

Certificate

Standard **ISO 9001:2015**

Certificate Registr. No. **01 100 5113**

Certificate Holder:



SPIR STAR AG
Auf der Rut 3-7
64668 Rimbach
Germany

Scope:

Development and production of high-pressure hoses and fittings. Sales of products and services in the high-pressure sector

Proof has been furnished by means of an audit that the requirements of ISO 9001:2015 are met.

Validity:

The certificate is valid from 2021-05-01 until 2024-04-30.
First certification 1995

2021-03-29

A handwritten signature in blue ink, appearing to read 'K. H. ...', positioned above a horizontal line.

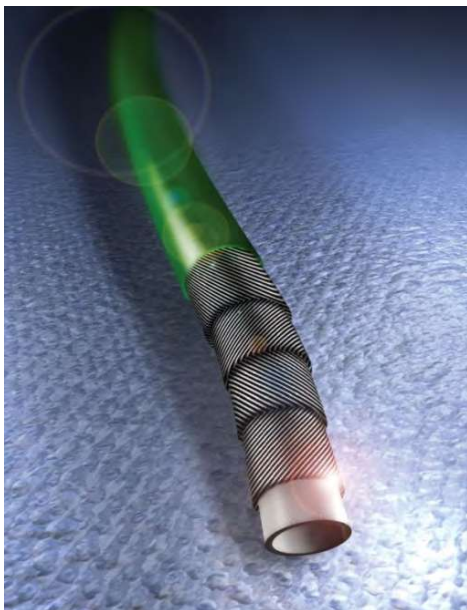
TÜV Rheinland Cert GmbH
Am Grauen Stein · 51105 Köln

Number of spiralized layers

Type **6/2WHT**

Series Description

Hose ID in mm



Hose Series	
DCI	Double Cover
H	Reinforced version
HT	For very high temperatures Very high chemical resistant PVDF inner core, PVDF outer cover
HW	Hot Water: for very high temperatures
K	Braided layer
L	Extremely flexible
M	For methanol service PA II inner core, PA outer cover
OK	Braided layer outer cover
PPA	For high temperatures Very high chemical resistant PVDF inner core, PA outer cover
R	Reinforced outer cover
W	2 wide layers of spiralized wire
KF	One braided layer

Hose Types



Type	Hose				Pressure Rating				Bend Radius		Weight		Insert ID		Sleeve OD		Application
	ID		OD		Working		Burst		[mm]	[in]	[kg/m]	[lbs/ft]	[mm]	[in]	[mm]	[in]	
	[mm]	[in]	[mm]	[in]	[bar]	[psi]	[bar]	[psi]									
ID20	<i>Heat-resisting up to 70° C (158° F)</i>																
20/2	19,0	0,75	26,2	1,03	520	7.540	1.300	18.850	240	9,45	0,750	0,503	13,0	0,51	34,2	1,34	Oil & Gas, Waterblast, Hydraulic
20/2W	18,8	0,74	29,5	1,16	760	11.020	1.900	27.550	220	8,66	1,160	0,777	13,0	0,51	36,3	1,42	Oil & Gas, Hydraulic
20/4	18,8	0,74	28,8	1,13	1.040	15.080	2.600	37.700	250	9,84	1,350	0,905	13,0	0,51	36,9	1,45	Oil & Gas, Waterblast, Hydraulic
20/6	18,8	0,74	32,8	1,29	1.400	20.300	3.500	50.750	350	13,78	2,170	1,454	13,0	0,51	42,9	1,68	Oil & Gas, Waterblast, Hydraulic
20/6- 1600	18,8	0,74	32,8	1,29	1.600	23.200	4.000	58.000	350	13,78	2,170	1,454	13,0	0,51	42,9	1,68	Oil & Gas, Waterblast, Hydraulic

Applications

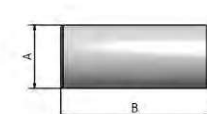
- Waterblast:** Heat exchanger tube cleaning, surface preparation (concrete removal, surface cleaning of buildings, paint removal), tank and vessel cleaning
- Hydraulics:** Pressure test equipment (valves, tooling and control panels)
- Oil and Gas:** Grease injection, nitrogen service

