	-	KS9401-E006	KS9401-E006
8	slotted pan head screw	SC2103-L05	SC2103-L05	SC2103-L06	SC2103-L08	SC2103-L05	SC2103-L05
9	cover plate	KS0151-AL/FG	KS0101-ST/FG	KS0101-ST/FG	KS0211-AL/FG	KS0101-ST/FG	KS0101-ST/FG
10	countersunk flat head screw with hexagon socket	SC1015-L09	SC1016-L09	SC1016-L11	SC1016-L13	SC1016-L09	SC1016-L09
vithout fig.	assembly/lamination dummy	KS0250	KS0200	KS0200	KS0200	KS0200	KS0200

<sup>\*</sup> The sliding washer for side bar type D (carbon fibre) is self-adhesive.

<sup>\*\*</sup> Note and respect the engraved bushing heights when reordering. If the engraving is illegible, measure the exact height to the second decimal digit (e.g. 2.03mm). You will find bronze bushings on catalogue page C10.4.

Indication



Hyperextension



- hyperextension of the knee joint → orthotic fitting

- with extra strong articulated side bars
- gonarthrosis (knee joint osteoarthritis)

#### Contraindication

Not suited for:

- patients with paralyses
- KAFOs with foot piece

#### Scope of Delivery

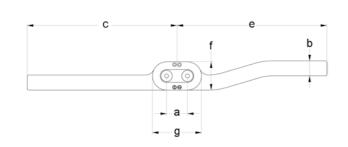
- 1 pair of articulated side bars with gear segments
- orthosis joint grease, 3g
- orthosis joint grease for joints with gear segments, 3g
- assembly/lamination dummy

Varus Deformity

Varus Deformity

Accessory Parts

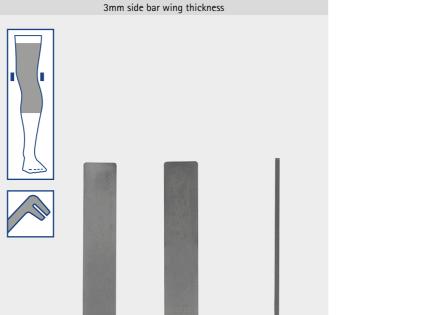
You will find alignment and lamination tools on catalogue page D10.1ff.



Articulates	N Sido Par Dimonsions [mm]						
Articulated	Articulated Side Bar Dimensions [mm]						
Dimension	Description						
а	centre distance	22					
b	side bar width	21					
С	side bar length	160					
e	side bar length	160					
f	cover plate width	30					
g	cover plate height	52					
	joint head thickness	10					
	side bar wing thickness	3					

Articulated Side Bar Weight* [g]			
424			
286			

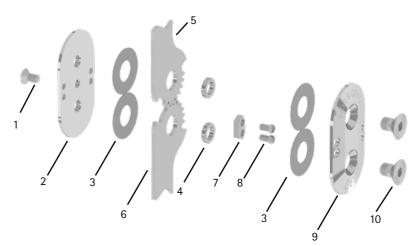
\* per sales unit

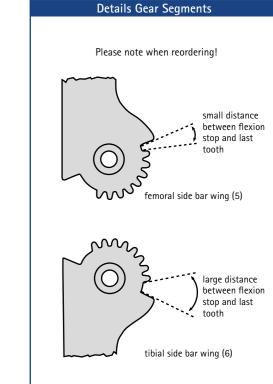


Joint Lamination/Prepreg Technique 22mm centre distance [a]

Side Bar Type C					
Article Number	Material	Unit			
KS3100-ST	steel	pair			
KS3100-TI	titanium	pair			

You will find stops on catalogue page C10.1ff.





Article Number for Side Bar Wings (5 and 6)					
		Side Bar Wing	Thickness for:		
		Steel	Titanium		
Item	Description	3mm	3mm		
5	femoral side bar wing, straight	KS0018-ST	KS0018-TI		
6	tibial side bar wing, calf curved	KS0019-ST	KS0019-TI		

Item	Description	Article Number
1	slotted countersunk flat head screw	SC1104-L05
2	base plate	KS0100-ST
3	sliding washer	GS2210-050
4	bronze bushing**	BB966x-**
7	0° extension stop	KS9301-E000
8	slotted pan head screw	SC2103-L06
9	cover plate	KS0101-ST/FG
10	countersunk flat head screw with hexagon socket	SC1016-L11
vithout fig.	assembly/lamination dummy	KS0200

\*\* Note and respect the engraved bushing heights when reordering. If the engraving is illegible, measure the exact height to the second decimal digit (e.g. 2.03mm). You will find bronze buschings on catalogue page C10.4.

3mm side bar wing thickness

varus deformity, left varus deformity, left varus deformity (bowleg)

- uni- and multiaxial instabilities

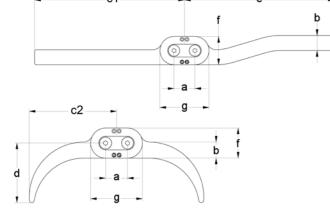
#### Not suited for:

- patients with paralyses
- KAFOs with foot piece
- patients with hyperextension

#### Scope of Delivery

- 1 pair of articulated side bars with gear segments for types A to D
- 1 articulated side bar with gear segments for type E
- orthosis joint grease, 3g
- orthosis joint grease for joints with gear segments, 3g
- assembly/lamination dummy

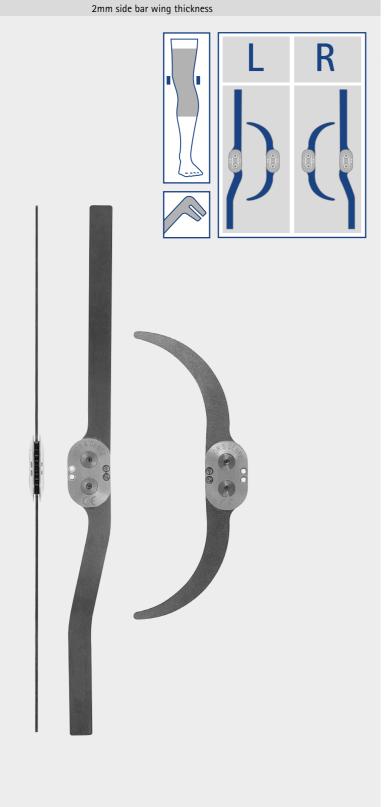
You will find alignment and lamination tools on catalogue page D10.1ff.



Articulated	Side Bar Dimensions [mm]		Side	Bar T	ype	
Dimension	Description	Α	В	С	D	Е
а	centre distance	16	22	22	22	22
b	side bar width	14	16	16	16	21
c1	side bar length	160	160	160	205	160
d	side bar height	50	60	60	65	-
e	side bar length	160	160	160	205	160
c2	side bar length	80	80	80	100	-
f	cover plate width	26	30	30	30	30
g	cover plate height	42	52	52	52	52
	joint head thickness	8	8	10	12	10
	side bar wing thickness	2	2	3	3.3	3

Articulated Side Bar W	Side	Bar Ty	pe		
Material	А	В	С	D	Е
steel	148	240	310	-	106
titanium	101	184	222	-	71
carbon fibre	-	-	-	137	-

\* per sales unit



Side Bar Type A						
Article Number	Leg	Material	Unit			
KS4011-ST	right	steel	pair			
KS4011-TI	right	titanium	pair			
KS4021-ST	left	steel	pair			
KS4021-TI	left	titanium	pair			
You will find stops	You will find stops on catalogue page C10.1ff.					

