

# Bite Type Tube Fittings (DIN 2353)

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# 02



Catalogue No. S-LOK Jan.2023

# Bite Type Tube Fittings - DIN2353

## Features

- HANSUN bite type fitting are designed in accordance with DIN 2353.
- The HANSUN bite type fitting is consists of a body, a progressive ring(sleeve) and a nut.
- The HANSUN bite type tube fittings are designed and manufacture to produced a strong, reliable, leak-free joint upon proper assembly.

## Standard Material Specifications

- Steel Fittings : Materials see DIN3859.
- Stainless Steel Fitting : X5CrNiMo 17122 in accordance with DIN17440, material No. 1.4401. or ASTM A276 / A479 type 316
- Brass Fitting : CuZn35Ni2 in accordance with DIN17660/ 17672, material No. 2.0540.
- Elastomer Seal : NBR(BUNA-N), DIN 17660FPM(VITON).

## Technical Information

### Pressure and temperature load Capability

- Pressure Ranges

Series		Max. Pressure		
		Steel	Stainless Steel	Brass
LL	4 ~ 12	100 bar	100 bar	63 bar
L	6 ~ 10	500 bar	315 bar	200 bar
	12 ~ 18	400 bar		
	22 ~ 42	250 bar	160 bar	100 bar
S	6 ~10	800 bar	630 bar	400 bar
	12 ~ 14(16*)	630 bar		
	16 ~ 30	400 bar	250 bar	
	38	420 bar	315 bar	200 bar

\*16S Steel Only.

### 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	35%
	-60°C up to 20°C	-
316 Stainless Steel (1.4401)	50°C	4%
	100°C	11%
	200°C	20%
	300°C	29%
	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.

## Allowable working temperatures

### A) For fittings materials

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

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

### A) For seal materials

Material	Temperature
NBR (e.g. PERBUNAN®)	-35°C up to 100°C
FPM (e.g. VITON®)	-28°C up to 204°C
PTFE (e.g. TEFLON®)	-60°C up to 240°C

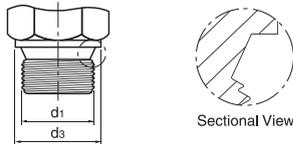
**Caution!** If different fitting and sealing material are used, the lowest temperature as indicated for each material is applicable!

## 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



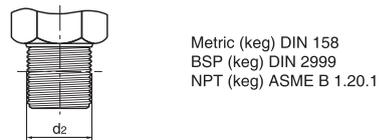
### Form B (DIN 3852 Part 1+2)

with sealing by compression against face of body



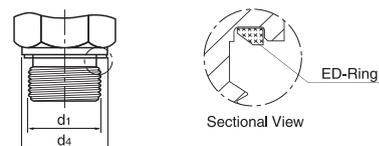
### Form C (DIN 3852 Part 1+2)

with sealing in tapered thread



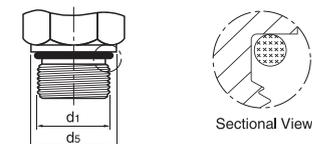
### Form E (DIN 3852 Part 1)

with sealing by DIN 3869 ring seals (\*ED-Ring)



### Form F (DIN 3852 Part 3)

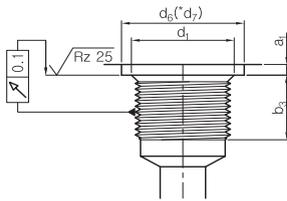
with sealing by (\*O-Ring)



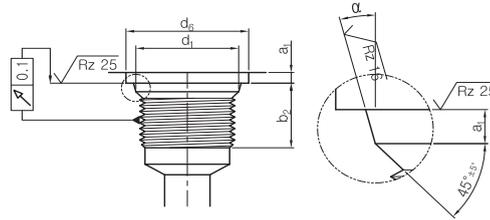
		Thread size for		
From A, B and E, F stud ends	From C stud ends	$d_3$	$d_4 \begin{smallmatrix} 0 \\ -0.2 \end{smallmatrix}$	$d_5$
M8X1.0	M8X1.0keg.	-	-	10.9
M10X1.0	M10X1.0keg.	14	13.9	12.9
M12X1.5	M12X1.5keg.	17	16.9	16.9
M14X1.5	M14X1.5keg.	19	18.9	18.9
M16X1.5	M16X1.5keg.	21	21.9	20.9
M18X1.5	M18X1.5keg.	23	23.9	22.9
M20X1.5	M20X1.5keg.	25	25.9	24.9
M22X1.5	M22X1.5keg.	27	26.9	26.9
M26X1.5	-	31	31.9	30.9
M27X2.0	-	32	31.9	31.9
M33X2.0	-	39	39.9	37.9
M42X2.0	-	49	49.9	49.8
M48X2.0	-	55	54.9	54.9
G1/8	1/8 NPT	14	13.9	-
G1/4	1/4 NPT	18	18.9	-
G3/8	3/8 NPT	22	21.9	-
G1/2	1/2 NPT	26	26.9	-
G3/4	3/4 NPT	32	31.9	-
G1	1 NPT	39	39.9	-
G1-1/4	1-1/4 NPT	49	49.9	-
G1-1/2	1-1/2 NPT	55	54.9	-
7/16-20UNF	R1/8 keg.	-	-	14.4
9/16-18UNF	R1/4 keg.	-	-	17.6
3/4-16UNF	R3/8 keg.	-	-	22.3
7/8-14UNF	R1/2 keg.	-	-	25.5
1-1/16-12UN	R3/4 keg.	-	-	31.9
1-5/16-12UN	R1 keg.	-	-	38.2
1-5/8-12UN	R1-1/4 keg.	-	-	47.7
-	R1-1/2 keg.	-	-	-

## Forms of Tapped Holes

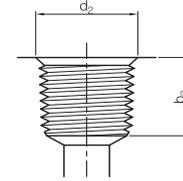
Form X (DIN 3852 Part 1+2)  
for parallel Stud Ends. (Form A,B)  
\* $d_7$  is for Stud Ends Form E



Form Y (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		$d_6$ Min.	$d_7$	$a_1$ Max	$a_2^{+0.4}_0$	$b_1$ Min.	$b_2$ Min	$b_3$ Min	$\alpha^{\circ} \pm 1.0^{\circ}$
From X, Y Tapped Holes	From Z Tapped Holes								
$d_1$	$d_2$								
M8X1.0	M8X1.0keg.	13	-	1.0	1.6	-	10.0	5.5	12
M10X1.0	M10X1.0keg.	15	15	1.0	1.6	8	10.0	5.5	12
M12X1.5	M12X1.5keg.	18	18	1.5	2.4	12	11.5	8.5	12
M14X1.5	M14X1.5keg.	20	20	1.5	2.4	12	11.5	8.5	15
M16X1.5	M16X1.5keg.	22	23	1.5	2.4	12	13.0	8.5	15
M18X1.5	M18X1.5keg.	24	25	2.0	2.4	12	14.5	8.5	15
M20X1.5	M20X1.5keg.	26	27	2.0	2.4	14	14.0	10.5	15
M22X1.5	M22X1.5keg.	28	28	2.5	2.4	14	15.5	10.5	15
M26X1.5	-	32	33	2.5	3.1	16	16.0	-	15
M27X2.0	-	33	33	2.5	3.1	16	19.0	-	15
M33X2.0	-	40	41	2.5	3.1	18	19.0	-	15
M42X2.0	-	50	58.1	2.5	3.1	20	19.5	-	15
M48X2.0	-	56	56	2.5	3.1	22	22.0	-	15
G1/8	1/8 NPT	15	15	1.0	-	8	-	6.9	-
G1/4	1/4 NPT	19	20	1.5	-	12	-	10.0	-
G3/8	3/8 NPT	23	23	2.0	-	12	-	10.3	-
G1/2	1/2 NPT	27	28	2.5	-	14	-	13.6	-
G3/4	3/4 NPT	33	33	2.5	-	16	-	14.1	-
G1	1 NPT	40	41	2.5	-	18	-	16.8	-
G1-1/4	1-1/4 NPT	50	51	2.5	-	20	-	17.3	-
G1-1/2	1-1/2 NPT	56	56	2.5	-	22	-	17.3	-
7/16-20UNF	R1/8 keg.	21	-	1.6	2.4	-	11.5	5.5	12
9/16-18UNF	R1/4 keg.	25	-	1.6	2.5	-	12.7	8.5	12
3/4-16UNF	R3/8 keg.	30	-	2.4	2.5	-	14.3	8.5	15
7/8-14UNF	R1/2 keg.	34	-	2.4	2.5	-	16.7	10.5	15
1-1/16-12UN	R3/4 keg.	41	-	2.4	3.3	-	19.0	13.0	15
1-5/16-12UN	R1 keg.	49	-	3.2	3.3	-	19.0	16.0	15
1-5/8-12UN	R1-1/4 keg.	58	-	3.2	3.3	-	19.0	17.0	15
-	R1-1/2 keg.	-	-	-	-	-	-	17.0	-

## ↗ Seamless precision stainless steel 1.4401

Stainless steel tubes (e.g. 1.4401), code X5CrNiMo 17122, must be cold-drawn and seamless, heat-treated without formation of scales, type m to DIN 17458, provide tolerances to DIN 2391, Part1. The following tube wall thicknesses are suitable for use:

Tube O.D (D)	Tol.	* 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
		1.0	0.075	500	480
		1.0	0.125	372	357
6	±0.1	1.5	0.168	526	505
		2.0	0.200	662	637
		2.25	0.211	725	696
8	±0.1	1.0	0.175	347	277
		1.5	0.244	412	396
		2.0	0.300	526	505
		2.5	0.344	630	604
10	±0.1	1.0	0.225	294	238
		1.5	0.319	357	343
		2.0	0.401	458	439
		2.5	0.469	551	529
		3.0	0.525	638	612
12	±0.08	• 1.0	0.275	245	201
		1.5	0.394	368	291
		2.0	0.501	391	376
		2.5	0.594	474	455
		3.0	0.615	551	529
		3.5	0.744	624	599
15	±0.08	1.5	0.507	294	238
		2.0	0.651	321	309
		2.5	0.782	391	376
		3.0	0.901	458	439
16	±0.08	2.0	0.701	368	291
		2.5	0.845	370	355
		3.0	0.977	433	416
18	±0.08	• 1.5	0.620	245	201
		2.0	0.801	327	262
		2.5	0.967	333	320
		3.0	1.126	391	376

Tube O.D (D)	Tol.	* 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
		3.0	1.277	357	343
		3.5	1.433	408	392
		4.0	1.600	458	439
22	±0.08	• 2.0	1.002	267	218
		2.5	1.220	334	267
		3.0	1.426	328	315
25	±0.08	• 2.0	1.152	235	193
		2.5	1.408	294	238
		3.0	1.635	353	281
		4.0	2.092	378	363
		4.5	2.307	418	402
		5.0	2.501	458	439
28	±0.08	2.0	1.302	210	174
		2.5	1.594	263	214
		3.0	1.874	315	253
		4.0	2.402	342	328
		5.0	2.876	415	399
30	±0.08	3.0	2.028	294	238
		4.0	2.605	321	309
		5.0	3.400	391	376
35	±0.15	2.0	1.644	168	141
		2.5	2.018	210	174
		3.0	2.392	252	206
		4.0	3.086	336	269
		5.0	3.742	342	328
		6.0	4.351	401	385
38	±0.15	4.0	3.405	309	249
		5.0	4.131	318	305
		6.0	4.807	373	358
		7.0	5.426	427	410
42	±0.2	3.0	2.930	210	174
		4.0	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) : 245N/mm<sup>2</sup>(to DIN 17458)
- Safety factor (S) : 1.5
- Allowance factor (C)

$$P = 20 \times K \times t \times c / (S \times D) \quad (\text{bar})$$

- Calculated pressures to DIN 2413 part III for dynamic load conditions
- Yield point (K) : 216N/mm<sup>2</sup> (assumed value)
- Safety factor (S) : 1.5

$$P = 20 \times K \times t \times c / (S \times (D + t \times c)) \quad (\text{bar})$$

### Consideration factors of wall thickness divergence for static and dynamic stress.

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

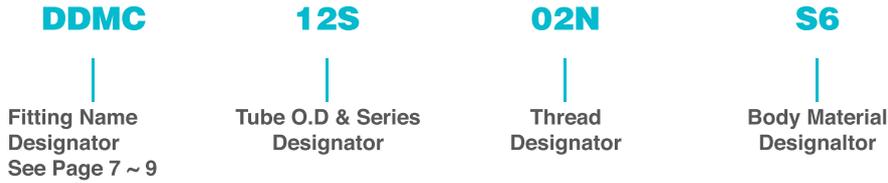
### Note

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/mm<sup>2</sup>

Temperature range : -60°C to + 400°C Reduction in pressure for higher temperatures

## Ordering Information

Selection the applicable options from designators listed.



### Tube O.D Designators

Tube Size	4mm	6mm	.....	35mm	38mm	42mm
Identifier	04	06	.....	35	38	42

### Series Designators

Series	Very Light	Light	Heavy
Identifier	LL	L	S

### Pipe Thread Designators

Thread Type	Symbol	Standard	Thread Size									
			1/8	1/4	3/8	1/2	3/4	1	1-1/4	1-1/2	2	
NPT	N	ASME B 1.20.1	01N	02N	03N	04N	06N	08N	10N	12N	16N	
PT	R	ISO 7-1, BS-21, JIS B0203	01R	02R	03R	04R	06R	08R	10R	12R	16R	
PF	G	ISO 228-1, BS 2779, JIS B 0202	01G	02G	03G	04G	06G	08G	10G	12G	16G	

### Metric Thread Designators

Thread Type	Symbol	Standard	Thread Size								
			M8x1.0	M10x1.0	M12x1.5	M14x1.5	.....	M27x2.0	M33.0x2.0	M42x2.0	M48x2.0
Metric	M	DIN 13 Parallel	M8	M10	M12	M14	.....	M27	M33	M42	M48
	M-K	DIN 158 Taper (keg)	M8K	M10K	M12K	M14K	.....	M27K	M33K	M42K	M48K

### Unified Thread Designators

Thread Type	Symbol	Standard	Thread Size												
			5/16	3/8	7/16	1/2	9/16	3/4	7/8	1-1/16	1-3/16	1-5/16	1-5/8	1-7/8	2-1/2
UN/UNF	U	ASME B 1.1	02U	03U	04U	05U	06U	08U	10U	12U	14U	16U	20U	24U	32U

### Body Material Designators

Series	Carbon Steel (DIN3859)	Stainless Steel (DIN 17440 / 1.4401 or ASTM A276 / A479 type 316)	Brass
Identifier	CS	S6	BS

## Tube to Tube

Straight Union

**DDU**



88

Union Elbow

**DDL**



89

Union Tee

**DDT**



90

Union Cross

**DDC**



91

Reducing Union

**DDUR**



92

Reducing Tee

**DDTR**



93

Bulkhead Union

**DDBU**



95

Welding Bulkhead Union

**DDBUW**



95

Bulkhead Union Elbow

**DDBL**



96

## Tube to Pipe

Male Connector  
(Metric/UNF) with O-Ring

**DDOM-M/U**



96  
97

Male Connector  
(NPT Thread)

**DDMC-N**



98

Male Connector  
(BSP Tapered)

**DDMC-R**



98

Male Connector  
(BSP Paralled)

**DDMC-G**



99

Male Connector  
(Metric Tapered / Paralled)

**DDMC-M**



100

Male Connector  
(BSP Paralled) with ED-Ring

**DDMC-GED**



101

Male Connector  
with ED-Ring

**DDMC-MED**



102

Male Elbow  
(BSP/ Metric Tapered)

**DDL-M-R/MK**



103

Female Connector  
(BSP / Metric Paralled)

**DDFC-G/M**



104

**Tube to Tube (Adjustable Fittings)**

Adjustable Elbow  
with Standpipe

**DDLA**



105

Adjustable Branch Tee  
with Standpipe

**DDBTA**



105

Adjustable Run Tee  
with Standpipe

**DDRTA**



106

Swivel Adjustable Elbow  
with Cone

**DDEW**



106

Swivel Adjustable Branch Tee  
with Cone

**DDET**



107

Swivel Adjustable Run Tee  
with Cone

**DDEL**



107

Standpipe Reducer

**DDKOR**



108

Reducer

**DDR**



110

Swivel Reducing Adapter  
with Cone

**DDRED**



112

Swivel Union  
with Cone

**DDUE**



114

**Tube to Pipe (Adjustable Fittings)**

Adaptor (BSP / Metric Paralled)  
with ED-Ring

**DDA-GED/MED**



115

Swivel Adaptor  
(BSP / Metric Paralled)  
with ED-Ring

**DDEGE-G/M**



116

**Banjo Fittings**

Banjo Fittings  
(BSP / Metric Paralled)  
with DKA Ring

**DDSWVE-G/M**



117

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

**DDWH-G/M**



118

High Pressure Banjo Fittings  
(BSP / Metric Paralled)

**DDTH-G/M**



119

## Gauge Connector &amp; Test Couplings

Pressure Gauge Connector  
(BSP Paralled)  
with DKI-Ring

**DDGC-G**

120

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

**DDGE-G**

120

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

**DDGA-G**

120

Tee Test Coupling  
with Threaded Connection  
DDEMA3-02G

**DDGMA**

121

Test Coupling  
with Threaded Connection M16

**DDEMA3**

121

## Weld Fittings

Welding Connector

**DDAS**

122

Welding Connector  
with DAK

**DDASK**

123

Welding Nipple  
with O-Ring

**DDAK**

124

Reducing Welding Nipple  
with O-Ring

**DDAKR**

124

## ETC (Adaptor, Plug, Cap, Sprare Part)

Male Female Adaptor  
(BSP Paralled)

**DMFAD**

126

Male Female Adaptor  
(BSP Paralled)

**DMFAE**

126

Male Female Adaptor  
(BSP Paralled)with ED-Ring

**DMFAD-ED**

127

Male Female Adaptor  
(BSP Paralled)with ED-Ring

**DMFAE-ED**

127

Blanking Plugs for Port  
with ED-Ring

**DDVSTI-GED/MED**

128

Blanking Plugs with O-Ring  
(accord.to ISO6149-3/DIN3582)

**DDVSTI**

128

Blanking Plug  
with O-Ring

**DDVKA**

129

Tube Cap

**DDCA**

129

Nut

**DDN**

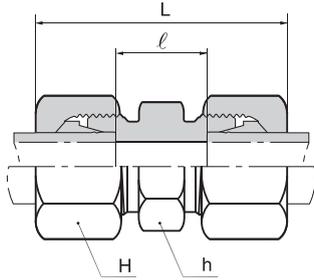
130

Cutting Ring

**DDS**

131

**Straight Union**  
**DDU**

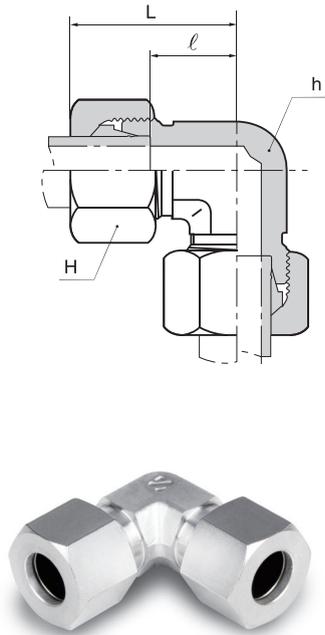


Series	Part No.	Tube O.D	H	h	L	ℓ
LL PN-100	DDU-04LL	4	10	9	31	12
	DDU-06LL	6	12	11	32	9
	DDU-08LL	8	14	12	35	12
	DDU-10LL	10	17	14	35	12
	DDU-12LL	12	19	17	35	11
L PN-315	DDU-06L	6	14	12	39	10
	DDU-08L	8	17	14	40	11
	DDU-10L	10	19	17	42	13
	DDU-12L	12	22	19	43	14
	DDU-15L	15	27	24	46	16
	DDU-18L	18	32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

