

INFORMATION

General

Based Standard DIN 3851 SEKWANG HI-TECH, 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 SEKWANG HI-TECH fittings.

Fitting materials

SEKWANG HI-TECH 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 are based on, 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		1.4571 (SS316)
	Size	Pressure	
LL	4-12	100 bar	100 bar
	6-15	250 bar	250 bar
	18-22	160 bar	160 bar
L	28-42	100 bar	100 bar
	6-14	630 bar	630 bar
	16-25	400 bar	400 bar
S	30-38	250 bar	250 bar

Caution! For certain type 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 range fittings are zinc chromate plated.

All weldable fittings are phosphated.

Nickel-plated on request for carbon steel.

Fluids

SEKWANG HI-TECH 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

HT - 12 S - S316
① ② ③ ④ ⑤ ⑥

Example 3. Tube to Tube Port

HEW - 16 S - S316
① ② ③ ④ ⑤ ⑥

Example 5. Banjo Fitting

HWH - 16 S - 04G - S316
① ② ③ ④ ⑤ 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)

Name Size	1/8"	1/4"	3/8"	1/2"	3/4"	1"	1 1/4"	1 1/2"
ANSI / ASME B1.20.1 NPT	02N	04N	06N	08N	12N	16N	20N	24N
DIN-ISO228(DIN 259) BSP /Parallel	02G	04G	06G	08G	12G	16G	20G	24G
DIN-2999 BSP Tapered	02R	04R	06R	08R	12R	16R	20R	24R

Thread Designator (Metric Thread)

Metric Size	M8X1.0	M10X1.0	M12X1.5	M14X1.5	.....	M27X2.0	M33X2.0	M42X2.0	M48X2.0
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	1 1/16-12UN	1 1/16-12UN	1 5/16-12UN	1 5/8-12UN
Identifier	07U	09U	12U	14U	17U	21U	26U

Material Designator

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

INFORMATION

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	II	III
4	±0.08	0.5	0.047	313	274	191
4	±0.08	0.75	0.060	409	391	282
4	±0.08	1	0.074	522	500	353
6	±0.08	0.75	0.103	333	289	307
6	±0.08	1	0.123	389	372	357
6	±0.08	1.5	0.166	549	526	458
6	±0.08	2	0.197	692	662	568
6	±0.08	2.25	0.208	757	725	625
8	±0.08	1	0.173	333	288	278
8	±0.08	1.5	0.240	431	412	328
8	±0.08	2	0.296	549	526	458
8	±0.08	2.5	0.339	658	630	526
10	±0.08	1	0.222	282	248	228
10	±0.08	1.5	0.314	373	357	278
10	±0.08	2	0.395	476	458	357
10	±0.08	2.5	0.462	576	551	458
10	±0.08	3	0.518	666	638	526
12	±0.08	1	0.271	235	209	209
12	±0.08	1.5	0.389	355	303	278
12	±0.08	2	0.493	409	391	328
12	±0.08	2.5	0.566	495	474	391
12	±0.08	3	0.606	576	551	458
12	±0.08	3.5	0.734	651	624	526
15	±0.08	1	0.345	188	171	171
15	±0.08	1.5	0.499	282	248	228
15	±0.08	2	0.641	336	321	278
15	±0.08	2.5	0.771	409	391	328
15	±0.08	3	0.888	478	458	391
16	±0.08	1	0.370	176	160	160
16	±0.08	1.5	0.536	264	234	228
16	±0.08	2	0.691	353	303	278
16	±0.08	2.5	0.832	396	370	328
16	±0.08	3	0.962	452	433	391
18	±0.08	1	0.419	157	143	143
18	±0.08	1.5	0.610	235	209	209
18	±0.08	2	0.769	313	273	273
18	±0.08	2.5	0.956	348	333	328
18	±0.08	3	1.110	409	391	328

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

*Permissible variation in wall thickness (DIN 2391)

- Calculation Pressure to DIN 2413 part I for primarily static load conditions
- Calculated pressure to DIN 2413 part III for dynamic load conditions
- Yield point(K) : 235 N/mm² (to DIN 1630)
- Safety factor(s) : 1.5
- Allowance factor(c) $P = \frac{20 \cdot K \cdot t \cdot c}{S \cdot D}$ (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 pulsation 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 17498, provide tolerance to DIN 2391, Part 1. 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	II	III
4	±0.08	0.75	0.061	391	376	376
4	±0.08	1	0.075	500	480	480
6	±0.08	1	0.125	372	357	357
6	±0.08	1.5	0.168	526	505	505
6	±0.08	2	0.200	662	637	637
6	±0.08	2.25	0.211	725	696	696
8	±0.08	1	0.175	347	277	277
8	±0.08	1.5	0.244	412	396	396
8	±0.08	2	0.300	526	505	505
8	±0.08	2.5	0.344	630	604	604
10	±0.08	1	0.225	294	238	238
10	±0.08	1.5	0.319	357	343	343
10	±0.08	2	0.401	458	439	439
10	±0.08	2.5	0.469	551	529	529
10	±0.08	3	0.525	638	612	612
12	±0.08	1	0.275	245	201	201
12	±0.08	1.5	0.384	368	291	291
12	±0.08	2	0.501	391	376	376
12	±0.08	2.5	0.594	474	544	544
12	±0.08	3	0.615	551	529	529
12	±0.08	3.5	0.744	624	599	599
15	±0.08	1.5	0.507	294	238	238
15	±0.08	2	0.651	321	309	309
15	±0.08	2.5	0.782	391	376	376
15	±0.08	3	0.901	458	439	439
16	±0.08	2	0.701	368	291	291
16	±0.08	2.5	0.845	370	355	355
16	±0.08	3	0.977	433	416	416
18	±0.08	1.5	0.620	245	201	201
18	±0.08	2	0.801	327	262	262
18	±0.08	2.5	0.967	333	320	320
18	±0.08	3	1.126	391	376	376

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

*Permissible variation in wall thickness (DIN 2391)

- Calculation Pressure to DIN 2413 part I for primarily static load conditions
- Calculated pressure to DIN 2413 part III for dynamic load conditions
- Yield point(K) : 216 N/mm² (assumed value)
- Safety factor(s) : 1.5
- Allowance factor(c) $P = \frac{20 \cdot K \cdot t \cdot c}{S \cdot D}$ (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 pulsation fatigue limit of 225 N/mm²
• Temperature range : - 60°C to +400°C reduction in pressure for higher temperatures (See page 1)

INFORMATION

Tightening Torques for Studs

- Recommend tightening torques MA
- The table below shows 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 fitting out of steel(galvanized) and to counter parts face of steel. For the Male / Female adapters (HFAD / HFAE), there apply the tightening torques for series 'S'

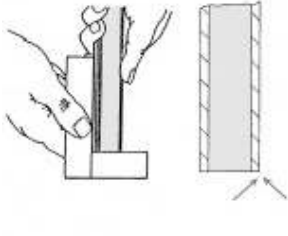
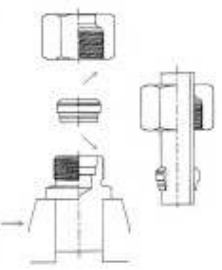
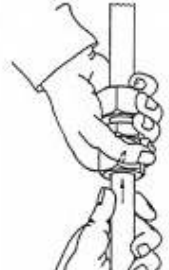
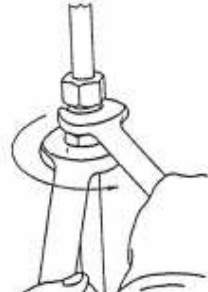
Series	Tube O.D	Pipe Thread	MA(Nm)	Metric Thread ISO	MA(Nm)
L	6	G 1/8A	25	M10X1	25
	8	G 1/4A	50	M12X1.5	30
	10	G 1/4A	50	M14X1.5	50
	12	G 3/8A	80	M16X1.5	80
	15	G 1/2A	160	M18X1.5	90
	18	G 1/2A	105	M22X1.5	160
	22	G 3/4A	220	M26X1.5	285
	18	G 1A	370	M33X2.0	425
	35	G 1 1/4A	600	M42X2.0	600
	42	G 1 1/2A	800	M48X2.0	800
S	6	G 1/4A	60	M12X1.5	35
	8	G 1/4A	60	M14X1.5	60
	10	G 3/8A	110	M16X1.5	95
	12	G 3/8A	110	M18X1.5	120
	14	G 1/2A	170	M20X1.5	170
	16	G 1/2A	140	M22X1.5	190
	20	G 3/4A	320	M27X2.0	320
	25	G 1A	380	M33X2.0	500
	30	G 1 1/4A	600	M42X2.0	600
	38	G 1 1/2A	800	M48X2.0	800

Assembly Instruction

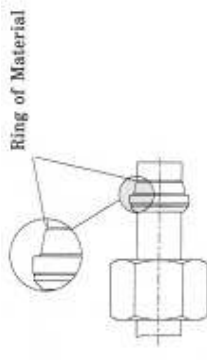

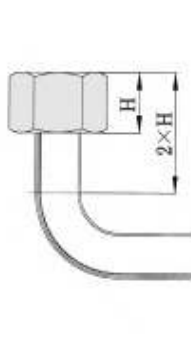
This assembly instruction applicable to DIN 2353 fittings shows suitable make-up of fittings into seamless pipe in accordance with DIN 3859.

- The design including form A and 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

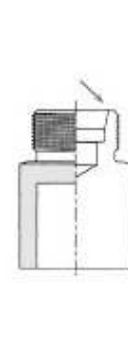
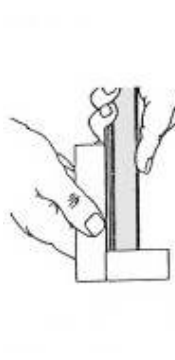
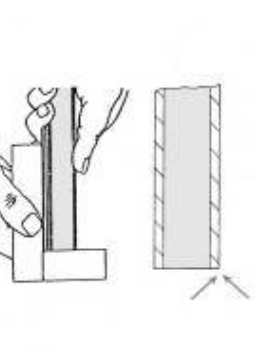
Assembly of cutting ring fittings in direct fitting body

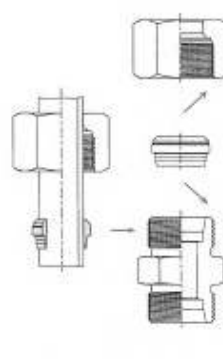


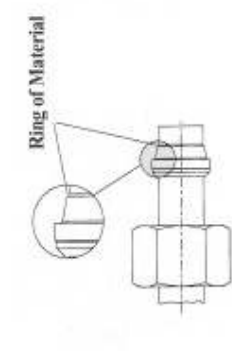
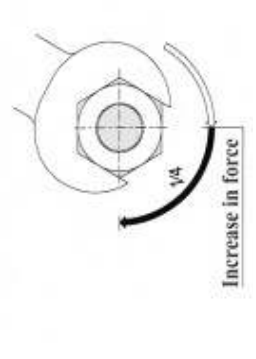
 <p>1.0 Saw the tube at right angle. An angular offset 1/2" in relation to the tube axis is permissible.</p> <p>1.1 After clean, lightly deburr tube ends at the inside and outside edge.</p> <p>1.2 Don't use a tube cutter because this cause formation of considerable burrs and an angular cut. Use sawing machine or device instead.</p>	 <p>2.0 Lubricate thread and inside of fitting body also cutting ring and thread of nut. Don't use grease.</p> <p>2.1 Place nut and cutting ring in tube as shown. Ensure cutting ring and nut are facing the right way.</p>
 <p>3.0 Press tube into fitting body, up to tube abutment, then hand-tighten the nut.</p>	 <p>4.0 make sure the nut is in hand tight position, then the 1 1/2 turns with wrench by holding fitting body with a second wrench.(Never turn fitting body,hold body and turn nut)</p> <p>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.</p>

Assembly Instruction


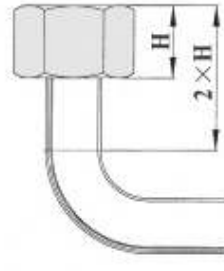
<p>5.0 Check penetration of cutting edge. A visible ring of material should fill the space in front of the cutting ring and face. Cutting ring may turn on tube, but should not be capable of axial displacement.</p>	
<p>6.0 Each time the fitting is disassembled, the nut must be retightened firmly using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

Assembly of cutting ring fittings in pre-assembly tool

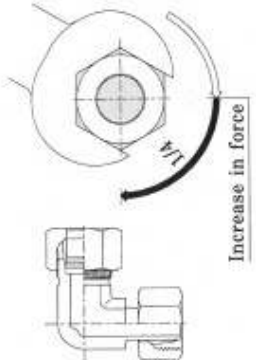
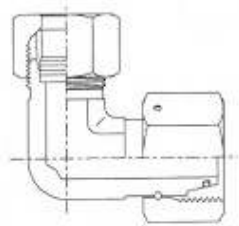
<p>1.0 In order to ensure positive assembly HMIC DIN fitting should always be pre-assembly in on oiled pre-assembly tool. For direct assembly, torque-controlled assembly or mechanical pre-assembly, which are also possible. Please refer to separate assembly instructions.</p>	
<p>2.0 Saw the tube at right angle. An angular offset 1/2° in relation to the tube axis is permissible.</p>	
<p>2.1 After clean, lightly sebur 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.</p>	

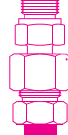
<p>3.0 Lubricate thread and inside of fittings body also ring and thread of nut. Don't use grease. 3.1 Place nut and cutting ring on tube as shown. Ensure cutting ring and nut are facing the right away.</p>	
<p>4.0 Press tube into fitting body, up to tube abutment, then hand-tighten the nut.</p>	
<p>5.0 Make sure the nut is hand tight position, then the 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 reduce the nominal pressure rating and the life of the fitting which cause leakage or slipping of the tube.</p>	
<p>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.</p>	
<p>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 unfavorable 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 off the fitting.</p>	



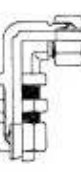

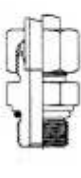
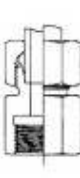

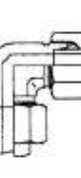

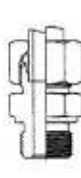
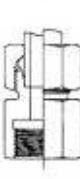

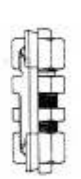

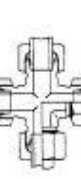
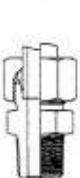

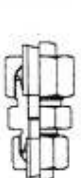

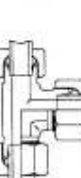
Assembly Instruction

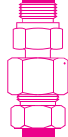
<p>8.0 Each time the fitting is disassembled, the nut must retightened firmly using the same torque as required for final assembly.</p>	
<p>9.0 Minimum length of straight tube and for tube bends, up to start of the bending radius must be at least twice (2XH) the nut length(H)</p>	

Assembly Instruction for standpipe & cone fitting with O-Ring

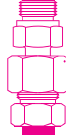
<p>1.0 Standpipes are generally supplied with pre-assembled cutting ring. Tighten the nut 1/4 turn with wrench beyond the point of a noticeable increase in force. Hold fitting body firmly by means of wrench.</p> <p>1.1 With unfavorable mounting conditions and great tube dimensions, final assembly must be completed in a vice with the fitting body to be subsequently installed.</p> <p>Caution! Any deviating number of tightening turns reduces the nominal pressure and the service life of the fitting and may cause leakages or slipping off the fitting.</p>	
<p>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.</p> <p>2.1 With unfavorable mounting conditions and great tube dimensions, final assembly must be completed in a vice with the fitting body to be subsequently installed.</p> <p>Caution! Any deviating number of tightening turns reduces the nominal pressure and the service life of the fitting and may cause leakages or slipping off the fitting.</p>	



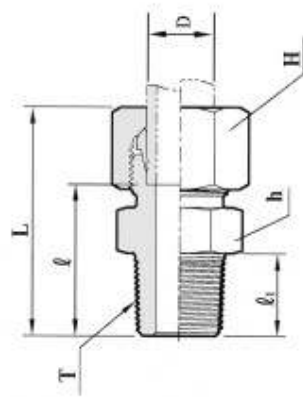
<p>HMC-R</p>	<p>P.30</p>		<p>HMC-N</p>	<p>P.31</p>		<p>HFC-G</p>	<p>P.32</p>		<p>HFC-M</p>	<p>P.33</p>		<p>HLM-R/M</p>	<p>P.34</p>	
<p>HU</p>	<p>P.35</p>		<p>HUR</p>	<p>P.36</p>		<p>HBU</p>	<p>P.37</p>		<p>HL</p>	<p>P.38</p>		<p>HOM-U</p>	<p>P.39</p>	
<p>HT</p>	<p>P.40</p>		<p>HTR</p>	<p>P.41~42</p>		<p>HC</p>	<p>P.43</p>		<p>HOM-G</p>	<p>P.44~45</p>		<p>HOM-U</p>	<p>P.46</p>	
<p>HOM-M</p>	<p>P.47</p>		<p>HOM-GED</p>	<p>P.48</p>		<p>HOM-MED</p>	<p>P.49</p>		<p>HOLM</p>	<p>P.50</p>		<p>HRED</p>	<p>P.51</p>	



HEGE-G/M	HUE	HEW	HET	HEL	HFAD	HFAD-ED	HFAE	HFAE-ED	HVSTI-GED / MED
P.52-53	P.54	P.55	P.56	P.57	P.77	P.77	P.78	P.79	P.80
HR	HKOR	HA-GED	HA-MED	HAS	HVSTI	HVKA	HCA	HLN	HKA
P.58	P.59-60	P.61	P.62	P.63	P.80	P.81	P.81	P.82	P.82
HASK	HAK	HLA	HBTA	HRTA	HKAZ	HKI	KP-B-S	KP-B-HS	HN
P.63	P.64	P.65	P.66	P.67	P.82	P.83	P.83	P.83	P.84
HSWVE-G/M	HWH-G/M	HTH-G/M	HSWV-G/M	HSVT-G/M	HS				
P.68-69	P.70-41	P.72-73	P.74-75	P.76	P.84				