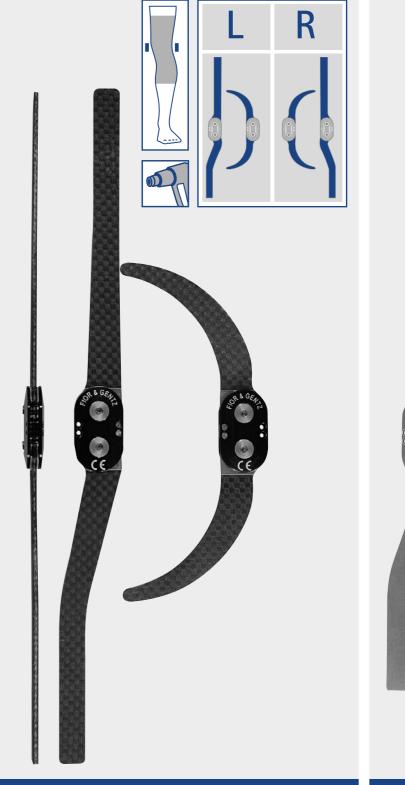
	2mm side bar wing thickness	
	2mm side bar wing thickness  L R	
- DOMINGOUS -		

	Side Bar Type B						
L	Article Number	Leg	Material	Unit	Ar		
	KS4010-ST	right	steel	pair			
	KS4010-TI	right	titanium	pair			
	KS4020-ST	left	steel	pair			
	KS4020-TI	left	titanium	pair			
	You will find stops catalogue page C10.1ff.						

	Side Bar Type C					
t	Article Number	Leg	Material	Unit		1
r	KS4510-ST	right	steel	pair		
r	KS4510-TI	right	titanium	pair		
r	KS4520-ST	left	steel	pair	Yo	οι
r	KS4520-TI	left	titanium	pair		
	You will find stops catalogue page C10.1 ff.					

Joint Lamination/Prepreg Technique

3mm side bar wing thickness



3.3mm side bar wing thickness

Article Number	Leg	Material	Unit	Article Numb
KS4010-C	right	carbon fibre	pair	KS3010-ST (fig
KS4020-C	left	carbon fibre	pair	KS3010-TI (fig.
ou will find stops on	KS3020-ST (fig			
				VC2020 TI (E

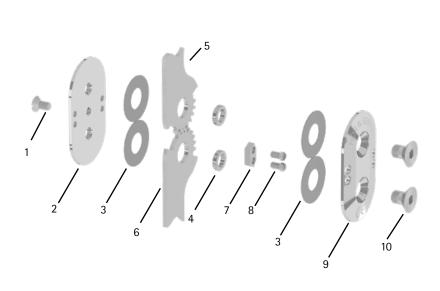
Article Number	Leg	Material	Unit			
KS3010-ST (fig. 1)	left medial	steel	piece			
KS3010-TI (fig. 1)	left medial	titanium	piece			
KS3020-ST (fig. 2)	right medial	steel	piece			
KS3020-TI (fig. 2)	right medial	titanium	piece			
For stone see estalogue page C10.1 ff						

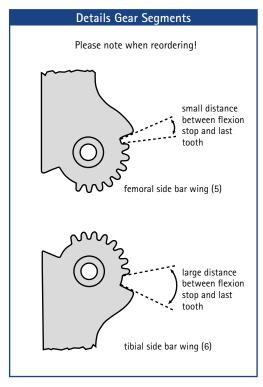
For stops see catalogue page C10.1 ff.

FIOR & GENTZ

B50.1

B50.2





Article Number for Side Bar Wings (5 and 6)						
Side Bar Type A		Side Bar Wing Thickness for:				
		Steel	Titanium			
Item	Description	2mm	2mm			
5	femoral side bar wing, straight	KS0052-ST	KS0052-TI			
5	femoral side bar wing, curved	KS0050-ST	KS0050-TI			
6	tibial side bar wing, curved	KS0051-ST	KS0051-TI			
6	tibial side bar wing, calf curved	KS0053-ST	KS0053-TI			

Side Bar Types B to E			Side Bar Wing Thickness for:					
			Steel		Titanium			Carbon Fibre
Item	Description	2mm	3mm	3mm unilateral	2mm	3mm	3mm unilateral	3.3mm
5	femoral side bar wing, straight	KS0012-ST	KS0026-ST	KS0018-ST	KS0012-TI	KS0026-TI	KS0018-TI	KS0012-C
5	femoral side bar wing, curved	KS0010-ST	KS0024-ST	-	KS0010-TI	KS0024-TI	-	KS0010-C
6	tibial side bar wing, curved	KS0011-ST	KS0025-ST	-	KS0011-TI	KS0025-TI	-	KS0011-C
6	tibial side bar wing, calf curved	KS0013-ST	KS0027-ST	KS0019-ST	KS0013-TI	KS0027-TI	KS0019-TI	KS0013-C

urther Spa	re Parts	Article Number for Side Bar Type				
Item	Description	А	В	С	D	E
1	slotted countersunk flat head screw	SC1104-L05	SC1104-L05	SC1104-L05	SC1104-L05	SC1104-L05
2	base plate	KS0150-AL	KS0100-ST	KS0100-ST	KS0210-AL	KS0100-ST
3	sliding washer	GS1609-050	GS2210-050	GS2210-050	GS2210-025*	GS2210-050
4	bronze bushing**	BB855x-**	BB966x-**	BB966x-**	BB106x-**	BB966x-**
7	0° extension stop	KS9402-E000	KS9401-E000	KS9301-E000	KS9121-E000	KS9301-E000
8	slotted pan head screw	SC2103-L05	SC2103-L05	SC2103-L06	SC2103-L08	SC2103-L06
9	cover plate	KS0151-AL/FG	KS0101-ST/FG	KS0101-ST/FG	KS0211-AL/FG	KS0101-ST/FG
10	countersunk flat head screw with hexagon socket	SC1015-L09	SC1016-L09	SC1016-L11	SC1016-L13	SC1016-L11
vithout fig.	assembly/lamination dummy	KS0250	KS0200	KS0200	KS0200	KS0200

<sup>\*</sup> The sliding washer for side bar type D (carbon fibre) is self-adhesive.

<sup>\*\*</sup> Note and respect the engraved bushing heights when reordering. If the engraving is illegible, measure the exact height to the second decimal digit (e.g. 2.03mm). You will find bronze bushings on catalogue page C10.4.

3mm side bar wing thickness

corrective forces valgus deformity, left valgus deformity, left

- valgus deformity (knock knee)

- uni- and multiaxial instabilities

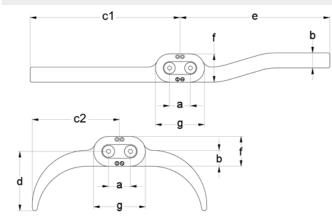
#### Not suited for:

- patients with paralyses
- KAFOs with foot piece
- patients with hyperextension

#### Scope of Delivery

- 1 pair of articulated side bars with gear segments for types A to D
- 1 articulated side bar with gear segments for type E
- orthosis joint grease, 3g
- orthosis joint grease for joints with gear segments, 3g
- assembly/lamination dummy

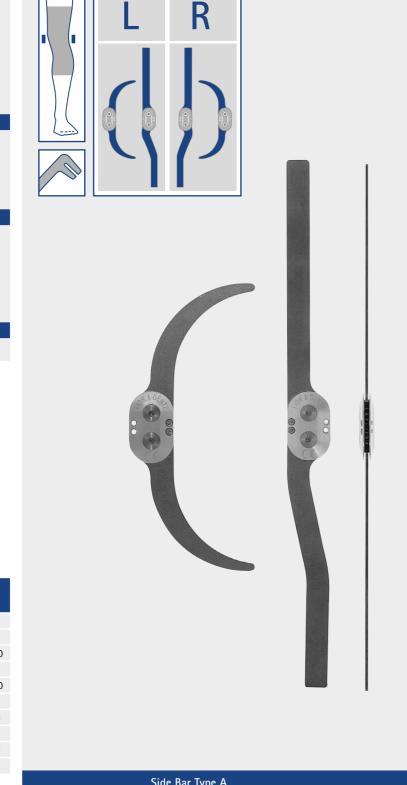
You will find alignment and lamination tools on catalogue page D10.1ff.



