Tube Fittings

for DIN 2353

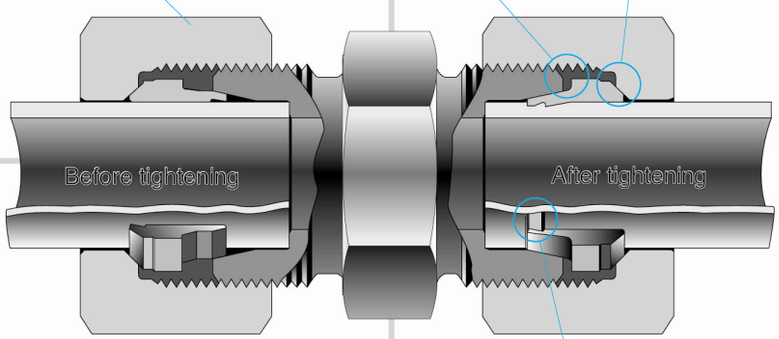
with LL, L, Series and S Series

Catalog No. H - 230TF
Jul. 2000

■ **Optimized Center Area :**
· Ideal contact angle.
· Cone stop limit for assembly preventing over tightening

■ **Variety of End Connection :**
· LL.L.S series tube connection.
· DIN/ISO parallel & taper thread.

■ **Optimized Shoulder Area :**
· Reduction of friction-force relief of the nut-bottom.
· End radius.
· Reinforced middle section.



■ **Optimized Cutting Area :**
· Optimized Cutting edge angle.
· Wedge-shaped cutting flank.
· Chip up setting groove.
· Not simuitaneously and stable area.

Features

- **Pressure** range up to 800 Bar at 120°C
- **Constructive** design of the cutting-geometry.
- **Little more effort.**
- **Force-**increase is perceptible
- **Secure holding-**function is guaranteed
- **Materials** are stainless steel, Carbon steel and Brass available

ISO 9001 CERTIFIED

Hy-Lok

HY-LOK CORPORATION

Information for DIN 2353

General

Based Standard DIN 3851 Hy-Lok Corp. DIN fittings have been improved to comply with current standard requirements. They conform to installation standard DIN 2353 and all of their constituent parts are interchangeable with competitor products provided they comply to the basic standard requirements as applicable.
Our production facilities have many years of experience in the manufacture of precision products which in conjunction with stringent quality control from the starting material up to the finished component determines the quality of Hy-Lok Corp. fittings.

Fitting materials

Hy-Lok Corp. Fittings are machined from drawn steel bar or steel forgings.
Materials according to DIN 3859 (technical specifications for tube fittings).
Nuts are either cold or hot pressed.
Fittings made of stainless steel.
X6CrNiMoTi17122 to DIN 17440, material No.1.4571, is also available for supply.

Caution! *The use of steel is permissible up to 120° C max. For any temperature higher than 120° C, use material 1.4571.*

Pressure and temperature load Capability

Pressure specification

The pressure specifications, given in our catalogue relate to steel fittings with a static load at a temperature up to 120° C and refer to

- Nominal pressure(PN) acc. to DIN 2401.
  The rated pressure has a safety factor of 4(DIN 3859)
- Permissible working pressure (PB) of the operating pressure acc. to DIN 2401. The security factor for PB is 2,5 of 1,5 respectively.

Pressure Ranges

Series	Steel / Brass*		1.4571 (SS316)	
	Size	Pressure	Size	Pressure
LL	4-8	100 bar	4-8	100 bar
L	6-18	315 bar	6-15	250 bar
	–	–	18-22	160 bar
	22-42	160 bar	28-42	100 bar
S	6-14	630 bar	6-14	630 bar
	16-30	400 bar	16-25	400 bar
	38	315 bar	30-38	315 bar

Brass* : Pressure range of brass should be adapted 30% below of the steel

Caution! *For certain types of fittings the nominal pressure differ from those shown above, in which case the ratings indicated for the individual types should be observed!*

Allowable working temperatures (TB)

A) For fittings materials

Material	Temperature
Steel	– 40° C up to + 120° C (DIN 3859)
Brass	– 60° C up to + 175° C
Stainless Steel	– 60° C up to + 400° C (DIN 17440)

Please refer to the information given in the section "Reduction of Pressure"

B) For seal - materials

Material	Temperature
NBR(e.g.Perbunan®)	– 35° C up to + 100° C
FPM(e.g.Viton®)	– 25° C up to + 200° C
PTFE(e.g.Teflon®)	– 60° C up to + 240° C

Caution! *If different fitting and sealing material are used, the lowest temperature as indicated for each material is applicable!*

Pressure reduction with temperature

The following reduction of pressure compared with the catalogue specification for higher temperatures.

Materials of fittings	Temperature range	Reduction of pressure
Steel	– 40° C up to + 120° C	–
Brass	– 60° C up to + 175° C	30%
1.4571	– 60° C up to + 20° C	–
1.4571	– 60° C up to + 50° C	4%
1.4571	+ 100° C	11%
1.4571	+ 200° C	20%
1.4571	+ 300° C	29%
1.4571	+ 400° C	33%

For different material of tubes and fittings. The tubes must be tested separately concerning the allowed temperature range and the necessary reduction of pressure.

Surface protection

All ranges fittings are galvanized and yellow passivated.
All weldable fittings are phosphated.
Nikel-plated on request for carbon steel.

Fluids

Hy-Lok Corp. DIN fittings are designed for the use of commercial hydraulic oils. If special fluids please contact our application engineers.

Ordering Information

Example 1. Tube to Tube Connection

DT	–	12 S	–	S316
①		② ③		⑥

Example 2. Tube to Thread Connection

DMC	–	10 L	–	02G ED	–	S316
①		② ③		④ ⑤		⑥

Example 3. Tube to Tube Port

DEW	–	16 S	–	S316
①		② ③		⑥

Example 4. Tube Port to Female Port

DMGE	–	16 S	–	04G ED	–	STEL
①		② ③		④ ⑤		⑥

Eample 5. Banjo Fitting

DWH	–	16 S	–	04G	–	S316
①		② ③		④		⑥

Example 6. Male / Female Adapter

MFAE	04G - 03G	–	STEL
①	④		⑥

① Name of Fitting : "Refer to Index"
② Tube O.D : See Tube O.D Designator
③ Series : See Series Designator
④ Thread Connection : See Thread Designator
⑤ Elastomer Seal : ED-Ring (Refer to seal materials)
⑥ Material : See Material Designator

• Tube O.D Designator

Tube O.D	4mm	6mm	8mm	·····	38mm	42mm
Identifier	04	06	08	·····	38	42

• Series Designator

Series	Very Light	Light	Heavy
Identifier	LL	L	S

• Thread Designator (Pipe Thread)

Nominal Size		1/8″	1/4″	3/8″	1/2″	3/4″	1″	1 1/4″	1 1/2″
Identifier	ANSI / ASME B1.20.1 NPT	01N	02N	03N	04N	06N	08N	10N	12N
	DIN-ISO228(DIN 259) BSP/Parallel	01G	02G	03G	04G	06G	08G	10G	12G
	DIN-2999 BSP Tapered	01R	02R	03R	04R	06R	08R	10R	12R

• Thread Designator (Metric Thread)

Metric Size		M8×1.0	M10×1.0	M12×1.5	M14×1.5	·····	M27×2.0	M33×2.0	M42×2.0	M48×2.0
Identifier	DIN 158 Taper (Keg)	M8K	M10K	M12K	M14K	·····				
	DIN-13 Parallel	M8	M10	M12	M12	·····	M27	M33	M42	M48

• Thread Designator (Unified)

Size	7/16-20UNF	9/16-18UNF	3/4-16UNF	7/8-14UNF	1 1/16-12UN	1 5/16-12UN	1 5/8-12UN
Identifier	04U	06U	08U	10U	12U	16U	20U

• Material Designator

Meterial	Carbon Steel (DIN 3859)	Stainless Steel		Brass
		DIN 17440 / 1.4571	ASTM A479 TYPE 316	
Identifier	STEL	4571	S316/316L	BRAS

Tubing guide

■ Seamless precision steel tube St 37.4

We recommend the use of seamless precision steel tubes with dimensions to DIN 2391, part 1, material St 37.4 to DIN 1630, type NBK. The following tube wall thickness are suitable for use:

Tube O.D (D)	Tolerance	Wall * Thickness (t)	Weight	Design Pressure DIN 2413	
				I	III
mm	mm	mm	kg/m	bar	bar
4	±0.1	0.5	0.047	313	274
4		0.75	0.060	409	391
4		1	0.074	522	500
6	±0.1	●0.75	0.103	333	289
6		1	0.123	389	372
6		1.5	0.166	549	526
6		2	0.197	692	662
6		2.25	0.208	757	725
8	±0.1	1	0.173	333	288
8		1.5	0.240	431	412
8		2	0.296	549	526
8		2.5	0.339	658	630
10	±0.1	1	0.222	282	248
10		1.5	0.314	373	357
10		2	0.395	478	458
10		2.5	0.462	576	551
10		3	0.518	666	638
12	±0.08	●1	0.271	235	209
12		1.5	0.389	353	303
12		2	0.493	409	391
12		2.5	0.586	495	474
12		3	0.606	576	551
12		3.5	0.734	651	624
15	±0.08	●1	0.345	188	171
15		1.5	0.499	282	248
15		2	0.641	336	321
15		2.5	0.771	409	391
15		3	0.888	478	458
16	±0.08	●1	0.370	176	160
16		1.5	0.536	264	234
16		2	0.691	353	303
16		2.5	0.832	386	370
16		3	0.962	452	433
18	±0.08	●1	0.419	157	143
18		1.5	0.610	235	209
18		2	0.789	313	273
18		2.5	0.956	348	333
18		3	1.110	409	391

Tube O.D (D)	Tolerance	Wall* Thickness (t)	Weight	Design Pressure DIN 2413	
				I	III
mm	mm	mm	kg/m	bar	bar
20	±0.08	●1.5	0.684	212	191
20		2	0.888	282	249
20		2.5	1.08	353	303
20		3	1.26	373	357
20		3.5	1.424	426	408
20		4	1.578	478	458
22	±0.08	●1	0.518	128	118
22		1.5	0.758	192	174
22		2	0.986	256	227
22		2.5	1.202	320	278
22		3	1.406	343	328
25	±0.08	2	1.134	226	201
25		2.5	1.387	282	248
25		3	1.628	338	292
25		4	2.072	394	378
25		4.5	2.275	437	418
25		5	2.466	478	458
28	±0.08	1.5	0.980	151	139
28		2	1.282	201	181
28		2.5	1.572	252	223
28		3	1.850	302	264
28		4	2.368	357	342
28		5	2.836	434	415
30	±0.08	●2	1.381	188	171
30		2.5	1.695	235	210
30		3	2.00	282	248
30		4	2.57	336	321
30		5	3.08	409	391
35	±0.15	2	1.63	161	147
35		2.5	2.00	201	181
35		3	2.37	242	215
35		4	3.06	322	280
35		5	3.69	357	342
35		6	4.29	419	401
38	±0.15	●2.5	2.189	186	168
38		3	2.589	223	200
38		4	3.35	297	260
38		5	4.07	332	318
38		6	4.74	390	373
38		7	5.35	446	427
42	±0.2	●2	1.973	134	124
42		3	2.89	201	181
42		4	3.75	269	237

●Reinforce tube inserts are recommended where thinwalled tubes are subject to severe strains.
* Permissible variation in wall thickness (DIN 2391)

■ Calculation Pressures :

- Calculated pressures to DIN 2413 part I for primarily static load conditions.
- Yield point (K) : 235 N / mm^2 (to DIN 1630)
- Safety factor (S) : 1.5
- Allowance factor (c)

$$P = \frac{20 \cdot K \cdot t \cdot c}{S \cdot D} (bar)$$

- Calculated pressures to DIN 2413 PART III for dynamic load conditions
- Yield point (K) : 225 N/mm^2 (DIN 2413 4.2.8)
- Safety factor (S) : 1.5

$$P = \frac{20 \cdot K \cdot t \cdot c}{S \cdot (D + t \cdot c)} (bar)$$

Factor for consideration of wall thickness divergence for static and dynamic stress

Tube Range	4mm/5mm	6mm/8mm	Larger
Factor(c)	0.8	0.85	0.9

■ Note

For a diameter ratio of O.D / I.D > 1.35,calculation made to DIN 2413 part III and based on a pulsating fatigue limit of 235 N / mm^2

■ Temperature range : - 40° C to +120° C without reduction in pressure.

■ **Seamless precision stainless steel 1.4571**

Stainless steel tubes (e.g. 1.4571), code X6CrNiMoTi 17122, must be cold-drawn and seamless, heat - treated without formation of scales, type m to Din 17458, provide tolerances to DIN 2391, Part 1.
The following tube wall thickness are suitable for use :

Tube O.D (D)	Tolerance	Wall * Thickness (t)	Weight	Design Pressure DIN 2413	
				Ⅰ	Ⅲ
mm	mm	mm	kg/m	bar	bar
4	±0.1	0.75	0.061	391	376
4		1	0.075	500	480
6	±0.1	1	0.125	372	357
6		1.5	0.168	526	505
6		2	0.200	662	637
6		2.25	0.211	725	696
8	±0.1	1	0.175	347	277
8		1.5	0.244	412	396
8		2	0.300	526	505
8		2.5	0.344	630	604
10	±0.1	1	0.225	294	238
10		1.5	0.319	357	343
10		2	0.401	458	439
10		2.5	0.469	551	529
10		3	0.525	638	612
12	±0.08	●1	0.275	245	201
12		1.5	0.394	368	291
12		2	0.501	391	376
12		2.5	0.594	474	455
12		3	0.615	551	529
12		3.5	0.744	624	599
15	±0.08	1.5	0.507	294	238
15		2	0.651	321	309
15		2.5	0.782	391	376
15		3	0.901	458	439
16	±0.08	2	0.701	368	291
16		2.5	0.845	370	355
16		3	0.977	433	416
18	±0.08	●1.5	0.620	245	201
18		2	0.801	327	262
18		2.5	0.967	333	320
18		3	1.126	391	376

Tube O.D (D)	Tolerance	Wall * Thickness (t)	Weight	Design Pressure DIN 2413	
				Ⅰ	Ⅲ
mm	mm	mm	kg/m	bar	bar
20	±0.08	2.5	1.095	368	291
20		3	1.277	357	343
20		3.5	1.443	408	392
20		4	1.600	458	439
22	±0.08	●2	1.002	267	218
22		2.5	1.220	334	267
22		3	1.426	328	315
25	±0.08	●2	1.152	235	193
25		2.5	1.408	294	238
25		3	1.635	353	281
25		4	2.092	378	363
25		4.5	2.307	418	402
25		5	2.501	458	439
28	±0.08	2	1.302	210	174
28		2.5	1.594	263	214
28		3	1.874	315	253
28		4	2.402	342	328
28		5	2.876	415	399
30	±0.08	3	2.028	294	238
30		4	2.605	321	309
30		5	3.400	391	376
35	±0.15	2	1.644	168	141
35		2.5	2.018	210	174
35		3	2.392	252	206
35		4	3.086	336	269
35		5	3.742	342	328
35		6	4.351	401	385
38	±0.15	4	3.405	309	249
38		5	4.131	318	305
38		6	4.807	373	358
38		7	5.426	427	410
42	±0.2	3	2.930	210	174
42		4	3.798	280	227

●Reinforce tube inserts are recommended where thin-walled tubes are subject to severe strains.
* Permissible variation in wall thickness (DIN 2391)

■ Calculation Pressures :

- Calculated pressures to DIN 2413 part Ⅰ for primarily static load conditions
- Yield point (K) : 245 N / mm² (to DIN 17458)
- Safety factor (S) : 1.5
- Allowance factor (c)

$$P = \frac{20 \cdot K \cdot t \cdot c}{S \cdot D} (bar)$$

- Calculated pressures to DIN 2413 part Ⅲ for dynamic load conditions
- Yield point (K) : 216N/mm²(assumed value)
- Safety factor (S) : 1.5

$$P = \frac{20 \cdot K \cdot t \cdot c}{S \cdot (D + t \cdot c)} (bar)$$

Factor for consideration of wall thickness divergence for static and dynamic stress

Tube Range	4mm/5mm	6mm/8mm	Larger
Factor(c)	0.8	0.85	0.9

■ Note
For a diameter ratio of O.D/I.D>1.35,calculation made to DIN 2413 part Ⅲ and based on a pulsating fatigue limit of 225 N/mm²

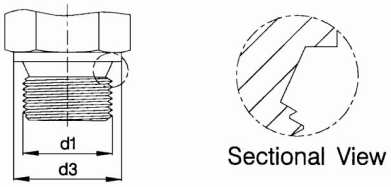
■ Temperature range : − 60° C to +400° C
Reduction in pressure for higher temperatures (See page 1)

Stud Ends & Tapped Hole Forms for tube Fittings

This standard specifies dimensions for stud ends and tapped holes with metric fine pitch thread and pipe thread for use with compression fittings, valves and screw plugs, general outlay of types.

■ Forms of Stud Ends

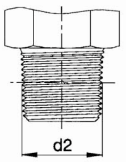
Form A (DIN 3852 Part 1+2)
with sealing by washer



Form B (DIN 3852 Part 1+2)
with sealing by compression
against face of body



Form C (DIN 3852 Part 1+2)
with sealing in tapered thread

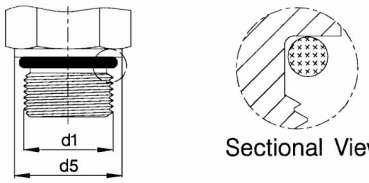


Metric (keg) DIN 158
B.S.P (keg) DIN 2999
NPT (keg) ANSI/ASME
B1.20.1-1983

Form E (DIN 3852 Part 11)
with sealing by DIN 3869 ring seals (* ED-Ring)



Form F (DIN 3852 Part 3)
with sealing by * O-Ring



Thread size for Form A,B and E,F stud ends d_1	Thread size for Form C stud ends d_2	d_3	d_4 $^{0}_{-0.2}$	d_5 $^{\pm 0.1}$
M8×1.0	M 8×1.0 keg.	–	–	10.9
M10×1.0	M10×1.0 keg.	14	13.9	12.9
M12×1.5	M12×1.5 keg.	17	16.9	16.9
M14×1.5	M14×1.5 keg.	19	18.9	18.9
M16×1.5	M16×1.5 keg.	21	21.9	20.9
M18×1.5	M18×1.5 keg.	23	23.9	22.9
M20×1.5	M20×1.5 keg.	25	25.9	24.9
M22×1.5	M22×1.5 keg.	27	26.9	26.9
M26×1.5	–	31	31.9	30.9
M27×2.0	–	32	31.9	31.9
M33×2.0	–	39	39.9	37.9
M42×2.0	–	49	49.9	47.9
M48×2.0	–	55	54.9	54.9
G 1/8	1/8 NPT	14	13.9	–
G 1/4	1/4 NPT	18	18.9	–
G 3/8	3/8 NPT	22	21.9	–
G 1/2	1/2 NPT	26	26.9	–
G 3/4	3/4 NPT	32	31.9	–
G 1	1 NPT	39	39.9	–
G 1 1/4	1 1/4 NPT	49	49.9	–
G 1 1/2	1 1/2 NPT	55	54.9	–
7/6-20UNF	R 1/8 keg.	–	–	14.4
9/6-18UNF	R 1/4 keg.	–	–	17.6
3/4-16UNF	R 3/8 keg.	–	–	22.3
7/8-14UNF	R 1/2 keg.	–	–	25.5
1 1/6-12UN	R 3/4 keg.	–	–	31.9
1 5/6-12UN	R 1 keg.	–	–	38.2
1 5/8-12UN	R 1 1/4 keg.	–	–	47.7
–	R 1 1/2 keg.	–	–	–

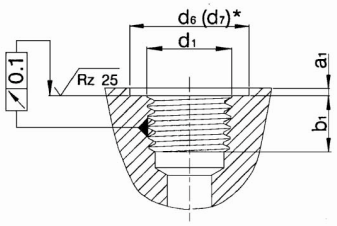
* ED-Ring & O-Ring Seals made of NBR Standard(- 20° C to 90° C)
Available made of Viton Upon Request(- 20° C to 200° C)

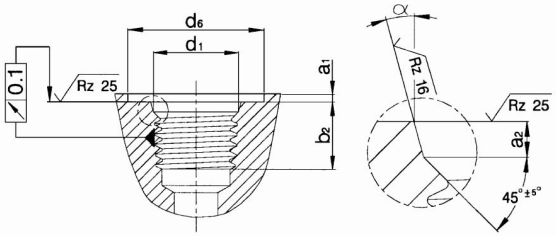
■ Forms of Tapped Holes

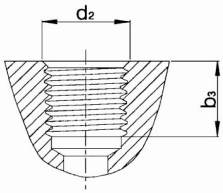
Form X (DIN 3852 Part 1+2)
for parallel Stud Ends. (Form A,B)
* d7 is for Stud Ends Form E

Form W (DIN 3852 Part 3)
for Stud Ends with O-Ring. (Form F)

Form Z (DIN 3852 Part 1+2)
for tapered thread Stud Ends.







Thread size for Form X.W Tapped Holes d_1	Thread size for Form Z Tapped Holes d_2	d_6 min	d_7	a_1 max	a_2 $^{+0.4}_{0}$	b_1 min	b_2 min	b_3 min	$\alpha^{\pm 1°}$
M 8×1.0	M8×1.0 keg.	13	–	1.0	1.6	–	10.0	5.5	12
M10×1.0	M10×1.0 keg.	15	15	1.0	1.6	8	10.0	5.5	12
M12×1.5	M12×1.5 keg.	18	18	1.5	2.4	12	11.5	8.5	12
M14×1.5	M14×1.5 keg.	20	20	1.5	2.4	12	11.5	8.5	15
M16×1.5	M16×1.5 keg.	22	23	1.5	2.4	12	13.0	8.5	15
M18×1.5	M18×1.5 keg.	24	25	2.0	2.4	12	14.5	8.5	15
M20×1.5	M20×1.5 keg.	26	27	2.0	2.4	14	14.0	10.5	15
M22×1.5	M22×1.5 keg.	28	28	2.5	2.4	14	15.5	10.5	15
M26×1.5	–	32	33	2.5	3.1	16	16.0	–	15
M27×2.0	–	33	33	2.5	3.1	16	19.0	–	15
M33×2.0	–	40	41	2.5	3.1	18	19.0	–	15
M42×2.0	–	50	51	2.5	3.1	20	19.5	–	15
M48×2.0	–	56	56	2.5	3.1	22	22	–	15
G 1/8	1/8 NPT	15	15	1.0	–	8	–	6.9	–
G 1/4	1/4 NPT	19	20	1.5	–	12	–	10.0	–
G 3/8	3/8 NPT	23	23	2.0	–	12	–	10.3	–
G 1/2	1/2 NPT	27	28	2.5	–	14	–	13.6	–
G 3/4	3/4 NPT	33	33	2.5	–	16	–	14.1	–
G 1	1 NPT	40	41	2.5	–	18	–	16.8	–
G 1 1/4	1 1/4 NPT	50	51	2.5	–	20	–	17.3	–
G 1 1/2	1 1/2 NPT	56	56	2.5	–	22	–	17.3	–
7/16-20UNF	R 1/8 keg.	21	–	1.6	2.4	–	11.5	5.5	12
9/16-18UNF	R 1/4 keg.	25	–	1.6	2.5	–	12.7	8.5	12
3/4-16UNF	R 3/8 keg.	30	–	2.4	2.5	–	14.3	8.5	15
7/8-14UNF	R 1/2 keg.	34	–	2.4	2.5	–	16.7	10.5	15
1 1/16-12UN	R 3/4 keg.	41	–	2.4	3.3	–	19.0	13.0	15
1 5/16-12UN	R 1 keg.	49	–	3.2	3.3	–	19.0	16.0	15
1 5/8-12UN	R 1 1/4 keg.	58	–	3.2	3.3	–	19.0	17.0	15
-	R 1 1/2 keg.	–	–	–	–	–	–	17.0	–

Tightening Torques for Studs

■ Recommend tightening torques MA
The table below showns the Nm value for studs with metal seal, form B, DIN 3852 or with captive sealing (ED-Ring) to avoid leakings.

■ Sealing of taper thread
Taper threads are not self-sealing. To achieve a leakproof seals, an additional sealant is necessary.
A well-established sealing-medium is a PTFE-tape (e.g.Teflon)

■ Note :
The quoted figures relate to fittings out of steel(galvanized) and to counter parts made of steel.
( ) * These figured relate to studs with captive sealing ED-Ring. For the Male/Female adapters(MFAD/MFAE), there apply the tightening torques for series " S "

Series	Tube O.D	Pipe Thread	MA (Nm)	Metric Thread ISO	MA (Nm)
L	6	G 1/8A	25	M10×1	25
	8	G 1/4A	50	M12×1.5	30
	10	G 1/4A	50	M14×1.5	50
	12	G 3/8A	80	M16×1.5	80
	15	G 1/2A	160	M18×1.5	90
	18	G 1/2A	105	M22×1.5	160
	22	G 3/4A	220	M26×1.5	285
	28	G 1 A	370	M33×2.0	425
	35	G 1 1/4A	600	M42×2.0	600
	42	G 1 1/2A	800	M48×2.0	800
S	6	G 1/4A	60	M12×1.5	35
	8	G 1/4A	60	M14×1.5	60
	10	G 3/8A	110	M16×1.5	95
	12	G 3/8A	110	M18×1.5	120
	14	G 1/2A	170	M20×1.5	170
	16	G 1/2A	140	M22×1.5	190
	20	G 3/4A	320	M27×2.0	320
			(250) *		(250) *
	25	G 1 A	380	M33×2.0	500
	30	G 1 1/4A	600	M42×2.0	600
	38	G 1 1/2A	800	M48×2.0	800

Assembly Instruction for DIN 2353

This assembly instruction applicable to DIN 2353 fittings shows suitable make-up of fittings into seamless pipe in accordance with DIN 3859.

- The design inculding form A and form B for DIN 3861.
- Introducing how to install steel pipe of DIN 2391 part 1 and part 2.

3 Methods might be employed for assembling -

- Assembly by direct fitting body.
- Assembly by using pre-assembly tool.
- Assembly of standpipe & cone fitting with O-ring

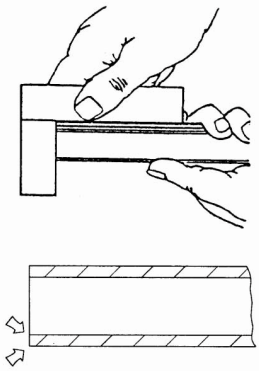
■ *Assembly of cutting ring fittings in direct fitting body.*

1.0 Saw the tube at right angle. An angular offset of 1/2° in relation to the tube axis is permissible.

1.1 After clean, lightly deburr tube ends at the inside and autside edge.

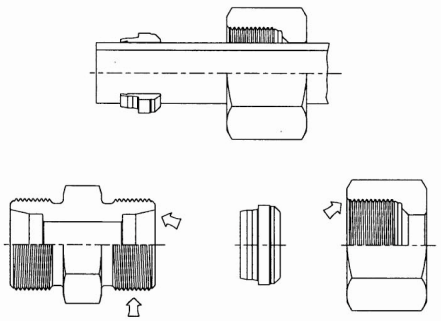
0.2

1.2 Don't use a tube cutter because this would cause formation of considerable burrs and an angular cut.
Use sawing machine or device instead

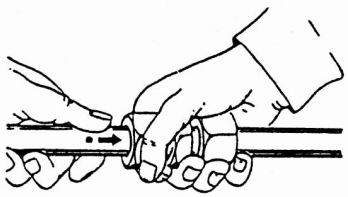


2.0 Lubricate thread and inside of fitting body also cutting ring and thread of nut.
Don't use grease.

2.1 Place nut and cutting ring on tube shown.
Ensure cutting ring and nut are facing the right way.

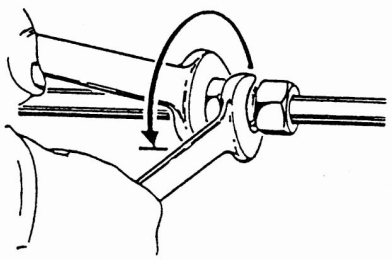


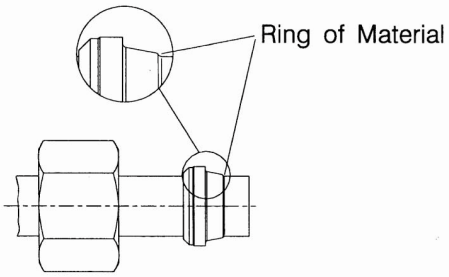
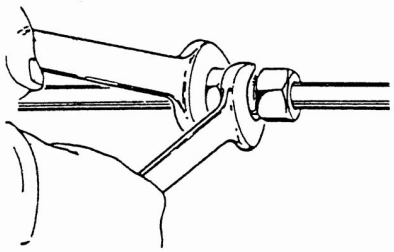
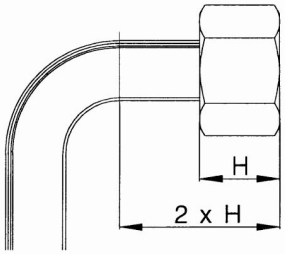
3.0 Press tube into fitting body, up to tube abutment, then hand-tighten the nut.



