

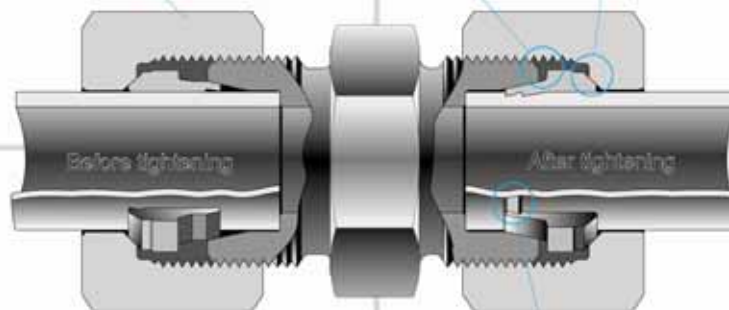
Tube Fittings

for DIN 2353

with LL, L, Series and S Series

Catalog No. H-230TF
Jul. 2000

- **Optimized Center Area :**
 - Ideal contact angle.
 - Cone stop limit for assembly preventing over tightening
- **Variety of End Connection :**
 - LL, L, S series tube connection.
 - DIN/ISO parallel & taper thread.
- **Optimized Shoulder Area :**
 - Reduction of friction-force relief of the nut-bottom.
 - End radius.
 - Reinforced middle section.



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

Features

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



HY-LOK CORPORATION

General

Based Standard DIN 3851 Hy-Lok Corp. DIN fittings have been improved to comply with current standard requirements. They conform to installation standard DIN 2353 and all of their constituent parts are interchangeable with competitor products provided they comply to the basic standard requirements as applicable.

Our production facilities have many years of experience in the manufacture of precision products which in conjunction with stringent quality control from the starting material up to the finished component determines the quality of Hy-Lok Corp. fittings.

Fitting materials

Hy-Lok Corp. Fittings are machined from drawn steel bar or steel forgings.

Materials according to DIN 3859 (technical specifications for tube fittings).

Nuts are either cold or hot pressed.

Fittings made of stainless steel.

X6CrNiMoTi17122 to DIN 17440, material No.1.4571, is also available for supply.

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

Pressure and temperature load Capability

Pressure specification

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

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

Pressure Ranges

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

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

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

Allowable working temperatures (TB)

A) For fittings materials

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

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

B) For seal - materials

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

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

Pressure reduction with temperature

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

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

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

Surface protection

All ranges fittings are galvanized and yellow passivated.

All weldable fittings are phosphated.

Nikel-plated on request for carbon steel.

Fluids

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

Ordering Information

Example 1. Tube to Tube Connection

DT - 12 S - S316
 ① ② ③ ⑥

Example 3. Tube to Tube Port

DEW - 16 S - S316
 ① ② ③ ⑥

Example 5. Banjo Fitting

DWH - 16 S - 04G - S316
 ① ② ③ ④ ⑥

Example 2. Tube to Thread Connection

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

Example 4. Tube Port to Female Port

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

Example 6. Male / Female Adapter

MFAE 04G - 03G - STEL
 ① ④ ⑥

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

• Tube O.D Designator

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

• Series Designator

| | | | |
|------------|------------|-------|-------|
| Series | Very Light | Light | Heavy |
| Identifier | LL | L | S |

• Thread Designator (Pipe Thread)

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

• Thread Designator (Metric Thread)

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

• Thread Designator (Unified)

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

• Material Designator

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

Tubing guide

Seamless precision steel tube St 37.4

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

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

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

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

Calculation Pressures :

- Calculated pressures to DIN 2413 part I for primarily static load conditions.
- Yield point (K) : 235 N / mm² (to DIN 1630)
- Safety factor (S) : 1.5
- Allowance factor (c)

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

- Calculated pressures to DIN 2413 PART III for dynamic load conditions
- Yield point (K) : 225 N/mm² (DIN 2413 4.2.8)
- Safety factor (S) : 1.5

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

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

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

Note

- For a diameter ratio of O.D / I.D > 1.35, calculation made to DIN 2413 part III and based on a pulsating fatigue limit of 235 N / mm²
- Temperature range : -40° C to +120° C without reduction in pressure.

Seamless precision stainless steel 1.4571

Stainless steel tubes (e.g. 1.4571), code X6CrNiMoTi 17122, must be cold-drawn and seamless, heat-treated without formation of scales, type m to Din 17458, provide tolerances to DIN 2391, Part 1.

The following tube wall thickness are suitable for use :

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

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

• Reinforce tube inserts are recommended where thin-walled tubes are subject to severe strains.

• Permissible variation in wall thickness (DIN 2391)

Calculation Pressures :

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

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

• Calculated pressures to DIN 2413 part III for dynamic load conditions

- Yield point (K) : 216N/mm²(assumed value)
- Safety factor (S) : 1.5

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

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

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

Note

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

• Temperature range : - 60° C to +400° C

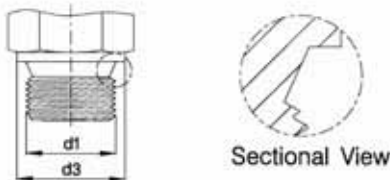
Reduction in pressure for higher temperatures (See page 1)

Stud Ends & Tapped Hole Forms for tube Fittings

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

■ Forms of Stud Ends

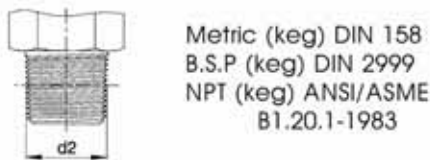
Form A (DIN 3852 Part 1+2)
with sealing by washer



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



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

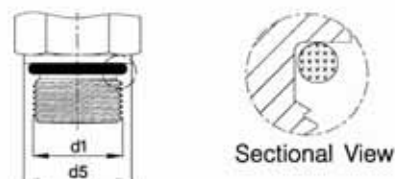


Metric (keg) DIN 158
B.S.P (keg) DIN 2999
NPT (keg) ANSI/ASME
B1.20.1-1983

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



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



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

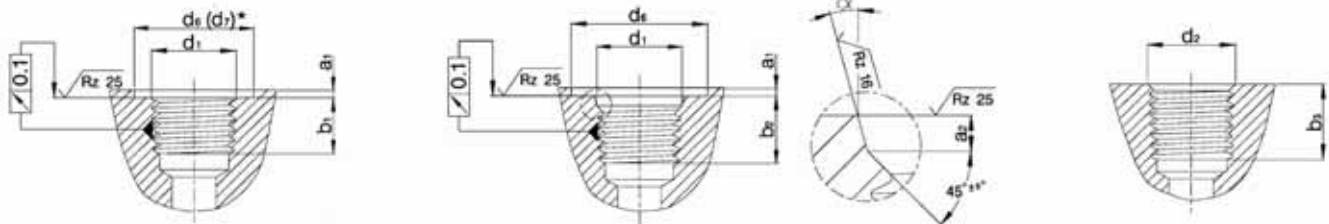
* ED-Ring & O-Ring Seals made of NBR Standard(- 20° C to 90° C)
Available made of Viton Upon Request(- 20° C to 200° C)

■ Forms of Tapped Holes

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

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

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



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

Tightening Torques for Studs

- Recommend tightening torques MA
The table below shows the Nm value for studs with metal seal, form B, DIN 3852 or with captive sealing (ED-Ring) to avoid leakings.
- Sealing of taper thread
Taper threads are not self-sealing. To achieve a leakproof seals, an additional sealant is necessary. A well-established sealing-medium is a PTFE-tape (e.g.Teflon)
- Note :
The quoted figures relate to fittings out of steel(galvanized) and to counter parts made of steel.
() * These figured relate to studs with captive sealing ED-Ring. For the Male/Female adapters(MFAD/MFAE), there apply the tightening torques for series " S "

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

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

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

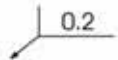
3 Methods might be employed for assembling -

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

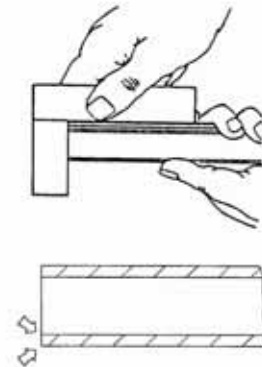
■ Assembly of cutting ring fittings in direct fitting body.

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

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

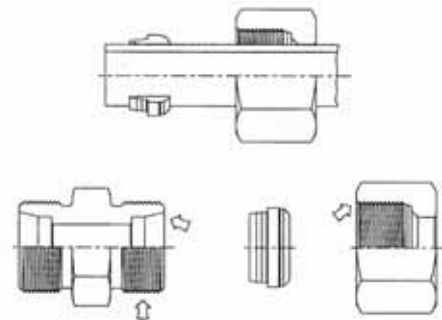


1.2 Don't use a tube cutter because this would cause formation of considerable burrs and an angular cut. Use sawing machine or device instead

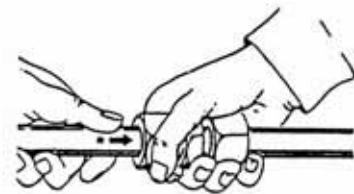


2.0 Lubricate thread and inside of fitting body also cutting ring and thread of nut. Don't use grease.

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



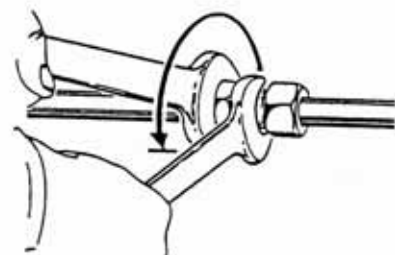
3.0 Press tube into fitting body, up to tube abutment, then hand-tighten the nut.



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

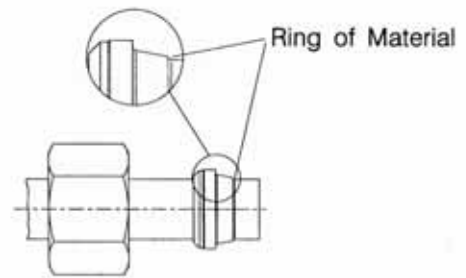
Caution!

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

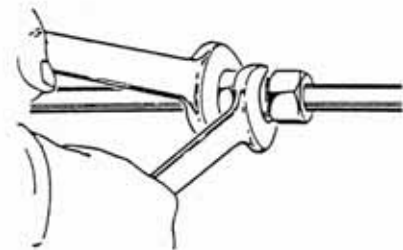


5.0 Check penetration of cutting edge.

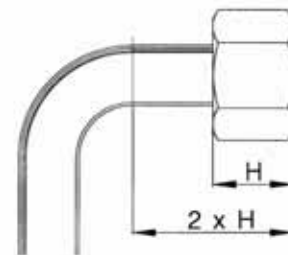
A visible ring of material should fill the space in front of the cutting ring and face.
Cutting ring may turn on tube, but should not be capable of axial displacement.



6.0 Each time the fitting is disassembled, the nut must be re-tightened firmly using the same torque as required for final assembly.

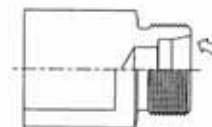


7.0 Minimum length of straight tube and for tube bends, up to start of the bending radius must be at least twice ($2 \times H$) the nut length (H)



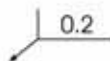
■ Assembly of cutting ring fittings in pre-assembly tool.

1.0 In order to ensure positive assembly HMIC DIN fittings should always be pre-assembled in an oiled pre-assembly tool.
For direct assembly, torque-controlled assembly or mechanical pre-assembly, which are also possible.
Please refer to separate assembly instructions.

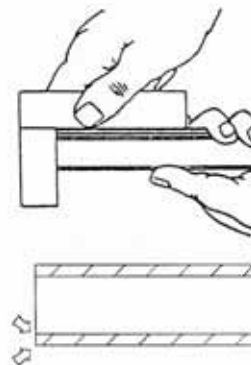


2.0 Saw the tube at right angle. An angular offset of $1/2^\circ$ in relation to the tube axis is permissible.

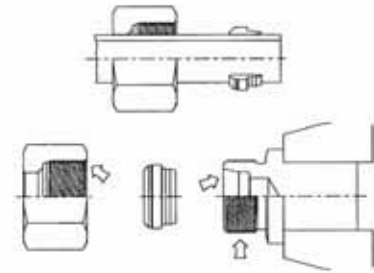
2.1 After clean, lightly deburr tube ends at the inside and outside edge.



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



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



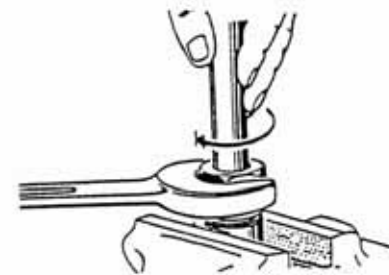
- 4.0 Press tube into fitting body, up to tube abutment, then hand-tighten the nut.



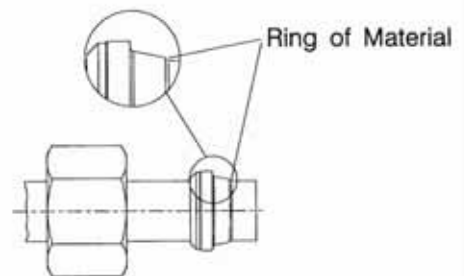
- 5.0 Make sure the nut is in hand tight position, then the 1 1/4 turns with wrench by holding fitting body with a second wrench (Never turn fitting body, hold body and turn nut)

Caution!

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



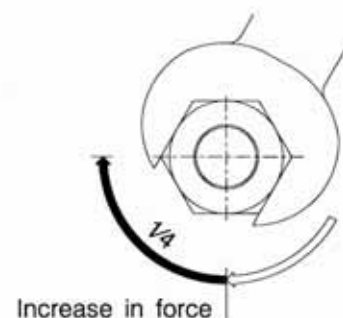
- 6.0 Check penetration of cutting edge.
A visible ring of material should fill the space in front of the cutting ring and face.
Cutting ring may turn on tube but should not be capable of axial displacement.



