NEURO HiSWING

	Dorsiflexion Stop	Plantar Flexion Stop
Main Function	dynamic	dynamic (with dorsiflexion assist)
Adjustment Options	adjustable, variable spring force by exchanging the spring unit	adjustable, variable spring force by exchanging the spring unit
Other Functions for the Patient	Via the lever, the patient can infinitely adjust the angle of the ankle joint by +/-17°. Using the spirit level, they take the orthosis' alignment determined by the orthotist into account. • adjusting the ankle joint angle: - to the conditions of the terrain - to the heel height of different shoes - for walking without shoes • extension of the range of motion to increase comfort when sitting	

The hydraulic NEURO HiSWING system ankle joint comes with integrated noise reduction.

The NEURO HiSWING system ankle joint can be converted into the NEURO CLASSIC system ankle joint free moving by optionally filing the system stirrup and by exchanging the functional unit.

The NEURO CLASSIC with plug + go modularity can be used as supporting joint for the NEURO HiSWING system ankle joint.

plug+go MODULARITY

The NEURO HiSWING system ankle joint can be converted into the NEURO CLASSIC with plug + go modularity, NEURO VARIO-CLASSIC 2, NEURO VARIO 2, NEURO VARIO-SPRING 2, NEURO VARIO-SWING, NEURO SWING, NEURO SWING-CLASSIC and NEURO SWING 2 system ankle joints by exchanging the functional unit. The system joints are available in the categories with or without feather keys, depending on the system width. Conversion is only possible within the respective category.

System Ankle Joints NEURO HiSWING

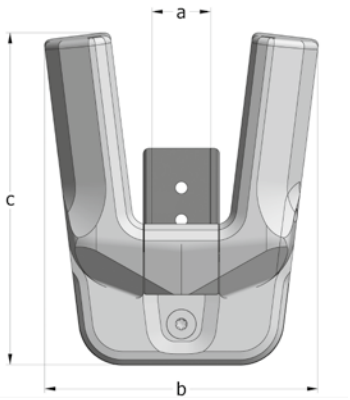
16 mm

20 mm

Joint Dimensions [mm]			
		System Width a	
Dimension	Description	16mm	20mm
b	joint head width	79	93
c	joint height	100	113
	joint thickness	28	33

Joint Weights* [g]			
		System Width	
Material	Unit	16mm	20mm
titanium	piece	235	380

* without spring units



The NEURO HiSWING system ankle joint is delivered with the following articles:
functional unit
spirit level
cover plate pressing aid
orthosis joint grease, 3g
assembly/lamination dummy for system ankle joint
assembly/lamination dummy for spirit level

➡ Please order spring units, shaping dummy, system stirrups and system side bars/anchors separately.
➡ You will find spring units on catalogue page C40.8.
➡ You will find the shaping dummy on catalogue page C40.9.
➡ You will find system stirrups plug + go modularity on catalogue page C40.10f.
➡ You will find system side bars and system anchors on catalogue page I1ff.

straight
fig. 1

bent inwards
fig. 2

bent outwards
fig. 3

Straight (Fig. 1)

Material	Leg	Unit	Article Number for System Width	
			16mm	20mm
titanium	left or right	piece	SH7203-TI/LR	SH7205-TI/LR