MALE CONNECTOR (BSP TAPERED)
HMC-R

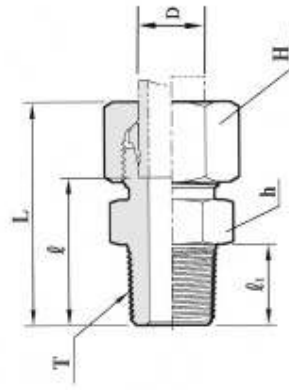


Form C stud end

Series	Part No.	Tube O.D.		h	H	L	l	φ ₁	T (BSPT)
		D	D						
LL very light PN 100	HMC 04LL-02R	4	4	11	10	26	16	8	1/8
	HMC 06LL-02R	6	6	11	12	26	14.5	8	1/8
	HMC 08LL-02R	8	8	12	14	28	16.5	8	1/8
	HMC 10LL-04R	10	10	14	14	32	20.5	12	1/4
	HMC 12LL-04R	12	12	17	17	32	20.5	12	1/4
	HMC 15L-08R	15	15	17	19	32	20	12	1/4
L light PN 250	HMC 06L-02R	6	6	12	14	30	15	8	1/8
	HMC 08L-04R	8	8	17	17	35	20	12	1/4
	HMC 10L-04R	10	10	17	19	36	21	12	1/4
	HMC 12L-04R	12	12	19	22	37	22	12	1/4
	HMC 12L-06R	12	12	24	22	39	24	14	1/2
	HMC 15L-06R	15	15	24	27	38	23	12	3/8
PN 160	HMC 15L-08R	15	15	24	27	40	25	14	1/2
	HMC 18L-08R	18	18	27	32	41	25.5	14	1/2
	HMC 22L-12R	22	22	32	36	46	29.5	16	3/4

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

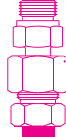
MALE CONNECTOR (NPT THREAD)
HMC-N



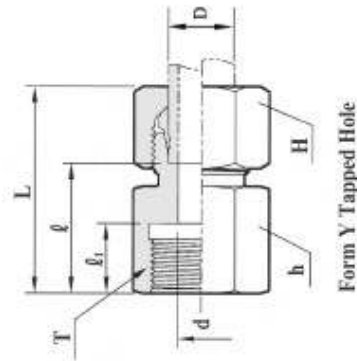
Form C stud end

Series	Part No.	Tube O.D.		h	H	L	l	φ ₁	T (NPT)
		D	D						
LL very light PN 100	HMC 04LL-02N	4	4	11	10	28	18.5	9.9	1/8
	HMC 06LL-02N	6	6	11	12	28	16.5	9.9	1/8
	HMC 08LL-02N	8	8	12	14	30	18.5	9.9	1/8
	HMC 06L-02N	6	6	12	14	32	17	9.9	1/8
	HMC 06L-04N	6	6	17	14	38	23	14.2	1/4
	HMC 08L-04N	8	8	17	17	38	23	14.2	1/4
L light PN 250	HMC 10L-04N	10	10	17	19	39	24	14.2	1/4
	HMC 10L-06N	10	10	19	19	40	25	14.2	3/8
	HMC 12L-04N	12	12	19	22	40	25	14.2	1/4
	HMC 12L-06N	12	12	19	22	40	25	14.2	3/8
	HMC 12L-08N	12	12	22	22	45	30	19.1	1/2
	HMC 15L-08N	15	15	24	27	46	31	19.1	1/2
PN 160	HMC 18L-08N	18	18	27	32	48	31.5	19.1	1/2
	HMC 22L-12N	22	22	32	36	50	33.5	19.1	3/4
	HMC 28L-16N	28	28	41	41	56	39.5	23.9	1
	HMC 35L-20N	35	35	46	50	62	40.5	23.9	1 1/4
	HMC 42L-24N	42	42	55	60	65	42	25.4	1 1/2
	HMC 06S-04N	6	6	17	17	43	28	14.2	1/4
S Heavy PN 630	HMC 08S-04N	8	8	17	19	43	28	14.2	1/4
	HMC 10S-04N	10	10	19	22	44	27.5	14.2	1/4
	HMC 10S-06N	10	10	19	22	44	27.5	14.2	3/8
	HMC 12S-04N	12	12	22	24	46	29.5	14.2	1/4
	HMC 12S-06N	12	12	22	24	46	29.5	14.2	3/8
	HMC 12S-08N	12	12	22	24	51	34.5	19.1	1/2
PN 400	HMC 14S-08N	14	14	24	27	54	36	19.1	1/2
	HMC 16S-08N	16	16	27	30	54	35.5	19.1	1/2
	HMC 20S-12N	20	20	32	36	59	37.5	19.1	3/4
	HMC 25S-16N	25	25	41	46	69	45	23.9	1
	HMC 30S-20N	30	30	46	50	73	46.5	23.9	1 1/4
	HMC 38S-24N	38	38	55	60	80	49	25.4	1 1/2

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



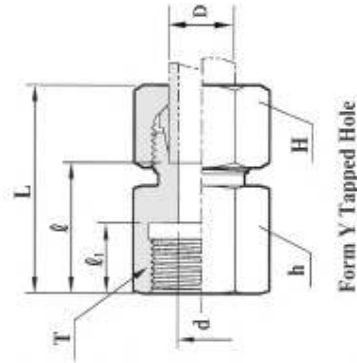
FEMALE CONNECTOR (BSP PARALLEL) HFC-G



Series	Part No.	Tube O.D.		d	h	H	L	ø	ø ₁	T (BSP)
		D	D							
L Light PN 250	HFC 06L-02G	6	6	4	14	14	34	19	12	1/8
	HFC 08L-04G	8	8	6	19	17	39	24	17	1/4
	HFC 08L-06G	8	8	6	24	17	40	25	17	3/8
	HFC 08L-08G	8	8	6	27	17	44	29	20	1/2
	HFC 10L-04G	10	10	8	19	19	40	25	17	1/4
	HFC 10L-06G	10	10	8	24	19	41	26	17	3/8
	HFC 10L-08G	10	10	8	27	19	45	30	20	1/2
	HFC 12L-06G	12	12	10	24	22	41	26	17	3/8
	HFC 12L-08G	12	12	10	27	22	45	30	20	1/2
	HFC 15L-08G	15	15	12	27	27	46	31	20	1/2
PN 160	HFC 18L-08G	18	18	15	27	32	47	30.5	20	1/2
	HFC 22L-12G	22	22	19	36	36	52	35.5	22	3/4
	HFC 28L-16G	28	28	24	41	41	55	38	24.5	1
PN 100	HFC 35L-20G	35	35	30	55	50	63	41	26.5	1 1/4
	HFC 42L-24G	42	42	36	60	60	65	42.5	28.5	1 1/2
	HFC 06S-04G	6	6	4	19	17	41	26	17	1/4
S Heavy PN 630	HFC 08S-04G	8	8	5	19	19	41	26	17	1/4
	HFC 10S-06G	10	10	7	24	22	43	26.5	17	3/8
	HFC 12S-06G	12	12	8	24	24	43	26.5	17	3/8
	HFC 14S-08G	14	14	10	30	27	50	32	20	1/2
PN 400	HFC 16S-08G	16	16	12	30	30	50	31.5	20	1/2
	HFC 20S-12G	20	20	16	36	36	56	34.5	22	3/4
	HFC 25S-16G	25	25	20	41	46	62	37.5	24.5	1
PN 250	HFC 30S-20G	30	30	25	55	50	69	42	26.5	1 1/4
	HFC 38S-24G	38	38	32	60	60	74	43.5	28.5	1 1/2

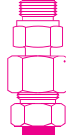
Dimensions given approximate length with tightened nut. All dimensions are in millimeters, for reference only subject to change.

FEMALE CONNECTOR (METRIC PARALLEL) HFC-M

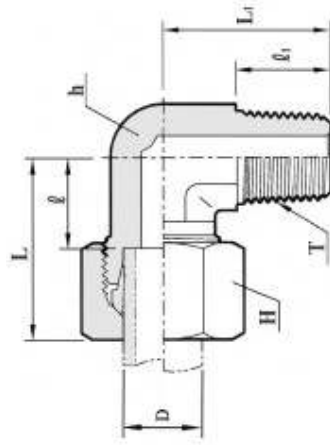


Series	Part No.	Tube O.D.		d	h	H	L	ø	ø ₁	T (Metric)
		D	D							
L Light PN 250	HFC 06L-M10	6	6	4	14	14	34	19.5	12.5	M 10X1
	HFC 08L-M12	8	8	6	17	17	39	24	17	M 12X1.5
	HFC 10L-M14	10	10	8	19	19	40	25	17	M 14X1.5
	HFC 12L-M16	12	12	10	22	22	41	26	17	M 16X1.5
	HFC 15L-M18	15	15	12	27	24	43	28	17	M 18X1.5
	HFC 18L-M22	18	18	15	32	30	46	29.5	19	M 22X1.5
PN 160	HFC 22L-M26	22	22	19	36	32	51	34.5	21	M 26X1.5
	HFC 28L-M33	28	28	24	41	41	54	37.5	24	M 33X2
	HFC 35L-M42	35	35	30	50	55	62	40.5	26	M 42X2
PN 100	HFC 42L-M48	42	42	36	60	60	65	42	28	M 48X2
	HFC 06S-M12	6	6	4	17	17	41	26	17	M 12X1.5
	HFC 08S-M14	8	8	5	19	19	41	26	17	M 14X1.5
S Heavy PN 630	HFC 10S-M16	10	10	7	22	22	43	26.5	17	M 16X1.5
	HFC 12S-M18	12	12	8	24	24	44	27.5	17	M 18X1.5
	HFC 14S-M20	14	14	10	27	27	49	31	19	M 20X1.5
PN 400	HFC 16S-M22	16	16	12	30	30	49	30.5	19	M 22X1.5
	HFC 20S-M27	20	20	16	36	36	56	34.5	22	M 27X2
	HFC 25S-M33	25	25	20	46	41	61	37	24	M 33X2
PN 250	HFC 30S-M42	30	30	25	50	55	68	41.5	26	M 42X2
	HFC 38S-M48	38	38	32	60	60	74	43	28	M 48X2

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



MALE ELBOW (BSP TAPERED/METRIC TAPERED) HLM-R/M

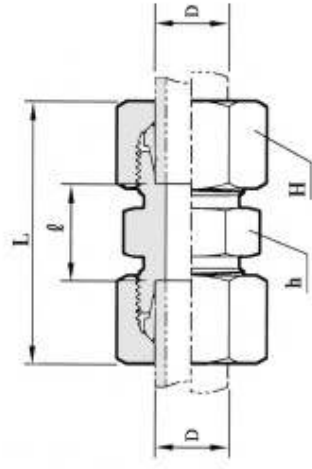


Form C stud end

Series	Part No.	Tube O.D.		h	H	L	L ₁	T	Metric Taper	ø ₁	T	T
		D	ø									
LL very light PN 100	HLM 04LL-02R	4	4	9	10	21	17	11	M8X1Keg	8	10	1/8
	HLM 06LL-02R	6	6	9	12	21	17	9.5	M10X1.5Keg	8	10	1/8
	HLM 08LL-02R	8	8	12	14	23	20	11.5	M10X1Keg	8	10	1/8
	HLM 10LL-04R	-	10	14	17	24	23	12.5	-	-	14	1/4
	HLM 12LL-04R	-	12	17	19	25	23	13	-	-	14	1/4
L light PN 250	HLM 06L -02R	6	6	12	14	27	20	12	M10X1Keg	8	10	1/8
	HLM 08L -04R	8	8	12	17	29	26	14	M12X1.5Keg	12	14	1/4
	HLM 10L -04R	10	10	14	19	30	27	15	M14X1.5Keg	12	14	1/4
	HLM 12L -06R	12	12	17	22	32	28	17	M16X1.5Keg	14	15	3/8
	HLM 15L -08R	15	15	19	27	36	34	21	M18X1.5Keg	14	19	1/2
PN 100	HLM 18L -08R	18	18	24	32	40	36	23.5	M22X1.5Keg	17	19	1/2
	HLM 06S -04R	6	6	12	17	31	26	16	M12X1.5Keg	12	14	1/4
	HLM 08S -04R	8	8	14	19	32	27	17	M14X1.5Keg	12	14	1/4
	HLM 10S -06R	10	10	17	22	34	28	17.5	M16X1.5Keg	12	15	3/8
	HLM 12S -06R	12	12	17	24	38	28	21.5	M18X1.5Keg	12	15	3/8
S Heavy PN 400	HLM 14S -08R	14	14	19	27	40	32	22	M20X1.5Keg	14	19	1/2
	HLM 16S -08R	16	16	24	30	43	32	24.5	M22X1.5Keg	17	19	1/2

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

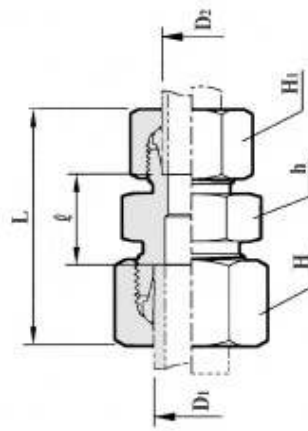
STRAIGHT UNION HU



Series	Part No.	Tube O.D.		h	H	L	ø
		D	ø				
LL Very light PN 100	HU-04LL	4	4	9	10	31	12
	HU-06LL	6	6	11	12	32	9
	HU-08LL	8	8	12	14	35	12
	HU-10LL	10	10	14	17	35	12
	HU-12LL	12	12	17	19	35	11
L Light PN 250	HU-06L	6	6	12	14	39	10
	HU-08L	8	8	14	17	40	11
	HU-10L	10	10	17	19	42	13
	HU-12L	12	12	19	22	43	14
	HU-15L	15	15	24	27	46	16
PN 160	HU-18L	18	18	27	32	48	16
	HU-22L	22	22	32	36	52	20
	HU-28L	28	28	41	41	54	21
	HU-35L	35	35	46	50	63	20
	HU-42L	42	42	55	60	66	21
S Heavy PN 630	HU-06S	6	6	14	17	45	16
	HU-08S	8	8	17	19	47	18
	HU-10S	10	10	19	22	49	17
	HU-12S	12	12	22	24	51	19
	HU-14S	14	14	24	27	57	22
PN 400	HU-16S	16	16	27	30	57	21
	HU-20S	20	20	32	36	66	23
	HU-25S	25	25	41	46	74	26
	HU-30S	30	30	46	50	80	27
	HU-38S	38	38	55	60	90	29

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

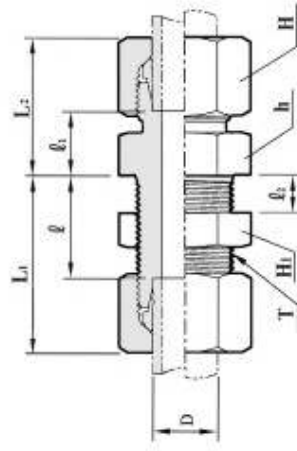
REDUCING UNION HUR



Series	Part No.	Tube O.D.		h	H	H ₁	L	φ
		D ₁	D ₂					
L light PN 250	HUR 08L-06L	8	6	14	17	14	40	11
	HUR 10L-06L	10	6	17	19	14	41	12
	HUR 10L-08L	10	8	17	19	17	41	12
	HUR 12L-06L	12	6	19	22	14	42	13
	HUR 12L-08L	12	8	19	22	17	42	13
	HUR 12L-10L	12	10	19	22	19	43	14
	HUR 15L-10L	15	10	24	27	19	45	15
	HUR 15L-12L	15	12	24	27	22	45	15
	HUR 18L-10L	18	10	27	32	19	46	15.5
	HUR 18L-12L	18	12	27	32	22	46	15.5
	HUR 18L-15L	18	15	27	32	27	48	16.5
	HUR 22L-12L	22	12	32	36	22	48	17.5
PN 100	HUR 22L-15L	22	15	32	36	27	50	18.5
	HUR 22L-18L	22	18	32	36	32	50	18
	HUR 28L-18L	28	18	41	41	32	52	19
	HUR 28L-22L	28	22	41	41	36	54	21
	HUR 35L-22L	35	22	46	50	36	59	21
	HUR 35L-28L	35	28	46	50	41	59	21
	HUR 08S-06S	8	6	17	19	17	47	18
	HUR 10S-06S	10	6	19	22	17	48	17.5
	HUR 10S-08S	10	8	19	22	19	48	17.5
	HUR 12S-06S	12	6	22	24	17	50	19.5
	HUR 12S-08S	12	8	22	24	19	50	19.5
	HUR 12S-10S	12	10	22	24	22	51	19
S Heavy PN 630	HUR 14S-10S	14	10	24	27	22	54	20.5
	HUR 14S-12S	14	12	24	27	24	54	20.5
	HUR 16S-12S	16	12	27	30	24	54	20
	HUR 16S-14S	16	14	27	30	27	57	21.5
	HUR 20S-10S	20	10	32	36	22	60	22
	HUR 20S-12S	20	12	32	36	24	60	22
	HUR 20S-16S	20	16	32	36	30	63	23
	HUR 25S-16S	25	16	41	46	30	68	25
	HUR 25S-20S	25	20	41	46	36	71	25.5
	HUR 30S-20S	30	20	46	50	36	74	26
	HUR 30S-25S	30	25	46	50	46	77	26.5
	HUR 38S-30S	38	30	55	60	50	87	29.5

