

# plug-in-ball design

## Application:

Spradow test couplings are applied for the monitoring and control of pressure as well as the ventilation. The advantages of this system are – among other – connection at system pressure level, the easy connection to measurement control and switching devices and the leakproof connection.

## Media:

Spradow test couplings have been developed for hydraulic oils and mineral oil based fluids.

(Please check compatibility of seal material.)

## Materials:

Metal parts: Steel, Stainless steel upon request

Seals: NBR (-20 °C to +100 °C)

FKM (-20 °C to +200 °C)

EPDM (-40 °C to +150 °C)

Hose: Polyamide (-35 °C to +100 °C); reinforcement: synthetic fibre

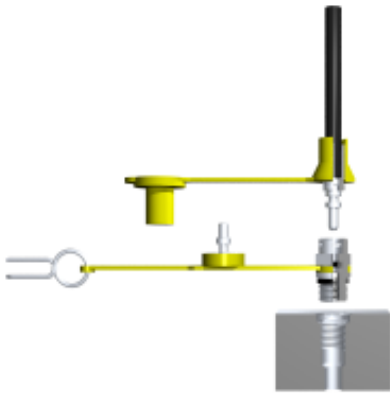
## Surface:

CrVI-free.

## Pressure:

Max. working pressure of the test couplings - 400 bar, at 3-fold security.

For the union pieces (type DKO, BE and GE) please observe the instructions given by the corresponding producer.



## test coupling series: plug-in

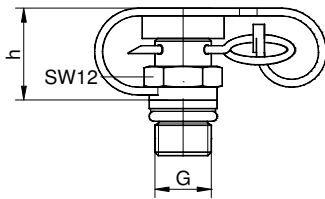


fig. 1

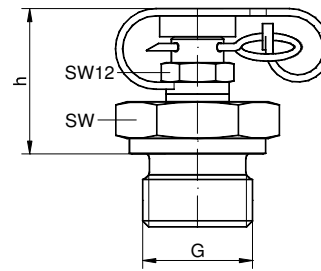


fig. 2

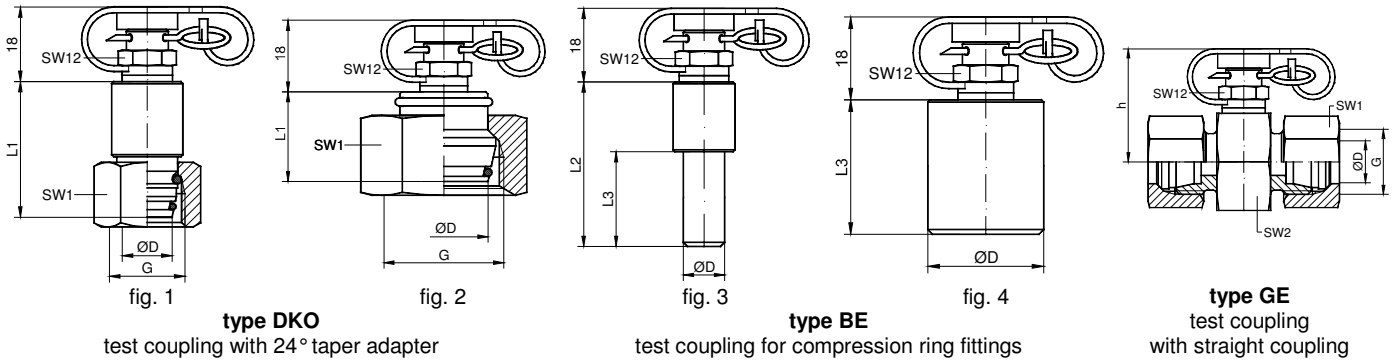
G	SW	h	fig.	sealing	part number (NBR)	part number (FKM)
M8x1	-	18	1	o-ring type 1	1-900-20-21-180-CF	1-900-20-22-180-CF
M10x1	-	18	1	o-ring type 1	1-900-22-21-180-CF	1-900-22-22-180-CF
R 1/8 taper	-	18	1	thread type 4	1-900-33-00-180-CF	1-900-33-02-180-CF
1/8 NPT	-	18	1	thread type 4	1-900-43-00-180-CF	1-900-43-02-180-CF
M10x1	17	37	2	metallic sealing type 2	1-905-22-30-180-CF	1-905-22-32-180-CF
G 1/4	19	27	2	soft sealing type 3	1-905-29-11-180-CF	1-905-29-12-180-CF

## port connection and seals

type 1				type 2				type 3				type 4				
				G	øD	t1	t2	G	øD	a	t1	t2	G	t1	t2	
M 8x1	9,5	11	14	M 10x1	15	1	8	10	G 1/4	20	1,5	12	15,5	1/8 NPT	6,9	11,6
M 10x1	11,5	11	14											R 1/8 taper	5,5	9,5

