

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. K. K.', positioned above a horizontal line.

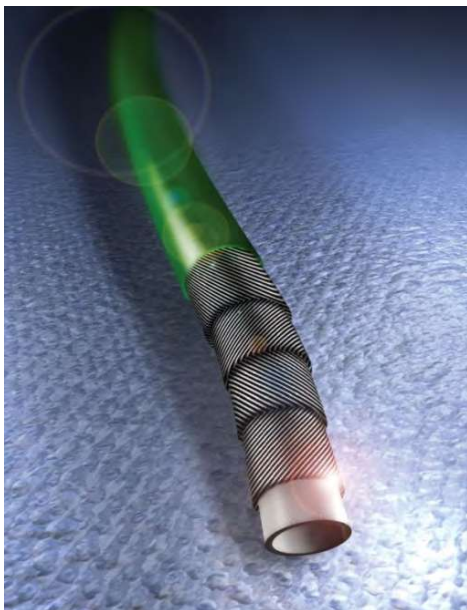
TÜV Rheinland Cert GmbH
Am Grauen Stein · 51105 Köln

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]	[bar]	[psi]	[bar]	[psi]									[mm]
PPA-Series																	
<i>Heat-resisting up to 80° C (176° F) - with P/DF inner core and polyamid outer cover</i>																	
5/4PPA	5,0	0,20	11,2	0,44	1.035	15.000	4.140	60.000	250	9,84	0,256	0,172	2,5	0,10	15,0	0,59	Oil & Gas, Hydraulic
6/2WPPA	6,3	0,25	12,2	0,48	690	10.000	2.760	40.000	150	5,91	0,266	0,178	3,5	0,14	17,1	0,67	Oil & Gas, Hydraulic
6/4PPA	6,3	0,25	12,6	0,5	1.035	15.000	4.140	60.000	280	11,02	0,305	0,204	3,5	0,14	16,4	0,64	Oil & Gas, Hydraulic
8/4PPA	8,0	0,31	14,7	0,58	1.035	15.000	4.140	60.000	300	11,81	0,420	0,281	4,5	0,18	20,3	0,79	Oil & Gas, Hydraulic
10/4PPA	10,0	0,39	18,4	0,72	1.035	15.000	4.140	60.000	300	11,81	0,680	0,456	5,5	0,22	23,1	0,90	Oil & Gas, Hydraulic
13/2WPPA	12,8	0,50	20,8	0,82	690	10.000	2.760	40.000	300	11,81	0,670	0,449	8,5	0,33	26,5	1,04	Oil & Gas, Hydraulic
13/4HPPA	12,8	0,50	22,0	0,87	860	12.500	3.450	50.000	300	11,81	1,000	0,670	7,5	0,30	29,5	1,16	Oil & Gas, Hydraulic
16/4PPA	16,0	0,63	25,5	1,00	690	10.000	2.760	40.000	400	15,75	1,082	0,725	10,5	0,41	32,7	1,28	Oil & Gas, Hydraulic
20/4PPA	18,8	0,74	28,8	1,13	690	10.000	2.760	40.000	500	19,69	1,350	0,907	13,0	0,51	36,9	1,45	Oil & Gas, Hydraulic
20/6PPA	18,8	0,74	32,8	1,29	860	12.500	3.450	50.000	600	23,62	2,170	1,454	13,0	0,51	43,1	1,69	Oil & Gas, Hydraulic
25/4PPA	24,8	0,98	36,3	1,43	520	7.500	2.070	30.000	500	19,69	1,820	1,223	18,0	0,71	42,3	1,66	Oil & Gas, Hydraulic

Applications

- Hydraulics:** Hydraulic tools (instrumentation packages for gauges, control of service equipment, hydraulic jacks, hydraulic tools)
- Oil and Gas:** Methanol service (oil rigs, distribution panels, umbilicals), jumper/ subsea well control, chemical injection, control of subsea hydraulic components, nitrogen service, Gaseous media handling



Technical Information

- Inner Core:** Polyvinylidenfluoride (PVDF)
- Pressure Support:** 4 layers of high-tensile steel wire
- Outer Cover:** Polyamide (PA)
- Color:** Dark green
- Temperature:** -20°C to +80°C [-4°F to 176°F]