Articulated Side Bar Dimensions [mm]			Side	Bar T	уре	
Dimension	Description	А	В	С	D	Е
а	centre distance	16	22	22	22	22
b	side bar width	14	16	16	16	21
c1	side bar length	160	160	160	205	160
d	side bar height	50	60	60	65	-
e	side bar length	160	160	160	205	160
c2	side bar length	80	80	80	100	-
f	cover plate width	26	30	30	30	30
g	cover plate height	42	52	52	52	52
	joint head thickness	8	8	10	12	10
	side bar wing thickness	2	2	3	3.3	3

side our wing thickness	-	-	U	0.0	U
Articulated Side Bar Weights* [g]	_	Side E	Bar Typ		
Material	Α	В	С	D	Е
steel	148	240	310	-	106
titanium	101	184	222	-	71
carbon fibre				127	

\* per sales unit

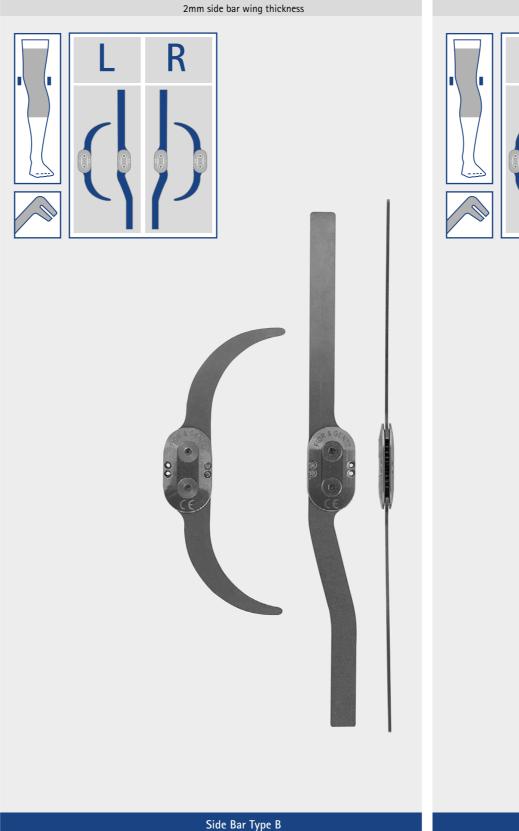


2mm side bar wing thickness

Side Bar Type A							
Article Number	Leg	Material	Unit				
KS4041-ST	left	steel	pair				
KS4041-TI	left	titanium	pair				
KS4031-ST	right	steel	pair				
KS4031-TI	right	titanium	pair				
You will find stops on catalogue page C10.1ff.							

KS4040-TI KS4030-ST KS4030-TI You will find stops catalogue page on C10.1ff.

KS4040-ST



Unit	Article Nun
pair	KS4540-
pair	KS4540-
pair	KS4530-
pair	KS4530-
	Van will find

titanium

You will find stops on catalogue page C10.1ff.

Joint Lamination/Prepreg Technique

3mm side bar wing thickness

3.3mm side bar wing thickness	
Service CE	

			48	
	Side Bar	r Type D		
Article Number	Leg	Material	Unit	
KS4040-C	left	carbon fibre	pair	KS
You will find stops o	n catalogue page C10.	1ff.		KS
				KS

Side Bar Type E KS3040-ST (fig. 1) KS3040-TI (fig. 1) piece KS3030-ST (fig. 2) right lateral piece KS3030-TI (fig. 2) right lateral

You will find stops on catalogue page C10.1ff.

FIOR & GENTZ

B60.1

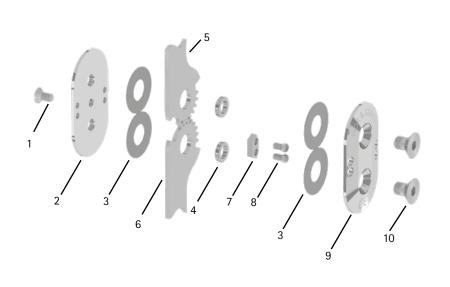
B60.2

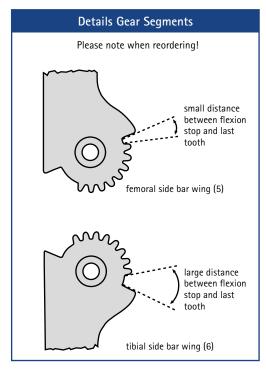
titanium

Side Bar Type C

**Materials** 







Article Nu	article Number for Side Bar Wings (5 and 6)								
Side Bar Typ	e A	Side Bar Wing Thickness for:							
		Steel	Titanium						
Item	Description	2mm	2mm						
5	femoral side bar wing, straight	KS0052-ST	KS0052-TI						
5	femoral side bar wing, curved	KS0050-ST	KS0050-TI						
6	tibial side bar wing, curved	KS0051-ST	KS0051-TI						
6	tibial side bar wing, calf curved	KS0053-ST	KS0053-TI						

Side Bar Typ	es B to E	Side Bar Wing Thickness for:						
			Steel		Titanium			Carbon Fibre
Item	Description	2mm	3mm	3mm unilateral	2mm	3mm	3mm unilateral	3.3mm
5	femoral side bar wing, straight	KS0012-ST	KS0026-ST	KS0018-ST	KS0012-TI	KS0026-TI	KS0018-TI	KS0012-C
5	femoral side bar wing, curved	KS0010-ST	KS0024-ST	-	KS0010-TI	KS0024-TI	-	KS0010-C
6	tibial side bar wing, curved	KS0011-ST	KS0025-ST	-	KS0011-TI	KS0025-TI	-	KS0011-C
6	tibial side bar wing, calf curved	KS0013-ST	KS0027-ST	KS0019-ST	KS0013-TI	KS0027-TI	KS0019-TI	KS0013-C

irther Spa	are Parts	Article Number for Side Bar Type				
Item	Description	A	В	С	D	E
1	slotted countersunk flat head screw	SC1104-L05	SC1104-L05	SC1104-L05	SC1104-L05	SC1104-L05
2	base plate	KS0150-AL	KS0100-ST	KS0100-ST	KS0210-AL	KS0100-ST
3	sliding washer	GS1609-050	GS2210-050	GS2210-050	GS2210-025*	GS2210-050
4	bronze bushing**	BB855x-**	BB966x-**	BB966x-**	BB106x-**	BB966x-**
7	0° extension stop	KS9402-E000	KS9401-E000	KS9301-E000	KS9121-E000	KS9301-E000
8	slotted pan head screw	SC2103-L05	SC2103-L05	SC2103-L06	SC2103-L08	SC2103-L06
9	cover plate	KS0151-AL/FG	KS0101-ST/FG	KS0101-ST/FG	KS0211-AL/FG	KS0101-ST/FG
10	countersunk flat head screw with hexagon socket	SC1015-L09	SC1016-L09	SC1016-L11	SC1016-L13	SC1016-L11
ithout fig.	assembly/lamination dummy	KS0250	KS0200	KS0200	KS0200	KS0200

<sup>\*</sup> The sliding washer for side bar type D (carbon fibre) is self-adhesive.

<sup>\*\*</sup> Note and respect the engraved bushing heights when reordering. If the engraving is illegible, measure the exact height to the second decimal digit (e.g. 2.03mm). You will find bronze bushings on catalogue page C10.4.

Example of Accessory Parts	
flexion stop with screws bronze bush	

#### Application of the Stops

Steel or plastic extension and flexion stops for mounting in articulated side mars made of steel, titanium or carbon fibre with gear segments and 16 or 22mm centre distance.

The stops can be screwed on the joint retainers for articulated side bars with gear segments (see catalogue page D10.4). Thus, the articulated side bars can be aligned and fixed in the desired flexed position determined by the positive cast. When ordering a stop set, the corresponding screws for mounting the stops are already included in the scope of delivery. However, you can also order the screws separately for each stop.