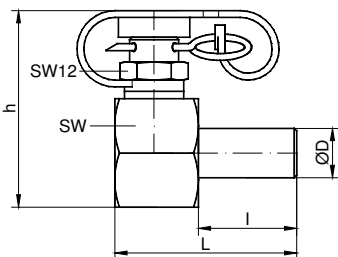
Other dimensions on request. We reserve the right to change the technical performance. All dimensions in mm.

fitting with test coupling  
series: plug-in



type	PN	tube øD	L1	L2	L3	SW1	SW2	h	G	type DKO part number	fig.	type BE part number	fig.	type GE part number
L	315	6	32,5	38	20	14	22	29	M12x1,5	1-902-00-10-180-CF	1	1-903-00-00-181-CF	3	1-904-00-00-180-CF
		8	32,5	38	20	17	24	30	M14x1,5	1-902-02-10-180-CF	1	1-903-02-00-181-CF	3	1-904-02-00-180-CF
		10	32,5	40	22	19	24	30	M16x1,5	1-902-04-10-180-CF	1	1-903-04-00-181-CF	3	1-904-04-00-180-CF
		12	32,5	40	22	22	27	31,5	M18x1,5	1-902-06-10-180-CF	1	1-903-06-00-181-CF	3	1-904-06-00-180-CF
		15	20		28	27	30	33	M22x1,5	1-902-09-00-180-CF	2	1-903-09-00-181-CF	4	1-904-09-00-180-CF
		18	22		28	32	32	34	M26x1,5	1-902-11-00-180-CF	2	1-903-11-00-181-CF	4	1-904-11-00-180-CF
	160	22	22		30	36	36	36	M30x2	1-902-13-00-180-CF	2	1-903-13-00-181-CF	4	1-904-13-00-180-CF
		28	24		32	41	41	38,5	M36x2	1-902-15-00-180-CF	2	1-903-15-00-181-CF	4	1-904-15-00-180-CF
		35	27		42	50	46	41	M45x2	1-902-17-00-180-CF	2	1-903-17-00-181-CF	4	1-904-17-00-180-CF
S	400	42	28		45	60	55	45,5	M52x2	1-902-19-00-180-CF	2	1-903-19-00-181-CF	4	1-904-19-00-180-CF
		6	33,5	38	20	17	24	30	M14x1,5	1-902-01-10-180-CF	1	1-903-00-00-181-CF	3	1-904-01-00-180-CF
		8	33,5	38	20	19	24	30	M16x1,5	1-902-03-10-180-CF	1	1-903-02-00-181-CF	3	1-904-03-00-180-CF
		10	33,5	40	22	22	24	30	M18x1,5	1-902-05-10-180-CF	1	1-903-04-00-181-CF	3	1-904-05-00-180-CF
		12	33,5	40	22	24	24	30	M20x1,5	1-902-07-10-180-CF	1	1-903-06-00-181-CF	3	1-904-07-00-180-CF
	400	14	24	40	22	27	27	31,5	M22x1,5	1-902-08-00-180-CF	2	1-903-08-00-181-CF	3	1-904-08-00-180-CF
		16	20		28	30	30	33	M24x1,5	1-902-10-00-180-CF	2	1-903-10-00-181-CF	4	1-904-10-00-180-CF
		20	25		30	36	32	34	M30x2	1-902-12-00-180-CF	2	1-903-12-00-181-CF	4	1-904-12-00-180-CF
		25	27		36	46	41	38,5	M36x2	1-902-14-00-180-CF	2	1-903-14-00-181-CF	4	1-904-14-00-180-CF
		30	29		41	50	46	41	M42x2	1-902-16-00-180-CF	2	1-903-16-00-181-CF	4	1-904-16-00-180-CF
315	38	32		48	60	55	45,5	M52x2	1-902-18-00-180-CF	2	1-903-18-00-181-CF	4	1-904-18-00-180-CF	
design with sealings made of FKM										1-902-xx-x2-xxx-CF		1-903-xx-02-xxx-CF		1-904-xx-02-xxx-CF

90° fitting type BE with test coupling  
series: plug-in



tube øD	l	L	SW	h	part number (NBR)	part number (FKM)
8	20	37	22	40	1-980-03-20-080-CF	1-980-03-20-081-CF
10	20	37	22	40	1-980-05-20-120-CF	1-980-05-20-121-CF

Other dimensions on request. We reserve the right to change the technical performance. All dimensions in mm.