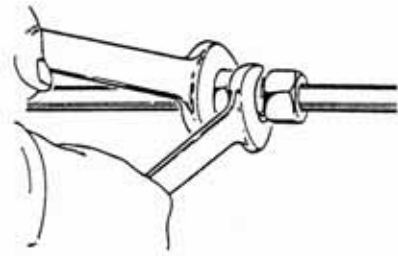
- 7.0 Tighten nut until a noticeable increase in force is required.
Beyond this point, tighten the nut by 1/4 turn with wrench for final assembly.
Hold fitting body by means of a wrench.
- 7.1 With unfavourable mounting conditions and great tube dimensions, final assembly must be completed in via with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

Caution!

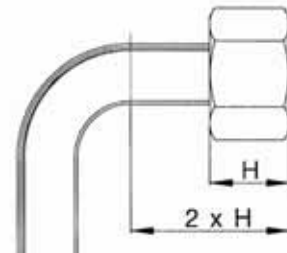
Any deviating number of tightening turns reduces the nominal pressure and the service life of the fitting and may cause leakages or slipping of the fitting.



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



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



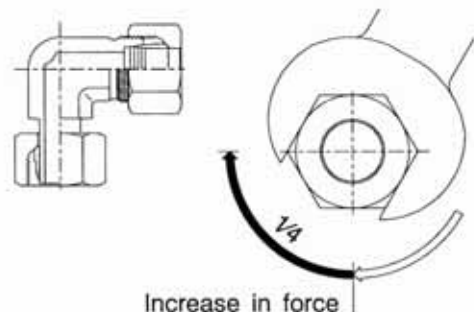
■ Assembly instruction for standpipe & cone fitting with O-Ring.

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

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

Caution!

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

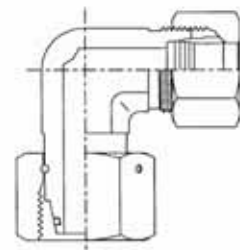


2.0 Oil O-ring.
Tighten nut 1/4 of a turn beyond the point of a noticeable increase in force.
Hold fitting body firmly by means of wrench.

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







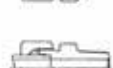

Caution!

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




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

Tube To Female Port

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



■ Illustration chart for reference only

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

Tube To Tube Port(Adjustable Fittings)

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

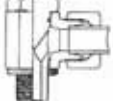
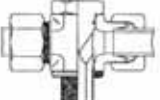
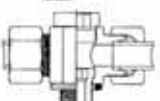
Tube Port To Female Port

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




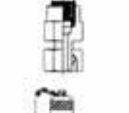
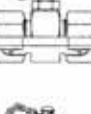
■ Illustration chart for reference only

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


Banjo Fittings

| | | | | | | | |
|---|---|--------------|-------------|-------------------|--------------------------------|--|-------------------|
|  | DSWVE-G / M 44 Banjo Fitting (BSP Paralled/Metric) | SWVE-R -M | SBD-R -M | | 152.../153... 150.../151... | | |
|  | DWH-G / M 45 High Pressure Banjo Fitting (BSP Paralled/Metric) | | SBE-R -M | EWHV...R -...M | 157... 155... | | P-RSWV...R ..M |
|  | DTH-G / M 46 High Pressure Banjo Fitting (BSP Paralled/Metric) | | | ETHV...R -...M | | | P-RSTV...R ..V |
|  | DSVW-G / M 47 Throttlefree Banjo Fitting (BSP Paralled/Metric) | DSVW-R -M | S8-R -B | | | | |
|  | DSVT-G / M 48 Throttlefree Banjo Fitting (BSP Paralled/Metric) | DSVT-R -M | SG-R -M | | | | |

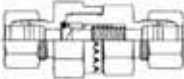
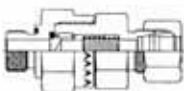
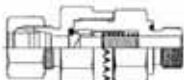
Gauge Connector & Test Couplings

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

■ Illustration chart for reference only

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





Non Return Valves

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

Male & Female Adaptors

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

Plugs and caps

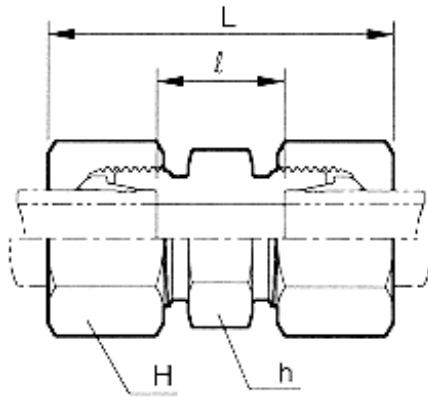
| | | | | | | | |
|---|---|----|-------------------|------------------|-----------|--------|------------------|
|  | DVSTI-GED/MED 59 Blanking Plug (BSP Paralled/Metric) with ED-Ring for port | 59 | VSIT R-ED M-ED | VSCH-Rwd -Mwd | VSCH..WD | 189... | VS-R-WD -M-WD |
|  | DVSTI 59 Blanking Plug(Metric)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

■ Illustration chart for reference only

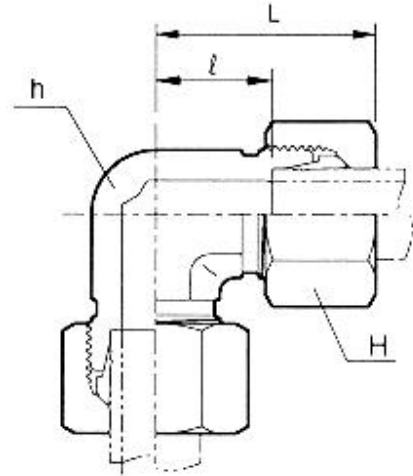
| Spare Parts | | EO | EMB | VOLZ | VOSS | WALPRO |
|---|--|------|-----|------|--------|------------|
|  | DIL 61 Tube Insert | VH | VSH | VS-H | 020... | EH |
|  | DLN 61 Bulkhead Lock Nut | GM | GM | G-M | 080... | |
|  | DKA 62 Sealing Ring for DWH/DTH and DSWVE | DKA | DKA | DKRA | 080... | |
|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

■ Illustration chart for reference only

Straight Union
DU



Union Elbow
DL



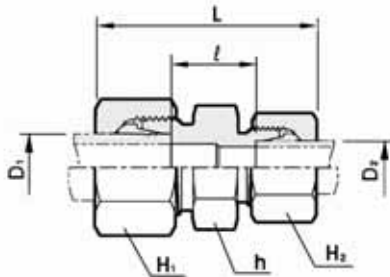
| Series | Part No. | Tube O.D. | H | h | L | |
|-----------------------------------|----------|-----------|----|----|----|----|
| LL very light PN 100 | DU-04LL | 4 | 10 | 9 | 31 | 12 |
| | DU-06LL | 6 | 12 | 11 | 32 | 9 |
| | DU-08LL | 8 | 14 | 12 | 35 | 12 |
| | DU-10LL | 10 | 17 | 14 | 35 | 12 |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

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

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

Reducing Union

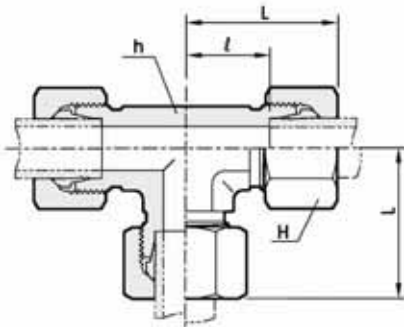
DUR



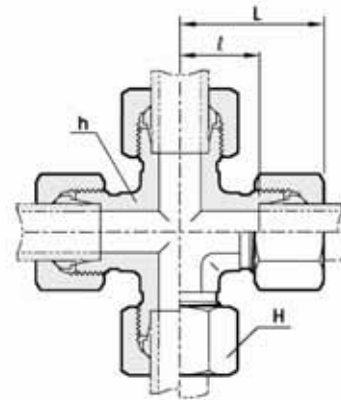
| Series | Part No. | Tube O.D | | H ₁ | H ₂ | h | L | t |
|----------------------|-------------|----------------|----------------|----------------|----------------|----|------|------|
| | | D ₁ | D ₂ | | | | | |
| L light PN 315 | DUR 08L-06L | 8 | 6 | 17 | 14 | 14 | 40 | 11 |
| | DUR 10L-06L | 10 |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

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

Union Tee DT



Union Cross DC



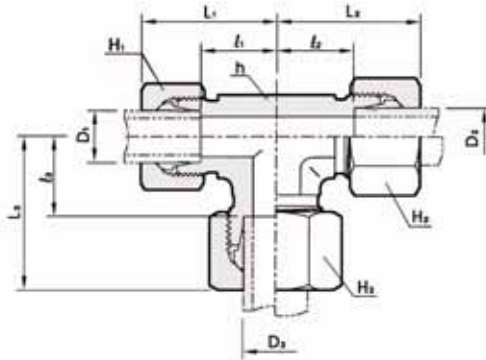
| Series | Part No. | Tube O.D. | H | h | L | l |
|-----------------------------------|----------|-----------|----|----|----|------|
| LL very light PN 100 | DT-04LL | 4 | 10 | 9 | 21 | 11 |
| | DT-06LL | 6 | 12 | 9 | 21 | 9.5 |
| | DT-08LL | 8 | 14 | 12 | 23 | 11.5 |
| | DT-10LL | 10 | 17 | 14 | 24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