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

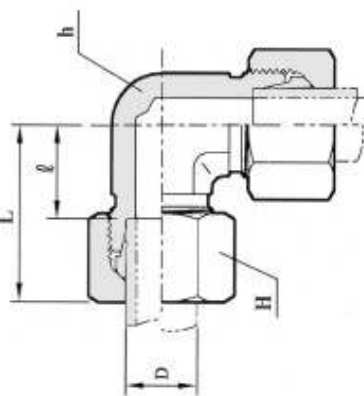
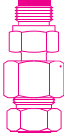
BULKHEAD UNION HBU



φ₂ = 16mm Max

Series	Part No.	Tube O.D. D	h	H	H ₁	L ₁	L ₂	φ	φ ₁	T
HBU-08L	8	19	17	19	42	23	27	8	M 14X1.5	
HBU-10L	10	22	19	22	43	25	28	10	M 16X1.5	
HBU-12L	12	24	22	24	44	25	29	10	M 18X1.5	
HBU-15L	15	27	27	30	46	27	31	12	M 22X1.5	
HBU-18L	18	32	32	36	49	30	32.5	13.5	M 26X1.5	
HBU-22L	22	36	36	41	51	33	34.5	16.5	M 30X2	
HBU-28L	28	41	41	46	52	35	35.5	18.5	M 36X2	
HBU-35L	35	50	50	55	58	40	36.5	18.5	M 45X2	
HBU-42L	42	60	60	65	59	42	36	19	M 52X2	
HBU-06S	6	19	17	19	44	27	29	12	M 14X1.5	
HBU-08S	8	22	19	22	44	28	29	13	M 16X1.5	
S Heavy PN 630	HBU-10S	10	24	22	24	46	31	29.5	14.5	M 18X1.5
	HBU-12S	12	27	24	27	47	31	30.5	14.5	M 20X1.5
	HBU-14S	14	30	27	30	50	35	32	17	M 22X1.5
	HBU-16S	16	32	30	32	50	35	31.5	16.5	M 24X1.5
	HBU-20S	20	41	36	41	55	39	33.5	17.5	M 30X2
	HBU-25S	25	46	46	46	59	44	35	20	M 36X2
	HBU-30S	30	50	50	50	64	48	37.5	21.5	M 42X2
	HBU-38S	38	65	60	65	68	53	37	22	M 52X2

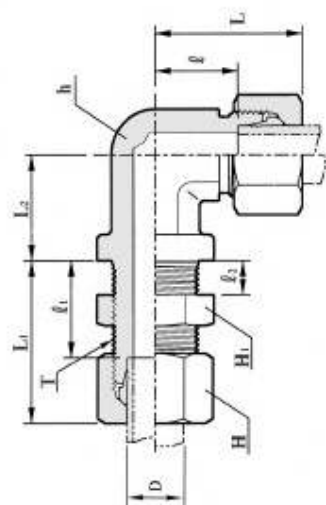
Dimensions given approximate length with tightened nut. All dimensions are in millimeters, for reference only, subject to change.



UNION ELBOW

HL

BULKHEAD UNION ELBOW

HBL $\phi_2 = 16\text{mm Max}$

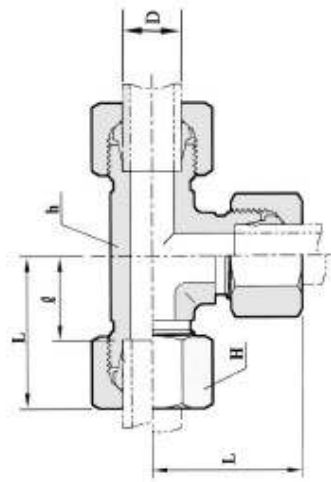
Series	Part No.	Tube O.D.		h	H	L	ϕ
		D					
LL Very light PN 100	HL-04LL	4		9	10	21	11
	HL-06LL	6		9	12	21	9.5
	HL-08LL	8		12	14	23	11.5
	HL-10LL	10		14	17	24	12.5
L Light PN 250	HL-12LL	12		17	19	25	13
	HL-06L	6		12	14	27	12
	HL-08L	8		12	17	29	14
	HL-10L	10		14	19	30	15
	HL-12L	12		17	22	32	17
PN 160	HL-15L	15		19	27	36	21
	HL-18L	18		24	32	40	23.5
	HL-22L	22		27	36	44	27.5
	HL-28L	28		36	41	47	30.5
PN 250	HL-35L	35		41	50	56	34.5
	HL-42L	42		50	60	63	40
	HL-06S	6		12	17	31	16
S Heavy PN 630	HL-08S	8		14	19	32	17
	HL-10S	10		17	22	34	17.5
	HL-12S	12		17	24	38	21.5
	HL-14S	14		19	27	40	22
	HL-16S	16		24	30	43	24.5
PN 400	HL-20S	20		27	36	48	26.5
	HL-25S	25		36	46	54	30
	HL-30S	30		41	50	62	35.5
PN 250	HL-38S	38		50	60	72	41

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

Series	Part No.	Tube O.D.		h	H	H ₁	L	L ₁	L ₂	ϕ	ϕ_1	T (Metric)
		D										
L light PN 250	HBL-06L	6		12	14	17	27	42	14	12	27	M 12X1.5
	HBL-08L	8		12	17	19	29	42	17	14	27	M 14X1.5
	HBL-10L	10		14	19	22	30	43	18	15	28	M 16X1.5
	HBL-12L	12		17	22	24	32	44	20	17	29	M 18X1.5
	HBL-15L	15		19	27	30	36	46	23	21	31	M 22X1.5
	HBL-18L	18		24	32	36	40	49	24	23.5	32.5	M 26X1.5
PN 160	HBL-22L	22		27	36	41	44	51	30	27.5	34.5	M 30X2
	HBL-28L	28		36	41	46	47	52	34	30.5	35.5	M 36X2
	HBL-35L	35		41	50	55	56	58	39	34.5	36.5	M 45X2
PN 100	HBL-42L	42		50	60	65	63	59	43	40	36	M 52X2
	HBL-06S	6		12	17	19	31	44	17	46	29	M 14X1.5
	HBL-08S	8		14	19	22	32	44	18	17	29	M 16X1.5
S heavy PN 630	HBL-10S	10		17	22	24	34	46	20	17.5	29.5	M 18X1.5
	HBL-12S	12		17	24	27	38	47	21	21.5	30.5	M 20X1.5
	HBL-14S	14		19	27	30	40	50	23	22	32	M 22X1.5
PN 400	HBL-16S	16		24	30	32	43	50	24	24.5	31.5	M 24X1.5
	HBL-20S	20		27	36	41	48	55	30	26.5	33.5	M 30X2
	HBL-25S	25		36	46	46	54	59	34	30	35	M 36X2
PN 250	HBL-30S	30		41	50	50	62	64	39	35.5	37.5	M 42X2
	HBL-38S	38		50	60	65	72	68	43	41	37	M 52X2

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

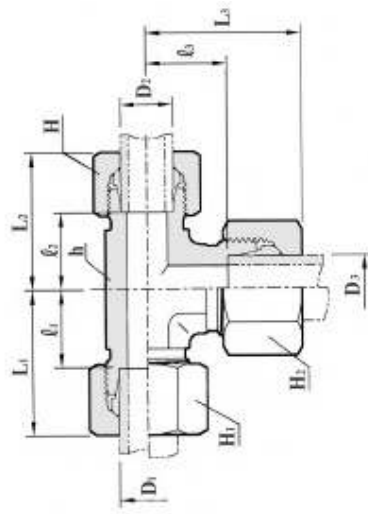
UNION TEE HT



Series	Part No.	Tube O.D.		h	H	L	Ø
		D	D				
LL Very light PN 100	HT-04LL	4	6	9	10	21	11
	HT-06LL	6	8	9	12	21	9.5
	HT-08LL	8	10	12	14	23	11.5
	HT-10LL	10	12	14	17	24	12.5
	HT-12LL	12	14	14	19	27	15
L Light PN 250	HT-06L	6	8	12	14	27	12
	HT-08L	8	10	12	17	29	14
	HT-10L	10	12	14	19	30	15
	HT-12L	12	14	17	22	32	17
	HC-15L	15	18	19	27	36	21
PN 160	HT-18L	18	22	24	32	40	23.5
	HT-22L	22	28	27	36	44	27.5
	HT-28L	28	35	36	41	47	30.5
PN 100	HT-35L	35	42	41	50	56	34.5
	HT-42L	42	50	50	60	63	40
	HT-06S	6	8	12	17	31	16
S Heavy PN 630	HT-08S	8	10	14	19	32	17
	HT-10S	10	12	17	22	34	17.5
	HT-12S	12	14	17	24	38	21.5
	HT-14S	14	16	19	27	40	22
PN 400	HT-16S	16	20	24	30	43	24.5
	HT-20S	20	25	27	36	48	26.5
	HT-25S	25	30	36	46	54	30
PN 250	HT-30S	30	38	41	50	62	35.5
	HT-38S	38	48	50	60	72	41

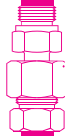
Dimensions given approximate length with tightened nut. All dimensions are in millimeters, for reference only, subject to change.

REDUCING UNION HTR



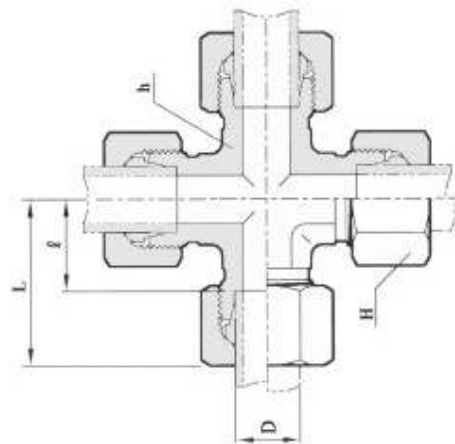
Series	Part No.	Tube O.D.			h	H	Ht	H2	L1	L2	L3	Ø1	Ø2	Ø3
		D1	D2	D3										
L light PN 316	HTR 06L-06L-08L	6	6	8	14	14	14	17	29	29	29	14	14	14
	HTR 08L-08L-06L	8	8	6	14	17	17	14	29	29	29	14	14	14
	HTR 06L-06L-10L	6	6	10	14	14	14	19	30	30	30	15	15	15
PN 250	HTR 08L-08L-10L	8	8	10	14	17	17	19	30	30	30	15	15	15
	HTR 10L-10L-06L	10	10	6	14	19	19	14	30	30	30	15	15	15
	HTR 10L-10L-08L	10	10	8	14	19	19	17	30	30	30	15	15	15
	HTR 10L-06L-10L	10	6	10	14	19	14	19	30	30	30	15	15	15
	HTR 08L-08L-12L	8	8	12	17	17	17	22	32	32	32	17	17	17
PN 250	HTR 12L-12L-06L	12	12	6	17	22	22	14	32	32	32	17	17	17
	HTR 12L-08L-08L	12	8	8	17	22	17	17	32	32	32	17	17	17
	HTR 12L-12L-08L	12	12	8	17	22	22	17	32	32	32	17	17	17
	HTR 12L-10L-10L	12	10	10	17	22	22	19	32	32	32	17	17	17
	HTR 12L-12L-10L	12	12	10	17	22	22	19	32	32	32	17	17	17
PN 250	HTR 12L-10L-12L	12	10	12	17	22	22	19	32	32	32	17	17	17
	HTR 10L-10L-15L	10	10	15	19	19	19	27	36	36	36	21	21	21
	HTR 12L-12L-15L	12	12	15	19	22	22	27	36	36	36	21	21	21
	HTR 15L-15L-06L	15	15	6	19	27	27	14	36	36	36	21	21	21
	HTR 15L-15L-10L	15	15	10	19	27	27	19	36	36	36	21	21	21
PN 250	HTR 15L-12L-12L	15	12	12	19	27	22	22	36	36	36	21	21	21
	HTR 15L-15L-12L	15	15	12	19	27	22	22	36	36	36	21	21	21
	HTR 15L-12L-15L	15	12	15	19	27	22	27	36	36	36	21	21	21
	HTR 12L-12L-18L	12	12	18	24	22	22	32	39	39	39	24	24	23.5
	HTR 18L-10L-10L	18	10	10	24	32	19	19	40	39	39	23.5	24	24
PN 160	HTR 18L-18L-10L	18	18	10	24	32	32	19	40	40	39	23.5	23.5	24
	HTR 18L-18L-12L	18	18	12	24	32	22	22	40	40	39	23.5	23.5	24
	HTR 18L-18L-15L	18	18	15	24	32	27	27	40	40	39	23.5	23.5	24
PN 160	HTR 18L-10L-18L	18	10	18	24	32	19	32	40	39	39	23.5	2	23.5

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



Union

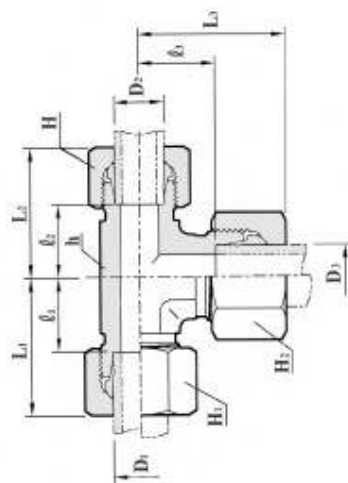
UNION CROSS HC



Series	Part No.	Tube O.D.		h	H	L	Ø
		D	D ₃				
LL Very light PN 100	HC-04LL	4	9	10	12	21	11
	HC-06LL	6	9	12	14	21	9.5
	HC-08LL	8	12	14	17	23	11.5
	HC-10LL	10	14	17	19	24	12.5
L Light PN 250	HC-12LL	12	14	19	22	27	15
	HC-06L	6	12	14	17	27	12
	HC-08L	8	12	17	19	29	14
	HC-10L	10	14	19	22	30	15
PN 160	HC-12L	12	17	22	27	32	17
	HC-15L	15	19	27	32	36	21
	HC-18L	18	24	32	36	40	23.5
	HC-22L	22	27	36	41	44	27.5
PN 100	HC-28L	28	36	41	50	47	30.5
	HC-35L	35	41	50	60	56	34.5
	HC-42L	42	50	60	63	63	40
	HC-06S	6	12	17	19	31	16
S Heavy PN 630	HC-08S	8	14	19	22	32	17
	HC-10S	10	17	22	24	34	17.5
	HC-12S	12	17	24	27	38	21.5
	HC-14S	14	19	27	30	40	22
PN 400	HC-16S	16	24	30	36	43	24.5
	HC-20S	20	27	36	46	48	26.5
	HC-25S	25	36	46	54	54	30
	HC-30S	30	41	50	60	62	35.5
PN 250	HC-38S	38	50	60	72	72	41

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

REDUCING UNION HTR

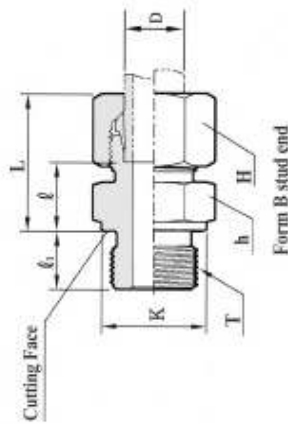


Series	Part No.	Tube O.D.			h	H ₁	H ₂	H ₃	L ₁	L ₂	L ₃	Ø ₁	Ø ₂	Ø ₃
		D ₁	D ₂	D ₃										
PN 160	HTR 22L-22L-10L	22	22	10	27	36	36	19	44	44	43	27.5	27.5	28
	HTR 22L-22L-12L	22	22	12	27	36	36	22	44	44	43	27.5	27.5	28
	HTR 22L-15L-15L	22	15	15	27	36	27	27	44	43	43	27.5	28	28
	HTR 22L-22L-15L	22	22	15	27	36	36	27	44	44	43	27.5	27.5	28
PN 100	HTR 22L-18L-18L	22	18	18	27	36	32	32	44	44	44	27.5	27.5	27.5
	HTR 22L-22L-18L	22	22	18	27	36	36	32	44	44	44	27.5	27.5	27.5
	HTR 28L-28L-10L	28	28	10	36	41	41	19	47	44	46	30.5	30.5	31
	HTR 28L-28L-12L	28	28	12	36	41	41	22	47	47	46	30.5	30.5	31
S PN 630	HTR 28L-28L-15L	28	28	15	36	41	41	27	47	47	46	30.5	30.5	31
	HTR 28L-28L-18L	28	28	18	36	41	41	32	47	47	47	30.5	30.5	30.5
	HTR 28L-22L-22L	28	22	22	36	41	41	36	47	47	47	30.5	30.5	30.5
	HTR 10S-10S-06S	10	10	6	17	22	22	17	34	34	33	17.5	17.5	18
PN 400	HTR 12S-08S-08S	12	8	8	17	24	19	19	38	37	37	21.5	22	22
	HTR 12S-12S-10S	12	12	10	17	24	24	22	38	38	38	21.5	21.5	21.5
	HTR 12S-12S-16S	12	12	16	24	24	24	30	42	42	43	25.5	25.5	24.5
	HTR 16S-16S-06S	16	16	6	24	30	30	17	43	43	41	24.5	24.5	26
PN 400	HTR 16S-16S-08S	16	16	8	24	30	30	19	43	43	41	24.5	24.5	26
	HTR 16S-16S-10S	16	16	10	24	30	30	22	43	43	42	24.5	24.5	25.5
	HTR 16S-16S-12S	16	16	12	24	30	30	24	43	43	42	24.5	24.5	25.5
	HTR 16S-16S-20S	16	16	20	27	36	36	24	48	48	48	26.5	26.5	29.5
PN 400	HTR 20S-20S-10S	20	20	10	27	36	36	22	48	48	46	26.5	26.5	29.5
	HTR 20S-20S-12S	20	20	12	27	36	36	24	48	48	46	26.5	26.5	29.5
	HTR 20S-20S-16S	20	20	16	27	36	36	30	48	48	47	26.5	26.5	28.5
	HTR 20S-20S-25S	20	20	25	36	46	46	36	53	53	54	31.5	31.5	30
PN 400	HTR 25S-25S-16S	25	25	16	36	46	46	46	61	61	61	37	37	37
	HTR 25S-25S-30S	25	25	30	46	46	46	50	61	61	61	37	37	35.5

