



360°

## Heavy Duty 360°

New Generation Ball Bearing Rotary Fittings



ENGINEERING YOUR SUCCESS.

# Customer requirements!

Standard rotary fittings are used to connect a fixed moving machine part via hoses. More and more terrains, hard climate conditions and poor infrastructure in some cases. During the last years our customers have new challenging requirements in terms of flow capacity, temperature resistance and general operating for a new standard.

## The solution!

Parker HPCE created for these challenging conditions a new robust version of rotary fittings - the new **Heavy Duty 360°** reliable ball bearings together with a new design and sealing concept lead to major improvements in terms of pressure, temperature and corrosion resistance.

**Heavy Duty 360°** can now work at a nominal pressure of 420 bar. The new sealing unit is special designed for long-time best sealing performance in combination with low-temperature suitability so that the function of the rotary fitting is still guaranteed at an ambient and medium temperature between -40°C and up to 95°C. It was possible to decrease the tilt tendency which protects all internal components - especially the extrusion for sealing components.

The new design and the reduced friction resistance showed in the final approval tests a very good durability of all components without any considerable wear at 420 bar nominal pressure. The new design will replace the current portfolio of Parker ball bearing rotary fittings (DG101, DG102, etc.). The dimensions of the old and the new rotary fittings will remain the same so that they can easily be replaced in their current application. The portfolio of plain bearing rotary fittings (DVGE, DVWE).

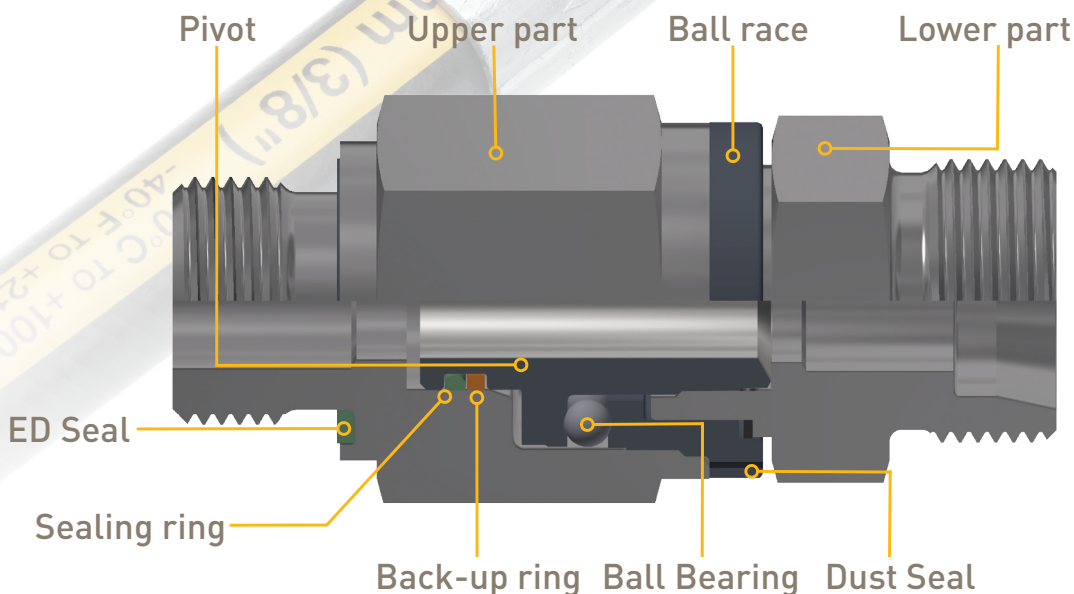
point to a swinging, rotating or customers have to deal with rough structure in some cases. During the requirements in terms of flow capacity conditions so that there was a need

ing conditions a new robust version of series. The combination of the proven and design and sealing concept lead to major temperature and corrosion resistance istics.

nominal pressure of 420 bar. for long-time best sealing performance suitability so that at an ambient and medium temperature. By the new design it protects all internal components is prevented.

showed in the final without any consider-

of Parker ball bearing dimensions of the old and the new rotary fittings will remain the same



# Key facts

## Features

- New sealing concept (Fitting dimensions unchanged)
- Working pressure up to 420 bar PN
- Temp. range: -40°C up to +95°C
- Size 06 - 38 // DN 04 - 26
- 24° DIN portfolio - SAE on request
- Improved corrosion resistance
- Improved media resistance