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

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

Reducing Tee

DTR

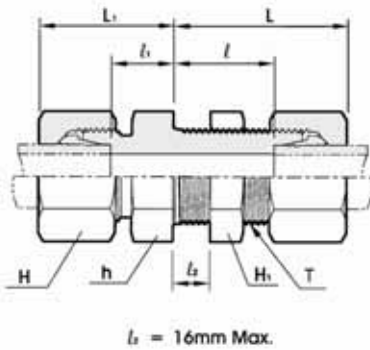


| Series | Part No. | Tube O.D | | | H ₁ | H ₂ | H ₃ | h | L ₁ | L ₂ | L ₃ | t ₁ | t ₂ | t ₃ |
|-------------------|-----------------|----------------|----------------|----------------|----------------|----------------|----------------|----|----------------|----------------|----------------|----------------|----------------|----------------|
| | | D ₁ | D ₂ | D ₃ | | | | | | | | | | |
| L Light PN 316 | DTR 06L-06L-08L | 6 | 6 | 8 | 14 | 14 | 17 | 14 | 29 | 29 | 29 | 14 | 14 | 14 |
| | DTR 08L-08L-06L | 8 | 8 | 6 | 17 | 17 | 14 | 14 | 29 | 29 | 29 | 14 | 14 | 14 |
| PN 315 | DTR 06L-06L-10L | 6 | 6 | 10 | 14 | 14 | 19 | 14 | 30 | 30 | 30 | 15 | 15 | 15 |
| | DTR 08L-08L-10L | 8 | 8 | 10 | 17 | 17 | 19 | 14 | 30 | 30 | 30 | 15 | 15 | 15 |
| | DTR 10L-10L-06L | 10 | 10 | 6 | 19 | 19 | 14 | 14 | 30 | 30 | 30 | 15 | 15 | 15 |
| | DTR 10L-10L-08L | 10 | 10 | 8 | 19 | 19 | 17 | 14 | 30 | 30 | 30 | 15 | 15 | 15 |
| | DTR 10L-06L-10L | 10 | 6 | 10 | 19 | 14 | 19 | 14 | 30 | 30 | 30 | 15 | 15 | 15 |
| PN 315 | DTR 08L-08L-12L | 8 | 8 | 12 | 17 | 17 | 22 | 17 | 32 | 32 | 32 | 17 | 17 | 17 |
| | DTR 12L-12L-06L | 12 | 12 | 6 | 22 | 22 | 14 | 17 | 32 | 32 | 32 | 17 | 17 | 17 |
| | DTR 12L-08L-08L | 12 | 8 | 8 | 22 | 17 | 17 | 17 | 32 | 32 | 32 | 17 | 17 | 17 |
| | DTR 12L-12L-08L | 12 | 12 | 8 | 22 | 22 | 17 | 17 | 32 | 32 | 32 | 17 | 17 | 17 |
| | DTR 12L-10L-10L | 12 | 10 | 10 | 22 | 19 | 19 | 17 | 32 | 32 | 32 | 17 | 17 | 17 |
| | DTR 12L-12L-10L | 12 | 12 | 10 | 22 | 22 | 19 | 17 | 32 | 32 | 32 | 17 | 17 | 17 |
| PN 315 | DTR 12L-10L-12L | 12 | 10 | 12 | 22 | 19 | 22 | 17 | 32 | 32 | 32 | 17 | 17 | 17 |
| | DTR 10L-10L-15L | 10 | 10 | 15 | 19 | 19 | 27 | 19 | 36 | 36 | 36 | 21 | 21 | 21 |
| | DTR 12L-12L-15L | 12 | 12 | 15 | 22 | 22 | 27 | 19 | 36 | 36 | 36 | 21 | 21 | 21 |
| | DTR 15L-15L-06L | 15 | 15 | 6 | 27 | 27 | 14 | 19 | 36 | 36 | 36 | 21 | 21 | 21 |
| | DTR 15L-15L-10L | 15 | 15 | 10 | 27 | 27 | 19 | 19 | 36 | 36 | 36 | 21 | 21 | 21 |
| | DTR 15L-12L-12L | 15 | 12 | 12 | 27 | 22 | 22 | 19 | 36 | 36 | 36 | 21 | 21 | 21 |
| PN 315 | DTR 15L-15L-12L | 15 | 15 | 12 | 27 | 27 | 22 | 19 | 36 | 36 | 36 | 21 | 21 | 21 |
| | DTR 15L-12L-15L | 15 | 12 | 15 | 27 | 22 | 27 | 19 | 36 | 36 | 36 | 21 | 21 | 21 |
| | DTR 12L-12L-18L | 12 | 12 | 18 | 22 | 22 | 32 | 24 | 39 | 39 | 40 | 24 | 24 | 23.5 |
| | DTR 18L-10L-10L | 18 | 10 | 10 | 32 | 19 | 19 | 24 | 40 | 39 | 39 | 23.5 | 24 | 24 |
| | DTR 18L-18L-10L | 18 | 18 | 10 | 32 | 32 | 19 | 24 | 40 | 40 | 39 | 23.5 | 23.5 | 24 |
| | DTR 18L-18L-12L | 18 | 18 | 12 | 32 | 32 | 22 | 24 | 40 | 40 | 39 | 23.5 | 23.5 | 24 |
| PN 160 | DTR 18L-18L-15L | 18 | 18 | 15 | 32 | 32 | 27 | 24 | 40 | 40 | 39 | 23.5 | 23.5 | 24 |
| | DTR 18L-10L-18L | 18 | 10 | 18 | 32 | 19 | 32 | 24 | 40 | 39 | 40 | 23.5 | 24 | 23.5 |
| | DTR 22L-22L-10L | 22 | 22 | 10 | 36 | 36 | 19 | 27 | 44 | 44 | 43 | 27.5 | 27.5 | 28 |
| | DTR 22L-22L-12L | 22 | 22 | 12 | 36 | 36 | 22 | 27 | 44 | 44 | 43 | 27.5 | 27.5 | 28 |
| | DTR 22L-15L-15L | 22 | 15 | 15 | 36 | 27 | 27 | 27 | 44 | 43 | 43 | 27.5 | 28 | 28 |
| | DTR 22L-22L-15L | 22 | 22 | 15 | 36 | 36 | 27 | 27 | 44 | 44 | 43 | 27.5 | 27.5 | 28 |
| PN 160 | DTR 22L-18L-18L | 22 | 18 | 18 | 36 | 32 | 32 | 27 | 44 | 44 | 44 | 27.5 | 27.5 | 27.5 |
| | DTR 22L-22L-18L | 22 | 22 | 18 | 36 | 36 | 32 | 27 | 44 | 44 | 44 | 27.5 | 27.5 | 27.5 |
| | DTR 22L-18L-22L | 22 | 18 | 22 | 36 | 32 | 36 | 27 | 44 | 44 | 44 | 27.5 | 27.5 | 27.5 |
| | DTR 28L-28L-10L | 28 | 28 | 10 | 41 | 41 | 19 | 36 | 47 | 47 | 46 | 30.5 | 30.5 | 31 |
| | DTR 28L-28L-12L | 28 | 28 | 12 | 41 | 41 | 22 | 36 | 47 | 47 | 46 | 30.5 | 30.5 | 31 |
| | DTR 28L-28L-15L | 28 | 28 | 15 | 41 | 41 | 27 | 36 | 47 | 47 | 46 | 30.5 | 30.5 | 31 |
| S PN 630 | DTR 28L-28L-18L | 28 | 28 | 18 | 41 | 41 | 32 | 36 | 47 | 47 | 47 | 30.5 | 30.5 | 30.5 |
| | DTR 28L-22L-22L | 28 | 22 | 22 | 41 | 36 | 36 | 36 | 47 | 47 | 47 | 30.5 | 30.5 | 30.5 |
| | DTR 28L-28L-22L | 28 | 28 | 22 | 41 | 36 | 36 | 47 | 47 | 47 | 47 | 30.5 | 30.5 | 30.5 |
| | DTR 10S-10S-06S | 10 | 10 | 6 | 22 | 22 | 17 | 17 | 34 | 34 | 33 | 17.5 | 17.5 | 18 |
| | DTR 12S-08S-08S | 12 | 8 | 8 | 24 | 19 | 19 | 17 | 38 | 37 | 37 | 21.5 | 22 | 22 |
| | DTR 12S-12S-08S | 12 | 12 | 8 | 24 | 24 | 19 | 17 | 38 | 38 | 37 | 21.5 | 21.5 | 22 |
| PN 400 | DTR 12S-12S-10S | 12 | 12 | 10 | 24 | 24 | 22 | 17 | 38 | 38 | 38 | 21.5 | 21.5 | 21.5 |
| | DTR 12S-12S-16S | 12 | 12 | 16 | 24 | 24 | 30 | 24 | 42 | 42 | 43 | 25.5 | 25.5 | 24.5 |
| | DTR 16S-16S-06S | 16 | 16 | 6 | 30 | 30 | 17 | 24 | 43 | 43 | 41 | 24.5 | 24.5 | 26 |
| | DTR 16S-16S-08S | 16 | 16 | 8 | 30 | 30 | 19 | 24 | 43 | 43 | 41 | 24.5 | 24.5 | 26 |
| | DTR 16S-16S-10S | 16 | 16 | 10 | 30 | 30 | 22 | 24 | 43 | 43 | 42 | 24.5 | 24.5 | 25.5 |
| PN 400 | DTR 16S-16S-12S | 16 | 16 | 12 | 30 | 30 | 24 | 24 | 43 | 43 | 42 | 24.5 | 24.5 | 25.5 |
| | DTR 16S-16S-20S | 16 | 16 | 20 | 30 | 30 | 36 | 27 | 47 | 47 | 48 | 28.5 | 28.5 | 26.5 |
| | DTR 20S-20S-10S | 20 | 20 | 10 | 36 | 36 | 22 | 27 | 48 | 48 | 46 | 26.5 | 26.5 | 29.5 |
| | DTR 20S-20S-12S | 20 | 20 | 12 | 36 | 36 | 24 | 27 | 48 | 48 | 46 | 26.5 | 26.5 | 29.5 |
| PN 400 | DTR 20S-20S-16S | 20 | 20 | 16 | 36 | 36 | 30 | 27 | 48 | 48 | 47 | 26.5 | 26.5 | 28.5 |
| | DTR 20S-20S-25S | 20 | 20 | 25 | 36 | 36 | 46 | 36 | 53 | 53 | 54 | 31.5 | 31.5 | 30 |
| | DTR 25S-25S-16S | 25 | 25 | 16 | 46 | 46 | 30 | 36 | 54 | 54 | 52 | 30 | 30 | 33.5 |
| PN 400 | DTR 25S-25S-20S | 25 | 25 | 20 | 46 | 46 | 36 | 36 | 54 | 54 | 53 | 30 | 30 | 31.5 |
| | DTR 25S-25S-30S | 25 | 25 | 30 | 46 | 46 | 50 | 41 | 61 | 61 | 62 | 37 | 37 | 35.5 |

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

Bulkhead Union

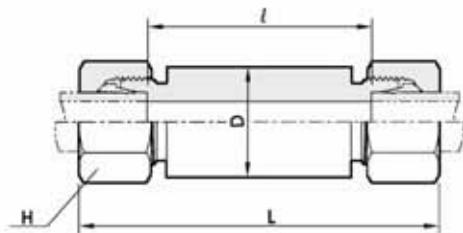
DBU



| Series | Part No. | Tube O.D. | H | H ₁ | h | L | L ₁ | ℓ | ℓ ₁ | T |
|-------------------------|----------|-----------|----|----------------|----|----|----------------|------|----------------|----------|
| L light PN 315 | DBU-06L | 6 | 14 | 17 | 17 | 42 | 22 | 27 | 7 | M 12×1.5 |
| | DBU-08L | 8 | 17 | 19 | 19 | 42 | 23 | 27 | 8 | M 14×1.5 |
| | DBU-10L | 10 | 19 | 22 | 22 | 43 | 25 | 28 | 10 | M 16×1.5 |
| | DBU-12L | 12 | 22 | 24 | 24 | 44 | 25 | 29 | 10 | M 18×1.5 |
| | DBU-15L | 15 | 27 | 30 | 27 | 46 | 27 | 31 | 12 | M 22×1.5 |
| | DBU-18L | 18 | 32 | 36 | 32 | 49 | 30 | 32.5 | 13.5 | M 26×1.5 |
| PN 160 | DBU-22L | 22 | 36 | 41 | 36 | 51 | 33 | 34.5 | 16.5 | M 30×2 |
| | DBU-28L | 28 | 41 | 46 | 41 | 52 | 35 | 35.5 | 18.5 | M 36×2 |
| | DBU-35L | 35 | 50 | 55 | 50 | 58 | 40 | 36.5 | 18.5 | M 45×2 |
| | DBU-42L | 42 | 60 | 65 | 60 | 59 | 42 | 36 | 19 | M 52×2 |
| S | DBU-06S | 6 | 17 | 19 | 19 | 44 | 27 | 29 | 12 | M 14×1.5 |
| | DBU-08S | 8 | 19 | 22 | 22 | 44 | 28 | 29 | 13 | M 16×1.5 |
| | DBU-10S | 10 | 22 | 24 | 24 | 46 | 31 | 29.5 | 14.5 | M 18×1.5 |
| | DBU-12S | 12 | 24 | 27 | 27 | 47 | 31 | 30.5 | 14.5 | M 20×1.5 |
| | DBU-14S | 14 | 27 | 30 | 30 | 50 | 35 | 32 | 17 | M 22×1.5 |
| PN 400 | DBU-16S | 16 | 30 | 32 | 32 | 50 | 35 | 31.5 | 16.5 | M 24×1.5 |
| | DBU-20S | 20 | 36 | 41 | 41 | 55 | 39 | 33.5 | 17.5 | M 30×2 |
| | DBU-25S | 25 | 46 | 46 | 46 | 59 | 44 | 35 | 20 | M 36×2 |
| | DBU-30S | 30 | 50 | 50 | 50 | 64 | 48 | 37.5 | 21.5 | M 42×2 |
| PN | DBU-38S | 38 | 60 | 65 | 65 | 68 | 53 | 37 | 22 | M 52×2 |

Welding Bulkhead Union

DBUW

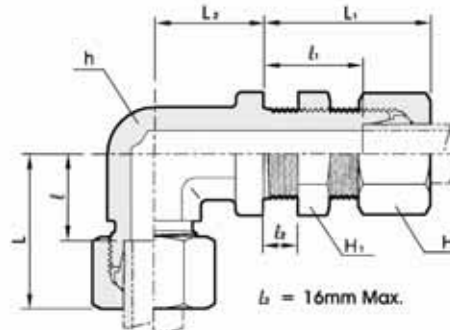


| Series | Part No. | Tube O.D. | D | H | L | ℓ |
|----------------------|----------|-----------|----|----|-----|----|
| L light 315 | DBUW-06L | 6 | 18 | 14 | 85 | 56 |
| | DBUW-08L | 8 | 20 | 17 | 85 | 56 |
| | DBUW-10L | 10 | 22 | 19 | 87 | 58 |
| | DBUW-12L | 12 | 25 | 22 | 87 | 58 |
| | DBUW-15L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

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

Bulkhead Union Elbow

DBL



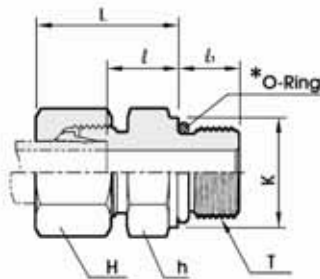
| Series | Part No. | Tube O.D. | H | H ₁ | h | L | L ₁ | L ₂ | ℓ | ℓ ₁ | T |
|-----------------------------|----------|-----------|----|----------------|----|----|----------------|----------------|------|----------------|----------|
| L light PN 315 | DBL-06L | 6 | 14 | 17 | 12 | 27 | 42 | 14 | 12 | 27 | M 12×1.5 |
| | DBL-08L | 8 | 17 | 19 | 12 | 29 | 42 | 17 | 14 | 27 | M 14×1.5 |
| | DBL-10L | 10 | 19 | 22 | 14 | 30 | 43 | 18 | 15 | 28 | M 16×1.5 |
| | DBL-12L | 12 | 22 | 24 | 17 | 32 | 44 | 20 | 17 | 29 | M 18×1.5 |
| | DBL-15L | 15 | 27 | 30 | 19 | 36 | 46 | 23 | 21 | 31 | M 22×1.5 |
| | DBL-18L | 18 | 32 | 36 | 24 | 40 | 49 | 24 | 23.5 | 32.5 | M 26×1.5 |
| PN 160 | DBL-22L | 22 | 36 | 41 | 27 | 44 | 51 | 30 | 27.5 | 34.5 | M 30×2 |
| | DBL-28L | 28 | 41 | 46 | 36 | 47 | 52 | 34 | 30.5 | 35.5 | M 36×2 |
| | DBL-35L | 35 | 50 | 55 | 41 | 56 | 58 | 39 | 34.5 | 36.5 | M 45×2 |
| | DBL-42L | 42 | 60 | 65 | 50 | 63 | 59 | 43 | 40 | 36 | M 52×2 |
| S heavy PN 630 | DBL-06S | 6 | 17 | 19 | 12 | 31 | 44 | 17 | 16 | 29 | M 14×1.5 |
| | DBL-08S | 8 | 19 | 22 | 14 | 32 | 44 | 18 | 17 | 29 | M 16×1.5 |
| | DBL-10S | 10 | 22 | 24 | 17 | 34 | 46 | 20 | 17.5 | 29.5 | M 18×1.5 |
| | DBL-12S | 12 | 24 | 27 | 17 | 38 | 47 | 21 | 21.5 | 30.5 | M 20×1.5 |
| | DBL-14S | 14 | 27 | 30 | 19 | 40 | 50 | 23 | 22 | 32 | M 22×1.5 |
| PN 400 | DBL-16S | 16 | 30 | 32 | 24 | 43 | 50 | 24 | 24.5 | 31.5 | M 24×1.5 |
| | DBL-20S | 20 | 36 | 41 | 27 | 48 | 55 | 30 | 26.5 | 33.5 | M 30×2 |
| | DBL-25S | 25 | 46 | 46 | 36 | 54 | 59 | 34 | 30 | 35 | M 36×2 |
| | DBL-30S | 30 | 50 | 50 | 41 | 62 | 64 | 39 | 35.5 | 37.5 | M 42×2 |
| PN 315 | DBL-38S | 38 | 60 | 65 | 50 | 72 | 68 | 43 | 41 | 37 | M 52×2 |