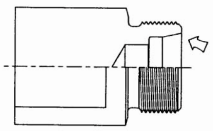
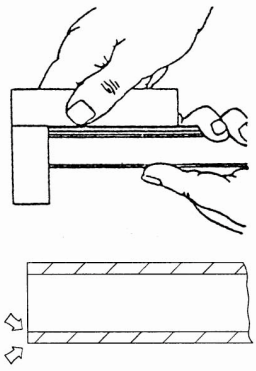
4.0 Make sure the nut is in hand tight position, then the 1 1/2 turns with wrench by holding fitting body with a second wrench. (Never turn fitting body, hold body and turn nut)

Caution!
Any deviating number of tighting turns reduces the nominal pressure and the service life of the fitting and may cause leakages or slipping of the tube.

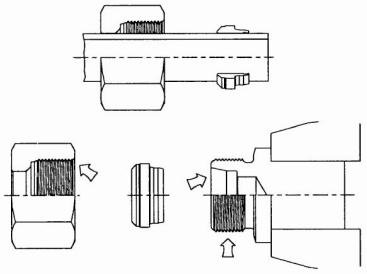


5.0 Check penetration of cutting edge. A visible ring of material should fill the space in front of the cutting ring and face. Cutting ring may turn on tube, but should not be capable of axial displacement.	
6.0 Each time the fitting is disassembled, the nut must be re-tightened firmly using the same toque as reguired for final assembly.	
7.0 Minimum length of straight tube and for tube bends, up to start of the bending radius must be at least twice(2 × H) the nut length(H)	

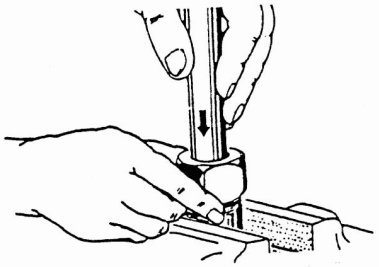
■ *Assembly of cutting ring fittings in pre-assembly tool.*

1.0 In order to ensure positive assembly HMIC DIN fittings should always be pre-assembled in on oiled pre-assembly tool. For direct assembly, torque-controled assembly or mechinical pre-assembly, which are also possible. Please refer to separete assembly instructions.	
2.0 Saw the tube at right angle. An angular offset of 1/2° in relation to the tube axis is permissible. 2.1 After clean, lightly deburr tube ends at the inside and outside edge. 0.2 2.2 Don't use a tube cutter because this would cause formation of considerable burrs and an angular cut. Use sawing machine or device instead.	

3.0 Lubricate thread and inside of fittings body also cutting ring and thread of nut.
Don't use grease.
3.1 Place nut and cutting ring on tube shown.
Ensure cutting ring and nut are facting the right away.

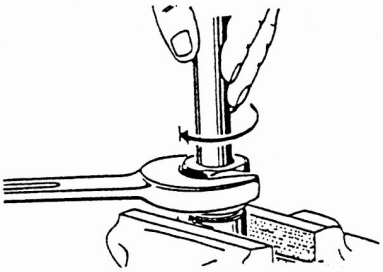


4.0 Press tube into fitting body, up to tube abutment, then hand-tighten the nut.

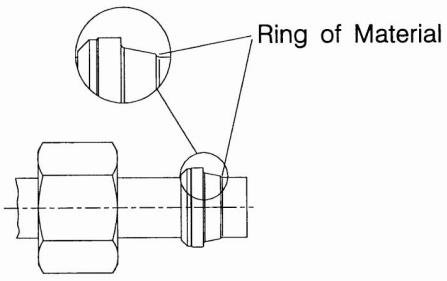


5.0 Make sure the nut is in hand tight position, then the 1 1/4 turns with wrench by holding fitting body with a second wrench(Never turn fitting body, hold body and turn nut)

Caution!
Application of deviating numbers of tightening turns reduces the nominal pressure rating and the life of the fitting which cause leakage or slipping of the tube.

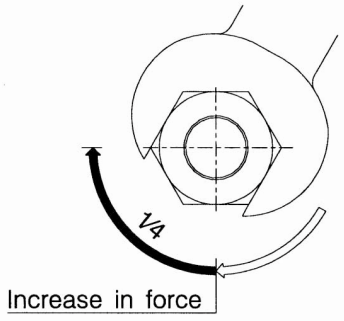


6.0 Check penetration of cutting edge.
A visible ring of material should fill the space in front of the cutting ring and face.
Cutting ring may turn on tube but should not be capable of axial displacement.

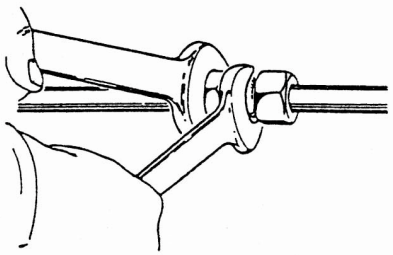


7.0 Tighten nut until a noticeable increase in force is reguired.
Beyond this point, tighten the nut by 1/4 turn with wrench for final assembly.
Hold fitting body by means of a wrench.
7.1 With unfavourable mounting conditions and great tube dimensions, final assembly must be completed in via with the fitting body.

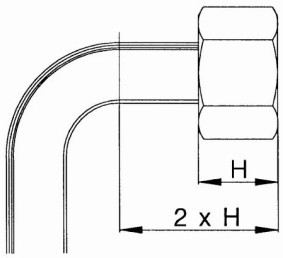
Caution!
Any deviating number of tightening turns reduces the nominal pressure and the service life of the fitting and may cause leakages or slipping of the fitting.



8.0 Each time the fitting is disassembled, the nut must be re-tightened firmly using the same toque as reguired for final assembly.



9.0 Minimum length of straight tube and for tube bends, up to start of the bending radius must be at least twice(2× H) the nut length(H)

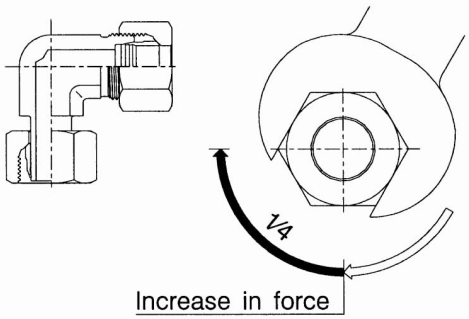


■ *Assembly instruction for standpipe & cone fitting with O-Ring.*

1.0 Standpipes are generally supplied with pre-assembled cutting ring
Tighten the nut 1/4 turn with wrench beyond the point of a noticeable increase in force.
Hold fitting body firmly by means of wrench

1.1 With unfavourable mounting conditions and great tube dimensions, final assembly must be completed in a vice with the fitting body to be subsequently installed.

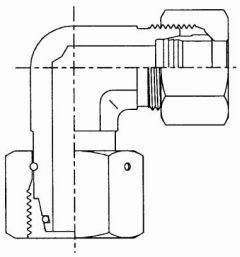
Caution!
Any deviating number of tightening turns reduces the nominal pressure and the service life of the fitting and may cause leakages or slipping of the fitting.



2.0 Oil O-ring.
Tighten nut 1/4 of a turn beyond the point of a noticeable increase in force.
Hold fitting body firmly by means of wrench.

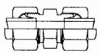
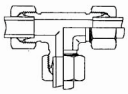
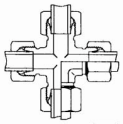
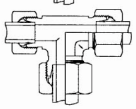
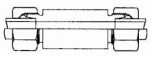
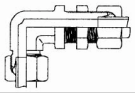
2.1 With unfavourable mounting conditions and great tube dimensions, final assembly must be completed in a vice with the fitting body to be subsequently installed.

Caution!
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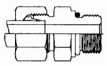
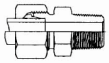
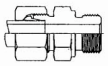
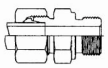
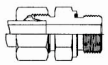
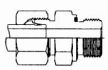
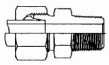


Index & Illustration Chart for DIN 2353

Tube To Tube

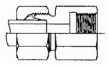
		Page	EO	EMB	VOLZ	VOSS	WALPRO
	**DU** Straight Union	17	G	E	G-V	111... 112...	P-GV
	**DL** Union Elbow	17	W	F	W-V	119... 120...	P-WV
	**DUR** Reducing Union	18	GR		GR-V		P-GV
	**DT** Union Tee	19	T	G	T-V	133... 134...	P-TV
	**DC** Union Cross	19	K	H	K-V	135... 136...	P-KV
	**DTR** Reducing Tee	20	TR				P-TV
	**DBU** Bulkhead Union	21	SV	K	GS-V	137...	P-GSV
	**DBUW** Welding Bulkhead Union	21	ESV	N	ES-V	141...	P-ESV
	**DBL** Bulkhead Union Elbow	22	WSV	L	WS-V	138...	P-WSV

Tube To Female Port

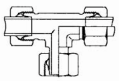
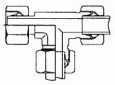
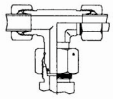
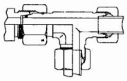
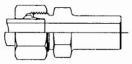
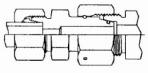
		Page					
	**DOM-U / M** Male Connector (UNF / Metric) with O-Ring	23	GE-UNF / UN GEO			182...	P-GEV..U P-GEV..M-FO.F
	**DMC-R** Male Connector (BSP Tapered)	24	GE-R	AP-R	GE-V..RK	103...104...	P-GEV..RK
	**DMC-G** Male Connector (BSP Paralled)	24	GE-R	A-R	GE-V..R	110...	P-GEV..R
	**DMC-M** Male Connector (Metric)	26	GE-M	A-M	GE-V..M	109...	P-GEV-M
	**DMC-GED** Male Connector (BSP Paralled) with ED-Ring	27	GE-R-ED	A-RWD	GE-V..RWD	184...	P-GEV..R-WD
	**DMC-MED** Male Connector (Metric) with ED-Ring	28	GE-M-ED	A-MWD	GE-V..MWD	184...	P-GEV..M-WD
	**DMC-N** Male Connector (NPT)	29	GE-NPT	A/NPT	GE-V..NPT	105...106	P-GEV..NPT
	**DLM-R / M** Male Elbow (BSP Tapered/Metric)	30	WE-R -M	B-R -M	WE-V..R ..M	115...116... 113...114...	P-WEV..RK ..MK

■ Illustration chart for reference only

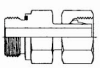
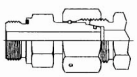
Index & Illustration Chart for DIN 2353

Tube To Male Thread	Page	EO	EMB	VOLZ	VOSS	WALPRO
	**DFC-G / M** ..... 31 Female Connector (BSP Paralled / Metric)	GAI-R -M	AL-R -M	GAIV..R ..M	144... 143...	P-GAV..R ..M

Tube To Tube Port(Adjustable Fittings)

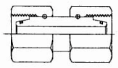
	**DLA** ..... 32 Adjustable Elbow	EVW	vb	EW-V	158...	P-EWV-SV
	**DBTA** ..... 33 Adjutable Branch Tee	EVT	vc	ET-V	160...	P-ETV-SV
	**DRTA** ..... 34 Adjustable Run Tee	EVL	vd	EL-V	162...	P-ELV-SV
	**DEW** ..... 35 Swivel Adjustable Elbow	EW	VBDKO	EWVD		P-EWVD
	**DET** ..... 36 Swivel Adjustable Branch Tee	ET	VCDKO	ETVD		P-ETVD
	**DEL** ..... 37 Swivel Adjustable Run Tee	EL	VDDKO	ELVD		P-ELVD
	**DKOR** ..... 38 Stand Pipe Reducer	KOR	RL,RS			
	**DR** ..... 39 Reducer			KOR-V	148...78	P-REDV-SV
	**DRED** ..... 40 Swivel Reducing Tube Adaptor	RED	RLDKO RSDKO	REDV		P-REDVD

Tube Port To Female Port

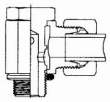
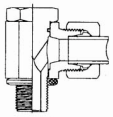
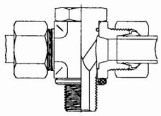
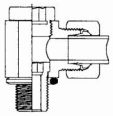
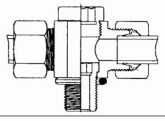
	**DA-GED / MED** ..... 41 Adaptor (BSP Paralled / Metric) with ED-Ring	EVGE-R-ED -M-ED	VA-Rwd -Mwd	EG-V..RWD ..MWD	177... 174...	P-EGES..R-WD-SV ..M-WD-SV
	**DEGE-G / M** ..... 42 Swivel Adaptor (BSP Paralled / Metric) with ED-Ring	EGE-R-ED -M-ED	VADKO-Rwd Mwd	EGVD..RWD ..MWD		EGESD..R-WD ..M..WD

■ Illustration chart for reference only

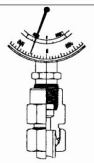
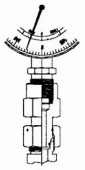
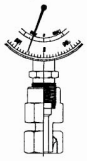
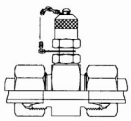
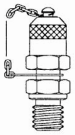
Index & Illustration Chart for DIN 2353

Tube Port to Tube Port		Page	EO	EMB	VOLZ	VOSS	WALPRO
	**DUE** Swivel Union	43		EDKO	EDKV		SNV

Banjo Fittings

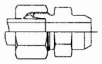
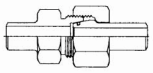
	**DSWVE-G / M** Banjo Fitting (BSP Parallel/Metric)	44	SWVE-R -M	SBD-R -M		152.../153... 150.../151...	
	**DWH-G / M** High Pressure Banjo Fitting (BSP Parallel/Metric)	45		SBE-R -M	EWHV-...R -...M	157... 155...	P-RSWV..R ..M
	**DTH-G / M** High Pressure Banjo Fitting (BSP Parallel/Metric)	46			ETHV-...R -...M		P-RSTV..R ..V
	**DSVW-G / M** Throttlefree Banjo Fitting (BSP Parallel/Metric)	47	DSVW-R -M	SB-R -B			
	**DSVT-G / M** Throttlefree Banjo Fitting (BSP Parallel/Metric)	48	DSVT-R -M	SG-R -M			

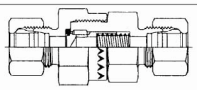
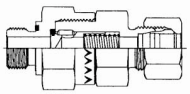
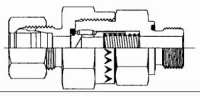
Gauge Connector & Test Couplings

	**DGC-G** Pressure Gauge Connector (BSP Parallel)	49	MAV	O	MA-V...R	142...	V-MAV...R
	**DGE-G** Swivel Gauge Adaptor (BSP Parallel)	49	MAVE	VODKO	MAVD...R		EMASD...
	**DGA-G** Gauge Adaptor (BSP Parallel)	49			MAEV...R		P-EMAS...R-SV
	**DGMA** Tee Test Coupling with Threaded Connection M16	50	GMA3				
	**DEMA3** Test Coupling with Threaded Connection M16	50	EMA3				

■ Illustration chart for reference only

Index & Illustration Chart for DIN 2353

Weld Fittings	Page	EO	EMB	VOLZ	VOSS	WALPRO
	**DAS** ..... 51 Welding Connector	AS	V	GAS-V	139...	P-ASV
	**DASK** ..... 51 Welding Connector	ASK	ESNO	ASKK..OD		
	**DAK** ..... 52 Welding Nipple	SKA	SNO	SK-A..OD	070...	SN
	**DAKR** ..... 52 Reducing Welding Nipple	SKAR	SNR			

Non Return Valves						
	**DCVU** ..... 54 Non Return Valves	RHD	RD	RS-V	600...	P-RV
	**DCV-GED-L/S** ..... 55 MED-L/S Non Return Valves	RHV-R-ED -M-ED	RV-Rwd -Mwd	RSVV-..RWD -..MWD	602... 601...	P-RVV...R-WD ...M-WD
	**DCV-L/S-GED** ..... 56 **L/S-MED** Non Return Valves	RHZ-R-ED -M-ED	RZ-Rwd Mwd	RSVZ..RWD ..MWD	604... 603...	P-RVZ...R-WD ...M-WD

Male & Female Adaptors						
	**MFAD** ..... 57 Male Female Adaptor	RI	ri	RIAS	149...	RED
	**MFAE** ..... 57 Male Female Adaptor	RI	RI	RIBS	149...	RED
	**MFAD-ED** ..... 58 Male Female Adaptor with ED-Ring	RI-ED	ri-wd	RIAS..WD		RED...WD
	**MFAE-ED** ..... 58 Male Female Adaptor with ED-Ring	RI-ED	RI-wd	RIBS..WD		RED...WD

Plugs and caps						
	**DVSTI-GED/MED** ..... 59 Blanking Plug (BSP Paralled/Metric) with ED-Ring for port	VSIT R-ED M-ED	VSCH-Rwd -Mwd	VSCH..WD	189...	VS-R-WD -M-WD
	**DVSTI** ..... 59 Blanking Plug(Metric) with O-Ring	VSIT M-OR				
	**DVKA** ..... 60 Blanking Plug with O-Ring	VKA	STO-O	VSTO...OD		VS...
	**DCA** ..... 60 Tube Cap	ROV	VSCHK	EVSV		

■ Illustration chart for reference only

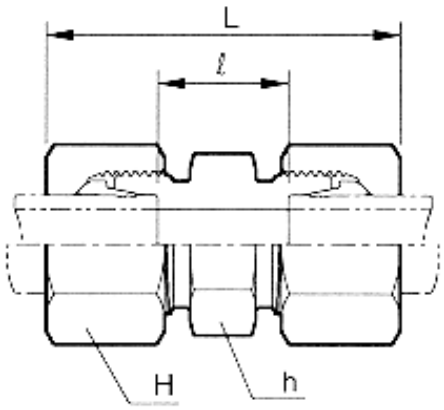
Index & Illustration Chart for DIN 2353

Spare Parts		EO	EMB	VOLZ	VOSS	WALPRO
	**DIL** ..... 61 Tube Insert	VH	VSH	VS-H	020...	EH
	**DLN** ..... 61 Bulkhead Lock Nut	GM	GM	G-M	080...	
	**DKA** ..... 62 Sealing Ring for DWH / DTH and DSWVE	DKA	DKA	DKRA	080...	
	**DKAZ** ..... 62 Sealing Ring for DSVW and DSVT	DKAZ			081...	
	**DKI** ..... 62 Sealing Ring for DGC/DGE and DGA	DKI	DKI	DKRI	080...	DKR
	KP-B-S ..... 62 ED-Ring	ED		WD-R		
	**KP-B-DS** ..... 62 O-Ring	OR		OD-R		
	**DN** ..... 63 Nut	M	m	Ü-M	004	M
	**DS** ..... 63 Cutting Ring	DPR	s	S-DR	007...	S-R P-R

■ Illustration chart for reference only

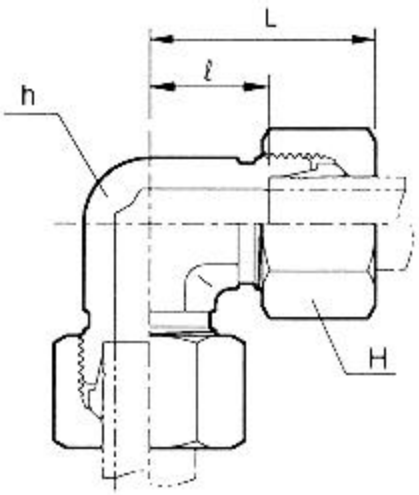
Bite Type Tube Fitting for DIN 2353

Straight Union
DU



Series	Part No.	Tube O.D.	H	h	L	ℓ
LL very light PN 100	DU-04LL	4	10	9	31	12
	DU-06LL	6	12	11	32	9
	DU-08LL	8	14	12	35	12
	DU-10LL	10	17	14	35	12
	DU-12LL	12	19	17	35	11
L light PN 315	DU-06L	6	14	12	39	10
	DU-08L	8	17	14	40	11
	DU-10L	10	19	17	42	13
	DU-12L	12	22	19	43	14
	DU-15L	15	27	24	46	16
	DU-18L	18	32	27	48	16
PN 160	DU-22L	22	36	32	52	20
	DU-28L	28	41	41	54	21
	DU-35L	35	50	46	63	20
	DU-42L	42	60	55	66	21
S heavy PN 630	DU-06S	6	17	14	45	16
	DU-08S	8	19	17	47	18
	DU-10S	10	22	19	49	17
	DU-12S	12	24	22	51	19
	DU-14S	14	27	24	57	22
PN 400	DU-16S	16	30	27	57	21
	DU-20S	20	36	32	66	23
	DU-25S	25	46	41	74	26
	DU-30S	30	50	46	80	27
PN 315	DU-38S	38	60	55	90	29

Union Elbow
DL

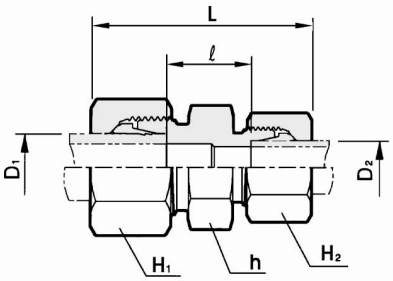


Series	Part No.	TubeO .D.	H	h	L	ℓ
LL very light PN 100	DL-04LL	4	10	9	21	11
	DL-06LL	6	12	9	21	9.5
	DL-08LL	8	14	12	23	11.5
	DL-10LL	10	17	14	24	12.5
	DL-12LL	12	19	17	25	13
L light PN 315	DL-06L	6	14	12	27	12
	DL-08L	8	17	12	29	14
	DL-10L	10	19	14	30	15
	DL-12L	12	22	17	32	17
	DL-15L	15	27	19	36	21
	DL-18L	18	32	24	40	23.5
PN 160	DL-22L	22	36	27	44	27.5
	DL-28L	28	41	36	47	30.5
	DL-35L	35	50	41	56	34.5
	DL-42L	42	60	50	63	40
S heavy PN 630	DL-06S	6	17	12	31	16
	DL-08S	8	19	14	32	17
	DL-10S	10	22	17	34	17.5
	DL-12S	12	24	17	38	21.5
	DL-14S	14	27	19	40	22
PN 400	DL-16S	16	30	24	43	24.5
	DL-20S	20	36	27	48	26.5
	DL-25S	25	46	36	54	30
	DL-30S	30	50	41	62	35.5
PN 315	DL-38S	38	60	50	72	41

Dimensions given approximate length with tightened nut. All dimensions are in millimeters, for reference only subject to change.

Reducing Union

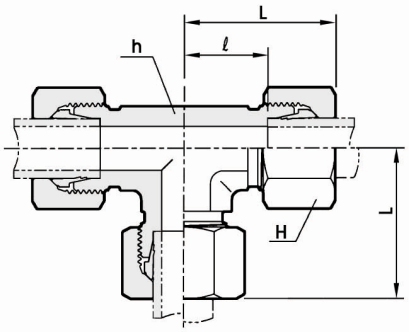
DUR



Series	Part No.	Tube O.D		H_1	H_2	h	L	ℓ
		D_1	D_2					
L light PN 315	DUR 08L-06L	8	6	17	14	14	40	11
	DUR 10L-06L	10	6	19	14	17	41	12
	DUR 10L-08L	10	8	19	17	17	41	12
	DUR 12L-06L	12	6	22	14	19	42	13
	DUR 12L-08L	12	8	22	17	19	42	13
	DUR 12L-10L	12	10	22	19	19	43	14
	DUR 15L-10L	15	10	27	19	24	45	15
	DUR 15L-12L	15	12	27	22	24	45	15
	DUR 18L-10L	18	10	32	19	27	46	15.5
	DUR 18L-12L	18	12	32	22	27	46	15.5
	DUR 18L-15L	18	15	32	27	27	48	16.5
PN 160	DUR 22L-12L	22	12	36	22	32	48	17.5
	DUR 22L-15L	22	15	36	27	32	50	18.5
	DUR 22L-18L	22	18	36	32	32	50	18
	DUR 28L-18L	28	18	41	32	41	52	19
	DUR 28L-22L	28	22	41	36	41	54	21
	DUR 35L-22L	35	22	50	36	46	59	21
	DUR 35L-28L	35	28	50	41	46	59	21
S heavy PN 630	DUR 08S-06S	8	6	19	17	17	47	18
	DUR 10S-06S	10	6	22	17	19	48	17.5
	DUR 10S-08S	10	8	22	19	19	48	17.5
	DUR 12S-06S	12	6	24	17	22	50	19.5
	DUR 12S-08S	12	8	24	19	22	50	19.5
	DUR 12S-10S	12	10	24	22	22	51	19
	DUR 14S-10S	14	10	27	22	24	54	20.5
	DUR 14S-12S	14	12	27	24	24	54	20.5
PN 400	DUR 16S-12S	16	12	30	24	27	54	20
	DUR 16S-14S	16	14	30	27	27	57	21.5
	DUR 20S-10S	20	10	36	22	32	60	22
	DUR 20S-12S	20	12	36	24	32	60	22
	DUR 20S-16S	20	16	36	30	32	63	23
	DUR 25S-16S	25	16	46	30	41	68	25
	DUR 25S-20S	25	20	46	36	41	71	25.5
	DUR 30S-20S	30	20	50	36	46	74	26
	DUR 30S-25S	30	25	50	46	46	77	26.5
PN 315	DUR 38S-30S	38	30	60	50	55	87	29.5

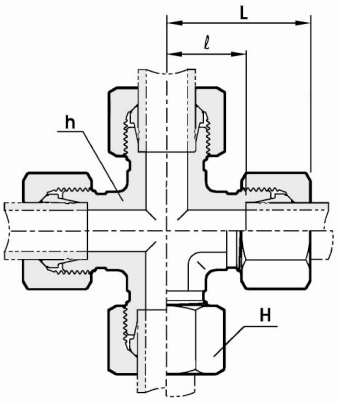
Dimensions given approximate length with tightened nut. All dimensions are in millimeters, for reference only subject to change.

Union Tee
DT



Series	Part No.	Tube O.D.	H	h	L	ℓ
LL very light PN 100	DT-04LL	4	10	9	21	11
	DT-06LL	6	12	9	21	9.5
	DT-08LL	8	14	12	23	11.5
	DT-10LL	10	17	14	24	12.5
	DT-12LL	12	19	14	27	15
L light PN 315	DT-06L	6	14	12	27	12
	DT-08L	8	17	12	29	14
	DT-10L	10	19	14	30	15
	DT-12L	12	22	17	32	17
	DT-15L	15	27	19	36	21
	DT-18L	18	32	24	40	23.5
PN 160	DT-22L	22	36	27	44	27.5
	DT-28L	28	41	36	47	30.5
	DT-35L	35	50	41	56	34.5
	DT-42L	42	60	50	63	40
S heavy PN 630	DT-06S	6	17	12	31	16
	DT-08S	8	19	14	32	17
	DT-10S	10	22	17	34	17.5
	DT-12S	12	24	17	38	21.5
	DT-14S	14	27	19	40	22
PN 400	DT-16S	16	30	24	43	24.5
	DT-20S	20	36	27	48	26.5
	DT-25S	25	46	36	54	30
	DT-30S	30	50	41	62	35.5
PN 315	DT-38S	38	60	50	72	41

Union Cross
DC

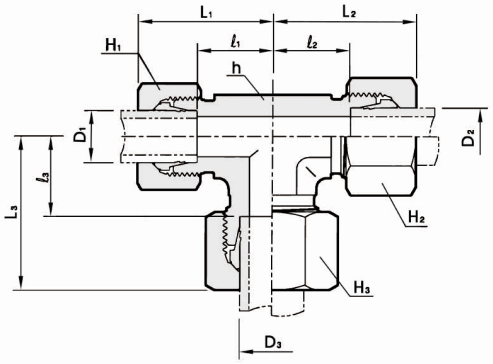


Series	Part No.	Tube O.D.	H	h	L	ℓ
LL very light PN 100	DC-04LL	4	10	9	21	11
	DC-06LL	6	12	9	21	9.5
	DC-08LL	8	14	12	23	11.5
	DC-10LL	10	17	14	24	12.5
	DC-12LL	12	19	14	27	15
L light PN 315	DC-06L	6	14	12	27	12
	DC-08L	8	17	12	29	14
	DC-10L	10	19	14	30	15
	DC-12L	12	22	17	32	17
	DC-15L	15	27	19	36	21
	DC-18L	18	32	24	40	23.5
PN 160	DC-22L	22	36	27	44	27.5
	DC-28L	28	41	36	47	30.5
	DC-35L	35	50	41	56	34.5
	DC-42L	42	60	50	63	40
S heavy PN 630	DC-06S	6	17	12	31	16
	DC-08S	8	19	14	32	17
	DC-10S	10	22	17	34	17.5
	DC-12S	12	24	17	38	21.5
	DC-14S	14	27	19	40	22
PN 400	DC-16S	16	30	24	43	24.5
	DC-20S	20	36	27	48	26.5
	DC-25S	25	46	36	54	30
	DC-30S	30	50	41	62	35.5
PN 315	DC-38S	38	60	50	72	41

Dimensions given approximate length with tightened nut. All dimensions are in millimeters, for reference only subject to change.