## high pressure hose

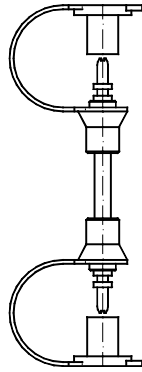
Max. working pressure:  
630 bar

Test hose:  
Nominal bore 2 mm  
Min. bend radius:  
20 mm

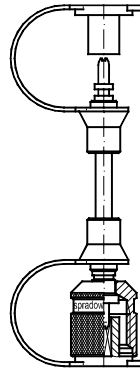
Pressure / t° factor:  
at 20 °C 100%  
at 40 °C 95%  
at 60 °C 90%  
at 80 °C 80%  
at 100 °C 70%

**Hose construction**  
Hose core and cover:  
PA  
Reinforcement:  
synthetic fibre  
bursting pressure:  
1900 bar

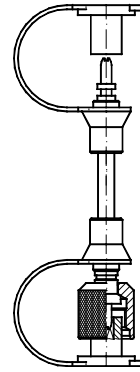
series: plug-in



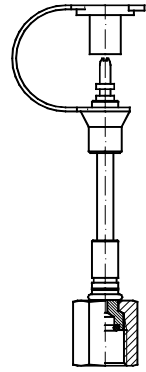
series: plug-in



series: plug-in



series: plug-in



series: plug-in

series: M16x2

series: S12x1,5

pressure gauge connector G 1/4<sup>2)</sup>

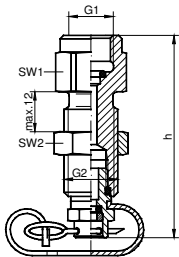
length L <sup>1)</sup> acc. DIN 20066	part number			
200	1-971-01-01-010-CF	1-971-01-04-010-CF	1-971-01-12-010-CF	1-971-01-02-010-CF
400	1-971-01-01-040-CF	1-971-01-04-040-CF	1-971-01-12-040-CF	1-971-01-02-040-CF
630	1-971-01-01-060-CF	1-971-01-04-060-CF	1-971-01-12-060-CF	1-971-01-02-060-CF
800	1-971-01-01-080-CF	1-971-01-04-080-CF	1-971-01-12-080-CF	1-971-01-02-080-CF
1000	1-971-01-01-090-CF	1-971-01-04-090-CF	1-971-01-12-090-CF	1-971-01-02-090-CF
1500	1-971-01-01-100-CF	1-971-01-04-100-CF	1-971-01-12-100-CF	1-971-01-02-100-CF
2000	1-971-01-01-110-CF	1-971-01-04-110-CF	1-971-01-12-110-CF	1-971-01-02-110-CF
2500	1-971-01-01-120-CF	1-971-01-04-120-CF	1-971-01-12-120-CF	1-971-01-02-120-CF
3200	1-971-01-01-130-CF	1-971-01-04-130-CF	1-971-01-12-130-CF	1-971-01-02-130-CF
4000	1-971-01-01-140-CF	1-971-01-04-140-CF	1-971-01-12-140-CF	1-971-01-02-140-CF

<sup>1)</sup> Other lengths on inquiry

Further connectors on page 33 f.

<sup>2)</sup> Connection thread G<sup>1</sup>/<sub>2</sub>,  
<sup>1</sup>/<sub>4</sub> NPT and <sup>1</sup>/<sub>2</sub> NPT upon request.

## pressure gauge connector



G1	SW1	SW2	h	G2	sealing	part number (NBR)	part number (FKM)
G 1/4	19	19	61	M16x2	o-ring	1-918-29-01-210-CF	1-918-29-21-210-CF
G 1/2	27	24	71	M16x2	o-ring	1-918-31-01-210-CF	1-918-31-21-210-CF
1/4 NPT	19	19	63	M16x2	thread	1-918-44-00-210-CF	1-918-44-20-210-CF
1/2 NPT	27	24	71	M16x2	thread	1-918-46-00-210-CF	1-918-46-20-210-CF

## bulkhead coupling

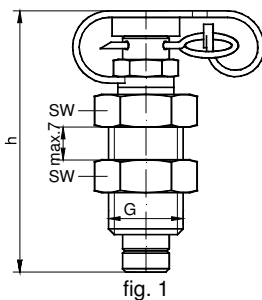


fig. 1

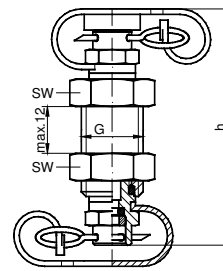


fig. 2

G	SW	h	fig.	part number (NBR)	part number (FKM)
M16x2	19	56	1	1-980-48-20-040-CF	1-980-48-20-041-CF
M16x2	19	66	2	1-980-48-20-050-CF	1-980-48-20-051-CF

Other dimensions on request. We reserve the right to change the technical performance. All dimensions in mm.