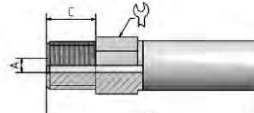


Technical Information

- Inner Core:** Polyamide (PA)
- Pressure Support:** 2 layers of high-tensile steel wire
- Outer Cover:** Polyamide (PA)
- Color:** Green
- Temperature:** -30°C to +60°C [-22°F to 140°F]

Ø ID	Ø OD	Working Pressure -- (SF 2,5:1)	Burst Pressure	Bend Radius	Weight	Insert ID
19,0 mm	26,2 mm	--	520 bar	1.300 bar	240 mm	0,750 kg/m
0,75 inch	1,03 inch	--	7.540 psi	18.850 psi	9,45 inch	0,503 lbs/ft

Part no.	Thread	Material	Dimensions (mm)				Sleeve
			A	B	C	⚙	
Sleeve							
I2020101	-	Steel	34,2	69	-	-	

Part no.	Thread	Material	Nut	Dimensions (mm)				Insert
				A	B	C	⚙	
Male fitting								
32020421A	1"x11 1/2NPT	Steel	-	13	111	25	36	
32020425A	1"x11 1/2NPT	AISI 316	-	13	111	25	36	

Female swivel with O-Ring								
22020201A	M36x2	Steel	52040211, 52040201	13	115	-	46	

Type M female swivel								
22020645A	1 5/16"x12UN	AISI 316	52040645	13	89	-	46	

Part no.	Thread	Material	Nut	Dimensions (mm)				Insert
				A	B	C	Ø	
JIC female swivel								
22020605A	I 5/16"x12UN	AISI 316	52040605	13	87	-	46	

Part no.	Thread	Material	Relief bores	Dimensions (mm)				Swivel nut
				A	B	C	Ø	
Swivel nut								
52040605	I 5/16"x12UN	AISI 316	I radial	25,5	34,5	14,5	46	
52040645	I 5/16"x12UN	AISI 316	I radial	25,5	31,5	11,5	46	
52040211	M36x2	Steel	I radial	25,5	30	18	46	

Part no.	Thread	Material	Dimensions (mm)				Tube cleaning accessories	
			A	B	C	Ø		
Marking ring								
I.853034.5	-	AISI 316	-	30	20	-	-	

Part no.	Mesh length (mm)	Overall length (mm)	Breaking strength (kN)	Suitable for SPIR STAR® hose outer diameter (mm)	Hose securing grip
Hose securing grip short version					
9136400	600,00	800,00	24,30	25-30	

Part no.	Size (mm)	Material	Crimp ring	Hose protection
Hose protection with spiral				
I.914051	ID Ø40, OD Ø47	PVC	I005054	

Accessories combinations				
Hose protection with spiral				
Description	Protection hose	Bend restrictor	Crimp ring	Securing grips
Protection hose	I.914051	-	I005054	-
with securing grip	I.914051	-	-	9136400

Production related variations of the burst pressure of up to 5 % are possible. Other colors upon request.

The safety factors between the burst pressure and the working pressure as well as the test pressure depend on the operating conditions. For gaseous media the outer cover is to be pinpricked.

Regarding the safety factor for gaseous media please contact your local SPIR STAR® assembling center.

The indicated working pressure refers to the hose only. Depending on the used fitting the permitted working pressure of a hose assembly may be less.

*) Blast-Pro® fittings may only be used for tube cleaning operations inside the tube. They have not been designed for the use outside of tubes.