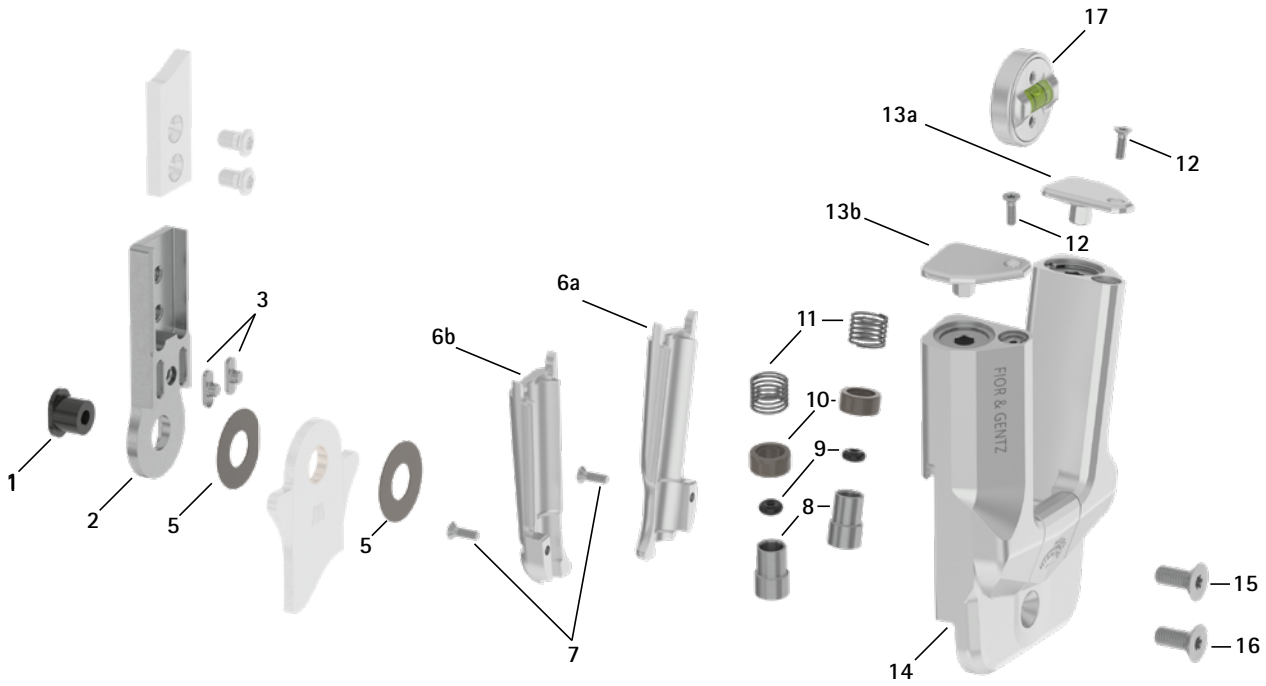
Bent Inwards (Fig. 2)

Material	Leg	Unit	Article Number for System Width	
			16mm	20mm
titanium	left or right	piece	SH7223-TI/LR	SH7225-TI/LR

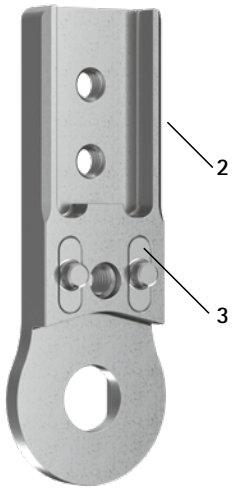
Bent Outwards (Fig. 3)

Material	Leg	Unit	Article Number for System Width	
			16mm	20mm
titanium	left or right	piece	SH7243-TI/LR	SH7245-TI/LR

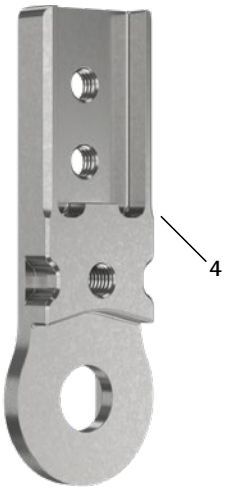
Spare Parts



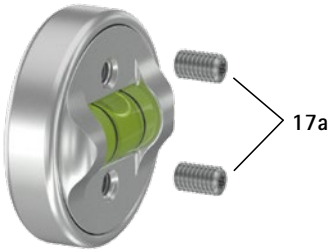
Upper Part with Feather Keys, Preassembled (2-3)



Upper Part without Feather Keys (4)



Spare Parts Spirit Level (17)