Ø ID	Ø OD	Working Pressure		Burst Pressure	Bend Radius	Weight	Insert ID
		(SF 3.2:1)	(SF 4.0:1)				
5,0 mm	11,2 mm	1.285 bar	1.035 bar	4.140 bar	250 mm	0,256 kg/m	2,5 mm
0,20 inch	0,44 inch	18.630 psi	15.000 psi	60.000 psi	9,84 inch	0,172 lbs/ft	0,10 inch

Part no.	Thread	Material	Dimensions (mm)				Sleeve
			A	B	C	⌀	
Sleeve							
10540101	-	Steel	15	49,5	-	-	
10540105	-	AISI 316	15	47,9	-	-	


Part no.	Thread	Material	Nut	Dimensions (mm)				Insert
				A	B	C	⌀	
HP fitting								
40540215B	1/4"x28UNF LH	AISI 316	-	2,5	83	14	-	
40540205B	3/8"x24UNF LH	AISI 316	-	2,5	90	20	-	
40540225B	9/16"x18UNF LH	AISI 316	-	2,5	103	24	-	

Part no.	Thread	Material	Nut	Dimensions (mm)				Insert
				A	B	C	⌀	
Male fitting								
30540401B	1/4"x18NPTF	Steel	-	2,5	71	14	14	

Part no.	Thread	Material	Nut	Dimensions (mm)				Insert
				A	B	C	⌀	
Male fitting 60° internal cone								
30540301B	G1/4"	Steel	-	2,5	70	12	14	

Part no.	Thread	Material	Nut	Dimensions (mm)				Insert
				A	B	C	⌀	
Male fitting 100° external cone								
30540361B	G1/4"	Steel	-	2,5	76	18	17	
Male fitting for USIT® Ring								
30540351B	G1/4"	Steel	-	2,5	68,5	11	22	
Universal female swivel 24°/60°								
20540301B	G1/4"	Steel	50540301	2,5	62	-	19	
20540305B	G1/4"	AISI 316	50540305	2,5	62	-	19	
Universal female swivel 24°/60° light								
20540101B	M14x1,5	Steel	50540101	2,5	62	-	19	
Female swivel with O-Ring								
20540041B	M20x1,5	Steel	50860201	2,5	77	-	27	
Type M female swivel								
20540641B	9/16"x18UNF	Steel	50540601	2,5	64	-	19	
20540645B	9/16"x18UNF	AISI 316	50540605	2,5	64	-	19	

Part no.	Thread	Material	Relief bores	Dimensions (mm)				Swivel nut
				A	B	C	⌀	
Swivel nut								
50540601	9/16"x18UNF	Steel	1 radial	9,2	18	14	19	
50540605	9/16"x18UNF	AISI 316	1 radial	9,2	18	14	19	
50540301	G1/4"	Steel	1 radial	9,2	16,5	8,5	19	
50540305	G1/4"	AISI 316	1 radial	9,2	16,5	8,5	19	
50540101	M14x1,5	Steel	1 radial	9,2	16,5	8,5	19	
50860201	M20x1,5	Steel	1 radial	12,2	22	12	27	

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					
9056400	600,00	740,00	10,20	10-15	

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

Maximum test pressure (1560 bar / 22620 psi).

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.

We reserve our rights for technical changes without notice. Subject to printing errors.

Applications

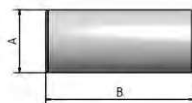
- Hydraulics:** Hydraulic tools (instrumentation packages for gauges, control of service equipment, hydraulic jacks, hydraulic tools)
- Oil and Gas:** Methanol service (oil rigs, distribution panels, umbilicals), jumper/ subsea well control, chemical injection, control of subsea hydraulic components, nitrogen service, Gaseous media handling

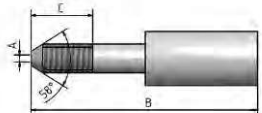


Technical Information

- Inner Core:** Polyvinylidenfluoride (PVDF)
- Pressure Support:** 2 open layers, 2 dense layers of high-tensile steel wire
- Outer Cover:** Polyamide (PA)
- Color:** Dark green
- Temperature:** -20°C to +80°C [-4°F to 176°F]