Reducing Tee

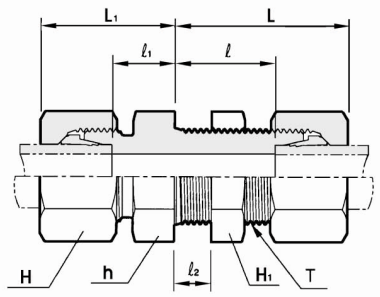
DTR



Series	Part No.	Tube O.D			H_1	H_2	H_3	h	L_1	L_2	L_3	ℓ_1	ℓ_2	ℓ_3
		D_1	D_2	D_3										
L Light PN 316	DTR 06L-06L-08L	6	6	8	14	14	17	14	29	29	29	14	14	14
	DTR 08L-08L-06L	8	8	6	17	17	14	14	29	29	29	14	14	14
PN 315	DTR 06L-06L-10L	6	6	10	14	14	19	14	30	30	30	15	15	15
	DTR 08L-08L-10L	8	8	10	17	17	19	14	30	30	30	15	15	15
	DTR 10L-10L-06L	10	10	6	19	19	14	14	30	30	30	15	15	15
	DTR 10L-10L-08L	10	10	8	19	19	17	14	30	30	30	15	15	15
	DTR 10L-06L-10L	10	6	10	19	14	19	14	30	30	30	15	15	15
PN 315	DTR 08L-08L-12L	8	8	12	17	17	22	17	32	32	32	17	17	17
	DTR 12L-12L-06L	12	12	6	22	22	14	17	32	32	32	17	17	17
	DTR 12L-08L-08L	12	8	8	22	17	17	17	32	32	32	17	17	17
	DTR 12L-12L-08L	12	12	8	22	22	17	17	32	32	32	17	17	17
	DTR 12L-10L-10L	12	10	10	22	19	19	17	32	32	32	17	17	17
	DTR 12L-12L-10L	12	12	10	22	22	19	17	32	32	32	17	17	17
	DTR 12L-10L-12L	12	10	12	22	19	22	17	32	32	32	17	17	17
PN 315	DTR 10L-10L-15L	10	10	15	19	19	27	19	36	36	36	21	21	21
	DTR 12L-12L-15L	12	12	15	22	22	27	19	36	36	36	21	21	21
	DTR 15L-15L-06L	15	15	6	27	27	14	19	36	36	36	21	21	21
	DTR 15L-15L-10L	15	15	10	27	27	19	19	36	36	36	21	21	21
	DTR 15L-12L-12L	15	12	12	27	22	22	19	36	36	36	21	21	21
	DTR 15L-15L-12L	15	15	12	27	27	22	19	36	36	36	21	21	21
	DTR 15L-12L-15L	15	12	15	27	22	27	19	36	36	36	21	21	21
PN 315	DTR 12L-12L-18L	12	12	18	22	22	32	24	39	39	40	24	24	23.5
	DTR 18L-10L-10L	18	10	10	32	19	19	24	40	39	39	23.5	24	24
	DTR 18L-18L-10L	18	18	10	32	32	19	24	40	40	39	23.5	23.5	24
	DTR 18L-18L-12L	18	18	12	32	32	22	24	40	40	39	23.5	23.5	24
	DTR 18L-18L-15L	18	18	15	32	32	27	24	40	40	39	23.5	23.5	24
	DTR 18L-10L-18L	18	10	18	32	19	32	24	40	39	40	23.5	24	23.5
PN 160	DTR 22L-22L-10L	22	22	10	36	36	19	27	44	44	43	27.5	27.5	28
	DTR 22L-22L-12L	22	22	12	36	36	22	27	44	44	43	27.5	27.5	28
	DTR 22L-15L-15L	22	15	15	36	27	27	27	44	43	43	27.5	28	28
	DTR 22L-22L-15L	22	22	15	36	36	27	27	44	44	43	27.5	27.5	28
	DTR 22L-18L-18L	22	18	18	36	32	32	27	44	44	44	27.5	27.5	27.5
	DTR 22L-22L-18L	22	22	18	36	36	32	27	44	44	44	27.5	27.5	27.5
	DTR 22L-18L-22L	22	18	22	36	32	36	27	44	44	44	27.5	27.5	27.5
PN 160	DTR 28L-28L-10L	28	28	10	41	41	19	36	47	44	46	30.5	30.5	31
	DTR 28L-28L-12L	28	28	12	41	41	22	36	47	47	46	30.5	30.5	31
	DTR 28L-28L-15L	28	28	15	41	41	27	36	47	47	46	30.5	30.5	31
	DTR 28L-28L-18L	28	28	18	41	41	32	36	47	47	47	30.5	30.5	30.5
	DTR 28L-22L-22L	28	22	22	41	36	36	36	47	47	47	30.5	30.5	30.5
	DTR 28L-28L-22L	28	28	22	41	41	36	36	47	47	47	30.5	30.5	30.5
S PN 630	DTR 10S-10S-06S	10	10	6	22	22	17	17	34	34	33	17.5	17.5	18
	DTR 12S-08S-08S	12	8	8	24	19	19	17	38	37	37	21.5	22	22
	DTR 12S-12S-08S	12	12	8	24	24	19	17	38	38	37	21.5	21.5	22
	DTR 12S-12S-10S	12	12	10	24	24	22	17	38	38	38	21.5	21.5	21.5
PN 400	DTR 12S-12S-16S	12	12	16	24	24	30	24	42	42	43	25.5	25.5	24.5
	DTR 16S-16S-06S	16	16	6	30	30	17	24	43	43	41	24.5	24.5	26
	DTR 16S-16S-08S	16	16	8	30	30	19	24	43	43	41	24.5	24.5	26
	DTR 16S-16S-10S	16	16	10	30	30	22	24	43	43	42	24.5	24.5	25.5
	DTR 16S-16S-12S	16	16	12	30	30	24	24	43	43	42	24.5	24.5	25.5
PN 400	DTR 16S-16S-20S	16	16	20	30	30	36	27	47	47	48	28.5	28.5	26.5
	DTR 20S-20S-10S	20	20	10	36	36	22	27	48	48	46	26.5	26.5	29.5
	DTR 20S-20S-12S	20	20	12	36	36	24	27	48	48	46	26.5	26.5	29.5
	DTR 20S-20S-16S	20	20	16	36	36	30	27	48	48	47	26.5	26.5	28.5
PN 400	DTR 20S-20S-25S	20	20	25	36	36	46	36	53	53	54	31.5	31.5	30
	DTR 25S-25S-16S	25	25	16	46	46	30	36	54	54	52	30	30	33.5
	DTR 25S-25S-20S	25	25	20	46	46	36	36	54	54	53	30	30	31.5
PN 400	DTR 25S-25S-30S	25	25	30	46	46	50	41	61	61	62	37	37	35.5

Dimensions given approximate length with tightened nut. All dimensions are in millimeters, for reference only subject to change.

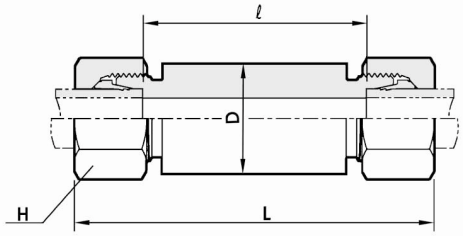
Bulkhead Union
DBU



ℓ2 = 16mm Max.

Series	Part No.	Tube O.D.	H	H1	h	L	L1	ℓ	ℓ1	T
L light PN 315	DBU-06L	6	14	17	17	42	22	27	7	M 12×1.5
	DBU-08L	8	17	19	19	42	23	27	8	M 14×1.5
	DBU-10L	10	19	22	22	43	25	28	10	M 16×1.5
	DBU-12L	12	22	24	24	44	25	29	10	M 18×1.5
	DBU-15L	15	27	30	27	46	27	31	12	M 22×1.5
	DBU-18L	18	32	36	32	49	30	32.5	13.5	M 26×1.5
PN 160	DBU-22L	22	36	41	36	51	33	34.5	16.5	M 30×2
	DBU-28L	28	41	46	41	52	35	35.5	18.5	M 36×2
	DBU-35L	35	50	55	50	58	40	36.5	18.5	M 45×2
	DBU-42L	42	60	65	60	59	42	36	19	M 52×2
S	DBU-06S	6	17	19	19	44	27	29	12	M 14×1.5
	DBU-08S	8	19	22	22	44	28	29	13	M 16×1.5
	DBU-10S	10	22	24	24	46	31	29.5	14.5	M 18×1.5
	DBU-12S	12	24	27	27	47	31	30.5	14.5	M 20×1.5
	DBU-14S	14	27	30	30	50	35	32	17	M 22×1.5
PN 400	DBU-16S	16	30	32	32	50	35	31.5	16.5	M 24×1.5
	DBU-20S	20	36	41	41	55	39	33.5	17.5	M 30×2
	DBU-25S	25	46	46	46	59	44	35	20	M 36×2
	DBU-30S	30	50	50	50	64	48	37.5	21.5	M 42×2
PN	DBU-38S	38	60	65	65	68	53	37	22	M 52×2

Welding Bulkhead Union
DBUW

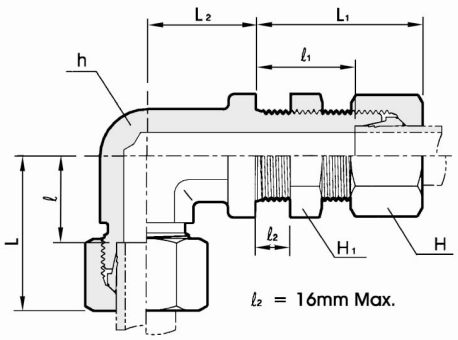


Series	Part No.	Tube O.D.	D	H	L	ℓ
L light 315	DBUW-06L	6	18	14	85	56
	DBUW-08L	8	20	17	85	56
	DBUW-10L	10	22	19	87	58
	DBUW-12L	12	25	22	87	58
	DBUW-15L	15	28	27	100	70
	DBUW-18L	18	32	32	101	69
PN 315	DBUW-22L	22	36	36	105	73
	DBUW-28L	28	40	41	106	73
	DBUW-35L	35	50	50	114	71
	DBUW-42L	42	60	60	115	70
S heavy PN 630	DBUW-06S	6	20	17	89	60
	DBUW-08S	8	22	19	89	60
	DBUW-10S	10	25	22	91	59
	DBUW-12S	12	28	24	91	59
	DBUW-14S	14	30	27	107	72
PN 400	DBUW-16S	16	35	30	107	71
	DBUW-20S	20	38	36	114	71
	DBUW-25S	25	45	46	120	72
	DBUW-30S	30	50	50	126	73
PN 315	DBUW-38S	38	60	60	133	72

Dimensions given approximate length with tightened nut. All dimensions are in millimeters, for reference only subject to change.

Bulkhead Union Elbow

DBL

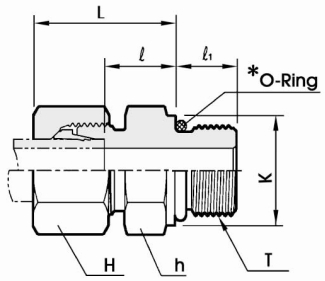


Series	Part No.	Tube O.D.	H	H_1	h	L	L_1	L_2	ℓ	$ℓ_1$	T
L light PN 315	DBL-06L	6	14	17	12	27	42	14	12	27	M 12×1.5
	DBL-08L	8	17	19	12	29	42	17	14	27	M 14×1.5
	DBL-10L	10	19	22	14	30	43	18	15	28	M 16×1.5
	DBL-12L	12	22	24	17	32	44	20	17	29	M 18×1.5
	DBL-15L	15	27	30	19	36	46	23	21	31	M 22×1.5
	DBL-18L	18	32	36	24	40	49	24	23.5	32.5	M 26×1.5
PN 160	DBL-22L	22	36	41	27	44	51	30	27.5	34.5	M 30×2
	DBL-28L	28	41	46	36	47	52	34	30.5	35.5	M 36×2
	DBL-35L	35	50	55	41	56	58	39	34.5	36.5	M 45×2
	DBL-42L	42	60	65	50	63	59	43	40	36	M 52×2
S heavy PN 630	DBL-06S	6	17	19	12	31	44	17	16	29	M 14×1.5
	DBL-08S	8	19	22	14	32	44	18	17	29	M 16×1.5
	DBL-10S	10	22	24	17	34	46	20	17.5	29.5	M 18×1.5
	DBL-12S	12	24	27	17	38	47	21	21.5	30.5	M 20×1.5
	DBL-14S	14	27	30	19	40	50	23	22	32	M 22×1.5
PN 400	DBL-16S	16	30	32	24	43	50	24	24.5	31.5	M 24×1.5
	DBL-20S	20	36	41	27	48	55	30	26.5	33.5	M 30×2
	DBL-25S	25	46	46	36	54	59	34	30	35	M 36×2
	DBL-30S	30	50	50	41	62	64	39	35.5	37.5	M 42×2
PN 315	DBL-38S	38	60	65	50	72	68	43	41	37	M 52×2

Dimensions given approximate length with tightened nut. All dimensions are in millimeters, for reference only subject to change.

Male Connector(Unified and Metric Paralled) with *O-Ring

DOM-U/M



Form F stud end

for Unified

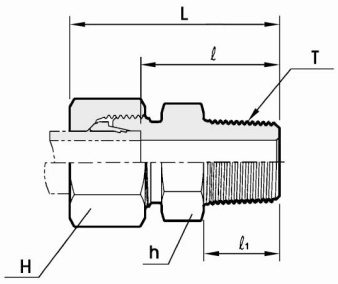
Series	Part No.	Tube O.D.	H	h	K	L	ℓ_1	ℓ	T U(Unified)
L light PN 315	DOM 08L-04U	8	17	17	14.4	25	9	10	7/16-20 UNF-2A
	DOM 10L-04U	10	19	17	14.4	26	10	11	7/16-20 UNF-2A
	DOM 12L-06U	12	22	19	17.6	26	10	11	9/16-18 UNF-2A
	DOM 12L-08U	12	22	24	22.3	28	11	13	3/4-16 UNF-2A
	DOM 12L-10U	12	22	27	25.5	29	12.7	14.3	7/8-14 UNF-2A
	DOM 15L-08U	15	27	24	22.3	29	11	14	3/4-16 UNF-2A
	DOM 15L-10U	15	27	27	25.5	30	12.7	15.3	7/8-14 UNF-2A
	DOM 18L-08U	18	32	27	22.3	31	11	14.5	3/4-16 UNF-2A
	DOM 18L-10U	18	32	27	25.5	31	12.7	14.8	7/8-14 UNF-2A
PN 160	DOM 22L-10U	22	36	32	25.5	33	12.7	16.8	7/8-14 UNF-2A
	DOM 22L-12U	22	36	32	31.9	33	15	16.5	1 1/16-12 UN-2A
	DOM 22L-16U	22	36	41	38.2	34	15	17.5	1 5/16-12 UN-2A
	DOM 28L-12U	28	41	41	31.9	34	15	17.5	1 1/16-12 UN-2A
	DOM 28L-16U	28	41	41	38.2	34	15	17.5	1 5/16-12 UN-2A
	DOM 35L-16U	35	50	46	38.2	39	15	17.5	1 5/16-12 UN-2A
	DOM 35L-20U	35	50	50	47.7	39	15	17.5	1 5/8-12 UN-2A
	DOM 42L-20U	42	60	55	47.7	42	15	19	1 5/8-12 UN-2A
S heavy PN 630	DOM 08S-04U	8	19	17	16	30	9	15	7/16-20 UNF-2A
	DOM 10S-06U	10	22	19	17.6	31	10	14.5	9/16-18 UNF-2A
	DOM 12S-06U	12	24	22	17.6	31	10	14.5	9/16-18 UNF-2A
	DOM 12S-08U	12	24	24	22.3	34	11	17.5	3/4-16 UNF-2A
PN 400	DOM 16S-08U	16	30	24	22.3	34	11	15.5	3/4-16 UNF-2A
	DOM 16S-10U	16	30	27	25.5	37	12.7	18.8	7/8-14 UNF-2A
	DOM 20S-08U	20	36	32	22.3	42	11	20.5	3/4-16 UNF-2A
	DOM 20S-10U	20	36	32	25.5	42	12.7	20.8	7/8-14 UNF-2A
	DOM 20S-12U	20	36	32	31.9	42	15	20.5	1 1/16-12 UN-2A
	DOM 25S-12U	25	46	36	31.9	47	15	23	1 1/16-12 UN-2A
	DOM 25S-16U	25	46	41	38.2	47	15	23	1 5/16-12 UN-2A
	DOM 30S-16U	30	50	46	38.2	50	15	23.5	1 5/16-12 UN-2A
	DOM 30S-20U	30	50	50	47.7	50	15	23.5	1 5/8-12 UN-2A
PN 315	DOM 38S-20U	38	60	55	47.7	57	15	26	1 5/8-12 UN-2A

for Metric Paralled

Series	Part No.	Tube O.D.	H	h	K	L	ℓ_1	ℓ	T M(Metric)
L light PN 315	DOM 06L-M10	6	14	14	-	23	10	8.5	M 10×1
	DOM 08L-M12	8	17	17	-	25	11.5	10	M 12×1.5
	DOM 10L-M14	10	19	19	-	26	11.5	11	M 14×1.5
	DOM 12L-M16	12	22	22	-	27	13	12	M 16×1.5
	DOM 15L-M18	15	27	24	-	29	14.5	13.5	M 18×1.5
	DOM 18L-M22	18	32	27	-	30	15.5	14	M 22×1.5
PN 160	DOM 22L-M26	22	36	32	-	32	16	16	M 26×1.5
	DOM 28L-M33	28	41	41	38	34	19	17.5	M 33×2
	DOM 35L-M42	35	50	50	48	39	19.5	17.5	M 42×2
S heavy PN 630	DOM 06S-M12	6	17	17	-	27	11.5	12	M 12×1.5
	DOM 08S-M14	8	19	19	-	27	11.5	12	M 14×1.5
	DOM 10S-M16	10	22	22	-	29	13	12.5	M 16×1.5
	DOM 12S-M18	12	24	24	-	29	14.5	13	M 18×1.5
PN 400	DOM 16S-M22	16	30	27	-	33	15.5	15	M 22×1.5
	DOM 20S-M27	20	36	32	-	37	19	15	M 27×2
	DOM 25S-M33	25	46	41	38	41	19	17	M 33×2
	DOM 30S-M42	30	50	50	48	45	19.5	18.5	M 42×2

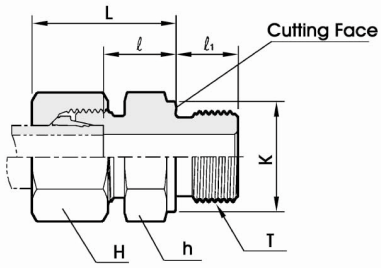
Dimensions given approximate length with tightened nut. All dimensions are in millimeters, for reference only subject to change.
* O-Ring of NBR(e.g.Perbunan®) Standard, of FPM(e.g. Viton®) on request (See Page 1)

Male Connector(BSP Tapered)
DMC-R



Form C stud end

Male Connector(BSP Paralled)
DMC-G

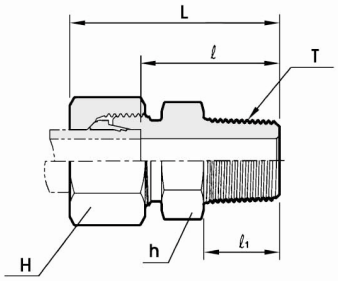


Form B stud end

Series	Part No.	Tube O.D.	H	h	K	L	ℓ	ℓ1	T R(PT), G(PF)
LL very light PN 100	DMC 04LL-01R	4	10	11	–	26	16	8	PT 1/8
	DMC 06LL-01R	6	12	11	–	26	14.5	8	PT 1/8
	DMC 08LL-01R	8	14	12	–	28	16.5	8	PT 1/8
	DMC 08LL-02R	8	14	14	–	32	20.5	12	PT 1/4
	DMC 10LL-02R	10	17	14	–	32	20.5	12	PT 1/4
	DMC 12LL-02R	12	19	17	–	32	20	12	PT 1/4
	DMC 12LL-03R	12	19	17	–	32	20	12	PT 3/8
L light PN 315	DMC 06L -01G	6	14	14	14	23	8.5	8	PF 1/8
	DMC 06L -01R	6	14	12	-	30	15	8	PT 1/8
	DMC 06L -02G	6	14	19	18	25	10	12	PF 1/4
	DMC 06L -03G	6	14	22	22	26	11.5	12	PF 3/8
	DMC 06L -04G	6	14	27	26	27	12	14	PF 1/2
	DMC 08L -02G	8	17	19	18	25	10	12	PF 1/4
	DMC 08L -01G	8	17	14	14	23	8.5	8	PF 1/8
	DMC 08L -02R	8	17	17	-	35	20	12	PT 1/4
	DMC 08L -03G	8	17	22	22	26	11.5	12	PF 3/8
	DMC 08L -04G	8	17	27	26	27	12	14	PF 1/2
	DMC 10L -02G	10	19	19	18	26	11	12	PF 1/4
	DMC 10L -02R	10	19	17	-	36	21	12	PT 1/4
	DMC 10L -03G	10	19	22	22	27	12.5	12	PF 3/8
	DMC 10L -04G	10	19	27	26	28	13	14	PF 1/2
	DMC 12L -03G	12	22	22	22	27	12.5	12	PF 3/8
	DMC 12L -02G	12	22	19	18	27	12	12	PF 1/4
	DMC 12L -02R	12	22	19	-	37	22	12	PT 1/4
	DMC 12L -03R	12	22	19	-	37	22	12	PT 3/8
	DMC 12L -04G	12	22	27	26	28	13	14	PF 1/2
	DMC 12L -04R	12	22	24	-	39	24	14	PT 1/2
	DMC 12L -06G	12	22	32	32	29	14	16	PF 3/4
	DMC 15L -04G	15	27	27	26	29	14	14	PF 1/2
	DMC 15L -03G	15	27	24	22	29	13.5	12	PF 3/8
	DMC 15L -03R	15	27	24	-	38	23	12	PT 3/8
	DMC 15L -04R	15	27	24	-	40	25	14	PT 1/2
	DMC 15L -06G	15	27	32	32	30	15	16	PF 3/4
	DMC 18L -04G	18	32	27	26	31	14.5	14	PF 1/2
	DMC 18L -03G	18	32	27	22	29.5	14	12	PF 3/8
	DMC 18L -04R	18	32	27	-	41	25.5	14	PT 1/2
	DMC 18L -06G	18	32	32	32	30	14.5	16	PF 3/4

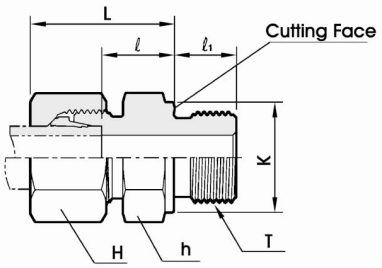
Dimensions given approximate length with tightened nut. All dimensions are in millimeters, for reference only subject to change.

Male Connector(BSP Tapered)
DMC-R



Form C stud end

Male Connector(BSP Paralled)
DMC-G



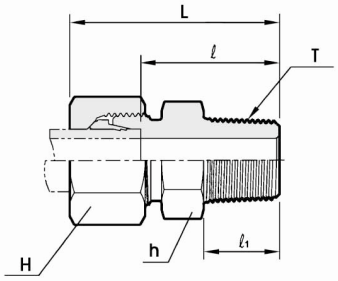
Form B stud end

Series	Part No.	Tube O.D.	H	h	K	L	ℓ	ℓ1	T R(PT), G(PF)
L light PN 160	DMC 22L-06G	22	36	32	32	33	16.5	16	PF 3/4
	DMC 22L-04G	22	36	32	26	33	16.5	14	PF 1/2
	DMC 22L-06R	22	36	32	-	46	29.5	16	PT 3/4
	DMC 28L-08G	28	41	41	39	34	17.5	18	PF 1
	DMC 28L-06G	28	41	41	32	34	17.5	16	PF 3/4
	DMC 35L-10G	35	50	50	49	39	17.5	20	PF 1 1/4
	DMC 35L-08G	35	50	46	39	39	17.5	18	PF 1
	DMC 42L-12G	42	60	55	55	42	19	22	PF 1 1/2
S heavy PB 630	DMC 06S-02G	6	17	19	18	28	13	12	PF 1/4
	DMC 06S-04G	6	17	27	26	33	18	14	PF 1/2
	DMC 08S-02G	8	19	19	18	30	15	12	PF 1/4
	DMC 08S-03G	8	19	22	22	30	15.5	12	PF 3/8
	DMC 10S-03G	10	22	22	22	31	15	12	PF 3/8
	DMC 10S-02G	10	22	19	18	31	14.5	12	PF 1/4
	DMC 10S-04G	10	22	27	26	34	17.5	14	PF 1/2
	DMC 12S-03G	12	24	22	22	33	17	12	PF 3/8
	DMC 12S-02G	12	24	22	18	33	16.5	12	PF 1/4
	DMC 12S-04G	12	24	27	26	34	17.5	14	PF 1/2
	DMC 14S-04G	14	27	27	26	37	19	14	PF 1/2
	DMC 14S-03G	14	27	24	22	36	18.5	12	PF 3/8
PB 400	DMC 16S-04G	16	30	27	26	37	18.5	14	PF 1/2
	DMC 16S-03G	16	30	27	22	36	18	12	PF 3/8
	DMC 16S-06G	16	30	32	32	39	20.5	16	PF 3/4
	DMC 20S-06G	20	36	32	32	42	20.5	16	PF 3/4
	DMC 20S-04G	20	36	32	26	42	20.5	14	PF 1/2
	DMC 25S-08G	25	46	41	39	47	23	18	PF 1
	DMC 25S-06G	25	46	41	32	47	23	16	PF 3/4
PB 250	DMC 30S-10G	30	50	50	49	50	23.5	20	PF 11/4
	DMC 30S-08G	30	50	46	39	50	23.5	18	PF 1
	DMC 38S-12G	38	60	55	55	57	26	22	PF 1 1/2
	DMC 38S-10G	38	60	55	49	57	26	20	PF 1 1/4

Dimensions given approximate length with tightened nut. All dimensions are in millimeters, for reference only subject to change.

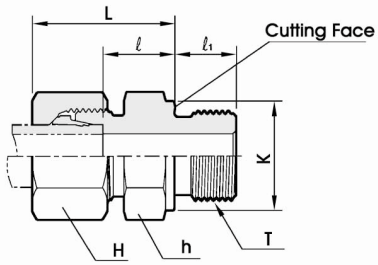
Bite Type Tube Fitting for DIN 2353

Male Connector(Metric Tapered)
DMC-MK



Form C stud end

Male Connector(Metric Paralled)
DMC-M



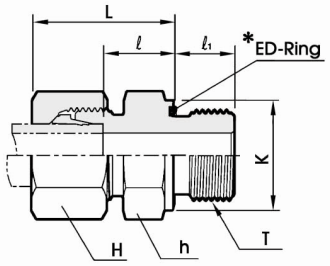
Form B stud end

Series	Part No.	Tube O.D.	H	h	K	L	ℓ	ℓ1	T M(Metric)
LL very light PN 100	DMC 04LL-M 6K	4	10	9	–	26	16	8	M 6×1Keg
	DMC 04LL-M 8K	4	10	10	–	26	16	8	M 8×1Keg
	DMC 06LL-M10K	6	12	11	–	26	14.5	8	M10×1Keg
	DMC 08LL-M10K	8	14	12	–	28	16.5	8	M10×1Keg
L light PN 315	DMC 06L -M10	6	14	14	14	23	8.5	8	M10×1
	DMC 08L -M12	8	17	17	17	25	10	12	M 12×1.5
	DMC 08L -M18	8	17	24	23	26	11.5	12	M 18×1.5
	DMC 10L -M14	10	19	19	19	26	11	12	M 14×1.5
	DMC 10L -M16	10	19	22	21	27	12	12	M 16×1.5
	DMC 10L -M18	10	19	24	23	27	12.5	12	M 18×1.5
	DMC 10L -M22	10	19	27	27	29	14	14	M 22×1.5
	DMC 12L -M14	12	22	19	19	26	11	12	M 14×1.5
	DMC 12L -M16	12	22	22	21	27	12.5	12	M 16×1.5
	DMC 12L -M18	12	22	24	23	27	12.5	12	M 18×1.5
	DMC 12L -M22	12	22	27	27	29	14	14	M 22×1.5
	DMC 15L -M16	15	27	24	21	28	13	12	M 16×1.5
	DMC 15L -M18	15	27	24	23	29	13.5	12	M 18×1.5
	DMC 15L -M22	15	27	27	27	30	15	14	M 22×1.5
	DMC 18L -M18	18	32	27	23	30	14	12	M 18×1.5
	DMC 18L -M22	18	32	27	27	31	14.5	14	M 22×1.5
PN 160	DMC 22L -M22	22	36	32	27	33	16.5	14	M 22×1.5
	DMC 22L -M26	22	36	32	31	33	16.5	16	M 26×1.5
	DMC 28L -M33	28	41	41	39	34	17.5	18	M 33×2
	DMC 35L -M42	35	50	50	49	39	17.5	20	M 42×2
	DMC 42L -M48	42	60	55	55	42	19	22	M 48×2
S heavy PB 630	DMC 06S -M12	6	17	17	17	28	13	12	M 12×1.5
	DMC 08S -M14	8	19	19	19	30	15	12	M 14×1.5
	DMC 10S -M16	10	22	22	21	31	15	12	M 16×1.5
	DMC 12S -M18	12	24	24	23	33	17	12	M 18×1.5
	DMC 12S -M22	12	24	27	27	34	17.5	14	M 22×1.5
	DMC 14S -M20	14	27	27	25	37	19	14	M 20×1.5
PB 400	DMC 16S -M18	16	30	27	23	36	18	12	M 18×1.5
	DMC 16S -M22	16	30	27	27	37	18.5	14	M 22×1.5
	DMC 20S -M27	20	36	32	32	42	20.5	16	M 27×2
	DMC 25S -M33	25	46	41	39	47	23	18	M 33×2
PB 250	DMC 30S -M42	30	50	50	49	50	23.5	20	M 42×2
	DMC 38S -M48	38	60	55	55	57	26	22	M 48×2

Dimensions given approximate length with tightened nut. All dimensions are in millimeters, for reference only subject to change.