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Applications

Hydraulics:

Pressure test equipment (valves, tooling and control panels), hydraulic tools (instrumentation packages for gauges, control of service equipment, hydraulic jacks, hydraulic tools)

Oil and Gas:

Grease injection, control of subsea hydraulic components, nitrogen service, Gaseous media handling



Technical Information

Inner Core:

Polyamide (PA)

Pressure Support:

2 open layers, 2 dense layers of high-tensile steel wire

Outer Cover:

Polyurethane (TPU)

Color:

Black

Temperature:

-30°C to +60°C [-22°F to 140°F]

Ø ID	Ø OD	Working Pressure -- (SF 2,5:1)	Burst Pressure	Bend Radius	Weight	Insert ID
18,8 mm	29,5 mm	--	760 bar	220 mm	1,160 kg/m	13,0 mm
0,74 inch	1,16 inch	--	11.020 psi	8,66 inch	0,777 lbs/ft	0,51 inch

Part no.	Thread	Material	Dimensions (mm)				Sleeve
			A	B	C	⌀	
Sleeve							
I2020191W	-	Steel	36,3	62,4	-	-	

Part no.	Thread	Material	Nut	Dimensions (mm)				Insert
				A	B	C	⌀	
Male fitting								
32020421A	1"x11 1/2NPT	Steel	-	13	111	25	36	
32020425A	1"x11 1/2NPT	AISI 316	-	13	111	25	36	

Part no.	Thread	Material	Nut	Dimensions (mm)				Insert
Female swivel with O-Ring								
22020201A	M36x2	Steel	52040211, 52040201	13	115	-	46	

Part no.	Thread	Material	Nut	Dimensions (mm)				Insert
Type M female swivel								
22020645A	1 5/16"x12UN	AISI 316	52040645	13	89	-	46	

Part no.	Thread	Material	Nut	Dimensions (mm)				Insert
				A	B	C	⌀	
JIC female swivel								
22020605A	I 5/16"x12UN	AISI 316	52040605	13	87	-	46	

Part no.	Thread	Material	Relief bores	Dimensions (mm)				Swivel nut
				A	B	C	⌀	
Swivel nut								
52040605	I 5/16"x12UN	AISI 316	I radial	25,5	34,5	14,5	46	
52040645	I 5/16"x12UN	AISI 316	I radial	25,5	31,5	11,5	46	
52040211	M36x2	Steel	I radial	25,5	30	18	46	

Part no.	Mesh length (mm)	Overall length (mm)	Breaking strength (kN)	Suitable for SPIR STAR® hose outer diameter (mm)	Hose securing grip
9204400	600,00	820,00	35,10	30-40	

Production related variations of the burst pressure of up to 5 % are possible. Other colors upon request.

The safety factors between the burst pressure and the working pressure as well as the test pressure depend on the operating conditions. For gaseous media the outer cover is to be pinpricked. Regarding the safety factor for gaseous media please contact your local SPIR STAR® assembling center.

The indicated working pressure refers to the hose only. Depending on the used fitting the permitted working pressure of a hose assembly may be less.

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Applications

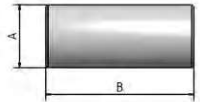
- Waterblast:** Heat exchanger tube cleaning, surface preparation (concrete removal, surface cleaning of buildings, paint removal), tank and vessel cleaning, ultra high-pressure waterjet cutting and hydro demolition (cutting and demolition of armoured concrete, pipelines, paper or steel)
- Hydraulics:** Pressure test equipment (valves, tooling and control panels), hydraulic tools (instrumentation packages for gauges, control of service equipment, hydraulic jacks, hydraulic tools)
- Oil and Gas:** Chemical injection, nitrogen service, Gaseous media handling

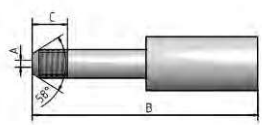


Technical Information

- Inner Core:** Polyamide (PA)
Pressure Support: 4 layers of high-tensile steel wire
Outer Cover: Polyamide (PA)
Color: Grey
Temperature: -30°C to +60°C [-22°F to 140°F]

Ø ID	Ø OD	Working Pressure -- (SF 2.5:1)	Burst Pressure	Bend Radius	Weight	Insert ID
18,8 mm	28,8 mm	--	1.040 bar	250 mm	1,350 kg/m	13,0 mm
0,74 inch	1,13 inch	--	15.080 psi	9,84 inch	0,905 lbs/ft	0,51 inch