Ø ID	Ø OD	Working Pressure		Burst Pressure	Bend Radius	Weight	Insert ID
		(SF 3.0:1)	(SF 4.0:1)				
6,3 mm	12,2 mm	915 bar	690 bar	2.760 bar	150 mm	0,266 kg/m	3,5 mm
0,25 inch	0,48 inch	13.260 psi	10.000 psi	40.000 psi	5,91 inch	0,178 lbs/ft	0,14 inch

Part no.	Thread	Material	Dimensions (mm)				Sleeve
			A	B	C	⌀	
10640115	-	AISI 316	17,3	64,4	-	-	

Part no.	Thread	Material	Nut	Dimensions (mm)				Insert
				A	B	C	⌀	
HP fitting								
40640205HB	3/8"x24UNF LH	AISI 316	-	3,5	98	20	-	

MP fitting								
40640305HB	3/8"x24UNF LH	AISI 316	-	3,5	100	11	-	

Anti vibration MP fitting								
40640315HB	3/8"x24UNF LH	AISI 316	-	3,5	112	11,1	-	

Part no.	Thread	Material	Nut	Dimensions (mm)				Insert
				A	B	C	⌀	
Universal female swivel 24°/60° heavy								
20640315HB	M16x1,5	AISI 316	50620125	3,5	77	-	19	

Type M female swivel								
20640645HB	9/16"x18UNF	AISI 316	S5063615	3,5	73	-	19	

JIC female swivel								
20640655HB	9/16"x18UNF	AISI 316	S5063615	3,5	69	-	19	

Part no.	Thread	Material	Relief bores	Dimensions (mm)				Swivel nut
				A	B	C	⌀	
Swivel nut								
S5063615	9/16"x18UNF	AISI 316	I radial	9,5	18	14	19	
50620125	M16x1,5	AISI 316	I radial	9,5	17,5	10	19	

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					
9056400	600,00	740,00	10,20	10-15	

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

Maximum test pressure (1380 bar / 20000 psi).

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

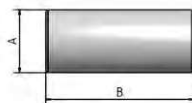
- Hydraulics:** Hydraulic tools (instrumentation packages for gauges, control of service equipment, hydraulic jacks, hydraulic tools)
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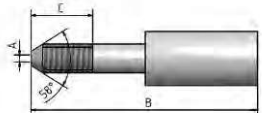


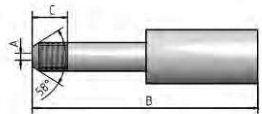
Technical Information

- Inner Core:** Polyvinylidenfluoride (PVDF)
- Pressure Support:** 4 layers of high-tensile steel wire
- Outer Cover:** Polyamide (PA)
- Color:** Dark green
- Temperature:** -20°C to +80°C [-4°F to 176°F]

Ø ID	Ø OD	Working Pressure		Burst Pressure	Bend Radius	Weight	Insert ID
		(SF 3.5:1)	(SF 4.0:1)				
6,3 mm	12,6 mm	1.180 bar	1.035 bar	4.140 bar	280 mm	0,305 kg/m	3,5 mm
0,25 inch	0,50 inch	17.100 psi	15.000 psi	60.000 psi	11,02 inch	0,204 lbs/ft	0,14 inch

Part no.	Thread	Material	Dimensions (mm)				Sleeve
			A	B	C	⌀	
10640115	-	AISI 316	17,3	64,4	-	-	

Part no.	Thread	Material	Nut	Dimensions (mm)				Insert
				A	B	C	⌀	
HP fitting								
40640205HB	3/8"x24UNF LH	AISI 316	-	3,5	98	20	-	

MP fitting								
40640305HB	3/8"x24UNF LH	AISI 316	-	3,5	100	11	-	

Anti vibration MP fitting								
40640315HB	3/8"x24UNF LH	AISI 316	-	3,5	112	11,1	-	

Part no.	Thread	Material	Nut	Dimensions (mm)				Insert
				A	B	C	⌀	
Universal female swivel 24°/60° heavy								
20640315HB	M16x1,5	AISI 316	50620125	3,5	77	-	19	
Type M female swivel								
20640645HB	9/16"x18UNF	AISI 316	S5063615	3,5	73	-	19	
JIC female swivel								
20640655HB	9/16"x18UNF	AISI 316	S5063615	3,5	69	-	19	

Part no.	Thread	Material	Relief bores	Dimensions (mm)				Swivel nut
				A	B	C	⌀	
Swivel nut								
S5063615	9/16"x18UNF	AISI 316	I radial	9,5	18	14	19	
50620125	M16x1,5	AISI 316	I radial	9,5	17,5	10	19	

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					
9056400	600,00	740,00	10,20	10-15	

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

Maximum test pressure (1560 bar / 22620 psi).