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

## Union Elbow

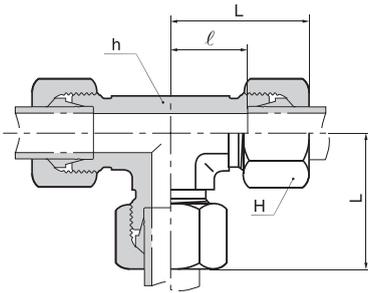
## DDL



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

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

Union Tee  
**DDT**

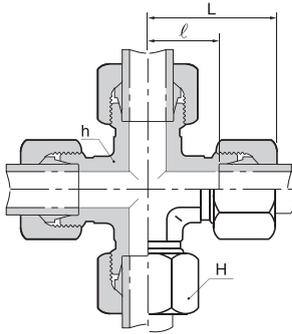


Series	Part No.	Tube O.D	H	h	L	ℓ
LL PN-100	DDT-04LL	4	10	9	21	11
	DDT-06LL	6	12	9	21	9.5
	DDT-08LL	8	14	12	23	11.5
	DDT-10LL	10	17	14	24	12.5
	DDT-12LL	12	19	14	27	15
L PN-315	DDT-06L	6	14	12	27	12
	DDT-08L	8	17	12	29	14
	DDT-10L	10	19	14	30	15
	DDT-12L	12	22	17	32	17
	DDT-15L	15	27	19	36	21
	DDT-18L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

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

## Union Cross

## DDC

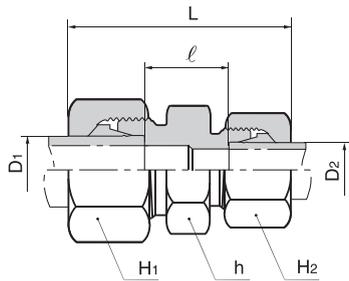


Series	Part No.	Tube O.D	H	h	L	ℓ
LL PN-100	DDC-04LL	4	10	9	21	11
	DDC-06LL	6	12	9	21	9.5
	DDC-08LL	8	14	12	23	11.5
	DDC-10LL	10	17	14	24	12.5
	DDC-12LL	12	19	14	27	15
L PN-315	DDC-06L	6	14	12	27	12
	DDC-08L	8	17	12	29	14
	DDC-10L	10	19	14	30	15
	DDC-12L	12	22	17	32	17
	DDC-15L	15	27	19	36	21
	DDC-18L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

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

Reducing Union

**DDUR**

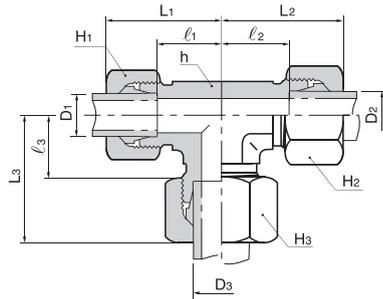


Series	Part No.	Tube O.D		H	H <sub>1</sub>	h	L	ℓ
		D <sub>1</sub>	D <sub>2</sub>					
L PN-315	DDUR-08L-06L	8	6	17	14	14	40	11
	DDUR-10L-06L	10	6	19	14	17	41	12
	DDUR-10L-06L	10	8	19	17	17	41	12
	DDUR-12L-06L	12	6	22	14	19	42	13
	DDUR-12L-08L	12	8	22	17	19	42	13
	DDUR-12L-10L	12	10	22	19	19	43	14
	DDUR-15L-10L	15	10	27	19	24	45	15
	DDUR-15L-12L	15	12	27	22	24	45	15
	DDUR-18L-10L	18	10	32	19	27	46	15.5
	DDUR-18L-12L	18	12	32	22	27	46	15.5
	DDUR-18L-15L	18	15	32	27	27	48	16.5
PN-160	DDUR-22L-12L	22	12	36	22	32	48	17.5
	DDUR-22L-15L	22	15	36	27	32	50	18.5
	DDUR-22L-18L	22	18	36	32	32	50	18
	DDUR-28L-18L	28	18	41	32	41	52	19
	DDUR-28L-22L	28	22	41	36	41	54	21
	DDUR-35L-22L	35	22	50	36	46	59	21
	DDUR-35L-28L	35	28	50	41	46	59	21
S PN-630	DDUR-08S-06S	8	6	19	17	17	47	18
	DDUR-10S-06S	10	6	22	17	19	48	17.5
	DDUR-10S-08S	10	8	22	19	19	48	17.5
	DDUR-12S-06S	12	6	24	17	22	50	19.5
	DDUR-12S-08S	12	8	24	19	22	50	19.5
	DDUR-12S-10S	12	10	24	22	22	51	19
	DDUR-14S-10S	14	10	27	22	24	54	20.5
	DDUR-14S-12S	14	12	27	24	24	54	20.5
PN-400	DDUR-16S-12S	16	12	30	24	27	54	20
	DDUR-16S-14S	16	14	30	27	27	57	21.5
	DDUR-20S-10S	20	10	36	22	32	60	22
	DDUR-20S-12S	20	12	36	24	32	60	22
	DDUR-20S-16S	20	16	36	30	32	63	23
	DDUR-25S-16S	25	16	46	30	41	68	25
	DDUR-25S-20S	25	20	46	36	41	71	25.5
	DDUR-30S-20S	30	20	50	36	46	74	26
PN-315	DDUR-30S-25S	30	25	50	46	46	77	26.5
PN-315	DDUR-38S-30S	38	30	60	50	55	87	29.5

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

Reducing Union Tee

**DDTR**

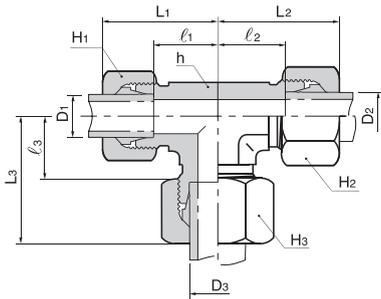


L  
PN-315

Series	Part No.	Tube O.D			H <sub>1</sub>	H <sub>2</sub>	H <sub>3</sub>	h	L <sub>1</sub>	L <sub>2</sub>	L <sub>3</sub>	l <sub>1</sub>	l <sub>2</sub>	l <sub>3</sub>
		D <sub>1</sub>	D <sub>2</sub>	D <sub>3</sub>										
	DDTR-06L-06L-08L	6	6	8	14	14	17	14	29	29	29	14	14	14
	DDTR-08L-08L-06L	8	8	6	17	17	14	14	29	29	29	14	14	14
	DDTR-06L-06L-10L	6	6	10	14	14	19	14	30	30	30	15	15	15
	DDTR-08L-08L-10L	8	8	10	17	17	19	14	30	30	30	15	15	15
	DDTR-10L-10L-06L	10	10	6	19	19	14	14	30	30	30	15	15	15
	DDTR-10L-10L-08L	10	10	8	19	19	17	14	30	30	30	15	15	15
	DDTR-10L-06L-10L	10	6	10	19	14	19	14	30	30	30	15	15	15
	DDTR-08L-08L-12L	8	8	12	17	17	22	17	32	32	32	15	15	15
	DDTR-12L-12L-06L	12	12	6	22	22	14	17	32	32	32	17	17	17
	DDTR-12L-08L-08L	12	8	8	22	17	17	17	32	32	32	17	17	17
	DDTR-12L-12L-08L	12	12	8	22	22	17	17	32	32	32	17	17	17
	DDTR-12L-10L-10L	12	10	10	22	19	19	17	32	32	32	17	17	17
	DDTR-12L-12L-10L	12	12	10	22	22	19	17	32	32	32	17	17	17
	DDTR-12L-10L-12L	12	10	12	22	19	22	17	32	32	32	17	17	17
	DDTR-10L-10L-15L	10	10	15	19	19	27	19	36	36	36	21	21	21
	DDTR-12L-12L-15L	12	12	15	22	22	27	19	36	36	36	21	21	21
	DDTR-15L-15L-06L	15	15	6	27	27	14	19	36	36	36	21	21	21
	DDTR-15L-15L-10L	15	15	10	27	27	19	19	36	36	36	21	21	21
	DDTR-15L-12L-12L	15	12	12	27	22	22	19	36	36	36	21	21	21
	DDTR-15L-15L-12L	15	15	12	27	27	22	19	36	36	36	21	21	21
	DDTR-15L-12L-15L	15	12	15	27	22	27	19	36	36	36	21	21	21
	DDTR-12L-12L-18L	12	12	18	22	22	32	24	39	39	40	24	24	23.5
	DDTR-18L-10L-10L	18	10	10	32	19	19	24	40	39	39	23.5	24	24
	DDTR-18L-18L-10L	18	18	10	32	32	19	24	40	40	39	23.5	23.5	24
	DDTR-18L-18L-12L	18	18	12	32	32	22	24	40	40	39	23.5	23.5	24
	DDTR-18L-18L-15L	18	18	15	32	32	27	24	40	40	39	23.5	23.5	24
	DDTR-18L-10L-18L	18	10	18	32	19	32	24	40	39	40	23.5	24	23.5

Reducing Union Tee

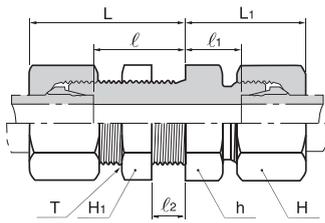
**DDTR**



Series	Part No.	Tube O.D			H <sub>1</sub>	H <sub>2</sub>	H <sub>3</sub>	h	L <sub>1</sub>	L <sub>2</sub>	L <sub>3</sub>	ℓ <sub>1</sub>	ℓ <sub>2</sub>	ℓ <sub>3</sub>
		D <sub>1</sub>	D <sub>2</sub>	D <sub>3</sub>										
PN-160	DDTR-22L-22L-10L	22	22	10	36	36	19	27	44	44	43	27.5	27.5	28
	DDTR-22L-22L-12L	22	22	12	36	36	22	27	44	44	43	27.5	27.5	28
	DDTR-22L-15L-15L	22	15	15	36	27	27	27	44	43	43	27.5	28	28
	DDTR-22L-22L-15L	22	22	15	36	36	27	27	44	44	43	27.5	27.5	28
	DDTR-22L-18L-18L	22	18	18	36	32	32	27	44	44	44	27.5	27.5	27.5
	DDTR-22L-22L-18L	22	22	18	36	36	32	27	44	44	44	27.5	27.5	27.5
	DDTR-22L-18L-22L	22	18	22	36	32	36	27	44	44	44	27.5	27.5	27.5
	DDTR-28L-28L-10L	28	28	10	41	41	19	36	47	44	46	30.5	30.5	31
	DDTR-28L-28L-12L	28	28	12	41	41	22	36	47	47	46	30.5	30.5	31
	DDTR-28L-28L-15L	28	28	15	41	41	27	36	47	47	46	30.5	30.5	31
	DDTR-28L-28L-18L	28	28	18	41	41	32	36	47	47	47	30.5	30.5	30.5
	DDTR-28L-22L-22L	28	22	22	41	36	36	36	47	47	47	30.5	30.5	30.5
	DDTR-28L-28L-22L	28	28	22	41	41	36	36	47	47	47	30.5	30.5	30.5
S PN-630	DDTR-10S-10S-06S	10	10	6	22	22	17	17	34	34	33	17.5	17.5	18
	DDTR-12S-08S-08S	12	8	8	24	19	19	17	38	37	37	21.5	22	22
	DDTR-12S-12S-08S	12	12	8	24	24	19	17	38	38	37	21.5	21.5	22
	DDTR-12S-12S-10S	12	12	10	24	24	22	17	38	38	38	21.5	21.5	21.5
PN-400	DDTR-12S-12S-16S	12	12	16	24	24	30	24	42	42	43	25.5	25.5	24.5
	DDTR-16S-16S-06S	16	16	6	30	30	17	24	43	43	41	24.5	24.5	26
	DDTR-16S-16S-08S	16	16	8	30	30	19	24	43	43	41	24.5	24.5	26
	DDTR-16S-16S-10S	16	16	10	30	30	22	24	43	43	42	24.5	24.5	25.5
	DDTR-16S-16S-12S	16	16	12	30	30	24	24	43	43	42	24.5	24.5	25.5
	DDTR-16S-16S-20S	16	16	20	30	30	36	27	47	47	48	28.5	28.5	26.5
	DDTR-20S-20S-10S	20	20	10	36	36	22	27	48	48	46	26.5	26.5	29.5
	DDTR-20S-20S-12S	20	20	12	36	36	24	27	48	48	46	26.5	26.5	29.5
	DDTR-20S-20S-16S	20	20	16	36	36	30	27	48	48	47	26.5	26.5	28.5
	DDTR-20S-20S-25S	20	20	25	36	36	46	36	53	53	54	31.5	31.5	30
	DDTR-25S-25S-16S	25	25	16	46	46	30	36	54	54	52	30	30	33.5
	DDTR-25S-25S-20S	25	25	20	46	46	36	36	54	54	53	30	30	31.5
DDTR-25S-25S-30S	25	25	30	46	46	50	41	61	61	62	37	37	35.5	

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

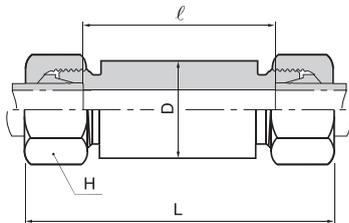
## Bulkhead Union

**DDBU**

 $l_2 = 16\text{mm Max.}$ 


Series	Part No.	Tube O.D	H	H <sub>1</sub>	h	L	L <sub>1</sub>	ℓ	ℓ <sub>1</sub>	T
L PN-315	DDBU-06L	6	14	17	17	42	22	27	7	M12 x 1.5
	DDBU-08L	8	17	19	19	42	23	27	8	M14 x 1.5
	DDBU-10L	10	19	22	22	43	25	28	10	M16 x 1.5
	DDBU-12L	12	22	24	24	44	25	29	10	M18 x 1.5
	DDBU-15L	15	27	30	27	46	27	31	12	M22 x 1.5
	DDBU-18L	18	32	36	32	49	30	32.5	13.5	M26 x 1.5
PN-160	DDBU-22L	22	36	41	36	51	33	34.5	16.5	M30 x 2
	DDBU-28L	28	41	46	41	52	35	35.5	18.5	M36 x 2
	DDBU-35L	35	50	55	50	58	40	36.5	18.5	M45 x 2
	DDBU-42L	42	60	65	60	59	42	36	19	M52 x 2
S PN-630	DDBU-06S	6	17	19	19	44	27	29	12	M14 x 1.5
	DDBU-08S	8	19	22	22	44	28	29	13	M16 x 1.5
	DDBU-10S	10	22	24	24	46	31	29.5	14.5	M18 x 1.5
	DDBU-12S	12	24	27	27	47	31	30.5	14.5	M20 x 1.5
	DDBU-14S	14	27	30	30	50	35	32	17	M22 x 1.5
PN-400	DDBU-16S	16	30	32	32	50	35	31.5	16.5	M24 x 1.5
	DDBU-20S	20	36	41	41	55	39	33.5	17.5	M30 x 2
	DDBU-25S	25	46	46	46	59	44	35	20	M36 x 2
	DDBU-30S	30	50	50	50	64	48	37.5	21.5	M42 x 2
PN-315	DDBU-38S	38	60	65	65	68	53	37	22	M52 x 2

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

## Welding Bulkhead Union

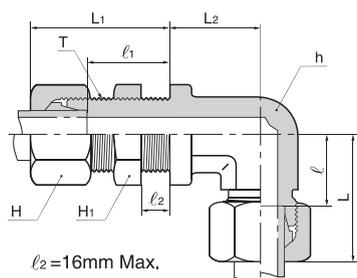
**DDBUW**


Series	Part No.	Tube O.D	D	H	L	ℓ
L PN-315	DDBUW-06L	6	18	14	85	56
	DDBUW-08L	8	20	17	85	56
	DDBUW-10L	10	22	19	87	58
	DDBUW-12L	12	25	22	87	58
	DDBUW-15L	15	28	27	100	70
	DDBUW-18L	18	32	32	101	69
PN-160	DDBUW-22L	22	36	36	105	73
	DDBUW-28L	28	40	41	106	73
	DDBUW-35L	35	50	50	114	71
	DDBUW-42L	42	60	60	115	70
S PN-630	DDBUW-06S	6	20	17	89	60
	DDBUW-08S	8	22	19	89	60
	DDBUW-10S	10	25	22	91	59
	DDBUW-12S	12	28	24	91	59
	DDBUW-14S	14	30	27	107	72
PN-400	DDBUW-16S	16	35	30	107	71
	DDBUW-20S	20	38	36	114	71
	DDBUW-25S	25	45	46	120	72
	DDBUW-30S	30	50	50	126	73
PN-315	DDBUW-38S	38	60	60	133	72

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

Bulkhead Union Elbow

**DDBL**

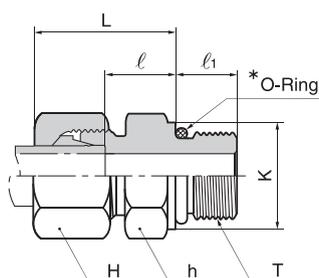


Series	Part No.	Tube O.D	H	H <sub>1</sub>	h	L	L <sub>1</sub>	L <sub>2</sub>	ℓ	ℓ <sub>1</sub>	T
L PN-315	DDBL-06L	6	14	17	12	27	42	14	12	27	M12 x 1.5
	DDBL-08L	8	17	19	12	29	42	17	14	27	M14 x 1.5
	DDBL-10L	10	19	22	14	30	43	18	15	28	M16 x 1.5
	DDBL-12L	12	22	24	17	32	44	20	17	29	M18 x 1.5
	DDBL-15L	15	27	30	19	36	46	23	21	31	M22 x 1.5
	DDBL-18L	18	32	36	24	40	49	24	23.5	32.5	M26 x 1.5
PN-160	DDBL-22L	22	36	41	27	44	51	30	27.5	34.5	M30 x 2
	DDBL-28L	28	41	46	36	47	52	34	30.5	35.5	M36 x 2
	DDBL-35L	35	50	55	41	56	58	39	34.5	36.5	M45 x 2
	DDBL-42L	42	60	65	50	63	59	43	40	36	M52 x 2
S PN-630	DDBL-06S	6	17	19	12	31	44	17	16	29	M14 x 1.5
	DDBL-08S	8	19	22	14	32	44	18	17	29	M16 x 1.5
	DDBL-10S	10	22	24	17	34	46	20	17.5	29.5	M18 x 1.5
	DDBL-12S	12	24	27	17	38	47	21	21.5	30.5	M20 x 1.5
	DDBL-14S	14	27	30	19	40	50	23	22	32	M22 x 1.5
PN-400	DDBL-16S	16	30	32	24	43	50	24	24.5	31.5	M24 x 1.5
	DDBL-20S	20	36	41	27	48	55	30	26.5	33.5	M30 x 2
	DDBL-25S	25	46	46	36	54	59	34	30	35	M36 x 2
	DDBL-30S	30	50	50	41	62	64	39	35.5	37.5	M42 x 2
PN-315	DDBL-38S	38	60	65	50	72	68	43	41	37	M52 x 2

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

Male Connector  
(Metric Parallel) with \*O-Ring

**DDOM-M**



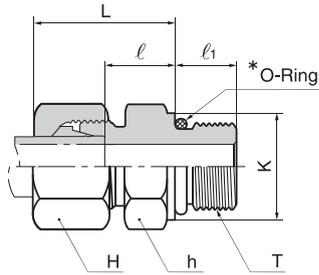
Series	Part No.	Tube O.D	H	h	K	L	ℓ	ℓ <sub>1</sub>	T
L PN-315	DDOM-06L-M10	6	14	14	14	23	8.5	9.5	M10 x 1
	DDOM-08L-M12	8	17	17	17	25	10	11	M12 x 1.5
	DDOM-10L-M14	10	19	19	19	26	11	11	M14 x 1.5
	DDOM-12L-M16	12	22	22	22	27	12.5	12.5	M16 x 1.5
	DDOM-15L-M18	15	27	24	24	29	13.5	14	M18 x 1.5
	DDOM-18L-M22	18	32	27	27	30	14.5	15	M22 x 1.5
PN-160	DDOM-22L-M27	22	36	32	32	33	16.5	18.5	M27 x 2
	DDOM-28L-M33	28	41	41	41	34	17.5	18.5	M33 x 2
	DDOM-35L-M42	35	50	50	50	39	17.5	19	M42 x 2
S PN-630	DDOM-06S-M12	6	17	17	17	28	13	11	M12 x 1.5
	DDOM-08S-M14	8	19	19	19	30	15	11	M14 x 1.5
	DDOM-10S-M16	10	22	22	22	31	15	12.5	M16 x 1.5
	DDOM-12S-M18	12	24	24	24	33	17	14	M18 x 1.5
PN-400	DDOM-16S-M22	16	30	27	27	37	18.5	15	M22 x 1.5
	DDOM-20S-M27	20	36	32	32	42	20.5	18.5	M27 x 2
	DDOM-25S-M33	25	46	41	41	47	23	18.5	M33 x 2
	DDOM-30S-M42	30	50	50	50	50	23.5	19	M42 x 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.