Male Connector(BSP Paralled) with *ED-Ring

DMC-GED



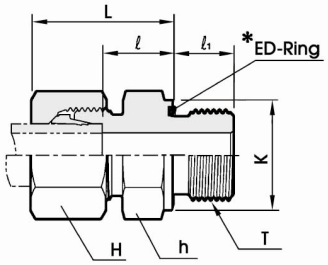
Form E stud end

Series	Part No.	Tube O.D.	H	h	K	L	ℓ	ℓ1	T G(PF)
L light PN 315	DMC 06L-01GED	6	14	14	14	23	8.5	8	1/8
	DMC 06L-02GED	6	14	19	19	25	10	12	1/4
	DMC 08L-01GED	8	17	14	14	24	9.5	8	1/8
	DMC 08L-02GED	8	17	19	19	25	10	12	1/4
	DMC 08L-03GED	8	17	22	22	26	11.5	12	3/8
	DMC 10L-02GED	10	19	19	19	26	11	12	1/4
	DMC 10L-03GED	10	19	22	22	27	12.5	12	3/8
	DMC 10L-04GED	10	19	27	27	28	13	14	1/2
	DMC 12L-02GED	12	22	19	19	27	12	12	1/4
	DMC 12L-03GED	12	22	22	22	27	12.5	12	3/8
	DMC 12L-04GED	12	22	27	27	28	13	14	1/2
	DMC 15L-03GED	15	27	24	22	29	13.5	12	3/8
	DMC 15L-04GED	15	27	27	27	29	14	14	1/2
	DMC 18L-04GED	18	32	27	27	31	14.5	14	1/2
	DMC 18L-06GED	18	32	32	32	31	14.5	16	3/4
PN 160	DMC 22L-06GED	22	36	32	32	33	16.5	16	3/4
	DMC 28L-08GED	28	41	41	40	34	17.5	18	1
	DMC 35L-10GED	35	50	50	50	39	17.5	20	1 1/4
	DMC 42L-12GED	42	60	55	55	42	19	22	1 1/2
S heavy PN 630	DMC 06S-02GED	6	17	19	19	28	13	12	1/4
	DMC 08S-02GED	8	19	19	19	30	15	12	1/4
	DMC 08S-03GED	8	19	22	22	30	15.5	12	3/8
	DMC 10S-02GED	10	22	19	19	31	14.5	12	1/4
	DMC 10S-03GED	10	22	22	22	31	15	12	3/8
	DMC 10S-04GED	10	22	27	27	34	17.5	14	1/2
	DMC 12S-02GED	12	24	22	19	33	16.5	12	1/4
	DMC 12S-03GED	12	24	22	22	33	17	12	3/8
	DMC 12S-04GED	12	24	27	32	34	17.5	14	1/2
	DMC 14S-04GED	14	27	27	27	37	19	14	1/2
PN 400	DMC 16S-03GED	16	30	27	22	36	18	12	3/8
	DMC 16S-04GED	16	30	27	27	37	18.5	14	1/2
	DMC 16S-06GED	16	30	32	27	39	20.5	16	3/4
	DMC 20S-06GED	20	36	32	32	42	20.5	16	3/4
	DMC 25S-04GED	25	46	41	27	47	23	14	1/2
	DMC 25S-06GED	25	46	41	32	47	23	16	3/4
	DMC 25S-08GED	25	46	41	40	47	23	18	1
	DMC 30S-10GED	30	50	50	50	50	23.5	20	1 1/4
PN 315	DMC 38S-12GED	38	60	55	55	57	26	22	1 1/2

Dimensions given approximate length with tightened nut. All dimensions are in millimeters, for reference only subject to change.
* ED-Ring of NBR(e.g. Perbunan®) standard, of FPM(e.g. Viton®) on request (see page 1)

Male Connector(Metric Paralled) with *ED-Ring

DMC-MED



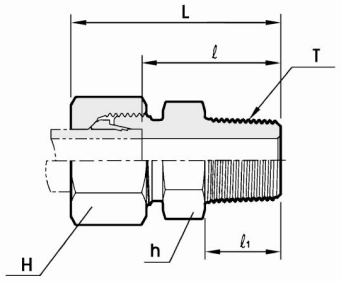
Form E stud end

Series	Part No.	Tube O.D.	H	h	K	L	ℓ	ℓ1	T M(Metric)
L light PN 315	DMC 06L-M10ED	6	14	14	14	23	8.5	8	M 10×1
	DMC 08L-M12ED	8	17	17	17	25	10	12	M 12×1.5
	DMC 10L-M14ED	10	19	19	19	26	11	12	M 14×1.5
	DMC 12L-M16ED	12	22	22	22	27	12.5	12	M 16×1.5
	DMC 12L-M18ED	12	22	24	24	27	12.5	12	M 18×1.5
	DMC 12L-M22ED	12	22	27	27	29	14	14	M 22×1.5
	DMC 15L-M18ED	15	27	24	24	29	13.5	12	M 18×1.5
	DMC 15L-M22ED	15	27	27	27	30	15	14	M 22×1.5
	DMC 18L-M22ED	18	32	27	27	31	14.5	14	M 22×1.5
PN 160	DMC 22L-M26ED	22	36	32	32	33	16.5	16	M 26×1.5
	DMC 28L-M33ED	28	41	41	40	34	17.5	18	M 33×2
	DMC 35L-M42ED	35	50	50	50	39	17.5	20	M 42×2
	DMC 42L-M48ED	42	60	55	55	42	19	22	M 48×2
S heavy PN 630	DMC 06S-M12ED	6	17	17	17	28	13	12	M 12×1.5
	DMC 08S-M14ED	8	19	19	19	30	15	12	M 14×1.5
	DMC 10S-M16ED	10	22	22	22	31	15	12	M 16×1.5
	DMC 12S-M18ED	12	24	24	24	33	17	12	M 18×1.5
	DMC 14S-M20ED	14	27	27	26	37	19	14	M 20×1.5
PN 400	DMC 16S-M22ED	16	30	27	27	37	18.5	14	M 22×1.5
	DMC 20S-M27ED	20	36	32	32	42	20.5	16	M 27×2
	DMC 25S-M33ED	25	46	41	40	47	23	18	M 33×2
	DMC 30S-M42ED	30	50	50	50	50	23.5	20	M 42×2
PN 315	DMC 38S-M48ED	38	60	55	55	57	26	22	M 48×2

Dimensions given approximate length with tightened nut. All dimensions are in millimeters, for reference only subject to change.
* ED-Ring of NBR(e.g. Perbunan®) standard, of FPM(e.g. Viton®) on request (see page 1)

Male Connector(NPT Thread)

DMC-N



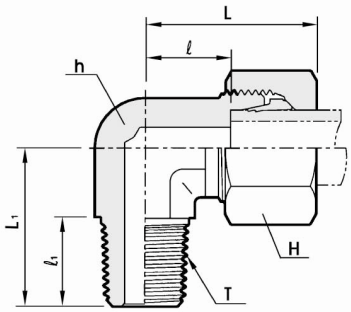
Form C stud end

Series	Part No.	Tube O.D.	H	h	L	ℓ	ℓ1	T N(NPT)
LL very light PN 100	DMC 04LL-01N	4	10	11	28	18.5	9.9	1/8-27
	DMC 06LL-01N	6	12	11	28	16.5	9.9	1/8-27
	DMC 08LL-01N	8	14	12	30	18.5	9.9	1/8-27
L light PN 315	DMC 06L -01N	6	14	12	32	17	9.9	1/8 - 27
	DMC 06L -02N	6	14	17	38	23	14.2	1/4 - 18
	DMC 08L -02N	8	17	17	38	23	14.2	1/4 - 18
	DMC 10L -02N	10	19	17	39	24	14.2	1/4 - 18
	DMC 10L -03N	10	19	19	40	25	14.2	3/8 - 18
	DMC 12L -02N	12	22	19	40	25	14.2	1/4 - 18
	DMC 12L -03N	12	22	19	40	25	14.2	3/8 - 18
	DMC 12L -04N	12	22	22	45	30	19.1	1/2 - 14
	DMC 15L -04N	15	27	24	46	31	19.1	1/2 - 14
	DMC 18L -04N	18	32	27	48	31.5	19.1	1/2 - 14
PN 160	DMC 22L -06N	22	36	32	50	33.5	19.1	3/4 - 14
	DMC 28L -08N	28	41	41	56	39.5	23.9	1 -11.5
	DMC 35L -10N	35	50	46	62	40.5	23.9	11/4 - 11.5
	DMC 42L -12N	42	60	55	65	42	25.4	11/2 - 11.5
S heavy PN 630	DMC 06S -02N	6	17	17	43	28	14.2	1/4 - 18
	DMC 08S -02N	8	19	17	43	28	14.2	1/4 - 18
	DMC 10S -02N	10	22	19	44	27.5	14.2	1/4 - 18
	DMC 10S -03N	10	22	19	44	27.5	14.2	3/8 - 18
	DMC 12S -02N	12	24	22	46	29.5	14.2	1/4 - 18
	DMC 12S -03N	12	24	22	46	29.5	14.2	3/8 - 18
	DMC 12S -04N	12	24	22	51	34.5	19.1	1/2 - 14
	DMC 14S -04N	14	27	24	54	36	19.1	1/2 - 14
PN 400	DMC 16S -04N	16	30	27	54	35.5	19.1	1/2 - 14
	DMC 20S -06N	20	36	32	59	37.5	19.1	3/4 - 14
	DMC 25S -08N	25	46	41	69	45	23.9	1 - 11.5
	DMC 30S -10N	30	50	46	73	46.5	23.9	1 1/4 - 11.5
PN 315	DMC 38S -12N	38	60	55	80	49	25.4	1 1/2 - 11.5

Dimensions given approximate length with tightened nut. All dimensions are in millimeters, for reference only subject to change.

Male Elbow(BSP Tapered/Metric Tapered))

DLM-R/M



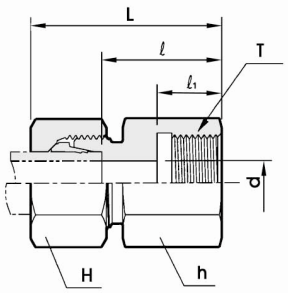
Form C stud end

Series	Part No.		Tube O.D.	H	h	L	L_1	ℓ	T Metric Taper	ℓ_1	T R(PT)	ℓ_1
LL very light PN 100	DLM 04LL-01R	DLM 04LL-M 8K	4	10	9	21	17	11	M 8×1 Keg	8	1/8	10
	DLM 06LL-01R	DLM 06LL-M10K	6	12	9	21	17	9.5	M10×1 Keg	8	1/8	10
	DLM 08LL-01R	DLM 08LL-M10K	8	14	12	23	20	11.5	M10×1 Keg	8	1/8	10
	DLM 10LL-02R	–	10	17	14	24	23	12.5	–	–	1/4	14
	DLM 12LL-02R	–	12	19	17	25	23	13	–	–	1/4	14
L light PN 315	DLM 06L-01R	DLM 06L-M10K	6	14	12	27	20	12	M10× 1Keg	8	1/8	10
	DLM 08L-02R	DLM 08L-M12K	8	17	12	29	26	14	M12×1.5Keg	12	1/4	14
	DLM 10L-02R	DLM 10L-M14K	10	19	14	30	27	15	M14×1.5Keg	12	1/4	14
	DLM 12L-03R	DLM 12L-M16K	12	22	17	32	28	17	M16×1.5Keg	14	3/8	15
	DLM 15L-04R	DLM 15L-M18K	15	27	19	36	34	21	M18×1.5Keg	14	1/2	19
	DLM 18L-04R	DLM 18L-M22K	18	32	24	40	36	23.5	M22×1.5Keg	17	1/2	19
S heavy PN 400	DLM 06S-02R	DLM 06S-M12K	6	17	12	31	26	16	M12×1.5Keg	12	1/4	14
	DLM 08S-02R	DLM 08S-M14K	8	19	14	32	27	17	M14×1.5Keg	12	1/4	14
	DLM 10S-03R	DLM 10S-M16K	10	22	17	34	28	17.5	M16×1.5Keg	12	3/8	15
	DLM 12S-03R	DLM 12S-M18K	12	24	17	38	28	21.5	M18×1.5Keg	12	3/8	15
	DLM 14S-04R	DLM 14S-M20K	14	27	19	40	32	22	M20×1.5Keg	14	1/2	19
	DLM 16S-04R	DLM 16S-M22K	16	30	24	43	32	24.5	M22×1.5Keg	17	1/2	19

Dimensions given approximate length with tightened nut. All dimensions are in millimeters, for reference only subject to change.

Female Connector (BSP Paralled/Metric Paralled)

DFC-G/M



Form Y Tapped Hole

for BSP Paralled

Series	Part No.	Tube O.D.	d	H	h	L	ℓ	ℓ1	T G(PF)
L light PN 315	DFC 06L-01G	6	4	14	14	34	19	12	1/8
	DFC 08L-02G	8	6	17	19	39	24	17	1/4
	DFC 08L-03G	8	6	17	24	40	25	17	3/8
	DFC 08L-04G	8	6	17	27	44	29	20	1/2
	DFC 10L-02G	10	8	19	19	40	25	17	1/4
	DFC 10L-03G	10	8	19	24	41	26	17	3/8
	DFC 10L-04G	10	8	19	27	45	30	20	1/2
	DFC 12L-03G	12	10	22	24	41	26	17	3/8
	DFC 12L-04G	12	10	22	27	45	30	20	1/2
	DFC 15L-04G	15	12	27	27	46	31	20	1/2
	DFC 18L-04G	18	15	32	27	47	30.5	20	1/2
PB 160	DFC 22L-06G	22	19	36	36	52	35.5	22	3/4
	DFC 28L-08G	28	24	41	41	55	38	24.5	1
	DFC 35L-10G	35	30	50	55	63	41	26.5	1 1/4
	DFC 42L-12G	42	36	60	60	65	42.5	28.5	1 1/2
S heavy PB 630	DFC 06S-02G	6	4	17	19	41	26	17	1/4
	DFC 08S-02G	8	5	19	19	41	26	17	1/4
	DFC 10S-03G	10	7	22	24	43	26.5	17	3/8
	DFC 12S-03G	12	8	24	24	43	26.5	17	3/8
	DFC 14S-04G	14	10	27	30	50	32	20	1/2
PB 400	DFC 16S-04G	16	12	30	30	50	31.5	20	1/2
	DFC 20S-06G	20	16	36	36	56	34.5	22	3/4
	DFC 25S-08G	25	20	46	41	62	37.5	24.5	1
	DFC 30S-10G	30	25	50	55	69	42	26.5	1 1/4
PB 315	DFC 38S-12G	38	32	60	60	74	43.5	28.5	1 1/2

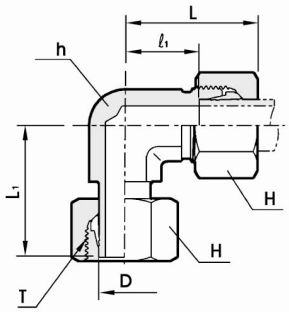
for Metric Paralled

Series	Part No.	Tube O.D.	d	H	h	L	ℓ	ℓ1	T M(Metric)
L light PB 315	DFC 06L-M10	6	4	14	14	34	19.5	12.5	M 10×1
	DFC 08L-M12	8	6	17	17	39	24	17	M 12×1.5
	DFC 10L-M14	10	8	19	19	40	25	17	M 14×1.5
	DFC 12L-M16	12	10	22	22	41	26	17	M 16×1.5
	DFC 15L-M18	15	12	27	24	43	28	17	M 18×1.5
	DFC 18L-M22	18	15	32	30	46	29.5	19	M 22×1.5
PB 160	DFC 22L-M26	22	19	36	32	51	34.5	21	M 26×1.5
	DFC 28L-M33	28	24	41	41	54	37.5	24	M 33×2
	DFC 35L-M42	35	30	50	55	62	40.5	26	M 42×2
	DFC 42L-M48	42	36	60	60	65	42	28	M 48×2
S heavy PB 630	DFC 06S-M12	6	4	17	17	41	26	17	M 12×1.5
	DFC 08S-M14	8	5	19	19	41	26	17	M 14×1.5
	DFC 10S-M16	10	7	22	22	43	26.5	17	M 16×1.5
	DFC 12S-M18	12	8	24	24	44	27.5	17	M 18×1.5
	DFC 14S-M20	14	10	27	27	49	31	19	M 20×1.5
PB 400	DFC 16S-M22	16	12	30	30	49	30.5	19	M 22×1.5
	DFC 20S-M27	20	16	36	36	56	34.5	22	M 27×2
	DFC 25S-M33	25	20	46	41	61	37	24	M 33×2
	DFC 30S-M42	30	25	50	55	68	41.5	26	M 42×2
PB 315	DFC 38S-M48	38	32	60	60	74	43	28	M 48×2

Dimensions given approximate length with tightened nut. All dimensions are in millimeters, for reference only subject to change.

Adjustable Elbow with Standpipe

DLA

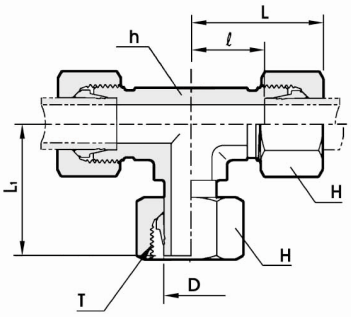


Series	Part No.	Tube O.D.	D	H	h	L	L_1	ℓ	T
L light PN 315	DLA-06L	6	6	14	12	27	26	12	M 12×1.5
	DLA-08L	8	8	17	12	29	27.5	14	M 14×1.5
	DLA-10L	10	10	19	14	30	29	15	M 16×1.5
	DLA-12L	12	12	22	17	32	29.5	17	M 18×1.5
	DLA-15L	15	15	27	19	36	32.5	21	M 22×1.5
	DLA-18L	18	18	32	24	40	35.5	23.5	M 26×1.5
PN 160	DLA-22L	22	22	36	27	44	38.5	27.5	M 30×2
	DLA-28L	28	28	41	36	47	41.5	30.5	M 36×2
	DLA-35L	35	35	50	41	56	51	34.5	M 45×2
	DLA-42L	42	42	60	50	63	56	40	M 52×2
S heavy PN 630	DLA-06S	6	6	17	12	31	27	16	M 14×1.5
	DLA-08S	8	8	19	14	32	27.5	17	M 16×1.5
	DLA-10S	10	10	22	17	34	30	17.5	M 18×1.5
	DLA-12S	12	12	24	17	38	31	21.5	M 20×1.5
	DLA-14S	14	14	27	19	40	35	22	M 22×1.5
PN 400	DLA-16S	16	16	30	24	43	36.5	24.5	M 24×1.5
	DLA-20S	20	20	36	27	48	44.5	26.5	M 30×2
	DLA-25S	25	25	46	36	54	50	30	M 36×2
	DLA-30S	30	30	50	41	62	55	35.5	M 42×2
PN 315	DLA-38S	38	38	60	50	72	63	41	M 52×2

Dimensions given approximate length with tightened nut. All dimensions are in millimeters, for reference only subject to change
Without male stud, but with pre-setted nut and cutting ring for connection.
Please observe final assembly instructions on page 11

Adjustable Branch Tee with Standpipe

DBTA

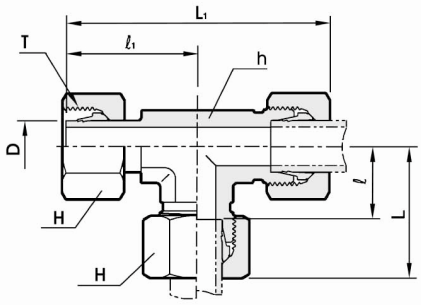


Series	Part No.	Tube O.D.	D	H	h	L	L_1	ℓ	T
L light PN 315	DBTA-06L	6	6	14	12	27	26	12	M 12×1.5
	DBTA-08L	8	8	17	12	29	27.5	14	M 14×1.5
	DBTA-10L	10	10	19	14	30	29	15	M 16×1.5
	DBTA-12L	12	12	22	17	32	29.5	17	M 18×1.5
	DBTA-15L	15	15	27	19	36	32.5	21	M 22×1.5
	DBTA-18L	18	18	32	24	40	35.5	23.5	M 26×1.5
PN 160	DBTA-22L	22	22	36	27	44	38.5	27.5	M 30×2
	DBTA-28L	28	28	41	36	47	41.5	30.5	M 36×2
	DBTA-35L	35	35	50	41	56	51	34.5	M 45×2
	DBTA-42L	42	42	60	50	63	56	40	M 52×2
S heavy PN 630	DBTA-06S	6	6	17	12	31	27	16	M 14×1.5
	DBTA-08S	8	8	19	14	32	27.5	17	M 16×1.5
	DBTA-10S	10	10	22	17	34	30	17.5	M 18×1.5
	DBTA-12S	12	12	24	17	38	31	21.5	M 20×1.5
	DBTA-14S	14	14	27	19	40	35	22	M 22×1.5
PN 400	DBTA-16S	16	16	30	24	43	36.5	24.5	M 24×1.5
	DBTA-20S	20	20	36	27	48	44.5	26.5	M 30×2
	DBTA-25S	25	25	46	36	54	50	30	M 36×2
	DBTA-30S	30	30	50	41	62	55	35.5	M 42×2
PN 315	DBTA-38S	38	38	60	50	72	63	41	M 52×2

Dimensions given approximate length with tightened nut. All dimensions are in millimeters, for reference only subject to change
Without male stud, but with pre-setted nut and cutting ring for connection.
Please observe final assembly instructions on page 11.

Adjustable Run Tee with Standpipe

DRTA

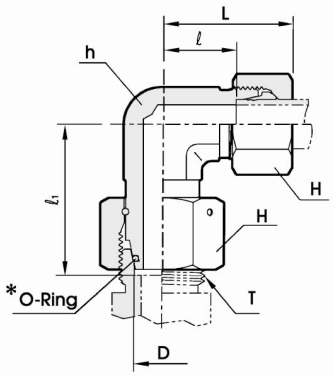


Series	Part No.	Tube O.D.	D	h	H	L	L_1	ℓ	ℓ_1	T
L light PN 315	DRTA-06L	6	6	12	14	27	53	12	26	M 12×1.5
	DRTA-08L	8	8	12	17	29	56	14	27.5	M 14×1.5
	DRTA-10L	10	10	14	19	30	59	15	29	M 16×1.5
	DRTA-12L	12	12	17	22	32	62	17	29.5	M 18×1.5
	DRTA-15L	15	15	19	27	36	69	21	32.5	M 22×1.5
	DRTA-18L	18	18	24	32	40	75	23.5	35.5	M 26×1.5
PN 160	DRTA-22L	22	22	27	36	44	83	27.5	38.5	M 30×2
	DRTA-28L	28	28	36	41	47	91	30.5	41.5	M 36×2
	DRTA-35L	35	35	41	50	56	111	34.5	51	M 45×2
	DRTA-42L	42	42	50	60	63	123	40	56	M 52×2
S heavy PN 630	DRTA-06S	6	6	12	17	31	58	16	27	M 14×1.5
	DRTA-08S	8	8	14	19	32	61	17	27.5	M 16×1.5
	DRTA-10S	10	10	17	22	34	66	17.5	30	M 18×1.5
	DRTA-12S	12	12	17	24	38	71	21.5	31	M 20×1.5
	DRTA-14S	14	14	19	27	40	75	22	35	M 22×1.5
PN 400	DRTA-16S	16	16	24	30	43	79	24.5	36.5	M 24×1.5
	DRTA-20S	20	20	27	36	48	93	26.5	44.5	M 30×2
	DRTA-25S	25	25	36	46	54	105	30	50	M 36×2
	DRTA-30S	30	30	41	50	62	119	35.5	55	M 42×2
PN 315	DRTA-38S	38	38	50	60	72	138	41	63	M 52×2

Dimensions given approximate length with tightened nut. All dimensions are in millimeters, for reference only subject to change.
Without male stud, but with pre-setted nut and cutting ring for connection.
Please observe final assembly instructions on page 11.

Swivel Adjustable Elbow with Cone

DEW

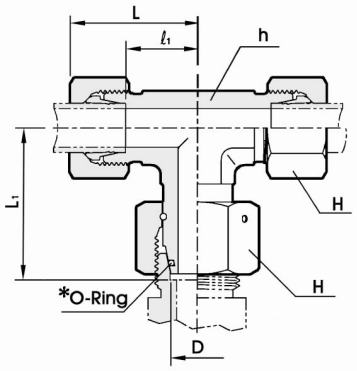


Series	Part No.	Tube O.D. D	H	h	L	ℓ	ℓ1	T
L light PN 315	DEW-06L	6	14	12	27	12	26	M 12×1.5
	DEW-08L	8	17	12	29	14	27.5	M 14×1.5
	DEW-10L	10	19	14	30	15	29	M 16×1.5
	DEW-12L	12	22	17	32	17	29.5	M 18×1.5
	DEW-15L	15	27	19	36	21	32.5	M 22×1.5
	DEW-18L	18	32	24	40	23.5	35.5	M 26×1.5
PN 160	DEW-22L	22	36	27	44	27.5	38.5	M 30×2
	DEW-28L	28	41	36	47	30.5	41.5	M 36×2
	DEW-35L	35	50	41	56	34.5	51	M 45×2
	DEW-42L	42	60	50	63	40	56	M 52×2
S heavy PN 630	DEW-06S	6	17	12	31	16	27	M 14×1.5
	DEW-08S	8	19	14	32	17	27.5	M 16×1.5
	DEW-10S	10	22	17	34	17.5	30	M 18×1.5
	DEW-12S	12	24	17	38	21.5	31	M 20×1.5
	DEW-14S	14	27	19	40	22	35	M 22×1.5
PN 400	DEW-16S	16	30	24	43	24.5	36.5	M 24×1.5
	DEW-20S	20	36	27	48	26.5	44.5	M 30×2
	DEW-25S	25	36	36	54	30	50	M 36×2
	DEW-30S	30	50	41	62	35.5	55	M 42×2
PN 315	DEW-38S	38	60	50	72	41	63	M 52×2

Dimensions given approximate length with tightened nut. All dimensions are in millimeters, for reference only subject to change.
Without male stud, but supplied with fitted O-Ring for connection.
Please observe final assembly instructions on page 11.
* O-Ring of NBR(e.g. Perbunan®) standard, FPM(e.g. viton®) on request (see page 1)

Swivel Adjustable Branch Tee with Cone

DET

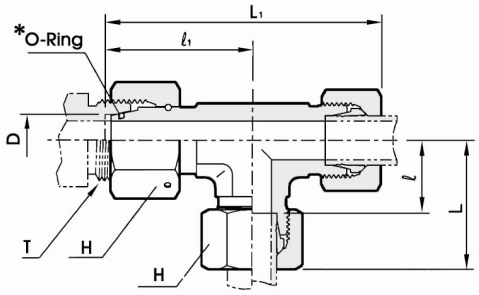


Series	Part No.	Tube O.D. D	H	h	L	L_1	ℓ	T
L light PN 315	DET-06L	6	14	12	27	26	12	M 12×1.5
	DET-08L	8	17	12	29	27.5	14	M 14×1.5
	DET-10L	10	19	14	30	29	15	M 16×1.5
	DET-12L	12	22	17	32	29.5	17	M 18×1.5
	DET-15L	15	27	19	36	32.5	21	M 22×1.5
	DET-18L	18	32	24	40	35.5	23.5	M 26×1.5
PN 160	DET-22L	22	36	27	44	38.5	27.5	M 30×2
	DET-28L	28	41	36	47	41.5	30.5	M 36×2
	DET-35L	35	50	41	56	51	34.5	M 45×2
	DET-42L	42	60	50	63	56	40	M 52×2
S heavy PN 630	DET-06S	6	17	12	31	27	16	M 14×1.5
	DET-08S	8	19	14	32	27.5	17	M 16×1.5
	DET-10S	10	22	17	34	30	17.5	M 18×1.5
	DET-12S	12	24	17	38	31	21.5	M 20×1.5
	DET-14S	14	27	19	40	35	22	M 22×1.5
PN 400	DET-16S	16	30	24	43	36.5	24.5	M 24×1.5
	DET-20S	20	36	27	48	44.5	26.5	M 30×2
	DET-25S	25	46	36	54	50	30	M 36×2
	DET-30S	30	50	41	62	55	35.5	M 42×2
PN 315	DET-38S	38	60	50	72	63	41	M 52×2

Dimensions given approximate length with tightened nut. All dimensions are in millimeters, for reference only subject to change.
Without male stud, but supplied with fitted O-Ring for connection
Please observe final assembly instructions on page 11.
* O-Ring of NBR(e.g. Perbunen®) standard, FPM(e.g. viton®) on request (see page 1)