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

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

DOM-U/M

for Unified



Form F stud end

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

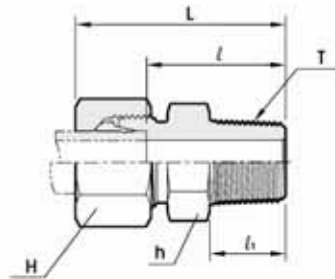
for Metric Paralled

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

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

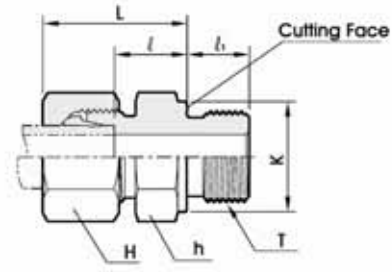
* O-Ring of NBR(e.g. Perbunan®) Standard, of FPM(e.g. Viton®) on request (See Page 1)

Male Connector(BSP Tapered) DMC-R



Form C stud end

Male Connector(BSP Paralled) DMC-G

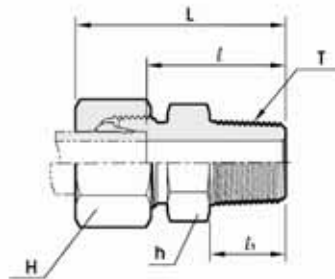


Form B stud end

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

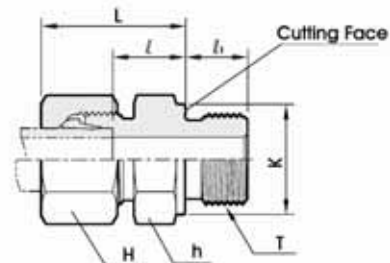
Dimensions given approximate length with tightened nut. All dimensions are in millimeters, for reference only subject to change.

Male Connector(BSP Tapered) DMC-R



Form C stud end

Male Connector(BSP Paralled) DMC-G

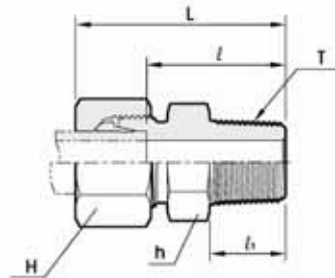


Form B stud end

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

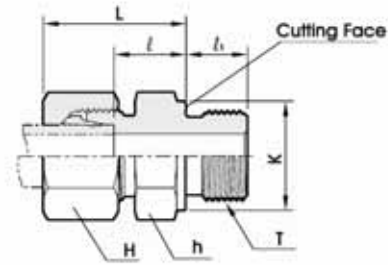
Dimensions given approximate length with tightened nut. All dimensions are in millimeters, for reference only subject to change.

Male Connector(Metric Tapered) DMC-MK



Form C stud end

Male Connector(Metric Paralled) DMC-M

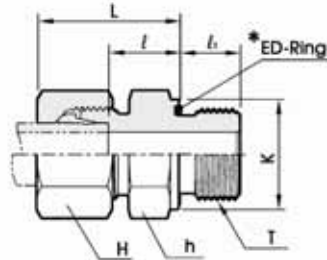


Form B stud end

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

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

Male Connector(BSP Paralled) with *ED-Ring DMC-GED

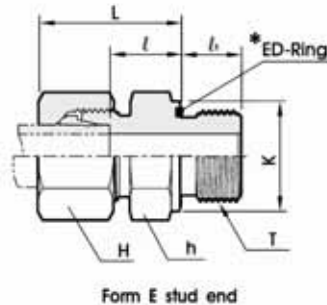


Form E stud end

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

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

Male Connector(Metric Paralled) with *ED-Ring DMC-MED

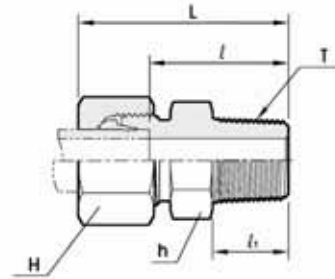


| Series | Part No. | Tube O.D. | H | h | K | L | l | li | T M (Metric) |
|----------------------|---------------|-----------|----|----|----|----|------|----|-----------------|
| L light PN 315 | DMC 06L-M10ED | 6 | 14 | 14 | 14 | 23 | 8.5 | 8 | M 10×1 |
| | DMC 08L-M12ED | 8 | 17 | 17 | 17 | 25 | 10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

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

Male Connector(NPT Thread)

DMC-N



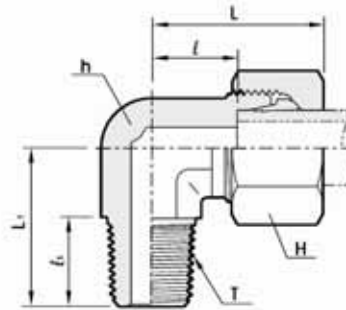
Form C stud end

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

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

Male Elbow(BSP Tapered/Metric Tapered)

DLM-R/M



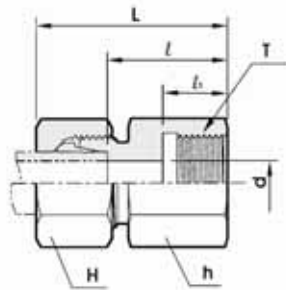
Form C stud end

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

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

Female Connector (BSP Paralled/Metric Paralled)

DFC-G/M



Form Y Tapped Hole

for BSP Paralled

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

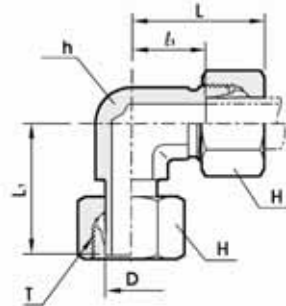
for Metric Paralled

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

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

Adjustable Elbow with Standpipe

DLA

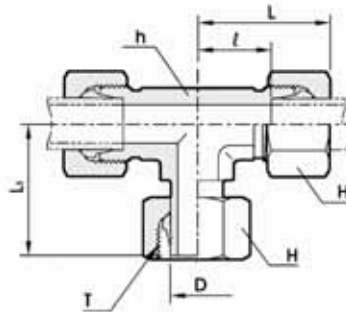


| Series | Part No. | Tube O.D. | D | H | h | L | L ₁ | l | T |
|----------------------|----------|-----------|----|----|----|----|----------------|------|----------|
| L light PN 315 | DLA-06L | 6 | 6 | 14 | 12 | 27 | 26 | 12 | M 12×1.5 |
| | DLA-08L | 8 | 8 | 17 | 12 | 29 | 27.5 | 14 | M 14×1.5 |
| | DLA-10L | 10 | 10 | 19 | 14 | 30 | 29 | 15 | M 16×1.5 |
| | DLA-12L | 12 | 12 | 22 | 17 | 32 | 29.5 | 17 | M 18×1.5 |
| | DLA-15L | 15 | 15 | 27 | 19 | 36 | 32.5 | 21 | M 22×1.5 |
| | DLA-18L | 18 | 18 | 32 | 24 | 40 | 35.5 | 23.5 | M 26×1.5 |
| PN 160 | DLA-22L | 22 | 22 | 36 | 27 | 44 | 38.5 | 27.5 | M 30×2 |
| | DLA-28L | 28 | 28 | 41 | 36 | 47 | 41.5 | 30.5 | M 36×2 |
| | DLA-35L | 35 | 35 | 50 | 41 | 56 | 51 | 34.5 | M 45×2 |
| | DLA-42L | 42 | 42 | 60 | 50 | 63 | 56 | 40 | M 52×2 |
| S heavy PN 630 | DLA-06S | 6 | 6 | 17 | 12 | 31 | 27 | 16 | M 14×1.5 |
| | DLA-08S | 8 | 8 | 19 | 14 | 32 | 27.5 | 17 | M 16×1.5 |
| | DLA-10S | 10 | 10 | 22 | 17 | 34 | 30 | 17.5 | M 18×1.5 |
| | DLA-12S | 12 | 12 | 24 | 17 | 38 | 31 | 21.5 | M 20×1.5 |
| | DLA-14S | 14 | 14 | 27 | 19 | 40 | 35 | 22 | M 22×1.5 |
| PN 400 | DLA-16S | 16 | 16 | 30 | 24 | 43 | 36.5 | 24.5 | M 24×1.5 |
| | DLA-20S | 20 | 20 | 36 | 27 | 48 | 44.5 | 26.5 | M 30×2 |
| | DLA-25S | 25 | 25 | 46 | 36 | 54 | 50 | 30 | M 36×2 |
| | DLA-30S | 30 | 30 | 50 | 41 | 62 | 55 | 35.5 | M 42×2 |
| PN 315 | DLA-38S | 38 | 38 | 60 | 50 | 72 | 63 | 41 | M 52×2 |

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

Adjustable Branch Tee with Standpipe

DBTA

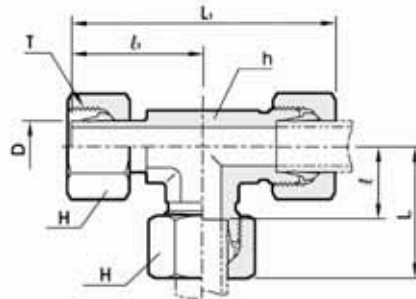


| Series | Part No. | Tube O.D. | D | H | h | L | L ₁ | l | T |
|----------------------|----------|-----------|----|----|----|----|----------------|------|----------|
| L light PN 315 | DBTA-06L | 6 | 6 | 14 | 12 | 27 | 26 | 12 | M 12×1.5 |
| | DBTA-08L | 8 | 8 | 17 | 12 | 29 | 27.5 | 14 | M 14×1.5 |
| | DBTA-10L | 10 | 10 | 19 | 14 | 30 | 29 | 15 | M 16×1.5 |
| | DBTA-12L | 12 | 12 | 22 | 17 | 32 | 29.5 | 17 | M 18×1.5 |
| | DBTA-15L | 15 | 15 | 27 | 19 | 36 | 32.5 | 21 | M 22×1.5 |
| | DBTA-18L | 18 | 18 | 32 | 24 | 40 | 35.5 | 23.5 | M 26×1.5 |
| PN 160 | DBTA-22L | 22 | 22 | 36 | 27 | 44 | 38.5 | 27.5 | M 30×2 |
| | DBTA-28L | 28 | 28 | 41 | 36 | 47 | 41.5 | 30.5 | M 36×2 |
| | DBTA-35L | 35 | 35 | 50 | 41 | 56 | 51 | 34.5 | M 45×2 |
| | DBTA-42L | 42 | 42 | 60 | 50 | 63 | 56 | 40 | M 52×2 |
| S heavy PN 630 | DBTA-06S | 6 | 6 | 17 | 12 | 31 | 27 | 16 | M 14×1.5 |
| | DBTA-08S | 8 | 8 | 19 | 14 | 32 | 27.5 | 17 | M 16×1.5 |
| | DBTA-10S | 10 | 10 | 22 | 17 | 34 | 30 | 17.5 | M 18×1.5 |
| | DBTA-12S | 12 | 12 | 24 | 17 | 38 | 31 | 21.5 | M 20×1.5 |
| | DBTA-14S | 14 | 14 | 27 | 19 | 40 | 35 | 22 | M 22×1.5 |
| PN 400 | DBTA-16S | 16 | 16 | 30 | 24 | 43 | 36.5 | 24.5 | M 24×1.5 |
| | DBTA-20S | 20 | 20 | 36 | 27 | 48 | 44.5 | 26.5 | M 30×2 |
| | DBTA-25S | 25 | 25 | 46 | 36 | 54 | 50 | 30 | M 36×2 |
| | DBTA-30S | 30 | 30 | 50 | 41 | 62 | 55 | 35.5 | M 42×2 |
| PN 315 | DBTA-38S | 38 | 38 | 60 | 50 | 72 | 63 | 41 | M 52×2 |