Male Connector  
(Unified Parallel) with \*O-Ring

## DDOM-U



From F stud end



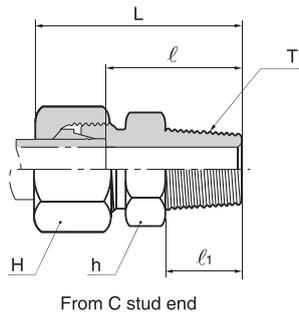
Series	Part No.	Tube O.D	H	h	K	L	ℓ	ℓ <sub>1</sub>	T
L PN-315	DDOM-08L-04U	8	17	17	14.4	25	10	9	7/16-20 UNF
	DDOM-10L-04U	10	19	17	14.4	26	11	10	7/16-20 UNF
	DDOM-12L-06U	12	22	19	17.6	26	11	10	9/16-18 UNF
	DDOM-12L-08U	12	22	24	22.3	28	13	11	3/4-16 UNF
	DDOM-12L-10U	12	22	27	25.5	29	14.3	12.7	7/8-14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

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.

Male Connector  
(NPT Thread)

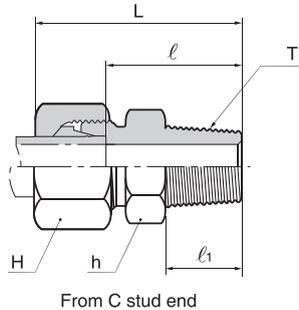
**DDMC-N**



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

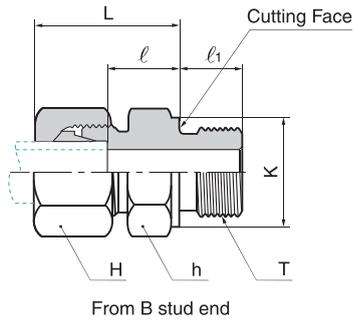
Male Connector  
(BSP Tapered)

**DDMC-R**



Series	Part No.	Tube O.D	H	h	L	ℓ	ℓ <sub>1</sub>	T
LL PN-100	DDMC-04LL-01R	4	10	11	26	16	8	PT 1/8
	DDMC-06LL-01R	6	12	11	26	14.5	8	PT 1/8
	DDMC-08LL-01R	8	14	12	28	16.5	8	PT 1/8
	DDMC-08LL-02R	8	14	14	32	20.5	12	PT 1/4
	DDMC-10LL-02R	10	17	14	32	20.5	12	PT 1/4
	DDMC-12LL-02R	12	19	17	32	20	12	PT 1/4
	DDMC-12LL-03R	12	19	17	32	20	12	PT 3/8
L PN-315	DDMC-06L-01R	6	14	12	30	15	8	PT 1/8
	DDMC-08L-02R	8	17	17	35	20	12	PT 1/4
	DDMC-10L-02R	10	19	17	36	21	12	PT 1/4
	DDMC-12L-02R	12	22	19	37	22	12	PT 1/4
	DDMC-12L-03R	12	22	19	37	22	12	PT 3/8
	DDMC-12L-04R	12	22	24	39	24	14	PT 1/2
	DDMC-15L-03R	15	27	24	38	23	12	PT 3/8
	DDMC-15L-04R	15	27	24	40	25	14	PT 1/2
	DDMC-18L-04R	18	32	27	41	25.5	14	PT 1/2
	DDMC-22L-06R	22	36	32	46	29.5	16	PT 3/4

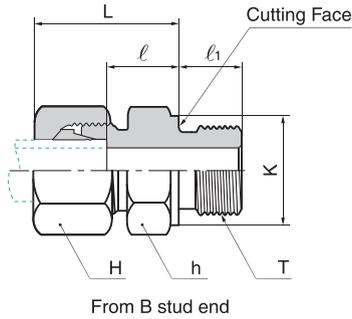
Dimensions given approximate length with tightened nut. All dimensions are in millimeters, for reference only subject to change.

Male Connector  
(BSP Parallel)**DDMC-G**

Series	Part No.	Tube O.D	H	h	K	L	l	l <sub>1</sub>	T
L PN-315	DDMC-06L-01G	6	14	14	14	23	8.5	8	PF 1/8
	DDMC-06L-02G	6	14	19	18	25	10	12	PF 1/4
	DDMC-06L-03G	6	14	22	22	26	11.5	12	PF 3/8
	DDMC-06L-04G	6	14	27	26	27	12	14	PF 1/2
	DDMC-08L-01G	8	17	14	14	23	8.5	8	PF 1/8
	DDMC-08L-02G	8	17	19	18	25	10	12	PF 1/4
	DDMC-08L-03G	8	17	22	22	26	11.5	12	PF 3/8
	DDMC-08L-04G	8	17	27	26	27	12	14	PF 1/2
	DDMC-10L-02G	10	19	19	18	26	11	12	PF 1/4
	DDMC-10L-03G	10	19	22	22	27	12.5	12	PF 3/8
	DDMC-10L-04G	10	19	27	26	28	13	14	PF 1/2
	DDMC-12L-02G	12	22	19	18	27	12	12	PF 1/4
	DDMC-12L-03G	12	22	22	22	27	12.5	12	PF 3/8
	DDMC-12L-04G	12	22	27	26	28	13	14	PF 1/2
	DDMC-12L-06G	12	22	32	32	29	14	16	PF 3/4
	DDMC-15L-03G	15	27	24	22	29	13.5	12	PF 3/8
	DDMC-15L-04G	15	27	27	26	29	14	14	PF 1/2
	DDMC-15L-06G	15	27	32	32	30	15	16	PF 3/4
DDMC-18L-03G	18	32	27	22	29.5	14	12	PF 3/8	
DDMC-18L-04G	18	32	27	26	31	14.5	14	PF 1/2	
DDMC-18L-06G	18	32	32	32	30	14.5	16	PF 3/4	
PN-160	DDMC-22L-04G	22	36	32	26	33	16.5	14	PF 1/2
	DDMC-22L-06G	22	36	32	32	33	16.5	16	PF 3/4
	DDMC-28L-06G	28	41	41	32	34	17.5	16	PF 3/4
	DDMC-28L-08G	28	41	41	39	34	17.5	18	PF 1
	DDMC-35L-08G	35	50	46	39	39	17.5	18	PF 1
	DDMC-35L-10G	35	50	50	49	39	17.5	20	PF 1-1/4
	DDMC-42L-12G	42	60	55	55	42	19	22	PF 1-1/2
S PN-630	DDMC-06S-02G	6	17	19	18	28	13	12	PF 1/4
	DDMC-06S-04G	6	17	27	26	33	18	14	PF 1/2
	DDMC-08S-02G	8	19	19	18	30	15	12	PF 1/4
	DDMC-08S-03G	8	19	22	22	30	15.5	12	PF 3/8
	DDMC-10S-02G	10	22	19	18	31	14.5	12	PF 1/4
	DDMC-10S-03G	10	22	22	22	31	15	12	PF 3/8
	DDMC-10S-04G	10	22	27	26	34	17.5	14	PF 1/2
	DDMC-12S-02G	12	24	22	18	33	16.5	12	PF 1/4
	DDMC-12S-03G	12	24	22	22	33	17	12	PF 3/8
	DDMC-12S-04G	12	24	27	26	34	17.5	14	PF 1/2
	DDMC-14S-03G	14	27	24	22	36	18.5	12	PF 3/8
	DDMC-14S-04G	14	27	27	26	37	19	14	PF 1/2
PN-400	DDMC-16S-03G	16	30	27	22	36	18	12	PF 3/8
	DDMC-16S-04G	16	30	27	26	37	18.5	14	PF 1/2
	DDMC-16S-06G	16	30	32	32	39	20.5	16	PF 3/4
	DDMC-20S-04G	20	36	32	26	42	20.5	14	PF 1/2
	DDMC-20S-06G	20	36	32	32	42	20.5	16	PF 3/4
	DDMC-25S-06G	25	46	41	32	47	23	16	PF 3/4
	DDMC-25S-08G	25	46	41	39	47	23	18	PF 1
PN-250	DDMC-30S-08G	30	50	46	39	50	23.5	18	PF 1
	DDMC-30S-10G	30	50	50	49	50	23.5	20	PF 1-1/4
	DDMC-38S-12G	38	60	55	55	57	26	22	PF 1-1/2
	DDMC-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.

Male Connector  
(Metric Parallel)  
From B stud end  
**DDMC-M**

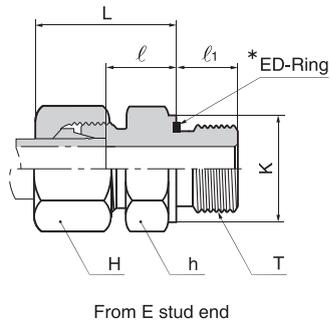


Series	Part No.	Tube O.D	H	h	K	L	ℓ	ℓ <sub>1</sub>	T
L PN-315	DDMC-06L-M10	6	14	14	14	23	8.5	8	M10 x 1
	DDMC-08L-M12	8	17	17	17	25	10	12	M12 x 1.5
	DDMC-08L-M18	8	17	24	23	26	11.5	12	M18 x 1.5
	DDMC-10L-M14	10	19	19	19	26	11	12	M14 x 1.5
	DDMC-10L-M16	10	19	22	21	27	12	12	M16 x 1.5
	DDMC-10L-M18	10	19	24	23	27	12.5	12	M18 x 1.5
	DDMC-10L-M22	10	19	27	27	29	14	14	M22 x 1.5
	DDMC-12L-M14	12	22	19	19	26	11	12	M14 x 1.5
	DDMC-12L-M16	12	22	22	21	27	12.5	12	M16 x 1.5
	DDMC-12L-M18	12	22	24	23	27	12.5	12	M18 x 1.5
	DDMC-12L-M22	12	22	27	27	29	14	14	M22 x 1.5
	DDMC-15L-M16	15	27	24	21	28	13	12	M16 x 1.5
	DDMC-15L-M18	15	27	24	23	29	13.5	12	M18 x 1.5
	DDMC-15L-M22	15	27	27	27	30	15	14	M22 x 1.5
	DDMC-18L-M18	18	32	27	23	30	14	12	M18 x 1.5
DDMC-18L-M22	18	32	27	27	31	14.5	14	M22 x 1.5	
PN-160	DDMC-22L-M22	22	36	32	27	33	16.5	14	M22 x 1.5
	DDMC-22L-M26	22	36	32	31	33	16.5	16	M26 x 1.5
	DDMC-28L-M33	28	41	41	39	34	17.5	18	M33 x 2
	DDMC-35L-M42	35	50	50	49	39	17.5	20	M42 x 2
	DDMC-42L-M48	42	60	55	55	42	19	22	M48 x 2
S PN-630	DDMC-06S-M12	6	17	17	17	28	13	12	M12 x 1.5
	DDMC-08S-M14	8	19	19	19	30	15	12	M14 x 1.5
	DDMC-10S-M16	10	22	22	21	31	15	12	M16 x 1.5
	DDMC-12S-M18	12	24	24	23	33	17	12	M18 x 1.5
	DDMC-12S-M22	12	24	27	27	34	17.5	14	M22 x 1.5
	DDMC-14S-M20	14	27	27	25	37	19	14	M20 x 1.5
PN-400	DDMC-16S-M18	16	30	27	23	36	18	12	M18 x 1.5
	DDMC-16S-M22	16	30	27	27	37	18.5	14	M22 x 1.5
	DDMC-20S-M27	20	36	32	32	42	20.5	16	M27 x 2
	DDMC-25S-M33	25	46	41	39	47	23	18	M33 x 2
PN-250	DDMC-30S-M42	30	50	50	49	50	23.5	20	M42 x 2
	DDMC-38S-M48	38	60	55	55	57	26	22	M48 x 2

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

Male Connector  
(BSP Parallel) with \*ED-Ring  
From E stud end

## DDMC-GED



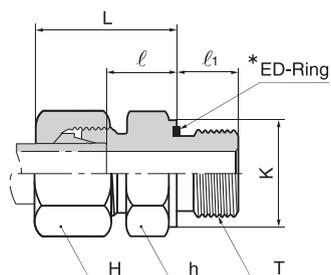
Series	Part No.	Tube O.D	H	h	K	L	ℓ	ℓ <sub>1</sub>	T
L PN-315	DDMC-06L-01GED	6	14	14	13.9	23	8.5	8	PF 1/8
	DDMC-06L-02GED	6	14	19	18.9	25	10	12	PF 1/4
	DDMC-08L-01GED	8	17	14	13.9	24	8.5	8	PF 1/8
	DDMC-08L-02GED	8	17	19	18.9	25	10	12	PF 1/4
	DDMC-08L-03GED	8	17	22	21.9	26	11.5	12	PF 3/8
	DDMC-10L-02GED	10	19	19	18.9	26	11	12	PF 1/4
	DDMC-10L-03GED	10	19	22	21.9	27	12.5	12	PF 3/8
	DDMC-10L-04GED	10	19	27	26.9	28	13	14	PF 1/2
	DDMC-12L-02GED	12	22	19	18.9	27	12	12	PF 1/4
	DDMC-12L-03GED	12	22	22	21.9	27	12.5	12	PF 3/8
	DDMC-12L-04GED	12	22	27	26.9	28	13	14	PF 1/2
	DDMC-15L-03GED	15	27	24	21.9	29	13.5	12	PF 3/8
	DDMC-15L-04GED	15	27	27	26.9	29	14	14	PF 1/2
	DDMC-18L-04GED	18	32	27	26.9	31	14.5	14	PF 1/2
DDMC-18L-06GED	18	32	32	31.9	31	14.5	16	PF 3/4	
PN-160	DDMC-22L-06GED	22	36	32	31.9	33	16.5	16	PF 3/4
	DDMC-28L-08GED	28	41	41	39.9	34	17.5	18	PF 1
	DDMC-35L-10GED	35	50	50	49.9	39	17.5	20	PF 1-1/4
	DDMC-42L-12GED	42	60	55	54.9	42	19	22	PF 1-1/2
S PN-630	DDMC-06S-02GED	6	17	19	18.9	28	13	12	PF 1/4
	DDMC-08S-02GED	8	19	19	18.9	30	15	12	PF 1/4
	DDMC-08S-03GED	8	19	22	21.9	30	15.5	12	PF 3/8
	DDMC-10S-02GED	10	22	19	18.9	31	14.5	12	PF 1/4
	DDMC-10S-03GED	10	22	22	21.9	31	15	12	PF 3/8
	DDMC-10S-04GED	10	22	27	26.9	34	17.5	14	PF 1/2
	DDMC-12S-02GED	12	24	22	21.9	33	16.5	12	PF 1/4
	DDMC-12S-03GED	12	24	22	21.9	33	17	12	PF 3/8
	DDMC-12S-04GED	12	24	27	26.9	34	17.5	14	PF 1/2
DDMC-14S-04GED	14	27	27	26.9	37	19	14	PF 1/2	
PN-400	DDMC-16S-03GED	16	30	27	21.9	36	18	12	PF 3/8
	DDMC-16S-04GED	16	30	27	26.9	37	18.5	14	PF 1/2
	DDMC-16S-06GED	16	30	32	31.9	39	20.5	16	PF 3/4
	DDMC-20S-06GED	20	36	32	31.9	42	20.5	16	PF 3/4
	DDMC-25S-04GED	25	46	41	26.9	47	23	14	PF 1/2
	DDMC-25S-06GED	25	46	41	31.9	47	23	16	PF 3/4
	DDMC-25S-08GED	25	46	41	39.9	47	23	18	PF 1
	DDMC-30S-10GED	30	50	50	49.9	50	23.5	20	PF 1-1/4
PN-315	DDMC-38S-12GED	38	60	55	54.9	57	26	22	PF 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.

Male Connector  
(Metric Parallel) with \*ED-Ring  
From E stud end

## DDMC-MED



From E stud end



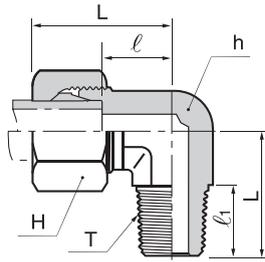
Series	Part No.	Tube O.D	H	h	K	L	ℓ	ℓ <sub>1</sub>	T
L PN-315	DDMC-06L-M10ED	6	14	14	13.9	23	8.5	8	M10 x 1
	DDMC-08L-M12ED	8	17	17	16.9	25	10	12	M12 x 1.5
	DDMC-10L-M14ED	10	19	19	18.9	26	11	12	M14 x 1.5
	DDMC-12L-M16ED	12	22	22	21.9	27	12.5	12	M16 x 1.5
	DDMC-12L-M18ED	12	22	24	23.9	27	12.5	12	M18 x 1.5
	DDMC-12L-M22ED	12	22	27	26.9	29	14	14	M22 x 1.5
	DDMC-15L-M18ED	15	27	24	23.9	29	13.5	12	M18 x 1.5
	DDMC-15L-M22ED	15	27	27	26.9	30	15	14	M22 x 1.5
PN-160	DDMC-18L-M22ED	18	32	27	26.9	31	14.5	14	M22 x 1.5
	DDMC-22L-M26ED	22	36	32	31.9	33	16.5	16	M26 x 1.5
	DDMC-28L-M23ED	28	41	41	39.9	34	17.5	18	M33 x 2
	DDMC-35L-M42ED	35	50	50	49.9	39	17.5	20	M42 x 2
S PN-630	DDMC-42L-M48ED	42	60	55	54.9	42	19	22	M48 x 2
	DDMC-06S-M12ED	6	17	17	16.9	28	13	12	M12 x 1.5
	DDMC-08S-M14ED	8	19	19	18.9	30	15	12	M14 x 1.5
	DDMC-10S-M16ED	10	22	22	21.9	31	15	12	M16 x 1.5
	DDMC-12S-M18ED	12	24	24	23.9	33	17	12	M18 x 1.5
PN-400	DDMC-14S-M20ED	14	27	27	25.9	37	19	14	M20 x 1.5
	DDMC-16S-M22ED	16	30	27	26.9	37	18.5	14	M22 x 1.5
	DDMC-20S-M27ED	20	36	32	31.9	42	20.5	16	M27 x 2
	DDMC-25S-M33ED	25	46	41	39.9	47	23	18	M33 x 2
PN-315	DDMC-30S-M42ED	30	50	50	49.9	50	23.5	20	M42 x 2
	DDMC-38S-M48ED	38	60	55	54.9	57	26	22	M48 x 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.