Swivel Adjustable Run Tee with Cone

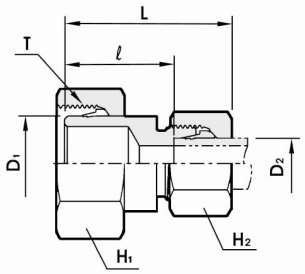
DEL



Series	Part No.	Tube O.D. D	H	h	L	L_1	ℓ	ℓ_1	T
L light PN 315	DEL-06L	6	14	12	27	53	12	26	M 12×1.5
	DEL-08L	8	17	12	29	56	14	27.5	M 14×1.5
	DEL-10L	10	19	14	30	59	15	29	M 16×1.5
	DEL-12L	12	22	17	32	61	17	29.5	M 18×1.5
	DEL-15L	15	27	19	36	69	21	32.5	M 22×1.5
	DEL-18L	18	32	24	40	75	23.5	35.5	M 26×1.5
PN 160	DEL-22L	22	36	27	44	82	27.5	38.5	M 30×2
	DEL-28L	28	41	36	47	89	30.5	41.5	M 36×2
	DEL-35L	35	50	41	56	107	34.5	51	M 45×2
	DEL-42L	42	60	50	63	119	40	56	M 52×2
S heavy PN 630	DEL-06S	6	17	12	31	58	16	27	M 14×1.5
	DEL-08S	8	19	14	32	59	17	27.5	M 16×1.5
	DEL-10S	10	22	17	34	64	17.5	30	M 18×1.5
	DEL-12S	12	24	17	38	69	21.5	31	M 20×1.5
	DEL-14S	14	27	19	40	75	22	35	M 22×1.5
PN 400	DEL-16S	16	30	24	43	79	24.5	36.5	M 24×1.5
	DEL-20S	20	36	27	48	93	26.5	44.5	M 30×2
	DEL-25S	25	46	36	54	104	30	50	M 36×2
	DEL-30S	30	50	41	62	117	35.5	55	M 42×2
PN 315	DEL-38S	38	60	50	72	135	41	63	M 52×2

Dimensions given approximate length with tightened nut. All dimensions are in millimeters, for reference only subject to change.
Without male stud, but supplied with fitted O-Ring for connection.
Please observe final assembly instructions on page 12.
* O-Ring of NBR(e.g. Perbunen®) standard, FPM(e.g. viton®) on request (see page 1)

Standpipe Reducer
DKOR



Series L(Light)

PN	Part No.	Tube O.D.		H_1	H_2	L	ℓ	T
		D_1	D_2					
PN 315	DKOR 08L-06L	8	6	17	14	38	23.5	M 14×1.5
PN 315	DKOR 10L-06L	10	6	19	14	38	23.5	M 16×1.5
	DKOR 10L-08L		8		17			
PN 315	DKOR 12L-06L	12	6	22	14	38	23.5	M 18×1.5
	DKOR 12L-08L		8		17	38	23.5	
	DKOR 12L-10L		10		19	39	24.5	
PN 315	DKOR 15L-06L	15	6	27	14	38	23.5	M 22×1.5
	DKOR 15L-08L		8		17	38	23.5	
	DKOR 15L-10L		10		19	39	24.5	
	DKOR 15L-12L		12		22	39	24.5	
PN 315	DKOR 18L-06L	18	6	32	14	39	24.5	M 26×1.5
	DKOR 18L-08L		8		17	39	24.5	
	DKOR 18L-10L		10		19	40	25.5	
	DKOR 18L-12L		12		22	40	25.5	
	DKOR 18L-15L		15		27	42	26.5	
PN 160	DKOR 22L-06L	22	6	36	14	40	25.5	M 30×2
	DKOR 22L-08L		8		17	40	25.5	
	DKOR 22L-10L		10		19	41	26.5	
	DKOR 22L-12L		12		22	41	26.5	
	DKOR 22L-15L		15		27	43	27.5	
	DKOR 22L-18L		18		32	43	27	
PN 160	DKOR 28L-06L	28	6	41	14	41	26.5	M 36×2
	DKOR 28L-08L		8		17	41	26.5	
	DKOR 28L-10L		10		19	42	27.5	
	DKOR 28L-12L		12		22	42	27.5	
	DKOR 28L-15L		15		27	44	28.5	
	DKOR 28L-18L		18		32	44	28	
	DKOR 28L-22L		22		36	46	30	
PN 160	DKOR 35L-06L	35	6	50	14	46	31.5	M 45×2
	DKOR 35L-08L		8		17	46	31.5	
	DKOR 35L-10L		10		19	47	32.5	
	DKOR 35L-12L		12		22	47	32.5	
	DKOR 35L-15L		15		27	49	33.5	
	DKOR 35L-18L		18		32	49	33	
	DKOR 35L-22L		22		36	51	35	
	DKOR 35L-28L		28		41	52	35	
PN 160	DKOR 42L-10L	42	10	60	19	48	33.5	M 52×2
	DKOR 42L-12L		12		22	48	33.5	
	DKOR 42L-15L		15		27	50	34.5	
	DKOR 42L-18L		18		32	50	34	
	DKOR 42L-22L		22		36	52	36	
	DKOR 42L-28L		28		41	53	36	
	DKOR 42L-35L		35		50	57	35	

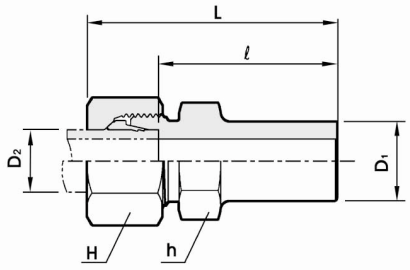
Series S(Heavy)

PN	Part No.	Tube O.D.		H_1	H_2	L	ℓ	T
		D_1	D_2					
PN 630	DKOR 08S-06S	8	6	19	17	40	25	M 16×1.5
PN 630	DKOR 10S-06S	10	6	22	17	41	26	M 18×1.5
	DKOR 10S-08S		8		19	41	26	
PN 630	DKOR 12S-06S	12	6	24	17	42	27	M 20×1.5
	DKOR 12S-08S		8		19	42	27	
	DKOR 12S-10S		10		22	43	26.5	
PN 630	DKOR 14S-06S	14	6	27	17	44	29	M 22×1.5
	DKOR 14S-08S		8		19	44	29	
	DKOR 14S-10S		10		22	45	28.5	
	DKOR 14S-12S		12		24	45	28.5	
PN 400	DKOR 16S-06S	16	6	30	17	44	29	M 24×1.5
	DKOR 16S-08S		8		19	44	29	
	DKOR 16S-10S		10		22	45	28.5	
	DKOR 16S-12S		12		24	45	28.5	
	DKOR 16S-14S		14		27	48	30	
PN 400	DKOR 20S-06S	20	6	36	17	49	34	M 30×2
	DKOR 20S-08S		8		19	49	34	
	DKOR 20S-10S		10		22	50	33.5	
	DKOR 20S-12S		12		24	50	33.5	
	DKOR 20S-14S		14		27	53	35	
	DKOR 20S-16S		16		30	53	34.5	
PN 400	DKOR 25S-06S	25	6	46	17	52	37	M 36×2
	DKOR 25S-08S		8		19	52	37	
	DKOR 25S-10S		10		22	53	36.5	
	DKOR 25S-12S		12		24	53	36.5	
	DKOR 25S-14S		14		27	55	37	
	DKOR 25S-16S		16		30	55	36.5	
	DKOR 25S-20S		20		36	59	37.5	
PN 400	DKOR 30S-06S	30	6	50	17	54	39	M 42×2
	DKOR 30S-08S		8		19	54	39	
	DKOR 30S-10S		10		22	55	38.5	
	DKOR 30S-12S		12		24	55	38.5	
	DKOR 30S-14S		14		27	58	40	
	DKOR 30S-16S		16		30	58	39.5	
	DKOR 30S-20S		20		36	61	39.5	
	DKOR 30S-25S		25		46	64	40	
PN 315	DKOR 38S-06S	38	6	60	17	58	43	M 52×2
	DKOR 38S-08S		8		19	58	43	
	DKOR 38S-10S		10		22	59	42.5	
	DKOR 38S-12S		12		24	59	42.5	
	DKOR 38S-14S		14		27	62	44	
	DKOR 38S-16S		16		30	62	43.5	
	DKOR 38S-20S		20		36	65	43.5	
	DKOR 38S-25S		25		46	68	44	
	DKOR 38S-30S		30		50	71	44.5	

Dimensions given approximate length with tightened nut. All dimentions are in millimeters, for referance only subject to change.
Without male stud, but with pre-setted nut and cutting ring for connection
Please observe final assembly instructions on page 11

Reducer

DR



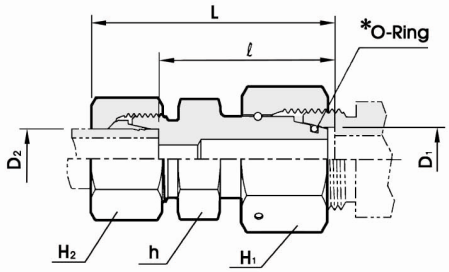
Series	Part. No.	Tube O.D. D1	Tube O.D. D2	H	h	L	ℓ
L Series PN 315	DR08L-06L	8	6	14	12	40	25.5
	DR10L-06L	10	6	14	12	42	27.5
	DR10L-08L		8	17	14	43	27.5
	DR12L-06L	12	6	14	14	42	27.5
	DR12L-08L		8	17	14	43	27.5
	DR12L-10L		10	19	17	44	28.5
	DR15L-06L	15	6	14	19	44	29
	DR15L-08L		8	17	19	44	29
	DR15L-10L		10	19	19	45	30
	DR15L-12L		12	22	19	45	30
	DR18L-06L	18	6	14	19	46	31
	DR18L-08L		8	17	19	46	31
	DR18L-10L		10	19	19	47	32
	DR18L-12L		12	22	19	47	32
	DR18L-15L		15	27	22	49	33
PN 160	DR22L-06L	22	6	14	24	48	33
	DR22L-08L		8	17	24	48	33
	DR22L-10L		10	19	24	49	34
	DR22L-12L		12	22	24	49	34
	DR22L-15L		15	27	24	50	35
	DR22L-18L		18	32	27	51	34.5
	DR28L-06L	28	6	14	30	48	33
	DR28L-08L		8	17	30	48	33
	DR28L-10L		10	19	30	49	34
	DR28L-12L		12	22	30	49	34
	DR28L-15L		15	27	30	50	35
	DR28L-18L		18	32	30	51	36
	DR28L-22L		22	36	32	53	36.5
	DR35L-06L	35	6	14	36	53	38.5
	DR35L-08L		8	17	36	53	38.5
	DR35L-10L		10	19	36	55	39.5
	DR35L-12L		12	22	36	55	39.5
	DR35L-15L		15	27	36	56	40.5
	DR35L-18L		18	32	36	56	40
	DR35L-22L		22	36	36	58	42
	DR35L-28L			41	36	59	42
	DR42L-06L	42	6	14	46	56	41
	DR42L-08L		8	17	46	56	41
	DR42L-10L		10	19	46	58	42
	DR42L-12L		12	22	46	58	42
	DR42L-15L		15	27	46	60	43
	DR42L-18L		18	32	46	60	42.5
	DR42L-22L		22	36	46	62	44.5
	DR42L-28L			41	46	64	44.5
	DR42L-35L		35	50	46	67	43.5

Series	Part. No.	Tube O.D. D1	Tube O.D. D2	H	h	L	ℓ
S Series PN 630	DR08S-06S	8	6	17	14	43	28
	DR10S-06S	10	6	17	14	45	30.5
	DR10S-08S		8	19	17	45	30.5
	DR12S-06S	12	6	17	14	47	32.5
	DR12S-08S		8	19	17	47	32.5
	DR12S-10S		10	22	19	48	32
	DR14S-06S	14	6	17	17	51	36.5
	DR14S-08S		8	19	17	51	36.5
	DR14S-10S		10	22	19	52	36
	DR14S-12S		12	24	22	52	36
	DR16S-06S	16	6	17	17	53	38.5
	DR16S-08S		8	19	17	53	38.5
	DR16S-10S		10	22	19	54	38
	DR16S-12S		12	24	22	55	38.5
	DR16S-14S		14	27	22	57	39.5
PN 400	DR20S-06S	20	6	17	22	58	43
	DR20S-08S		8	19	22	58	43
	DR20S-10S		10	22	22	59	42.5
	DR20S-12S		12	24	22	59	42.5
	DR20S-14S		14	27	22	62	44
	DR20S-16S		16	30	24	62	43.5
	DR25S-06S	25	6	17	27	62	47.5
	DR25S-08S		8	19	27	62	47.5
	DR25S-10S		10	22	27	63	47
	DR25S-12S		12	24	27	63	47
	DR25S-14S		14	27	27	66	48.5
	DR25S-16S		16	30	27	66	48
	DR25S-20S		20	36	30	70	48
	DR30S-06S	30	6	17	32	67	52
	DR30S-08S		8	19	32	67	52
	DR30S-10S		10	22	32	68	51.5
	DR30S-12S		12	24	32	68	51.5
	DR30S-14S		14	27	32	71	53
	DR30S-16S		16	30	32	71	52.5
	DR30S-20S		20	36	32	74	52.5
	DR30S-25S		25	46	36	77	53
PN 315	DR38S-06S	38	6	17	41	72	57
	DR38S-08S		8	19	41	72	57
	DR38S-10S		10	22	41	73	56.5
	DR38S-12S		12	24	41	73	56.5
	DR38S-14S		14	27	41	76	58
	DR38S-16S		16	30	41	76	57.5
	DR38S-20S		20	36	41	79	57.5
	DR38S-25S		25	46	41	82	58
	DR38S-30S		30	50	46	89	58.5

Dimensions given approximate length with tightened nut. All dimentions are in millimeters, for referance only subject to change.

Swivel Reducing Adapter with Cone

DRED



Series L (Light)

PN	Part No.	Tube O.D. D_1	Tube O.D. D_2	H_1	H_2	h	L	ℓ
PN 315	DRED 08L-06L	8	6	17	14	14	39	24.5
PN 315	DRED 10L-06L	10	6	19	14	17	39.5	24.5
	DRED 10L-08L		8		17		39.5	24.5
PN 315	DRED 12L-06L	12	6	22	14	17	40	25
	DRED 12L-08L		8		17		40	25
	DRED 12L-10L		10		19		41	26
PN 315	DRED 15L-06L	15	6	27	14	22	42	27.5
	DRED 15L-08L		8		17		42	27.5
	DRED 15L-10L		10		19		43	28.5
	DRED 15L-12L		12		22		43	28.5
PN 315	DRED 18L-06L	18	6	32	14	25	43	28
	DRED 18L-08L		8		17		43	28
	DRED 18L-10L		10		19		44.5	29.5
	DRED 18L-12L		12		22		44.5	29.5
	DRED 18L-15L		15		27		45.5	30.5
PN 160	DRED 22L-06L	22	6	36	14	28.5	47	32
	DRED 22L-08L		8		17		47	32
	DRED 22L-10L		10		19		48	33
	DRED 22L-12L		12		22		48	33
	DRED 22L-15L		15		27		49	34
	DRED 22L-18L		18		32		50	33.5
PN 160	DRED 28L-06L	28	6	41	14	36	49	34
	DRED 28L-08L		8		17		49	34
	DRED 28L-10L		10		19		50	35
	DRED 28L-12L		12		22		50	35
	DRED 28L-15L		15		27		51	36
	DRED 28L-18L		18		32		52	35.5
	DRED 28L-22L		22		36		54	37.5
PN 160	DRED 35L-06L	35	6	50	14	46	55	40
	DRED 35L-08L		8		17		55	40
	DRED 35L-10L		10		19		56	41
	DRED 35L-12L		12		22		56	41
	DRED 35L-15L		15		27		57	42
	DRED 35L-18L		18		32		58	41.5
	DRED 35L-22L		22		36		60	43.5
	DRED 35L-28L		28		41		60	43.5
PN 160	DRED 42L-06L	42	6	60	14	50	55	40.5
	DRED 42L-08L		8		17		55	40.5
	DRED 42L-10L		10		19		56	41.5
	DRED 42L-12L		12		22		56	41.5
	DRED 42L-15L		15		27		58	42.5
	DRED 42L-18L		18		32		58	42
	DRED 42L-22L		22		36		60	44
	DRED 42L-28L		28		41		61	44
	DRED 42L-35L		35		50		65	43

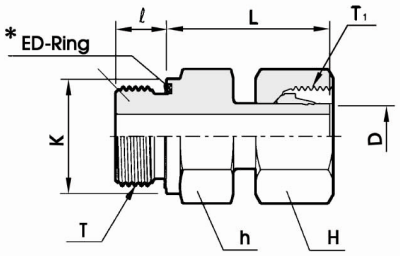
Series S (heavy)

PN	Part No.	Tube O.D. D_1	Tube O.D. D_2	H_1	H_2	h	L	ℓ
PN 630	DRED 08S-06S	8	6	19	17	17	44	28
PN 630	DRED 10S-06S	10	6	22	17	17	44	29.5
	DRED 10S-08S		8		19		44	29.5
PN 630	DRED 12S-06S	12	6	24	17	19	45	30
	DRED 12S-08S		8		19		45	30
	DRED 12S-10S		10		22		46	29.5
PN 630	DRED 14S-06S	14	6	27	17	22	47.5	33
	DRED 14S-08S		8		19		47.5	33
	DRED 14S-10S		10		22		48.5	32.5
	DRED 14S-12S		12		24		48.5	32.5
PN 630	DRED 16S-06S	16	6	30	17	24	50.0	35
	DRED 16S-08S		8		19		50	35
	DRED 16S-10S		10		22		51	34.5
	DRED 16S-12S		12		24		51	34.5
	DRED 16S-14S		14		27		54	36
PN 400	DRED 20S-06S	20	6	36	17	28.5	54	39
	DRED 20S-08S		8		19		54	39
	DRED 20S-10S		10		22		55	38.5
	DRED 20S-12S		12		24		55	38.5
	DRED 20S-14S		14		27		58	40
	DRED 20S-16S		16		30		58	39.5
PN 400	DRED 25S-06S	25	6	46	17	36	58	43.5
	DRED 25S-08S		8		19		58	43.5
	DRED 25S-10S		10		22		59	43
	DRED 25S-12S		12		24		59	43
	DRED 25S-14S		14		27		62	44.5
	DRED 25S-16S		16		30		62	44
	DRED 25S-20S		20		36		66	44
PN 400	DRED 30S-06S	30	6	50	17	41	66	51
	DRED 30S-08S		8		19		66	51
	DRED 30S-10S		10		22		67	50.5
	DRED 30S-12S		12		24		67	50.5
	DRED 30S-14S		14		27		70	52
	DRED 30S-16S		16		30		70	51.5
	DRED 30S-20S		20		36		73	51.5
	DRED 30S-25S		25		46		76	52
PN 315	DRED 38S-06S	38	6	60	17	50	70.5	56
	DRED 38S-08S		8		19		70.5	56
	DRED 38S-10S		10		22		71.5	55.5
	DRED 38S-12S		12		24		71.5	55.5
	DRED 38S-14S		14		27		74.5	57
	DRED 38S-16S		16		30		74.5	56.5
	DRED 38S-20S		20		36		78.5	56.5
	DRED 38S-25S		25		46		81.5	57
	DRED 38S-30S		30		50		85.5	58.5

Dimensions given approximate length with tightened nut. All dimensions are in millimeters, for reference only subject to change.
Without male stud, but supplied with fitted O-Ring for connection.
Please observe final assembly instructions on page 11.
* O-Ring of NBR(e.g. Perbunan®) standard, FPM(e.g. viton®) on request (see page 1)

Adapter (BSP Paralled / Metric Paralled) with *ED-Ring

DA-GED/MED



Form E stud end

for BSP Paralled

Series	Part No.	Tube O.D D	H	h	K	L	ℓ	T G(PF)	T_1
L light PN 315	DA 06L-01GED	6	14	14	14	24.5	8	1/8	M 12×1.5
	DA 08L-02GED	8	17	19	19	29.5	12	1/4	M 14×1.5
	DA 10L-02GED	10	19	19	19	27.5	12	1/4	M 16×1.5
	DA 12L-03GED	12	22	22	22	34	12	3/8	M 18×1.5
	DA 15L-04GED	15	27	27	27	32	14	1/2	M 22×1.5
	DA 18L-04GED	18	32	27	27	31.5	14	1/2	M 26×1.5
PN 160	DA 22L-06GED	22	36	32	32	32.5	16	3/4	M 30×2
	DA 28L-08GED	28	41	41	40	35	18	1	M 36×2
	DA 35L-10GED	35	50	50	50	42.5	20	1 1/4	M 45×2
	DA 42L-12GED	42	60	55	55	46.5	22	1 1/2	M 52×2
S heavy PN 630	DA 06S-02GED	6	17	19	19	27	12	1/4	M 14×1.5
	DA 08S-02GED	8	19	19	19	29.5	12	1/4	M 16×1.5
	DA 10S-03GED	10	22	22	22	32	12	3/8	M 18×1.5
	DA 12S-03GED	12	24	22	22	34	12	3/8	M 20×1.5
	DA 12S-04GED	12	24	27	27	34.5	14	1/2	M 20×1.5
	DA 14S-04GED	14	27	27	27	36.5	14	1/2	M 22×1.5
PN 400	DA 16S-04GED	16	30	27	27	37	14	1/2	M 24×1.5
	DA 16S-06GED	16	30	32	32	39	16	3/4	M 24×1.5
	DA 20S-06GED	20	36	32	32	43	16	3/4	M 30×2
	DA 25S-08GED	25	46	41	40	48	18	1	M 36×2
	DA 30S-10GED	30	50	50	50	51	20	1 1/4	M 42×2
	DA 38S-12GED	38	60	55	55	60	22	1 1/2	M 52×2

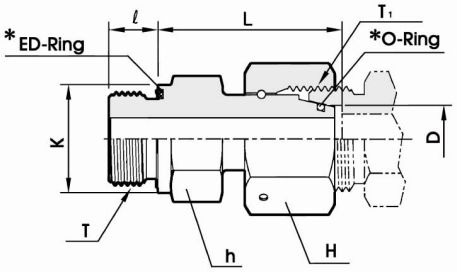
for Metric Paralled

Series	Part No.	Tube O.D. D	H	h	K	L	ℓ	T M(Metric)	T_1
L light PN 315	DA 06L-M10ED	6	14	14	14	24.5	8	M 10×1	M 12×1.5
	DA 08L-M12ED	8	17	17	17	26.5	12	M 12×1.5	M 14×1.5
	DA 10L-M14ED	10	19	19	19	27.5	12	M 14×1.5	M 16×1.5
	DA 12L-M16ED	12	22	22	22	30.5	12	M 16×1.5	M 18×1.5
	DA 15L-M18ED	15	27	24	24	31.5	14	M 18×1.5	M 22×1.5
	DA 18L-M22ED	18	32	27	27	31.5	14	M 22×1.5	M 26×1.5
PN 160	DA 22L-M26ED	22	36	32	32	32.5	16	M 26×1.5	M 30×2
	DA 28L-M33ED	28	41	41	40	35	18	M 33×2	M 36×2
	DA 35L-M42ED	35	50	50	50	42.5	20	M 42×2	M 45×2
	DA 42L-M48ED	42	60	55	55	46.5	22	M 48×2	M 52×2
S heavy PN 630	DA 06S-M12ED	6	17	17	17	27	12	M 12×1.5	M 14×1.5
	DA 08S-M14ED	8	19	19	19	29.5	12	M 14×1.5	M 16×1.5
	DA 10S-M16ED	10	22	22	22	32	12	M 16×1.5	M 18×1.5
	DA 12S-M18ED	12	24	24	24	34	12	M 18×1.5	M 20×1.5
	DA 14S-M20ED	14	27	27	27	36.5	14	M 20×1.5	M 22×1.5
PN 400	DA 16S-M22ED	16	30	27	27	37	14	M 22×1.5	M 24×1.5
	DA 20S-M27ED	20	36	32	32	43	16	M 27×2	M 30×2
	DA 25S-M33ED	25	46	41	40	48	18	M 33×2	M 36×2
	DA 30S-M42ED	30	50	50	50	51	20	M 42×2	M 42×2
PN 315	DA 38S-M48ED	38	60	55	55	60	22	M 48×2	M 52×2

Dimensions given approximate length with tightened nut. All dimensions are in millimeters, for reference only subject to change.
Without male stud, but with pre-setted nut and cutting ring for connection.
Please observe final assembly instructions on page 11.
*ED-Ring sealing of NBR(e.g. Perbunan®) standard, FPM(e.g. viton®) on request (see page 1)

Swivel Adapter (BSP Paralled/Metric Paralled) with Cone and *ED-Ring

DEGE-G/M



Form E stud end

for BSP Paralled

Series	Part No.	Tube O.D. D	H	h	K	L	ℓ	T G(PF)	T_1
L light PN 315	DEGE 06L-01G	6	14	14	14	24.5	8	1/8	M 12×1.5
	DEGE 08L-02G	8	17	19	19	29.5	12	1/4	M 14×1.5
	DEGE 10L-02G	10	19	19	19	27.5	12	1/4	M 16×1.5
	DEGE 12L-03G	12	22	22	22	34	12	3/8	M 18×1.5
	DEGE 15L-04G	15	27	27	27	32	14	1/2	M 22×1.5
	DEGE 18L-04G	18	32	27	27	31.5	14	1/2	M 26×1.5
PN 160	DEGE 22L-06G	22	36	32	32	32.5	16	3/4	M 30×2
	DEGE 28L-08G	28	41	41	40	35	18	1	M 36×2
	DEGE 35L-10G	35	50	50	50	42.5	20	1 1/4	M 45×2
	DEGE 42L-12G	42	60	55	55	46.5	22	1 1/2	M 52×2
S heavy PN 630	DEGE 06S-02G	6	17	19	19	27	12	1/4	M 14×1.5
	DEGE 08S-02G	8	19	19	19	29.5	12	1/4	M 16×1.5
	DEGE 10S-03G	10	22	22	22	32	12	3/8	M 18×1.5
	DEGE 12S-03G	12	24	22	22	34	12	3/8	M 20×1.5
	DEGE 14S-04G	14	27	27	27	36.5	14	1/2	M 22×1.5
PN 400	DEGE 16S-04G	16	30	27	27	37	14	1/2	M 24×1.5
	DEGE 20S-06G	20	36	32	32	43	16	3/4	M 30×2
	DEGE 25S-08G	25	46	41	40	48	18	1	M 36×2
	DEGE 30S-10G	30	50	50	50	51	20	1 1/4	M 42×2
PN 315	DEGE 38S-12G	38	60	55	55	60	22	1 1/2	M 52×2

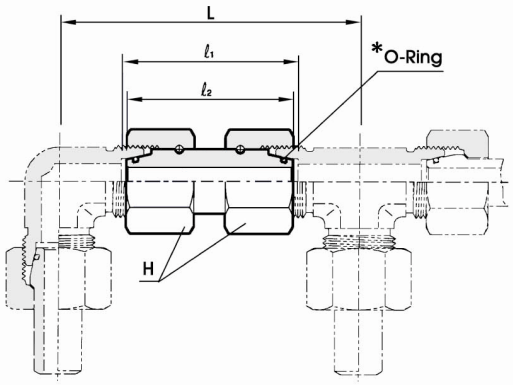
for Metric Paralled

Series	Part No.	Tube O.D. D	H	h	K	L	ℓ	T M(Metric)	T_1
L light PN 315	DEGE 06L-M10	6	14	14	14	24.5	8	M 10×1	M 12×1.5
	DEGE 08L-M12	8	17	19	17	26.5	12	M 12×1.5	M 14×1.5
	DEGE 10L-M14	10	19	19	19	27.5	12	M 14×1.5	M 16×1.5
	DEGE 12L-M16	12	22	22	22	30.5	12	M 16×1.5	M 18×1.5
	DEGE 15L-M18	15	27	24	24	31.5	12	M 18×1.5	M 22×1.5
	DEGE 18L-M22	18	32	27	27	31.5	14	M 22×1.5	M 26×1.5
PN 160	DEGE 22L-M26	22	36	32	32	32.5	16	M 26×1.5	M 30×2
	DEGE 28L-M33	28	41	41	40	35	18	M 33×2	M 36×2
	DEGE 35L-M42	35	50	50	50	42.5	20	M 42×2	M 45×2
	DEGE 42L-M48	42	60	55	55	46.5	22	M 48×2	M 52×2
S heavy PN 630	DEGE 06S-M12	6	17	17	17	27	12	M 12×1.5	M 14×1.5
	DEGE 08S-M14	8	19	19	19	29.5	12	M 14×1.5	M 16×1.5
	DEGE 10S-M16	10	22	22	22	32	12	M 16×1.5	M 18×1.5
	DEGE 12S-M18	12	24	24	24	34	12	M 18×1.5	M 20×1.5
	DEGE 14S-M20	14	27	27	26	36.5	14	M 20×1.5	M 22×1.5
PN 400	DEGE 16S-M22	16	30	27	27	37	14	M 22×1.5	M 24×1.5
	DEGE 20S-M27	20	36	32	32	43	16	M 27×2	M 30×2
	DEGE 25S-M33	25	46	41	40	48	18	M 33×2	M 36×2
	DEGE 30S-M42	30	50	50	50	51	20	M 42×2	M 42×2
PN 315	DEGE 38S-M48	38	60	55	55	60	22	M 48×2	M 52×2

Dimensions given approximate length with tightened nut. All dimensions are in millimeters, for reference only subject to change.
Without male stud, supplied with fitted O-Ring for connection.
Please observe final assembly instructions on page 11.
*O-Ring and ED-Ring of NBR(e.g. Perbunen®) standard, FPM(e.g. viton®) on request (see page 1)