					Extension and Flexion Stops					
		Description (Use)	Alternative Use						Unit	ACL
				articulated side bar material: steel/titanium	articulated si steel/i	de bar material: titanium	art	iculated side bar material: carbon fibre		
				16mm centre distance	22mm cer	ntre distance		22mm centre distance		
				2mm side bar wing thickness	2mm side bar wing thickness	3mm side bar wing thickness	3.3	nm side bar wing thickness		PCL
				stop material: steel	stop r s'	naterial: teel	stop material: steel	stop material: plastic*		
	<b>a</b>	0° extension stop	100° flexion stop	KS9402-E000	KS9401-E000	KS9301-E000	KS9111-E000	KS9121-E000	piece	G
		6° extension stop	-	KS9402-E006	KS9401-E006	KS9301-E006	KS9111-E006	KS9121-E006	piece	Gonarthrosis
		10° extension stop	90° flexion stop	KS9402-E010	KS9401-E010	KS9301-E010	KS9111-E010	KS9121-E010	piece	OSIS
		20° extension stop	80° flexion stop	KS9402-E020	KS9401-E020	KS9301-E020	KS9111-E020	KS9121-E020	piece	Нур
	00	30° extension stop	70° flexion stop	KS9402-E030	KS9401-E030	KS9301-E030	KS9111-E030	KS9121-E030	piece	Hyperextension
h		0° flexion stop	-	KS9402-F000	KS9401-F000	KS9301-F000	KS9111-F000	-	piece	nsion
in re		10° flexion stop	-	KS9402-F010	KS9401-F010	KS9301-F010	KS9111-F010	-	piece	Varus
		20° flexion stop	-	KS9402-F020	KS9401-F020	KS9301-F020	KS9111-F020	-	piece	ıs Defor
		30° flexion stop	-	KS9402-F030	KS9401-F030	KS9301-F030	KS9111-F030	-	piece	rmity
		40° flexion stop	-	KS9402-F040	KS9401-F040	KS9301-F040	KS9111-F040	KS9121-F040	piece	Valgus
		50° flexion stop	-	KS9402-F050	KS9401-F050	KS9301-F050	KS9111-F050	KS9121-F050	piece	us Deform
	00	60° flexion stop	40° extension stop	KS9402-F060	KS9401-F060	KS9301-F060	KS9111-F060	KS9121-F060	piece	ormity
		70° flexion stop	30° extension stop	KS9402-F070	KS9401-F070	KS9301-F070	KS9111-F070	KS9121-F070	piece	Acc
		80° flexion stop	20° extension stop	KS9402-F080	KS9401-F080	KS9301-F080	KS9111-F080	KS9121-F080	piece	Accessory
	<b>A</b>	90° flexion stop	10° extension stop	KS9402-F090	KS9401-F090	KS9301-F090	KS9111-F090	KS9121-F090	piece	Parts
	<b>(II)</b>	100° flexion stop	0° extension stop	KS9402-F100	KS9401-F100	KS9301-F100	KS9111-F100	KS9121-F100	piece	
	without fig.	stop set	-	KS9402	KS9401	KS9301	-	-	set	Tools
	without fig.	stop set	-	-	-	-	KS9111	KS9121	set	
	<b>}</b>	slotted pan head screw, M3x4	-	SC2103-L05	SC2103-L05	SC2103-L06	SC2103-L08	SC2103-L08	piece	_
							* lower noise (only for low loads)			Mate

ACL

Varus Deformity

Valgus Deformity

Accessory Parts

Gonarthrosis

FIOR & GENTZ Tools













Catalogue Pages of the Tools						
Section	Page					
Making the Negative Cast	D10.2					
Positioning the Pivot Points	D10.3					
Tools for the Parallel Alignment of the System Joints	D10.4					
Spare Parts for the Tools	D10.5					
Other Tools	D10.6					
Tool Case	D10.7					













h-Cast		
Fig.	Article Number	Description
1	WE3200	h-Cast
1a	WE3200-1/5	cover plate
1b	WE3200-1/4	plate with tenon, 5mm
1c	WE3200-1/3	plate with tenon, 10mm
1d	WE3200-1/2	plate with tenon, 20mm
1e	WE3200-1/1	base plate with tenon

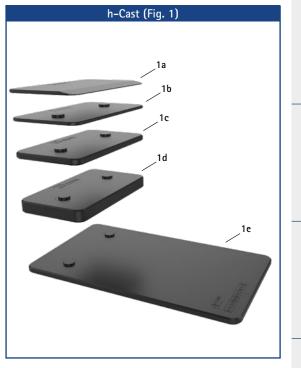
Application: to determine a heel height/leg length discrepancy. For positioning the patient in a physiological position.

e-Cast in	a Case	
Fig.	Article Number	Description
2	WE3400	e-Cast in a case
2a	ET3400-T	operator device
2b	ET3410-WE	sensor for the thigh
2c	ET3420-WE	sensor for the lower leg
2d	ET3430-WE	sensor for the foot
2e	WZ2067-T08	screwdriver, hexalobular socket, T8 x 60mm
2f	ET0710	cable
2g	ET0780	adapter
2h	ET0830-2450*	3 x batteries for e-Cast sensors*
w/o fig.	KL4200	glue dots for the fixation of the sensors, 48 pieces
w/o fig.	KL4601	washers for marking the mechanical pivot points, self-adhesive, 28 pieces

\* When reordering the article, only one battery is delivered as a sales unit.

Application: for checking the joint angles during the making of the negative cast

e-Cast Accesso	ry Parts	
Fig.	Article Number	Description
2b, 2c and 2d	ET3400-WE	e-Cast sensor set for making the negative cast





Valgus Deformity

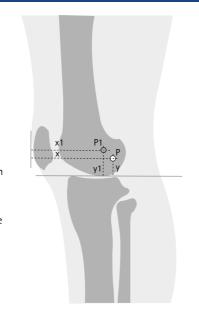
Accessory Parts

Knee Joint: The position of the mechanical pivot point at knee height is calculated by the Orthosis Configurator using the ap measurement.

With the Orthosis Configurator, the exact anatomical compromise pivot point according to Nietert P1 and the exact mechanical pivot point P can be calculated for your planned orthosis. We recommend to place the orthotic knee joint exactly on the calculated mechanical pivot point P. To do so, mark point P on the patient's leg according to our production technique. Later, the alignment aid (see below) must be pierced through point P on the negative cast.

Why Does the Mechanical Pivot Point P Differ from the Anatomical Compromise Pivot Point According to Nietert P1?

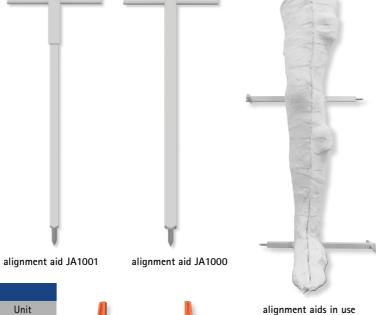
Due to the rolling and sliding motion of the human knee, the anatomical pivot point moves on a centrode during flexion and extension. The anatomical compromise pivot point P1 centres the several pivot points of the centrode as precisely as possible on only one point. For patients without any impairment on the muscles, it makes sense to place the axis of the orthotic knee joint on the anatomical compromise pivot point according to Nietert. To increase the mechanical knee control for patients with insufficient knee securing muscles, the pivot point of the orthotic knee joint has to lie behind the anatomical compromise pivot point. How far the mechanical pivot point lies behind the anatomical compromise pivot point depends on the degree of insufficiency of the affected muscle groups. In order to reduce the bottom-up shifting of the femoral shell on the patient's leg and due to the difference to the centrode, the mechanical pivot point has to lie also further down at the same time.



 $P = mechanical\ pivot\ point$  (corresponds to the anatomical compromise pivot point according to Nietert)

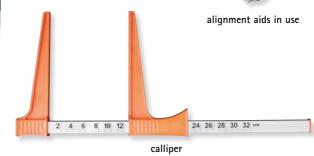
Alignment Aid		
Article Number	Description	Unit
JA1001	alignment aid 11 x 11mm for 10 and 12mm system ankle joints	piece
JA1000	alignment aid 15 x 15 x 300mm for all 14, 16 and 20mm system joints as well as 12mm system knee joints	piece

**Application:** the alignment aid is pierced through the mechanical pivot points marked on the negative cast. Thus, there is room for the holders (see catalogue pages D10.4 to D10.5) inside the positive cast.