Male Elbow  
(BSP Tapered)

## DDL-M-R



From C stud end

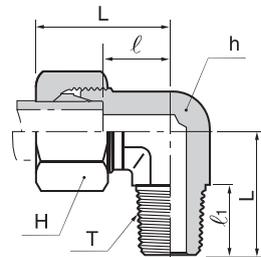


Series	Part No.	Tube O.D	H	h	L	L <sub>1</sub>	ℓ	ℓ <sub>1</sub>	T
LL PN-100	DDL-M-04LL-01R	4	10	9	21	17	11	10	PT 1/8
	DDL-M-06LL-01R	6	12	9	21	17	9.5	10	PT 1/8
	DDL-M-08LL-01R	8	14	12	23	20	11.5	10	PT 1/8
	DDL-M-10LL-02R	10	17	14	24	23	12.5	14	PT 1/4
	DDL-M-12LL-02R	12	19	17	25	23	13	14	PT 1/4
L PN-315	DDL-M-06L-01R	6	14	12	27	20	12	10	PT 1/8
	DDL-M-08L-02R	8	17	12	29	26	14	14	PT 1/4
	DDL-M-10L-02R	10	19	14	30	27	15	14	PT 1/4
	DDL-M-12L-03R	12	22	17	32	28	17	15	PT 3/8
	DDL-M-15L-04R	15	27	19	36	34	21	19	PT 1/2
	DDL-M-18L-04R	18	32	24	40	36	23.5	19	PT 1/2
S PN-400	DDL-M-06S-02R	6	17	12	31	26	16	14	PT 1/4
	DDL-M-08S-02R	8	19	14	32	27	17	14	PT 1/4
	DDL-M-10S-03R	10	22	17	34	28	17.5	15	PT 3/8
	DDL-M-12S-03R	12	24	17	38	28	21.5	15	PT 3/8
	DDL-M-14S-04R	14	27	19	40	32	22	19	PT 1/2
	DDL-M-16S-04R	16	30	24	43	32	24.5	19	PT 1/2

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

Male Elbow  
(Metric Tapered)

## DDL-M-K



From C stud end

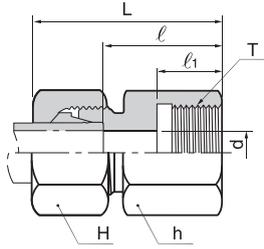


Series	Part No.	Tube O.D	H	h	L	L <sub>1</sub>	ℓ	ℓ <sub>1</sub>	T
LL PN-100	DDL-M-04LL-M8K	4	10	9	21	17	11	8	M8 x 1keg
	DDL-M-06LL-M10K	6	12	9	21	17	9.5	8	M10 x 1keg
	DDL-M-08LL-M10K	8	14	12	23	20	11.5	8	M10 x 1keg
L PN-315	DDL-M-06L-M10K	6	14	12	27	20	12	8	M10 x 1keg
	DDL-M-08L-M12K	8	17	12	29	26	14	12	M12 x 1.5keg
	DDL-M-10L-M14K	10	19	14	30	27	15	12	M14 x 1.5keg
	DDL-M-12L-M16K	12	22	17	32	28	17	14	M16 x 1.5keg
	DDL-M-15L-M18K	15	27	19	36	34	21	14	M18 x 1.5keg
	DDL-M-18L-M22K	18	32	24	40	36	23.5	17	M22 x 1.5keg
S PN-400	DDL-M-06S-M12K	6	17	12	31	26	16	12	M12 x 1.5keg
	DDL-M-08S-M14K	8	19	14	32	27	17	12	M14 x 1.5keg
	DDL-M-10S-M16K	10	22	17	34	28	17.5	12	M16 x 1.5keg
	DDL-M-12S-M18K	12	24	17	38	28	21.5	12	M18 x 1.5keg
	DDL-M-14S-M20K	14	27	19	40	32	22	14	M20 x 1.5keg
	DDL-M-16S-M22K	16	30	24	43	32	24.5	17	M22 x 1.5keg

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

Female Connector  
(BSP Parallel)

**DDFC-G**



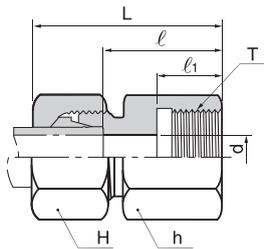
From Y Tapped Hole



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

Female Connector  
(Metric Parallel)

**DDFC-M**



From Y Tapped Hole

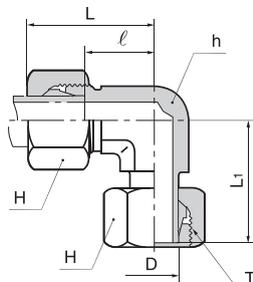
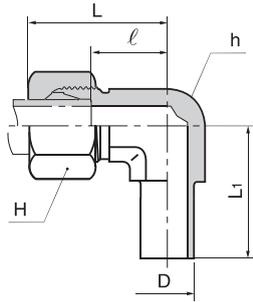


Series	Part No.	Tube O.D	d	H	h	L	ℓ	ℓ <sub>1</sub>	T
L PN-315	DDFC-06L-M10	6	4	14	14	34	19.5	12.5	M10 x 1
	DDFC-08L-M12	8	6	17	17	39	24	17	M12 x 1.5
	DDFC-10L-M14	10	8	19	19	40	25	17	M14 x 1.5
	DDFC-12L-M16	12	10	22	22	41	26	17	M16 x 1.5
	DDFC-15L-M18	15	12	27	24	43	28	17	M18 x 1.5
	DDFC-18L-M22	18	15	32	30	46	29.5	19	M22 x 1.5
PN-160	DDFC-22L-M26	22	19	36	32	51	34.5	21	M26 x 1.5
	DDFC-28L-M33	28	24	41	41	54	37.5	24	M33 x 2
	DDFC-35L-M42	35	30	50	55	62	40.5	26	M42 x 2
	DDFC-42L-M48	42	36	60	60	65	42	28	M48 x 2
S PN-630	DDFC-06S-M12	6	4	17	17	41	26	17	M12 x 1.5
	DDFC-08S-M14	8	5	19	17	41	26	17	M14 x 1.5
	DDFC-10S-M16	10	7	22	22	43	26.5	17	M16 x 1.5
	DDFC-12S-M18	12	8	24	24	44	27.5	17	M18 x 1.5
	DDFC-14S-M20	14	10	27	27	49	31	19	M20 x 1.5
PN-400	DDFC-16S-M22	16	12	30	30	49	30.5	19	M22 x 1.5
	DDFC-20S-M27	20	16	36	36	56	34.5	22	M27 x 2
	DDFC-25S-M33	25	20	46	41	61	37	24	M33 x 2
	DDFC-30S-M42	30	25	50	55	68	41.5	26	M42 x 2
PN-250	DDFC-38S-M48	38	32	60	60	74	43	28	M48 x 2

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

Adjustable Elbow with Standpipe

**DDLA**



\*Option

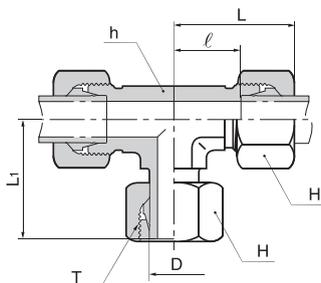
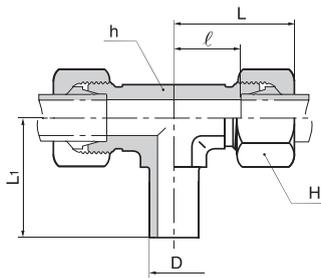
Series	Part No.	Tube O.D	D	H	h	L	L <sub>1</sub>	ℓ	T
L PN-315	DDLA-06L	6	6	14	12	27	26	12	M12 x 1.5
	DDLA-08L	8	8	17	12	29	27.5	14	M14 x 1.5
	DDLA-10L	10	10	19	14	30	29	15	M16 x 1.5
	DDLA-12L	12	12	22	17	32	29.5	17	M18 x 1.5
	DDLA-15L	15	15	27	19	36	32.5	21	M22 x 1.5
	DDLA-18L	18	18	32	24	40	35.5	23.5	M26 x 1.5
PN-160	DDLA-22L	22	22	36	27	44	38.5	27.5	M30 x 2
	DDLA-28L	28	28	41	36	47	41.5	30.5	M36 x 2
	DDLA-35L	35	35	50	41	56	51	34.5	M45 x 2
	DDLA-42L	42	42	60	50	63	56	40	M52 x 2
S PN-630	DDLA-06S	6	6	17	12	31	27	16	M14 x 1.5
	DDLA-08S	8	8	19	14	32	27.5	17	M16 x 1.5
	DDLA-10S	10	10	22	17	34	30	17.5	M18 x 1.5
	DDLA-12S	12	12	24	17	38	31	21.5	M20 x 1.5
PN-400	DDLA-14S	14	14	27	19	40	35	22	M22 x 1.5
	DDLA-16S	16	16	30	24	43	36.5	24.5	M24 x 1.5
	DDLA-20S	20	20	36	27	48	44.5	26.5	M30 x 2
	DDLA-25S	25	25	46	36	54	50	30	M36 x 2
PN-315	DDLA-30S	30	30	50	41	62	55	35.5	M42 x 2
	DDLA-38S	38	38	60	50	72	63	41	M52 x 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-settled nut and cutting ring for connection.

\*Option : Preswaging nut and cutting ring - DDLA-06S-PS-S6

Adjustable Branch Tee with Standpipe

**DDBTA**



\*Option

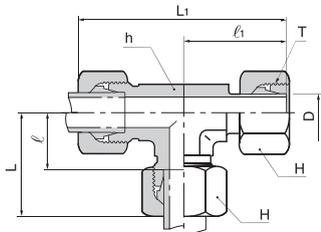
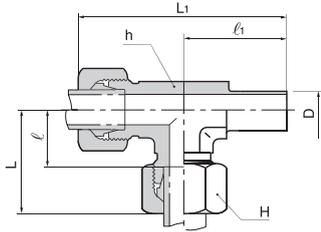
Series	Part No.	Tube O.D	D	H	h	L	L <sub>1</sub>	ℓ	T
L PN-315	DDBTA-06L	6	6	14	12	27	26	12	M12 x 1.5
	DDBTA-08L	8	8	17	12	29	27.5	14	M14 x 1.5
	DDBTA-10L	10	10	19	14	30	29	15	M16 x 1.5
	DDBTA-12L	12	12	22	17	32	29.5	17	M18 x 1.5
	DDBTA-15L	15	15	27	19	36	32.5	21	M22 x 1.5
	DDBTA-18L	18	18	32	24	40	35.5	23.5	M26 x 1.5
PN-160	DDBTA-22L	22	22	36	27	44	38.5	27.5	M30 x 2
	DDBTA-28L	28	28	41	36	47	41.5	30.5	M36 x 2
	DDBTA-35L	35	35	50	41	56	51	34.5	M45 x 2
	DDBTA-42L	42	42	60	50	63	56	40	M52 x 2
S PN-630	DDBTA-06S	6	6	17	12	31	27	16	M14 x 1.5
	DDBTA-08S	8	8	19	14	32	27.5	17	M16 x 1.5
	DDBTA-10S	10	10	22	17	34	30	17.5	M18 x 1.5
	DDBTA-12S	12	12	24	17	38	31	21.5	M20 x 1.5
PN-400	DDBTA-14S	14	14	27	19	40	35	22	M22 x 1.5
	DDBTA-16S	16	16	30	24	43	36.5	24.5	M24 x 1.5
	DDBTA-20S	20	20	36	27	48	44.5	26.5	M30 x 2
	DDBTA-25S	25	25	46	36	54	50	30	M36 x 2
PN-315	DDBTA-30S	30	30	50	41	62	55	35.5	M42 x 2
	DDBTA-38S	38	38	60	50	72	63	41	M52 x 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-settled nut and cutting ring for connection.

\*Option : Preswaging nut and cutting ring - DDBTA-06S-PS-S6

Adjustable Run Tee  
with Standpipe

**DDRTA**



\*Option

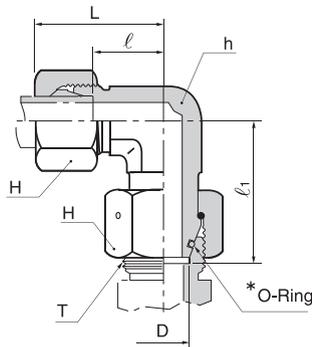
Series	Part No.	Tube O.D	D	H	h	L	L <sub>1</sub>	ℓ	ℓ <sub>1</sub>	T
L PN-315	DDRTA-06L	6	6	14	12	27	53	12	26	M12 x 1.5
	DDRTA-08L	8	8	17	12	29	56	14	27.5	M14 x 1.5
	DDRTA-10L	10	10	19	14	30	59	15	29	M16 x 1.5
	DDRTA-12L	12	12	22	17	32	62	17	29.5	M18 x 1.5
	DDRTA-15L	15	15	27	19	36	69	21	32.5	M22 x 1.5
	DDRTA-18L	18	18	32	24	40	75	23.5	35.5	M26 x 1.5
PN-160	DDRTA-22L	22	22	36	27	44	83	27.5	38.5	M30 x 2
	DDRTA-28L	28	28	41	36	47	91	30.5	41.5	M36 x 2
	DDRTA-35L	35	35	50	41	56	111	34.5	51	M45 x 2
	DDRTA-42L	42	42	60	50	63	123	40	56	M52 x 2
S PN-630	DDRTA-06S	6	6	17	12	31	58	16	27	M14 x 1.5
	DDRTA-08S	8	8	19	14	32	61	17	27.5	M16 x 1.5
	DDRTA-10S	10	10	22	17	34	66	17.5	30	M18 x 1.5
	DDRTA-12S	12	12	24	17	38	71	21.5	31	M20 x 1.5
	DDRTA-14S	14	14	27	19	40	75	22	35	M22 x 1.5
PN-400	DDRTA-16S	16	16	30	24	43	79	24.5	36.5	M24 x 1.5
	DDRTA-20S	20	20	36	27	48	93	26.5	44.5	M30 x 2
	DDRTA-25S	25	25	46	36	54	105	30	50	M36 x 2
	DDRTA-30S	30	30	50	41	62	119	35.5	55	M42 x 2
PN-315	DDRTA-38S	38	38	60	50	72	138	41	63	M52 x 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-settled nut and cutting ring for connection.

\*Option : Preswaging nut and cutting ring - DDRTA-06S-PS-S6

Swivel Adjustable Elbow  
with Cone

**DDEW**

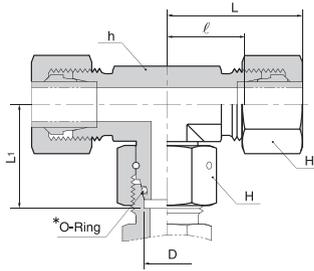


Series	Part No.	Tube O.D	H	h	L	ℓ	ℓ <sub>1</sub>	T
L PN-315	DDEW-06L	6	14	12	27	12	26	M12 x 1.5
	DDEW-08L	8	17	12	29	14	27.5	M14 x 1.5
	DDEW-10L	10	19	14	30	15	29	M16 x 1.5
	DDEW-12L	12	22	17	32	17	29.5	M18 x 1.5
	DDEW-15L	15	27	19	36	21	32.5	M22 x 1.5
	DDEW-18L	18	32	24	40	23.5	35.5	M26 x 1.5
PN-160	DDEW-22L	22	36	27	44	27.5	38.5	M30 x 2
	DDEW-28L	28	41	36	47	30.5	41.5	M36 x 2
	DDEW-35L	35	50	41	56	34.5	51	M45 x 2
	DDEW-42L	42	60	50	63	40	56	M52 x 2
S PN-630	DDEW-06S	6	17	12	31	16	27	M14 x 1.5
	DDEW-08S	8	19	14	32	17	27.5	M16 x 1.5
	DDEW-10S	10	22	17	34	17.5	30	M18 x 1.5
	DDEW-12S	12	24	17	38	21.5	31	M20 x 1.5
	DDEW-14S	14	27	19	40	22	35	M22 x 1.5
PN-400	DDEW-16S	16	30	24	43	24.5	36.5	M24 x 1.5
	DDEW-20S	20	36	27	48	26.5	44.5	M30 x 2
	DDEW-25S	25	46	36	54	30	50	M36 x 2
	DDEW-30S	30	50	41	62	35.5	55	M42 x 2
PN-315	DDEW-38S	38	60	50	72	41	63	M52 x 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.

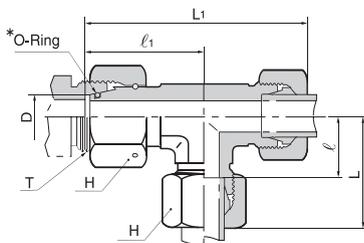
\*O-ring of NBR (e.g. PERBUNAN®) Standard, of FPM (e.g. VITON®) on request.

\*Option : Preswaging nut and sleeve - DDGA-06S-04G-PS-S6

**Swivel Adjustable Branch Tee  
with Cone**
**DDET**


Series	Part No.	Tube O.D	H	h	L	L <sub>1</sub>	ℓ	T
L PN-315	DDET-06L	6	14	12	27	26	12	M12 x 1.5
	DDET-08L	8	17	12	29	27.5	14	M14 x 1.5
	DDET-10L	10	19	14	30	29	15	M16 x 1.5
	DDET-12L	12	22	17	32	29.5	17	M18 x 1.5
	DDET-15L	15	27	19	36	32.5	21	M22 x 1.5
	DDET-18L	18	32	24	40	35.5	23.5	M26 x 1.5
PN-160	DDET-22L	22	36	27	44	38.5	27.5	M30 x 2
	DDET-28L	28	41	36	47	41.5	30.5	M36 x 2
	DDET-35L	35	50	41	56	51	34.5	M45 x 2
	DDET-42L	42	60	50	63	56	40	M52 x 2
S PN-630	DDET-06S	6	17	12	31	27	16	M14 x 1.5
	DDET-08S	8	19	14	32	27.5	17	M16 x 1.5
	DDET-10S	10	22	17	34	30	17.5	M18 x 1.5
	DDET-12S	12	24	17	38	31	21.5	M20 x 1.5
	DDET-14S	14	27	19	40	35	22	M22 x 1.5
PN-400	DDET-16S	16	30	24	43	36.5	24.5	M24 x 1.5
	DDET-20S	20	36	27	48	44.5	26.5	M30 x 2
	DDET-25S	25	46	36	54	50	30	M36 x 2
	DDET-30S	30	50	41	62	55	35.5	M42 x 2
PN-315	DDET-38S	38	60	50	72	63	41	M52 x 2

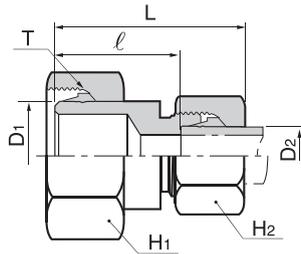
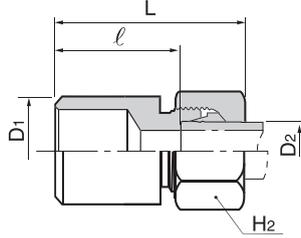
Dimensions given approximate length with tightened nut. All dimensions are in millimeters, for reference only subject to change. Without male stud, but with pre-settled nut and cutting ring for connection.  
\*O-ring of NBR (e.g. PERBUNAN®) Standard, of FPM (e.g. VITON®) on request.