Part no.	Thread	Material	Dimensions (mm)				Sleeve
			A	B	C	⚙	
Sleeve							
I2040131	-	Steel	36,9	72	-	-	

Part no.	Thread	Material	Nut	Dimensions (mm)				Insert
				A	B	C	⚙	
MP fitting								
42060304C	1"x14UNS LH	Stainless steel	-	13	158	30	-	

Part no.	Thread	Material	Nut	Dimensions (mm)				Insert
				A	B	C	⚙	
Female swivel with O-Ring								
22060202C	M36x2	Steel	52040201	13	127	-	46	

Part no.	Thread	Material	Nut	Dimensions (mm)				Insert
				A	B	C		
Type M female swivel								
22060644C	I 5/16"x12UN	Stainless steel	52040645	13	107	-	46	

Part no.	Thread	Material	Relief bores	Dimensions (mm)				Swivel nut
				A	B	C		
Swivel nut								
52040645	I 5/16"x12UN	AISI 316	I radial	25,5	31,5	11,5	46	
52040201	M36x2	Steel	I radial	25,5	38	22	46	

Part no.	Thread	Material	Dimensions (mm)				Tube cleaning accessories	
			A	B	C			
Marking ring								
I.853034.5	-	AISI 316	-	32,6	20	-	-	

Part no.	Size (mm)	Material	Crimp ring	Hose protection
Hose protection with spiral				
I.914051	ID Ø40, OD Ø47	PVC	I005054	

Part no.	Mesh length (mm)	Overall length (mm)	Breaking strength (kN)	Suitable for SPIR STAR® hose outer diameter (mm)	Hose securing grip
Hose securing grip short version					
9136400	600,00	800,00	24,30	25-30	



Accessories combinations				
Without hose protection				
Description		Bend restrictor	Crimp ring	Securing grips
Securing grip		-	-	9136400
Hose protection with spiral				
Description	Protection hose	Bend restrictor	Crimp ring	Securing grips
Protection hose	I.914051	-	I005054	-
with securing grip	I.914051	-	-	9136400

Production related variations of the burst pressure of up to 5 % are possible. Other colors upon request.

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Applications

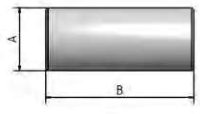
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- Oil and Gas:** Chemical injection, nitrogen service, Gaseous media handling

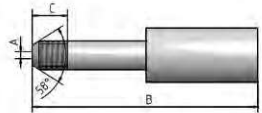


Technical Information

- Inner Core:** Polyamide (PA)
- Pressure Support:** 6 layers of high-tensile steel wire
- Outer Cover:** Polyamide (PA)
- Color:** Blue
- Temperature:** -30°C to +70°C [-22°F to 158°F]

Ø ID	Ø OD	Working Pressure -- (SF 2.5:1)	Burst Pressure	Bend Radius	Weight	Insert ID
18,8 mm	32,8 mm	--	1.400 bar	350 mm	2,170 kg/m	13,0 mm
0,74 inch	1,29 inch	--	20.300 psi	13,78 inch	1,454 lbs/ft	0,51 inch

Part no.	Thread	Material	Nut	Dimensions (mm)				Sleeve
				A	B	C	⌀	
Sleeve								
I2060116	-	Steel	-	37,2	91	-	-	

Part no.	Thread	Material	Nut	Dimensions (mm)				Insert
				A	B	C	⌀	
MP fitting								
42060304E	1"x14UNS LH	Stainless steel	-	13	171	30	-	

Part no.	Thread	Material	Nut	Dimensions (mm)				Insert
				A	B	C	⌀	
Female swivel with O-Ring								
22060206E	M36x2	Steel	52040201	13	126	-	46	

Part no.	Thread	Material	Nut	Dimensions (mm)				Insert
				A	B	C	⌀	
Type M female swivel								
22060644E	1 5/16"x12UN	Stainless steel	52040645	13	119	-	46	

Part no.	Thread	Material	Relief bores	Dimensions (mm)				Swivel nut
				A	B	C		
Swivel nut								
52040201	M36x2	Steel	I radial	25,5	38	22	46	
52040645	I 5/16"x12UN	AISI 316	I radial	25,5	31,5	11,5	46	