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

- Hydraulics:** Hydraulic tools (instrumentation packages for gauges, control of service equipment, hydraulic jacks, hydraulic tools)
- Oil and Gas:** Methanol service (oil rigs, distribution panels, umbilicals), jumper/ subsea well control, chemical injection, control of subsea hydraulic components, nitrogen service, Gaseous media handling



Technical Information

- Inner Core:** Polyvinylidenfluoride (PVDF)
- Pressure Support:** 4 layers of high-tensile steel wire
- Outer Cover:** Polyamide (PA)
- Color:** Dark green
- Temperature:** -20°C to +80°C [-4°F to 176°F]

Ø ID	Ø OD	Working Pressure		Burst Pressure	Bend Radius	Weight	Insert ID
		(SF 3,8:1)	(SF 4,0:1)				
8,0 mm	14,7 mm	1.085 bar	1.035 bar	4.140 bar	300 mm	0,420 kg/m	4,5 mm
0,31 inch	0,58 inch	15.730 psi	15.000 psi	60.000 psi	11,81 inch	0,281 lbs/ft	0,18 inch

Part no.	Thread	Material	Dimensions (mm)				Sleeve
			A	B	C	⌀	
Sleeve							
10840102	-	Steel	20,2	56,5	-	-	
10840105	-	AISI 316	20,2	58	-	-	


Part no.	Thread	Material	Nut	Dimensions (mm)				Insert
				A	B	C	⌀	
HP fitting								
40840205B	9/16"x18UNF LH	AISI 316	-	4,5	108,5	24	-	

Male fitting								
30840411B	1/4"x18NPTF	Steel	-	4,5	84	14	14	
30840401B	3/8"x18NPTF	Steel	-	4,5	82	14	17	
30840341B	G1/4"	Steel	-	4,5	82	14	14	

Male fitting flat seal								
30840311B	G1/4"	Steel	-	4,5	83	15	14	

Part no.	Thread	Material	Nut	Dimensions (mm)				Insert
				A	B	C	⌀	
Male fitting DIN3852 T2 form A								
30840301B	G3/8"	Steel	-	4,5	84,5	12	22	
Universal female swivel 24°/60°								
20840301B	G3/8"	Steel	50860301	4,5	72	-	24	
20840305B	G3/8"	AISI 316	50840305	4,5	74	-	24	
Female swivel with O-Ring								
20840201B	M20x1,5	Steel	50860201	4,5	77	-	27	
20840231B	M22x1,5	Steel	51060201, 51060205	4,5	79	-	30	
20840221B	M24x1,5	Steel	51321206, 51320205, 51360206	4,5	85	-	32	
Type M female swivel								
20840641B	3/4"x16UNF	Steel	50840601	4,5	73	-	24	
20840645B	3/4"x16UNF	AISI 316	50840605	4,5	73	-	24	
JIC female swivel								
20840605B	3/4"x16UNF	AISI 316	50840605	4,5	68	-	24	

Part no.	Thread	Material	Relief bores	Dimensions (mm)				Swivel nut
				A	B	C	⌀	
Swivel nut								
50840601	3/4"x16UNF	Steel	1 radial	12,2	22,5	17,5	24	
50840605	3/4"x16UNF	AISI 316	1 radial	12,2	22,5	17,5	24	
50860301	G3/8"	Steel	1 radial	12,5	18,5	15,5	24	
50840305	G3/8"	AISI 316	1 radial	12,2	18,5	13,5	24	
50860201	M20x1,5	Steel	1 radial	12,2	22	12	27	
51060201	M22x1,5	Steel	2 axial	14,2	23	14	30	
51060205	M22x1,5	AISI 316	2 axial	14,2	25	14	30	
51321206	M24x1,5	Steel	2 axial	16,8	23	16	32	
51320205	M24x1,5	AISI 316	1 radial	16,8	23	16	32	

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					
9056400	600,00	740,00	10,20	10-15	

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

Maximum test pressure (1630 bar / 23630 psi).