**Swivel Adjustable Run Tee  
with Cone**
**DDEL**


Series	Part No.	Tube O.D	H	h	L	L <sub>1</sub>	ℓ	ℓ <sub>1</sub>	T
L PN-315	DDEL-06L	6	14	12	27	53	12	26	M12 x 1.5
	DDEL-08L	8	17	12	29	56	14	27.5	M14 x 1.5
	DDEL-10L	10	19	14	30	59	15	29	M16 x 1.5
	DDEL-12L	12	22	17	32	61	17	29.5	M18 x 1.5
	DDEL-15L	15	27	19	36	69	21	32.5	M22 x 1.5
	DDEL-18L	18	32	24	40	75	23.5	35.5	M26 x 1.5
PN-160	DDEL-22L	22	36	27	44	82	27.5	38.5	M30 x 2
	DDEL-28L	28	41	36	47	89	30.5	41.5	M36 x 2
	DDEL-35L	35	50	41	56	107	34.5	51	M45 x 2
	DDEL-42L	42	60	50	63	119	40	56	M52 x 2
S PN-630	DDEL-06S	6	17	12	31	58	16	27	M14 x 1.5
	DDEL-08S	8	19	14	32	59	17	27.5	M16 x 1.5
	DDEL-10S	10	22	17	34	64	17.5	30	M18 x 1.5
	DDEL-12S	12	24	17	38	69	21.5	31	M20 x 1.5
	DDEL-14S	14	27	19	40	75	22	35	M22 x 1.5
PN-400	DDEL-16S	16	30	24	43	79	24.5	36.5	M24 x 1.5
	DDEL-20S	20	36	27	48	93	26.5	44.5	M30 x 2
	DDEL-25S	25	46	36	54	104	30	50	M36 x 2
	DDEL-30S	30	50	41	62	117	35.5	55	M42 x 2
PN-315	DDEL-38S	38	60	50	72	135	41	63	M52 x 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-settled nut and cutting ring for connection.  
\*O-ring of NBR (e.g. PERBUNAN®) Standard, of FPM (e.g. VITON®) on request.

Standpipe Reducer  
**DDKOR**

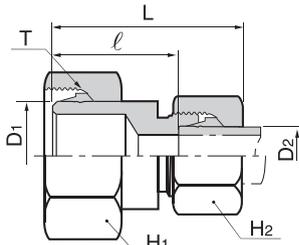
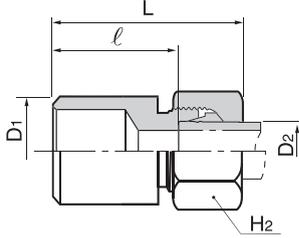


\*Option



Series	Part No.	Tube O.D		H <sub>1</sub>	H <sub>2</sub>	L	ℓ	T
		D <sub>1</sub>	D <sub>2</sub>					
L PN-315	DDKOR-08L-06L	8	6	17	14	38	23.5	M14 x 1.5
	DDKOR-10L-06L	10	6	19	14	38	23.5	M16 x 1.5
	DDKOR-10L-08L	10	8	19	17	38	23.5	M16 x 1.5
	DDKOR-12L-06L	12	6	22	14	38	23.5	M18 x 1.5
	DDKOR-12L-08L	12	8	22	17	38	23.5	M18 x 1.5
	DDKOR-12L-10L	12	10	22	19	39	24.5	M18 x 1.5
	DDKOR-15L-06L	15	6	27	14	38	23.5	M22 x 1.5
	DDKOR-15L-08L	15	8	27	17	38	23.5	M22 x 1.5
	DDKOR-15L-10L	15	10	27	19	39	24.5	M22 x 1.5
	DDKOR-15L-12L	15	12	27	22	39	24.5	M22 x 1.5
	DDKOR-18L-06L	18	6	32	14	39	24.5	M26 x 1.5
	DDKOR-18L-08L	18	8	32	17	39	24.5	M26 x 1.5
	DDKOR-18L-10L	18	10	32	19	40	25.5	M26 x 1.5
	DDKOR-18L-12L	18	12	32	22	40	25.5	M26 x 1.5
	DDKOR-18L-15L	18	15	32	27	42	26.5	M26 x 1.5
PN-160	DDKOR-22L-06L	22	6	36	14	40	25.5	M30 x 2
	DDKOR-22L-08L	22	8	36	17	40	25.5	M30 x 2
	DDKOR-22L-10L	22	10	36	19	41	26.5	M30 x 2
	DDKOR-22L-12L	22	12	36	22	41	26.5	M30 x 2
	DDKOR-22L-15L	22	15	36	27	43	27.5	M30 x 2
	DDKOR-22L-18L	22	18	36	32	43	27	M30 x 2
	DDKOR-28L-06L	28	6	41	14	41	26.5	M36 x 2
	DDKOR-28L-08L	28	8	41	17	41	26.5	M36 x 2
	DDKOR-28L-10L	28	10	41	19	42	27.5	M36 x 2
	DDKOR-28L-12L	28	12	41	22	42	27.5	M36 x 2
	DDKOR-28L-15L	28	15	41	27	44	28.5	M36 x 2
	DDKOR-28L-18L	28	18	41	32	44	28	M36 x 2
	DDKOR-28L-22L	28	22	41	36	46	30	M36 x 2
	DDKOR-35L-06L	35	6	50	14	46	31.5	M45 x 2
	DDKOR-35L-08L	35	8	50	17	46	31.5	M45 x 2
	DDKOR-35L-10L	35	10	50	19	47	32.5	M45 x 2
	DDKOR-35L-12L	35	12	50	22	47	32.5	M45 x 2
	DDKOR-35L-15L	35	15	50	27	49	33.5	M45 x 2
	DDKOR-35L-18L	35	18	50	32	49	33	M45 x 2
	DDKOR-35L-22L	35	22	50	36	51	35	M45 x 2
	DDKOR-35L-28L	35	28	50	41	52	35	M45 x 2
DDKOR-42L-10L	42	10	60	19	48	33.5	M52 x 2	
DDKOR-42L-12L	42	12	60	22	48	33.5	M52 x 2	
DDKOR-42L-15L	42	15	60	27	50	34.5	M52 x 2	
DDKOR-42L-18L	42	18	60	32	50	34	M52 x 2	
DDKOR-42L-22L	42	22	60	36	52	36	M52 x 2	
DDKOR-42L-28L	42	28	60	41	53	36	M52 x 2	
DDKOR-42L-35L	42	35	60	50	57	35	M52 x 2	

Standpipe Reducer  
**DDKOR**



\*Option

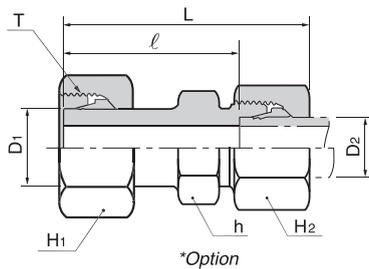
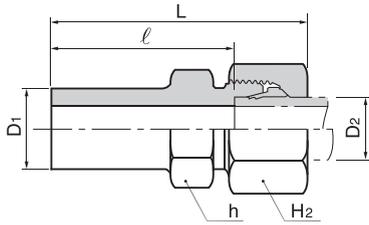


Series	Part No.	Tube O.D		H <sub>1</sub>	H <sub>2</sub>	L	ℓ	T
		D <sub>1</sub>	D <sub>2</sub>					
S PN-630	DDKOR-08S-06S	8	6	19	17	40	25	M16 x 1.5
	DDKOR-10S-06S	10	6	22	17	41	26	M18 x 1.5
	DDKOR-10S-08S	10	8	22	19	41	26	M18 x 1.5
	DDKOR-12S-06S	12	6	24	17	42	27	M20 x 1.5
	DDKOR-12S-08S	12	8	24	19	42	27	M20 x 1.5
	DDKOR-12S-10S	12	10	24	22	43	26.5	M20 x 1.5
	DDKOR-14S-06S	14	6	27	17	44	29	M22 x 1.5
	DDKOR-14S-08S	14	8	27	19	44	29	M22 x 1.5
	DDKOR-14S-10S	14	10	27	22	45	28.5	M22 x 1.5
	DDKOR-14S-12S	14	12	27	24	45	28.5	M22 x 1.5
PN-400	DDKOR-16S-06S	16	6	30	17	44	29	M24 x 1.5
	DDKOR-16S-08S	16	8	30	19	44	29	M24 x 1.5
	DDKOR-16S-10S	16	10	30	22	45	28.5	M24 x 1.5
	DDKOR-16S-12S	16	12	30	24	45	28.5	M24 x 1.5
	DDKOR-16S-14S	16	14	30	27	48	30	M24 x 1.5
	DDKOR-20S-06S	20	6	36	17	49	34	M30 x 2
	DDKOR-20S-08S	20	8	36	19	49	34	M30 x 2
	DDKOR-20S-10S	20	10	36	22	50	33.5	M30 x 2
	DDKOR-20S-12S	20	12	36	24	50	33.5	M30 x 2
	DDKOR-20S-14S	20	14	36	27	53	35	M30 x 2
	DDKOR-20S-16S	20	16	36	30	53	34.5	M30 x 2
	DDKOR-25S-06S	25	6	46	17	52	37	M36 x 2
	DDKOR-25S-08S	25	8	46	19	52	37	M36 x 2
	DDKOR-25S-10S	25	10	46	22	53	36.5	M36 x 2
	DDKOR-25S-12S	25	12	46	24	53	36.5	M36 x 2
	DDKOR-25S-14S	25	14	46	27	55	37	M36 x 2
	DDKOR-25S-16S	25	16	46	30	55	36.5	M36 x 2
	DDKOR-25S-20S	25	20	46	36	59	37.5	M36 x 2
DDKOR-30S-06S	30	6	50	17	54	39	M42 x 2	
DDKOR-30S-08S	30	8	50	19	54	39	M42 x 2	
DDKOR-30S-10S	30	10	50	22	55	38.5	M42 x 2	
DDKOR-30S-12S	30	12	50	24	55	38.5	M42 x 2	
DDKOR-30S-14S	30	14	50	27	58	40	M42 x 2	
DDKOR-30S-16S	30	16	50	30	58	39.5	M42 x 2	
DDKOR-30S-20S	30	20	50	36	61	39.5	M42 x 2	
DDKOR-30S-25S	30	25	50	46	64	40	M42 x 2	
PN-315	DDKOR-38S-06S	38	6	60	17	58	43	M52 x 2
	DDKOR-38S-08S	38	8	60	19	58	43	M52 x 2
	DDKOR-38S-10S	38	10	60	22	59	42.5	M52 x 2
	DDKOR-38S-12S	38	12	60	24	59	42.5	M52 x 2
	DDKOR-38S-14S	38	14	60	27	62	44	M52 x 2
	DDKOR-38S-16S	38	16	60	30	62	43.5	M52 x 2
	DDKOR-38S-20S	38	20	60	36	65	43.5	M52 x 2
	DDKOR-38S-25S	38	25	60	46	68	44	M52 x 2
	DDKOR-38S-30S	38	30	60	50	71	44.5	M52 x 2

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

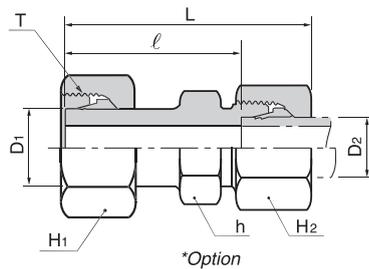
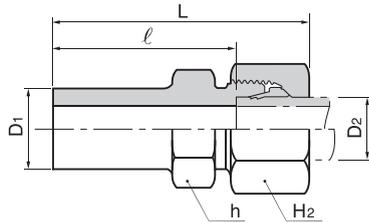
\*Option : Preswaging nut and cutting ring - DDKOR-08S-06S-PS-S6

Reducer  
**DDR**



Series	Part No.	Tube O.D		H <sub>1</sub>	H <sub>2</sub>	h	L	ℓ	T
		D <sub>1</sub>	D <sub>2</sub>						
L PN-315	DDR-08L-06L	8	6	17	14	14	40	25.5	M14 x 1.5
	DDR-10L-06L	10	6	19	14	14	42	27.5	M16 x 1.5
	DDR-10L-08L	10	8	19	17	17	43	27.5	M16 x 1.5
	DDR-12L-06L	12	6	22	14	14	42	27.5	M18 x 1.5
	DDR-12L-08L	12	8	22	17	17	43	27.5	M18 x 1.5
	DDR-12L-10L	12	10	22	19	17	44	28.5	M18 x 1.5
	DDR-15L-06L	15	6	27	14	17	44	29	M22 x 1.5
	DDR-15L-08L	15	8	27	17	17	44	29	M22 x 1.5
	DDR-15L-10L	15	10	27	19	17	45	30	M22 x 1.5
	DDR-15L-12L	15	12	27	22	19	45	30	M22 x 1.5
	DDR-18L-06L	18	6	32	14	19	46	31	M26 x 1.5
	DDR-18L-08L	18	8	32	17	19	46	31	M26 x 1.5
	DDR-18L-10L	18	10	32	19	19	47	32	M26 x 1.5
	DDR-18L-12L	18	12	32	22	19	47	32	M26 x 1.5
DDR-18L-15L	18	15	32	27	24	49	33	M26 x 1.5	
PN-160	DDR-22L-06L	22	6	36	14	24	48	33	M30 x 2
	DDR-22L-08L	22	8	36	17	24	48	33	M30 x 2
	DDR-22L-10L	22	10	36	19	24	49	34	M30 x 2
	DDR-22L-12L	22	12	36	22	24	49	34	M30 x 2
	DDR-22L-15L	22	15	36	27	24	51	35	M30 x 2
	DDR-22L-18L	22	18	36	32	27	52	34.5	M30 x 2
	DDR-28L-06L	28	6	41	14	30	48	33	M36 x 2
	DDR-28L-08L	28	8	41	17	30	48	33	M36 x 2
	DDR-28L-10L	28	10	41	19	30	50	34	M36 x 2
	DDR-28L-12L	28	12	41	22	30	50	34	M36 x 2
	DDR-28L-15L	28	15	41	27	30	52	35	M36 x 2
	DDR-28L-18L	28	18	41	32	30	53	36	M36 x 2
	DDR-28L-22L	28	22	41	36	32	57	36.5	M36 x 2
	DDR-35L-06L	35	6	50	14	36	53	38.5	M45 x 2
	DDR-35L-08L	35	8	50	17	36	53	38.5	M45 x 2
	DDR-35L-10L	35	10	50	19	36	55	39.5	M45 x 2
	DDR-35L-12L	35	12	50	22	36	55	39.5	M45 x 2
	DDR-35L-15L	35	15	50	27	36	58	40.5	M45 x 2
	DDR-35L-18L	35	18	50	32	36	58	40	M45 x 2
	DDR-35L-22L	35	22	50	36	36	62	42	M45 x 2
	DDR-35L-28L	35	28	50	41	36	63	42	M45 x 2
	DDR-42L-06L	42	6	60	14	46	56	41	M52 x 2
	DDR-42L-08L	42	8	60	17	46	56	41	M52 x 2
	DDR-42L-10L	42	10	60	19	46	58	42	M52 x 2
DDR-42L-12L	42	12	60	22	46	58	42	M52 x 2	
DDR-42L-15L	42	15	60	27	46	60	43	M52 x 2	
DDR-42L-18L	42	18	60	32	46	60	42.5	M52 x 2	
DDR-42L-22L	42	22	60	36	46	62	44.5	M52 x 2	
DDR-42L-28L	42	28	60	41	46	64	44.5	M52 x 2	
DDR-42L-35L	42	35	60	50	46	67	43.5	M52 x 2	

Reducer  
**DDR**

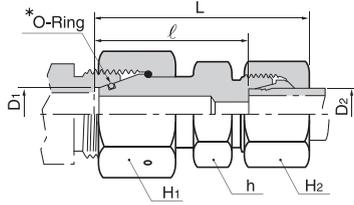


Series	Part No.	Tube O.D		H <sub>1</sub>	H <sub>2</sub>	h	L	ℓ	T
		D <sub>1</sub>	D <sub>2</sub>						
S PN-630	DDR-08S-06S	8	6	19	17	17	43	28	M16 x 1.5
	DDR-10S-06S	10	6	22	17	17	45	30.5	M18 x 1.5
	DDR-10S-08S	10	8	22	19	17	45	30.5	M18 x 1.5
	DDR-12S-06S	12	6	24	17	17	47	32.5	M20 x 1.5
	DDR-12S-08S	12	8	24	19	17	47	32.5	M20 x 1.5
	DDR-12S-10S	12	10	24	22	19	48	32	M20 x 1.5
	DDR-14S-06S	14	6	27	17	17	51	36.5	M22 x 1.5
	DDR-14S-08S	14	8	27	19	17	51	36.5	M22 x 1.5
	DDR-14S-10S	14	10	27	22	19	52	36	M22 x 1.5
	DDR-14S-12S	14	12	27	24	24	52	36	M22 x 1.5
PN-400	DDR-16S-06S	16	6	30	17	17	53	38.5	M24 x 1.5
	DDR-16S-08S	16	8	30	19	17	53	38.5	M24 x 1.5
	DDR-16S-10S	16	10	30	22	19	54	38	M24 x 1.5
	DDR-16S-12S	16	12	30	24	22	55	38.5	M24 x 1.5
	DDR-16S-14S	16	14	30	27	24	57	39.5	M24 x 1.5
	DDR-20S-06S	20	6	36	17	22	58	43	M30 x 2
	DDR-20S-08S	20	8	36	19	22	58	43	M30 x 2
	DDR-20S-10S	20	10	36	22	22	59	42.5	M30 x 2
	DDR-20S-12S	20	12	36	24	22	59	42.5	M30 x 2
	DDR-20S-14S	20	14	36	27	24	62	44	M30 x 2
	DDR-20S-16S	20	16	36	30	27	62	43.5	M30 x 2
	DDR-25S-06S	25	6	46	17	27	62	47.5	M36 x 2
	DDR-25S-08S	25	8	46	19	27	62	47.5	M36 x 2
	DDR-25S-10S	25	10	46	22	27	63	47	M36 x 2
	DDR-25S-12S	25	12	46	24	27	63	47	M36 x 2
	DDR-25S-14S	25	14	46	27	27	66	48.5	M36 x 2
	DDR-25S-16S	25	16	46	30	27	66	48	M36 x 2
	DDR-25S-20S	25	20	46	36	32	70	48	M36 x 2
	DDR-30S-06S	30	6	50	17	32	67	52	M42 x 2
	DDR-30S-08S	30	8	50	19	32	67	52	M42 x 2
DDR-30S-10S	30	10	50	22	32	68	51.5	M42 x 2	
DDR-30S-12S	30	12	50	24	32	68	51.5	M42 x 2	
DDR-30S-14S	30	14	50	27	32	71	53	M42 x 2	
DDR-30S-16S	30	16	50	30	32	71	52.5	M42 x 2	
DDR-30S-20S	30	20	50	36	32	74	52.5	M42 x 2	
DDR-30S-25S	30	25	50	46	41	77	53	M42 x 2	
PN-315	DDR-38S-06S	38	6	60	17	41	72	57	M52 x 2
	DDR-38S-08S	38	8	60	19	41	72	57	M52 x 2
	DDR-38S-10S	38	10	60	22	41	73	56.5	M52 x 2
	DDR-38S-12S	38	12	60	24	41	73	56.5	M52 x 2
	DDR-38S-14S	38	14	60	27	41	76	58	M52 x 2
	DDR-38S-16S	38	16	60	30	41	76	57.5	M52 x 2
	DDR-38S-20S	38	20	60	36	41	79	57.5	M52 x 2
	DDR-38S-25S	38	25	60	46	41	82	58	M52 x 2
	DDR-38S-30S	38	30	60	50	46	89	58.5	M52 x 2

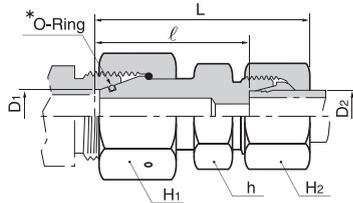
Dimensions given approximate length with tightened nut. All dimensions are in millimeters, for reference only subject to change. Without male stud, but with pre-settled nut and cutting ring for connection.  
\*Option : Preswaging nut and cutting ring - DDR-08S-06S-PS-S6