Part no.	Size (mm)	Material	Crimp ring	Hose protection
I.914051	ID Ø40, OD Ø47	PVC	I005054	
I.914553	ID Ø45, OD Ø53	PVC	-	

Part no.	Material	Crimp ring	Dimensions (mm)		Bend restrictor
			Ø	Length	
PU bend restrictor					
I.954355	PU	I005560	59	450	

Part no.	Mesh length (mm)	Overall length (mm)	Breaking strength (kN)	Suitable for SPIR STAR® hose outer diameter (mm)	Hose securing grip
9204400	600,00	820,00	35,10	30-40	

Accessories combinations					
Without hose protection					
Description		Bend restrictor	Crimp ring	Securing grips	
Bend restrictor		I.954355	I005560	-	
Securing grip		-	-	9204400	
Hose protection with spiral					
Description	Protection hose	Bend restrictor	Crimp ring	Securing grips	
Protection hose	I.914051	-	I005054	-	
with bend restrictor	I.914553	I.954355	I005560	-	
with securing grip	I.914553	-	-	9204400	

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Applications

- Waterblast:** Surface preparation (concrete removal, surface cleaning of buildings, paint removal), tank and vessel cleaning, ultra high-pressure waterjet cutting and hydro demolition (cutting and demolition of armoured concrete, pipelines, paper or steel)
- Hydraulics:** Pressure test equipment (valves, tooling and control panels)
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Technical Information

- Inner Core:** Polyamide (PA)
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- Outer Cover:** Polyamide (PA)
- Color:** Blue
- Temperature:** -30°C to +70°C [-22°F to 158°F]

Ø ID	Ø OD	Working Pressure -- (SF 2.5:1)	Burst Pressure	Bend Radius	Weight	Insert ID
18,8 mm	32,8 mm	--	1.600 bar	350 mm	2,170 kg/m	13,0 mm
0,74 inch	1,29 inch	--	23.200 psi	13,78 inch	1,454 lbs/ft	0,51 inch

Part no.	Thread	Material	Nut	Dimensions (mm)				Sleeve
				A	B	C	⌀	
Sleeve								
I2060116	-	Steel	-	37,2	91	-	-	

Part no.	Thread	Material	Nut	Dimensions (mm)				Insert
				A	B	C	⌀	
MP fitting								
42060304E	1"x14UNS LH	Stainless steel	-	13	171	30	-	

Part no.	Thread	Material	Nut	Dimensions (mm)				Insert
				A	B	C	⌀	
Female swivel with O-Ring								
22060206E	M36x2	Steel	52040201	13	126	-	46	

Part no.	Thread	Material	Nut	Dimensions (mm)				Insert
				A	B	C	⌀	
Type M female swivel								
22060644E	1 5/16"x12UN	Stainless steel	52040645	13	119	-	46	

Part no.	Thread	Material	Relief bores	Dimensions (mm)				Swivel nut
				A	B	C		
Swivel nut								
52040645	1 5/16"x12UN	AISI 316	1 radial	25,5	31,5	11,5	46	
52040201	M36x2	Steel	1 radial	25,5	38	22	46	

Part no.	Size (mm)	Material	Crimp ring	Hose protection
I.914051	ID Ø40, OD Ø47	PVC	I005054	
I.914553	ID Ø45, OD Ø53	PVC	-	

Part no.	Material	Crimp ring	Dimensions (mm)		Bend restrictor
			Ø	Length	
PU bend restrictor					
I.954355	PU	I005560	59	450	

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Without hose protection					
Description	Bend restrictor	Crimp ring	Securing grips		
Bend restrictor	I.954355	I005560	-		
Securing grip	-	-	9204400		
Hose protection with spiral					
Description	Protection hose	Bend restrictor	Crimp ring	Securing grips	
Protection hose	I.914051	-	I005054	-	
with bend restrictor	I.914553	I.954355	I005560	-	
with securing grip	I.914553	-	-	9204400	

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