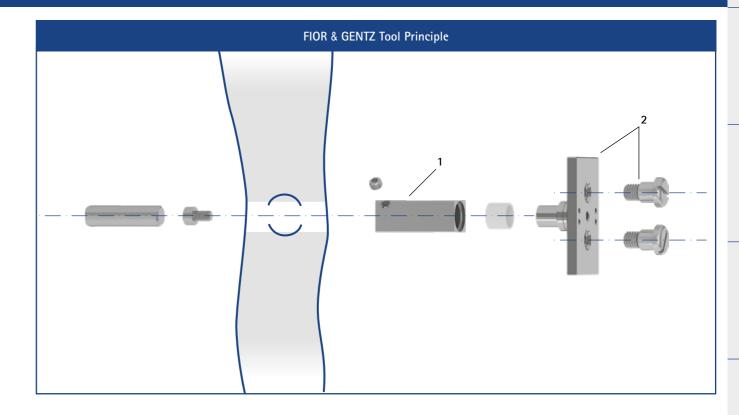
Calliper		
Article Number	Description	Unit
WZ3000-32	calliper, measurement range 0-320mm	piece

 $\label{policy} \textbf{Application:} \ \ \text{to determine the ap measurement at knee height}$ 

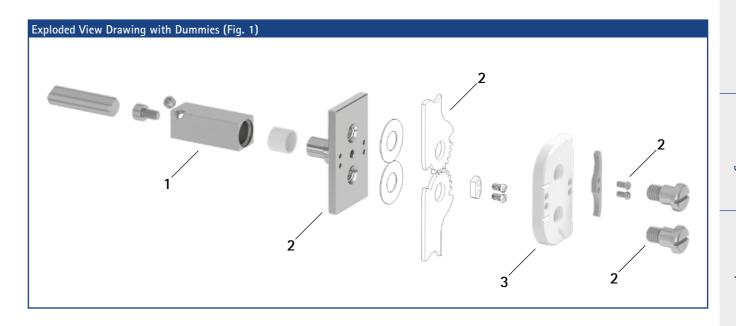


Use the Orthosis Configurator for calculating the anatomical compromise pivot point according to Nietert:





Articulated Side Bars for Knee Orthoses					
Article Number 1	Article Number for Centre Distance				
16mm 22mm					
PE2000-LR or PE4000-LR (1) and PZ4100-LR (2)	PE2000-LR or PE4000-LR (1) and PZ2100-LR (2)				



Tools for the Parallel Alignment of the System Joints on the Positive Cast  Article Number for Centre Distance					
	Article Number for	r Centre Distance			
Item	16mm	22mm	Description	Unit	
1	PE2000-LR	PE2000-LR	holders, 40mm long, plaster technique, square: 15 x 15mm	piece	
1	PE4000-LR	PE4000-LR	holders, 30mm long, plaster technique, square: 15 x 15mm	piece	
2	PZ4100-LR	PZ2100-LR	joint retainers for articulated side bars with gear segments	set	
3	KS0250-LR	KS0200-LR	assembly/lamination dummy	piece	

Hyperextension

Varus Deformity

Valgus Deformity

Accessory Parts

Holder (1)							
	Article Number for						
Item	PE2000	PE4000	Description	Unit			
1a	RM0120-AL100	RM0080-AL100	round material	piece			
without fig.	RM0300-AL100*	RM0300-AL100*	round material, aluminium 10 x 300mm	piece			
1b	SC4005-L08	SC4005-L08	cylinder head screw	piece			
1c	PE0102-01	PE0102-00	square	piece			
1d	BP1210-L10	BP1210-L10	polyamide bushing	piece			
1e	SC9606-L04ST	SC9606-L04ST	headless pin	piece			

<sup>\*</sup> not included in the scope of delivery, can be ordered optionally

Spare Parts for the Tools

Joint Retai	Joint Retainer for Articulated Side Bars with Gear Segments (2)						
	Article Number for						
Item	PZ2100	PZ4100	Description	Unit			
2a	PZ0210	PZ0410	joint retainer	piece			
2b	KS9401-F000	KS9402-F000	0° flexion stop	piece			
without fig.	=	KS9402-F005	5° flexion stop	piece			
2c	SC2103-L06	SC2103-L05	slotted pan head screw	piece			
2d	SC4048-L16	SC4038-L16	retaining screw	piece			



Parallel Alignm			
Article Number	Scope of Delivery	Description	Unit
PS1000	1 x fig. 1	parallel alignment gauge for aligning system stirrups and system joints	piece

Application: used to control the parallel alignment of ankle and knee joints as well as stirrups on orthoses. Scope of delivery: parallel alignment gauge with 3 aligning pins, different lengths: 60, 90 and 120mm.

bolt for trial with knurled

Spare Parts for Parallel Alignment Gauge					
Item	Article Number	Description	Unit		
1	PS0102	centering screw	piece		
2	PS0101	guide bushing	piece		
3	PS0100-L060	aligning pin, length: 60mm	piece		
4	PS0100-L090	aligning pin, length: 90mm	piece		
5	PS0100-L120	aligning pin, length: 120mm	piece		

Reamer (Fig. 3)					
Article Number	Scope of Delivery	Description	Unit		
WZ1225-096	1 x fig. 3	reamer 9.6mm, H7	piece		

Application: used to screw together the bands and system side bars for producing a trial fitting orthosis.

Bolt for Trial with Knurled Nut (Fig. 2)

10 x fig. 2

PS2000-010

Application: for reaming the bronze bushing bore before inserting a repair bushing.

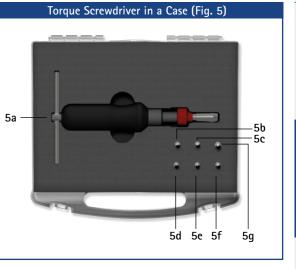
WZ1225-105 similar to fig. 3 reamer 10.5mm, H7 piece

Easy Cutter (Fig. 4)						
Article Number	Scope of Delivery	Description	Unit			
WZ8083-01	1 x fig. 4	electric scissors to cut aramid and carbon fibres	piece			

Application: used to precisely cut curves and straight cuts into technical and synthetic as well as natural materials (materials see catalogue page E10.1ff).

Torque Screwdriver in a Case						
Fig.	Article Number	Description				
5	WZ5500	torque screwdriver in a case with 6 bits				
5a - torque screwdriver, 1-6Nm		torque screwdriver, 1-6Nm				
5b	WZ5600-I30	bit, hexagon socket, 3mm, 25mm long, for M5 screws				
5c	WZ5600-I40	bit, hexagon socket, 4mm, 25mm long, for M6 screws				
5d	WZ5604-T10	bit, hexalobular socket, TX10, 25mm long, for M3 screws				
5e	WZ5604-T15	bit, hexalobular socket, TX15, 25mm long, for M4 screws				
5f	WZ5604-T20	bit, hexalobular socket, TX20, 25mm long, for M5/M6 screws				
5g	WZ5604-T25	bit, hexalobular socket, TX25, 25mm long,				