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

Adjustable Run Tee with Standpipe

DRTA

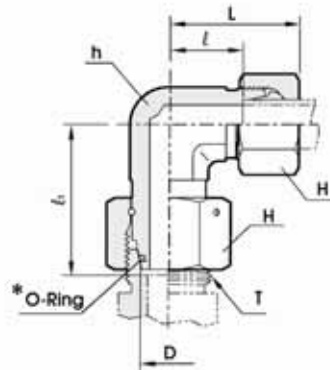


| Series | Part No. | Tube O.D. | D | h | H | L | L ₁ | t | t ₁ | T |
|----------------------|----------|-----------|----|----|----|----|----------------|------|----------------|----------|
| L light PN 315 | DRTA-06L | 6 | 6 | 12 | 14 | 27 | 53 | 12 | 26 | M 12×1.5 |
| | DRTA-08L | 8 | 8 | 12 | 17 | 29 | 56 | 14 | 27.5 | M 14×1.5 |
| | DRTA-10L | 10 | 10 | 14 | 19 | 30 | 59 | 15 | 29 | M 16×1.5 |
| | DRTA-12L | 12 | 12 | 17 | 22 | 32 | 62 | 17 | 29.5 | M 18×1.5 |
| | DRTA-15L | 15 | 15 | 19 | 27 | 36 | 69 | 21 | 32.5 | M 22×1.5 |
| | DRTA-18L | 18 | 18 | 24 | 32 | 40 | 75 | 23.5 | 35.5 | M 26×1.5 |
| PN 160 | DRTA-22L | 22 | 22 | 27 | 36 | 44 | 83 | 27.5 | 38.5 | M 30×2 |
| | DRTA-28L | 28 | 28 | 36 | 41 | 47 | 91 | 30.5 | 41.5 | M 36×2 |
| | DRTA-35L | 35 | 35 | 41 | 50 | 56 | 111 | 34.5 | 51 | M 45×2 |
| | DRTA-42L | 42 | 42 | 50 | 60 | 63 | 123 | 40 | 56 | M 52×2 |
| S heavy PN 630 | DRTA-06S | 6 | 6 | 12 | 17 | 31 | 58 | 16 | 27 | M 14×1.5 |
| | DRTA-08S | 8 | 8 | 14 | 19 | 32 | 61 | 17 | 27.5 | M 16×1.5 |
| | DRTA-10S | 10 | 10 | 17 | 22 | 34 | 66 | 17.5 | 30 | M 18×1.5 |
| | DRTA-12S | 12 | 12 | 17 | 24 | 38 | 71 | 21.5 | 31 | M 20×1.5 |
| | DRTA-14S | 14 | 14 | 19 | 27 | 40 | 75 | 22 | 35 | M 22×1.5 |
| PN 400 | DRTA-16S | 16 | 16 | 24 | 30 | 43 | 79 | 24.5 | 36.5 | M 24×1.5 |
| | DRTA-20S | 20 | 20 | 27 | 36 | 48 | 93 | 26.5 | 44.5 | M 30×2 |
| | DRTA-25S | 25 | 25 | 36 | 46 | 54 | 105 | 30 | 50 | M 36×2 |
| | DRTA-30S | 30 | 30 | 41 | 50 | 62 | 119 | 35.5 | 55 | M 42×2 |
| PN 315 | DRTA-38S | 38 | 38 | 50 | 60 | 72 | 138 | 41 | 63 | M 52×2 |

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

Swivel Adjustable Elbow with Cone

DEW



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

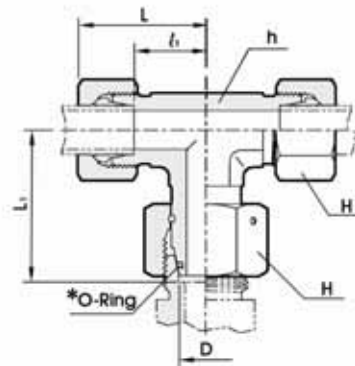
Dimensions given approximate length with tightened nut. All dimensions are in millimeters, for reference only subject to change.
Without male stud, but supplied with fitted O-Ring for connection.

Please observe final assembly instructions on page 11.

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

Swivel Adjustable Branch Tee with Cone

DET



| Series | Part No. | Tube O.D. D | H | h | L | L ₁ | ℓ | T |
|----------------------|----------|-------------|----|----|----|----------------|------|----------|
| L light PN 315 | DET-06L | 6 | 14 | 12 | 27 | 26 | 12 | M 12×1.5 |
| | DET-08L | 8 | 17 | 12 | 29 | 27.5 | 14 | M 14×1.5 |
| | DET-10L | 10 | 19 | 14 | 30 | 29 | 15 | M 16×1.5 |
| | DET-12L | 12 | 22 | 17 | 32 | 29.5 | 17 | M 18×1.5 |
| | DET-15L | 15 | 27 | 19 | 36 | 32.5 | 21 | M 22×1.5 |
| | DET-18L | 18 | 32 | 24 | 40 | 35.5 | 23.5 | M 26×1.5 |
| PN 160 | DET-22L | 22 | 36 | 27 | 44 | 38.5 | 27.5 | M 30×2 |
| | DET-28L | 28 | 41 | 36 | 47 | 41.5 | 30.5 | M 36×2 |
| | DET-35L | 35 | 50 | 41 | 56 | 51 | 34.5 | M 45×2 |
| | DET-42L | 42 | 60 | 50 | 63 | 56 | 40 | M 52×2 |
| S heavy PN 630 | DET-06S | 6 | 17 | 12 | 31 | 27 | 16 | M 14×1.5 |
| | DET-08S | 8 | 19 | 14 | 32 | 27.5 | 17 | M 16×1.5 |
| | DET-10S | 10 | 22 | 17 | 34 | 30 | 17.5 | M 18×1.5 |
| | DET-12S | 12 | 24 | 17 | 38 | 31 | 21.5 | M 20×1.5 |
| | DET-14S | 14 | 27 | 19 | 40 | 35 | 22 | M 22×1.5 |
| PN 400 | DET-16S | 16 | 30 | 24 | 43 | 36.5 | 24.5 | M 24×1.5 |
| | DET-20S | 20 | 36 | 27 | 48 | 44.5 | 26.5 | M 30×2 |
| | DET-25S | 25 | 46 | 36 | 54 | 50 | 30 | M 36×2 |
| | DET-30S | 30 | 50 | 41 | 62 | 55 | 35.5 | M 42×2 |
| PN 315 | DET-38S | 38 | 60 | 50 | 72 | 63 | 41 | M 52×2 |

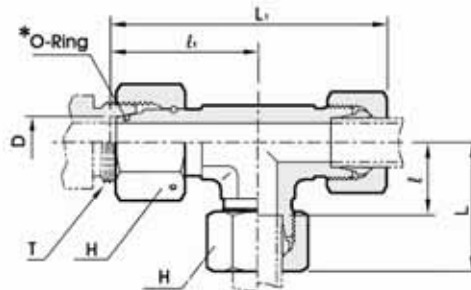
Dimensions given approximate length with tightened nut. All dimensions are in millimeters, for reference only subject to change.
Without male stud, but supplied with fitted O-Ring for connection

Please observe final assembly instructions on page 11.

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

Swivel Adjustable Run Tee with Cone

DEL



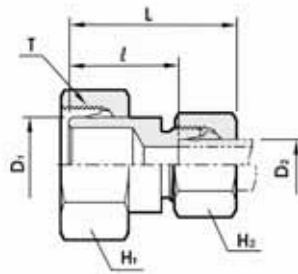
| Series | Part No. | Tube O.D. D | H | h | L | L ₁ | l | l ₁ | T |
|-----------------------------|----------|----------------|----|----|----|----------------|------|----------------|----------|
| L light PN 315 | DEL-06L | 6 | 14 | 12 | 27 | 53 | 12 | 26 | M 12×1.5 |
| | DEL-08L | 8 | 17 | 12 | 29 | 56 | 14 | 27.5 | M 14×1.5 |
| | DEL-10L | 10 | 19 | 14 | 30 | 59 | 15 | 29 | M 16×1.5 |
| | DEL-12L | 12 | 22 | 17 | 32 | 61 | 17 | 29.5 | M 18×1.5 |
| | DEL-15L | 15 | 27 | 19 | 36 | 69 | 21 | 32.5 | M 22×1.5 |
| | DEL-18L | 18 | 32 | 24 | 40 | 75 | 23.5 | 35.5 | M 26×1.5 |
| PN 160 | DEL-22L | 22 | 36 | 27 | 44 | 82 | 27.5 | 38.5 | M 30×2 |
| | DEL-28L | 28 | 41 | 36 | 47 | 89 | 30.5 | 41.5 | M 36×2 |
| | DEL-35L | 35 | 50 | 41 | 56 | 107 | 34.5 | 51 | M 45×2 |
| | DEL-42L | 42 | 60 | 50 | 63 | 119 | 40 | 56 | M 52×2 |
| S heavy PN 630 | DEL-06S | 6 | 17 | 12 | 31 | 58 | 16 | 27 | M 14×1.5 |
| | DEL-08S | 8 | 19 | 14 | 32 | 59 | 17 | 27.5 | M 16×1.5 |
| | DEL-10S | 10 | 22 | 17 | 34 | 64 | 17.5 | 30 | M 18×1.5 |
| | DEL-12S | 12 | 24 | 17 | 38 | 69 | 21.5 | 31 | M 20×1.5 |
| | DEL-14S | 14 | 27 | 19 | 40 | 75 | 22 | 35 | M 22×1.5 |
| PN 400 | DEL-16S | 16 | 30 | 24 | 43 | 79 | 24.5 | 36.5 | M 24×1.5 |
| | DEL-20S | 20 | 36 | 27 | 48 | 93 | 26.5 | 44.5 | M 30×2 |
| | DEL-25S | 25 | 46 | 36 | 54 | 104 | 30 | 50 | M 36×2 |
| | DEL-30S | 30 | 50 | 41 | 62 | 117 | 35.5 | 55 | M 42×2 |
| PN 315 | DEL-38S | 38 | 60 | 50 | 72 | 135 | 41 | 63 | M 52×2 |

Dimensions given approximate length with tightened nut. All dimensions are in millimeters, for reference only subject to change.
Without male stud, but supplied with fitted O-Ring for connection.
Please observe final assembly instructions on page 12.

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

Standpipe Reducer

DKOR



Series L (Light)

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

Series S (Heavy)

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

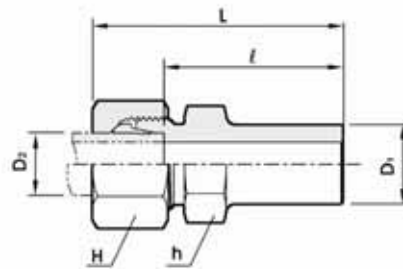
Dimensions given approximate length with tightened nut. All dimensions are in millimeters, for reference only subject to change.
 Without male stud, but with pre-set nut and cutting ring for connection
 Please observe final assembly instructions on page 11