Spare Parts for the System Joint with Feather Keys

Item	Article Number for System Width 16mm	20mm	Description
1	SB9669-L0760	SB1069-L0960	bearing nut
2-3	SF0313-P/ST	SF0315-P/ST	upper part with feather keys, straight, steel
2-3	SF0313-P/TI	SF0315-P/TI	upper part with feather keys, straight, titanium
2-3	SF0333-P/ST	SF0335-P/ST	upper part with feather keys, bent inwards, steel
2-3	SF0333-P/TI	SF0335-P/TI	upper part with feather keys, bent inwards, titanium
2-3	SF0333-8P/ST	SF0335-8P/ST	upper part with feather keys, bent outwards, steel
2-3	SF0333-8P/TI	SF0335-8P/TI	upper part with feather keys, bent outwards, titanium
3	SF0393-02	SF0395-02	feather key with pin
5	GS2210-*	GS2611*	sliding washer*
6a	SH0763-2/L	SH0765-2/L	spring unit cover, 20mm, left lateral or right medial
6b	SH0763-2/R	SH0765-2/R	spring unit cover, 20mm, left medial or right lateral
7	SC1403-L08/1	SC1403-L08/1	countersunk flat head screw with hexalobular socket
8	SH0493-01	SH0493-01	plunger
9	VE3771-012/26	VE3771-012/26	O-ring damper
10	GS1108-500	GS1108-500	sliding bushing
11	FE1027-01	FE1027-01	coil spring
12	SC1403-L08/1	SC1403-L08/1	countersunk flat head screw with hexalobular socket
13a	SH0763-3/L	SH0765-3/L	adjusting screw cover, 20mm, left lateral or right medial
13b	SH0763-3/R	SH0765-3/R	adjusting screw cover, 20mm, left medial or right lateral
14	-	-	cover plate**
15	SC1405-L12	SC1405-L14	countersunk flat head screw with hexalobular socket
16	SC1405-L12	SC1406-L14	countersunk flat head screw with hexalobular socket (axle screw)
6-16	SH7973-AL***	SH7975-AL***	functional unit plug + go modularity***
17	SH7805	SH7805	spirit level
17a	SC9403-L05	SC9403-L05	securing pin

** The cover plate cannot be ordered separately.

*** The functional unit is delivered fully assembled. The hydraulic system of the functional unit must not be opened. You can see from the exploded view drawing which parts of the functional unit may be disassembled. The spirit level is not part of the functional unit. Please order the spirit level for a joint conversion separately. For a conversion from the NEURO CLASSIC with plug + go modularity, this longer bearing nut is required in addition to the functional unit (see item 1)

Spare Parts for the System Joint without Feather Keys

Item	Article Number for System Width 16mm	20mm	Description
1	SB9669-L0760	SB1069-L0960	bearing nut
4	SH0813-ST	SH0815-ST	upper part without feather keys, straight, steel
4	SH0813-TI	SH0815-TI	upper part without feather keys, straight, titanium
4	SH0833-ST	SH0835-ST	upper part without feather keys, bent inwards, steel
4	SH0833-TI	SH0835-TI	upper part without feather keys, bent inwards, titanium
4	SH0833-8/ST	SH0835-8/ST	upper part without feather keys, bent outwards, steel
4	SH0833-8/TI	SH0835-8/TI	upper part without feather keys, bent outwards, titanium
5	GS2210-*	GS2611-*	sliding washer*
6a	SH0763-2/L	SH0865-2/L	spring unit cover, left rear or right front
6b	SH0763-2/R	SH0865-2/R	spring unit cover, left front or right rear
7	SC1403-L08/1	SC1403-L10	countersunk flat head screw with hexalobular socket
8	SH0493-01	SH0493-01	plunger
9	VE3771-012/26	VE3771-012/26	O-ring damper
10	GS1108-500	GS1108-500	sliding bushing
11	FE1027-01	FE1027-01	coil spring
12	SC1403-L08/1	SC1403-L08/1	countersunk flat head screw with hexalobular socket
13a	SH0763-3/L	SH0765-3/L	adjusting screw cover, left rear or right front
13b	SH0763-3/R	SH0765-3/R	adjusting screw cover, left front or right rear
14	-	-	cover plate**
15	SC1405-L12	SC1416-L14	countersunk flat head screw with hexalobular socket
16	SC1405-L12	SC1416-L14	countersunk flat head screw with hexalobular socket (axle screw)
6-16	SH7983-AL***	SH7985-AL***	functional unit plug + go modularity***
17	SH7805	SH7805	spirit level
17a	SC9403-L05	SC9403-L05	securing pin