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



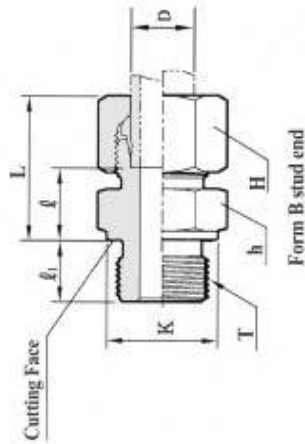
MALE CONNECTOR (BSP PARALLEL)
HOM-G



Series	Part No.	Tube O.D.		h	H	K	L	φ	φ ₁	T (BSPP)
		D	D							
L light PN 250	HOM 06L-02G	6	14	14	14	14	23	8.5	8	1/8
	HOM 06L-04G	6	19	14	18	25	10	11.5	12	1/4
	HOM 06L-06G	6	22	14	22	26	11.5	12	12	3/8
	HOM 06L-08G	6	27	14	26	27	12	14	14	1/2
	HOM 08L-02G	8	14	17	14	23	8.5	8	8	1/8
	HOM 08L-04G	8	19	17	18	25	10	12	12	1/4
	HOM 08L-06G	8	22	17	22	26	11.5	12	12	1/8
	HOM 08L-08G	8	27	17	26	27	12	14	14	1/2
	HOM 10L-04G	10	19	19	18	26	11	12	12	1/4
	HOM 10L-06G	10	22	19	22	27	12.5	12	12	3/8
	HOM 10L-08G	10	27	19	26	28	13	14	14	1/2
	HOM 12L-04G	12	19	22	18	27	12	12	12	1/4
	HOM 12L-06G	12	22	22	22	27	12.5	12	12	3/8
	HOM 12L-08G	12	27	22	26	28	13	14	14	1/2
	HOM 12L-12G	12	32	22	32	29	14	16	16	3/4
HOM 15L-06G	15	24	27	22	29	13.5	12	12	3/8	
HOM 15L-08G	15	27	27	26	29	14	14	14	1/2	
HOM 15L-12G	15	32	27	32	30	15	16	16	3/4	
PN 160	HOM 18L-06G	18	27	32	22	29.5	14	12	12	3/8
	HOM 18L-08G	18	27	32	26	31	14.5	14	14	1/2
	HOM 18L-12G	18	32	32	32	30	14.5	16	16	3/4
L light PN 100	HOM 22L-08G	22	32	36	26	33	16.5	14	14	1/2
	HOM 22L-12G	22	32	36	32	33	16.5	16	16	3/4
	HOM 28L-12G	28	41	41	32	34	17.5	16	16	3/4
	HOM 28L-16G	28	41	41	39	34	17.5	18	18	1
	HOM 35L-16G	35	46	50	39	39	17.5	18	18	1
HOM 42L-24G	HOM 35L-20G	35	50	50	49	39	17.5	20	20	1 1/4
	HOM 42L-24G	42	55	60	55	42	19	22	22	1 1/2

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

MALE CONNECTOR (BSP PARALLEL)
HOM-G

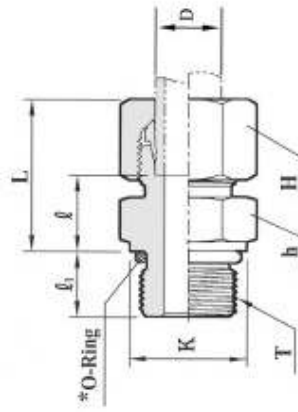


Series	Part No.	Tube O.D.		h	H	K	L	φ	φ ₁	T (BSPP)
		D	D							
S Heavy PN 630	HOM 06S-04G	6	19	17	18	28	13	12	12	1/4
	HOM 06S-08G	6	27	17	26	33	18	14	14	1/2
	HOM 08S-04G	8	19	19	18	30	15	12	12	1/4
	HOM 08S-06G	8	22	19	22	30	15.5	12	12	3/8
	HOM 10S-04G	10	19	22	18	31	14.5	12	12	1/4
	HOM 10S-06G	10	22	22	22	31	15	12	12	3/8
	HOM 10S-08G	10	27	22	26	34	17.5	14	14	1/2
	HOM 12S-04G	12	22	24	18	33	16.5	12	12	1/4
	HOM 12S-06G	12	22	24	22	33	17	12	12	3/8
	HOM 12S-08G	12	27	24	26	34	17.5	14	14	1/2
	HOM 14S-06G	14	24	27	22	36	18.5	12	12	1/2
	HOM 14S-08G	14	27	27	26	37	19	14	14	3/8
	HOM 16S-06G	16	27	30	22	36	18	12	12	3/8
	HOM 16S-08G	16	27	30	26	37	18.5	14	14	1/2
	PN 400	HOM 16S-12G	16	32	30	32	39	20.5	16	16	3/4
HOM 20S-08G		20	32	36	26	42	20.5	14	14	1/2
HOM 20S-12G		20	32	36	32	42	20.5	16	16	3/4
HOM 25S-12G		25	41	46	32	47	23	16	16	3/4
HOM 25S-16G		25	41	46	39	47	23	18	18	1
PN 250	HOM 30S-16G	30	46	50	39	50	23.5	18	18	1
	HOM 30S-20G	30	50	50	49	50	23.5	20	20	1 1/4
	HOM 38S-20G	38	55	60	49	57	26	20	20	1 1/4
	HOM 38S-24G	38	55	60	55	57	26	22	22	1 1/2

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



MALE CONNECTOR (UNIFIED) WITH *O-RING HOM-U

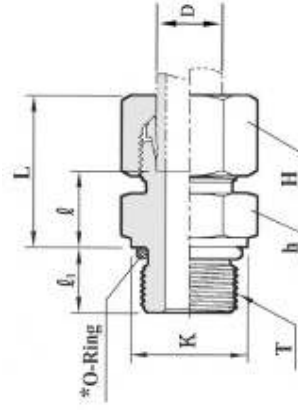


Form F stud end

Series	Part No.	Tube O.D. D	h	H	K	L	l ₁	l	T (Unified)
L light PN 250	HOM 08L-07U	8	17	17	14.4	25	9	10	7/16 UNF-2A
	HOM 10L-07U	10	17	19	14.4	26	10	11	7/16 UNF-2A
	HOM 12L-09U	12	19	22	17.6	26	10	11	9/16 UNF-2A
	HOM 12L-12U	12	24	22	22.3	28	11	13	3/4 UNF-2A
	HOM 12L-14U	12	27	22	25.5	29	12.7	14.3	7/8 UNF-2A
	HOM 15L-12U	15	24	27	22.3	29	11	14	3/4 UNF-2A
	HOM 15L-14U	15	27	27	25.5	30	12.7	15.3	7/8 UNF-2A
	HOM 18L-12U	18	27	32	22.3	31	11	14.5	3/4 UNF-2A
	HOM 18L-14U	18	27	32	25.5	31	12.7	14.8	7/8 UNF-2A
	HOM 22L-14U	22	32	36	25.5	33	12.7	16.8	7/8 UNF-2A
PN 160	HOM 22L-17U	22	32	36	31.9	33	15	16.5	1 1/16 UN-2A
	HOM 22L-21U	22	41	36	38.2	34	15	17.5	1 5/16 UN-2A
	HOM 28L-17U	28	41	41	31.9	34	15	17.5	1 1/16 UN-2A
	HOM 28L-21U	28	41	41	38.2	34	15	17.5	1 5/16 UN-2A
	HOM 35L-21U	35	46	50	38.2	39	15	17.5	1 5/16 UN-2A
	HOM 35L-26U	35	50	50	47.7	39	15	17.5	1 5/8 UN-2A
	HOM 42L-26U	42	55	60	47.7	42	15	19	1 5/8 UN-2A
	HOM 08S-07U	8	17	19	16	30	9	15	7/16 UNF-2A
	HOM 10S-09U	10	19	22	17.6	31	10	14.5	9/16 UNF-2A
	HOM 12S-09U	12	22	24	17.6	31	10	14.5	9/16 UNF-2A
PN 100	HOM 12S-12U	12	24	24	22.3	34	11	17.5	3/4 UNF-2A
	HOM 16S-12U	16	24	30	22.3	34	11	15.5	3/4 UNF-2A
	HOM 16S-14U	16	27	30	25.5	37	12.7	18.8	7/8 UNF-2A
	HOM 20S-12U	20	32	36	22.3	42	11	20.5	3/4 UNF-2A
	HOM 20S-14U	20	32	36	25.5	42	12.7	20.8	7/8 UNF-2A
	HOM 20S-17U	20	32	36	31.9	42	15	20.5	1 1/16 UN-2A
	HOM 25S-17U	25	36	46	31.9	47	15	23	1 1/16 UN-2A
	HOM 25S-21U	25	41	46	38.2	47	15	23	1 5/16 UN-2A
	HOM 30S-21U	30	46	50	38.2	50	15	23.5	1 5/16 UN-2A
	HOM 30S-26U	30	50	50	47.7	50	15	23.5	1 5/8 UN-2A
PN 250	HOM 38S-26U	38	55	60	47.7	57	15	26	1 5/8 UN-2A

Dimensions given approximate length with tightened nut. All dimensions are in millimeters, for reference only subject to change.
*O-Ring of NBR(c.g.Perbunan)/Standard, of FPM(c.g. Viton) on request (See Page 16)

MALE CONNECTOR (METRIC PARALLELED) WITH *O-RING HOM-M



Form F stud end

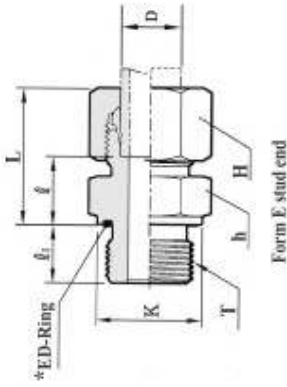
for Metric Paralleled

Series	Part No.	Tube O.D.		h	H	K	L	l ₁	l	T (Metric)
		D	D							
L light PN 250	HOM 06L-M10	6	6	14	14	-	23	10	8.5	M 10X1
	HOM 08L-M12	8	8	17	17	-	25	11.5	10	M 12X1.5
	HOM 10L-M14	10	10	19	19	-	26	11.5	11	M 14X1.5
	HOM 12L-M16	12	12	22	22	-	27	13	12	M 16X1.5
PN 160	HOM 15L-M18	15	15	24	27	-	29	14.5	13.5	M 18X1.5
	HOM 18L-M22	18	18	27	32	-	30	15.5	14	M 22X1.5
	HOM 22L-M26	22	22	32	36	-	32	16	16	M 26X1.5
	HOM 28L-M33	28	28	41	41	38	34	19	17.5	M 33X2
PN 100	HOM 35L-M42	35	35	50	50	48	39	19.5	17.5	M 42X2
	HOM 06S-M12	6	6	17	17	-	27	11.5	12	M 12X1.5
	HOM 08S-M14	8	8	19	19	-	27	11.5	12	M 14X1.5
	HOM 10S-M16	10	10	22	22	-	29	13	12.5	M 16X1.5
S heavy PN 630	HOM 12S-M18	12	12	24	24	-	29	14.5	13	M 18X1.5
	HOM 16S-M22	16	16	27	30	-	33	15.5	15	M 22X1.5
	HOM 20S-M27	20	20	32	36	-	37	19	15	M 27X2
	HOM 25S-M33	25	25	41	46	38	41	19	17	M 33X2
PN 250	HOM 30S-M42	30	30	50	50	48	45	19.5	18.5	M 42X2

Dimensions given approximate length with tightened nut. All dimensions are in millimeters, for reference only subject to change.
*O-Ring of NBR(c.g.Perbunan)/Standard, of FPM(c.g. Viton) on request (See Page 16)



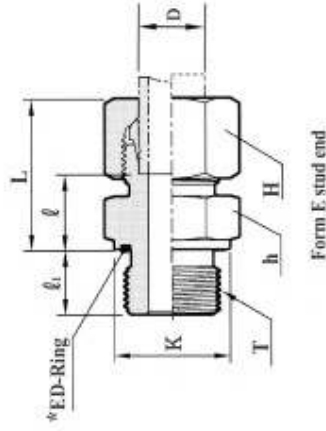
MALE CONNECTOR (BSP PARALLEL) WITH *ED-RING HOM-GED



Series	Part No.	Tube O.D.		H	h	K	L	l	l ₁	T
		D	D							
L Light PN 250	HOM 06L-02GED	6	14	14	14	14	23	8.5	8	1/8
	HOM 06L-04GED	6	19	14	19	14	25	10	12	1/4
	HOM 08L-02GED	8	14	17	14	14	24	9.5	8	1/8
	HOM 08L-04GED	8	19	17	17	19	25	10	12	1/4
	HOM 08L-06GED	8	22	17	22	26	26	11.5	12	3/8
	HOM 10L-04GED	10	19	19	19	19	26	11	12	1/4
	HOM 10L-06GED	10	22	19	22	27	27	12.5	12	3/8
	HOM 10L-08GED	10	27	19	27	28	13	14	1/2	1/2
	HOM 12L-04GED	12	19	22	19	27	12	12	12	1/4
	HOM 12L-06GED	12	22	22	22	27	12.5	14	12	3/8
	HOM 12L-08GED	12	27	22	27	28	13	14	1/2	1/2
	HOM 15L-06GED	15	24	27	22	29	13.5	12	12	3/8
PN 160	HOM 15L-08GED	15	27	27	29	14	14	1/2	1/2	1/2
	HOM 18L-08GED	18	27	32	27	31	14.5	14	1/2	1/2
	HOM 18L-12GED	18	32	32	32	31	14.5	16	3/4	3/4
	HOM 22L-12GED	22	32	36	32	33	16.5	16	3/4	3/4
	HOM 28L-16GED	28	41	41	40	34	17.5	18	1	1
	HOM 35L-20GED	35	50	50	50	39	17.5	20	1 1/4	1 1/4
PN 100	HOM 42L-24GED	42	55	60	55	42	19	22	1 1/2	1 1/2
	HOM 06S-04GED	6	19	17	19	19	28	13	12	1/4
	HOM 08S-04GED	8	19	19	19	30	15	12	1/4	1/4
	HOM 08S-06GED	8	22	19	22	30	15.5	12	3/8	3/8
	HOM 10S-04GED	10	19	22	19	31	14.5	12	1/4	1/4
	HOM 10S-06GED	10	22	22	22	31	15	12	3/8	3/8
S Heavy PN 630	HOM 10S-08GED	10	27	22	27	34	17.5	14	1/2	1/2
	HOM 12S-04GED	12	22	24	19	33	16.5	12	1/4	1/4
	HOM 12S-06GED	12	22	24	22	33	17	12	3/8	3/8
	HOM 14S-08GED	14	27	24	32	34	17.5	14	1/2	1/2
	HOM 16S-06GED	16	27	30	22	36	18	12	3/8	3/8
	HOM 16S-08GED	16	27	30	27	37	18.5	14	1/2	1/2
PN 400	HOM 16S-12GED	16	32	30	27	39	20.5	16	3/4	3/4
	HOM 20S-12GED	20	32	36	32	42	20.5	16	3/4	3/4
	HOM 25S-08GED	25	41	46	27	47	23	14	1/2	1/2
	HOM 25S-12GED	25	41	46	32	47	23	16	3/4	3/4
	HOM 25S-16GED	25	41	46	40	47	23	18	1	1
	HOM 30S-20GED	30	50	50	50	50	23.5	20	1 1/4	1 1/4
PN 250	HOM 38S-24GED	38	55	60	55	57	26	22	1 1/2	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 16)

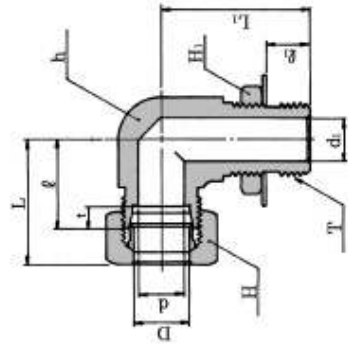
MALE CONNECTOR (METRIC PARALLEL) WITH *ED-RING HOM-MED



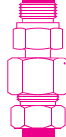
Series	Part No.	Tube O.D.		H	h	K	L	l	l ₁	T	
		D	D								
L Light PN 250	HOM 06L-M10ED	6	14	14	14	14	23	8.5	8	M 10X1	
	HOM 08L-M12ED	8	17	17	17	17	25	10	12	M 12X1.5	
	HOM 10L-M14ED	10	19	19	19	19	26	11	12	M 14X1.5	
	HOM 12L-M16ED	12	22	22	22	22	27	12.5	12	M 16X1.5	
	HOM 12L-M18ED	12	24	22	24	22	24	27	12.5	12	M 18X1.5
	HOM 15L-M18ED	15	24	24	27	24	29	14	14	M 22X1.5	
	HOM 15L-M22ED	15	27	27	27	27	30	15	14	M 22X1.5	
	HOM 18L-M22ED	18	27	27	27	27	31	14.5	14	M 22X1.5	
	HOM 22L-M26ED	22	32	36	32	33	16.5	16	M 26X1.5	M 26X1.5	
	HOM 28L-M33ED	28	41	41	40	34	17.5	18	M 33X2	M 33X2	
	HOM 35L-M42ED	35	50	50	50	39	17.5	20	M 42X2	M 42X2	
	HOM 42L-M48ED	42	55	60	55	42	19	22	M 48X2	M 48X2	
S Heavy PN 630	HOM 06S-M12ED	6	17	17	17	17	28	13	12	M 12X1.5	
	HOM 08S-M14ED	8	19	19	19	19	30	15	12	M 14X1.5	
	HOM 10S-M16ED	10	22	22	22	22	31	15	12	M 16X1.5	
	HOM 12S-M18ED	12	24	24	24	24	33	17	12	M 18X1.5	
	HOM 16S-M20ED	14	27	27	27	26	37	19	14	M 20X1.5	
	HOM 16S-M22ED	16	27	30	27	30	27	37	18.5	14	M 22X1.5
PN 400	HOM 20S-M27ED	20	32	36	32	32	42	20.5	16	M 27X2	
	HOM 25S-M33ED	25	41	46	40	40	47	23	18	M 33X2	
	HOM 30S-M42ED	30	50	50	50	50	50	23.5	20	M 42X2	
	HOM 38S-M48ED	38	55	60	55	57	26	22	M 48X2	M 48X2	