Bite Type Tube Fitting

for DIN 2353

Reducer

DR

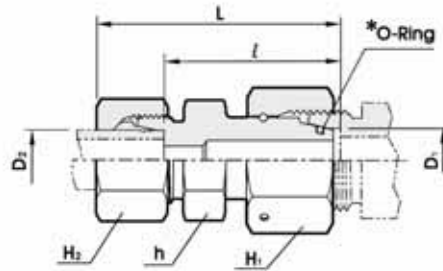


| Series | Part. No. | Tube O.D. D1 | Tube O.D. D2 | H | h | L | l | Series | Part. No. | Tube O.D. D1 | Tube O.D. D2 | H | h | L | l |
|--------------------|-----------|--------------|--------------|----|----|------|-----------|--------------------|-----------|--------------|--------------|----|------|------|------|
| L Series PN 315 | DR08L-06L | 8 | 6 | 14 | 12 | 40 | 25.5 | S Series PN 630 | DR08S-06S | 8 | 6 | 17 | 14 | 43 | 28 |
| | DR10L-06L | 10 | 6 | 14 | 12 | 42 | 27.5 | | DR10S-06S | 10 | 6 | 17 | 14 | 45 | 30.5 |
| | DR10L-08L | | 8 | 17 | 14 | 43 | 27.5 | | DR10S-08S | | 8 | 19 | 17 | 45 | 30.5 |
| | DR12L-06L | 12 | 6 | 14 | 14 | 42 | 27.5 | | DR12S-06S | 12 | 6 | 17 | 14 | 47 | 32.5 |
| | DR12L-08L | | 8 | 17 | 14 | 43 | 27.5 | | DR12S-08S | | 8 | 19 | 17 | 47 | 32.5 |
| | DR12L-10L | | 10 | 19 | 17 | 44 | 28.5 | | DR12S-10S | | 10 | 22 | 19 | 48 | 32 |
| | DR15L-06L | 15 | 6 | 14 | 19 | 44 | 29 | | DR14S-06S | 14 | 6 | 17 | 17 | 51 | 36.5 |
| | DR15L-08L | | 8 | 17 | 19 | 44 | 29 | | DR14S-08S | | 8 | 19 | 17 | 51 | 36.5 |
| | DR15L-10L | | 10 | 19 | 19 | 45 | 30 | | DR14S-10S | | 10 | 22 | 19 | 52 | 36 |
| | DR15L-12L | | 12 | 22 | 19 | 45 | 30 | | DR14S-12S | | 12 | 24 | 22 | 52 | 36 |
| | DR18L-06L | 18 | 6 | 14 | 19 | 46 | 31 | | DR16S-06S | 16 | 6 | 17 | 17 | 53 | 38.5 |
| | DR18L-08L | | 8 | 17 | 19 | 46 | 31 | | DR16S-08S | | 8 | 19 | 17 | 53 | 38.5 |
| | DR18L-10L | | 10 | 19 | 19 | 47 | 32 | | DR16S-10S | | 10 | 22 | 19 | 54 | 38 |
| | DR18L-12L | | 12 | 22 | 19 | 47 | 32 | | DR16S-12S | | 12 | 24 | 22 | 55 | 38.5 |
| DR18L-15L | | 15 | 27 | 22 | 49 | 33 | DR16S-14S | | 14 | 27 | 22 | 57 | 39.5 | | |
| PN 160 | DR22L-06L | 22 | 6 | 14 | 24 | 48 | 33 | PN 400 | DR20S-06S | 20 | 6 | 17 | 22 | 58 | 43 |
| | DR22L-08L | | 8 | 17 | 24 | 48 | 33 | | DR20S-08S | | 8 | 19 | 22 | 58 | 43 |
| | DR22L-10L | | 10 | 19 | 24 | 49 | 34 | | DR20S-10S | | 10 | 22 | 22 | 59 | 42.5 |
| | DR22L-12L | | 12 | 22 | 24 | 49 | 34 | | DR20S-12S | | 12 | 24 | 22 | 59 | 42.5 |
| | DR22L-15L | | 15 | 27 | 24 | 50 | 35 | | DR20S-14S | | 14 | 27 | 22 | 62 | 44 |
| | DR22L-18L | | 18 | 32 | 27 | 51 | 34.5 | | DR20S-16S | | 16 | 30 | 24 | 62 | 43.5 |
| | DR28L-06L | 28 | 6 | 14 | 30 | 48 | 33 | | DR25S-06S | 25 | 6 | 17 | 27 | 62 | 47.5 |
| | DR28L-08L | | 8 | 17 | 30 | 48 | 33 | | DR25S-08S | | 8 | 19 | 27 | 62 | 47.5 |
| | DR28L-10L | | 10 | 19 | 30 | 49 | 34 | | DR25S-10S | | 10 | 22 | 27 | 63 | 47 |
| | DR28L-12L | | 12 | 22 | 30 | 49 | 34 | | DR25S-12S | | 12 | 24 | 27 | 63 | 47 |
| | DR28L-15L | | 15 | 27 | 30 | 50 | 35 | DR25S-14S | | 14 | 27 | 27 | 66 | 48.5 | |
| | DR28L-18L | | 18 | 32 | 30 | 51 | 36 | DR25S-16S | | 16 | 30 | 27 | 66 | 48 | |
| | DR28L-22L | | 22 | 36 | 32 | 53 | 36.5 | DR25S-20S | | 20 | 36 | 30 | 70 | 48 | |
| | DR35L-06L | 35 | 6 | 14 | 36 | 53 | 38.5 | DR30S-06S | 30 | 6 | 17 | 32 | 67 | 52 | |
| | DR35L-08L | | 8 | 17 | 36 | 53 | 38.5 | DR30S-08S | | 8 | 19 | 32 | 67 | 52 | |
| | DR35L-10L | | 10 | 19 | 36 | 55 | 39.5 | DR30S-10S | | 10 | 22 | 32 | 68 | 51.5 | |
| | DR35L-12L | | 12 | 22 | 36 | 55 | 39.5 | DR30S-12S | | 12 | 24 | 32 | 68 | 51.5 | |
| | DR35L-15L | | 15 | 27 | 36 | 56 | 40.5 | DR30S-14S | | 14 | 27 | 32 | 71 | 53 | |
| | DR35L-18L | | 18 | 32 | 36 | 56 | 40 | DR30S-16S | | 16 | 30 | 32 | 71 | 52.5 | |
| | DR35L-22L | | 22 | 36 | 36 | 58 | 42 | DR30S-20S | | 20 | 36 | 32 | 74 | 52.5 | |
| DR35L-28L | | | 41 | 36 | 59 | 42 | DR30S-25S | | 25 | 46 | 36 | 77 | 53 | | |
| DR42L-06L | 42 | 6 | 14 | 46 | 56 | 41 | PN 315 | DR38S-06S | 38 | 6 | 17 | 41 | 72 | 57 | |
| DR42L-08L | | 8 | 17 | 46 | 56 | 41 | | DR38S-08S | | 8 | 19 | 41 | 72 | 57 | |
| DR42L-10L | | 10 | 19 | 46 | 58 | 42 | | DR38S-10S | | 10 | 22 | 41 | 73 | 56.5 | |
| DR42L-12L | | 12 | 22 | 46 | 58 | 42 | | DR38S-12S | | 12 | 24 | 41 | 73 | 56.5 | |
| DR42L-15L | | 15 | 27 | 46 | 60 | 43 | | DR38S-14S | | 14 | 27 | 41 | 76 | 58 | |
| DR42L-18L | | 18 | 32 | 46 | 60 | 42.5 | | DR38S-16S | | 16 | 30 | 41 | 76 | 57.5 | |
| DR42L-22L | | 22 | 36 | 46 | 62 | 44.5 | | DR38S-20S | | 20 | 36 | 41 | 79 | 57.5 | |
| DR42L-28L | | | 41 | 46 | 64 | 44.5 | | DR38S-25S | | 25 | 46 | 41 | 82 | 58 | |
| DR42L-35L | | 35 | 50 | 46 | 67 | 43.5 | | DR38S-30S | | 30 | 50 | 46 | 89 | 58.5 | |

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

Swivel Reducing Adapter with Cone

DRED



Series L (Light)

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

Series S (heavy)

| PN | Part No. | Tube O.D. | | H ₁ | H ₂ | h | L | l |
|--------|--------------|----------------|----------------|----------------|----------------|------|------|------|
| | | D ₁ | D ₂ | | | | | |
| PN 630 | DRED 08S-06S | 8 | 6 | 19 | 17 | 17 | 44 | 28 |
| PN 630 | DRED 10S-06S | 10 | 6 | 22 | 17 | 17 | 44 | 29.5 |
| | DRED 10S-08S | | 8 | | 19 | | 44 | 29.5 |
| PN 630 | DRED 12S-06S | 12 | 6 | 24 | 17 | 19 | 45 | 30 |
| | DRED 12S-08S | | 8 | | 19 | | 45 | 30 |
| | DRED 12S-10S | | 10 | | 22 | | 46 | 29.5 |
| PN 630 | DRED 14S-06S | 14 | 6 | 27 | 17 | 22 | 47.5 | 33 |
| | DRED 14S-08S | | 8 | | 19 | | 47.5 | 33 |
| | DRED 14S-10S | | 10 | | 22 | | 48.5 | 32.5 |
| | DRED 14S-12S | | 12 | | 24 | | 48.5 | 32.5 |
| PN 630 | DRED 16S-06S | 16 | 6 | 30 | 17 | 24 | 50.0 | 35 |
| | DRED 16S-08S | | 8 | | 19 | | 50 | 35 |
| | DRED 16S-10S | | 10 | | 22 | | 51 | 34.5 |
| | DRED 16S-12S | | 12 | | 24 | | 51 | 34.5 |
| | DRED 16S-14S | | 14 | | 27 | | 54 | 36 |
| PN 400 | DRED 20S-06S | 20 | 6 | 36 | 17 | 28.5 | 54 | 39 |
| | DRED 20S-08S | | 8 | | 19 | | 54 | 39 |
| | DRED 20S-10S | | 10 | | 22 | | 55 | 38.5 |
| | DRED 20S-12S | | 12 | | 24 | | 55 | 38.5 |
| | DRED 20S-14S | | 14 | | 27 | | 58 | 40 |
| | DRED 20S-16S | | 16 | | 30 | | 58 | 39.5 |
| PN 400 | DRED 25S-06S | 25 | 6 | 46 | 17 | 36 | 58 | 43.5 |
| | DRED 25S-08S | | 8 | | 19 | | 58 | 43.5 |
| | DRED 25S-10S | | 10 | | 22 | | 59 | 43 |
| | DRED 25S-12S | | 12 | | 24 | | 59 | 43 |
| | DRED 25S-14S | | 14 | | 27 | | 62 | 44.5 |
| | DRED 25S-16S | | 16 | | 30 | | 62 | 44 |
| | DRED 25S-20S | | 20 | | 36 | | 66 | 44 |
| PN 400 | DRED 30S-06S | 30 | 6 | 50 | 17 | 41 | 66 | 51 |
| | DRED 30S-08S | | 8 | | 19 | | 66 | 51 |
| | DRED 30S-10S | | 10 | | 22 | | 67 | 50.5 |
| | DRED 30S-12S | | 12 | | 24 | | 67 | 50.5 |
| | DRED 30S-14S | | 14 | | 27 | | 70 | 52 |
| | DRED 30S-16S | | 16 | | 30 | | 70 | 51.5 |
| | DRED 30S-20S | | 20 | | 36 | | 73 | 51.5 |
| | DRED 30S-25S | | 25 | | 46 | | 76 | 52 |
| PN 315 | DRED 38S-06S | 38 | 6 | 60 | 17 | 50 | 70.5 | 56 |
| | DRED 38S-08S | | 8 | | 19 | | 70.5 | 56 |
| | DRED 38S-10S | | 10 | | 22 | | 71.5 | 55.5 |
| | DRED 38S-12S | | 12 | | 24 | | 71.5 | 55.5 |
| | DRED 38S-14S | | 14 | | 27 | | 74.5 | 57 |
| | DRED 38S-16S | | 16 | | 30 | | 74.5 | 56.5 |
| | DRED 38S-20S | | 20 | | 36 | | 78.5 | 56.5 |
| | DRED 38S-25S | | 25 | | 46 | | 81.5 | 57 |
| | DRED 38S-30S | | 30 | | 50 | | 85.5 | 58.5 |

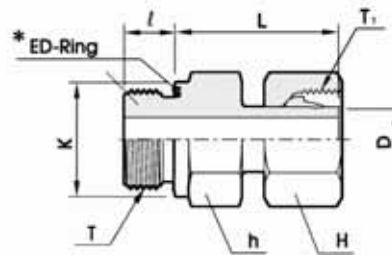
Dimensions given approximate length with tightened nut. All dimensions are in millimeters, for reference only subject to change. Without male stud, but supplied with fitted O-Ring for connection.

Please observe final assembly instructions on page 11.

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

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

DA-GED/MED



Form E stud end

for BSP Paralled

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

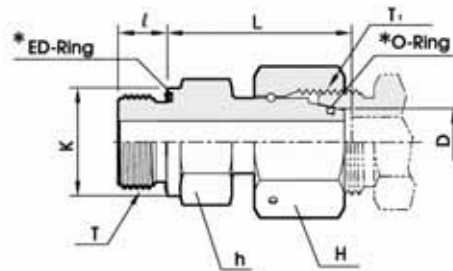
for Metric Paralled

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

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

*ED-Ring sealing of NBR(e.g. Perbunan®) standard, FPM(e.g. viton®) on request (see page 1)

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



Form E stud end

for BSP Paralled

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

for Metric Paralled

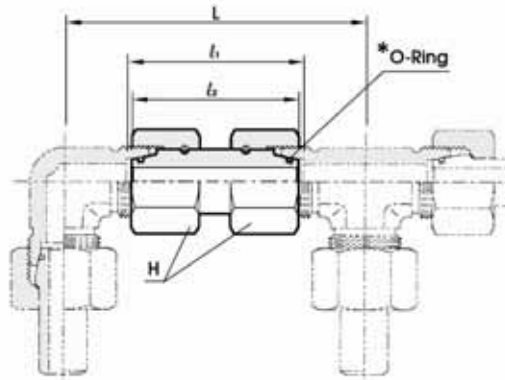
| Series | Part No. | Tube O.D. D | H | h | K | L | l | T M(Metric) | T ₁ |
|----------------------|--------------|----------------|----|----|----|------|----|----------------|----------------|
| L light PN 315 | DEGE 06L-M10 | 6 | 14 | 14 | 14 | 24.5 | 8 | M 10×1 | M 12×1.5 |
| | DEGE 08L-M12 | 8 |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

Dimensions given approximate length with tightened nut. All dimensions are in millimeters, for reference only subject to change.
Without male stud, supplied with fitted O-Ring for connection.
Please observe final assembly instructions on page 11.

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

Swivel Union with Cone

DUE



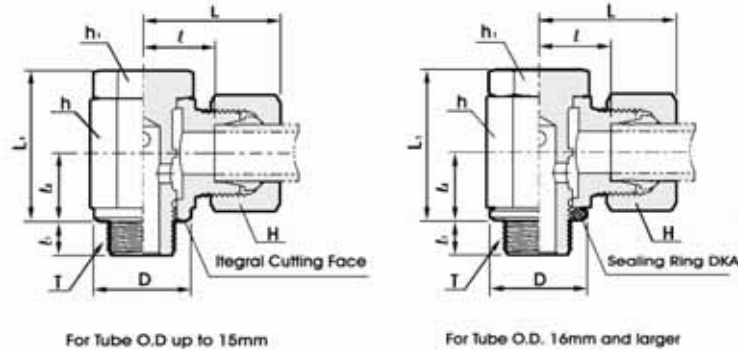
| Series | Part No. | Tube O.D. | H | L | l ₁ | l ₂ |
|---------------------|----------|-----------|----|------|----------------|----------------|
| L light PN500 | DUE-06L | 6 | 17 | 64 | 36 | 34 |
| | DUE-08L | 8 | 17 | 64 | 36 | 34 |
| | DUE-10L | 10 | 19 | 67 | 37 | 36 |
| PB400 | DUE-12L | 12 | 22 | 71 | 37 | 36 |
| | DUE-15L | 15 | 27 | 82 | 40 | 39 |
| | DUE-18L | 18 | 32 | 89.5 | 42.5 | 40.5 |
| PB250 | DUE-22L | 22 | 36 | 102 | 47 | 45 |
| | DUE-28L | 28 | 46 | 110 | 49 | 47 |
| | DUE-35L | 35 | 50 | 127 | 58 | 53 |
| | DUE-42L | 42 | 60 | 139 | 59 | 53 |
| S heavy PB800 | DUE-06S | 6 | 17 | 71 | 39 | 37 |
| | DUE-08S | 8 | 19 | 73 | 39 | 37 |
| | DUE-10S | 10 | 22 | 78 | 43 | 41 |
| PN630 | DUE-12S | 12 | 24 | 87 | 44 | 43 |
| | DUE-14S | 14 | 27 | 92 | 48 | 45 |
| | DUE-16S | 16 | 30 | 99 | 50 | 46 |
| PN400 | DUE-20S | 20 | 36 | 113 | 60 | 55 |
| | DUE-25S | 26 | 46 | 126 | 66 | 58 |
| | DUE-30S | 30 | 50 | 144 | 73 | 62 |
| | DUE-38S | 38 | 60 | 165 | 83 | 67 |

Dimensions given approximate length with tightened nut. All dimensions are in millimeters, for reference only subject to change. Without male stud, but supplied with fitted O-Ring for connection.

Please observe final assembly instructions on page 11.