Application: for tightening screws with a defined torque



Gonarthrosis

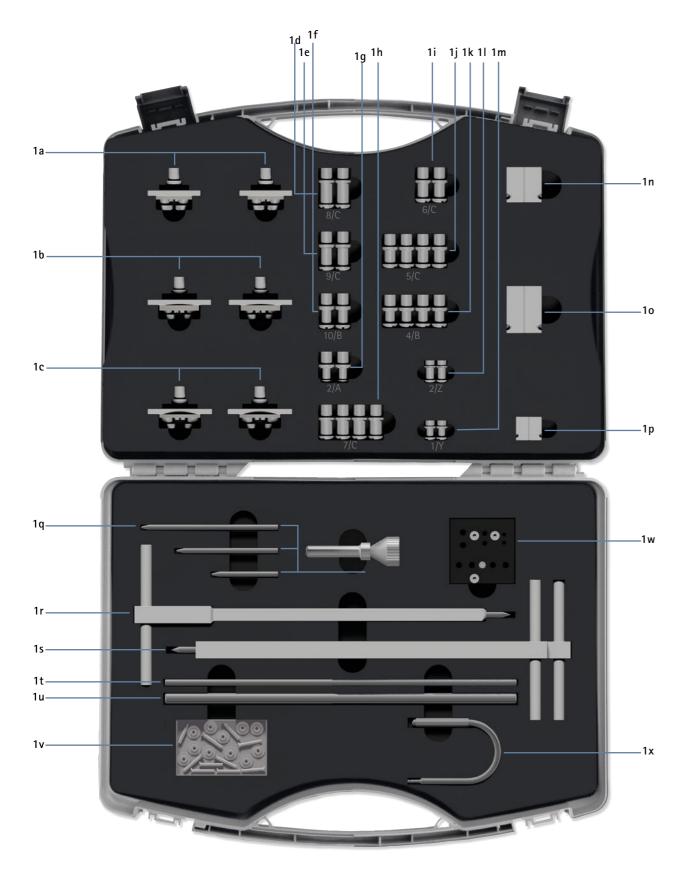
Hyperextension

Varus Deformity

Valgus Deformity

PCL

ACL



Item	Article No.	ol Case  Description	Qty.	Catalogue Page
1	WK1000	tool case complete, filled with tools	1	J13
				313
-	WK1000-0	tool case with empty storage foam inlays, for filling by yourself	1	-
1a	PZ4100-LR	joint retainers for 10 and 14mm NEURO ACTIVE system joints/articulated system side bars as well as articulated side bars with gear segments*, 16mm centre distance	2	J10 -
1b	PZ3100-LR	joint retainers for 16 and 20mm NEURO ACTIVE system joints/articulated system side bars	2	J10
1c	PZ2100-LR	joint retainers for articulated side bars with gear segments, 22mm centre distance	2	-
1d	PE1125-LR	joint retainers for 20mm NEURO FLEX MAX and NEURO LOCK MAX (laser marking: 8/C)	2	
1e	PE1123-LR	joint retainers for 16mm NEURO FLEX MAX and NEURO LOCK MAX as well as 20mm NEURO LOCK Carbon und NEURO CLASSIC Carbon (laser marking: 9/C)	2	
1f	PE1122-LR	joint retainers for 14mm NEURO FLEX MAX and NEURO LOCK MAX as well as 16mm NEURO CLASSIC Carbon und NEURO LOCK Carbon (laser marking: 10/B)	2	
1g	PE1121-LR	joint retainers for 12mm NEURO FLEX MAX and NEURO LOCK MAX (laser marking: 2/A)	2	
1h	PE1025-LR	joint retainers for all 20mm system ankle joints and 16mm NEURO SWING Carbon, for the system knee joints 20mm NEURO MATIC, NEURO TRONIC and NEURO HITRONIC as well as 16 and 20mm NEURO CLASSIC zero, NEURO VARIO zero, NEURO CLASSIC, NEURO VARIO, NEURO VARIO 2 and NEURO VARIO-SWING (laser marking: 7/C)	4	J10
1i	PE1015-LR	joint retainers for 16mm NEURO MATIC and NEURO TRONIC as well as 20mm NEURO LOCK (laser marking: 6/C)	2	
1j	PE1013-LR	joint retainers for all 16mm system ankle joints, excluding 16mm NEURO SWING Carbon, as well as for the system knee joints 14mm NEURO CLASSIC zero, NEURO VARIO zero, NEURO CLASSIC, NEURO VARIO, NEURO VARIO 2 and NEURO VARIO-SWING and 16mm NEURO LOCK (laser marking: 5/C)	4	
1k	PE1012-LR	joint retainers for all 14mm system ankle joints as well as for the system knee joints 12mm NEURO CLASSIC zero, NEURO VARIO zero, NEURO CLASSIC, NEURO VARIO, NEURO VARIO 2 and NEURO VARIO-SWING and 14mm NEURO CLASSIC Carbon, NEURO LOCK und NEURO LOCK Carbon (laser marking: 4/B)	4	
11	PE1011-01/LR	joint retainers for all 12mm system ankle joints (laser marking: 2/Z)	2	
1m	PE1010-01/LR	joint retainers for all 10mm system ankle joints (laser marking: 1/Y)	2	
1n	PE4000-LR	holder, model technique, square: 15 x 15 x 30mm for all 14, 16 and 20mm system ankle joints	2	
10	PE2000-LR	holder, model technique, square: 15 x 15 x 40mm for all system knee joints	2	J9
1p	PE1001-LR	holder, model technique, square: 11 x 11 x 20mm for all 10 and 12mm system ankle joints	2	
1q	PS1000	parallel alignment gaug	1	J11
1r	JA1001	alignment aid 11 x 11 x 300mm for all 10 and 12mm system ankle joints	1	
1s	JA1000	alignment aid 15 x 15 x 300mm for all 14, 16 and 20mm system ankle/knee joints as well as 12mm system knee joints	2	J4
1t	RM0300-AL060	round material, aluminium, 6 x 300mm	1	10
1u	RM0300-AL100	round material, aluminium, 10 x 300mm	1	J9
1v	PS2000-010	bolts for trial with knurled nut	10	J11
1w	BS1000	drilling jig	1	J12
1x	WE9303-SF	assembly aid for cover plate for system ankle joints with dorsiflexion assist, 16 and 20mm system width	1	J11

<sup>\*</sup> You can find articulated side bars with gear segments in our product calatolue Articulated Side Bars for Knee Orthoses.

**Application:** the tools included in the tool case are used for the parallel alignment of FIOR & GENTZ system joints. Detailed information concerning each tool is given on the corresponding catalogue pages.

You can store already bought FIOR & GENTZ tools in the tool case with empty foam inlays.

Materials

Materials





fig. 1

Trial Shell Material Vivak (Fig. 1)					
Article Number	Scope of Delivery	Length x Width x Thickness [mm]	Unit		
PL1086-5/02	1 x fig. 1	1250 x 600 x 5	sheet		

Application: for producing trial shells

#### Material properties:

- thermoformable material
- transparent
- for direct processing on moist plaster
- very stiff

#### Indications:

- recommended processing temperature at 170°C
- depending on the quality of the oven or heating plate, bubbles can form from heating the material



Varus Deformity

Valgus Deformity

Accessory Parts

fig. 1









Set of Epoxy Resin and Hardener (Fig. 1)					
Fig.	Article Number	Description	Content	Unit	
-	KL1201	set of epoxy resin and hardener	1kg resin and 0.19kg hardener	set	
-	KL1201-0	epoxy resin	1kg resin	tin	
-	KL1201-H	hardener	0,19kg hardener	tin	
1	KL1202	set of epoxy resin and hardener	5kg resin and 0.95kg hardener	set	
1	KL1202-0	epoxy resin	5kg resin	tin	
1	KL1202-H	hardener	0,95kg hardener	tin	

Application: for laminating orthoses

Material properties: after hardening, the material cannot be thermoformed.

especially adjusted to our materials and tested

Colour Pastes for Epoxy Resin (Fig. 2)				
Article Number	Colour	Content [g]	Unit	
KL1910	blue	250	tin	
KL1911	black	250	tin	
KL1912	white	250	tin	
KL1913	yellow	250	tin	
KL1914	orange	250	tin	
KL1915	red	250	tin	
KL1916	green	250	tin	

Application: for colouring epoxy resins

Material properties: for an individual designing of laminated orthoses. The different colours can be mixed. The colour proportion of the colour-epoxy resin mix should be from 2 to 5% and not higher than 5%.

Insulating Wax for Lamination (Fig. 3)			
Article Number	Content [g]	Unit	
WA1000	425	tin	
Applications for filling up ampty spaces sool gaps and applied before			

Application: for filling up empty spaces, seal gaps and openings before lamination. When heated it can easily be removed with compressed air.

A Activator, Spray for Adhesives (Fig. 4)				
Article Number Content [ml] Uni				
KL2900	150	tin		

Application: for accelerating the hardening of cyanoacrylate adhesives

Fast-Acting Adhesive Based on Ethyl-Cyanoacrylate (Fig. 5-6)				
Article Number Viscosity Content [g] Uni				
KL2100*	low	20	bottle	
KL2101**	medium	20	bottle	

Application: for adhering materials with a small or medium-size joint gap

#### Examples for the use of fast-acting adhesive

- \* adhesion of materials with a small joint gap
- \*\* for adhering materials with medium size joint gap e.g. adhering the PVC profile cores with system anchors for the lamination/prepreg technique.









Application: for fixing reinforcement layers



AGOMET® Adhesive F330 (Fig. 1)				
Content [g]	Unit			
800	tin			
	Content [g]			

AGOMET® Hardener F330 (Fig. 2)		
Article Number	Content [g]	Unit
KL1100-H	30	tube

AGOMET® Adhesive F330 with AGOMET Hardener F330 (without fig.)				
Article Number	Content [g]	Unit		
KL1101	5	tin		

Application: for adhering CTC and CTS materials to each other and to metals. Material properties: after hardening, the material cannot be thermoformed.