## Customer Value

- Avoidance of torsion
- Avoidance of narrow bend radii for hose assemblies
- Longer lifetime of hydraulic system
- Avoidance of downtime
- More design flexibility of hydraulic system

## Application

- Mobile hydraulics
- Machine construction
- Maintenance and repair
- Industrial Equipment
- **Or generally wherever a hose assembly must be connected to a machine part which itself rotates**



# Applications

## Mobile Cranes



- e.g. at the boom of mobile cranes or maritime cranes

## Construction Equipment



- e.g. to connect the excavator final drive/ travel motor and the valve block and for rotatable or swivelling driver's seat

## Trains



- e.g. at the transition from the bogie to the wagon



## Trucks



- e.g. for construction trucks at the crane pillar at the transition to the loading crane

## Machine Tools



- e.g. at the milling head or milling spindle or at the basket changer for changing the tools

## Agriculture



- e.g. at the boom or head for mobile forestry machines like harvester or skidder

# Technical Data Sheet

## Number of revolutions and starting torques

Tube OD	Nominal Diameter DN mm	Permissible number of rev. (rpm.) for HD360 rotary fittings under a working pressure of							Initial torque at 250 bar/ Nm
		25 bar	64 bar	100 bar	160 bar	250 bar	350 bar	420 bar	
6	5.0	1.600	800	400	200	150	90	90	max. 0.5
8									
12	9.5	1.000	600	300	180	120	90	90	max. 3.0
16									
20	16.0	500	250	120	60	40	20	20	max. 3.5
25									
30	26.0	300	150	100	50	20	10	10	max. 5.0
38									

### ■ Application:

Connecting a fixed point to a rotating, swinging or moving machine part via hoses.  
To prevent torsion and to avoid small hose radii.

### ■ Flow media:

Hydraulic oils and lubricants on mineral oil base and for hydraulic fluids HETG and HEES.  
Also for pneumatic applications and gases.  
Not suitable for corrosive and HFC-fluids.

### ■ Surface:

Cr(VI)-free

### ■ Assembly instructions:

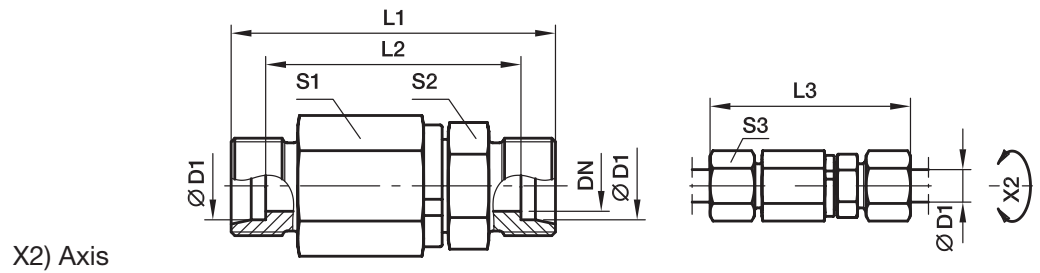
The life of a rotary fitting depends considerably on a stress-free line connection.  
Therefore the direct connection with tubes is to be avoided.  
For connection of hoses the use of swivel nut fittings (DIN 3865) is recommended.  
We recommend short, straight hose lines (free hose length approx. 5x hose O.D.)  
Thus shocks, vibrations etc. are absorbed.

### ■ Flow rate

Recommended flow rate up to 8 m/s. Higher value possible according to the individual application.