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

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



for BSP Paralled

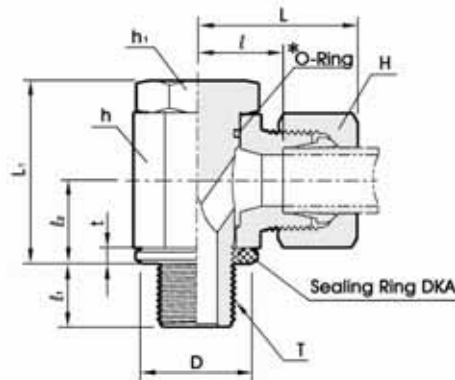
| Series | Part No. | Tube O.D. | D | H | h | h ₁ | L | L ₁ | t | t ₁ | t ₂ | T G(PF) | MA* |
|----------------------|---------------|-----------|------|----|----|----------------|----|----------------|------|----------------|----------------|---------|-----|
| L light PB 250 | DSWVE 06L-01G | 6 | 14.5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

for Metric Paralled

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

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

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



for BSP Paralled

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

for Metric Paralled

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

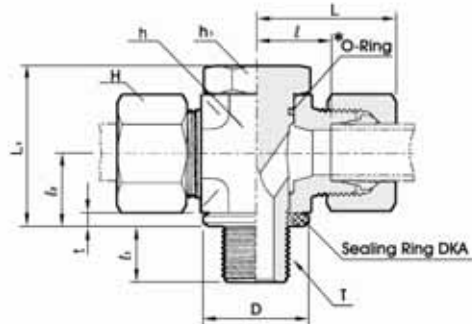
Dimensions given approximate length with tightened nut. All dimensions are in millimeters, for reference only subject to change.

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

¹MA = Recommended tightening torques (in Nm) for male G and M

High Pressure Banjo Fittings(BSP Paralled/Metric Paralled)

DTH-G/M



for BSP Paralled

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

for Metric Paralled

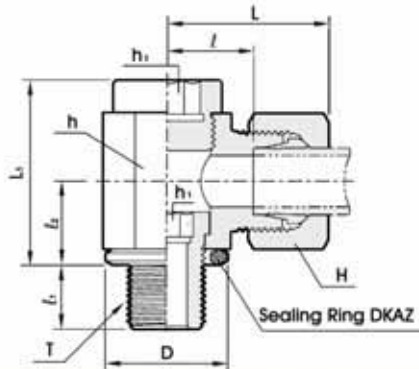
| Series | Part No. | Tube O.D. | D | H | h | h ₁ | L | L ₁ | t | t ₁ | t ₂ | t | T M(Metric) | MA [*] |
|----------------------|-------------|-----------|----|----|----|----------------|----|----------------|------|----------------|----------------|-----|----------------|-----------------|
| L light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

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

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

†MA = Recommended tightening torques (in Nm) for male G and M

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



for BSP Paralled

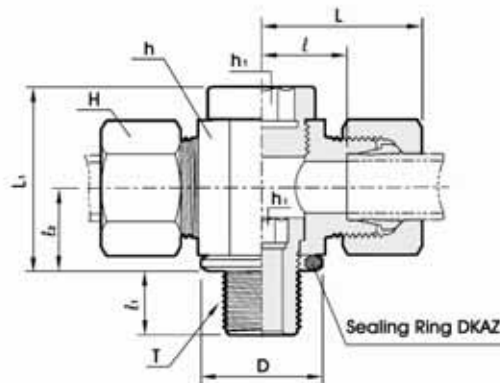
| Series | Part No. | Tube O.D. | D | H | h | h ₁ | L | L ₁ | l | l ₁ | l ₂ | T G(PF) |
|----------------------|--------------|-----------|----|----|----|----------------|----|----------------|------|----------------|----------------|------------|
| L light PB 250 | DSVW 06L-01G | 6 | 14 | 14 | 19 |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

for Metric Paralled

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

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

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



for BSP Paralled

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

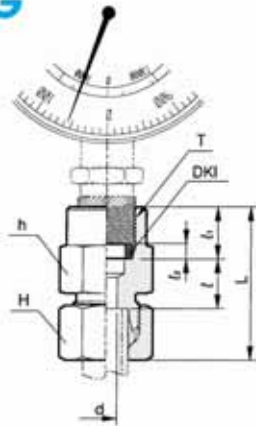
for Metric Paralled

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

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

Pressure Gauge Connector(BSP Paralled) with DKI-Ring

DGC-G

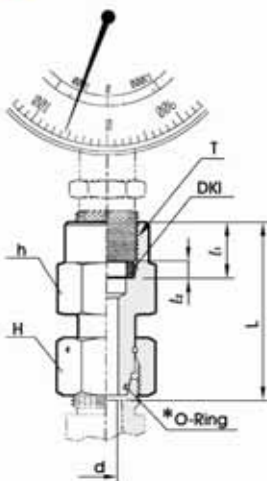


| Series | Part No. | Tube O.D. | d | H | h | L | l ₁ | l ₂ | T | G (PF) |
|-----------------------------|-------------|-----------|-----|----|----|----|----------------|----------------|-----|--------|
| L light PN 315 | DGC 06L-02G | 6 | 2.5 | 14 | 19 | 37 | 7.5 | 14.5 | 4.5 | 1/4 |
| | DGC 08L-02G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

Dimensions given approximate length with tightened nut.

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

DGE-G

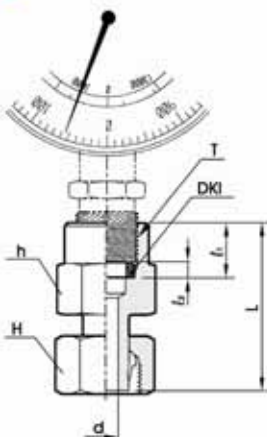


| Series | Part No. | Tube O.D. | d | H | h | L | l ₁ | l ₂ | T | G (PF) |
|-----------------------------|-------------|-----------|-----|----|----|------|----------------|----------------|-----|--------|
| L light PN 315 | DGE 06L-02G | 6 | 2.5 | 14 | 19 | 35.5 | 14.5 | 4.5 | 1/4 | |
| | DGE 08L-02G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

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

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

DGA-G

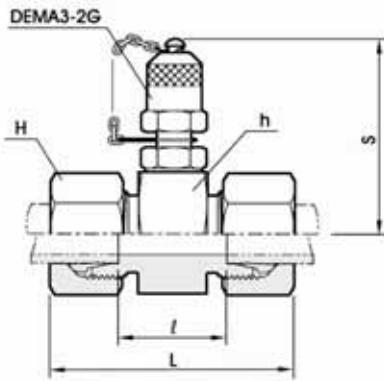


| Series | Part No. | Tube O.D. | d | H | h | L | l ₁ | l ₂ | T | G (PF) |
|-----------------------------|-------------|-----------|-----|----|----|------|----------------|----------------|-----|--------|
| L light PN 315 | DGA 06L-02G | 6 | 3.5 | 14 | 19 | 38 | 14.5 | 4.5 | 1/4 | |
| | DGA 08L-02G |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

Please observe Final Assembly Instructions on page 11.

Tee Test Coupling with threaded Connection DEMA 3-02G

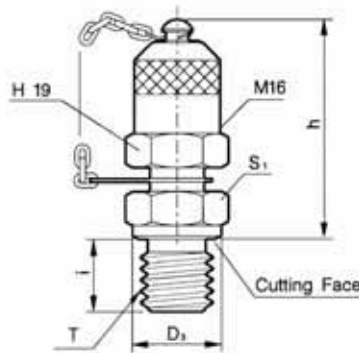
DGMA



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

Test Coupling with threaded connection M16

DEMA3



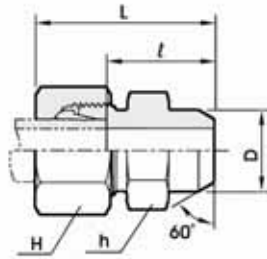
Form B stud end standard
(Form E stud end available)

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

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

Welding Connector

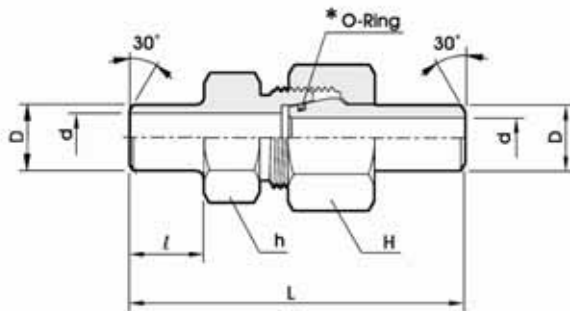
DAS



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

Welding Connector with DAK

DASK

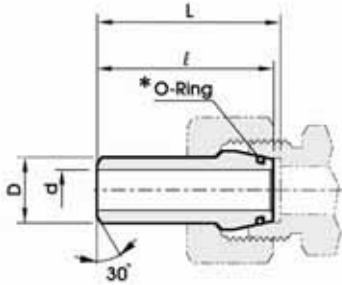


| Series S | Part No. | Tube O.D. D | d | H | h | L | l |
|---------------|-------------|----------------|----|----|----|------|------|
| Max. Pressure | | | | | | | |
| PB 248 | DASK 10×1.0 | 10 | 8 | 22 | 19 | 58 | 10 |
| PB 357 | DASK 10×1.5 | | 7 | | | | |
| PB 458 | DASK 10×2.0 | | 6 | | | | |
|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

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

Welding Nipple with *O-Ring

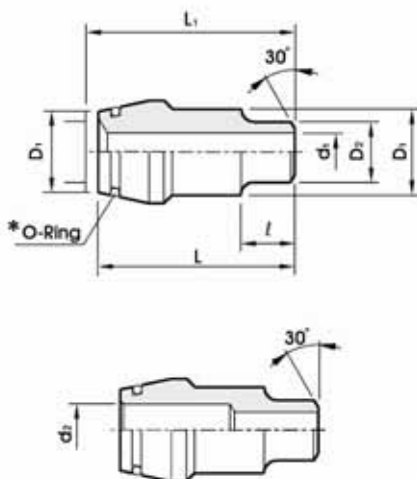
DAK



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

Reducing Welding Nipple with *O-Ring

DAKR



| Pressure Rating | | Part No. | Tube O.D | | d ₁ | d ₂ | L ₁ | L | l |
|-----------------|---------------|---------------|----------------|----------------|----------------|----------------|----------------|------|----|
| Fittings | DAKR and Tube | | D ₁ | D ₂ | | | | | |
| PN 630 | PB 526 | DAKR 1006×1.5 | 10 | 6 | 3 | 5 | 37.5 | 35 | 12 |
| | PB 526 | DAKR 1008×2.0 | 10 | 8 | 4 | - | 37.5 | 35 | 12 |
| | PB 526 | DAKR 1208×2.0 | 12 | 8 | 4 | 6 | 37.5 | 35 | 14 |
| | PB 357 | DAKR 1210×1.5 | 12 | 10 | 7 | - | 37.5 | 35 | 14 |
| PN 400 | PB 474 | DAKR 1612×2.5 | 16 | 12 | 7 | - | 46.5 | 43 | 15 |
| | PB 474 | DAKR 2012×2.5 | 20 | 12 | 7 | - | 51.5 | 47.5 | 15 |
| | PB 433 | DAKR 2016×3.0 | 20 | 16 | 10 | - | 53.5 | 49.5 | 17 |
| | PB 433 | DAKR 2516×3.0 | 25 | 16 | 10 | - | 56.5 | 51 | 17 |
| | PB 458 | DAKR 2520×4.0 | 25 | 20 | 12 | - | 59.5 | 54 | 20 |
| | PB 303 | DAKR 3016×2.0 | 30 | 16 | 12 | - | 67 | 60 | 17 |
| | PB 303 | DAKR 3020×2.5 | 30 | 20 | 15 | - | 70 | 63 | 20 |
| | PB 292 | DAKR 3025×3.0 | 30 | 25 | 19 | - | 70 | 63 | 20 |
| PN 315 | PB 303 | DAKR 3816×2.0 | 38 | 16 | 12 | - | 79 | 69.5 | 17 |
| | PB 303 | DAKR 3820×2.5 | 38 | 20 | 15 | - | 82 | 72.5 | 20 |
| | PB 292 | DAKR 3825×3.0 | 38 | 25 | 19 | - | 82 | 72.5 | 20 |
| | PB 321 | DAKR 3830×4.0 | 38 | 30 | 22 | - | 82 | 72.5 | 20 |

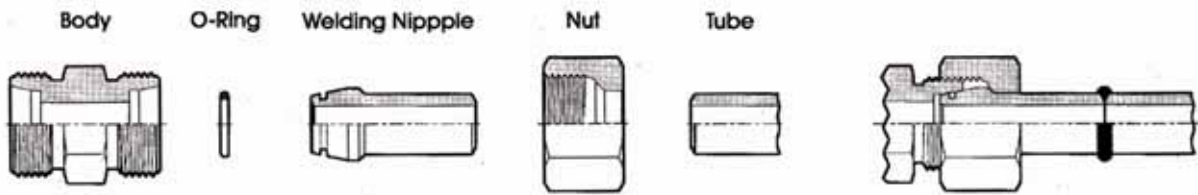
*O-Ring seals NBR(e.g. Perbunam®) standard, FPM(e.g. Viton®) on request (see page 1)

Please observe final assembly instructions on page 11.

Max Pressure ratings are based on carbon steel (st 35.4 NBK), and pressure rating of the stainless steel given refer to on page 4.