Swivel Reducing Adaptor  
with Cone

**DDRED**



Series	Part No.	Tube O.D		H <sub>1</sub>	H <sub>2</sub>	h	L	ℓ
		D <sub>1</sub>	D <sub>2</sub>					
PN-315	DDRED-08L-06L	8	6	17	14	14	39	24.5
	DDRED-10L-06L	10	6	19	14	17	39.5	24.5
	DDRED-10L-08L	10	8	19	17	17	39.5	24.5
	DDRED-12L-06L	12	6	22	14	17	40	25
	DDRED-12L-08L	12	8	22	17	17	40	25
	DDRED-12L-10L	12	10	22	19	17	41	26
	DDRED-15L-06L	15	6	27	14	22	42	27.5
	DDRED-15L-08L	15	8	27	17	22	42	27.5
	DDRED-15L-10L	15	10	27	19	22	43	28.5
	DDRED-15L-12L	15	12	27	22	22	43	28.5
	DDRED-18L-06L	18	6	32	14	24	43	28
	DDRED-18L-08L	18	8	32	17	24	43	28
	DDRED-18L-10L	18	10	32	19	24	44.5	29.5
	DDRED-18L-12L	18	12	32	22	24	44.5	29.5
	DDRED-18L-15L	18	15	32	27	24	45.5	30.5
PN-160	DDRED-22L-06L	22	6	36	14	28.5	47	32
	DDRED-22L-08L	22	8	36	17	28.5	47	32
	DDRED-22L-10L	22	10	36	19	28.5	48	33
	DDRED-22L-12L	22	12	36	22	28.5	48	33
	DDRED-22L-15L	22	15	36	27	28.5	49	34
	DDRED-22L-18L	22	18	36	32	28.5	50	33.5
	DDRED-28L-06L	28	6	41	14	36	49	34
	DDRED-28L-08L	28	8	41	17	36	49	34
	DDRED-28L-10L	28	10	41	19	36	50	35
	DDRED-28L-12L	28	12	41	22	36	50	35
	DDRED-28L-15L	28	15	41	27	36	51	36
	DDRED-28L-18L	28	18	41	32	36	52	35.5
	DDRED-28L-22L	28	22	41	36	36	54	37.5
	DDRED-35L-06L	35	6	50	14	46	55	40
	DDRED-35L-08L	35	8	50	17	46	55	40
	DDRED-35L-10L	35	10	50	19	46	56	41
	DDRED-35L-12L	35	12	50	22	46	56	41
	DDRED-35L-15L	35	15	50	27	46	57	42
	DDRED-35L-18L	35	18	50	32	46	58	41.5
	DDRED-35L-22L	35	22	50	36	46	60	43.5
	DDRED-35L-28L	35	28	50	41	46	60	43.5
	DDRED-42L-06L	42	6	60	14	50	55	40.5
	DDRED-42L-08L	42	8	60	17	50	55	40.5
	DDRED-42L-10L	42	10	60	19	50	56	41.5
DDRED-42L-12L	42	12	60	22	50	56	41.5	
DDRED-42L-15L	42	15	60	27	50	58	42.5	
DDRED-42L-18L	42	18	60	32	50	58	42	
DDRED-42L-22L	42	22	60	36	50	60	44	
DDRED-42L-28L	42	28	60	60	50	61	44	
DDRED-42L-35L	42	35	60	60	50	65	43	

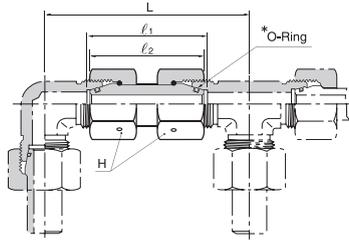
Swivel Reducing Adaptor  
with Cone**DDRED**

Series	Part No.	Tube O.D		H <sub>1</sub>	H <sub>2</sub>	h	L	ℓ
		D <sub>1</sub>	D <sub>2</sub>					
S PN-630	DDRED-08S-06S	8	6	19	17	17	44	28
	DDRED-10S-06S	10	6	22	17	17	44	29.5
	DDRED-10S-08S	10	8	22	19	17	44	29.5
	DDRED-12S-06S	12	6	24	17	19	45	30
	DDRED-12S-08S	12	8	24	19	19	45	30
	DDRED-12S-10S	12	10	24	22	19	46	29.5
	DDRED-14S-06S	14	6	27	17	22	47.5	33
	DDRED-14S-08S	14	8	27	19	22	47.5	33
	DDRED-14S-10S	14	10	27	22	22	48.5	32.5
	DDRED-14S-12S	14	12	27	24	22	48.5	32.5
PN-400	DDRED-16S-06S	16	6	30	17	24	50	35
	DDRED-16S-08S	16	8	30	19	24	50	35
	DDRED-16S-10S	16	10	30	22	24	51	34.5
	DDRED-16S-12S	16	12	30	24	24	51	34.5
	DDRED-16S-14S	16	14	30	27	24	54	36
	DDRED-20S-06S	20	6	36	17	28.5	54	39
	DDRED-20S-08S	20	8	36	19	28.5	54	39
	DDRED-20S-10S	20	10	36	22	28.5	55	38.5
	DDRED-20S-12S	20	12	36	24	28.5	55	38.5
	DDRED-20S-14S	20	14	36	27	28.5	58	40
	DDRED-20S-16S	20	16	36	30	28.5	58	39.5
	DDRED-25S-06S	25	6	46	17	36	58	43.5
	DDRED-25S-08S	25	8	46	19	36	58	43.5
	DDRED-25S-10S	25	10	46	22	36	59	43
	DDRED-25S-12S	25	12	46	24	36	59	43
	DDRED-25S-14S	25	14	46	27	36	62	44.5
	DDRED-25S-16S	25	16	46	30	36	62	44
	DDRED-25S-20S	25	20	46	36	36	66	44
	DDRED-30S-06S	30	6	50	17	41	66	51
	DDRED-30S-08S	30	8	50	19	41	66	51
DDRED-30S-10S	30	10	50	22	41	67	50.5	
DDRED-30S-12S	30	12	50	24	41	67	50.5	
DDRED-30S-14S	30	14	50	27	41	70	52	
DDRED-30S-16S	30	16	50	30	41	70	51.5	
DDRED-30S-20S	30	20	50	36	41	73	51.5	
DDRED-30S-25S	30	25	50	46	41	76	52	
PN-315	DDRED-38S-06S	38	6	60	17	50	70.5	56
	DDRED-38S-08S	38	8	60	19	50	70.5	56
	DDRED-38S-10S	38	10	60	22	50	71.5	55.5
	DDRED-38S-12S	38	12	60	24	50	71.5	55.5
	DDRED-38S-14S	38	14	60	27	50	74.5	57
	DDRED-38S-16S	38	16	60	30	50	74.5	56.5
	DDRED-38S-20S	38	20	60	36	50	78.5	56.5
	DDRED-38S-25S	38	25	60	46	50	81.5	57
DDRED-38S-30S	38	30	60	50	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.  
\*O-ring of NBR (e.g. PERBUNAN®) Standard, of FPM (e.g. VITON®) on request.

Swivel Union  
with Cone

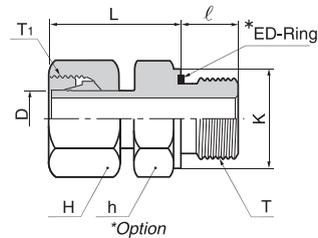
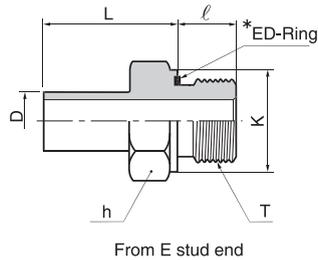
**DDUE**



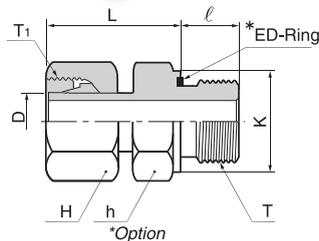
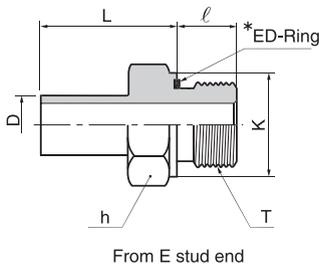
Series	Part No.	Tube O.D	H	L	l <sub>1</sub>	l <sub>2</sub>
L PN-500	DDUE-06L	6	17	64	36	34
	DDUE-08L	8	17	64	36	34
	DDUE-10L	10	19	67	37	36
PN-400	DDUE-12L	12	22	71	37	36
	DDUE-15L	15	27	82	40	39
	DDUE-18L	18	32	89.5	42.5	40.5
PN-250	DDUE-22L	22	36	102	47	45
	DDUE-28L	28	46	110	49	47
	DDUE-35L	35	50	127	58	53
	DDUE-42L	42	60	139	59	53
S PN-800	DDUE-06S	6	17	71	39	37
	DDUE-08S	8	19	73	39	37
	DDUE-10S	10	22	78	43	41
PN-630	DDUE-12S	12	24	87	44	43
	DDUE-14S	14	27	92	48	45
	DDUE-16S	16	30	99	50	46
PN-400	DDUE-20S	20	36	113	60	55
	DDUE-25S	25	46	126	66	58
	DDUE-30S	30	50	144	73	62
	DDUE-38S	38	60	165	83	67

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.

**Adaptor  
(BSP Parallel) with \*ED-Ring**
**DDA-GED**


Series	Part No.	Tube O.D	H	h	K	L	ℓ	T	T <sub>1</sub>
L PN-315	DDA-06L-01GED	6	14	14	13.9	24.5	8	PF 1/8	M12 x 1.5
	DDA-08L-02GED	8	17	19	18.9	29.5	12	PF 1/4	M14 x 1.5
	DDA-10L-02GED	10	19	19	18.9	27.5	12	PF 1/4	M16 x 1.5
	DDA-12L-03GED	12	22	22	21.9	34	12	PF 3/8	M18 x 1.5
	DDA-15L-04GED	15	27	27	26.9	32	14	PF 1/2	M22 x 1.5
	DDA-18L-04GED	18	32	27	26.9	31.5	14	PF 1/2	M26 x 1.5
PN-160	DDA-22L-06GED	22	36	32	31.9	32.5	16	PF 3/4	M30 x 2
	DDA-28L-08GED	28	41	41	39.9	35	18	PF 1	M36 x 2
	DDA-35L-10GED	35	50	50	49.9	42.5	20	PF 1-1/4	M45 x 2
	DDA-42L-12GED	42	60	55	54.9	46.5	22	PF 1-1/2	M52 x 2
S PN-630	DDA-06S-02GED	6	17	19	18.9	27	12	PF 1/4	M14 x 1.5
	DDA-08S-02GED	8	19	19	18.9	29.5	12	PF 1/4	M16 x 1.5
	DDA-10S-03GED	10	22	22	21.9	32	12	PF 3/8	M18 x 1.5
	DDA-12S-03GED	12	24	22	21.9	34	12	PF 3/8	M20 x 1.5
	DDA-12S-04GED	12	24	27	26.9	34.5	14	PF 1/2	M20 x 1.5
	DDA-14S-04GED	14	27	27	26.9	36.5	14	PF 1/2	M22 x 1.5
PN-400	DDA-16S-04GED	16	30	27	26.9	37	14	PF 1/2	M24 x 1.5
	DDA-16S-06GED	16	30	32	31.9	39	16	PF 3/4	M24 x 1.5
	DDA-20S-06GED	20	36	32	31.9	43	16	PF 3/4	M30 x 2
	DDA-25S-08GED	25	46	41	39.9	48	18	PF 1	M36 x 2
	DDA-30S-10GED	30	50	50	49.9	51	20	PF 1-1/4	M42 x 2
PN-315	DDA-38S-12GED	38	60	55	54.9	60	22	PF 1-1/2	M52 x 2

**Adaptor  
(Metric Parallel) with \*ED-Ring**
**DDA-MED**


Series	Part No.	Tube O.D	H	h	K	L	ℓ	T	T <sub>1</sub>
L PN-315	DDA-06L-M10ED	6	14	14	13.9	24.5	8	M10 x 1	M12 x 1.5
	DDA-08L-M12ED	8	17	17	16.9	26.5	12	M12 x 1.5	M14 x 1.5
	DDA-10L-M14ED	10	19	19	18.9	27.5	12	M14 x 1.5	M16 x 1.5
	DDA-12L-M16ED	12	22	22	21.9	30.5	12	M16 x 1.5	M18 x 1.5
	DDA-15L-M18ED	15	27	24	23.9	31.5	12	M18 x 1.5	M22 x 1.5
	DDA-18L-M22ED	18	32	27	26.9	31.5	14	M22 x 1.5	M26 x 1.5
PN-160	DDA-22L-M26ED	22	36	32	31.9	32.5	16	M26 x 1.5	M30 x 2
	DDA-28L-M23ED	28	41	41	39.9	35	18	M33 x 2	M36 x 2
	DDA-35L-M42ED	35	50	50	49.9	42.5	20	M42 x 2	M45 x 2
	DDA-42L-M48ED	42	60	55	54.9	46.5	22	M48 x 2	M52 x 2
S PN-630	DDA-06S-M12ED	6	17	17	16.9	27	12	M12 x 1.5	M14 x 1.5
	DDA-08S-M14ED	8	19	19	18.9	29.5	12	M14 x 1.5	M16 x 1.5
	DDA-10S-M16ED	10	22	22	21.9	32	12	M16 x 1.5	M18 x 1.5
	DDA-12S-M18ED	12	24	24	23.9	34	12	M18 x 1.5	M20 x 1.5
	DDA-14S-M20ED	14	27	27	25.9	36.5	14	M20 x 1.5	M22 x 1.5
	DDA-16S-M22ED	16	30	27	26.9	37	14	M22 x 1.5	M24 x 1.5
PN-400	DDA-20S-M27ED	20	36	32	31.9	43	16	M27 x 2	M30 x 2
	DDA-25S-M33ED	25	46	41	39.9	48	18	M33 x 2	M36 x 2
	DDA-30S-M42ED	30	50	50	49.9	51	20	M42 x 2	M42 x 2
	DDA-38S-M48ED	38	60	55	54.9	60	22	M48 x 2	M52 x 2

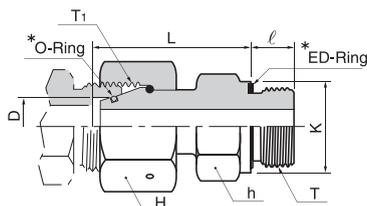
Dimensions given approximate length with tightened nut. All dimensions are in millimeters, for reference only subject to change. Without male stud, but with pre-set nut and cutting ring for connection.

\*ED-ring of NBR (e.g. PERBUNAN®) Standard, of FPM (e.g. VITON®) on request.

\*Option : Preswaging nut and cutting ring - DDA-06S-02GED-PS-S6

Swivel Adaptor  
(BSP Parallel) with \*ED-Ring

**DDEGE-G**



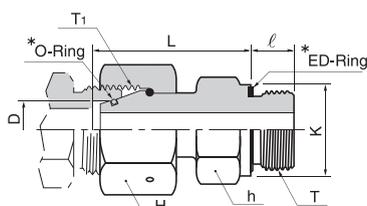
From E stud end



Series	Part No.	Tube O.D	H	h	K	L	ℓ	T	T <sub>1</sub>
L PN-315	DDEGE-06L-01G	6	14	14	13.9	24.5	8	PF 1/8	M12 x 1.5
	DDEGE-08L-02G	8	17	19	18.9	29.5	12	PF 1/4	M14 x 1.5
	DDEGE-10L-02G	10	19	19	18.9	27.5	12	PF 1/4	M16 x 1.5
	DDEGE-12L-03G	12	22	22	21.9	34	12	PF 3/8	M18 x 1.5
	DDEGE-15L-04G	15	27	27	26.9	32	14	PF 1/2	M22 x 1.5
	DDEGE-18L-04G	18	32	27	26.9	31.5	14	PF 1/2	M26 x 1.5
PN-160	DDEGE-22L-06G	22	36	32	31.9	32.5	16	PF 3/4	M30 x 2
	DDEGE-28L-08G	28	41	41	39.9	35	18	PF 1	M36 x 2
	DDEGE-35L-10G	35	50	50	49.9	42.5	20	PF 1-1/4	M45 x 2
	DDEGE-42L-12G	42	60	55	54.9	46.5	22	PF 1-1/2	M52 x 2
S PN-630	DDEGE-06S-02G	6	17	19	18.9	27	12	PF 1/4	M14 x 1.5
	DDEGE-08S-02G	8	19	19	18.9	29.5	12	PF 1/4	M16 x 1.5
	DDEGE-10S-03G	10	22	22	21.9	32	12	PF 3/8	M18 x 1.5
	DDEGE-12S-03G	12	24	22	21.9	34	12	PF 3/8	M20 x 1.5
	DDEGE-14S-04G	14	27	27	26.9	36.5	14	PF 1/2	M22 x 1.5
PN-400	DDEGE-16S-04G	16	30	27	26.9	37	14	PF 1/2	M24 x 1.5
	DDEGE-20S-06G	20	36	32	31.9	43	16	PF 3/4	M30 x 2
	DDEGE-25S-08G	25	46	41	39.9	48	18	PF 1	M36 x 2
	DDEGE-30S-10G	30	50	50	49.9	51	20	PF 1-1/4	M42 x 2
PN-315	DDEGE-38S-12G	38	60	55	54.9	60	22	PF 1-1/2	M52 x 2

Swivel Adaptor  
(Metric Parallel) with \*ED-Ring

**DDEGE-M**



From E stud end

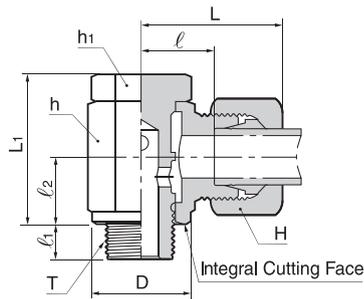


Series	Part No.	Tube O.D	H	h	K	L	ℓ	T	T <sub>1</sub>
L PN-315	DDEGE-06L-M10	6	14	14	13.9	24.5	8	M10 x 1	M12 x 1.5
	DDEGE-08L-M12	8	17	17	16.9	26.5	12	M12 x 1.5	M14 x 1.5
	DDEGE-10L-M14	10	19	19	18.9	27.5	12	M14 x 1.5	M16 x 1.5
	DDEGE-12L-M16	12	22	22	21.9	30.5	12	M16 x 1.5	M18 x 1.5
	DDEGE-15L-M18	15	27	24	23.9	31.5	12	M18 x 1.5	M22 x 1.5
	DDEGE-18L-M22	18	32	27	26.9	31.5	14	M22 x 1.5	M26 x 1.5
PN-160	DDEGE-22L-M26	22	36	32	31.9	32.5	16	M26 x 1.5	M30 x 2
	DDEGE-28L-M23	28	41	41	39.9	35	18	M33 x 2	M36 x 2
	DDEGE-35L-M42	35	50	50	49.9	42.5	20	M42 x 2	M45 x 2
	DDEGE-42L-M48	42	60	55	54.9	46.5	22	M48 x 2	M52 x 2
S PN-630	DDEGE-06S-M12	6	17	17	16.9	27	12	M12 x 1.5	M14 x 1.5
	DDEGE-08S-M14	8	19	19	18.9	29.5	12	M14 x 1.5	M16 x 1.5
	DDEGE-10S-M16	10	22	22	21.9	32	12	M16 x 1.5	M18 x 1.5
	DDEGE-12S-M18	12	24	24	23.9	34	12	M18 x 1.5	M20 x 1.5
	DDEGE-14S-M20	14	27	27	25.9	36.5	14	M20 x 1.5	M22 x 1.5
PN-400	DDEGE-16S-M22	16	30	27	26.9	37	14	M22 x 1.5	M24 x 1.5
	DDEGE-20S-M27	20	36	32	31.9	43	16	M27 x 2	M30 x 2
	DDEGE-25S-M33	25	46	41	39.9	48	18	M33 x 2	M36 x 2
	DDEGE-30S-M42	30	50	50	49.9	51	20	M42 x 2	M42 x 2
PN-315	DDEGE-38S-M48	38	60	55	54.9	60	22	M48 x 2	M52 x 2

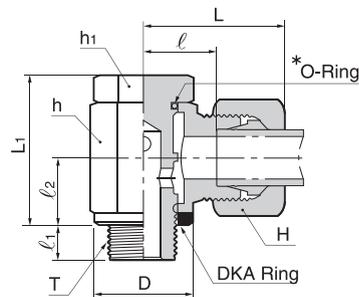
Dimensions given approximate length with tightened nut. All dimensions are in millimeters, for reference only subject to change. Without male stud, but supplied with fitted O-Ring for connection.  
\*O-ring and ED-ring of NBR (e.g. PERBUNAN®) Standard, of FPM (e.g. VITON®) on request.