## DG 101 Straight ball bearing rotary union

EO 24° cone end / EO 24° cone end

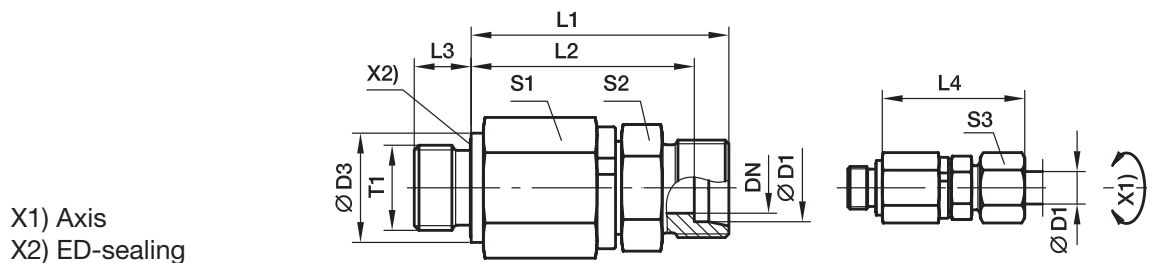


X2) Axis

D1	DN	L1	L2	L3	S1	S2	S3	Weight g/1 piece	Order code	PN bar
06	5.0	61	47	76	22	17	17	113	DG101/06SHDOMDCF	420
08	5.0	61	47	76	22	17	19	118	DG101/08SHDOMDCF	420
12	9.5	72	57	89	30	24	24	258	DG101/12SHDOMDCF	420
16	9.5	74	57	93	30	27	30	264	DG101/16SHDOMDCF	420
20	16.0	92	71	114	41	36	36	578	DG101/20SHDOMDCF	420
25	16.0	96	72	120	41	41	46	652	DG101/25SHDOMDCF	420
30	26.0	109	82	135	60	46	50	1321	DG101/30SHDOMDCF	420
38	26.0	104	82	143	60	55	60	1509	DG101/38SHDOMDCF	420

## DG 102-R Straight male stud ball bearing rotary union

Male BSPB thread - ED-seal (ISO 1179) / EO 24° cone end



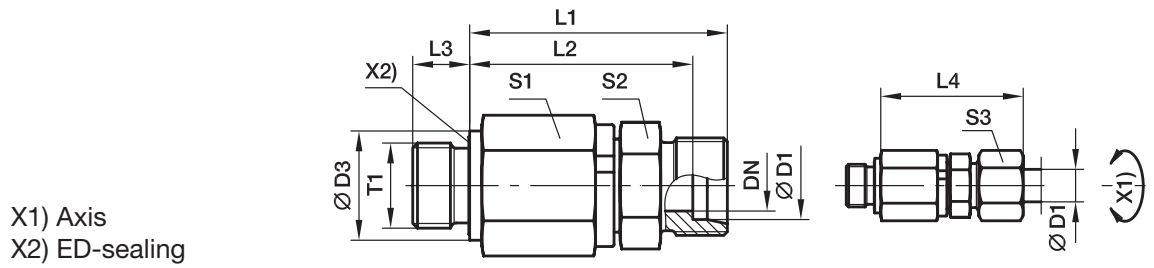
X1) Axis

X2) ED-sealing

D1	T1	DN	D3	L1	L2	L3	L4	S1	S2	S3	Weight g/1 piece	Order code	PN bar
06	G 1/4 A	5.0	19	49	42.0	12	57.0	22	17	17	110	DG102/06SRHDOMDCF	420
08	G 1/4 A	5.0	19	49	42.0	12	57.0	22	17	19	116	DG102/08SRHDOMDCF	420
12	G 3/8 A	9.5	24	60	52.5	12	69.0	30	24	24	243	DG102/12SRHDOMDCF	420
16	G 1/2 A	9.5	27	60	51.5	14	70.0	30	27	30	256	DG102/16SRHDOMDCF	420
20	G 3/4 A	16.0	32	76	65.5	16	87.5	41	36	36	558	DG102/20SRHDOMDCF	420
25	G 1A	16.0	40	78	66.0	18	90.5	41	41	46	853	DG102/25SRHDOMDCF	420
30	G 1 1/4 A	26.0	50	89	75.5	20	102.0	60	46	50	1312	DG102/30SRHDOMDCF	420
38	G 1 1/2 A	26.0	55	92	76.0	22	107.0	60	55	60	1494	DG102/38SRHDOMDCF	420