LOCTITE® Adhesive 243 (Fig. 3)				
Article Number	Article Number Content [ml] Uni			
KL2000	5	tube		
Application: for realisi	na medium strenath screw retentions			



Adhesive Transfer Tape without Backing Material (Fig. 5-6)					
Article Number	Scope of Delivery	Length [m]	Width [mm]	Unit	
KL4050-06	1 x fig. 5	55	6	reel	
KL4050-12	1 x fig. 6	55	12	reel	
Application: for fixing the cutting edges and attaching to the positive cast					

	Temperature Marke			
	Article Number	Description	Unit	
	ZM1000	temperature marker 175°C	Piece	
Application: for marking the proper processing temperature of the CTC material				

Orthosis Joint Grease (Fig. 6)			
Article Number	Description	Content [g]	Unit
FT1000	orthosis joint grease	3	tube

Application: for greasing the system components

Orthosis Joint Grease for Joints with Gear Segments, 3g (Fig. 7)				
Article Number	Description	Content [g]	Unit	
FT2000	orthosis joint grease for joints with gear segments	3	tube	

Application: for greasing the spaces in between the gear segments

Super Clean LOCTITE® SF 7063 (Fig. 10)					
Article Number	Description	Content [ml]	Unit		
WZ7063	Super Clean, LOCTITE® SF 7063	400	tin		

Application: for the residue-free removal of insulating wax on all surfaces and for the cleaning of surfaces in preparation of the adhesion of materials.

**Reinforcement Materials** 

Gonarthrosis

Hyperextension

Varus Deformity

Valgus Deformity

Accessory Parts



Fabrics (Fig. 1-2)	Fabrics (Fig. 1-2)							
Article Number	Scope of Delivery	Material	Fibre Orientation	Structure	Length x Width [m]	Grammage [g/m2]	Unit	
VP5202-10020	1 x fig. 1	carbon fibre	bidirectional	twill 2/2	2 x 1	204	Reel	
VP5202-10050	1 x fig. 1	carbon fibre	bidirectional	twill 2/2	5 x 1	204	Reel	
VP5221-10020	1 x fig. 2	aramid fibre	bidirectional	twill 2/2	2 x 1	170	Reel	

Application:

Carbon fibre fabric: for producing laminated orthoses and for extensive

for using with our adhesive transfer tape without backing material

Aramid fibre fabric: for producing flexible areas as part of a laminated orthosis, e.g. for a long partially flexible foot piece or a flexible proximal femoral reinforcement (bearing surface)

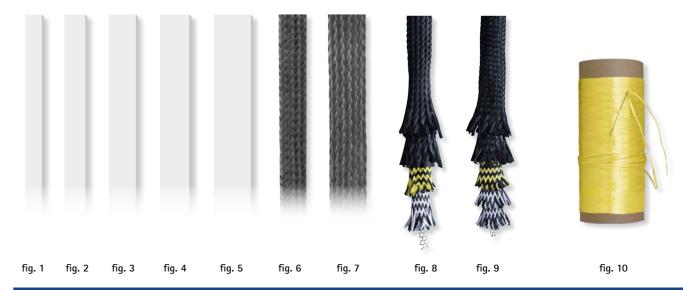
Carbon Fibre Band (Fig. 3)							
Article Number	Scope of Delivery	Fibre Orientation	Length [m]	Width [mm]	Grammage [g/m2]	Unit	
VP4305-L1000	1 x fig. 3	unidirectional	10	50	250	reel	
VP4305-L2000	1 x fig. 3	unidirectional	20	50	250	reel	
VP4310-L1000	1 x fig. 3	unidirectional	10	100	250	reel	
VP4310-L2000	1 x fig. 3	unidirectional	20	100	250	reel	

Application: for producing laminated orthoses and for partial reinforcements.

PVA Film Tubes (Fig. 4	<b>I</b> )				
Article Number	Scope of Delivery	Length x Width [cm]	Circumference [cm]	Film Thickness [mm]	Unit
KL9630	10 x fig. 4	100 x 15	30	0.1	package
KL9635	10 x fig. 4	100 x 18	35	0.1	package
KL9640	10 x fig. 4	100 x 20	40	0.1	package
KL9735	10 x fig. 4	130 x 18	35	0.1	package
KL9745	10 x fig. 4	130 x 23	45	0.1	package
KL9755	10 x fig. 4	130 x 28	55	0.1	package
KL9765	10 x fig. 4	130 x 33	65	0.1	package

Application: for lamination/prepreg technique

extra strong and tear-resistant



PVC Profile Cores (Fig. 1-	5)			
Article Number	Scope of Delivery	Length x Width x Thickness [cm]	Application for System Width [mm]	Unit
VP2012-L200	1 x fig. 1	200 x 0.9 x 0.3	10	piece
VP2021-L200	1 x fig. 2	200 x 1.2 x 0.3	12	piece
VP2022-L200	1 x fig. 3	200 x 1.3 x 0.3	14	piece
VP2032-L200	1 x fig. 4	200 x 1.5 x 0.3	16	piece
VP2033-L200	1 x fig. 5	200 x 1.9 x 0.4	20	piece

Application: for producing reinforcement profiles in laminates

Carbon-Fibre Braided Tubes (Fig. 6-7)						
Article Number	Scope of Delivery	Length [m]	Width [mm]	Application for System Width [mm]	Unit	
VP1033-L1000	1 x fig. 6	10	12	10, 12	reel	
VP1034-L1000	1 x fig. 7	10	18	14, 16, 20	reel	

Application: for producing reinforcement profiles in laminates

Reinforcing Carbon Fibre Braid with Honeycomb Core (Fig. 8-9)				
Article Number	Scope of	Length x Width x Thickness	Unit	
	Delivery	[cm]		
VP1226-L120	1 x fig. 8	120 x 1.4 x 0.7	piece	
VP1237-L120	1 x fig. 9	120 x 1.6 x 0.9	piece	
Application: for producing reinforcement profiles in laminates				

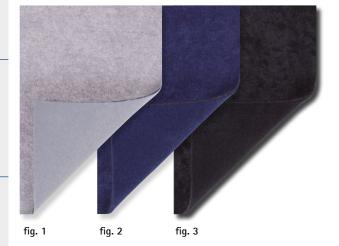
Material Properties	
Standard Lay-Up (VP1226-L120)	Reinforced Lay-Up (VP1237-L120)
1 x honeycomb core	1 x honeycomb core
1 x layer carbon-glass	2 x layers carbon-glass
1 x layer carbon-Kevlar	1 x layer carbon-Kevlar
2 x layers carbon	2 x layers carbon

Aramid Fibre Roving (Fig. 10)						
Article Number	Scope of Delivery	Length [m]	Width [mm]	Grammage [g/m2]	Unit	
VP3208-L2000	1 x fig. 10	20	14	805	reel	

Application: for sewing system anchors and reinforcement profiles

Valgus Deformity

Accessory Parts





xDRY Towelling Padding Material (Fig. 1-3)							
Fig.	Article Number	Description	Length x Width x Thickness [mm]	Unit			
1	PL3687-02/4	xDRY towelling padding material, grey	1000 x 1400 x 4	sheet			
2	PL3687-02/2	xDry towelling padding material, blue	1000 x 1400 x 4	sheet			
3	PL3687-02/1	xDry towelling padding material, black	1000 x 1400 x 4	sheet			

Colours are not true to the original due to two-colour-printing of the catalogue.

Application: for padding of orthoses

exchangeable and soft padding material. The padding material has a skin-friendly towelling coating on one side and a velour coating on the reverse.

The padding material is antimicrobial and can be washed at 60°C.

Use the hook tape (see below) for a safe fixation of the padding material to an orthosis.

When you cut the material with pinking shears there are no frayed edges, that means you get a functional edge which does not need to be linked.