Swivel Union with Cone

DUE

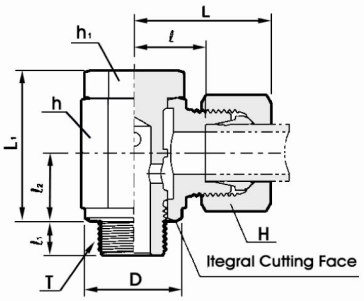


Series	Part No.	Tube O.D.	H	L	ℓ_1	ℓ_2
L light PN500	DUE-06L	6	17	64	36	34
	DUE-08L	8	17	64	36	34
	DUE-10L	10	19	67	37	36
PB400	DUE-12L	12	22	71	37	36
	DUE-15L	15	27	82	40	39
	DUE-18L	18	32	89.5	42.5	40.5
PB250	DUE-22L	22	36	102	47	45
	DUE-28L	28	46	110	49	47
	DUE-35L	35	50	127	58	53
	DUE-42L	42	60	139	59	53
S heavy PB800	DUE-06S	6	17	71	39	37
	DUE-08S	8	19	73	39	37
	DUE-10S	10	22	78	43	41
PN630	DUE-12S	12	24	87	44	43
	DUE-14S	14	27	92	48	45
	DUE-16S	16	30	99	50	46
PN400	DUE-20S	20	36	113	60	55
	DUE-25S	26	46	126	66	58
	DUE-30S	30	50	144	73	62
	DUE-38S	38	60	165	83	67

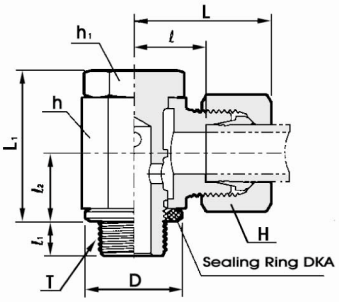
Dimensions given approximate length with tightened nut. All dimensions are in millimeters, for reference only subject to change.
Without male stud, but supplied with fitted O-Ring for connection.
Please observe final assembly instructions on page 11.
* O-Ring of NBR(e.g. Perbunan®) standard, FPM(e.g. viton®) on request (see page 1)

Banjo Fittings(BSP Paralled/Metric Paralled) with DKA-Ring

DSWVE-G/M



For Tube O.D up to 15mm



For Tube O.D. 16mm and larger

for BSP Paralled

Series	Part No.	Tube O.D.	D	H	h	h_1	L	L_1	ℓ	ℓ_1	ℓ_2	T G(PF)	MA*
L light PB 250	DSWVE 06L-01G	6	14.5	14	14	14	25	21	10.5	6	10	1/8	20
	DSWVE 08L-02G	8	18.5	17	19	19	28	27	13	9	13	1/4	45
	DSWVE 10L-02G	10	18.5	19	19	19	29	27	14	9	13	1/4	45
	DSWVE 12L-03G	12	22.5	22	22	22	30	32	15.5	9	15	3/8	70
	DSWVE 15L-04G	15	26.5	27	27	27	34	37.5	19	11	18	1/2	100
PB 160	DSWVE 18L-04G	18	26	32	30	27	37	44	20.5	11	21.5	1/2	100
	DSWVE 22L-06G	22	32	36	36	32	42	49	25.5	13	24	3/4	140
S heavy PB 250	DSWVE 06S-02G	6	18.5	17	19	19	30	27	15	9	13	1/4	45
	DSWVE 08S-02G	8	18.5	19	19	19	30	27	15	9	13	1/4	45
	DSWVE 10S-03G	10	22.5	22	22	22	32	32	16	9	15	3/8	70
	DSWVE 12S-03G	12	22.5	24	24	24	33	37	17	9	18	3/8	70
	DSWVE 14S-04G	14	26.5	27	27	27	38	37	20	11	18	1/2	100
PB 160	DSWVE 16S-04G	16	26	30	30	27	40	44	21.5	11	21.5	1/2	100
	DSWVE 20S-06G	20	32	36	36	32	46	49	24.5	13	24	3/4	140

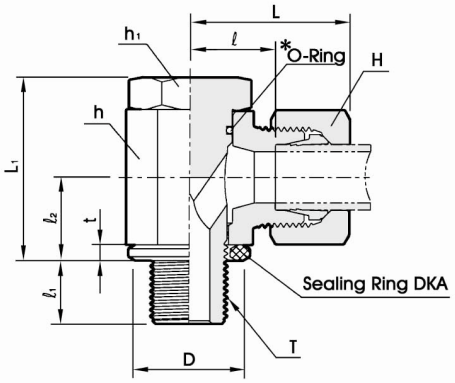
for Metric Paralled

Series	Part No.	Tube O.D.	D	H	h	h_1	L	L_1	ℓ	ℓ_1	ℓ_2	T M(Metric)	MA*
L light PB 250	DSWVE 06L-M10	6	14.5	14	14	14	25	21.5	10.5	6	10	M 10×1	25
	DSWVE 08L-M12	8	17.5	17	17	17	27	25	12	9	12	M 12×1.5	40
	DSWVE 10L-M14	10	19.5	19	19	19	29	27	14	9	13	M 14×1.5	55
	DSWVE 12L-M16	12	21.5	22	22	22	30	32	15.5	9	15	M 16×1.5	65
	DSWVE 15L-M18	15	23.5	27	24	24	33	37.5	17.5	9	18	M 18×1.5	90
PB 160	DSWVE 18L-M22	18	27	32	30	27	37	44	20.5	11	21.5	M 22×1.5	130
	DSWVE 22L-M26	22	31	36	36	32	42	49	25.5	13	24	M 26×1.5	140
S heavy PB 250	DSWVE 06S-M12	6	17.5	17	17	17	29	25	14	9	12	M 12×1.5	40
	DSWVE 08S-M14	8	19.5	19	19	19	30	27	15	9	13	M 14×1.5	55
	DSWVE 10S-M16	10	21.5	22	22	22	32	32	16	9	15	M 16×1.5	65
	DSWVE 12S-M18	12	23.5	24	24	24	33	37	17	9	18	M 18×1.5	90
	DSWVE 14S-M20	14	25.5	27	27	27	38	37	20	11	18	M 20×1.5	120
PB 160 bar	DSWVE 16S-M22	16	27	30	30	27	40	44	21.5	11	21.5	M 22×1.5	130
	DSWVE 20S-M27	20	32	36	36	32	46	49	24.5	13	24	M 27×2	150

Dimensions given approximate length with tightened nut. All dimensions are in millimeters, for reference only subject to change.
*MA = Recommended tightening torques (in Nm) for male G and M

High Pressure Banjo Fittings(BSP Paralled/Metric Paralled) with DKA-Ring

DWH-G/M



for BSP Paralled

Series	Part No.	Tube O.D.	D	H	h	h_1	L	L_1	ℓ	ℓ_1	ℓ_2	t	T G(PF)	MA†
L light PB 315	DWH 06L-01G	6	14	14	17	17	27	24	12	8	10.5	2.5	1/8	20
	DWH 08L-02G	8	18	17	22	19	29	30	14.5	12	14	3.0	1/4	50
	DWH 10L-02G	10	18	19	22	19	30	30	15.5	12	14	3.0	1/4	50
	DWH 12L-03G	12	22	22	27	24	33	36	18	12	16.5	3.0	3/8	75
	DWH 15L-04G	15	26	27	32	30	37	45	21.5	14	21.5	4.5	1/2	130
	DWH 18L-04G	18	26	32	32	30	37	45	21	14	21.5	4.5	1/2	130
PB 160	DWH 22L-06G	22	32	36	41	36	44	53	27.5	16	24	3.5	3/4	250
	DWH 28L-08G	28	39	41	50	46	49	66	32	18	30.5	3.5	1	350
	DWH 35L-10G	35	49	50	60	55	58	76	36	20	35.5	3.5	1 1/4	600
	DWH 42L-12G	42	55	60	70	60	63	87	40.5	22	40.5	3.5	1 1/2	800
S heavy PB 400	DWH 06S-02G	6	18	17	22	19	31	30	16.5	12	14	3.0	1/4	50
	DWH 08S-02G	8	18	19	22	19	31	30	16.5	12	14	3.0	1/4	50
	DWH 10S-03G	10	22	22	27	24	35	36	18.5	12	16.5	3.0	3/8	75
	DWH 12S-03G	12	22	24	27	24	35	36	18.5	12	16.5	3.0	3/8	75
	DWH 16S-04G	16	26	30	32	30	40	45	22	14	21.5	4.5	1/2	130
	DWH 20S-06G	20	32	36	41	36	48	53	26.5	16	24	3.5	3/4	250
PB 250	DWH 25S-08G	25	39	46	50	46	56	66	31.5	18	30.5	3.5	1	350
	DWH 30S-10G	30	49	50	60	55	64	76	37	20	34.5	3.5	1 1/4	600
	DWH 38S-12G	38	55	60	70	60	72	87	41.5	22	40.5	3.5	1 1/2	800

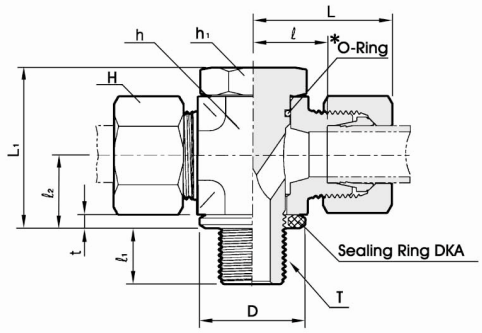
for Metric Paralled

Series	Part No.	Tube O.D.	D	H	h	h_1	L	L_1	ℓ	ℓ_1	ℓ_2	t	T M(Metric)	MA†
L light PB 315	DWH 06L-M10	6	14	14	17	17	27	24	12	8	10.5	2.5	M 10×1	25
	DWH 08L-M12	8	17	17	22	19	29	30	14.5	12	14	3.0	M 12×1.5	50
	DWH 10L-M14	10	19	19	22	19	30	30	15.5	12	14	3.0	M 14×1.5	60
	DWH 12L-M16	12	21	22	27	24	33	36	18	12	16.5	3.0	M 16×1.5	90
	DWH 15L-M18	15	23	27	30	27	36	39.5	20.5	12	18.5	3.0	M 18×1.5	110
	DWH 18L-M22	18	27	32	32	30	37	45	21	14	21.5	4.5	M 22×1.5	150
PB 160	DWH 22L-M26	22	31	36	41	36	44	53	27.5	16	24	3.5	M 26×1.5	350
	DWH 28L-M33	28	39	41	50	46	49	66	32	18	30.5	3.5	M 33×2	400
	DWH 35L-M42	35	49	50	60	55	58	76	36	20	35.5	3.5	M 42×2	600
	DWH 42L-M48	42	55	60	70	60	63	87	40.5	22	40.5	3.5	M 48×2	800
S heavy PB 400	DWH 06S-M12	6	17	17	22	19	31	30	16.5	12	14	3.0	M 12×1.5	50
	DWH 08S-M14	8	19	19	22	19	31	30	16.5	12	14	3.0	M 14×1.5	60
	DWH 10S-M16	10	21	22	27	24	35	36	18.5	12	16.5	3.0	M 16×1.5	90
	DWH 12S-M18	12	23	24	30	27	36	39.5	20	12	18.5	3.0	M 18×1.5	110
	DWH 16S-M22	16	27	30	32	30	40	45	22	14	21.5	4.5	M 22×1.5	150
	DWH 20S-M27	20	32	36	41	36	48	53	26.5	16	24	3.5	M 27×2	350
PB 250	DWH 25S-M33	25	39	46	50	46	56	66	31.5	18	30.5	3.5	M 33×2	400
	DWH 30S-M42	30	49	50	60	55	64	76	37	20	35.5	3.5	M 42×2	600
	DWH 38S-M48	38	55	60	70	60	72	87	41.5	22	40.5	3.5	M 48×2	800

Dimensions given approximate length with tightened nut. All dimensions are in millimeters, for reference only subject to change.
*O-Ring of NBR(e.g. Perbunan®) standard, FPM(e.g. viton®) on request (see page 1)
†MA = Recommended tightening torques (in Nm) for male G and M

High Pressure Banjo Fittings(BSP Paralled/Metric Paralled)

DTH-G/M



for BSP Paralled

Series	Part No.	Tube O.D.	D	H	h	h_1	L	L_1	ℓ	ℓ_1	ℓ_2	t	T G(PF)	MA†
L light PB 315	DTH 06L-01G	6	14	14	17	17	27	24	12	8	10.5	2.5	1/8	20
	DTH 08L-02G	8	18	17	22	19	29	30	14.5	12	14	3.0	1/4	50
	DTH 10L-02G	10	18	19	22	19	30	30	15.5	12	14	3.0	1/4	50
	DTH 12L-03G	12	22	22	27	24	33	36	18	12	16.5	3.0	3/8	75
	DTH 15L-04G	15	26	27	32	30	37	45	21.5	14	21.5	4.5	1/2	130
	DTH 18L-04G	18	26	32	32	30	37	45	21	14	21.5	4.5	1/2	130
PB 160	DTH 22L-06G	22	32	36	41	36	44	53	27.5	16	24	3.5	3/4	250
	DTH 28L-08G	28	39	41	50	46	49	66	32	18	30.5	3.5	1	350
	DTH 35L-10G	35	49	50	60	55	58	76	36	20	35.5	3.5	1 1/4	600
	DTH 42L-12G	42	55	60	70	60	63	87	40.5	22	40.5	3.5	1 1/2	800
S heavy PB 400	DTH 06S-02G	6	18	17	22	19	31	30	16.5	12	14	3.0	1/4	50
	DTH 08S-02G	8	18	19	22	19	31	30	16.5	12	14	3.0	1/4	50
	DTH 10S-03G	10	22	22	27	24	35	36	18.5	12	16.5	3.0	3/8	75
	DTH 12S-03G	12	22	24	27	24	35	36	18.5	12	16.5	3.0	3/8	75
	DTH 16S-04G	16	26	30	32	30	40	45	22	14	21.5	4.5	1/2	130
	DTH 20S-06G	20	32	36	41	36	48	53	26.5	16	24	3.5	3/4	250
PB 250	DTH 25S-08G	25	39	46	50	46	56	66	31.5	18	30.5	3.5	1	350
	DTH 30S-10G	30	49	50	60	55	64	76	37	20	35.5	3.5	1 1/4	600
	DTH 38S-12G	38	55	60	70	60	72	87	41.5	22	40.5	3.5	1 1/2	800

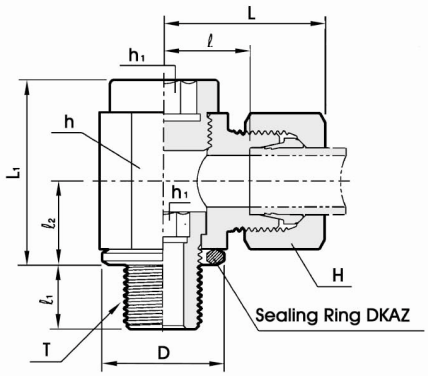
for Metric Paralled

Series	Part No.	Tube O.D.	D	H	h	h_1	L	L_1	ℓ	ℓ_1	ℓ_2	t	T M(Metric)	MA†
L light PB 315	DTH 06L-M10	6	14	14	17	17	27	24	12	8	10.5	2.5	M 10×1	25
	DTH 08L-M12	8	17	17	22	19	29	30	14.5	12	14	3.0	M 12×1.5	50
	DTH 10L-M14	10	19	19	22	19	30	30	15.5	12	14	3.0	M 14×1.5	60
	DTH 12L-M16	12	21	22	27	24	33	36	18	12	16.5	3.0	M 16×1.5	90
	DTH 15L-M18	15	23	27	30	27	36	39.5	20.5	12	18.5	3.0	M 18×1.5	110
	DTH 18L-M22	18	27	32	32	30	37	45	21	14	21.5	4.5	M 22×1.5	150
PB 160	DTH 22L-M26	22	31	36	41	36	44	53	27.5	16	24	3.5	M 26×1.5	350
	DTH 28L-M33	28	39	41	50	46	49	66	32	18	30.5	3.5	M 33×2	400
	DTH 35L-M42	35	49	50	60	55	58	76	36	20	35.5	3.5	M 42×2	600
	DTH 42L-M48	42	55	60	70	60	63	87	40.5	22	40.5	3.5	M 48×2	800
S heavy PB 400	DTH 06S-M12	6	17	17	22	19	31	30	16.5	12	14	3.0	M 12×1.5	50
	DTH 08S-M14	8	19	19	22	19	31	30	16.5	12	14	3.0	M 14×1.5	60
	DTH 10S-M16	10	21	22	27	24	35	36	18.5	12	16.5	3.0	M 16×1.5	90
	DTH 12S-M18	12	23	24	30	27	36	39.5	20	12	18.5	3.0	M 18×1.5	110
	DTH 16S-M22	16	27	30	32	30	40	45	22	14	21.5	4.5	M 22×1.5	150
	DTH 20S-M27	20	32	36	41	36	48	53	26.5	16	24	3.5	M 27×2	350
PB 250	DTH 25S-M33	25	39	46	50	46	56	66	31.5	18	30.5	3.5	M 33×2	400
	DTH 30S-M42	30	49	50	60	55	64	76	37	20	35.5	3.5	M 42×2	600
	DTH 38S-M48	38	55	60	70	60	72	87	41.5	22	40.5	3.5	M 48×2	800

Dimensions given approximate length with tightened nut. All dimensions are in millimeters, for reference only subject to change.
*O-Ring of NBR(e.g. Perbunan®) standard, FPM(e.g. viton®) on request (see page 1)
†MA = Recommended tightening torques (in Nm) for male G and M

Throttlefree Banjo Fittings(BSP/Metric Paralled) with DKAZ-Ring

DSVW-G/M



for BSP Paralled

Series	Part No.	Tube O.D.	D	H	h	h_1	L	L_1	ℓ	ℓ_1	ℓ_2	T G(PF)
L light PB 250	DSVW 06L-01G	6	14	14	19	6	27	24	12.5	8	12	1/8
	DSVW 08L-02G	8	18	17	22	8	29	30	14.5	12	16	1/4
	DSVW 10L-02G	10	18	19	22	8	30	30	15.5	12	16	1/4
	DSVW 12L-03G	12	22	22	27	10	33	37	18	12	18	3/8
	DSVW 15L-04G	15	26	27	32	12	37	42	22	14	21	1/2
PB 100	DSVW 18L-04G	18	26	32	36	12	38	46	21.5	14	23	1/2
	DSVW 22L-06G	22	32	36	46	17	45	58	28.5	16	28	3/4
	DSVW 28L-08G	28	39	41	50	22	48	64	31.5	18	32	1
	DSVW 35L-10G	35	49	50	60	27	57	76	35.5	20	37	1 1/4
	DSVW 42L-12G	42	55	60	65	32	63	85	40	22	42	1 1/2
S heavy PB 400	DSVW 06S-02G	6	18	17	22	8	31	30	16.5	12	16	1/4
	DSVW 08S-02G	8	18	19	22	8	31	30	16.5	12	16	1/4
	DSVW 10S-03G	10	22	22	27	10	35	37	18.5	12	18	3/8
	DSVW 12S-03G	12	22	24	27	10	35	37	18.5	12	18	3/8
	DSVW 14S-04G	14	26	27	32	12	41	42	23	14	21	1/2
	DSVW 16S-04G	16	26	30	36	12	41	46	22.5	14	23	1/2
	DSVW 20S-06G	20	32	36	46	17	49	58	27.5	16	28	3/4
PB 250	DSVW 25S-08G	25	39	46	50	22	55	64	31.	18	32	1
	DSVW 30S-10G	30	49	50	60	27	63	76	36.5	20	37	1 1/4
	DSVW 38S-12G	38	55	60	70	32	72	85	41	22	42	1 1/2

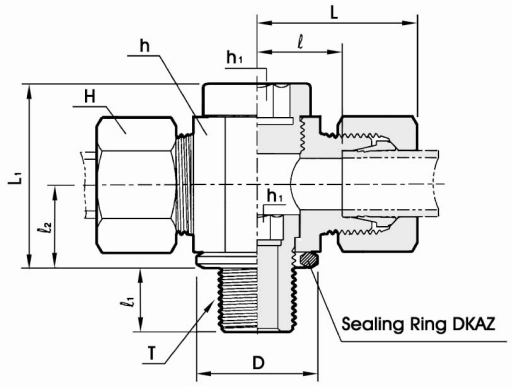
for Metric Paralled

Series	Part No.	Tube O.D.	D	H	h	h_1	L	L_1	ℓ	ℓ_1	ℓ_2	T M(Metric)
L light PB 250	DSVW 06L-M10	6	14	14	19	6	27	24	12.5	8	12	M 10×1
	DSVW 08L-M12	8	17	17	22	6	29	30	14.5	12	15	M 12×1.5
	DSVW 10L-M14	10	19	19	22	8	30	30	15.5	12	16	M 14×1.5
	DSVW 12L-M16	12	21	22	27	10	33	37	18	12	18	M 16×1.5
	DSVW 15L-M18	15	23	27	30	12	36	40	21	12	20	M 18×1.5
PB 100	DSVW 18L-M22	18	27	32	36	14	38	46	21.5	14	23	M 22×1.5
	DSVW 22L-M26	22	31	36	41	17	42	51	26	16	25	M 26×1.5
	DSVW 28L-M33	28	39	41	50	22	48	64	31.5	18	32	M 33×2
	DSVW 35L-M42	35	49	50	60	27	57	76	35.5	20	37	M 42×2
	DSVW 42L-M48	42	55	60	65	32	63	85	40	22	42	M 48×2
S heavy PB 400	DSVW 06S-M12	6	17	17	22	6	31	30	16.5	12	15	M 12×1.5
	DSVW 08S-M14	8	19	19	22	8	31	30	16.5	12	16	M 14×1.5
	DSVW 10S-M16	10	21	22	27	10	35	37	18.5	12	18	M 16×1.5
	DSVW 12S-M18	12	23	24	30	12	37	41	20.5	12	20	M 18×1.5
	DSVW 14S-M20	14	25	27	32	12	41	42	23	14	21	M 20×1.5
	DSVW 16S-M22	16	27	30	36	14	41	46	22.5	14	23	M 22×1.5
	DSVW 20S-M27	20	32	36	46	17	49	58	27.5	16	28	M 27×2
PB 250	DSVW 25S-M33	25	39	46	50	22	55	64	31	18	32	M 33×2
	DSVW 30S-M42	30	49	50	60	27	63	76	36.5	20	37	M 42×2
	DSVW 38S-M48	38	55	60	70	32	72	85	41	22	42	M 48×2

Dimensions given approximate length with tightened nut. All dimensions are in millimeters, for reference only subject to change.

Throttlefree Banjo Fittings(BSP/Metric Paralled) with DKAZ-Ring

DSVT-G/M



for BSP Paralled

Series	Part No.	Tube O.D.	D	H	h	h_1	L	L_1	ℓ	ℓ_1	ℓ_2	T G(PF)
L light PB 250 bar	DSVT 06L-01G	6	14	14	18	6	27	24	12	8	12	1/8
	DSVT 08L-02G	8	18	17	22	8	29	30	14	12	15	1/4
	DSVT 10L-02G	10	18	19	22	8	30	30	15	12	15	1/4
	DSVT 12L-03G	12	22	22	27	10	32	36	17.5	12	18	3/8
	DSVT 15L-04G	15	26	27	30	12	35	40	20	14	20	1/2
PB 100 bar	DSVT 18L-04G	18	26	32	30	12	36	40	19.5	14	20	1/2
	DSVT 22L-06G	22	32	36	41	17	43	52	27	16	25	3/4
	DSVT 28L-08G	28	39	41	46	22	46	58	29.5	18	29	1
	DSVT 35L-10G	35	49	50	55	27	55	69	33	20	34	1 1/4
	DSVT 42L-12G	42	55	60	65	32	63	84	40	22	41	1 1/2
S heavy PB 400 bar	DSVT 06S-02G	6	18	17	22	8	31	30	16	12	15	1/4
	DSVT 08S-02G	8	18	19	22	8	31	30	16	12	15	1/4
	DSVT 10S-03G	10	22	22	27	10	34	36	18	12	18	3/8
	DSVT 12S-03G	12	22	24	27	10	34	36	18	12	18	3/8
	DSVT 14S-04G	14	26	27	32	12	40	42	22	14	21	1/2
	DSVT 16S-04G	16	26	30	32	12	40	42	21.5	14	21	1/2
	DSVT 20S-06G	20	32	36	46	17	50	57	28.5	16	28	3/4
PB 250 bar	DSVT 25S-08G	25	39	46	50	22	55	62	31	18	31	1
	DSVT 30S-10G	30	49	50	60	27	63	74	36.5	20	36	1 1/4
	DSVT 38S-12G	38	55	60	70	32	72	84	41	22	41	1 1/2

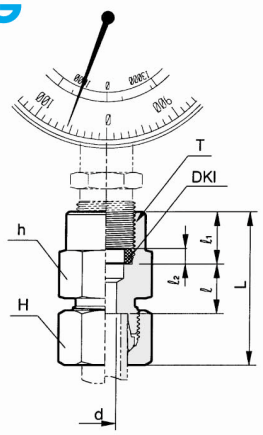
for Metric Paralled

Series	Part No.	Tube O.D.	D	H	h	h_1	L	L_1	ℓ	ℓ_1	ℓ_2	T M(Metric)
L light PB 250 bar	DSVT 06L-M10	6	14	14	18	6	27	24	12	8	12	M 10×1
	DSVT 08L-M12	8	17	17	20	6	28	27	13	12	14	M 12×1.5
	DSVT 10L-M14	10	19	19	22	8	30	30	15	12	15	M 14×1.5
	DSVT 12L-M16	12	21	22	27	10	32	36	17.5	12	18	M 16×1.5
	DSVT 15L-M18	15	23	27	30	12	35	39	20	12	19	M 18×1.5
PB 100 bar	DSVT 18L-M22	18	27	32	32	14	37	41	20.5	14	20	M 22×1.5
	DSVT 22L-M26	22	31	36	36	17	41	46	24.5	16	22	M 26×1.5
	DSVT 28L-M33	28	39	41	46	22	46	58	29.5	18	29	M 33×2
	DSVT 35L-M42	35	49	50	55	27	55	69	33	20	33	M 42×2
	DSVT 42L-M48	42	55	60	65	32	63	84	40	22	41	M 48×2
S heavy PB 400 bar	DSVT 06S-M12	6	17	17	20	6	30	27	15	12	14	M 12×1.5
	DSVT 08S-M14	8	19	19	22	8	31	30	16	12	15	M 14×1.5
	DSVT 10S-M16	10	21	22	27	10	34	36	18	12	18	M 16×1.5
	DSVT 12S-M18	12	23	24	30	12	36	39	19.5	12	19	M 18×1.5
	DSVT 14S-M20	14	25	27	32	12	40	41	22	14	20	M 20×1.5
	DSVT 16S-M22	16	27	30	36	14	42	45	23.5	14	22	M 22×1.5
	DSVT 20S-M27	20	32	36	46	17	50	58	28.5	16	28	M 27×2
PB 250 bar	DSVT 25S-M33	25	39	46	50	22	55	62	31	18	31	M 33×2
	DSVT 30S-M42	30	49	50	60	27	63	74	36.5	20	36	M 42×2
	DSVT 38S-M48	38	55	60	70	32	72	84	41	22	41	M 48×2

Dimensions given approximate length with tightened nut. All dimensions are in millimeters, for reference only subject to change.

Pressure Gauge Connector(BSP Paralled) with DKI-Ring

DGC-G

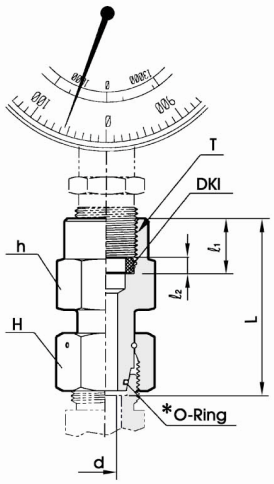


Series	Part No.	Tube O.D.	d	H	h	L	ℓ	ℓ1	ℓ2	T G(PF)
L light PN 315	DGC 06L-02G	6	2.5	14	19	37	7.5	14.5	4.5	1/4
	DGC 08L-02G	8	5.5	17	19	37	7.5	14.5	4.5	1/4
	DGC 10L-02G	10	5.5	19	19	38	8.5	14.5	4.5	1/4
	DGC 12L-02G	12	5.5	22	19	38	8.5	14.5	4.5	1/4
S heavy PN 630	DGC 06S-04G	6	3.5	17	27	46	11	20	5	1/2
	DGC 08S-04G	8	3.5	19	27	46	11	20	5	1/2
	DGC 10S-04G	10	7.0	22	27	47	10.5	20	5	1/2
	DGC 12S-04G	12	7.0	24	27	47	10.5	20	5	1/2

Dimensions given approximate length with tightened nut.