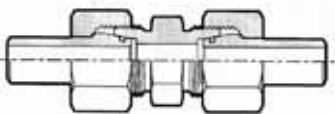
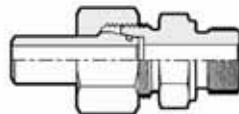
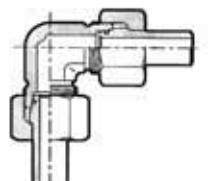
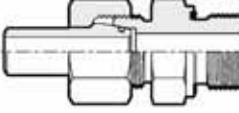
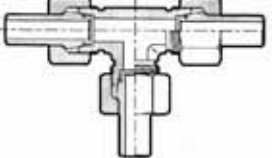
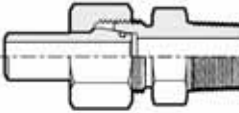
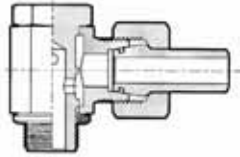
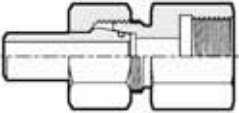
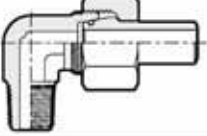
All dimensions are in millimeters, for reference only subject to change.

Installation Instruction for Welding Nipple Fittings



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

Ordering information for Welding Nipple fittings.

| Order No. | Figures | Order No. | Figures |
|-----------|---|-----------|---|
| DGV | DU (Without Cutting Ring) + DAK | DGEV | DMC (Without Cutting Ring) + DAK |
| |  | |  |
| DWV | DL (Without Cutting Ring) + DAK | DGUIV | DMC-ED (Without Cutting Ring) + DAK |
| |  | |  |
| DTV | DT (Without Cutting Ring) + DAK | DGEV-R | DMC (Without Cutting Ring) + DAK |
| |  | |  |
| DWSEV | DSWVE (Without Cutting Ring) + DAK | DGAI | DFC (Without Cutting Ring) + DAK |
| |  | |  |
| | | DWEV | DLM (Without Cutting Ring) + DAK |
| | | |  |

General informations for Non-Return Valves

■ Application

For hydraulic fluid and compressed air.

Please contact our application engineers for doubtful conditions or the use of special fluids.

■ Design

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

■ Opening Pressure

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

■ Materials

Standard materials are stainless steel, 316, carbon steel or brass available upon request.

Sealing seals are FPM(e.g. Viton®) standard, other materials available on request.

Non Return Valve

DCVU

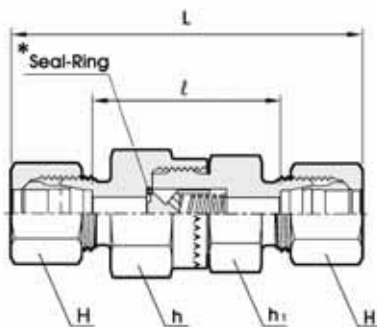


FIG.A

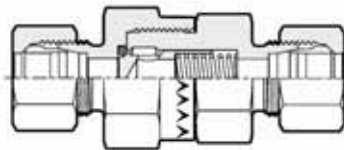


FIG.B

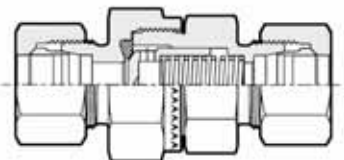


FIG.C



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

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

*O-Ring of NBR(e.g. Perbunan®)standard, FPM(e.g. viton®) on request (see page1)

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

for BSP Paralled

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

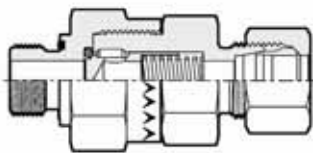
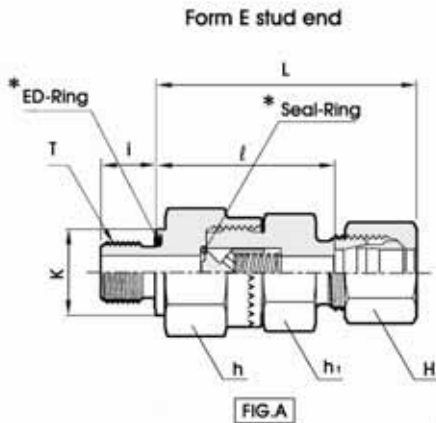


FIG. B

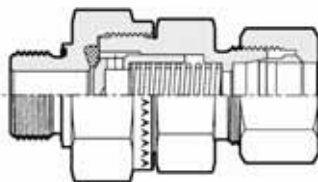


FIG. C

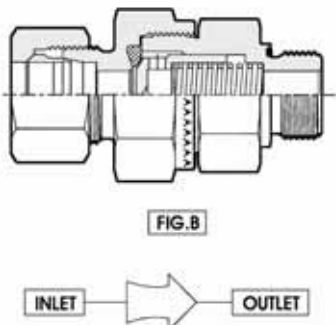
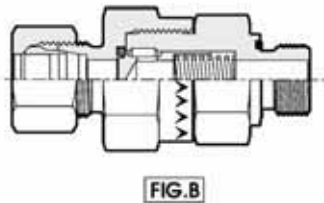
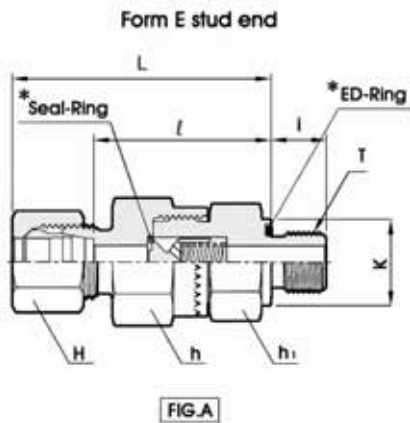


for Metric Paralled

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

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

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



for BSP Paralled

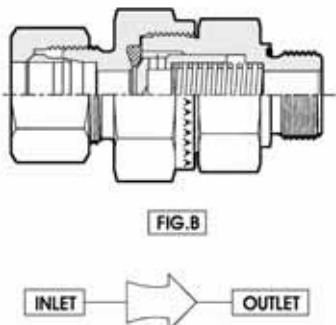
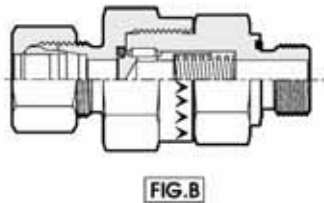
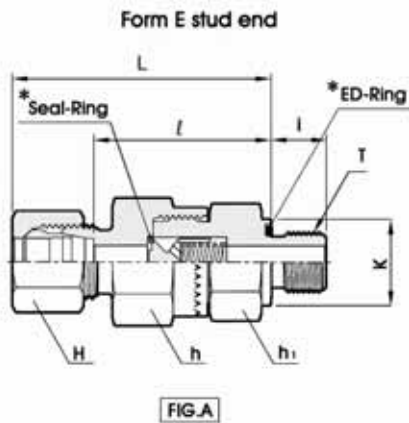
| Series | Part No. | Tube O.D. | H | h | h1 | K | L | ℓ | i | T G(PF) | Fig. |
|---------------------|--------------|-----------|----|----|----|----|------|------|----|------------|------|
| L light PB250 | DCV06L-01GED | 6 | 14 | 17 | 17 | 14 | 41 | 26.5 | 8 | 1/8 | A |
| | DCV08L-02GED | 8 | 17 |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

for Metric Paralled

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

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

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



for BSP Paralled

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

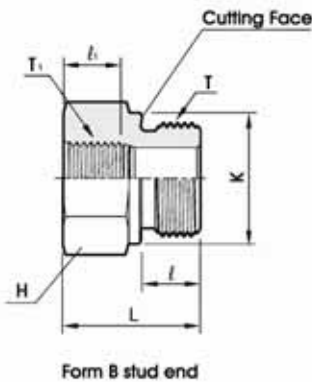
for Metric Paralled

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

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

Male Female Adaptor (BSP Paralled)

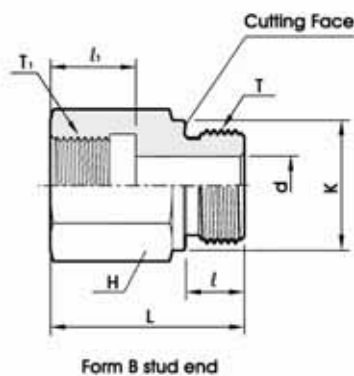
MFAD



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

Male Female Adaptor (BSP Paralled)

MFAE

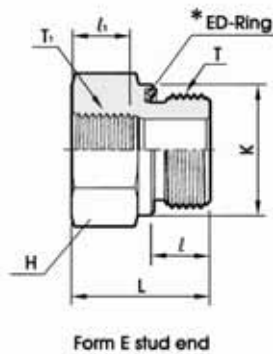


| PB | Part No. | d | H | K | L | l | l ₁ | Male stud T G (PF) | Female stud T ₁ G (PF) |
|--------|-------------|----|----|----|----|----|----------------|-----------------------|--------------------------------------|
| PB 630 | MFAE 01-02G | 4 | 19 | 14 | 31 | 8 | 17 | 1/8 | 1/4 |
| | MFAE 01-03G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

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

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

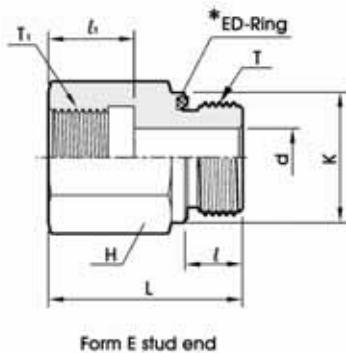
MFAD-ED



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

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

MFAE-ED



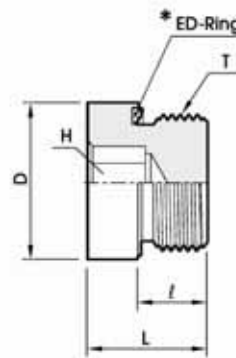
| PB | Part No. | D | H | K | L | ℓ | ℓ ₁ | Male stud T G (PF) | Female stud T ₁ G (PF) |
|--------|---------------|----|----|----|----|----|----------------|-----------------------|--------------------------------------|
| PB 630 | MFAE 01ED-02G | 4 | 19 | 14 | 31 | 8 | 17 | 1/8 | 1/4 |
| | MFAE 01ED-03G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

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

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

Blanking Plugs for Port with *ED-Ring

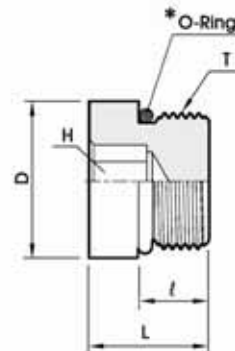
DVSTI-GED/MED



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

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

DVSTI



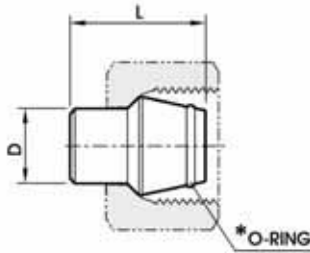
| PB | Part No. | T M(Metric) | D | H | L | t |
|-----|-----------|----------------|----|----|------|------|
| 630 | DVSTI-M10 | M 10×1 | 13 | 5 | 14 | 10 |
| | DVSTI-M12 | M 12×1.5 | 17 | 6 | 16.5 | 11.5 |
| | DVSTI-M14 | M 14×1.5 | 19 | 6 | 16.5 | 11.5 |
| | DVSTI-M16 | M 16×1.5 | 21 | 6 | 18 | 13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

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

* ED-Ring and O-Ring of NBR(e.g.Perbunan®) Standard, FPM(e.g. Viton®) on request (See Page 1)

Blanking Plug with *O-Ring

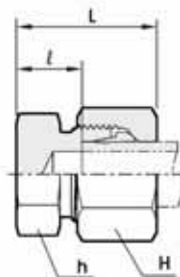
DVKA



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

Tube Cap

DCA



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

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

* O-Ring of NBR(e.g. Perbunan[®]) Standard, FPM(e.g. Viton[®]) on request (See Page 1)

Tube Insert

DIL



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

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

*Bulkhead Lock Nut

DLN



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

*According to DIN 80705 for bulkhead screw-joint.

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

Sealing rings for DWH/DTH and DSWVE

Sealing rings for DSVW/DSVT

DKA



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

DKAZ

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

Sealing rings for DGC

DKI

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

ED-Ring KP-B-S



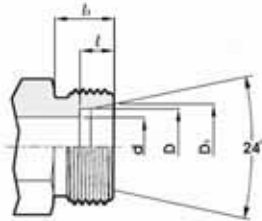
| Part No. | For Male Thread | |
|-----------|-----------------|-------|
| | Metric | G(PF) |
| KP-B-S M8 | M 8 × 1 | - |
| KP-B-S01G | M 10 × 1 | 1/8 |
| KP-B-SM12 | M 12 × 1.5 | - |
| KP-B-S02G | M 14 × 1.5 | 1/4 |
| KP-B-SM16 | M 16 × 1.5 | - |
| KP-B-S03G | - | 3/8 |
| KP-B-SM18 | M 18 × 1.5 | -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

O-Rings KP-B-DS

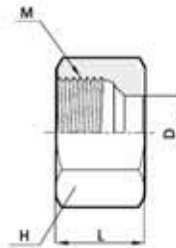


| Part No. | D | T |
|-----------|------|-----|
| KP-B-DS06 | 4 | 1.5 |
| KP-B-DS08 | 6 | 1.5 |
| KP-B-DS10 | 7.5 | 1.5 |
| KP-B-DS12 | 9 | 1.5 |
| KP-B-DS14 | 10 | 2 |
| KP-B-DS16 | 12 | 2 |
| KP-B-DS18 | 15 | 2 |
| KP-B-DS20 | 16.3 | 2.4 |
| KP-B-DS22 | 20 | 2 |
| KP-B-DS25 | 20.3 | 2.4 |
| KP-B-DS30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

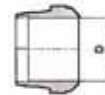
Tube end Dimension



Nut
DN



Cutting Ring
DS



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

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