## DG 102-M Straight male stud ball bearing rotary union

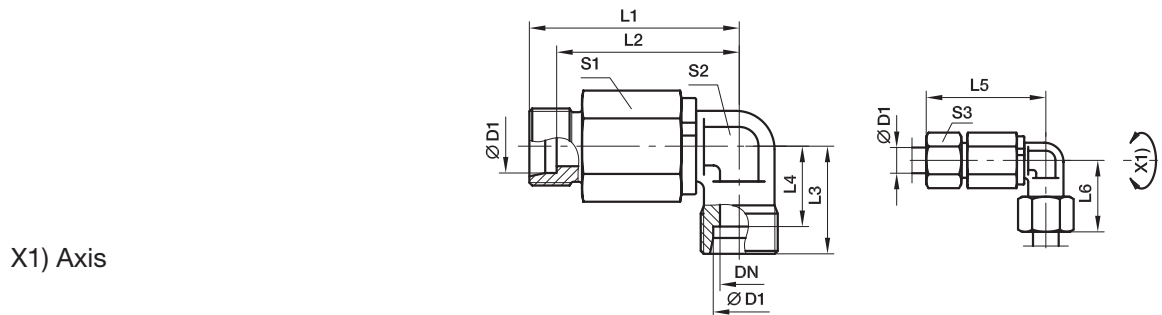
Male metric thread - ED-seal (ISO 9974) / EO 24° cone end



D1	T1	DN	D3	L1	L2	L3	L4	S1	S2	S3	Weight g/1 piece	Order code	PN bar
06	M 14x1.5	5.0	19	49	42.0	12	57.0	22	17	17	110	DG102/06SMHDOMDCF	420
08	M 14x1.5	5.0	19	49	42.0	12	57.0	22	17	19	116	DG102/08SMHDOMDCF	420
12	M 18x1.5	9.5	24	60	52.5	12	69.0	30	24	24	243	DG102/12SMHDOMDCF	420
16	M 22x1.5	9.5	27	60	51.5	14	70.0	30	27	30	256	DG102/16SMHDOMDCF	420
20	M 27x2.0	16.0	32	76	65.5	16	87.5	41	36	36	558	DG102/20SMHDOMDCF	420
25	M 33x2.0	16.0	40	78	66.0	18	90.5	41	41	46	853	DG102/25SMHDOMDCF	420
30	M 42x2.0	26.0	50	89	75.5	20	102.0	60	46	50	1312	DG102/30SMHDOMDCF	420
38	M 48x2.0	26.0	55	92	76.0	22	107.0	60	55	60	1494	DG102/38SMHDOMDCF	420

## DG 103 Elbow ball bearing rotary union

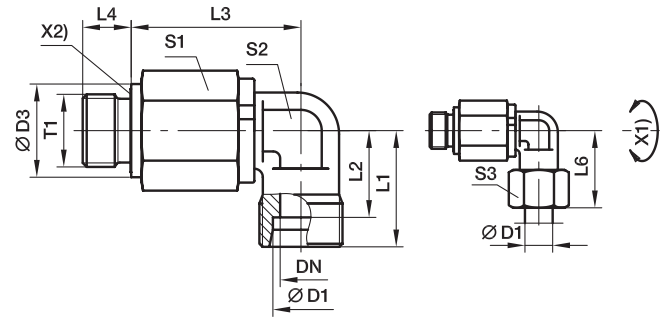
EO 24° cone end / EO 24° cone end



D1	DN	L1	L2	L3	L4	L5	L6	S1	S2	S3	Weight g/1 piece	Order code	PN bar
06	5.0	51.5	59.0	23	16.0	44.5	16.0	22	17	17	134	DG103/06SHDOMDCF	420
08	5.0	51.5	59.0	24	17.0	44.5	17.0	22	17	19	141	DG103/08SHDOMDCF	420
12	9.5	63.0	72.0	29	21.5	55.5	21.5	30	22	24	296	DG103/12SHDOMDCF	420
16	9.5	63.0	73.0	33	24.5	54.5	24.5	30	22	30	298	DG103/16SHDOMDCF	420
20	16.0	83.0	94.5	37	26.5	72.5	26.5	41	36	36	772	DG103/20SHDOMDCF	420
25	16.0	83.0	95.5	42	30.0	71.0	30.0	41	36	46	803	DG103/25SHDOMDCF	420
30	26.0	102.5	116.0	49	35.5	89.0	35.5	60	50	50	1722	DG103/30SHDOMDCF	420
38	26.0	102.5	117.0	57	41.0	86.5	41.0	60	50	60	1931	DG103/38SHDOMDCF	420