Banjo Fittings  
(BSP/Metric Parallel) with DKA Ring

**DDSWVE-G/M**



For Tube O.D up to 15mm



For Tube O.D up to 16mm and larger



Series	Part No.	Tube O.D	D	H	h	h <sub>1</sub>	L	L <sub>1</sub>	ℓ	ℓ <sub>1</sub>	ℓ <sub>2</sub>	T
L PN-160	DDSWVE-06L-01G	6	14	14	14	14	25	21	10.5	6	10	PF 1/8
	DDSWVE-08L-02G	8	18.5	17	19	19	28	27	13	9	13	PF 1/4
	DDSWVE-10L-02G	10	18.5	19	19	19	29	27	14	9	13	PF 1/4
PN-100	DDSWVE-12L-03G	12	22.5	22	22	22	30	32	15.5	9	15	PF 3/8
	DDSWVE-15L-04G	15	26.5	27	27	27	34	37.5	19	11	18	PF 1/2
	DDSWVE-18L-04G	18	26	32	30	27	37	44	20.5	11	21.5	PF 1/2
	DDSWVE-22L-06G	22	32	36	36	32	42	49	25.5	13	24	PF 3/4
S PN-160	DDSWVE-06S-02G	6	18.5	17	19	19	30	27	15	9	13	PF 1/4
	DDSWVE-08S-02G	8	18.5	19	19	19	30	27	15	9	13	PF 1/4
PN-100	DDSWVE-10S-03G	10	22.5	22	22	22	32	32	16	9	15	PF 3/8
	DDSWVE-12S-03G	12	22.5	24	24	24	33	37	17	9	18	PF 3/8
	DDSWVE-14S-04G	14	26.5	27	27	27	38	37	20	11	18	PF 1/2
	DDSWVE-16S-04G	16	26	30	30	27	40	44	21.5	11	21.5	PF 1/2
	DDSWVE-20S-06G	20	32	36	36	32	46	49	24.5	13	24	PF 3/4

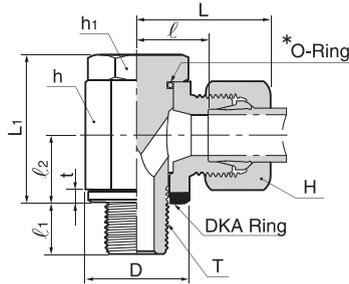
Series	Part No.	Tube O.D	D	H	h	h <sub>1</sub>	L	L <sub>1</sub>	ℓ	ℓ <sub>1</sub>	ℓ <sub>2</sub>	T
L PN-160	DDSWVE-06L-M10	6	14.5	14	14	25	25	10.5	10.5	6	10	M10 x 1
	DDSWVE-08L-M12	8	17.5	17	17	27	27	12	12	9	12	M12 x 1.5
	DDSWVE-10L-M14	10	19.5	19	19	29	29	14	14	9	13	M14 x 1.5
PN-100	DDSWVE-12L-M16	12	21.5	22	22	30	30	15.5	15.5	9	15	M16 x 1.5
	DDSWVE-15L-M18	15	23.5	27	24	33	33	17.5	17.5	9	18	M18 x 1.5
	DDSWVE-18L-M22	18	27	32	30	37	37	20.5	20.5	11	21.5	M22 x 1.5
	DDSWVE-22L-M26	22	31	36	36	42	42	25.5	25.5	13	24	M26 x 1.5
S PN-100	DDSWVE-06S-M12	6	17.5	17	17	29	29	14	14	9	12	M12 x 1.5
	DDSWVE-08S-M14	8	19.5	19	19	30	30	15	15	9	13	M14 x 1.5
	DDSWVE-10S-M16	10	21.5	22	22	32	32	16	16	9	15	M16 x 1.5
	DDSWVE-12S-M18	12	23.5	24	24	33	33	17	17	9	18	M18 x 1.5
	DDSWVE-14S-M20	14	25.5	27	27	38	38	20	20	11	18	M20 x 1.5
	DDSWVE-16S-M22	16	27	30	30	40	40	21.5	21.5	11	21.5	M22 x 1.5
	DDSWVE-20S-M27	20	32	36	36	46	46	24.5	24.5	13	24	M27 x 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.

High Pressure Banjo Elbow  
(BSP/Metric Parallel) with DKA Ring

**DDWH-G/M**



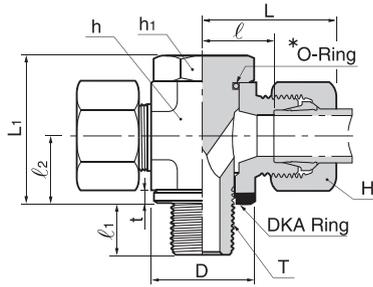
Series	Part No.	Tube O.D	D	H	h	h <sub>1</sub>	L	L <sub>1</sub>	ℓ	ℓ <sub>1</sub>	ℓ <sub>2</sub>	t	T
L PN-250	DDWH-06L-01G	6	14	14	17	17	27	24	12	8	10.5	2.5	PF 1/8
	DDWH-08L-02G	8	18	17	22	19	29	30	14.5	12	14	3	PF 1/4
	DDWH-10L-02G	10	18	19	22	19	30	30	15.5	12	14	3	PF 1/4
	DDWH-12L-03G	12	22	22	27	24	33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

Series	Part No.	Tube O.D	D	H	h	h <sub>1</sub>	L	L <sub>1</sub>	ℓ	ℓ <sub>1</sub>	ℓ <sub>2</sub>	t	T
L PN-250	DDWH-06L-M10	6	14	14	17	17	27	24	12	8	10.5	2.5	M10 x 1
	DDWH-08L-M12	8	17	17	22	19	29	30	14.5	12	14	3	M12 x 1.5
	DDWH-10L-M14	10	19	19	22	19	30	30	15.5	12	14	3	M14 x 1.5
	DDWH-12L-M16	12	21	22	27	24	33	36	18	12	16.5	3	M16 x 1.5
	DDWH-15L-M18	15	23	27	30	27	36	39.5	20.5	12	18.5	3	M18 x 1.5
	DDWH-18L-M22	18	27	32	32	30	37	45	21	14	21.5	4.5	M22 x 1.5
PN-160	DDWH-22L-M26	22	31	36	41	36	44	53	27.5	16	24	3.5	M26 x 1.5
	DDWH-28L-M23	28	39	41	50	46	49	66	32	18	30.5	3.5	M33 x 2
	DDWH-35L-M42	35	49	50	60	55	58	76	36	20	35.5	3.5	M42 x 2
	DDWH-42L-M48	42	55	60	70	60	63	87	40.5	22	40.5	3.5	M48 x 2
S PN-315	DDWH-06S-M12	6	17	17	22	19	31	30	16.5	12	14	3	M12 x 1.5
	DDWH-08S-M14	8	19	19	22	19	31	30	16.5	12	14	3	M14 x 1.5
	DDWH-10S-M16	10	21	22	27	24	35	36	18.5	12	16.5	3	M16 x 1.5
	DDWH-12S-M18	12	23	24	30	27	36	39.5	20	12	18.5	3	M18 x 1.5
	DDWH-16S-M22	16	27	30	32	30	40	45	22	14	21.5	4.5	M22 x 1.5
PN-160	DDWH-20S-M27	20	32	36	41	36	48	53	26.5	16	24	3.5	M27 x 2
	DDWH-25S-M33	25	39	46	50	46	56	66	31.5	18	30.5	3.5	M33 x 2
	DDWH-30S-M42	30	49	50	60	55	64	76	37	20	35.5	3.5	M42 x 2
	DDWH-38S-M48	38	55	60	70	60	72	87	41.5	22	40.5	3.5	M48 x 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.

High Pressure Banjo Tee  
(BSP/Metric Parallel) with DKA Ring  
**DDTH-G/M**



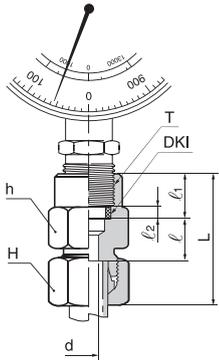
Series	Part No.	Tube O.D	D	H	h	h <sub>1</sub>	L	L <sub>1</sub>	ℓ	ℓ <sub>1</sub>	ℓ <sub>2</sub>	t	T
L PN-250	DDTH-06L-01G	6	14	14	17	17	27	24	12	8	10.5	2.5	PF 1/8
	DDTH-08L-02G	8	18	17	22	19	29	30	14.5	12	14	3	PF 1/4
	DDTH-10L-02G	10	18	19	22	19	30	30	15.5	12	14	3	PF 1/4
	DDTH-12L-03G	12	22	22	27	24	33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

Series	Part No.	Tube O.D	D	H	h	h <sub>1</sub>	L	L <sub>1</sub>	ℓ	ℓ <sub>1</sub>	ℓ <sub>2</sub>	t	T
L PN-250	DDTH-06L-M10	6	14	14	17	17	27	24	12	8	10.5	2.5	M10 x 1
	DDTH-08L-M12	8	17	17	22	19	29	30	14.5	12	14	3	M12 x 1.5
	DDTH-10L-M14	10	19	19	22	19	30	30	15.5	12	14	3	M14 x 1.5
	DDTH-12L-M16	12	21	22	27	24	33	36	18	12	16.5	3	M16 x 1.5
	DDTH-15L-M18	15	23	27	30	27	36	39.5	20.5	12	18.5	3	M18 x 1.5
	DDTH-18L-M22	18	27	32	32	30	37	45	21	14	21.5	4.5	M22 x 1.5
PN-160	DDTH-22L-M26	22	31	36	41	36	44	53	27.5	16	24	3.5	M26 x 1.5
	DDTH-28L-M23	28	39	41	50	46	49	66	32	18	30.5	3.5	M33 x 2
	DDTH-35L-M42	35	49	50	60	55	58	76	36	20	35.5	3.5	M42 x 2
	DDTH-42L-M48	42	55	60	70	60	63	87	40.5	22	40.5	3.5	M48 x 2
S PN-315	DDTH-06S-M12	6	17	17	22	19	31	30	16.5	12	14	3	M12 x 1.5
	DDTH-08S-M14	8	19	19	22	19	31	30	16.5	12	14	3	M14 x 1.5
	DDTH-10S-M16	10	21	22	27	24	35	36	18.5	12	16.5	3	M16 x 1.5
	DDTH-12S-M18	12	23	24	30	27	36	39.5	20	12	18.5	3	M18 x 1.5
	DDTH-16S-M22	16	27	30	32	30	40	45	22	14	21.5	4.5	M22 x 1.5
PN-160	DDTH-20S-M27	20	32	36	41	36	48	53	26.5	16	24	3.5	M27 x 2
	DDTH-25S-M33	25	39	46	50	46	56	66	31.5	18	30.5	3.5	M33 x 2
	DDTH-30S-M42	30	49	50	60	55	64	76	37	20	35.5	3.5	M42 x 2
	DDTH-38S-M48	38	55	60	70	60	72	87	41.5	22	40.5	3.5	M48 x 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.

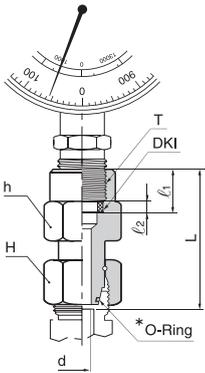
**Pressure Gauge Connector  
(BSP Parallel)  
with DKI-Ring  
DDGC-G**



Series	Part No.	Tube O.D	d	H	h	L	l <sub>1</sub>	l <sub>2</sub>	T	
L PN-315	DDGC-06L-02G	6	2.5	14	19	37	7.5	14.5	4.5	PF 1/4
	DDGC-08L-02G	8	5.5	17	19	37	7.5	14.5	4.5	PF 1/4
	DDGC-10L-02G	10	5.5	19	19	38	8.5	14.5	4.5	PF 1/4
	DDGC-12L-02G	12	5.5	22	19	38	8.5	14.5	4.5	PF 1/4
S PN-630	DDGC-06S-04G	6	3.5	17	27	46	11	20	5	PF 1/2
	DDGC-08S-04G	8	3.5	19	27	46	11	20	5	PF 1/2
	DDGC-10S-04G	10	7	22	27	47	10.5	20	5	PF 1/2
	DDGC-12S-04G	12	7	24	27	47	10.5	20	5	PF 1/2

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

**Swivel Gauge Adaptor  
(BSP Parallel) with Cone  
and DKI-Ring  
DDGE-G**

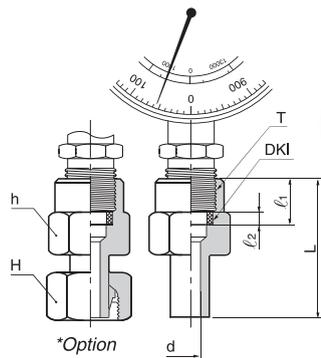


Series	Part No.	Tube O.D	d	H	h	L	l <sub>1</sub>	l <sub>2</sub>	T
L PN-315	DDGE-06L-02G	6	2.5	14	19	35.5	14.5	4.5	PF 1/4
	DDGE-08L-02G	8	4	17	19	35.5	14.5	4.5	PF 1/4
	DDGE-10L-02G	10	5.5	19	19	36	14.5	4.5	PF 1/4
	DDGE-12L-02G	12	5.5	22	19	36	14.5	4.5	PF 1/4
S PN-630	DDGE-06S-04G	6	2.5	17	27	42.5	20	5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

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.

**Pressure Gauge Connector  
(BSP Parallel) with Standpipe  
and DKI-Ring  
DDGA-G**

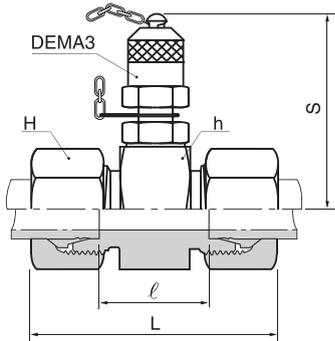


Series	Part No.	Tube O.D	d	H	h	L	l <sub>1</sub>	l <sub>2</sub>	T
L PN-315	DDGA-06L-02G	6	3.5	14	19	38	14.5	4.5	PF 1/4
	DDGA-08L-02G	8	5.5	17	19	38	14.5	4.5	PF 1/4
	DDGA-10L-02G	10	7.5	19	19	39.5	14.5	4.5	PF 1/4
	DDGA-12L-02G	12	9	22	19	40.5	14.5	4.5	PF 1/4
S PN-630	DDGA-06S-04G	6	3.5	17	27	45	20	5	PF 1/2
	DDGA-08S-04G	8	4.5	19	27	45	20	5	PF 1/2
	DDGA-10S-04G	10	6.5	22	27	47	20	5	PF 1/2
	DDGA12S-04G	12	7.5	24	27	47.5	20	5	PF 1/2

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

\*Option : Preswaging nut and cutting ring - DDGA-06S-04G-PS-S6

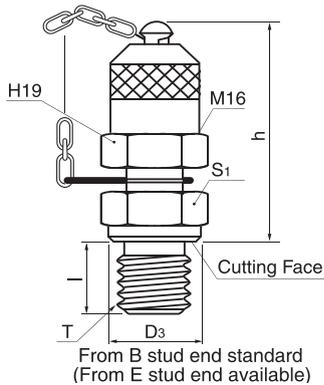
Tee Test Coupling  
with threaded Connection  
DDEMA3  
**DDGMA**



Series	Part No.	Tube O.D	H	h	L	ℓ <sub>1</sub>	S
L PN-315	DDGMA3-06L	6	14	24	50	20.5	50
	DDGMA3-08L	8	17	24	50	20.5	50
	DDGMA3-10L	10	19	24	52	22.5	50
	DDGMA3-12L	12	22	24	52	22.5	50
	DDGMA3-15L	15	27	30	55	24.5	53
	DDGMA3-18L	18	32	32	56	23.5	54
PN-160	DDGMA3-22L	22	36	36	60	27.5	56
	DDGMA3-28L	28	41	41	61	27.5	58
	DDGMA3-35L	35	50	46	69	25.5	61
	DDGMA3-42L	42	60	55	70	24.5	65
S PN-630	DDGMA3-06S	6	17	24	54	24.5	50
	DDGMA3-08S	8	19	24	54	24.5	50
	DDGMA3-10S	10	22	24	56	23.5	50
	DDGMA3-12S	12	24	24	56	23.5	50
	DDGMA3-14S	14	27	27	62	26.5	51
PN-400	DDGMA3-16S	16	30	30	62	25.5	53
	DDGMA3-20S	20	36	36	69	25.5	56
	DDGMA3-25S	25	46	41	75	26.5	58
	DDGMA3-30S	30	50	46	81	27.5	61
PN-315	DDGMA3-38S	38	60	55	90	29	65

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

Test Coupling  
with threaded Connection  
DDEMA3

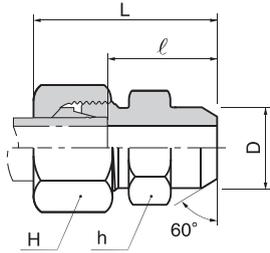


Series	Part No.	D <sub>3</sub>	h	I	S <sub>1</sub>	T
PN-630	DDEMA3-01G	14	41	8	17	PF 1/8
	DDEMA3-02G	18	41	10	19	PF 1/4
	DDEMA3-03G	22	41	12	22	PF 3/8
	DDEMA3-04G	26	41	14	27	PF 1/2
	DDEMA3-M10	14	41	8	17	M10 x 1
	DDEMA3-M12	17	41	12	17	M12 x 1.5
	DDEMA3-M14	19	41	12	19	M14 x 1.5
	DDEMA3-M16	21	41	12	22	M16 x 1.5

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

Welding Connector

**DDAS**

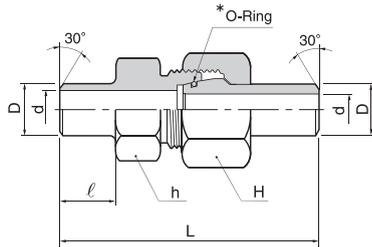


Series	Part No.	Tube O.D	D	H	h	L	ℓ
L PN-315	DDAS-06L	6	10	14	12	29	14
	DDAS-08L	8	12	17	14	31	16
	DDAS-10L	10	14	19	17	33	18
	DDAS-12L	12	16	22	19	33	18
	DDAS-15L	15	19	27	22	37	22
	DDAS-18L	18	22	32	27	40	23.5
PN-160	DDAS-22L	22	27	36	32	45	28.5
	DDAS-28L	28	32	41	41	47	30.5
	DDAS-35L	35	40	50	46	54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

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

Welding Connector  
with DAK

## DDASK



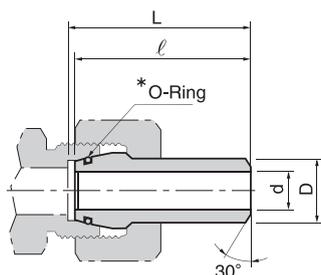
Pressure Rating	Part No.	Tube O.D	d	H	h	L	ℓ
PN-248	DDASK-10-1.0	10	8	22	19	58	10
PN-357	DDASK-10-1.5	10	7	22	19	58	10
PN-458	DDASK-10-2.0	10	6	22	19	58	10
PN-303	DDASK-12-1.5	12	9	24	22	65	15
PN-391	DDASK-12-2.0	12	8	24	22	65	15
PN-474	DDASK-12-2.5	12	7	24	22	65	15
PN-234	DDASK-16-1.5	16	13	30	27	74.5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

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.