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

- Hydraulics:** Hydraulic tools (instrumentation packages for gauges, control of service equipment, hydraulic jacks, hydraulic tools)
- Oil and Gas:** Methanol service (oil rigs, distribution panels, umbilicals), jumper/ subsea well control, chemical injection, control of subsea hydraulic components, nitrogen service, Gaseous media handling



Technical Information

- Inner Core:** Polyvinylidenfluoride (PVDF)
- Pressure Support:** 4 layers of high-tensile steel wire
- Outer Cover:** Polyamide (PA)
- Color:** Dark green
- Temperature:** -20°C to +80°C [-4°F to 176°F]

Ø ID	Ø OD	Working Pressure		Burst Pressure	Bend Radius	Weight	Insert ID
		(SF 3.5:1)	(SF 4.0:1)				
10,0 mm	18,4 mm	1.180 bar	1.035 bar	4.140 bar	300 mm	0,680 kg/m	5,5 mm
0,39 inch	0,72 inch	17.100 psi	15.000 psi	60.000 psi	11,81 inch	0,456 lbs/ft	0,22 inch

Part no.	Thread	Material	Dimensions (mm)				Sleeve
			A	B	C	⌀	
Sleeve							
I1040102	-	Steel	23	63,7	-	-	
I1040105	-	AISI 316	23	64	-	-	

Part no.	Thread	Material	Nut	Dimensions (mm)				Insert
				A	B	C	⌀	
HP fitting								
41060204C	9/16"x18UNF LH	Stainless steel	-	5,5	114	24	-	

Part no.	Thread	Material	Nut	Dimensions (mm)				Insert
				A	B	C	⌀	
Male fitting 60° internal cone								
31060311B	G3/8"	Steel	-	5,5	80	12	17	

Part no.	Thread	Material	Nut	Dimensions (mm)				Insert
				A	B	C	⌀	
Universal female swivel 24°/60°								
21060304C	G1/2"	Stainless steel	51060311, 51060315	5,5	78	-	27	

Female swivel with O-Ring								
21060204C	M22x1,5	Stainless steel	51060201, 51060205	5,5	90	-	30	
21060224C	M24x1,5	Stainless steel	51320205, 51321206, 51360206	5,5	93	-	32	
21060221B	M24x1,5	Steel	51321206	5,5	92,5	-	32	

Type M female swivel								
21040645B	3/4"x16UNF	AISI 316	51320615	5,5	78	-	24	

Part no.	Thread	Material	Relief bores	Dimensions (mm)				Swivel nut
				A	B	C	⌀	
Swivel nut								
51320615	3/4"x16UNF	AISI 316	1 radial	14,2	22,5	17,5	24	
51060311	G1/2"	Steel	1 radial	16,7	23,5	13,5	27	
51060315	G1/2"	AISI 316	1 radial	16,7	23,5	13,5	27	
51060201	M22x1,5	Steel	2 axial	14,2	23	14	30	
51060205	M22x1,5	AISI 316	2 axial	14,2	25	14	30	
51321206	M24x1,5	Steel	2 axial	16,8	23	16	32	
51320205	M24x1,5	AISI 316	1 radial	16,8	23	16	32	

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					
9086400	600,00	780,00	20,40	15-20	

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

Maximum test pressure (1560 bar / 22620 psi).

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.

We reserve our rights for technical changes without notice. Subject to printing errors.

Applications

Hydraulics: Hydraulic tools (instrumentation packages for gauges, control of service equipment, hydraulic jacks, hydraulic tools)

Oil and Gas: Methanol service (oil rigs, distribution panels, umbilicals), jumper/ subsea well control, chemical injection, nitrogen service, Gaseous media handling



Technical Information

Inner Core: Polyvinylidenfluoride (PVDF)
Pressure Support: 2 open layers, 2 dense layers of high-tensile steel wire
Outer Cover: Polyamide (PA)
Color: Dark green
Temperature: -20°C to +80°C [-4°F to 176°F]

Ø ID	Ø OD	Working Pressure		Burst Pressure	Bend Radius	Weight	Insert ID
		(SF 3,5:1)	(SF 4,0:1)				
12,8 mm	20,8 mm	790 bar	690 bar	2.760 bar	300 mm	0,670 kg/m	8,5 mm
0,50 inch	0,82 inch	11.450 psi	10.000 psi	40.000 psi	11,81 inch	0,449 lbs/ft	0,33 inch