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 16)

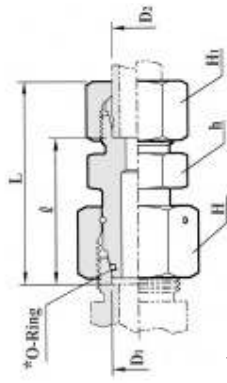
O-SEAL MALE ELBOW HOLM



Series	Designations	Tube OD D	T (BSPP)	Width across flat			ℓ	ℓ ₁	L	L ₁
				h	H	H ₁				
L Light PN 250	HOLM 06L-02G	6	1/8	14	14	17	20	10	30.5	30
	HOLM 08L-04G	8	1/4	14	17	19	23	12	33.5	34
	HOLM 10L-04G	10	1/4	19	19	22	23	12	34.5	35
	HOLM 12L-06G	12	3/8	19	22	24	24	12	35.5	36
PN 160	HOLM 15L-08G	15	1/2	24	27	30	29	16	41.5	46
	HOLM 18L-08G	18	1/2	27	32	36	32	16	44.5	46
	HOLM 22L-12G	22	3/4	32	36	41	34	17	46.5	52
	HOLM 28L-16G	28	1	41	41	46	44	21	55.0	62
PN 100	HOLM 35L-20G	35	1 1/4	41	50	55	46	21	63.5	57
	HOLM 42L-24G	42	1 1/2	50	60	65	50	21	69.5	73
	HOLM 06S-04G	6	1/4	14	17	19	20	12	33.5	34
	HOLM 08S-04G	8	1/4	14	19	22	23	12	33.5	34
S Heavy PN 630	HOLM 10S-06G	10	3/8	19	22	24	23	12	35.5	36
	HOLM 12S-06G	12	3/8	19	24	27	24	12	41.5	40
	HOLM 12S-08G	12	1/2	24	24	27	24	16	41.5	46
	HOLM 16S-08G	16	1/2	27	30	32	32	16	44.5	46
PN 400	HOLM 16S-12G	16	3/4	32	30	32	32	17	45.5	52
	HOLM 20S-12G	20	3/4	32	36	41	34	17	49.5	60
	HOLM 25S-16G	25	1	41	46	46	36	21	55.5	66
	HOLM 30S-20G	30	1 1/4	41	50	50	44	21	60.5	66
PN 250	HOLM 38S-24G	38	1 1/2	50	60	65	50	69.5	73	



SWIVEL REDUCING ADAPTER WITH CONE HRED



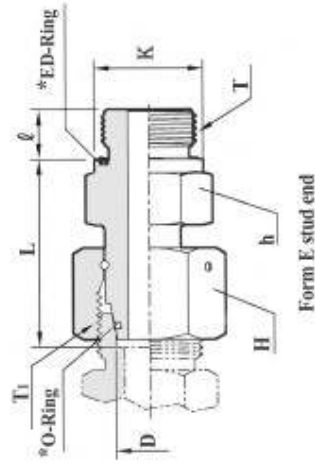
Series L (Light) Series S (Heavy)

Series	Part No.	Tube O.D.		h	H	H ₁	L	ℓ	Series	Part No.	Tube O.D.		h	H	H ₁	L	ℓ
		D ₁	D ₂								D ₁	D ₂					
PN 250	HRED 08L-06L	8	6	14	17	14	39	24.5	PN 630	HRED 08S-06S	8	6	17	19	17	44	28
	HRED 10L-06L	10	6	17	19	14	39.5	24.5	PN 630	HRED 10S-06S	10	6	17	22	17	44	29.5
	HRED 12L-06L	12	6	17	22	14	40	25	PN 630	HRED 12S-06S	12	6	19	24	17	45	30
	HRED 12L-08L	12	8	17	22	14	40	25	PN 630	HRED 12S-08S	12	8	19	24	17	45	30
PN 160	HRED 15L-06L	15	6	22	27	14	42	27.5		HRED 14S-06S	14	6	22	27	17	47.5	33
	HRED 15L-08L	15	8	22	27	14	42	27.5	PN 630	HRED 14S-08S	14	8	22	27	17	47.5	33
	HRED 15L-10L	15	10	22	27	14	43	28.5		HRED 14S-10S	14	10	22	27	17	47.5	33
	HRED 15L-12L	15	12	22	27	14	43	28.5		HRED 14S-12S	14	12	22	27	17	47.5	33
PN 100	HRED 18L-06L	18	6	25	32	14	43	28		HRED 16S-06S	16	6	24	30	17	50.0	35
	HRED 18L-08L	18	8	25	32	14	43	28	PN 400	HRED 16S-08S	16	8	24	30	17	50.0	35
	HRED 18L-10L	18	10	25	32	14	43	28	PN 400	HRED 16S-10S	16	10	25	32	17	50.0	35
	HRED 18L-12L	18	12	25	32	14	43	28		HRED 16S-12S	16	12	25	32	17	50.0	35
PN 100	HRED 22L-06L	22	6	28.5	36	14	47	32		HRED 20S-06S	20	6	28.5	36	17	54	39
	HRED 22L-08L	22	8	28.5	36	14	47	32		HRED 20S-08S	20	8	28.5	36	17	54	39
	HRED 22L-10L	22	10	28.5	36	14	47	32	PN 400	HRED 20S-10S	20	10	28.5	36	17	54	39
	HRED 22L-12L	22	12	28.5	36	14	47	32		HRED 20S-12S	20	12	28.5	36	17	54	39
PN 100	HRED 28L-06L	28	6	36	41	14	49	34		HRED 25S-06S	25	6	36	46	17	58	43.5
	HRED 28L-08L	28	8	36	41	14	49	34		HRED 25S-08S	25	8	36	46	17	58	43.5
	HRED 28L-10L	28	10	36	41	14	49	34	PN 400	HRED 25S-10S	25	10	36	46	17	58	43.5
	HRED 28L-12L	28	12	36	41	14	49	34		HRED 25S-12S	25	12	36	46	17	58	43.5
PN 100	HRED 35L-06L	35	6	46	50	14	55	40		HRED 30S-06S	30	6	41	50	17	66	51
	HRED 35L-08L	35	8	46	50	14	55	40		HRED 30S-08S	30	8	41	50	17	66	51
	HRED 35L-10L	35	10	46	50	14	55	40	PN 250	HRED 30S-10S	30	10	46	50	17	66	51
	HRED 35L-12L	35	12	46	50	14	55	40		HRED 30S-12S	30	12	46	50	17	66	51
PN 100	HRED 42L-06L	42	6	50	60	14	55	40.5		HRED 30S-14S	30	14	50	27	62	44.5	
	HRED 42L-08L	42	8	50	60	14	55	40.5		HRED 30S-16S	30	16	50	30	70	51.5	
	HRED 42L-10L	42	10	50	60	14	55	40.5		HRED 30S-20S	30	20	36	73	51.5		
	HRED 42L-12L	42	12	50	60	14	55	40.5		HRED 30S-25S	30	25	46	76	52		
PN 100	HRED 42L-15L	42	15	50	60	14	55	40.5		HRED 38S-06S	38	6	50	60	17	70.5	56
	HRED 42L-18L	42	18	50	60	14	55	40.5		HRED 38S-08S	38	8	50	60	17	70.5	56
	HRED 42L-20L	42	20	50	60	14	55	40.5		HRED 38S-10S	38	10	50	60	17	70.5	56
	HRED 42L-22L	42	22	50	60	14	55	40.5		HRED 38S-12S	38	12	50	60	17	70.5	56
PN 250	HRED 42L-25L	42	25	50	60	14	55	40.5		HRED 38S-14S	38	14	50	27	74.5	57	
	HRED 42L-28L	42	28	50	60	14	55	40.5		HRED 38S-16S	38	16	50	30	74.5	57	
	HRED 42L-30L	42	30	50	60	14	55	40.5		HRED 38S-20S	38	20	36	78.5	56.5		
	HRED 42L-35L	42	35	50	60	14	55	40.5		HRED 38S-25S	38	25	46	81.5	57		

Dimensions given approximate length with tightened nut. All dimensions are in millimeters, for reference only subject to change. Please observe final assembly instruction on page 22. * O-Ring of NBR(e.g. perbunan) standard, PRM(e.g. viton) on request (see page 16)



SWIVEL ADAPTER (BSP PARALLEL) WITH CONE AND *ED-RING HEGE-G



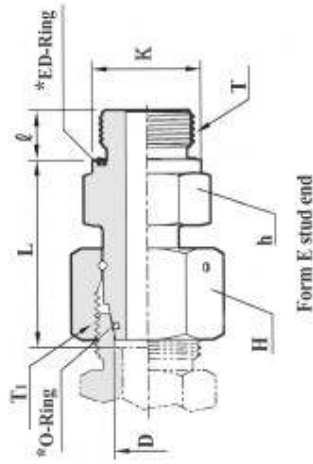
for BSP Parallel

Series	Part No.	Tube O.D.		h	H	K	L	q	T (BSPP)	T ₁ (Metric)
		D	D							
L Light PN 250	HEGE 06L-02G	6	14	14	14	14	24.5	8	1/8	M 12X1.5
	HEGE 08L-04G	8	17	17	19	19	29.5	12	1/4	M 14X1.5
	HEGE 10L-04G	10	19	19	19	19	27.5	12	1/4	M 16X1.5
	HEGE 12L-06G	12	22	22	22	22	34	12	3/8	M 18X1.5
	HEGE 15L-08G	15	24	27	27	27	32	14	1/2	M 22X1.5
PN 160	HEGE 18L-08G	18	27	32	27	27	31.5	14	1/2	M 26X1.5
	HEGE 22L-12G	22	32	36	32	32	32.5	16	3/4	M 30X2
	HEGE 28L-16G	28	41	41	40	35	35	18	1	M 36X2
PN 100	HEGE 35L-20G	35	50	50	50	50	42.5	20	1 1/4	M 45X2
	HEGE 42L-24G	42	55	60	55	46.5	46.5	22	1 1/2	M 52X2
	HEGE 06S-04G	6	17	17	19	19	27	12	1/4	M 14X1.5
S Heavy PN 630	HEGE 08S-04G	8	19	19	19	19	29.5	12	1/4	M 16X1.5
	HEGE 10S-06G	10	22	22	22	22	32	12	3/8	M 18X1.5
	HEGE 12S-06G	12	24	24	24	22	34	12	3/8	M 20X1.5
	HEGE 14S-08G	14	27	27	27	27	36.5	14	1/2	M 22X1.5
PN 400	HEGE 16S-08G	16	27	30	27	27	37	14	1/2	M 24X1.5
	HEGE 20S-12G	20	32	36	32	43	43	16	3/4	M 30X2
	HEGE 25S-16G	25	41	46	40	48	48	18	1	M 36X2
PN 250	HEGE 30S-20G	30	50	50	50	50	51	20	1 1/4	M 42X2
	HEGE 38S-24G	38	55	60	55	60	60	22	1 1/2	M 52X2

Dimensions given approximate length with tightened nut. All dimensions are in millimeters, for reference only subject to change. Please observe final assembly instruction on page 22.

*ED-Ring of NBR(e.g.perbunan) standard, FRM(e.g.viton) on request (see page 16)

SWIVEL ADAPTER (METRIC PARALLEL) WITH CONE AND *ED-RING HEGE-M



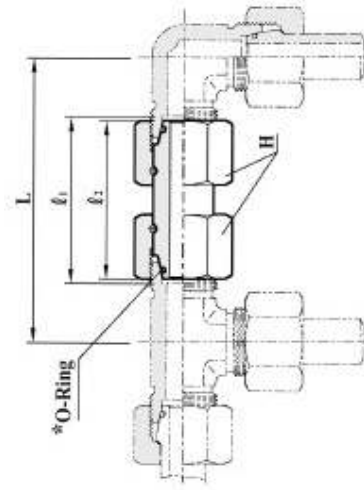
for Metric Parallel

Series	Part No.	Tube O.D.		h	H	K	L	q	T (Metric)	T ₁ (Metric)
		D	D							
L Light PN 250	HEGE 06L-M10	6	14	14	14	14	24.5	8	M 10X1	M 12X1.5
	HEGE 08L-M12	8	19	17	17	17	26.5	12	M 12X1.5	M 14X1.5
	HEGE 10L-M14	10	19	19	19	19	27.5	12	M 14X1.5	M 16X1.5
	HEGE 12L-M16	12	22	22	22	22	30.5	12	M 16X1.5	M 18X1.5
	HEGE 15L-M18	15	24	27	24	24	31.5	12	M 18X1.5	M 22X1.5
PN 160	HEGE 18L-M22	18	27	32	27	27	31.5	14	M 22X1.5	M 26X1.5
	HEGE 22L-M26	22	32	36	32	32	32.5	16	M 26X1.5	M 30X2
	HEGE 28L-M33	28	41	41	40	35	35	18	M 33X2	M 36X2
PN 100	HEGE 35L-M42	35	50	50	50	50	42.5	20	M 42X2	M 45X2
	HEGE 42L-M48	42	55	60	55	46.5	46.5	22	M 48X2	M 52X2
	HEGE 06S-M12	6	17	17	17	17	27	12	M 12X1.5	M 14X1.5
S Heavy PN 630	HEGE 08S-M14	8	19	19	19	19	29.5	12	M 14X1.5	M 16X1.5
	HEGE 10S-M16	10	22	22	22	22	32	12	M 16X1.5	M 18X1.5
	HEGE 12S-M18	12	24	24	24	24	34	12	M 18X1.5	M 20X1.5
	HEGE 14S-M20	14	27	27	27	26	36.5	14	M 20X1.5	M 22X1.5
PN 400	HEGE 16S-M22	16	27	30	27	27	37	14	M 22X1.5	M 24X1.5
	HEGE 20S-M27	20	32	36	32	43	43	16	M 27X2	M 30X2
	HEGE 25S-M33	25	41	46	40	48	48	18	M 33X2	M 36X2
PN 250	HEGE 30S-M42	30	50	50	50	50	51	20	M 42X2	M 45X2
	HEGE 38S-M48	38	55	60	55	60	60	22	M 48X2	M 52X2

Dimensions given approximate length with tightened nut. All dimensions are in millimeters, for reference only subject to change. Please observe final assembly instruction on page 22.

* O-Ring of NBR(e.g.perbunan) standard, FRM(e.g.viton) on request (see page 16)

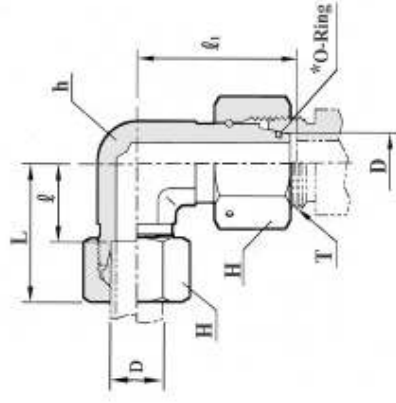
SWIVEL UNION WITH CONE HUE



Series	Part No.	Tube O.D. D	H	L	\varnothing_1	\varnothing_2
L Light PN 500	HUE-06L	6	14	64	36	34
	HUE-08L	8	17	67	36	34
	HUE-10L	10	19	64	37	36
	HUE-12L	12	22	71	37	36
PN 400	HUE-15L	15	27	82	40	39
	HUE-18L	18	32	89.5	42.5	40.5
	HUE-22L	22	36	102	47	45
	HUE-28L	28	41	110	49	47
PN 250	HUE-35L	35	50	127	58	53
	HUE-42L	42	60	139	59	53
	HUE-06S	6	17	71	39	37
	HUE-08S	8	19	73	39	37
S Heavy PN 800	HUE-10S	10	22	78	43	41
	HUE-12S	12	24	87	44	43
	HUE-14S	14	27	92	48	45
	HUE-16S	16	30	99	50	46
PN 630	HUE-20S	20	36	113	60	55
	HUE-25S	25	46	126	66	58
	HUE-30S	30	50	144	73	62
	HUE-38S	38	60	165	83	67

Dimensions given approximate length with tightened nut. All dimensions are in millimeters, for reference only subject to change. Please observe final assembly instruction on page 22. *O-Ring of NBR(e.g.perbunan) standard, FRM(e.g.viton) on request (see page 16)

SWIVEL ADJUSTABLE ELBOW WITH CONE HEW



Series	Part No.	Tube O.D.		h	H	L	\varnothing	\varnothing_1	T (Metric)
		D							
L Light PN 250	HEW-06L	6		12	14	27	12	26	M 12X1.5
	HEW-08L	8		12	17	29	14	27.5	M 14X1.5
	HEW-10L	10		14	19	30	15	29	M 16X1.5
	HEW-12L	12		17	22	32	17	29.5	M 18X1.5
	HEW-15L	15		19	27	36	21	32.5	M 22X1.5
	HEW-18L	18		24	32	40	23.5	35.5	M 26X1.5
PN 160	HEW-22L	22		27	36	44	27.5	38.5	M 30X2
	HEW-28L	28		36	41	47	30.5	41.5	M 36X2
	HEW-35L	35		41	50	56	34.5	51	M 45X2
	HEW-42L	42		50	60	63	40	56	M 52X2
S Heavy PN 630	HEW-06S	6		12	17	31	16	27	M 14X1.5
	HEW-08S	8		14	19	32	17	27.5	M 16X1.5
	HEW-10S	10		17	22	34	17.5	30	M 18X1.5
	HEW-12S	12		17	24	38	21.5	31	M 20X1.5
	HEW-14S	14		19	27	40	22	35	M 22X1.5
	HEW-16S	16		24	30	43	24.5	36.5	M 24X1.5
PN 400	HEW-20S	20		27	36	48	26.5	44.5	M 30X2
	HEW-25S	25		36	46	54	30	50	M 36X2
	HEW-30S	30		41	50	62	35.5	55	M 42X2
	HEW-38S	38		50	60	72	41	63	M 52X2

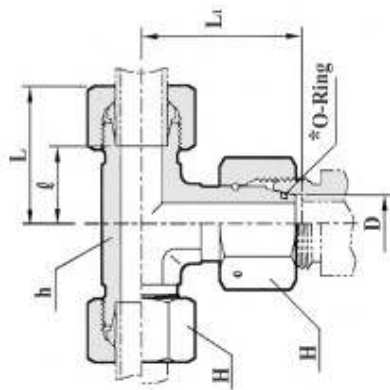
Dimensions given approximate length with tightened nut. All dimensions are in millimeters, for reference only subject to change.