** The cover plate cannot be ordered separately.

*** The functional unit is delivered fully assembled. The hydraulic system of the functional unit must not be opened. You can see from the exploded view drawing which parts of the functional unit may be disassembled. The spirit level is not part of the functional unit. Please order the spirit level for a joint conversion separately. For a conversion from the NEURO CLASSIC with plug + go modularity, this longer bearing nut is required in addition to the functional unit (see item 1)

Feather Key Set

Item	Article Number for System Width 16mm	20mm	Description	Unit
w/o fig.	SF0393	SF0395	feather key set	set

➡ The feather key set contains two feather keys with pin and the outer assembly/lamination dummy to make pressing easier. You can order the set if the feather keys have to be exchanged.

* Sliding Washers

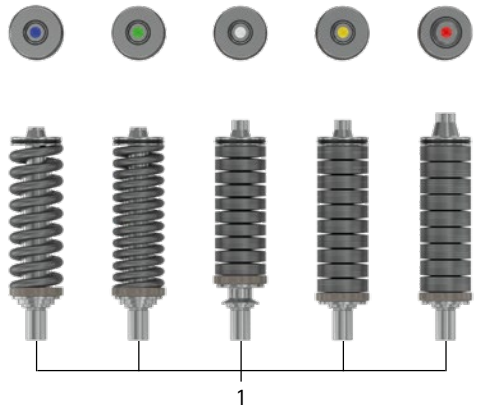
Article Number for System Width 16mm	20mm
Ø = 22mm	Ø = 26mm
GS2210-040	GS2611-040
GS2210-045	GS2611-045
GS2210-050	GS2611-050
GS2210-055	GS2611-055
GS2210-060	GS2611-060

The last three digits of the article number stand for the thickness of the sliding washer, e.g. GS2611-**040**. The thickness of this sliding washer is 0.40mm. In total, the sliding washers are available in five different thicknesses. The thickness of a sliding washer is indicated by the markings. For example, a sliding washer with two notches is 0.40mm thick, whereas a sliding washer with one notch is 0.55mm thick.

0.40mm 0.45mm 0.50mm 0.55mm 0.60mm

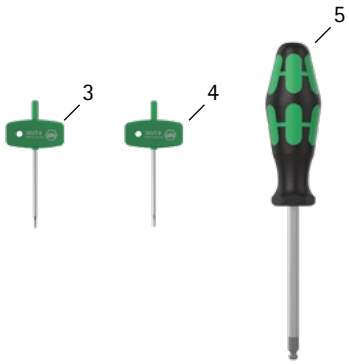
➡ You will find system stirrups plug + go modularity on catalogue page C40.10f.
➡ You will find the system side bars and system anchors on catalogue page I1ff.

Spring Units



Spare Parts Spring Unit

Accessory Parts



Spring Units* (You Need Two of the Following Spring Units for One NEURO HiSWING System Ankle Joint):

Item	Article Number for System Width 16mm	20mm	Description	Unit
1	SH5803-15/07	SH5805-15/18	spring unit, blue, normal, max. 15° range of motion	piece
1	SH5803-15/15	SH5805-15/25	spring unit, green, medium, max. 15° range of motion	piece
1	SH5803-10/21	SH5805-10/40	spring unit, white, strong, max. 10° range of motion	piece
1	SH5803-10/31	SH5805-10/60	spring unit, yellow, very strong, max. 10° range of motion	piece
1	SH5803-05/63	SH5805-05/99	spring unit, red, extra strong, max. 5° range of motion	piece

* For the NEURO HiSWING system ankle joint 16mm and 20mm, the same spring units are required as for the NEURO SWING 2 system ankle joint 16mm and 20mm.