Swivel Gauge Adaptor(BSP Paralled) with cone and DKI-Ring

DGE-G

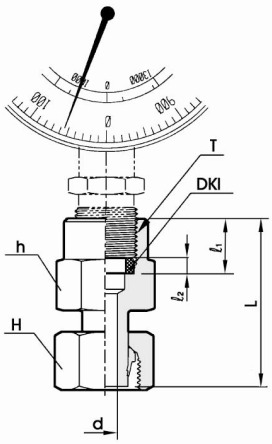


Series	Part No.	Tube O.D.	d	H	h	L	ℓ1	ℓ2	T G(PF)
L light PN 315	DGE 06L-02G	6	2.5	14	19	35.5	14.5	4.5	1/4
	DGE 08L-02G	8	4	17		35.5			
	DGE 10L-02G	10	5.5	19		36			
	DGE 12L-02G	12	5.5	22		36			
S heavy PN 630	DGE 06S-04G	6	2.5	17	27	42.5	20	5	1/2
	DGE 08S-04G	8	4	19		43			
	DGE 10S-04G	10	6	22		43.5			
	DGE 12S-04G	12	7	24		45			
	DGE 06S-02G	6	2.5	17	19	35.5	14.5	4.5	1/4
	DGE 08S-02G	8	4	19		35.5			
	DGE 10S-02G	10	6	22		36			
	DGE 12S-02G	12	7	24		39			

Dimensions given approximate length with tightened nut.
*O-Ring of NBR(e.g. Perbunen®) standard, FPM(e.g. viton®) on request (see page 1)
Please observe Final Assembly Instrucrions on page 11.

Gauge Adaptor(BSP Paralled) with Standpipe and DKI-Ring

DGA-G



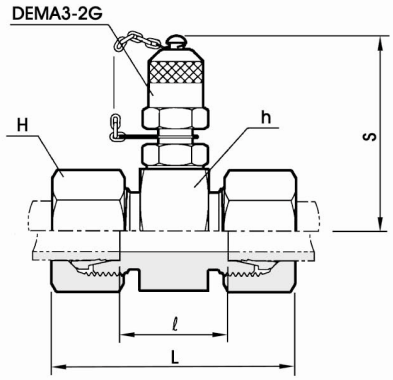
Series	Part No.	Tube O.D.	d	H	h	L	ℓ1	ℓ2	T G(PF)
L light PN 315	DGA 06L-02G	6	3.5	14	19	38	14.5	4.5	1/4
	DGA 08L-02G	8	5.5	17		38			
	DGA 10L-02G	10	7.5	19		39.5			
	DGA 12L-02G	12	9	22		40.5			
S heavy PN 630	DGA 06S-04G	6	3.5	17	27	45	20	5	1/2
	DGA 08S-04G	8	4.5	19		45			
	DGA 10S-04G	10	6.5	22		47			
	DGA 12S-04G	12	7.5	24		47.5			

Please observe Final Assembly Instrucrions on page 11.

All Dimensions are in millimeters, refereance only subject to change.

Tee Test Coupling with threaded Connection DEMA 3-02G

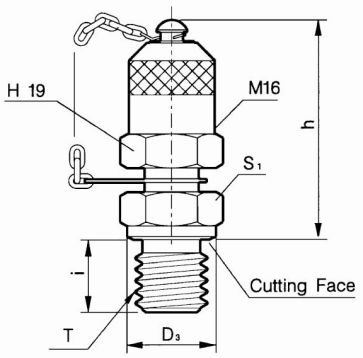
DGMA



Series	Part No.	Tube O.	H	h	L	ℓ	S
L light PB 315	DGMA 3-06L	6	14	24	50	20.5	50
	DGMA 3-08L	8	17	24	50	20.5	50
	DGMA 3-10L	10	19	24	52	22.5	50
	DGMA 3-12L	12	22	24	52	22.5	50
	DGMA 3-15L	15	27	30	55	24.5	53
	DGMA 3-18L	18	32	32	56	23.5	54
PB 160	DGMA 3-22L	22	36	36	60	27.5	56
	DGMA 3-28L	28	41	41	61	27.5	58
	DGMA 3-35L	35	50	46	69	25.5	61
	DGMA 3-42L	42	60	55	70	24.5	65
S heavy PB 630	DGMA 3-06S	6	17	24	54	24.5	50
	DGMA 3-08S	8	19	24	54	24.5	50
	DGMA 3-10S	10	22	24	56	23.5	50
	DGMA 3-12S	12	24	24	56	23.5	50
	DGMA 3-14S	14	27	27	62	26.5	51
PB 400	DGMA 3-16S	16	30	30	62	25.5	53
	DGMA 3-20S	20	36	36	69	25.5	56
	DGMA 3-25S	25	46	41	75	26.5	58
	DGMA 3-30S	30	50	46	81	27.5	61
PB 315	DGMA 3-38S	38	60	55	90	29	65

Test Coupling with threaded connection M16

DEMA3

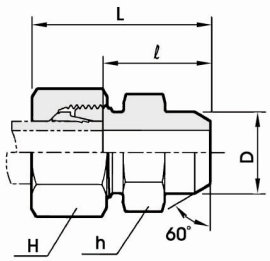


Form B stud end standard
(Form E stud end available)

PB	Part No.	d_3	h	i	S_1	T
PB 630	DEMA3 - 01G	14	41	8	17	PF 1/8
	DEMA3 - 02G	18		10	19	PF 1/4
	DEMA3 - 03G	22		12	22	PF 3/8
	DEMA3 - 04G	26		14	27	PF 1/2
PB 630	DEMA3 - M10	14	41	8	17	M 10×1
	DEMA3 - M12	17		12	17	M 12×1.5
	DEMA3 - M14	19		12	19	M 14×1.5
	DEMA3 - M16	21		12	22	M 16×1.5

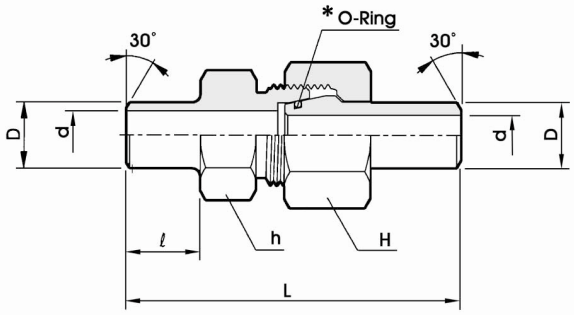
Dimensions given approximate length with tightened nut. All dimensions are in millimeters, for reference only subject to change.

Welding Connector
DAS



Series	Part No.	Tube O.D.	D	H	h	L	ℓ
L light PN 315	DAS-06L	6	10	14	12	29	14
	DAS-08L	8	12	17	14	31	16
	DAS-10L	10	14	19	17	33	18
	DAS-12L	12	16	22	19	33	18
	DAS-15L	15	19	27	22	37	22
	DAS-18L	18	22	32	27	40	23.5
PN 160	DAS-22L	22	27	36	32	45	28.5
	DAS-28L	28	32	41	41	47	30.5
	DAS-35L	35	40	50	46	54	32.5
	DAS-42L	42	46	60	55	58	35
S heavy PN 630	DAS-06S	6	11	17	14	34	19
	DAS-08S	8	13	19	17	36	21
	DAS-10S	10	15	22	19	39	22.5
	DAS-12S	12	17	24	22	41	24.5
	DAS-14S	14	19	27	24	45	27
PN 400	DAS-16S	16	21	30	27	45	26.5
	DAS-20S	20	26	36	32	51	29.5
	DAS-25S	25	31	46	41	56	32
	DAS-30S	30	36	50	46	62	35.5
PN 315	DAS-38S	38	44	60	55	69	38

Welding Connector with DAK
DASK

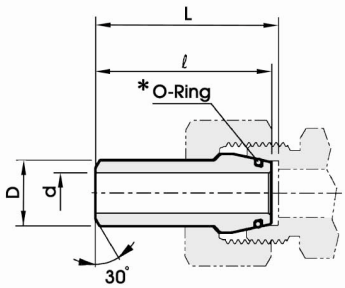


Series S / Max. Pressure	Part No.	Tube O.D D	d	H	h	L	ℓ
PB 248	DASK 10×1.0	10	8	22	19	58	10
PB 357	DASK 10×1.5		7				
PB 458	DASK 10×2.0		6				
PB 303	DASK 12×1.5	12	9	24	22	65	15
PB 391	DASK 12×2.0		8				
PB 474	DASK 12×2.5		7				
PB 234	DASK 16×1.5	16	13	30	27	74.5	16.5
PB 303	DASK 16×2.0		12				
PB 370	DASK 16×2.5		11				
PB 433	DASK 16×3.0		10				
PB 249	DASK 20×2.0	20	16	36	32	84	19
PB 305	DASK 20×2.5		15				
PB 357	DASK 20×3.0		14				
PB 458	DASK 20×4.0		12				
PB 292	DASK 25×3.0	25	19	46	41	94.5	19.5
PB 378	DASK 25×4.0		17				
PB 458	DASK 25×5.0		15				
PB 248	DASK 30×3.0	30	24	50	46	102	23
PB 321	DASK 30×4.0		22				
PB 391	DASK 30×5.0		20				
PB 460	DASK 30×6.0		18				
PB 260	DASK 38×4.0	38	30	60	55	111	23
PB 318	DASK 38×5.0		28				
PB 373	DASK 38×6.0		26				
PB 427	DASK 38×7.0		24				

Dimensions given approximate length with tightened nut. All dimentions are in milimeters, for referance only subject to change.
*O-Ring of NBR(e.g. Perbunan®)standard, FPM(e.g. viton®) on request (see page1)

Welding Nipple with *O-Ring

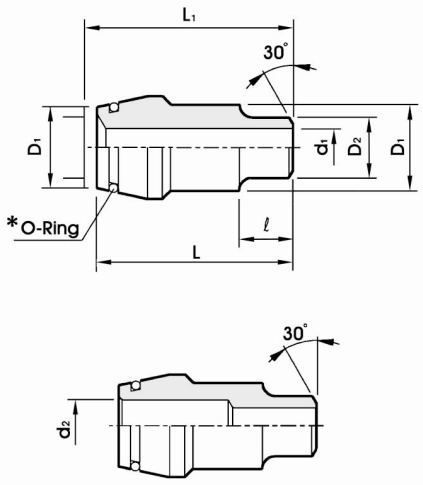
DAK



Pressure Rating		Part No.	Tube O.D D	d	L	ℓ
Fittings	DAK and Tube					
PN 630	PB 248	DAK 10×1.0	10	8	35.5	33
	PB 357	DAK 10×1.5		7		
	PB 458	DAK 10×2.0		6		
PN 630	PB 303	DAK 12×1.5	12	9	35.5	33
	PB 391	DAK 12×2.0		8		
	PB 474	DAK 12×2.5		7		
PN 400	PB 234	DAK 16×1.5	16	13	42.5	39
	PB 303	DAK 16×2.0		12		
	PB 370	DAK 16×2.5		11		
	PB 433	DAK 16×3.0		10		
PN 400	PB 249	DAK 20×2.0	20	16	47.5	43.5
	PB 303	DAK 20×2.5		15		
	PB 357	DAK 20×3.0		14		
	PB 458	DAK 20×4.0		12		
PN 400	PB 292	DAK 25×3.0	25	19	55	49.5
	PB 378	DAK 25×4.0		17		
	PB 458	DAK 25×5.0		15		
PN 400	PB 248	DAK 30×3.0	30	24	58.5	51.5
	PB 321	DAK 30×4.0		22		
	PB 391	DAK 30×5.0		20		
	PB 460	DAK 30×6.0		18		
PN 315	PB 260	DAK 38×4.0	38	30	66	56.5
	PB 318	DAK 38×5.0		28		
	PB 373	DAK 38×6.0		26		
	PB 427	DAK 38×7.0		24		

Reducing Welding Nipple with *O-Ring

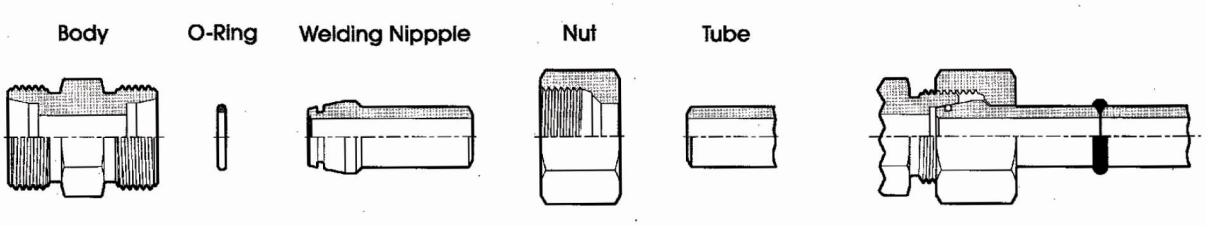
DAKR



Pressure Rating		Part No.	Tube O.D		d_1	d_2	L_1	L	ℓ
Fittings	DAKR and Tube		D_1	D_2					
PN 630	PB 526	DAKR 1006×1.5	10	6	3	5	37.5	35	12
	PB 526	DAKR 1008×2.0	10	8	4	-	37.5	35	12
	PB 526	DAKR 1208×2.0	12	8	4	6	37.5	35	14
	PB 357	DAKR 1210×1.5	12	10	7	-	37.5	35	14
PN 400	PB 474	DAKR 1612×2.5	16	12	7	-	46.5	43	15
	PB 474	DAKR 2012×2.5	20	12	7	-	51.5	47.5	15
	PB 433	DAKR 2016×3.0	20	16	10	-	53.5	49.5	17
	PB 433	DAKR 2516×3.0	25	16	10	-	56.5	51	17
	PB 458	DAKR 2520×4.0	25	20	12	-	59.5	54	20
	PB 303	DAKR 3016×2.0	30	16	12	-	67	60	17
	PB 303	DAKR 3020×2.5	30	20	15	-	70	63	20
	PB 292	DAKR 3025×3.0	30	25	19	-	70	63	20
PN 315	PB 303	DAKR 3816×2.0	38	16	12	-	79	69.5	17
	PB 303	DAKR 3820×2.5	38	20	15	-	82	72.5	20
	PB 292	DAKR 3825×3.0	38	25	19	-	82	72.5	20
	PB 321	DAKR 3830×4.0	38	30	22	-	82	72.5	20

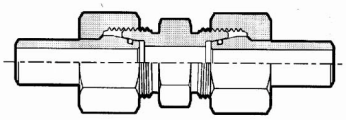
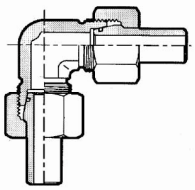
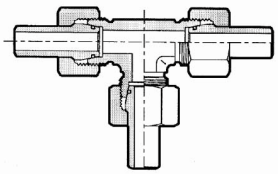
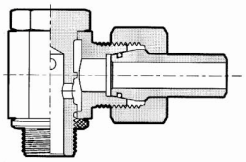
*O-Ring seals NBR(e.g. Perbunam®) standard, FPM(e.g. Viton®) on request (see page1)
Please observe final asembly Instructions on page 11.
Max Pressure ratings are based on carbon steel (st 35.4 NBK), and pressure rating of the sfainless steel given refer to on page 4.
All dimensions are in millimeters, for reference only subject to change.

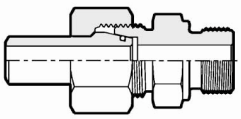
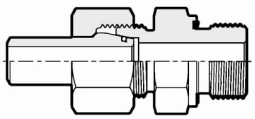
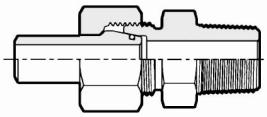
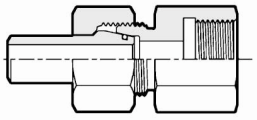
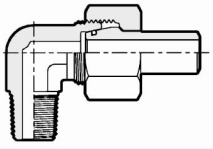
Installation Instruction for Welding Nipple Fittings



Step 1. Pipe to be cut at right angle by sawing and freed from burrs both inside and outside.
Step 2. Slide nut onto the weld nipple.
Step 3. Welding nipple and tube to be welded together and weld to be cleaned between runs. The tube and welding nipple must be aligned.
Step 4. Fit the O-Ring : Attention, do not twist O-Ring : taper, nut and cone must be clean
Step 5. Thread on body and nut to be oiled.
Step 6. Screw on nut by hand. Fully tighten using a spanner with a 1/3 turn.

Ordering information for Welding Nipple fittings.

Order No.	Figures
DGV	DU (Without Cutting Ring) + DAK
	
DWV	DL (Without Cutting Ring) + DAK
	
DTV	DT (Without Cutting Ring) + DAK
	
DWSEV	DSWVE (Without Cutting Ring) + DAK
	

Order No.	Figures
DGEV	DMC (Without Cutting Ring) + DAK
	
DGUV	DMC-ED (Without Cutting Ring) + DAK
	
DGEV-R	DMC (Without Cutting Ring) + DAK
	
DGAI	DFC (Without Cutting Ring) + DAK
	
DWEV	DLM (Without Cutting Ring) + DAK
	

General informations for Non-Return Valves

■ Application
For hydraulic fluid and compressed air.
Please contact our application engineers for doutful conditions or the use of special fluids.

■ Design
Hyupdong non return valves are leakfree by elastic materials (e.g. Viton®) and intermal parts provides optimal flow conditions for the fluids.

■ Opening Pressure
The non return valves are tested at the factory to an opening pressure of approx. 1 bar. On request also 0.5 to 3 bar available.

■ Materials
Standard materials are stainless steel, 316, carbon steel or brass available upon request.
Sealing seals are FPM(e.g. Viton®) standard, other materials available on request.

Non Return Valve
DCVU

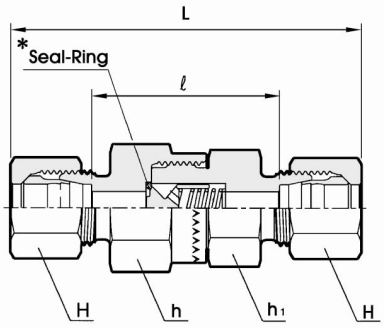
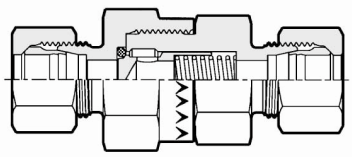
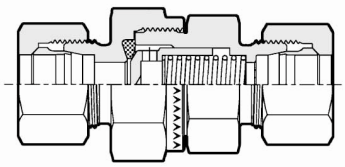
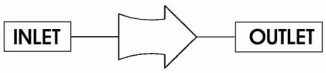


FIG.A


FIG.B


FIG.C



Series	Part No.	Tube O.D	H	h	h1	L	l	Fig.
L light PB250	DCVU-06L	6	14	17	17	58	29	A
	DCVU-08L	8	17	19	19	59	30	
	DCVU-10L	10	19	24	22	69.5	40.5	
	DCVU-12L	12	22	30	27	72.5	43.5	B
	DCVU-15L	15	27	32	27	77.5	47.5	
PB160	DCVU-18L	18	32	36	36	83.5	51.5	
	DCVU-22L	22	36	46	41	93.5	61.5	C
PB100	DCVU-28L	28	41	55	50	113.7	69.5	
	DCVU-35L	35	50	60	60	117.5	74.5	
	DCVU-42L	42	60	70	65	119	74	
S heavy PB400	DCVU-06S	6	17	19	19	63.5	34.5	A
	DCVU-08S	8	19	19	19	63.5	34.5	
	DCVU-10S	10	22	24	22	72.5	40.5	
	DCVU-12S	12	24	27	24	74.5	42.5	
	DCVU-14S	14	27	32	27	82.5	47.5	B
	DCVU-16S	16	30	36	32	86.5	50.5	
	DCVU-20S	20	36	46	41	97.5	54.5	C
PB250	DCVU-25S	25	46	50	46	106.5	58.5	
	DCVU-30S	30	50	60	60	122.5	69.5	
	DCVU-38S	38	60	70	65	136.5	75.5	

Dimensions given approximate length with tightened nut. All dimentions are in milimeters, for referance only subject to change.
*O-Ring of NBR(e.g. Perbunan®)standard, FPM(e.g. viton®) on request (see page1)

Non Return Valve

DCV GED-L/S
MED-L/S

Form E stud end

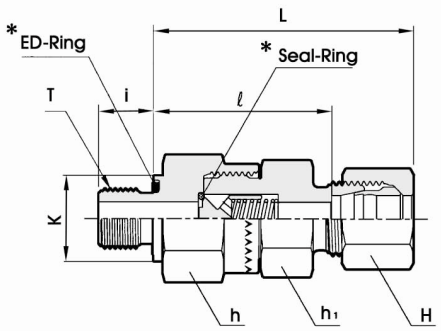


FIG.A

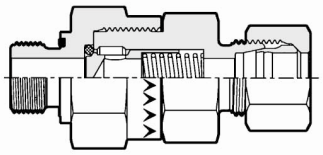


FIG.B

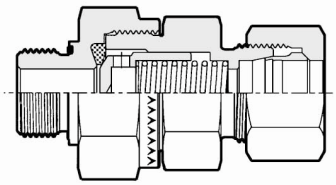
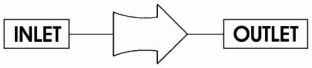


FIG.C



for BSP Paralled

Series	Part No.	Tube O.D.	H	h	h1	K	L	ℓ	i	T G(PF)	Fig.
L light PB250	DCV01GED-06L	6	14	17	17	14	42.5	28	8	1/8	A
	DCV02GED-08L	8	17	19	19	19	44.5	30	12	1/4	
	DCV02GED-10L	10	19	24	22	19	53	38.5	12	1/4	
	DCV03GED-12L	12	22	30	27	22	57	42.5	12	3/8	B
	DCV04GED-15L	15	27	32	27	27	60.5	45.5	14	1/2	
PB160	DCV04GED-18L	18	32	36	36	27	66	50	14	1/2	
	DCV06GED-22L	22	36	46	41	32	71	55	16	3/4	C
PB100	DCV08GED-28L	28	41	55	50	40	79.5	63	18	1	
	DCV10GED-35L	35	50	60	60	50	90.5	69	20	1 1/4	
	DCV12GED-42L	42	60	70	65	55	91	68.5	22	1 1/2	
S heavy PB400	DCV02GED-06S	6	17	19	19	19	46	31.5	12	1/4	A
	DCV02GED-08S	8	19	19	19	19	46	31.5	12	1/4	
	DCV03GED-10S	10	22	24	22	22	54	38	12	3/8	
	DCV03GED-12S	12	24	27	24	22	57	41	12	3/8	
	DCV04GED-14S	14	27	32	27	27	62	44.5	14	1/2	B
	DCV04GED-16S	16	30	36	32	27	66	48	14	1/2	
	DCV06GED-20S	20	36	46	41	32	73.5	52	16	3/4	C
PB250	DCV08GED-25S	25	46	50	46	40	78.5	54.5	18	1	
	DCV10GED-30S	30	50	60	60	50	90.5	64	20	1 1/4	
	DCV12GED-38S	38	60	70	65	55	102	69.5	22	1 1/2	

for Metric Paralled

Series	Part No.	Tube O.D.	H	h	h1	K	L	ℓ	i	T M(Metric)	Fig.
L light PN400	DCVM10ED-06L	6	14	17	17	14	42.5	28	8	M10×1.0	A
	DCVM12ED-08L	8	17	19	19	17	43.5	29	12	M12×1.5	
	DCVM14ED-10L	10	19	24	22	19	53	38.5	12	M14×1.5	
	DCVM16ED-12L	12	22	30	27	22	57	42.5	12	M16×1.5	B
	DCVM18ED-15L	15	27	32	27	24	60.5	45.5	12	M18×1.5	
PB160	DCVM22ED-18L	18	32	36	36	27	66	50	14	M22×1.5	
	DCVM26ED-22L	22	36	46	41	32	71	55	16	M26×1.5	C
PB100	DCVM33ED-28L	28	41	55	50	40	79.5	63	18	M33×2.0	
	DCVM42ED-35L	35	50	60	60	50	90.5	69	20	M42×2.0	
	DCVM48ED-42L	42	60	70	65	55	91	68.5	22	M48×2.0	
S heavy PB400	DCVM12ED-06S	6	17	19	19	17	46	31.5	12	M12×1.5	A
	DCVM14ED-08S	8	19	19	19	19	46	31.5	12	M14×1.5	
	DCVM16ED-10S	10	22	24	22	22	54	38	12	M16×1.5	
	DCVM18ED-12S	12	24	27	24	24	57	41	12	M18×1.5	
	DCVM20ED-14S	14	27	32	27	26	62	44.5	14	M20×1.5	B
	DCVM22ED-16S	16	30	36	32	27	66	48	14	M22×1.5	
	DCVM27ED-20S	20	36	46	41	32	73.5	52	16	M27×2.0	C
PB250	DCVM33ED-25S	25	46	50	46	40	78.5	54.5	18	M33×2.0	
	DCVM42ED-30S	30	50	60	60	50	90.5	64	20	M42×2.0	
	DCVM48ED-38S	38	60	70	65	55	100	69.5	22	M48×2.0	

Dimensions given approximate length with tightened nut. All dimensions are in millimeters for reference only, subject to change.
*ED-Ring and O-Ring of NBR(e.g. Perbunan®)standard, FPM(e.g. viton®) on request (see page1)

Non Return Valve
DCV L/S-GED
L/S-MED

Form E stud end

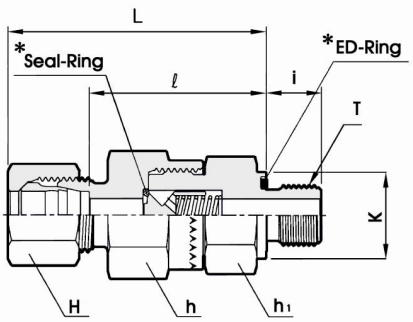


FIG.A

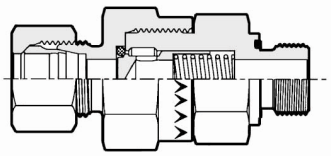


FIG.B

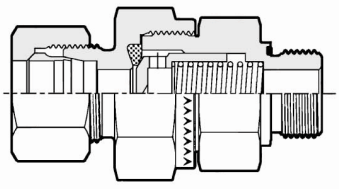
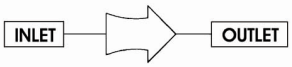


FIG.B



for BSP Paralled

Series	Part No.	Tube O.D.	H	h	h1	K	L	ℓ	i	T G(PF)	Fig.
L light PB250	DCV06L-01GED	6	14	17	17	14	41	26.5	8	1/8	A
	DCV08L-02GED	8	17	19	19	19	43	28.5	12	1/4	
	DCV10L-02GED	10	19	24	22	19	53	38.5	12	1/4	
	DCV12L-03GED	12	22	30	27	22	55	40.5	12	3/8	B
	DCV15L-04GED	15	27	32	27	27	57.5	42.5	14	1/2	
PB160	DCV18L-04GED	18	32	36	36	27	64	48	14	1/2	
	DCV22L-06GED	22	36	46	41	32	72	56	16	3/4	C
PB100	DCV28L-08GED	28	41	55	50	40	80.5	64	18	1	
	DCV35L-10GED	35	50	60	60	50	91.5	70	20	1 1/4	
	DCV42L-12GED	42	60	70	65	55	93	70.5	22	1 1/2	
S heavy PB400	DCV06L-02GED	6	17	19	19	19	46	31.5	12	1/4	A
	DCV08S-02GED	8	19	19	19	19	46	31.5	12	1/4	
	DCV10S-03GED	10	22	24	22	22	54	38	12	3/8	
	DCV12S-03GED	12	24	27	24	22	57	41	12	3/8	
	DCV14S-04GED	14	27	32	27	27	61	43.5	14	1/2	B
	DCV16S-04GED	16	30	36	32	27	64	46	14	1/2	
	DCV20S-06GED	20	36	46	41	32	71.5	50	16	3/4	C
PB250	DCV25S-08GED	25	46	50	46	40	78.5	54.5	18	1	
	DCV30S-10GED	30	50	60	60	50	90.5	64	20	1 1/4	
	DCV38S-12GED	38	60	70	65	55	102	71.5	22	1 1/2	

for Metric Paralled

Series	Part No.	Tube O.D.	H	h	h1	K	L	ℓ	i	T M(Metric)	Fig.
L light PN 250	DCV06L-M10ED	6	14	17	17	14	41	26.5	8	M10×1.0	A
	DCV08L-M12ED	8	17	19	19	19	43	28.5	12	M12×1.5	
	DCV10L-M14ED	10	19	24	22	19	53	38.5	12	M14×1.5	
	DCV12L-M16ED	12	22	30	27	22	55	40.5	12	M16×1.5	B
	DCV15L-M18ED	15	27	32	27	27	57.5	42.5	14	M18×1.5	
PB160	DCV18L-M22ED	18	32	36	36	27	64	48	14	M22×1.5	
	DCV22L-M26ED	22	36	46	41	32	72	56	16	M26×1.5	C
PB100	DCV28L-M33ED	28	41	55	50	40	80.5	64	18	M33×2.0	
	DCV35L-M42ED	35	50	60	60	50	91.5	70	20	M42×2.0	
	DCV42L-M48ED	42	60	70	65	55	93	70.5	22	M48×2.0	
S	DCV06S-M12ED	6	17	19	19	19	46	31.5	12	M12×1.5	A
	DCV08S-M14ED	8	19	19	19	19	46	31.5	12	M14×1.5	
	DCV10S-M16ED	10	22	24	22	22	54	38	12	M16×1.5	
	DCV12S-M18ED	12	24	27	24	22	57	41	12	M18×1.5	
	DCV14S-M20ED	14	27	32	27	27	61	43.5	14	M20×1.5	B
	DCV16S-M22ED	16	30	36	32	27	64	46	14	M22×1.5	
	DCV20S-M27ED	20	36	46	41	32	71.5	50	16	M27×2.0	C
PB250	DCV25S-M33ED	25	46	50	46	40	78.5	54.5	18	M33×2.0	
	DCV30S-M42ED	30	50	60	60	50	90.5	64	20	M42×2.0	
	DCV38S-M48ED	38	60	70	65	55	102	71.5	22	M48×2.0	