Please observe final assembly instruction on page 22.

*O-Ring of NBR(e.g.Perbunan)Standard, of FPM(c.g. Viton) on request (See Page 16)



SWIVEL ADJUSTABLE BRANCH TEE WITH CONE HET

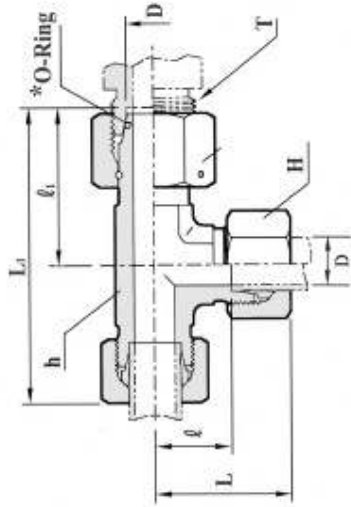


Series	Part No.	Tube O.D.		h	H	L	L ₁	Ø	T (Metric)
		D	D						
L Light PN 250	HET-06L	6	6	12	14	27	26	12	M 12X1.5
	HET-08L	8	8	12	17	29	27.5	14	M 14X1.5
	HET-10L	10	10	14	19	30	29	15	M 16X1.5
	HET-12L	12	12	17	22	32	29.5	17	M 18X1.5
	HET-15L	15	15	19	27	36	32.5	21	M 22X1.5
PN 160	HET-18L	18	18	24	32	40	35.5	23.5	M 26X1.5
	HET-22L	22	22	27	36	44	38.5	27.5	M 30X2
	HET-28L	28	28	36	41	47	41.5	30.5	M 36X2
PN 100	HET-35L	35	35	41	50	56	51	34.5	M 45X2
	HET-42L	42	42	50	60	63	56	40	M 52X2
	HET-06S	6	6	12	17	31	27	16	M 14X1.5
	HET-08S	8	8	14	19	32	27.5	17	M 16X1.5
S Heavy PN 630	HET-10S	10	10	17	22	34	30	17.5	M 18X1.5
	HET-12S	12	12	17	24	38	31	21.5	M 20X1.5
	HET-14S	14	14	19	27	40	35	22	M 22X1.5
	HET-16S	16	16	24	30	43	36.5	24.5	M 24X1.5
PN 400	HET-20S	20	20	27	36	48	44.5	26.5	M 30X2
	HET-25S	25	25	36	46	54	50	30	M 36X2
PN 250	HET-30S	30	30	41	50	62	55	35.5	M 42X2
	HET-38S	38	38	50	60	72	63	41	M 52X2

Dimensions given approximate length with tightened nut. All dimensions are in millimeters, for reference only subject to change. Please observe final assembly instruction on page 22.

*O-Ring of NBR(c.g.Perbunan)/Standard, of FPM(c.g. Viton) on request (See Page 16)

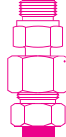
SWIVEL ADJUSTABLE RUN TEE WITH CONE HEL



Series	Part No.	Tube O.D.		h	H	L	L ₁	Ø	Q ₁	T (Metric)
		D	D							
L Light PN 250	HEL-06L	6	6	12	14	27	53	12	26	M 12X1.5
	HEL-08L	8	8	12	17	29	56	14	27.5	M 14X1.5
	HEL-10L	10	10	14	19	30	59	15	29	M 16X1.5
	HEL-12L	12	12	17	22	32	61	17	29.5	M 18X1.5
	HEL-15L	15	15	19	27	36	69	21	32.5	M 22X1.5
PN 160	HEL-18L	18	18	24	32	40	75	23.5	35.5	M 26X1.5
	HEL-22L	22	22	27	36	44	82	27.5	38.5	M 30X2
	HEL-28L	28	28	36	41	47	89	30.5	41.5	M 36X2
PN 100	HEL-35L	35	35	41	50	56	107	34.5	51	M 45X2
	HEL-42L	42	42	50	60	63	119	40	56	M 52X2
	HEL-06S	6	6	12	17	31	58	16	27	M 14X1.5
	HEL-08S	8	8	14	19	32	59	17	27.5	M 16X1.5
S Heavy PN 630	HEL-10S	10	10	17	22	34	64	17.5	30	M 18X1.5
	HEL-12S	12	12	17	24	38	69	21.5	31	M 20X1.5
	HEL-14S	14	14	19	27	40	75	22	35	M 22X1.5
	HEL-16S	16	16	24	30	43	79	24.5	36.5	M 24X1.5
PN 400	HEL-20S	20	20	27	36	48	93	26.5	44.5	M 30X2
	HEL-25S	25	25	36	46	54	104	30	50	M 36X2
PN 250	HEL-30S	30	30	41	50	62	117	35.5	55	M 42X2
	HEL-38S	38	38	50	60	72	135	41	63	M 52X2

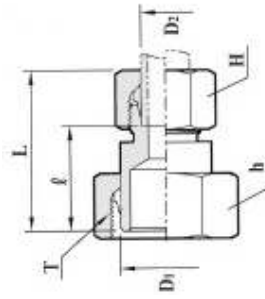
Dimensions given approximate length with tightened nut. All dimensions are in millimeters, for reference only subject to change. Please observe final assembly instruction on page 22.

*O-Ring of NBR(c.g.Perbunan)/Standard, of FPM(c.g. Viton) on request (See Page 16)



STANDPIPE REDUCER

HKOR



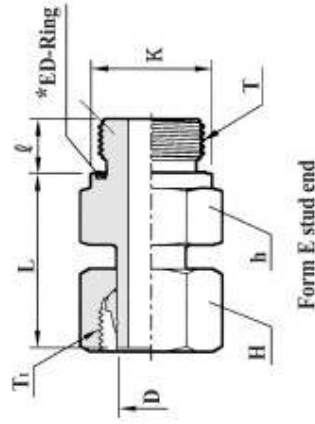
Series S(Heavy)

Series	Part No.	Tube O.D.		h	H	L	ℓ	T
		D ₁	D ₂					
PN 630	HKOR 08S-06S	8	6	19	17	40	25	M 16X1.5
	HKOR 10S-06S	10	8	22	17	41	26	M 18X1.5
	HKOR 10S-08S	8	6	19	19	41	26	M 20X1.5
PN 630	HKOR 12S-06S	12	6	24	17	42	27	M 20X1.5
	HKOR 12S-08S	8	6	19	19	42	27	M 20X1.5
	HKOR 12S-10S	10	6	22	22	43	26.5	M 22X1.5
PN 630	HKOR 14S-06S	14	6	27	17	44	29	M 22X1.5
	HKOR 14S-08S	8	6	19	19	44	29	M 22X1.5
	HKOR 14S-10S	10	6	22	22	45	28.5	M 24X1.5
PN 400	HKOR 14S-12S	12	6	24	24	45	28.5	M 24X1.5
	HKOR 16S-06S	16	6	30	17	44	29	M 24X1.5
	HKOR 16S-08S	8	6	19	19	44	29	M 24X1.5
PN 400	HKOR 16S-10S	10	6	22	22	45	28.5	M 24X1.5
	HKOR 16S-12S	12	6	24	24	45	28.5	M 24X1.5
	HKOR 16S-14S	14	6	27	27	48	30	M 30X2
PN 400	HKOR 20S-06S	20	6	36	17	49	34	M 30X2
	HKOR 20S-08S	8	6	19	19	49	34	M 30X2
	HKOR 20S-10S	10	6	22	22	50	33.5	M 30X2
PN 400	HKOR 20S-12S	12	6	24	24	50	33.5	M 30X2
	HKOR 20S-14S	14	6	27	27	53	35	M 30X2
	HKOR 20S-16S	16	6	30	30	53	34.5	M 30X2
PN 400	HKOR 25S-06S	25	6	46	17	52	37	M 36X2
	HKOR 25S-08S	8	6	19	19	52	37	M 36X2
	HKOR 25S-10S	10	6	22	22	53	36.5	M 36X2
PN 400	HKOR 25S-12S	12	6	24	24	53	36.5	M 36X2
	HKOR 25S-14S	14	6	27	27	55	37	M 36X2
	HKOR 25S-16S	16	6	30	30	55	36.5	M 36X2
PN 400	HKOR 25S-20S	20	6	36	36	59	37.5	M 36X2
	HKOR 30S-06S	30	6	50	17	54	39	M 42X2
	HKOR 30S-08S	8	6	19	19	54	39	M 42X2
PN 250	HKOR 30S-10S	10	6	22	22	55	38.5	M 42X2
	HKOR 30S-12S	12	6	24	24	55	38.5	M 42X2
	HKOR 30S-14S	14	6	27	27	58	40	M 42X2
PN 250	HKOR 30S-16S	16	6	30	30	58	39.5	M 42X2
	HKOR 30S-20S	20	6	36	36	61	39.5	M 42X2
	HKOR 30S-25S	25	6	46	46	64	40	M 42X2
PN 250	HKOR 38S-06S	38	6	60	17	58	43	M 52X2
	HKOR 38S-08S	8	6	19	19	58	43	M 52X2
	HKOR 38S-10S	10	6	22	22	59	42.5	M 52X2
PN 250	HKOR 38S-12S	12	6	24	24	59	42.5	M 52X2
	HKOR 38S-14S	14	6	27	27	62	44	M 52X2
	HKOR 38S-16S	16	6	30	30	62	43.5	M 52X2
PN 250	HKOR 38S-20S	20	6	36	36	65	43.5	M 52X2
	HKOR 38S-25S	25	6	46	46	68	44	M 52X2
	HKOR 38S-30S	30	6	50	50	71	44.5	M 52X2

Dimensions given approximate length with tightened nut. All dimensions are in millimeters, for reference only subject to change. Pre-set nut and cutting ring for connection. Please observe final assembly instruction on page 22.

ADAPTER (BSP PARALLEL) WITH *ED-RING

HA-GED



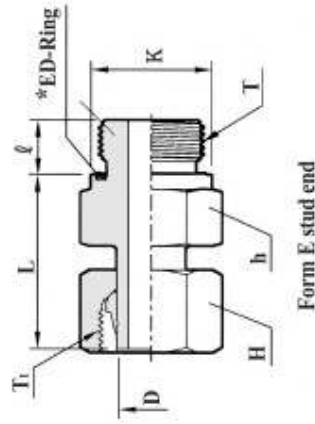
Form E stud end

for BSP Paralleled

Series	Part No.	Tube O.D.		h	H	K	L	ℓ	T	T ₁
		D	D							
L Light PN 250	HA 06L-02GED	6	8	14	14	14	24.5	8	1/8	M 12X1.5
	HA 08L-04GED	8	10	19	17	19	29.5	12	1/4	M 14X1.5
	HA 10L-04GED	10	12	22	19	19	27.5	12	1/4	M 16X1.5
PN 160	HA 12L-06GED	12	15	27	22	22	34	12	3/8	M 18X1.5
	HA 15L-08GED	15	18	27	27	27	32	14	1/2	M 22X1.5
	HA 18L-08GED	18	22	27	32	27	31.5	14	1/2	M 26X1.5
PN 100	HA 22L-12GED	22	28	32	36	32	32.5	16	3/4	M 30X2
	HA 28L-16GED	28	35	41	41	40	35	18	1	M 36X2
	HA 35L-20GED	35	42	50	50	50	42.5	20	1 1/4	M 45X2
PN 400	HA 42L-24GED	42	55	60	60	55	46.5	22	1 1/2	M 52X2
	HA 06S-04GED	6	8	19	17	19	27	12	1/4	M 14X1.5
	HA 08S-04GED	8	10	19	19	19	28.5	12	1/4	M 16X1.5
S Heavy PN 630	HA 10S-06GED	10	12	22	22	22	32	12	3/8	M 18X1.5
	HA 12S-06GED	12	15	22	22	22	34	12	3/8	M 20X1.5
	HA 12S-08GED	12	15	27	24	27	34.5	14	1/2	M 20X1.5
PN 400	HA 14S-08GED	14	18	27	27	27	36.5	14	1/2	M 22X1.5
	HA 16S-08GED	16	20	27	30	27	37	14	1/2	M 24X1.5
	HA 16S-12GED	16	20	32	30	32	39	16	3/4	M 24X1.5
PN 250	HA 20S-13GED	20	25	32	36	32	43	16	3/4	M 30X2
	HA 25S-16GED	25	30	41	46	40	48	18	1	M 36X2
	HA 30S-20GED	30	38	50	50	50	51	20	1 1/4	M 42X2
PN 250	HA 38S-24GED	38	55	60	60	55	60	22	1 1/2	M 52X2

Dimensions given approximate length with tightened nut. All dimensions are in millimeters, for reference only subject to change. Pre-set nut and cutting ring for connection. Please observe final assembly instruction on page 22. *ED-Ring of NBR(e.g.perbunan) standard, FRM(e.g.viton) on request (see page 16)

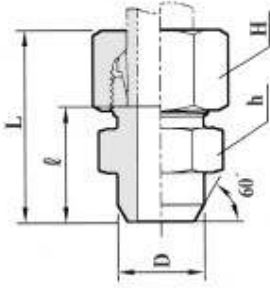
ADAPTER (METRIC PARALLELED) WITH *ED-RING HA-MED



Series	Part No.	Tube O.D.		H	h	K	L	l	T	T ₁ (Metric)
		D	D							
L Light PN 250	HA 06L-M10ED	6	14	14	14	14	24.5	8	M 10X1	M 12X1.5
	HA 08L-M12ED	8	19	17	17	17	26.5	12	M 12X1.5	M 14X1.5
	HA 10L-M14ED	10	19	19	19	19	27.5	12	M 14X1.5	M 16X1.5
	HA 12L-M16ED	12	22	22	22	22	30.5	12	M 16X1.5	M 18X1.5
	HA 15L-M18ED	15	27	27	24	24	31.5	14	M 18X1.5	M 22X1.5
PN 160	HA 18L-M22ED	18	27	32	27	27	31.5	14	M 22X1.5	M 26X1.5
	HA 22L-M26ED	22	32	36	32	32	32.5	16	M 26X1.5	M 30X2
	HA 28L-M33ED	28	41	41	40	35	18	M 33X2	M 36X2	
PN 100	HA 35L-M42ED	35	50	50	50	42.5	20	M 42X2	M 45X2	
	HA 42L-M48ED	42	55	60	55	46.5	22	M 48X2	M 52X2	
	HA 06S-M12ED	6	19	17	17	17	27	12	M 12X1.5	M 14X1.5
S Heavy PN 630	HA 08S-M14ED	8	22	19	19	19	29.5	12	M 14X1.5	M 16X1.5
	HA 10S-M16ED	10	22	22	22	22	32	12	M 16X1.5	M 18X1.5
	HA 12S-M18ED	12	27	24	24	34	12	M 18X1.5	M 20X1.5	
	HA 14S-M20ED	14	27	27	27	36.5	14	M 20X1.5	M 22X1.5	
	HA 16S-M22ED	16	32	30	27	37	14	M 22X1.5	M 24X1.5	
PN 400	HA 20S-M27ED	20	32	36	32	43	16	M 27X2	M 30X2	
	HA 25S-M33ED	25	41	46	40	48	18	M 33X2	M 36X2	
PN 250	HA 30S-M42ED	30	50	50	50	51	20	M 42X2	M 42X2	
	HA 38S-M48ED	38	55	60	55	60	22	M 48X2	M 52X2	

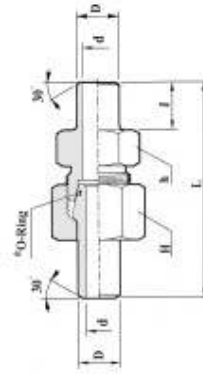
Dimensions given approximate length with tightened nut. All dimensions are in millimeters, for reference only subject to change.
Pre-set nut and cutting ring for connection. Please observe final assembly instruction on page 22.
*ED-Ring of NBR(e.g.perbunan) standard, FRM(e.g.viton) on request (see page 16)