## DG 104-R Elbow male stud ball bearing rotary union

Male BSPA thread - ED-seal (ISO 1179) / EO 24° cone end

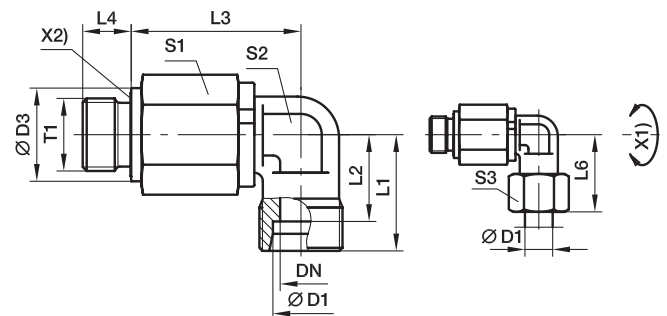


X1) Axis  
X2) ED-sealing

D1	T1	DN	D3	L1	L2	L3	L4	L6	S1	S2	S3	Weight g/1 piece	Order code	PN bar
06	G 1/4 A	5.0	19	23	16.0	39.5	12	31	22	17	17	131	DG104/06SRHDOMDCF	420
08	G 1/4 A	5.0	19	24	17.0	39.5	12	32	22	17	19	135	DG104/08SRHDOMDCF	420
12	G 3/8 A	9.5	22	29	21.5	51.0	12	38	30	22	24	284	DG104/12SRHDOMDCF	420
16	G 1/2 A	9.5	27	33	24.5	49.0	14	43	30	22	30	284	DG104/16SRHDOMDCF	420
20	G 3/4 A	16.0	32	37	26.5	67.0	16	48	41	36	36	752	DG104/20SRHDOMDCF	420
25	G 1 A	16.0	40	42	30.0	65.0	18	54	41	36	46	789	DG104/25SRHDOMDCF	420
30	G 1 1/4 A	26.0	50	49	35.5	82.5	20	62	60	50	50	1713	DG104/30SRHDOMDCF	420
38	G 1 1/2 A	26.0	55	57	41.0	80.5	22	72	60	50	60	1915	DG104/38SRHDOMDCF	420

## DG 104-M Elbow male stud ball bearing rotary union

Male metric thread - ED-seal (ISO 9974) / EO 24° cone end



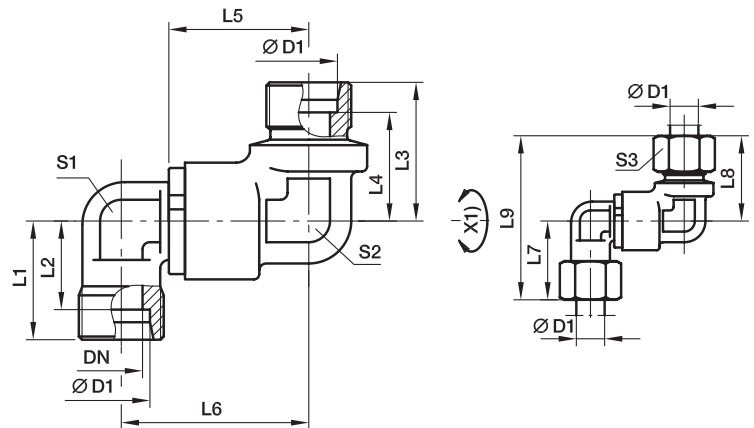
X1) Axis  
X2) Eolastic -sealing

D1	T1	DN	D3	L1	L2	L3	L4	L6	S1	S2	S3	Weight g/1 piece	Order code	PN bar
06	M 14x1.5	5.0	19	23	16.0	39.5	12	31	22	17	17	132	DG104/06SMHDOMDCF	420
08	M 14x1.5	5.0	19	24	17.0	39.5	12	32	22	17	19	136	DG104/08SMHDOMDCF	420
12	M 18x1.5	9.5	22	29	21.5	51.0	12	38	30	22	24	286	DG104/12SMHDOMDCF	420
16	M 22x1.5	9.5	27	33	24.5	49.0	14	43	30	22	30	287	DG104/16SMHDOMDCF	420
20	M 27x2.0	16.0	32	37	26.5	67.0	16	48	41	36	36	752	DG104/20SMHDOMDCF	420
25	M 33x2.0	16.0	40	42	30.0	65.0	18	54	41	36	46	788	DG104/25SMHDOMDCF	420
30	M 42x2.0	26.0	50	49	35.5	82.5	20	62	60	50	50	1717	DG104/30SMHDOMDCF	420
38	M 48x2.0	26.0	55	57	41.0	80.5	22	72	60	50	60	1913	DG104/38SMHDOMDCF	420