Dimensions given approximate length with tightened nut. All dimensions are in millimeters for reference only, subject to change.
*ED-Ring and O-Ring of NBR(e.g. Perbunan®)standard, FPM(e.g. viton®) on request (see page1)

Non Return Valve
DCV L/S-GED
L/S-MED

Form E stud end

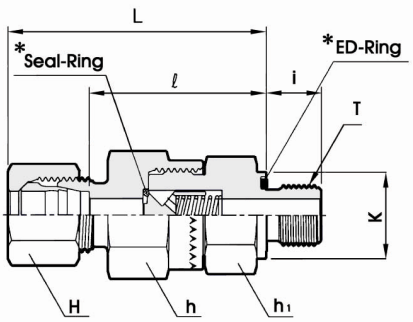


FIG.A

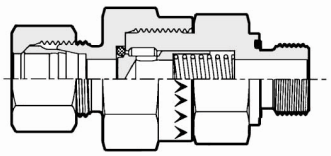


FIG.B

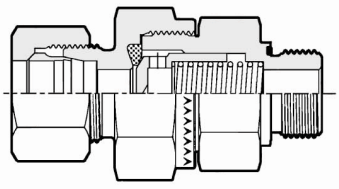
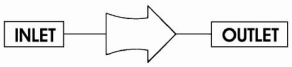


FIG.B



for BSP Paralled

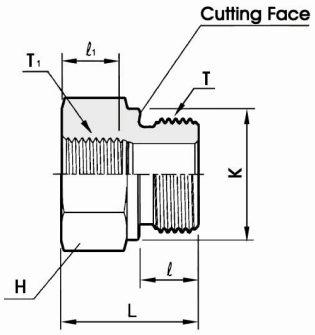
Series	Part No.	Tube O.D.	H	h	h1	K	L	ℓ	i	T G(PF)	Fig.
L light PB250	DCV06L-01GED	6	14	17	17	14	41	26.5	8	1/8	A
	DCV08L-02GED	8	17	19	19	19	43	28.5	12	1/4	
	DCV10L-02GED	10	19	24	22	19	53	38.5	12	1/4	
	DCV12L-03GED	12	22	30	27	22	55	40.5	12	3/8	B
	DCV15L-04GED	15	27	32	27	27	57.5	42.5	14	1/2	
PB160	DCV18L-04GED	18	32	36	36	27	64	48	14	1/2	
	DCV22L-06GED	22	36	46	41	32	72	56	16	3/4	C
PB100	DCV28L-08GED	28	41	55	50	40	80.5	64	18	1	
	DCV35L-10GED	35	50	60	60	50	91.5	70	20	1 1/4	
	DCV42L-12GED	42	60	70	65	55	93	70.5	22	1 1/2	
S heavy PB400	DCV06L-02GED	6	17	19	19	19	46	31.5	12	1/4	A
	DCV08S-02GED	8	19	19	19	19	46	31.5	12	1/4	
	DCV10S-03GED	10	22	24	22	22	54	38	12	3/8	
	DCV12S-03GED	12	24	27	24	22	57	41	12	3/8	
	DCV14S-04GED	14	27	32	27	27	61	43.5	14	1/2	B
	DCV16S-04GED	16	30	36	32	27	64	46	14	1/2	
	DCV20S-06GED	20	36	46	41	32	71.5	50	16	3/4	C
PB250	DCV25S-08GED	25	46	50	46	40	78.5	54.5	18	1	
	DCV30S-10GED	30	50	60	60	50	90.5	64	20	1 1/4	
	DCV38S-12GED	38	60	70	65	55	102	71.5	22	1 1/2	

for Metric Paralled

Series	Part No.	Tube O.D.	H	h	h1	K	L	ℓ	i	T M(Metric)	Fig.
L light PN 250	DCV06L-M10ED	6	14	17	17	14	41	26.5	8	M10×1.0	A
	DCV08L-M12ED	8	17	19	19	19	43	28.5	12	M12×1.5	
	DCV10L-M14ED	10	19	24	22	19	53	38.5	12	M14×1.5	
	DCV12L-M16ED	12	22	30	27	22	55	40.5	12	M16×1.5	B
	DCV15L-M18ED	15	27	32	27	27	57.5	42.5	14	M18×1.5	
PB160	DCV18L-M22ED	18	32	36	36	27	64	48	14	M22×1.5	
	DCV22L-M26ED	22	36	46	41	32	72	56	16	M26×1.5	C
PB100	DCV28L-M33ED	28	41	55	50	40	80.5	64	18	M33×2.0	
	DCV35L-M42ED	35	50	60	60	50	91.5	70	20	M42×2.0	
	DCV42L-M48ED	42	60	70	65	55	93	70.5	22	M48×2.0	
S	DCV06S-M12ED	6	17	19	19	19	46	31.5	12	M12×1.5	A
	DCV08S-M14ED	8	19	19	19	19	46	31.5	12	M14×1.5	
	DCV10S-M16ED	10	22	24	22	22	54	38	12	M16×1.5	
	DCV12S-M18ED	12	24	27	24	22	57	41	12	M18×1.5	
	DCV14S-M20ED	14	27	32	27	27	61	43.5	14	M20×1.5	B
	DCV16S-M22ED	16	30	36	32	27	64	46	14	M22×1.5	
	DCV20S-M27ED	20	36	46	41	32	71.5	50	16	M27×2.0	C
PB250	DCV25S-M33ED	25	46	50	46	40	78.5	54.5	18	M33×2.0	
	DCV30S-M42ED	30	50	60	60	50	90.5	64	20	M42×2.0	
	DCV38S-M48ED	38	60	70	65	55	102	71.5	22	M48×2.0	

Dimensions given approximate length with tightened nut. All dimensions are in millimeters for reference only, subject to change.
*ED-Ring and O-Ring of NBR(e.g. Perbunan®)standard, FPM(e.g. viton®) on request (see page1)

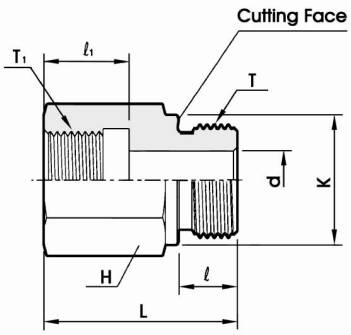
Male Female Adaptor (BSP Paralled)
MFAD



Form B stud end

PB	Part No.	H	K	L	ℓ	ℓ1	Male stud T G(PF)	Female stud T1 G(PF)
PB 630	MFAD 03-01G	22	22	22.5	12	8	3/8	1/8
PB 630	MFAD 04-01G	27	26	24	14	8	1/2	1/8
PB 400	MFAD 04-02G	27	26	24	14	12	1/2	1/4
PB 400	MFAD 06-02G	32	32	26	16	12	3/4	1/4
	MFAD 06-03G	32	32	26	16	12	3/4	3/8
PB 400	MFAD 08-02G	41	39	29	18	12	1	1/4
	MFAD 08-03G	41	39	29	18	12	1	3/8
	MFAD 08-04G	41	39	29	18	14	1	1/2
PB 250	MFAD 10-04G	50	49	32	20	14	1 1/4	1/2
	MFAD 10-06G	50	49	32	20	16	11/4	3/4
PB 250	MFAD 12-04G	55	55	36	22	14	1 1/2	1/2
	MFAD 12-06G	55	55	36	22	16	1 1/2	3/4
	MFAD 12-08G	55	55	36	22	18	1 1/2	1

Male Female Adaptor (BSP Paralled)
MFAE

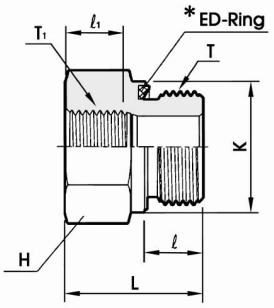


Form B stud end

PB	Part No.	d	H	K	L	ℓ	ℓ1	Male stud T G(PF)	Female stud T1 G(PF)
PB 630	MFAE 01-02G	4	19	14	31	8	17	1/8	1/4
	MFAE 01-03G	4	24	14	32	8	17	1/8	3/8
PB 630	MFAE 02-01G	5	19	18	28	12	12	1/4	1/8
	MFAE 02-03G	5	24	18	36	12	17	1/4	3/8
	MFAE 02-04G	5	30	18	40	12	20	1/4	1/2
PB 400	MFAE 02-06G	5	36	18	43	12	22	1/4	3/4
PB 630	MFAE 03-02G	8	22	22	36	12	17	3/8	1/4
	MFAE 03-04G	8	30	22	41	12	20	3/8	1/2
PB 250	MFAE 03-06G	8	36	22	44	12	22	3/8	3/4
PB 400	MFAE 04-03G	12	27	26	36	14	17	1/2	3/8
	MFAE 04-06G	12	36	26	46	14	22	1/2	3/4
	MFAE 04-08G	12	41	26	49	14	24.5	1/2	1
PB 250	MFAE 04-10G	10	55	26	53	14	26.5	1/2	1 1/4
PB 400	MFAE 06-04G	16	32	32	41	16	20	3/4	1/2
	MFAE 06-08G	16	41	32	51	16	24.5	3/4	1
	MFAE 06-10G	16	55	32	55	16	26.5	3/4	1 1/4
PB 250	MFAE 06-12G	16	60	32	57	16	28.5	3/4	1 1/2
PB 400	MFAE 08-06G	20	41	39	47	18	22	1	3/4
PB 250	MFAE 08-10G	20	55	39	57	18	26.5	1	1 1/4
	MFAE 08-12G	20	60	39	59	18	28.5	1	1 1/2
PB 250	MFAE 10-08G	25	50	49	52	20	24.5	1 1/4	1
	MFAE 10-12G	25	60	49	60	20	28.5	1 1/4	1 1/2
PB 250	MFAE 12-10G	32	55	55	58	22	26.5	1 1/2	1 1/4
PB 250	MFAE 16-12G	40	70	68	62	24	28.5	2	1 1/2

Male/Female thread adaptors with metric and NPT thread on request. All dimensions are in millimeters, for reference only subject to change.

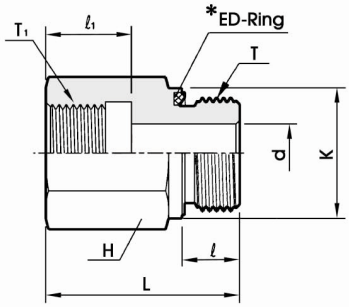
Male Female Adaptor (BSP Paralled) with * ED-Ring
MFAD-ED



Form E stud end

PB	Part No.	H	K	L	ℓ	ℓ_1	Male stud T G(PF)	Female stud T_1 G(PF)
PB 630	MFAD 03ED-01G	22	22	22.5	12	8	3/8	1/8
PB 630	MFAD 04ED-01G	27	26	24	14	8	1/2	1/8
PB 400	MFAD 04ED-02G	27	26	24	14	12	1/2	1/4
PB 400	MFAD 06ED-02G	32	32	26	16	12	3/4	1/4
	MFAD 06ED-03G	32	32	26	16	12	3/4	3/8
PB 400	MFAD 08ED-02G	41	39	29	18	12	1	1/4
	MFAD 08ED-03G	41	39	29	18	12	1	3/8
	MFAD 08ED-04G	41	39	29	18	14	1	1/2
PB 250	MFAD 10ED-04G	50	49	32	20	14	1 1/4	1/2
	MFAD 10ED-06G	50	49	32	20	16	1 1/4	3/4
PB 250	MFAD 12ED-04G	55	55	36	22	14	1 1/2	1/2
	MFAD 12ED-06G	55	55	36	22	16	1 1/2	3/4
	MFAD 12ED-08G	55	55	36	22	18	1 1/2	1

Male Female Adaptor (BSP Paralled) with * ED-Ring
MFAE-ED

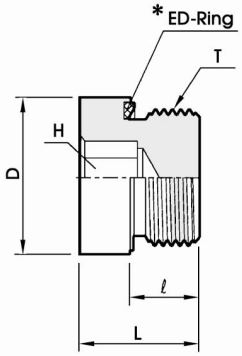


Form E stud end

PB	Part No.	D	H	K	L	ℓ	ℓ_1	Male stud T G(PF)	Female stud T_1 G(PF)
PB 630	MFAE 01ED-02G	4	19	14	31	8	17	1/8	1/4
	MFAE 01ED-03G	4	24	14	32	8	17	1/8	3/8
PB 630	MFAE 02ED-01G	5	19	18	28	12	12	1/4	1/8
	MFAE 02ED-03G	5	24	18	36	12	17	1/4	3/8
	MFAE 02ED-04G	5	30	18	40	12	20	1/4	1/2
PB 450	MFAE 02ED-06G	5	36	18	43	12	22	1/4	3/4
PB 630	MFAE 03ED-02G	8	22	22	36	12	17	3/8	1/4
	MFAE 03ED-04G	8	30	22	41	12	20	3/8	1/2
PB 400	MFAE 03ED-06G	8	36	22	44	12	22	3/8	3/4
PB 400	MFAE 04ED-03G	12	27	26	36	14	17	1/2	3/8
	MFAE 04ED-06G	12	36	26	46	14	22	1/2	3/4
	MFAE 04ED-08G	12	41	26	49	14	24.5	1/2	1
PB 250	MFAE 04ED-10G	10	55	26	53	14	26.5	1/2	1 1/4
PB 400	MFAE 06ED-04G	16	32	32	41	16	20	3/4	1/2
	MFAE 06ED-08G	16	41	32	51	16	24.5	3/4	1
	MFAE 06ED-10G	16	55	32	55	16	26.5	3/4	1 1/4
PB 250	MFAE 06ED-12G	16	60	32	57	16	28.5	3/4	1 1/2
PB 400	MFAE 08ED-06G	20	41	39	47	18	22	1	3/4
PB 250	MFAE 08ED-10G	20	55	39	57	18	26.5	1	1 1/4
	MFAE 08ED-12G	20	60	39	59	18	28.5	1	1 1/2
PB 250	MFAE 10ED-08G	25	50	49	52	20	24.5	1 1/4	1
	MFAE 10ED-12G	25	60	49	60	20	28.5	1 1/4	1 1/2
PB 250	MFAE 12ED-10G	32	55	55	58	22	26.5	1 1/2	1 1/4
PB 250	MFAE 16ED-12G	40	70	68	62	24	28.5	2	1 1/2

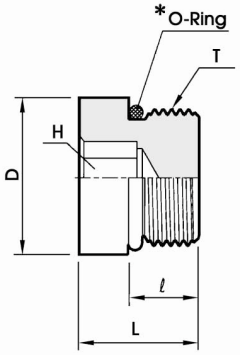
All dimensions are in millimeters, for referance only subject to change.
*ED-Ring of NBR(e.g. Perbunan®) standard, FPM(e.g. viton®) on request (see page 1)

Blanking Plugs for Port with *ED-Ring
DVSTI-GED/MED



PB	Part No.(M)	Part No.(G)	T M(Metric)	T G(PF)	D	H	L	ℓ
400	DVSTI-M10ED	DVSTI-01GED	M 10×1	1/8	14	5	12	8
	DVSTI-M12ED	-	M 12×1.5	-	17	6	17	12
	DVSTI-M14ED	DVSTI-02GED	M 14×1.5	1/4	19	6	17	12
	DVSTI-M16ED	DVSTI-03GED	M 16×1.5	3/8	22	8	17	12
	DVSTI-M18ED	-	M 18×1.5	-	23.9	8	17	12
	DVSTI-M20ED	-	M 20×1.5	-	25.9	10	19	14
	DVSTI-M22ED	DVSTI-04GED	M 22×1.5	1/2	27	10	19	14
	DVSTI-M26ED	-	M 26×1.5	-	31.9	12	21	16
	DVSTI-M27ED	DVSTI-06GED	M 27×2	3/4	32	12	21	16
	DVSTI-M33ED	DVSTI-08GED	M 33×2	1	39.9	17	22.5	16
250	DVSTI-M42ED	DVSTI-10GED	M 42×2	1 1/4	49.9	22	22.5	16
	DVSTI-M48ED	DVSTI-12GED	M 48×2	1 1/2	55	24	22.5	16

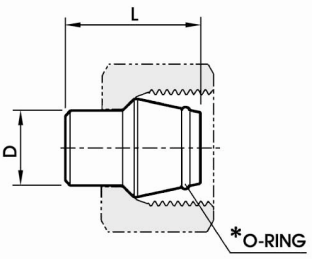
Blanking Plugs with *O-Ring (accord. to ISO 6149-3/DIN 3582)
DVSTI



PB	Part No.	T M(Metric)	D	H	L	ℓ
630	DVSTI-M10	M 10×1	13	5	14	10
	DVSTI-M12	M 12×1.5	17	6	16.5	11.5
	DVSTI-M14	M 14×1.5	19	6	16.5	11.5
	DVSTI-M16	M 16×1.5	21	6	18	13
	DVSTI-M18	M 18×1.5	23	8	19.5	14.5
400	DVSTI-M22	M 22×1.5	27	10	20.5	15.5
	DVSTI-M26	M 26×1.5	31	12	21	16
	DVSTI-M27	M 27×2	32	12	24	19
	DVSTI-M33	M 33×2	38	17	25.5	19
	DVSTI-M42	M 42×2	48	22	26	19.5

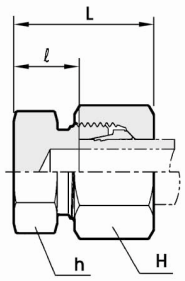
All dimensions are in millimeters, for reference only subject to change.
* ED-Ring and O-Ring of NBR(e.g.Perbunan®) Standard, FPM(e.g. Viton®) on request (See Page 1)

Blanking Plug with *O-Ring
DVKA



Series	Part No.	Tube O.D D	L
L light PN315/PN630	DVKA-06L/S	6	18.5
	DVKA-08L/S	8	18.5
	DVKA-10L/S	10	20
	DVKA-12L/S	12	20.5
	DVKA-15L	15	20.5
	DVKA-18L	18	22.5
PN 160	DVKA-22L	22	25
	DVKA-28L	28	25.5
	DVKA-35L	35	30
	DVKA-42L	42	30
S heavy PN 630	DVKA-14S	14	22.5
PN 400	DVKA-16S	16	23.5
	DVKA-20S	20	28.5
	DVKA-25S	25	29
	DVKA-30S	30	30.5
PN 315	DVKA-38S	38	33

Tube Cap
DCA

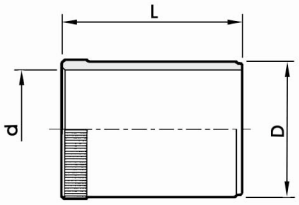


Series	Part No.	Tube O.D	H	h	L	ℓ
L light PN 315	DCA-06L	6	14	12	22	7
	DCA-08L	8	17	14	23	8
	DCA-10L	10	19	17	24	9
	DCA-12L	12	22	19	25	10
	DCA-15L	15	27	24	26	11
	DCA-18L	18	32	27	28	11.5
PN 160	DCA-22L	22	36	32	30	13.5
	DCA-28L	28	41	41	31	14.5
	DCA-35L	35	50	46	36	14.5
	DCA-42L	42	60	55	39	16
S heavy PN 630	DCA-06S	6	17	14	26	11
	DCA-08S	8	19	17	28	13
	DCA-10S	10	22	19	29	12.5
	DCA-12S	12	24	22	31	14.5
	DCA-14S	14	27	24	34	16
PN 400	DCA-16S	16	30	27	34	15.5
	DCA-20S	20	36	32	39	17.5
	DCA-25S	25	46	41	44	20
	DCA-30S	30	50	46	47	20.5
PN 315	DCA-38S	38	60	55	54	23

Dimension given approximate length with tightened nut. All dimensions are in millimeters, for reference only subject to change.
* O-Ring of NBR(e.g.Perbunan®) Standard, FPM(e.g. Viton®) on request (See Page 1)

Tube Insert

DIL

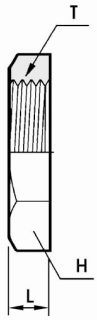


For thin-walled steel and stainless steel and other saft-thin-walled metal tubes.

Part No.	Tube O.D.	Tube I.D.	d	D	L
DIL 6-1	6	4	2.6	3.8	15.5
DIL 6-0.75	6	4.5	3.1	4.3	12.5
DIL 6-0.5	6	5	3.6	4.8	15.5
DIL 8-1	8	6	4.6	5.8	15.5
DIL 10-1.5	10	7	5.6	6.8	17
DIL 10-1	10	8	6.6	7.8	16.5
DIL 12-1.5	12	9	7.6	8.8	16.5
DIL 12-1	12	10	8.6	9.8	16.5
DIL 15-1.5	15	12	10.2	11.8	17
DIL 15-1	15	13	11.2	12.8	17
DIL 16-1	16	14	12.2	13.8	17
DIL 18-1.5	18	15	13.2	14.8	17.5
DIL 18-1	18	16	14.2	15.8	17.5
DIL 20-1.5	20	17	15.2	16.8	20
DIL 20-1	20	18	16.2	17.8	22
DIL 22-1.5	22	19	17.2	18.8	18
DIL 22-1	22	20	18.2	19.8	18
DIL 25-2	25	21	19.2	20.8	21.5
DIL 25-1.5	25	22	20.2	21.8	23.5
DIL 28-2	28	24	22.2	23.8	18
DIL 28-1.5	28	25	23.2	24.8	18
DIL 30-2	30	26	24.2	25.8	23.5
DIL 35-2	35	31	28.8	30.8	22.5
DIL 38-3	38	32	29.8	31.8	26.5
DIL 38-2.5	38	33	30.8	32.8	26.5
DIL 42-2	42	38	35.8	37.8	23.5

*Bulkhead Lock Nut

DLN



Series	Part No.	Tube O.D		H	L	T
		Light	Heavy			
L	DLN 06L	6	–	17	6	M 12×1.5
L/S	DLN 08L–06S	8	6	19		M 14×1.5
L/S	DLN 10L–08S	10	8	22		M 16×1.5
L/S	DLN 12L–10S	12	10	24		M 18×1.5
S	DLN 12S	–	12	27		M 20×1.5
L/S	DLN 15L–14S	15	14	30	7	M 22×1.5
S	DLN 16S	–	16	32		M 24×1.5
L	DLN 18L	18	–	36	8	M 26×1.5
L/S	DLN 22L–20S	22	20	41		M 30×2
L/S	DLN 28L–25S	28	25	46	9	M 36×2
S	DLN 30S	–	30	50		M 42×2
L	DLN 35L	35	–	55		M 45×2
L/S	DLN 42L–38S	42	38	65	10	M 52×2

*According to DIN 80705 for bulkhead screw-joint.

All dimensions are in millimeters, for reference only subject to change.

Sealing rings for DWH/DTH and DSWVE
DKA



Part No.	External Thread
DKA-01G	PF 1/8
DKA-02G	PF 1/4
DKA-03G	PF 3/8
DKA-04G	PF 1/2
DKA-04G×4.5	PF 1/2
DKA-06G	PF 3/4
DKA-08G	PF 1
DKA-10GM42	PF 1 1/4/M42×2
DKA-12GM48	PF 1 1/2/M48×2
DKA-M10	M 10×1
DKA-M12	M 12×1.5
DKA-M14	M 14×1.5
DKA-M16	M 16×1.5
DKA-M18	M 18×1.5
DKA-M20	M 20×1.5
DKA-M22	M 22×1.5
DKA-M22×4.5	M 22×1.5
DKA-M26	M 26×1.5
DKA-M26×3.5	M 26×1.5
DKA-M27	M 27×2
DKA-M33	M 33×2

Sealing rings for DSVW/DSVT
DKAZ

Part No.	External Thread
DKAZ-01G	PF 1/8
DKAZ-02G	PF 1/4
DKAZ-03G	PF 3/8
DKAZ-04G	PF 1/2
DKAZ-06G	PF 3/4
DKAZ-08G	PF 1
DKAZ-10GM42	PF 1 1/4/M42×2
DKAZ-12GM48	PF 1 1/2/M48×2
DKAZ-M10	M 10×1
DKAZ-M12	M 12×1.5
DKAZ-M14	M 14×1.5
DKAZ-M16	M 16×1.5
DKAZ-M18	M 18×1.5
DKAZ-M20	M 20×1.5
DKAZ-M22	M 22×1.5
DKAZ-M26	M 26×1.5
DKAZ-M27	M 27×2
DKAZ-M33	M 33×2

Sealing rings for DGC
DKI

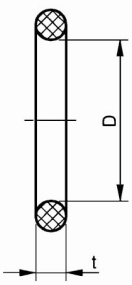
Part No.	Internal Thread
DKI-02G	PF 1/4
DKI-04G	PF 1/2

ED-Ring
KP-B-S



Part No.	For Male Thread	
	Metric	G(PF)
KP-B-S M8	M 8×1	-
KP-B-S01G	M 10×1	1/8
KP-B-SM12	M 12×1.5	
KP-B-S02G	M 14×1.5	1/4
KP-B-SM16	M 16×1.5	-
KP-B-S03G	-	3/8
KP-B-SM18	M 18×1.5	-
KP-B-SM20	M 20×1.5	-
KP-B-S04G	-	1/2
KP-B-SM22	M 22×1.5	-
KP-B-S06G	M 26×1.5 M 27×2	3/4
KP-B-S08G	M 33×2	1
KP-B-S10G	M 42×2	1 1/4
KP-B-S12G	M 48×2	1 1/2

O-Rings
KP-B-DS

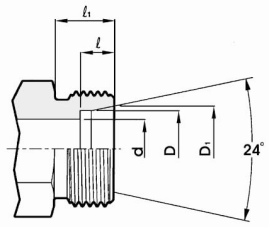


Part No.	D	T
KP-B-DS06	4	1.5
KP-B-DS08	6	1.5
KP-B-DS10	7.5	1.5
KP-B-DS12	9	1.5
KP-B-DS14	10	2
KP-B-DS16	12	2
KP-B-DS18	15	2
KP-B-DS20	16.3	2.4
KP-B-DS22	20	2
KP-B-DS25	20.3	2.4
KP-B-DS30	25.3	2.4
KP-B-DS28	26	2
KP-B-DS35	32	2.5
KP-B-DS38	33.3	2.4
KP-B-DS42	38	2.5

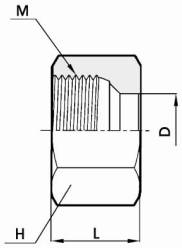
ED-Ring and O-Ring of NBR(e.g. Perbunen®) standard, FPM(e.g. viton®) on request (see page 1)

Bite Type Tube Fitting for DIN 2353

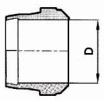
Tube end Dimension



Nut
DN



Cutting Ring
DS



Series	Part No. Nut	Part No. Cutting Ring	Tube O.D	DN Size	D	D_1	d	H	L	M	ℓ	ℓ_1
LL very light	DN-04LL	DS-04LL	4	3	4	5	3	10	11.5	M 8×1.0	4	8
	DN-06LL	DS-06LL	6	4	6	7.5	4.5	12	12	M 10×1.0	5.5	8
	DN-08LL	DS-08LL	8	6	8	9.5	6	14	12.5	M 12×1.0	5.5	9
	DN-10LL	DS-10LL	10	8	10	11.5	8	17	12.5	M 14×1.0	6	9
	DN-12LL	DS-12LL	12	10	12	13.5	10	19	13	M 16×1.0	6	9
L light	DN-06L	DS-06	6	4	6	8.1	4	14	15	M 12×1.5	7	10
	DN-08L	DS-08	8	6	8	10.1	6	17	15	M 14×1.5	7	10
	DN-10L	DS-10	10	8	10	12.3	8	19	16	M 16×1.5	7	11
	DN-12L	DS-12	12	10	12	14.3	10	22	16	M 18×1.5	7	11
	DN-15L	DS-15	15	12	15	17.3	12	27	17.5	M 22×1.5	7	12
	DN-18L	DS-18	18	16	18	20.3	15	32	18	M 26×1.5	7.5	12
	DN-22L	DS-22	22	20	22	24.3	19	36	20.5	M 30×2	7.5	14
	DN-28L	DS-28	28	25	28	30.3	24	41	21	M 36×2	7.5	14
	DN-35L	DS-35	35	32	35	38	30	50	24	M 45×2	10.5	16
	DN-42L	DS-42	42	40	42	45	36	60	24	M 52×2	11	16
S heavy	DN-06S	DS-06	6	3	6	8.1	4	17	16.5	M 14×1.5	7	12
	DN-08S	DS-08	8	4	8	10.1	5	19	16.5	M 16×1.5	7	12
	DN-10S	DS-10	10	6	10	12.3	7	22	17.5	M 18×1.5	7.5	12
	DN-12S	DS-12	12	8	12	14.3	8	24	18	M 20×1.5	7.5	12
	DN-14S	DS-14	14	10	14	16.3	10	27	20.5	M 22×1.5	8	14
	DN-16S	DS-16	16	12	16	18.3	12	30	21	M 24×1.5	8.5	14
	DN-20S	DS-20	20	16	20	22.9	16	36	24	M 30×2	10.5	16
	DN-25S	DS-25	25	20	25	27.9	20	46	27	M 36×2	12	18
	DN-30S	DS-30	30	25	30	33	25	50	29.5	M 42×2	13.5	20
	DN-38S	DS-38	38	32	38	41	32	60	32.5	M 52×2	16	22

All dimensions are in millimeters, for reference only subject to change.