WELDING CONNECTOR HAS



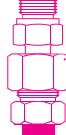
Series	Part No.	Tube O.D.		D	H	h	L	l
		D	D					
L Light PN 250	HAS-06L	6	10	10	14	12	29	14
	HAS-08L	8	12	17	14	14	31	16
	HAS-10L	10	14	19	17	17	33	18
	HAS-12L	12	16	22	19	19	33	18
	HAS-15L	15	19	27	22	22	37	22
PN 160	HAS-18L	18	22	32	27	27	40	23.5
	HAS-22L	22	27	36	32	32	45	28.5
	HAS-28L	28	32	41	41	47	51	30.5
PN 100	HAS-35L	35	40	50	46	46	54	32.5
	HAS-42L	42	46	60	55	58	62	35
	HAS-06S	6	11	17	14	14	34	19
S Heavy PN 630	HAS-08S	8	13	19	17	17	36	21
	HAS-10S	10	15	22	19	19	39	22.5
	HAS-12S	12	17	24	22	22	41	24.5
	HAS-14S	14	19	27	24	24	45	27
	HAS-16S	16	21	30	27	27	45	26.5
PN 400	HAS-20S	20	26	36	32	32	51	29.5
	HAS-25S	25	31	46	41	41	56	32
	HAS-30S	30	36	50	46	46	62	35.5
PN 250	HAS-38S	38	44	60	55	69	38	

WELDING CONNECTOR WITH HAK HASK

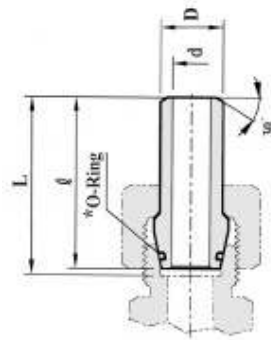


Series S Max. Pressure	Part No.	Tube O.D.		d	H	h	L	l
		D	D					
PB 248	HASK 10X1.0	10	8	8	22	19	58	10
PB 357	HASK 10X1.5	10	7	7				
PB 458	HASK 10X2.0	10	6	6				
PB 303	HASK 12X1.5	12	9	9	24	22	65	15
PB 391	HASK 12X2.0	12	8	8				
PB 474	HASK 12X2.5	12	7	7				
PB 234	HASK 16X1.5	16	13	13	30	27	74.5	16.5
PB 303	HASK 16X2.0	16	12	12				
PB 370	HASK 16X2.5	16	11	11				
PB 433	HASK 16X3.0	16	10	10				
PB 249	HASK 20X2.0	20	16	16	36	32	84	19
PB 303	HASK 20X2.5	20	15	15				
PB 357	HASK 20X3.0	20	14	14				
PB 458	HASK 20X4.0	20	12	12				
PB 292	HASK 25X3.0	25	19	19	46	41	94.5	19.5
PB 378	HASK 25X4.0	25	17	17				
PB 458	HASK 25X5.0	25	15	15				
PB 248	HASK 30X3.0	30	24	24	50	46	102	23
PB 321	HASK 30X4.0	30	22	22				
PB 391	HASK 30X5.0	30	20	20				
PB 460	HASK 30X6.0	30	18	18				
PB 260	HASK 38X4.0	38	30	30	60	55	111	23
PB 318	HASK 38X5.0	38	28	28				
PB 373	HASK 38X6.0	38	26	26				
PB 427	HASK 38X7.0	38	24	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, FRM(e.g.viton) on request (see page 16)

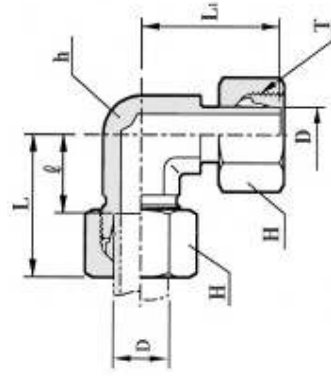


WELDING NIPPLE WITH *O-RING HAK



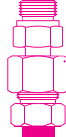
Pressure Rating Fittings	Part No.	Tube O.D.		d	L	Ø
		D	D			
PN 630	HAK 10X1.0	10	10	8	35.5	33
	HAK 10X1.5			7		
	HAK 10X2.0			6		
PN 630	HAK 12X1.0	12	12	9	35.5	33
	HAK 12X2.0			8		
	HAK 12X2.5			7		
PN 400	HAK 16X1.5	16	16	13	42.5	39
	HAK 16X2.0			12		
	HAK 16X2.5			11		
PN 400	HAK 16X3.0	20	20	10	47.5	43.5
	HAK 20X2.0			16		
	HAK 20X2.5			15		
PN 400	HAK 20X3.0	25	25	14	55	49.5
	HAK 20X4.0			12		
	HAK 25X3.0			19		
PN 400	HAK 25X5.0	30	30	17	58.5	51.5
	HAK 30X3.0			15		
	HAK 30X4.0			24		
PN 250	HAK 30X5.0	38	38	22	66	56.5
	HAK 30X6.0			20		
	HAK 38X4.0			18		
PN 250	HAK 38X5.0			30		
	HAK 38X6.0			28		
	HAK 38X7.0			26		

ADJUSTABLE ELBOW WITH STANDPIPE HLA

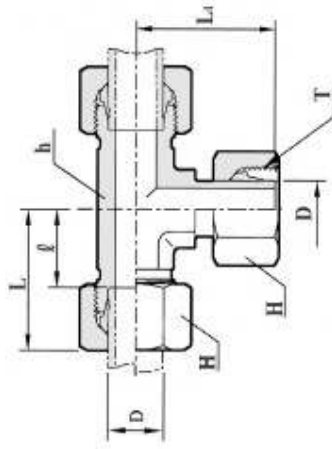


Series	Part No.	Tube O.D.		h	H	L	L ₁	Ø	T
		D	D						
L Light PN 250	HLA-06L	6	6	12	14	27	26	12	M 12X1.5
	HLA-08L	8	8	12	17	29	27.5	14	M 14X1.5
	HLA-10L	10	10	14	19	30	29	15	M 16X1.5
PN 160	HLA-12L	12	12	17	22	32	29.5	17	M 18X1.5
	HLA-15L	15	15	19	27	36	32.5	21	M 22X1.5
	HLA-18L	18	18	24	32	40	35.5	23.5	M 26X1.5
PN 100	HLA-22L	22	22	27	36	44	38.5	27.5	M 30X2
	HLA-28L	28	28	36	41	47	41.5	30.5	M 36X2
	HLA-35L	35	35	41	50	56	51	34.5	M 45X2
S Heavy PN 630	HLA-42L	42	42	50	60	63	56	40	M 52X2
	HLA-06S	6	6	12	17	31	27	16	M 14X1.5
	HLA-08S	8	8	14	19	32	27.5	17	M 16X1.5
PN 400	HLA-10S	10	10	17	22	34	30	17.5	M 18X1.5
	HLA-12S	12	12	17	24	38	31	21.5	M 20X1.5
	HLA-14S	14	14	19	27	40	35	22	M 22X1.5
PN 250	HLA-16S	16	16	24	30	43	36.5	24.5	M 24X1.5
	HLA-20S	20	20	27	36	48	44.5	26.5	M 30X2
	HLA-25S	25	25	36	46	54	50	30	M 36X2
PN 250	HLA-30S	30	30	41	50	62	55	35.5	M 42X2
	HLA-38S	38	38	50	60	72	63	41	M 52X2

Dimensions given approximate length with tightened nut. All dimensions are in millimeters, for reference only subject to change. Pre-set nut and cutting ring for connection. Please observe final assembly instruction on page 22.



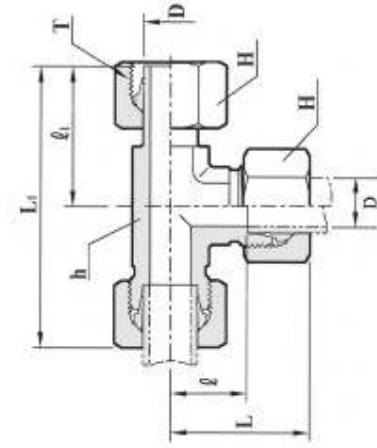
ADJUSTABLE BRANCH TEE WITH STANDPIPE HBTA



Series	Part No.	Tube O.D.		h	H	L	L ₁	L ₂	D	T
		D	D							
L Light PN 250	HBTA-06L	6	6	12	14	27	26	12	12	M 12X1.5
	HBTA-08L	8	8	12	17	29	27.5	14	14	M 14X1.5
	HBTA-10L	10	10	14	19	30	29	15	15	M 16X1.5
	HBTA-12L	12	12	17	22	32	29.5	17	17	M 18X1.5
	HBTA-15L	15	15	19	27	36	32.5	21	21	M 22X1.5
PN 160	HBTA-18L	18	18	24	32	40	35.5	23.5	23.5	M 26X1.5
	HBTA-22L	22	22	27	36	44	38.5	27.5	27.5	M 30X2
	HBTA-28L	28	28	36	41	47	41.5	30.5	30.5	M 36X2
PN 100	HBTA-35L	35	35	41	50	56	51	34.5	34.5	M 45X2
	HBTA-42L	42	42	50	60	63	56	40	40	M 52X2
	HBTA-06S	6	6	12	17	31	27	16	16	M 14X1.5
S Heavy PN 630	HBTA-08S	8	8	14	19	32	27.5	17	17	M 16X1.5
	HBTA-10S	10	10	17	22	34	30	17.5	17.5	M 18X1.5
	HBTA-12S	12	12	17	24	38	31	21.5	21.5	M 20X1.5
	HBTA-14S	14	14	19	27	40	35	22	22	M 22X1.5
	HBTA-16S	16	16	24	30	43	36.5	24.5	24.5	M 24X1.5
PN 400	HBTA-20S	20	20	27	36	48	44.5	26.5	26.5	M 30X2
	HBTA-25S	25	25	36	46	54	50	30	30	M 36X2
	HBTA-30S	30	30	41	50	62	55	35.5	35.5	M 42X2
PN 250	HBTA-38S	38	38	50	60	72	63	41	41	M 52X2

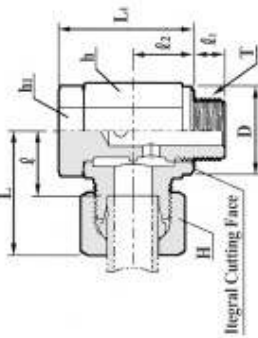
Dimensions given approximate length with tightened nut. All dimensions are in millimeters, for reference only subject to change. Pre-set nut and cutting ring for connection. Please observe final assembly instruction on page 22.

ADJUSTABLE RUN TEE WITH STANDPIPE HRTA

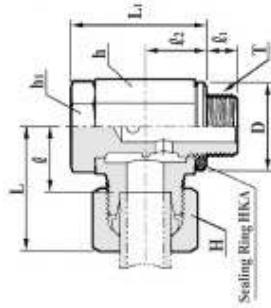


Series	Part No.	Tube O.D.		h	H	L	L ₁	L ₂	D	T
		D	D							
L Light PN 250	HRTA-06L	6	6	12	14	27	53	12	26	M 12X1.5
	HRTA-08L	8	8	12	17	29	56	14	27.5	M 14X1.5
	HRTA-10L	10	10	14	19	30	59	15	29	M 16X1.5
	HRTA-12L	12	12	17	22	32	62	17	29.5	M 18X1.5
	HRTA-15L	15	15	19	27	36	69	21	32.5	M 22X1.5
PN 160	HRTA-18L	18	18	24	32	40	75	23.5	35.5	M 26X1.5
	HRTA-22L	22	22	27	36	44	83	27.5	38.5	M 30X2
	HRTA-28L	28	28	36	41	47	91	30.5	41.5	M 36X2
PN 100	HRTA-35L	35	35	41	50	56	111	34.5	51	M 45X2
	HRTA-42L	42	42	50	60	63	123	40	56	M 52X2
	HRTA-06S	6	6	12	17	31	58	16	27	M 14X1.5
S Heavy PN 630	HRTA-08S	8	8	14	19	32	61	17	27.5	M 16X1.5
	HRTA-10S	10	10	17	22	34	66	17.5	30	M 18X1.5
	HRTA-12S	12	12	17	24	38	71	21.5	31	M 20X1.5
	HRTA-14S	14	14	19	27	40	75	22	35	M 22X1.5
	HRTA-16S	16	16	24	30	43	79	24.5	36.5	M 24X1.5
PN 400	HRTA-20S	20	20	27	36	48	93	26.5	44.5	M 30X2
	HRTA-25S	25	25	36	46	54	105	30	50	M 36X2
	HRTA-30S	30	30	41	50	62	119	35.5	55	M 42X2
PN 250	HRTA-38S	38	38	50	60	72	138	41	63	M 52X2

Dimensions given approximate length with tightened nut. All dimensions are in millimeters, for reference only subject to change. Pre-set nut and cutting ring for connection. Please observe final assembly instruction on page 22.



For Tube O.D. up to 15mm



For Tube O.D. 16mm and larger

BANJO FITTINGS (BSP PARALLELED/METRIC PARALLELED) WITH HKA-RING HSWVE-G/M

for BSP Paralleled

Series	Part No.	Tube O.D.		D	h	h ₁	H	L	L ₁	φ	φ ₁	φ ₂	T (BSP)	MA*
		6	8											
L light PN 250	HSWVE 06L-02G	6	14.5	14	14	14	14	25	21	10.5	6	10	1/8	20
	HSWVE 08L-04G	8	18.5	17	19	28	27	27	27	13	9	13	1/4	45
	HSWVE 10L-04G	10	18.5	19	19	29	27	14	9	13	1/4	45		
	HSWVE 12L-06G	12	22.5	22	22	30	32	15.5	9	15	3/8	70		
PN 160	HSWVE 15L-08G	15	26.5	27	27	34	37.5	19	11	18	1/2	100		
	HSWVE 18L-08G	18	26	30	32	27	44	20.5	11	21.5	1/2	100		
	HSWVE 22L-12G	22	32	36	36	32	42	49	25.5	13	24	3/4	140	
	HSWVE 06S-04G	6	18.5	19	17	19	30	27	15	9	13	1/4	45	
S heavy PN 630	HSWVE 08S-04G	8	18.5	19	19	19	30	27	15	9	13	1/4	45	
	HSWVE 10S-06G	10	22.5	22	22	32	32	16	9	15	3/8	70		
	HSWVE 12S-06G	12	22.5	24	24	33	37	17	9	18	3/8	70		
	HSWVE 14S-08G	14	26.5	27	27	38	37	20	11	18	1/2	100		
PN 400	HSWVE 16S-08G	16	26	30	30	27	40	44	21.5	11	21.5	1/2	100	
	HSWVE 20S-12G	20	32	36	36	32	46	49	24.5	13	24	3/4	140	

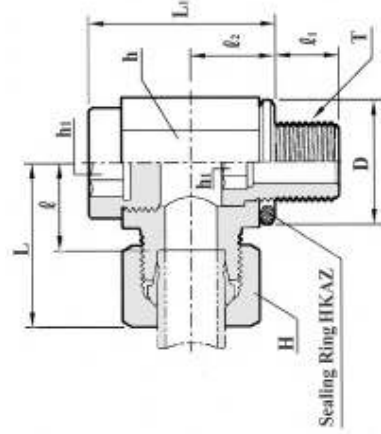
for Metric Paralleled

Series	Part No.	Tube O.D.		D	h	h ₁	H	L	L ₁	φ	φ ₁	φ ₂	T (Metric)	MA*
		6	8											
L light PN 250	HSWVE 06L-M10	6	14.5	14	14	14	14	25	21.5	10.5	6	10	M 10X1	25
	HSWVE 08L-M12	8	17.5	17	17	27	25	27	25	12	9	12	M 12X1.5	40
	HSWVE 10L-M14	10	19.5	19	19	29	27	14	9	13		13	M 14X1.5	55
	HSWVE 12L-M16	12	21.5	22	22	30	32	15.5	9	15		15	M 16X1.5	65
PN 160	HSWVE 15L-M18	15	23.5	24	24	27	33	37.5	17.5	9	18		M 18X1.5	90
	HSWVE 18L-M22	18	27	30	27	32	37	44	20.5	11	21.5		M 22X1.5	130
	HSWVE 22L-M26	22	31	36	36	42	49	25.5	13	24		24	M 26X1.5	140
	HSWVE 06S-M12	6	17.5	17	17	29	25	14	9	12		12	M 12X1.5	40
S heavy PN 630	HSWVE 08S-M14	8	19.5	19	19	19	30	27	15	9	13		M 14X1.5	55
	HSWVE 10S-M16	10	21.5	22	22	32	32	16	9	15		15	M 16X1.5	65
	HSWVE 12S-M18	12	23.5	24	24	33	37	17	9	18		18	M 18X1.5	90
	HSWVE 14S-M20	14	26.5	27	27	38	37	20	11	18		18	M 20X1.5	120
PN 400	HSWVE 16S-M22	16	27	30	27	30	40	44	21.5	11	21.5		M 22X1.5	130
	HSWVE 20S-M27	20	32	36	36	32	46	49	24.5	13	24		M 27X2	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