Part no.	Thread	Material	Dimensions (mm)				Sleeve
			A	B	C	⌀	
Sleeve							
I1330191W	-	Steel	27,2	58	-	-	
I1330195W	-	AISI 316	27,2	58	-	-	

Part no.	Thread	Material	Nut	Dimensions (mm)				Insert
				A	B	C	⌀	
MP fitting								
41320205A	9/16"x18UNF LH	AISI 316	-	8,5	109	12,7	-	

Male fitting								
31320401A	1/2"x14NPTF	Steel	-	8,5	90	18	22	
31320405A	1/2"x14NPTF	AISI 316	-	8,5	90	18	22	

Universal female swivel 24°/60°								
21320311A	G1/2"	Steel	51060311	8,5	73	-	27	
21320315A	G1/2"	AISI 316	51060315, 51060311	8,5	73	-	27	

Part no.	Thread	Material	Nut	Dimensions (mm)				Insert
				A	B	C	⌀	
Female swivel with O-Ring								
21320101A	M22x1,5	Steel	51360221	8,5	85	-	30	
21320241A	M24x1,5	Steel	51321206	8,5	80	-	32	
21320245A	M24x1,5	AISI 316	51320205	8,5	80	-	32	
Type M female swivel								
21320641A	1"x12UNF	Steel	51360641	8,5	74	-	32	
21320645A	1"x12UNF	AISI 316	51360645, 51360643	8,5	74	-	32	
Swivel nut								
Swivel nut								
51360641	1"x12UNF	Steel	1 radial	16,8	28	22	32	
51360645	1"x12UNF	AISI 316	1 radial	16,8	28	22	32	
51060311	G1/2"	Steel	1 radial	16,7	23,5	13,5	27	
51060315	G1/2"	AISI 316	1 radial	16,7	23,5	13,5	27	
51360221	M22x1,5	Steel	1 radial	16,8	25	14	30	
51321206	M24x1,5	Steel	2 axial	16,8	23	16	32	
51320205	M24x1,5	AISI 316	1 radial	16,8	23	16	32	
Hose securing grip								
Hose securing grip short version								
9086400	600,00	780,00	20,40	Suitable for SPIR STAR® hose outer diameter (mm)		15-20		

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

Maximum test pressure (1380 bar / 20000 psi).

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.

We reserve our rights for technical changes without notice. Subject to printing errors.

Applications

- Hydraulics:** Hydraulic tools (instrumentation packages for gauges, control of service equipment, hydraulic jacks, hydraulic tools)
- Oil and Gas:** Methanol service (oil rigs, distribution panels, umbilicals), jumper/ subsea well control, chemical injection, control of subsea hydraulic components, nitrogen service, Gaseous media handling



Technical Information

- Inner Core:** Polyvinylidenfluoride (PVDF)
- Pressure Support:** 4 layers of high-tensile steel wire
- Outer Cover:** Polyamide (PA)
- Color:** Dark green
- Temperature:** -20°C to +80°C [-4°F to 176°F]

Ø ID	Ø OD	Working Pressure		Burst Pressure	Bend Radius	Weight	Insert ID
		(SF 3.3:1)	(SF 4.0:1)				
12,8 mm	22,0 mm	1.035 bar	860 bar	3.450 bar	300 mm	1,000 kg/m	7,5 mm
0,50 inch	0,87 inch	15.000 psi	12.500 psi	50.000 psi	11,81 inch	0,670 lbs/ft	0,30 inch

Part no.	Thread	Material	Dimensions (mm)				Sleeve
			A	B	C	⌀	
Sleeve							
11340232	-	Steel	29,2	65	-	-	
11340105	-	AISI 316	29,2	63			

Part no.	Thread	Material	Nut	Dimensions (mm)				Insert
				A	B	C	⌀	
HP fitting								
41360214C	9/16"x18UNF LH	Stainless steel	-	7,5	118	24	-	

MP fitting								
41360204C	3/4"x16UNF LH	Stainless steel	-	7,5	121	25	-	

Female swivel with O-Ring								
21360244C	M24x1,5	Stainless steel	51320205, 51321206	7,5	89	-	32	

Part no.	Thread	Material	Nut	Dimensions (mm)				Insert
				A	B	C	⌀	
Type M female swivel								
21360644C	1"x12UNF	Stainless steel	51360645, 51360641, 51360643	7,5	84	-	32	