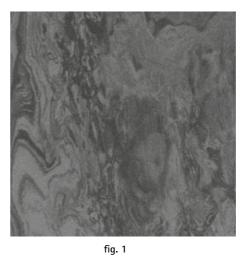
Hook Tape, Self-Adhesive, Transparent (Fig. 5)					
Article Number	Scope of Delivery	Length x Width x Thickness [mm]	Unit		
KV4050-L1000	1 x fig. 5	1000 x 50 x 1	band		

Application: for fixing the towelling padding material into the orthosis

Material properties: 1mm thin micro hook tape

Hook Dots (Fig. 6)		
Article Number	Description	Unit
KV0020-22/06	6 x hook dots, self-adhesive, transparent	set
KV0020-22/40	40 x hook dots, self-adhesive, transparent	set

Application: for attaching the towelling padding material to the orthosis Material properties: 1mm thin micro hook dots with a diameter of 22mm



Padding Material for Orthoses, 30° Shore (Fig. 1)					
Article Number	Scope of	Length x Width x Thickness [mm]	Unit		
	Delivery				
PL3887-04/1	1 x fig. 1	1050 x 900 x 4	sheet		

Application: for padding orthoses

Material properties: thermoformable padding material with closed cell structure which can be washed and disinfected

Note: the recommended processing temperature is at approx. 130°C.



fig. 2

Dummy for Padding Material for Orthoses, PE Foam, Blue (Fig. 2)						
Article Number	Scope of	Length x Width x Thickness [mm]	Unit			
	Delivery					
PL3988-04/2	1 x fig. 2	1000 x 1000 x 4	sheet			

Application: placeholder for the padding of the orthosis during production. Material properties: thermoformable material which is adjusted to the FIOR & GENTZ production technique. Lamination dummies (e.g. for the production of NEURO MATIC/NEURO TRONIC orthoses) can be fixed on this material with fast-acting adhesive.

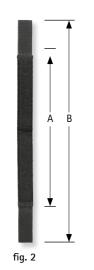
Note: the dummy for the padding of the orthosis is suitable only to a limited extent for the lamination technique with acrylic resin. The produced heat during lamination with acrylic resin has a negative effect on the dummy. Do not use the dummy for the padding of the orthosis for the prepreg technique because of too high processing temperature.

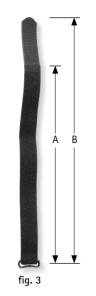
The recommended processing temperature is at approx. 130  $^{\circ}\text{C}.$ 

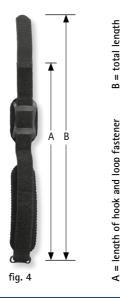
Varus Deformity

Valgus Deformity

Accessory Parts







Hook and Loop Fastener, ca. 50mm Wide, Black (Fig. 1)						
Article Number	Scope of Delivery	Length of Hook and Loop Total Length B [mm]		Unit		
		Fastener A [mm]				
KV1008-L420	1 x fig. 1	260	420	piece		
KV1008-L550	1 x fig. 1	380	550	piece		
KV1008-L650	1 x fig. 1	490	650	piece		
			1 1 1 1 1 1 1			

Application: for the fixation of orthoses on the leg. The ca. 50mm wide hook and loop fastener is used as proximal thigh strap. You can find appropriate loops for 50mm on catalogue page E10.10.

Hook and Loop Fastener, ca. 25mm Wide, Black (Fig. 2)						
Article Number	Scope of Delivery	Length of Hook and Loop	Total Length B [mm]	Unit		
		Fastener A [mm]				
KV1003-L380	1 x fig. 2	240	380	piece		
KV1003-L440	1 x fig. 2	280	440	piece		

Application: for the fixation of knee orthoses on the leg. The ca. 25mm wide hook and loop fastener is used as distal and proximal calf strap and as distal thigh strap. You can find appropriate loops for 25mm on catalogue page E10.10.

Hook and Loop Fastener with Loop, ca. 25mm Wide, Black (Fig. 3)						
Article Number	Scope of Delivery	Length of Hook and Loop	Total Length B [mm]	Circumference* [cm]	Unit	
		Fastener A [mm]				
KV1004-L450	1 x fig. 3	370	450	33-36	piece	
KV1004-L500	1 x fig. 3	420	500	37-40	piece	
KV1004-L550	1 x fig. 3	470	550	41-44	piece	

Hook and Loop Fastener with Loop, Strap Pad and Holder, ca. 25mm Wide, Black (Fig. 4)						
Article Number	Scope of Delivery	Length of Hook and Loop	Total Length B [mm]	Circumference* [cm]	Unit	
		Fastener A [mm]				
KV2004-L450	1 x fig. 4	370	450	33-36	piece	
KV2004-L500	1 x fig. 4	420	500	37-40	piece	
KV2004-L550	1 x fig. 4	470	550	41-44	piece	

\* measured at the highest point of the calf

Application: the hook and loop fastener with loop is used, among other things, as a calf strap.



fig. 1





fig. 3



fig. 4

fig. 2

Loops for 25mm Hook and Loop Fastener, Plastic, Black (Fig. 1)					
Article Number	Scope of Delivery	Width [mm]	Unit		
US1000	4 x fig. 1	25	pack		
US1001	20 x fig. 1	25	pack		
US1002	50 x fig. 1	25	pack		

Loops for 50mm Hook and Loop Fastener, Plastic, Black (Fig. 2)					
Article Number	Scope of Delivery	Width [mm]	Unit		
US1100	4 x fig. 2	50	pack		
US1101	20 x fig. 2	50	pack		
US1102	50 x fig. 2	50	pack		

Application: for fixing hook and loop fasteners on orthoses and prostheses

Strap Pad Made of Padding Material, Black, 50mm Wide (Fig. 3)						
Article Number	Scope of Delivery	Length [mm]	Article Number of the Appropriate Strap pad Holder	Unit		
GP1000-L090	1 x fig. 3	90	GP1201-L070	piece		
GP1000-L130	1 x fig. 3	130	GP1201-L100	piece		
GP1000-L170	1 x fig. 3	170	GP1201-L130	piece		
GP1000-L205	1 x fig. 3	205	-	piece		
GP1000-L240	1 x fig. 3	240	-	piece		
GP1000-L275	1 x fig. 3	275	-	piece		

Application: for cushioning the hook and loop fastener that contacts the skin

Material properties: exchangeable, elastic and breathable padding material with a skin-friendly, non-slip coating on one side and a soft coating on the reverse side. Hooks can be fastened to the soft coating side of the material.

Holder for Strap Pad with Hook Dots, Black, 50mm Wide (Fig. 4)					
Article Number	Scope of delivery	Length [mm]	Article Number of the Appropriate Strap Pad	Unit	
GP1201-L070	1 x fig. 4	70	GP1000-L090	piece	
GP1201-L100	1 x fig. 4	100	GP1000-L130	piece	
GP1201-L130	1 x fig. 4	130	GP1000-L170	piece	

Application: the strap pad and the hook and loop fastener are attached to the holder.









fig. 2 fig. 3 fig. 4 fig. 1

Cloth Bags for Orthoses, Blue (Fig. 1-4)				
Article number	Scope of delivery	Length x Width [cm]	Unit	
OB1000-S	1 x fig. 1	40 x 30	piece	
OB1000-M	1 x fig. 2	70 x 35	piece	
OB1000-L	1 x fig. 3	90 x 35	piece	
OB1000-XL	1 x fig. 4	120 x 40	piece	

Application: for storing and transporting orthoses.



#### cleaning tips

Washing: separately and inside out, up to max. 40°C.

Drying: Do not tumble dry. Before hanging out, pull into shape and allow to air-dry.

Ironing: at 180-200°C with steam or with a damp cloth.

For returns, please send us the following:

- 1. goods in original packing including bar code label;
- 2. delivery note (copy);
- 3. completed return form;
- 4. control sheet;
- 5. completed orthotic treatment sheet (only necessary if article was mounted into the orthosis and broke during usage).

For organisational reasons, freight collect returns will not be accepted.

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Return Form (PR9045-DE/GB)

#### Control Sheet (PB0004)



The return form and the control sheet are enclosed with the goods. Please send us the goods including the completed return form stating the reason for claim and the control sheet to improve our quality. You can also download the return form at www.fior-gentz.com.



You can download the current orthotic treatment sheets in the download section at www.fior-gentz.com or order them with the corresponding article number.

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