## DG 105 Double elbow ball bearing rotary union

EO 24° cone end / EO 24° cone end

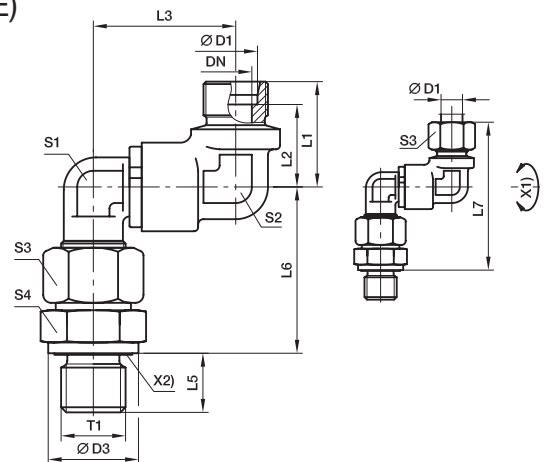


X1) Axis

D1	DN	L1	L2	L3	L4	L5	L6	L7	L8	L9	S1	S2	S3	Weight g/1 piece	Order code	PN bar
12	9.5	39.5	26.5	43	21.5	38	81	53.0	24	22	24	29	50.5	384	DG105/12SHDOMDCF	420
16	9.5	39.5	25.5	44	24.5	43	87	53.0	30	22	24	33	52.5	377	DG105/16SHDOMDCF	420
20	16.0	56.5	39.5	61	26.5	48	109	76.0	36	36	32	37	71.5	1015	DG105/20SHDOMDCF	420
25	16.0	56.5	38.0	62	30.0	54	116	76.0	46	36	32	42	74.0	1034	DG105/25SHDOMDCF	420
30	26.0	65.0	44.5	71	35.5	62	133	92.5	50	50	50	49	84.5	2344	DG105/30SHDOMDCF	420
38	26.0	65.0	42.0	73	41.0	72	145	92.5	60	50	50	57	89.0	2485	DG105/38SHDOMDCF	420

## DG 106-R Double elbow male stud ball bearing rotary union

Male BSPB thread - ED-seal (ISO 1179) / EO 24° cone end  
(Adjustable at male thread axis, consisting of DG105 + EGE)



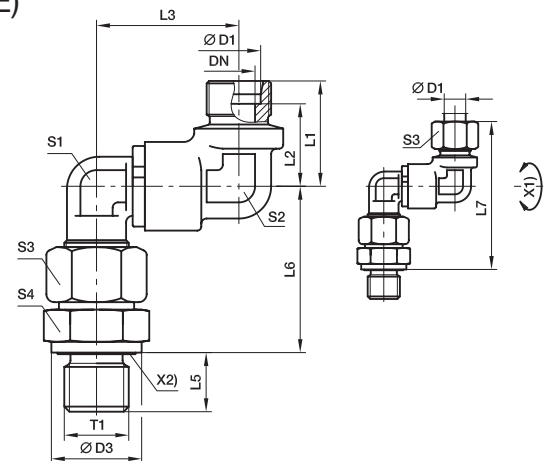
X1) Axis

X2) ED-sealing

D1	T1	DN	D3	L1	L2	L3	L5	L6	L7	S1	S2	S3	S4	Weight g/1 piece	Order code	PN bar
12	G 3/8 A	9.5	24	34	26.5	53.0	12	55.5	99	24	22	24	22	484	DG106/12SRHDOMDCF	420
16	G 1/2 A	9.5	27	34	25.5	53.0	14	61.5	105	24	24	30	27	547	DG106/16SRHDOMDCF	420
20	G 3/4 A	16.0	32	50	39.5	76.0	16	69.5	131	36	32	36	32	1288	DG106/20SRHDOMDCF	420
25	G 1 A	16.0	40	50	38.0	76.0	18	78.0	140	36	32	46	41	1528	DG106/25SRHDOMDCF	420
30	G 1 1/4 A	26.0	50	58	44.5	92.5	20	86.5	158	50	50	50	50	3004	DG106/30SRHDOMDCF	420
38	G 1 1/2 A	26.0	55	58	42.0	92.5	22	101.0	174	50	50	60	55	3419	DG106/38SRHDOMDCF	420