Part no.	Thread	Material	Relief bores	Dimensions (mm)				Swivel nut
				A	B	C	⌀	
Swivel nut								
51360641	1"x12UNF	Steel	1 radial	16,8	28	22	32	
51360645	1"x12UNF	AISI 316	1 radial	16,8	28	22	32	
51321206	M24x1,5	Steel	2 axial	16,8	23	16	32	
51320205	M24x1,5	AISI 316	1 radial	16,8	23	16	32	

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					
9106400	600,00	800,00	20,40	20-25	

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

Maximum test pressure (1290 bar / 18705 psi).

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.

We reserve our rights for technical changes without notice. Subject to printing errors.

Applications

- Hydraulics:** Hydraulic tools (instrumentation packages for gauges, control of service equipment, hydraulic jacks, hydraulic tools)
- Oil and Gas:** Methanol service (oil rigs, distribution panels, umbilicals), jumper/ subsea well control, chemical injection, nitrogen service, Gaseous media handling



Technical Information

- Inner Core:** Polyvinylidenfluoride (PVDF)
- Pressure Support:** 4 layers of high-tensile steel wire
- Outer Cover:** Polyamide (PA)
- Color:** Dark green
- Temperature:** -20°C to +80°C [-4°F to 176°F]

Ø ID	Ø OD	Working Pressure		Burst Pressure	Bend Radius	Weight	Insert ID
		(SF 3,5:1)	(SF 4,0:1)				
16,0 mm	25,5 mm	790 bar	690 bar	2.760 bar	400 mm	1,082 kg/m	10,5 mm
0,63 inch	1,00 inch	11.450 psi	10.000 psi	40.000 psi	15,75 inch	0,725 lbs/ft	0,41 inch

Part no.	Thread	Material	Dimensions (mm)				Sleeve
			A	B	C	⌀	
Sleeve							
I1640112	-	Steel	32,7	69	-	-	
I1640115	-	AISI 316	32,6	69	-	-	

Part no.	Thread	Material	Nut	Dimensions (mm)				Insert
				A	B	C	⌀	
MP fitting								
41640305B	3/4"x16UNF LH	AISI 316	-	10,5	120	18	-	

Male fitting								
Part no.	Thread	Material	Nut	Dimensions (mm)				Insert
A	B	C	⌀					
31640401B	3/4"x14NPT	Steel	-	10,5	101	18	27	

Female swivel with O-Ring								
Part no.	Thread	Material	Nut	Dimensions (mm)				Insert
A	B	C	⌀					
21640101B	M30x2	Steel	51640201	10,5	98	-	41	

Part no.	Thread	Material	Nut	Dimensions (mm)				Insert
				A	B	C	⌀	
Type M female swivel								
2I640605B	I 5/16"xI2UN	AISI 316	52040645	10,5	99	-	46	
JIC female swivel								
2I640645B	I 1/16"xI2UN	AISI 316	5I640605	10,5	84	-	36	

Part no.	Thread	Material	Relief bores	Dimensions (mm)				Swivel nut
				A	B	C	⌀	
Swivel nut								
5I640605	I 1/16"xI2UN	AISI 316	I radial	20,1	29	23	36	
52040645	I 5/16"xI2UN	AISI 316	I radial	25,5	31,5	11,5	46	
5I64020I	M30x2	Steel	I radial	20,5	28	15	41	

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					
9I06400	600,00	800,00	20,40	20-25	

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

Maximum test pressure (1035 bar / 15000 psi).

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

- Hydraulics:** Hydraulic tools (instrumentation packages for gauges, control of service equipment, hydraulic jacks, hydraulic tools)
- Oil and Gas:** Methanol service (oil rigs, distribution panels, umbilicals), jumper/ subsea well control, chemical injection, nitrogen service, Gaseous media handling



Technical Information

- Inner Core:** Polyvinylidenfluoride (PVDF)
- Pressure Support:** 4 layers of high-tensile steel wire
- Outer Cover:** Polyamide (PA)
- Color:** Dark green
- Temperature:** -20°C to +80°C [-4°F to 176°F]