Welding Nipple  
with \*O-Ring

**DDAK**



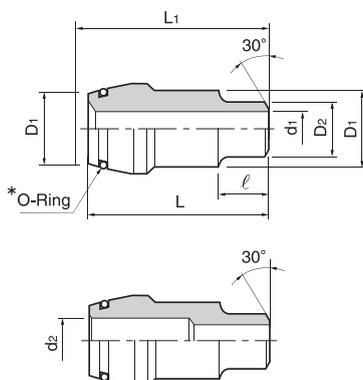
Pressure Rating	Part No.	Tube O.D	d	L	ℓ
PN-248	DDAK-10-1.0T	10	8	35.5	33
PN-357	DDAK-10-1.5T	10	7	35.5	33
PN-458	DDAK-10-2.0T	10	6	35.5	33
PN-303	DDAK-12-1.5T	12	9	35.5	33
PN-391	DDAK-12-2.0T	12	8	35.5	33
PN-474	DDAK-12-2.5T	12	7	35.5	33
PN-234	DDAK-16-1.5T	16	13	42.5	39
PN-303	DDAK-16-2.0T	16	12	42.5	39
PN-370	DDAK-16-2.5T	16	11	42.5	39
PN-433	DDAK-16-3.0T	16	10	42.5	39
PN-249	DDAK-20-2.0T	20	16	47.5	43.5
PN-305	DDAK-20-2.5T	20	15	47.5	43.5
PN-357	DDAK-20-3.0T	20	14	47.5	43.5
PN-458	DDAK-20-4.0T	20	12	47.5	43.5
PN-292	DDAK-25-3.0T	25	19	55	49.5
PN-378	DDAK-25-4.0T	25	17	55	49.5
PN-458	DDAK-25-5.0T	25	15	55	49.5
PN-248	DDAK-30-3.0T	30	24	58.5	51.5
PN-321	DDAK-30-4.0T	30	22	58.5	51.5
PN-391	DDAK-30-5.0T	30	20	58.5	51.5
PN-460	DDAK-30-6.0T	30	18	58.5	51.5
PN-260	DDAK-38-4.0T	38	30	66	56.5
PN-318	DDAK-38-5.0T	38	28	66	56.5
PN-373	DDAK-38-6.0T	38	26	66	56.5
PN-427	DDAK-38-7.0T	38	24	66	56.5

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.

Reducing Welding Nipple  
with \*O-Ring

**DDAKR**

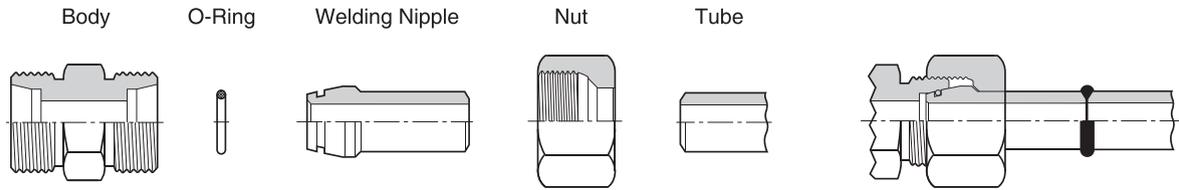


Pressure Rating	Part No.	Tube O.D		d1	d2	L	L <sub>1</sub>	ℓ
		D <sub>1</sub>	D <sub>2</sub>					
PN-526	DDAKR-10-06-1.5T	10	6	3	5	35	37.5	12
PN-526	DDAKR-10-08-2.0T	10	8	4	-	35	37.5	12
PN-526	DDAKR-12-08-2.0T	12	8	4	6	35	37.5	14
PN-357	DDAKR-12-10-1.5T	12	10	7	-	35	37.5	14
PN-474	DDAKR-16-12-2.5T	16	12	7	-	43	46.5	15
PN-474	DDAKR-20-12-2.5T	20	12	7	-	47.5	51.5	15
PN-433	DDAKR-20-16-3.0T	20	16	10	-	49.5	53.5	17
PN-433	DDAKR-25-16-3.0T	25	16	10	-	51	56.5	17
PN-458	DDAKR-25-20-4.0T	25	20	12	-	54	59.5	20
PN-303	DDAKR-30-16-2.0T	30	16	12	-	60	67	17
PN-303	DDAKR-30-20-2.5T	30	20	15	-	63	70	20
PN-292	DDAKR-30-25-3.0T	30	25	19	-	63	70	20
PN-303	DDAKR-38-16-2.0T	38	16	12	-	69.5	79	17
PN-303	DDAKR-38-20-2.5T	38	20	15	-	72.5	82	20
PN-292	DDAKR-38-25-3.0T	38	25	19	-	72.5	82	20
PN-321	DDAKR-38-30-4.0T	38	30	22	-	72.5	82	20

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.

## Installation Instruction for Welding Nipple Fittings



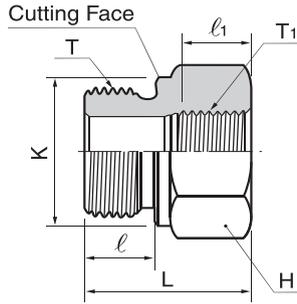
- Step1. Pipe to be cut at right angle by sawing and freed from burrs both inside and outside.  
 Step2. Slide nut onto the weld nipple.  
 Step3. Welding nipple and tube to be welded together and weld to be cleaned between runs.  
 The tube and welding nipple must be aligned.  
 Step4. Fit the O-Ring: Attention, do not twist O-Ring: taper, nut and cone must be clean.  
 Step5. Thread on body and nut to be oiled.  
 Step6. Screw on nut by hand. Fully tighten using a spanner with a 1/3 turn.

## Ordering information for Welding Nipple Fittings

Order No.	Figures	Order No.	Figures
	DDU (Without Cutting Ring)+DDAK		DDMC (Without Cutting Ring)+DDAK
DDGV		DDGEV	
	DDL (Without Cutting Ring)+DDAK		DDMC-ED (Without Cutting Ring)+DDAK
DDWV		DDGUV	
	DDT (Without Cutting Ring)+DDAK		DDMC (Without Cutting Ring)+DDAK
DDTV		DDGEV-R	
	DDSWVE (Without Cutting Ring)+DDAK		DDFC (Without Cutting Ring)+DDAK
DDWSEV		DDGAI	
			DDL (Without Cutting Ring)+DDAK
		DDWEV	

Male Female Adaptor  
(BSP Parallel)

**DMFAD**



From B stud end

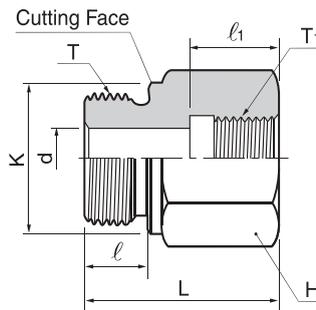


Pressure Rating	Part No.	H	K	L	ℓ	ℓ <sub>1</sub>	Male stud (T)	Female stud (T <sub>1</sub> )
PN-630	DMFAD-03-01G	22	22	22.5	12	8	PF 3/8	PF 1/8
	DMFAD-04-01G	27	26	24	14	8	PF 1/2	PF 1/8
PN-400	DMFAD-04-02G	27	26	24	14	12	PF 1/2	PF 1/4
	DMFAD-06-02G	32	32	26	16	12	PF 3/4	PF 1/4
	DMFAD-06-03G	32	32	26	16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

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 Parallel)

**DMFAE**



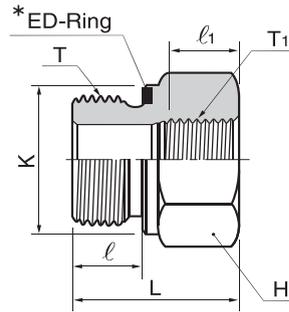
From B stud end



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



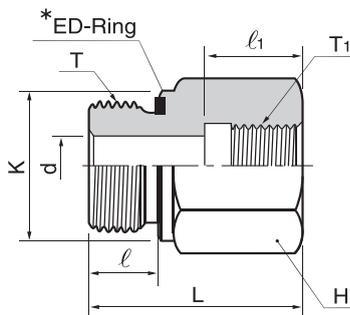
From B stud end



Pressure Rating	Part No.	H	K	L	ℓ	ℓ <sub>1</sub>	Male stud (T)	Female stud (T <sub>1</sub> )
PN-630	DMFAD-03ED-01G	22	22	22.5	12	8	PF 3/8	PF 1/8
	DMFAD-04ED-01G	27	26	24	14	8	PF 1/2	PF 1/8
PN-400	DMFAD-04ED-02G	27	26	24	14	12	PF 1/2	PF 1/4
	DMFAD-06ED-02G	32	32	26	16	12	PF 3/4	PF 1/4
	DMFAD-06ED-03G	32	32	26	16	12	PF 3/4	PF 3/8
	DMFAD-08ED-02G	41	39	29	18	12	PF 1	PF 1/4
	DMFAD-08ED-03G	41	39	29	18	12	PF 1	PF 3/8
PN-250	DMFAD-08ED-04G	41	39	29	18	14	PF 1	PF 1/2
	DMFAD-10ED-04G	50	49.9	32	20	14	PF 1-1/4	PF 1/2
	DMFAD-10ED-06G	50	49.9	32	20	16	PF 1-1/4	PF 3/4
	DMFAD-12ED-04G	55	55	36	22	14	PF 1-1/2	PF 1/2
	DMFAD-12ED-06G	55	55	36	22	16	PF 1-1/2	PF 3/4
	DMFAD-12ED-08G	55	55	36	22	18	PF 1-1/2	PF 1

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.

Male Female Adaptor  
(BSP Parallel) with \*ED-Ring  
**DMFAE-ED**



From B stud end

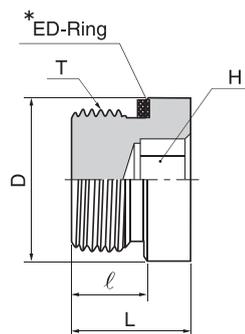


Pressure Rating	Part No.	d	H	K	L	ℓ	ℓ <sub>1</sub>	Male stud (T)	Female stud (T <sub>1</sub> )
PN-630	DMFAE-01ED-02G	4	19	14	31	8	17	PF 1/8	PF 1/4
	DMFAE-01ED-03G	4	24	14	32	8	17	PF 1/8	PF 3/8
	DMFAE-02ED-01G	5	19	18	28	12	12	PF 1/4	PF 1/8
	DMFAE-02ED-03G	5	24	18	36	12	17	PF 1/4	PF 3/8
	DMFAE-02ED-04G	5	30	18	40	12	20	PF 1/4	PF 1/2
	DMFAE-03ED-02G	8	22	22	36	12	17	PF 3/8	PF 1/4
PN-400	DMFAE-03ED-04G	8	30	22	41	12	20	PF 3/8	PF 1/2
	DMFAE-02ED-06G	5	36	18	43	12	22	PF 1/4	PF 3/4
	DMFAE-04ED-03G	12	27	26	36	14	17	PF 1/2	PF 3/8
	DMFAE-04ED-06G	12	36	26	46	14	22	PF 1/2	PF 3/4
	DMFAE-04ED-08G	12	41	26	49	14	24.5	PF 1/2	PF 1
	DMFAE-06ED-04G	16	32	32	41	16	20	PF 3/4	PF 1/2
	DMFAE-06ED-08G	16	41	32	51	16	24.5	PF 3/4	PF 1
	DMFAE-06ED-10G	16	55	32	55	1	26.5	PF 3/4	PF 1-1/4
PN-250	DMFAE-08ED-06G	20	41	39	47	18	22	PF 1	PF 3/4
	DMFAE-03ED-06G	8	36	22	44	12	22	PF 3/8	PF 3/4
	DMFAE-04ED-10G	10	55	26	53	14	26.5	PF 1/2	PF 1-1/4
	DMFAE-06ED-12G	16	60	32	57	16	28.5	PF 3/4	PF 1-1/2
	DMFAE-08ED-10G	20	55	39	57	18	26.5	PF 1	PF 1-1/4
	DMFAE-08ED-12G	20	60	39	59	18	28.5	PF 1	PF 1-1/2
	DMFAE-10ED-08G	25	50	49.9	52	20	24.5	PF 1-1/4	PF 1
	DMFAE-10ED-12G	25	60	49.9	60	20	28.5	PF 1-1/4	PF 1-1/2
	DMFAE-12ED-10G	32	55	55	58	22	26.5	PF 1-1/2	PF 1-1/4
	DMFAE-16ED-12G	40	70	68	62	24	28.5	PF 2	PF 1-1/2

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.

Blanking Plugs for Port with \*ED-Ring

### DDVSTI-GED

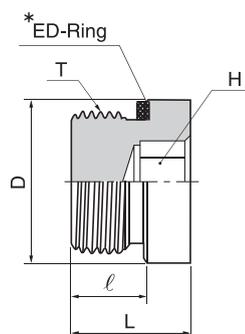


Pressure Rating	Part No.	T	D	H	L	ℓ
PN-400	DDVSTI-01GED	PF 1/8	13.9	5	12	8
	DDVSTI-02GED	PF 1/4	18.9	6	17	12
	DDVSTI-03GED	PF 3/8	21.9	8	17	12
	DDVSTI-04GED	PF 1/2	26.9	10	19	14
	DDVSTI-06GED	PF 3/4	31.9	12	21	16
	DDVSTI-08GED	PF 1	39.9	17	22.5	16
PN-250	DDVSTI-10GED	PF 1-1/4	49.9	22	22.5	16
	DDVSTI-12GED	PF 1-1/2	54.9	24	22.5	16

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.

Blanking Plugs for Port with \*ED-Ring

### DDVSTI-MED

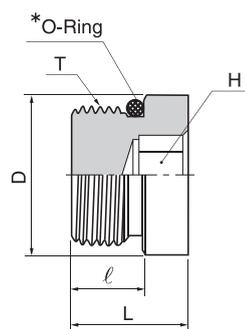


Pressure Rating	Part No.	T	D	H	L	ℓ
PN-400	DDVSTI-M10ED	M10 x 1	13.9	5	12	8
	DDVSTI-M12ED	M12 x 1.5	16.9	6	17	12
	DDVSTI-M14ED	M14 x 1.5	18.9	6	17	12
	DDVSTI-M16ED	M16 x 1.5	21.9	8	17	12
	DDVSTI-M18ED	M18 x 1.5	23.9	8	17	12
	DDVSTI-M20ED	M20 x 1.5	25.9	10	19	14
	DDVSTI-M22ED	M22 x 1.5	26.9	10	19	14
	DDVSTI-M26ED	M26 x 1.5	31.9	12	21	16
	DDVSTI-M27ED	M27 x 2	31.9	12	21	16
	DDVSTI-M33ED	M33 x 2	39.9	17	22.5	16
PN-250	DDVSTI-M42ED	M42 x 2	49.9	22	22.5	16
	DDVSTI-M48ED	M48 x 2	54.9	24	22.5	16

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.

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

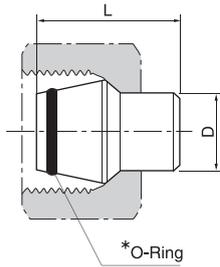
### DDVSTI



Pressure Rating	Part No.	T	D	H	L	ℓ
PN-630	DDVSTI-M10	M10 x 1	13	5	14	10
	DDVSTI-M12	M12 x 1.5	17	6	16.5	11.5
	DDVSTI-M14	M14 x 1.5	19	6	16.5	11.5
	DDVSTI-M16	M16 x 1.5	21	6	18	13
	DDVSTI-M18	M18 x 1.5	23	8	19.5	14.5
PN-400	DDVSTI-M22	M22 x 1.5	27	10	20.5	15.5
	DDVSTI-M26	M26 x 1.5	31	12	21	16
	DDVSTI-M27	M27 x 2	32	12	24	19
	DDVSTI-M33	M33 x 2	38	17	25.5	19
	DDVSTI-M42	M42 x 2	48	22	26	19.5

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.

## Blanking Plug with \*O-Ring

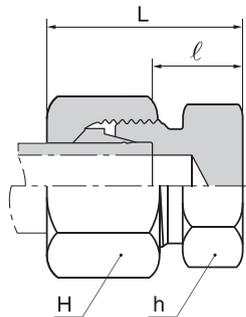
**DDVKA**

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

From 6mm to 12mm OD plug, both L Series and S Series are used same plug of the tube OD.  
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.

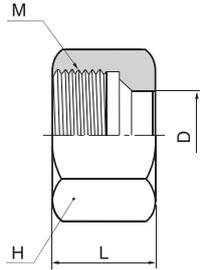
## Tube Cap

**DDCA**

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

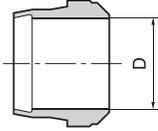
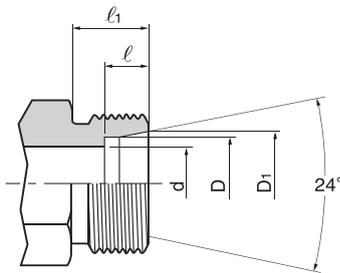
Dimensions given approximate length with tightened nut. All dimensions are in millimeters, for reference only subject to change.

**Nut**  
**DDN**



Series	Part No.	Tube O.D (D)	H	L	M
LL Very Light	DDN-04LL	4	10	11.5	M8 x 1.0
	DDN-06LL	6	12	12	M10 x 1.0
	DDN-08LL	8	14	12.5	M12 x 1.0
	DDN-10LL	10	17	12.5	M14 x 1.0
	DDN-12LL	12	19	13	M16 x 1.0
L Light	DDN-06L	6	14	15	M12 x 1.5
	DDN-08L	8	17	15	M14 x 1.5
	DDN-10L	10	19	16	M16 x 1.5
	DDN-12L	12	22	16	M18 x 1.5
	DDN-15L	15	27	17.5	M22 x 1.5
	DDN-18L	18	32	18	M26 x 1.5
	DDN-22L	22	36	20.5	M30 x 2
	DDN-28L	28	41	21	M36 x 2
	DDN-35L	35	50	24	M45 x 2
DDN-42L	42	60	24	M52 x 2	
S Heavy	DDN-06S	6	17	16.5	M14 x 1.5
	DDN-08S	8	19	16.5	M16 x 1.5
	DDN-10S	10	22	17.5	M18 x 1.5
	DDN-12S	12	24	18	M20 x 1.5
	DDN-14S	14	27	20.5	M22 x 1.5
	DDN-16S	16	30	21	M24 x 1.5
	DDN-20S	20	36	24	M30 x 2
	DDN-25S	25	46	27	M36 x 2
	DDN-30S	30	50	29.5	M42 x 2
DDN-38S	38	60	32.5	M52 x 2	

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

**Cutting Ring**  
**DDS**

**Compression end Detail**


Series	Part No.	Tube O.D (D)	$D_1$	d	$l$	$l_1$
LL Very Light	DDS-04LL	4	5	3	4	8
	DDS-06LL	6	7.5	4.5	5.5	8
	DDS-08LL	8	9.5	6	5.5	9
	DDS-10LL	10	11.5	8	6	9
	DDS-12LL	12	13.5	10	6	9
L Light	DDS-06L	6	8.1	4	7	10
	DDS-08L	8	10.1	6	7	10
	DDS-10L	10	12.3	8	7	11
	DDS-12L	12	14.3	10	7	11
	DDS-15L	15	17.3	12	7	12
	DDS-18L	18	20.3	15	7.5	12
	DDS-22L	22	24.3	19	7.5	14
	DDS-28L	28	30.3	24	7.5	14
	DDS-35L	35	38	30	10.5	16
DDS-42L	42	45	36	11	16	
S Heavy	DDS-06S	6	8.1	4	7	12
	DDS-08S	8	10.1	5	7	12
	DDS-10S	10	12.3	7	7.5	12
	DDS-12S	12	14.3	8	7.5	12
	DDS-14S	14	16.3	10	8	14
	DDS-16S	16	18.3	12	8.5	14
	DDS-20S	20	22.9	16	10.5	16
	DDS-25S	25	27.9	20	12	18
	DDS-30S	30	33	25	13.5	20
	DDS-38S	38	41	32	16	22

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

S-LOK®