## DG 106-M Double elbow male stud ball bearing rotary union

Male metric thread - ED-seal (ISO 9974) / EO 24° cone end  
(Adjustable at male thread axis, consisting of DG105 + EGE)

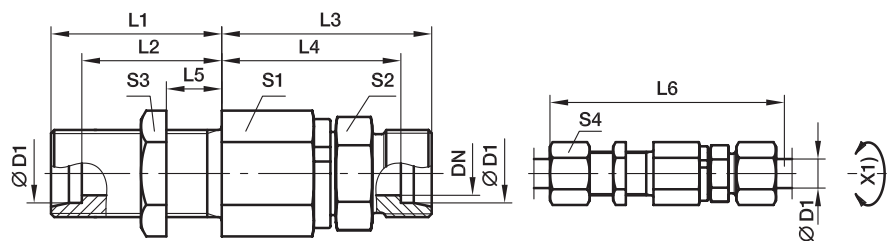


X1) Axis  
X2) ED-sealing

D1	T1	DN	D3	L1	L2	L3	L5	L6	L7	S1	S2	S3	S4	Weight g/1 piece	Order code	PN bar
12	M 18x1.5	9.5	24	34	26.5	53.0	12	55.5	99	24	22	24	22	495	DG106/12SMHDOMDCF	420
16	M 22x1.5	9.5	27	34	25.5	53.0	14	61.5	105	24	24	30	27	551	DG106/16SMHDOMDCF	420
20	M 27x2.0	16.0	32	50	39.5	76.0	16	69.5	131	36	32	36	32	1289	DG106/20SMHDOMDCF	420
25	M 33x2.0	16.0	40	50	38.0	76.0	18	78.0	140	36	32	46	41	1532	DG106/25SMHDOMDCF	420
30	M 42x2.0	26.0	50	58	44.5	92.5	20	86.5	158	50	50	50	50	3007	DG106/30SMHDOMDCF	420
38	M 48x2.0	26.0	55	58	42.0	92.5	22	101.0	174	50	50	60	55	3441	DG106/38SMHDOMDCF	420

## DG 107 Straight bulkhead ball bearing rotary union

EO 24° cone end / EO 24° cone end

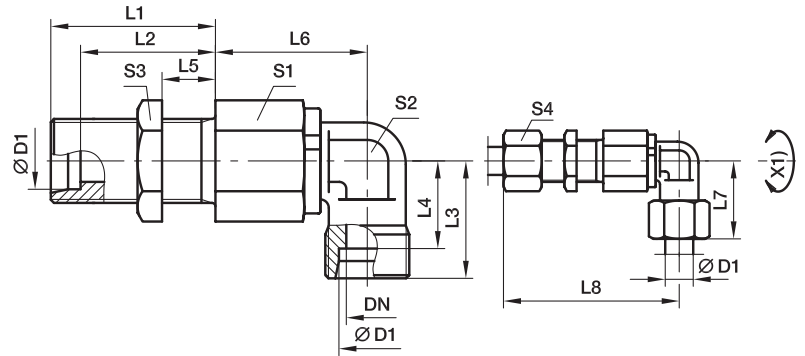


X1) Axis

D1	DN	T1	L1	L2	L3	L4	L5	L6	S1	S2	S3	S4	Weight g/1 piece	Order code	PN bar
06	5.0	M 14x1.5	23	16.0	49	42.0	05	87	22	17	19	17	134	DG107/06SHDOMDCF	420
08	5.0	M 16x1.5	23	16.0	49	42.0	05	87	22	17	22	19	143	DG107/08SHDOMDCF	420
12	9.5	M 20x1.5	23	15.5	60	52.5	05	100	30	24	27	24	291	DG107/12SHDOMDCF	420
16	9.5	M 24x1.5	26	17.5	60	51.5	05	105	30	27	32	30	328	DG107/16SHDOMDCF	420
20	16.0	M 30x2.0	39	28.5	76	65.5	15	137	41	36	41	36	710	DG107/20SHDOMDCF	420
25	16.0	M 36x2.0	42	30.0	78	66.0	15	144	41	41	46	46	847	DG107/25SHDOMDCF	420
30	26.0	M 42x2.0	44	30.5	89	75.5	15	159	60	46	50	50	1533	DG107/30SHDOMDCF	420
38	26.0	M 52x2.0	47	31.0	92	76.0	15	168	60	55	65	60	1930	DG107/38SHDOMDCF	420