Spare Parts Spring Units

Item	Article Number for System Width 16mm	20mm	Description
2	VE3771-08/10	VE3771-11/10	O-ring for securing the spring unit

Spring Units Weights [g]

Spring Unit	Article Number	System Width 16mm	20mm
spring unit, blue, normal, max. 15° range of motion	see table spring units	13	36
spring unit, green, medium, max. 15° range of motion	see table spring units	24	41
spring unit, white, strong, max. 10° range of motion	see table spring units	29	52
spring unit, yellow, very strong, max. 10° range of motion	see table spring units	32	61
spring unit, red, extra strong, max. 5° range of motion	see table spring units	32	64

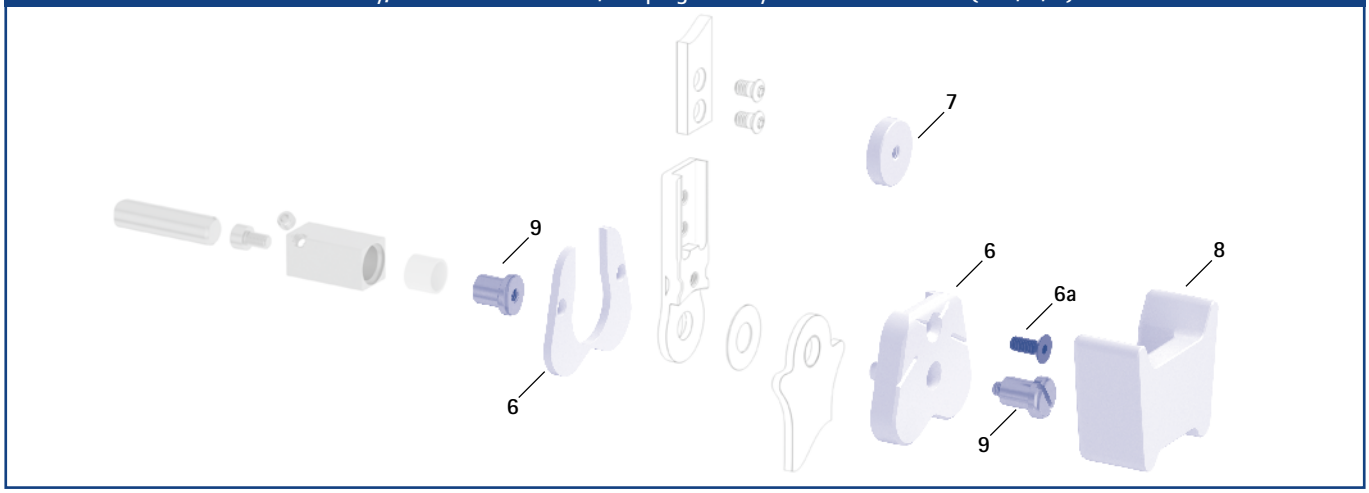
Accessory Parts

Item	Article Number	Description	Unit
3	WZ5114-T06	hexalobular screwdriver, T-handle, T6**	piece
4	WZ5114-T08	hexalobular screwdriver, T-handle, T8***	piece
5	WZ5112-5010	hexagonal screwdriver with spherical head, 5 x 100mm	piece

** is needed to screw the securing pins on the spirit level in and out

*** is needed to screw the countersunk flat head screws on the spring unit covers in and out

Assembly/Lamination Dummies, Shaping Dummy and Joint Retainers (6-7, 8, 9)



Assembly/Lamination Dummies, Shaping Dummy and Joint Retainers

Item	Article Number for System Width 16mm	20mm	Description	Unit
6	SF0953-LR1	SH0985-LR1	assembly/lamination dummy, two parts (2 dummies with screw)	set
6a	SC1055-L12	SC1056-L14	countersunk flat head screw with hexagon socket	piece
7	SH0975-1	SH0975-1	assembly/lamination dummy for spirit level	piece
8	SF0953-LR2	SF0955-5LR2	shaping dummy	piece
9	PE1013-LR	PE1025-LR	joint retainer	piece
	5/C	7/C	laser marking	-

➡ Assembly/lamination dummies are included in the scope of delivery of the system joints.