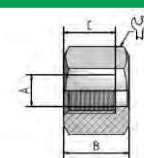
Ø ID	Ø OD	Working Pressure		Burst Pressure	Bend Radius	Weight	Insert ID
		(SF 3,6:1)	(SF 4,0:1)				
18,8 mm	28,8 mm	775 bar	690 bar	2.760 bar	500 mm	1,350 kg/m	13,0 mm
0,74 inch	1,13 inch	11.230 psi	10.000 psi	40.000 psi	19,69 inch	0,907 lbs/ft	0,51 inch


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	-	

Female swivel with O-Ring								
22060202C	M36x2	Steel	52040211	13	127	-	46	

Type M female swivel								
22060644C	1 5/16"x12UN	Stainless steel	52040645	13	107	-	46	

Part no.	Thread	Material	Relief bores	Dimensions (mm)				Swivel nut
				A	B	C	W	
Swivel nut								
52040645	1 5/16"x12UN	AISI 316	1 radial	25,5	31,5	11,5	46	
52040211	M36x2	Steel	1 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
9136400	600,00	800,00	24,30	25-30	

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

Maximum test pressure (1035 bar / 15000 psi).

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

Hydraulics: Hydraulic tools (instrumentation packages for gauges, control of service equipment, hydraulic jacks, hydraulic tools)

Oil and Gas: Methanol service (oil rigs, distribution panels, umbilicals), jumper/ subsea well control, chemical injection, nitrogen service, Gaseous media handling



Technical Information

Inner Core: Polyvinylidenfluoride (PVDF)
Pressure Support: 6 layers of high-tensile steel wire
Outer Cover: Polyamide (PA)
Color: Dark green
Temperature: -20°C to +80°C [-4°F to 176°F]


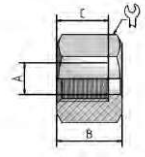
Ø ID	Ø OD	Working Pressure		Burst Pressure	Bend Radius	Weight	Insert ID
		(SF 3,3:1)	(SF 4,0:1)				
18,8 mm	32,8 mm	1.035 bar	860 bar	3.450 bar	600 mm	2,170 kg/m	13,0 mm
0,74 inch	1,29 inch	15.000 psi	12.500 psi	50.000 psi	23,62 inch	1,454 lbs/ft	0,51 inch


Part no.	Thread	Material	Dimensions (mm)				Sleeve
			A	B	C	⌀	
Sleeve							
12060111	-	Steel	42,9	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	1 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	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.	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.

Maximum test pressure (1290 bar / 18705 psi).

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

Hydraulics: Hydraulic tools (instrumentation packages for gauges, control of service equipment, hydraulic jacks, hydraulic tools)

Oil and Gas: Methanol service (oil rigs, distribution panels, umbilicals), jumper/ subsea well control, chemical injection, nitrogen service, Gaseous media handling



Technical Information

Inner Core: Polyvinylidenfluoride (PVDF)
Pressure Support: 4 layers of high-tensile steel wire
Outer Cover: Polyamide (PA)
Color: Dark green
Temperature: -20°C to +80°C [-4°F to 176°F]


Ø ID	Ø OD	Working Pressure		Burst Pressure	Bend Radius	Weight	Insert ID
		(SF 3,0:1)	(SF 4,0:1)				
24,8 mm	36,3 mm	690 bar	520 bar	2.070 bar	500 mm	1,820 kg/m	18,0 mm
0,98 inch	1,43 inch	10.000 psi	7.500 psi	30.000 psi	19,69 inch	1,223 lbs/ft	0,71 inch

Part no.	Thread	Material	Dimensions (mm)				Sleeve
			A	B	C	⌀	
Sleeve							
I2540I25	-	AISI 316	42,4	92	-	-	

Part no.	Thread	Material	Nut	Dimensions (mm)				Insert
				A	B	C	⌀	
Male fitting								
32540405HB	1"x11 1/2NPTF	AISI 316	-	18	131	25	36	

Part no.	Thread	Material	Nut	Dimensions (mm)				Swivel nut
				A	B	C	⌀	
Female swivel with O-Ring								
22540205HB	M42x2	AISI 316	52521215, 525202010	18	122	-	50	

Part no.	Thread	Material	Relief bores	Dimensions (mm)				Swivel nut
				A	B	C	⌀	
Swivel nut								
52521215	M42x2	AISI 316	2 axial	30,2	34	24	50	

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					
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.

Maximum test pressure (1035 bar / 15000 psi).

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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