## DG 108 Elbow bulkhead ball bearing rotary union

EO 24° cone end / EO 24° cone end

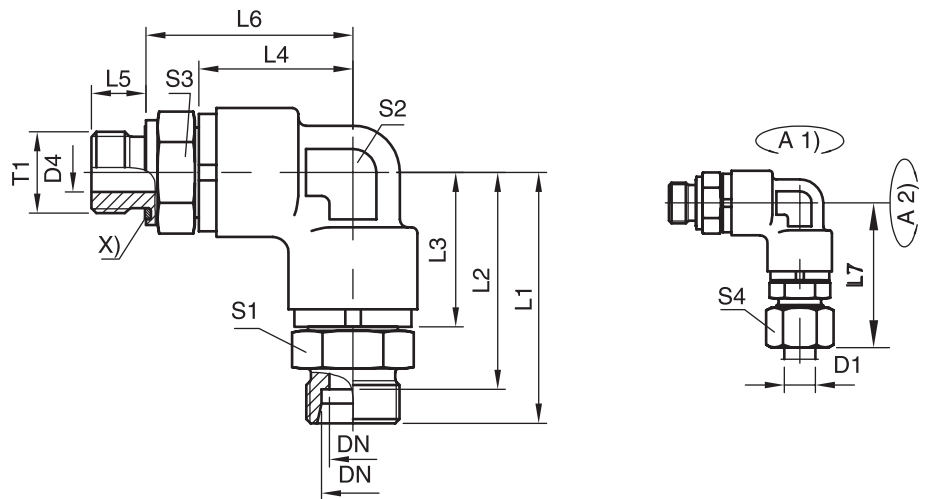


X1) Axis

D1	DN	T1	L1	L2	L3	L4	L5	L6	L7	L8	S1	S2	S3	S4	Weight g/1 piece	Order code	PN bar
06	5.0	M 14x1.5	23	16.0	23	16.0	05	39.5	31	70.0	22	17	19	17	154	DG108/06SHDOMDCF	420
08	5.0	M 16x1.5	23	16.0	23	17.0	05	39.5	32	70.0	22	17	22	19	166	DG108/08SHDOMDCF	420
12	9.5	M 20x1.5	23	15.5	29	21.5	05	51.0	38	83.0	30	22	27	24	333	DG108/12SHDOMDCF	420
16	9.5	M 24x1.5	26	17.5	33	24.5	05	49.0	43	85.0	30	22	32	30	354	DG108/16SHDOMDCF	420
20	16.0	M 30x2.0	39	28.5	37	26.5	15	67.0	48	117.5	41	36	41	36	904	DG108/20SHDOMDCF	420
25	16.0	M 36x2.0	42	30.0	42	30.0	15	65.0	54	119.5	41	36	46	45	999	DG108/25SHDOMDCF	420
30	26.0	M 42x2.0	44	30.5	49	35.5	15	82.5	62	140.0	60	50	50	50	1935	DG108/30SHDOMDCF	420
38	26.0	M 52x2.0	47	31.0	57	41.0	15	80.5	72	142.0	60	50	65	60	2351	DG108/38SHDOMDCF	420

## DG 208-R Double elbow male stud ball bearing rotary union

Male BSPB thread - ED-seal (ISO 1179) / EO 24° cone end



A1) Axis  
A2) Axis  
X) ED-Eolastic

D1	T1	DN	L1	L2	L3	L4	L5	L6	L7	S1	S2	S3	S4	Order code	PN bar
12	G 3/8 A	08	61.8	54.3	39.8	39.8	12	52.5	70.3	24	24	24	24	DG208/12SRHDOMDCF	420
16	G 1/2 A	12	64.5	56.5	39.8	39.8	14	53.0	73.5	27	24	27	30	DG208/16SRHDOMDCF	420
20	G 3/4 A	16	84.5	74.5	56.5	56.5	16	71.5	95.5	36	32	36	36	DG208/20SRHDOMDCF	420
25	G 1 A	16	89.5	77.5	56.5	56.5	18	74.5	100.5	41	32	41	46	DG208/25SRHDOMDCF	420
38	G 1 1/2 A	32	104.0	88.0	65.3	65.3	22	85.3	121.5	55	50	55	60	DG208/38SRHDOMDCF	420

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