➡ You will find an overview of our tools on catalogue page J1ff.

➡ You will also find the joint retainers and the corresponding laser markings in the tool case on the catalogue pages J15 and J16.

Cover Plate Pressing Aid for the System Joint with Feather Keys

Item	Article Number for System Width 16mm	20mm	Description	Unit
10	WE5002-SF	WE5002-SF	cover plate pressing aid (pressing screw and washer)	set

Cover Pressing Aid for the System Joint without Feather Keys

Item	Article Number for System Width 16mm	20mm	Description	Unit
10	WE5002-SF	WE5005-SF	cover plate pressing aid (pressing screw and washer)	set

➡ The cover plate pressing aid is included in the scope of delivery of the system joint.

Cover Plate Pressing Aid (10)

rivet stirrup

lamination/prepreg stirrup

thermoformage stirrup

side view

General Measures of the System Stirrups plug + go Modularity		
Measure [mm]	System Width 16mm	20mm
thickness	3.0	3.0
neck width	26.6	30.8
bore hole diameter	9.6	10.5

Bent				
Description	Leg/Leg Side	Unit	Article Number and Measures for System Width 16mm	20mm
rivet stirrup	left or right	piece	FB5093-LR/ST4	FB5015-LR/ST5
length from the middle of the bore hole [mm]			144	164
weight [g]			112	143
lamination/prepreg stirrup	left lateral or right medial	piece	FB5193-L/ST1	FB5115-L/ST1
	left medial or right lateral		FB5193-R/ST1	FB5115-R/ST1
length from the middle of the bore hole [mm]			64	68
weight [g]			53	70
thermoformage stirrup	left or right	piece	FB5293-LR/ST2	FB5215-LR/ST3
length from the middle of the bore hole [mm]			67	73
weight [g]			53	66

System Stirrups plug + go Modularity – Straight

rivet stirrup

lamination/prepreg stirrup

thermoformage stirrup

Straight

Description	Unit	Article Number and Measures for System Width	
		16mm	20mm
rivet stirrup	piece	FB5093-ST/4	FB5015-ST/5
length from the middle of the bore hole [mm]		145	165
weight [g]		112	143
lamination/prepreg stirrup	piece	FB5193-ST/1	FB5115-ST/1
length from the middle of the bore hole [mm]		65	69
weight [g]		53	70
thermoformage stirrup	piece	FB5293-ST/2	FB5215-ST/3
length from the middle of the bore hole [mm]		68	74
weight [g]		53	66

Spare Parts System Stirrup

Item	Article Number for System Width		Description
	16mm	20mm	
1	BR1110-L030	BR1211-L030	sliding bushing

➡ All system stirrups of the NEURO HiSWING system ankle joint are delivered with an integrated sliding bushing.

Information for Processing

Rivet Stirrup:

➡ This system stirrup is riveted to the foot piece.

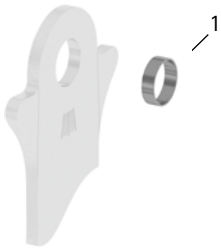
Lamination/Prepreg Stirrup:

➡ This system stirrup is embedded into the laminate of the foot piece.

Thermoformage Stirrup:

➡ This system stirrup is embedded into thermoformable plastics, but can be embedded into laminates as well.

Spare Parts System Stirrup



➡ The system stirrup is marked with lines in the neck area in order to read the joint angle.