THROTTLEFREE BANJO FITTINGS (METRIC PARALLELED) WITH HKAZ-RING HSWVE-G/M



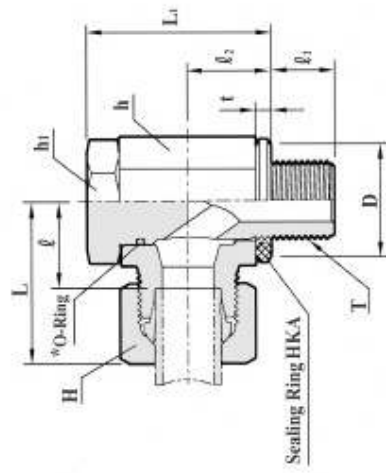
for Metric Paralleled

Series	Part No.	Tube O.D.		D	h	h ₁	H	L	L ₁	φ	φ ₁	φ ₂	T (Metric)
		6	8										
L light PN 250	HSWV 06L-M10	6	14	19	6	14	27	24	12.5	8	12		M 10X1
	HSWV 08L-M12	8	17	22	6	17	29	30	14.5	12	15		M 12X1.5
	HSWV 10L-M14	10	19	22	8	19	30	30	15.5	12	16		M 14X1.5
	HSWV 12L-M16	12	21	27	10	22	33	37	18	12	18		M 16X1.5
PN 160	HSWV 15L-M18	15	23	30	12	27	36	40	21	12	20		M 18X1.5
	HSWV 18L-M22	18	27	36	14	32	38	46	21.5	14	23		M 22X1.5
	HSWV 22L-M26	22	31	41	17	36	42	51	26	16	25		M 26X1.5
	HSWV 28L-M33	28	39	50	22	41	48	64	31.5	18	32		M 33X2
PN 100	HSWV 35L-M42	35	49	60	27	50	57	76	35.5	20	37		M 42X2
	HSWV 42L-M48	42	55	65	32	60	63	85	40	22	42		M 48X2
	HSWV 06S-M12	6	17	22	6	17	31	30	16.5	12	15		M 12X1.5
	HSWV 08S-M14	8	19	22	8	19	31	30	16.5	12	16		M 14X1.5
S heavy PN 630	HSWV 10S-M16	10	21	27	10	22	35	37	18.5	12	18		M 16X1.5
	HSWV 12S-M18	12	23	30	12	24	37	41	20.5	12	20		M 18X1.5
	HSWV 14S-M20	14	25	32	12	27	41	42	23	14	21		M 20X1.5
	HSWV 16S-M22	16	27	36	14	30	41	46	22.5	14	23		M 22X1.5
PN 400	HSWV 20S-M27	20	32	46	17	36	49	58	27.5	16	28		M 27X2
	HSWV 25S-M33	25	39	50	22	46	55	64	31	18	32		M 33X2
	HSWV 30S-M42	30	49	60	27	50	63	76	36.5	20	37		M 42X2
	HSWV 38S-M48	38	55	70	32	60	72	85	41	22	42		M 48X2

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



HIGH PRESSURE BANJO FITTINGS (METRIC PARALLELED) WITH HKA-RING HWH-G/M



for Metric Paralleled

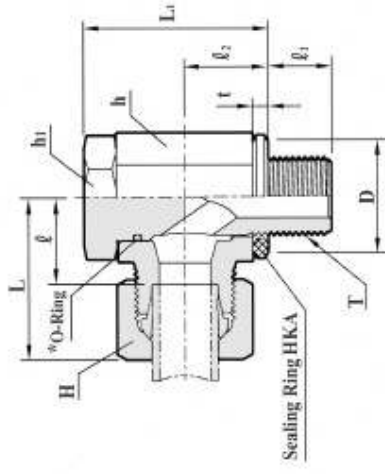
Series	Part No.	Tube O.D. D	D	h	h1	H	L	L1	l	l2	T	T (Metric)	MA*
L light PN 250	HWH 06L-M10	6	14	17	17	14	27	24	12	8	2.5	M 10X1	25
	HWH 08L-M12	8	17	22	19	17	29	30	14.5	12	3.0	M 12X1.5	50
	HWH 10L-M14	10	19	22	19	19	30	30	15.5	12	3.0	M 14X1.5	60
	HWH 12L-M16	12	21	27	24	22	33	36	18	12	3.0	M 16X1.5	90
	HWH 15L-M18	15	23	30	27	27	36	39.5	20.5	12	3.0	M 18X1.5	110
PN 160	HWH 18L-M22	18	27	32	30	32	37	45	21	14	4.5	M 22X1.5	150
	HWH 22L-M26	22	31	41	36	36	44	53	27.5	16	3.5	M 26X1.5	350
	HWH 28L-M33	28	39	50	46	41	49	66	32	18	3.5	M 33X2	400
PN 100	HWH 35L-M42	35	49	60	55	50	58	76	36	20	3.5	M 42X2	600
	HWH 42L-M48	42	55	70	60	60	63	87	40.5	22	4.0	M 48X2	800
S heavy PN 630	HWH 06S-M12	6	17	22	19	17	31	30	16.5	12	3.0	M 12X1.5	50
	HWH 08S-M14	8	19	22	19	19	31	30	16.5	12	3.0	M 14X1.5	60
	HWH 10S-M16	10	21	27	24	22	35	36	18.5	12	3.0	M 16X1.5	90
PN 400	HWH 12S-M18	12	23	30	27	24	36	39.5	20	12	3.0	M 18X1.5	110
	HWH 16S-M22	16	27	32	30	30	40	45	22	14	4.5	M 22X1.5	150
	HWH 20S-M27	20	32	41	36	36	48	53	26.5	16	3.5	M 27X2	350
PN 250	HWH 25S-M33	25	39	50	46	46	56	66	31.5	18	3.5	M 33X2	400
	HWH 30S-M42	30	49	60	55	50	64	76	37	20	3.5	M 42X2	600
	HWH 38S-M48	38	55	70	60	60	72	87	41.5	22	4.0	M 48X2	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, FRM (e.g. viton) on request (see page 16)

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

HIGH PRESSURE BANJO FITTINGS (BSP PARALLELED) WITH HKA-RING HWH-G/M



for BSP Paralleled

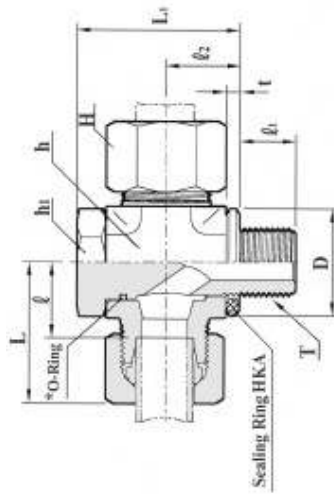
Series	Part No.	Tube O.D. D	D	h	h1	H	L	L1	l	l2	T	T (BSP)	MA*	
L light PN 250	HWH 06L-02G	6	14	17	14	17	27	24	12	8	2.5	1/8	20	
	HWH 08L-04G	8	18	19	17	22	29	30	14.5	12	3.0	1/4	50	
	HWH 10L-04G	10	18	19	19	22	30	30	15.5	12	3.0	1/4	50	
	HWH 12L-06G	12	22	24	22	27	33	36	18	12	3.0	3/8	75	
	HWH 15L-08G	15	26	30	27	32	37	45	21.5	14	21.5	4.5	1/2	130
PN 160	HWH 18L-08G	18	26	30	32	32	37	45	21	14	4.5	1/2	130	
	HWH 22L-12G	22	32	36	36	41	44	53	27.5	16	24	3.5	3/4	250
	HWH 28L-16G	28	39	46	41	50	49	66	32	18	30.5	3.5	1	350
PN 100	HWH 35L-20G	35	49	55	50	60	58	76	36	20	35.5	3.5	11/4	600
	HWH 42L-24G	42	55	60	60	70	63	87	40.5	22	40.5	3.5	1 1/2	800
S heavy PN 630	HWH 06S-04G	6	18	19	17	22	31	30	16.5	12	3.0	1/4	50	
	HWH 08S-04G	8	18	19	19	22	31	30	16.5	12	3.0	1/4	50	
	HWH 10S-06G	10	22	24	22	27	35	36	18.5	12	16.5	3.0	3/8	75
PN 400	HWH 12S-06G	12	22	24	24	27	35	36	18.5	12	16.5	3.0	3/8	75
	HWH 16S-08G	16	26	30	30	32	40	45	22	14	21.5	4.5	1/2	130
	HWH 20S-12G	20	32	36	36	41	48	53	26.5	16	24	3.5	3/4	250
PN 250	HWH 25S-16G	25	39	46	46	50	56	66	31.5	18	30.5	3.5	1	350
	HWH 30S-20G	30	49	55	50	60	64	76	37	20	34.5	3.5	1 1/4	600
	HWH 38S-24G	38	55	60	60	70	72	87	41.5	22	40.5	3.5	1 1/2	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, FRM (e.g. viton) on request (see page 16)

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

HIGH PRESSURE BANJO TEE (BSP PARALLELED) HTH-G/M

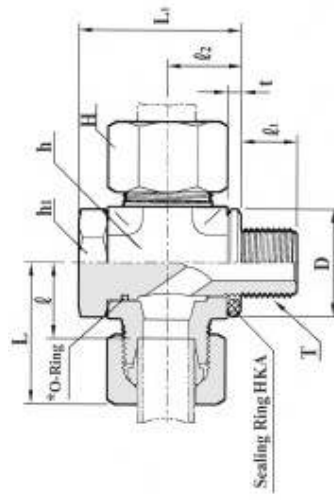


for BSP Paralleled

Series	Part No.	Tube O.D.		D	H	H ₁	h	h ₁	L	L ₁	L ₂	T	T (BSPP)	MA*		
		D	D													
L light PN 250	HTH 06L-02G	6	14	17	14	17	17	17	27	24	12	8	10.5	2.5	1/8	20
	HTH 08L-04G	8	18	22	19	17	22	19	29	30	14.5	12	14	3.0	1/4	50
	HTH 10L-04G	10	18	22	19	19	22	19	30	30	15.5	12	14	3.0	1/4	50
	HTH 12L-06G	12	22	27	24	22	27	24	33	36	18	12	16.5	3.0	3/8	75
	HTH 15L-08G	15	26	32	30	27	32	30	37	45	21.5	14	21.5	4.5	1/2	130
PN 160	HTH 18L-08G	18	26	32	30	32	30	32	37	45	21	14	21.5	4.5	1/2	130
	HTH 22L-12G	22	32	41	36	36	44	53	27.5	16	24	3.5	3/4	250		
PN 100	HTH 28L-16G	28	39	50	46	41	49	66	32	18	30.5	3.5	1	350		
	HTH 35L-20G	35	49	60	55	50	58	76	36	20	35.5	3.5	1 1/4	600		
	HTH 42L-24G	42	55	70	60	60	63	87	40.5	22	40.5	3.5	1 1/2	800		
S heavy PN 630	HTH 06S-04G	6	18	22	19	17	31	30	16.5	12	14	3.0	1/4	50		
	HTH 08S-04G	8	18	22	19	19	31	30	16.5	12	14	3.0	1/4	50		
	HTH 10S-06G	10	22	27	24	22	35	36	18.5	12	16.5	3.0	3/8	75		
PN 400	HTH 12S-06G	12	22	27	24	24	35	36	18.5	12	16.5	3.0	3/8	75		
	HTH 16S-08G	16	26	32	30	30	40	45	22	14	21.5	4.5	1/2	130		
	HTH 20S-12G	20	32	41	36	36	48	53	26.5	16	24	3.5	3/4	250		
PN 250	HTH 25S-16G	25	39	50	46	46	56	66	31.5	18	30.5	3.5	1	350		
	HTH 30S-20G	30	49	60	55	50	64	76	37	20	35.5	3.5	1 1/4	600		
	HTH 38S-24G	38	55	70	60	60	72	87	41.5	22	40.5	3.5	1 1/2	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, FRM (e.g. viton) on request (see page 16)
* MA = Recommended tightening torques (in Nm) for male G and M

HIGH PRESSURE BANJO TEE (METRIC PARALLELED) HTH-G/M



for Metric Paralleled

Series	Part No.	Tube O.D.		D	H	H ₁	h	h ₁	L	L ₁	L ₂	T	T (Metric)	MA*		
		D	D													
L light PN 250	HTH 06L-M10	6	14	17	14	17	17	17	27	24	12	8	10.5	2.5	M 10X1	25
	HTH 08L-M12	8	17	22	19	17	22	19	29	30	14.5	12	14	3.0	M 12X1.5	50
	HTH 10L-M14	10	19	22	19	19	22	19	30	30	15.5	12	14	3.0	M 14X1.5	60
	HTH 12L-M16	12	21	27	24	22	27	24	33	36	18	12	16.5	3.0	M 16X1.5	90
	HTH 15L-M18	15	23	30	27	27	30	27	36	39.5	20.5	12	18.5	3.0	M 18X1.5	110
PN 160	HTH 18L-M22	18	27	32	30	32	30	32	37	45	21	14	21.5	4.5	M 22X1.5	150
	HTH 22L-M26	22	31	41	36	36	44	53	27.5	16	24	3.5	M 26X1.5	350		
PN 100	HTH 28L-M33	28	39	50	46	41	49	66	32	18	30.5	3.5	M 33X2	400		
	HTH 35L-M42	35	49	60	55	50	58	76	36	20	35.5	3.5	M 42X2	600		
	HTH 42L-M48	42	55	70	60	60	63	87	40.5	22	40.5	3.5	M 48X2	800		
S heavy PN 630	HTH 06S-M12	6	17	22	19	17	31	30	16.5	12	14	3.0	M 12X1.5	50		
	HTH 08S-M14	8	19	22	19	19	31	30	16.5	12	14	3.0	M 14X1.5	60		
	HTH 10S-M16	10	21	27	24	22	35	36	18.5	12	16.5	3.0	M 16X1.5	90		
PN 400	HTH 12S-M18	12	23	30	27	24	36	39.5	20	12	18.5	3.0	M 18X1.5	110		
	HTH 16S-M22	16	27	32	30	30	40	45	22	14	21.5	4.5	M 22X1.5	150		
	HTH 20S-M27	20	32	41	36	36	48	53	26.5	16	24	3.5	M 27X2	350		
PN 250	HTH 25S-M33	25	39	50	46	46	56	66	31.5	18	30.5	3.5	M 33X2	400		
	HTH 30S-M42	30	49	60	55	50	64	76	37	20	35.5	3.5	M 42X2	600		
	HTH 38S-M48	38	55	70	60	60	72	87	41.5	22	40.5	3.5	M 48X2	800		

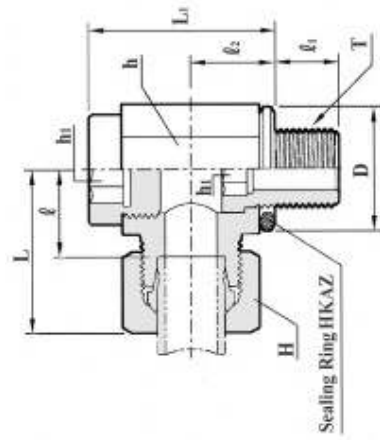
Dimensions given approximate length with tightened nut. All dimensions are in millimeters, for reference only subject to change.

* O-Ring of NBR (e.g. perbunan) standard, FRM (e.g. viton) on request (see page 16)

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



THROTTLEFREE BANJO FITTINGS (BSP PARALLEL) WITH HKAZ-RING HSVW-G/M

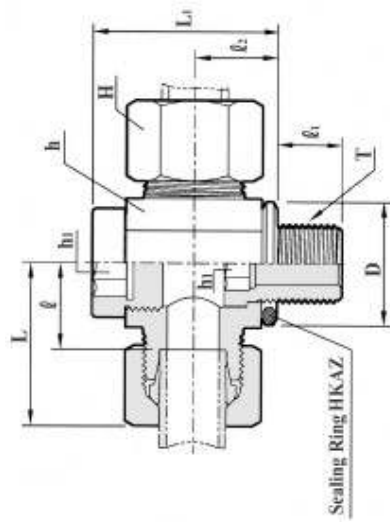


for BSP Parallel

Series	Part No.	Tube O.D.		D	h	h ₁	H	L	L ₁	ℓ	ℓ ₁	ℓ ₂	T	T	T
		D	D												
L light PN 250	HSVW 06L-02G	6	14	19	6	14	27	24	12,5	8	12	1/8	1/8	1/8	1/8
	HSVW 08L-04G	8	18	22	8	17	29	30	14,5	12	16	1/4	1/4	1/4	1/4
	HSVW 10L-04G	10	18	22	8	19	30	30	15,5	12	16	1/4	1/4	1/4	1/4
	HSVW 12L-06G	12	22	27	10	22	33	37	18	12	18	3/8	3/8	3/8	3/8
PN 160	HSVW 15L-08G	15	26	32	12	27	37	42	22	14	21	1/2	1/2	1/2	1/2
	HSVW 18L-08G	18	26	36	12	32	38	46	21,5	14	23	1/2	1/2	1/2	1/2
	HSVW 22L-12G	22	32	46	17	36	45	58	28,5	16	28	3/4	3/4	3/4	3/4
	HSVW 28L-16G	28	39	50	22	41	48	64	31,5	18	32	1	1	1	1
PN 100	HSVW 35L-20G	35	49	60	27	50	57	76	35,58	20	37	1 1/4	1 1/4	1 1/4	1 1/4
	HSVW 42L-24G	42	55	65	32	60	63	85	40	22	42	1 1/2	1 1/2	1 1/2	1 1/2
S heavy PN 650	HSVW 06S-04G	6	18	22	8	17	31	30	16,5	12	16	1/4	1/4	1/4	1/4
	HSVW 08S-04G	8	18	22	8	19	31	30	16,5	12	16	1/4	1/4	1/4	1/4
	HSVW 10S-06G	10	22	27	10	22	35	37	18,5	12	18	3/8	3/8	3/8	3/8
	HSVW 12S-06G	12	22	27	10	24	35	37	18,5	12	18	3/8	3/8	3/8	3/8
PN 400	HSVW 14S-08G	14	26	32	12	27	41	42	23	14	21	1/2	1/2	1/2	1/2
	HSVW 16S-08G	16	26	36	12	30	41	46	22,5	14	23	1/2	1/2	1/2	1/2
	HSVW 20S-12G	20	32	46	17	36	49	58	27,5	16	28	3/4	3/4	3/4	3/4
	HSVW 25S-16G	25	39	50	22	46	55	64	31	18	32	1	1	1	1
PN 250	HSVW 30S-20G	30	49	60	27	50	63	76	36,5	20	37	1 1/4	1 1/4	1 1/4	1 1/4
	HSVW 38S-24G	38	55	70	32	60	72	85	41	22	42	1 1/2	1 1/2	1 1/2	1 1/2

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

THROTTLEFREE BANJO FITTINGS (BSP PARALLEL) WITH HKAZ-RING HSVT-G/M

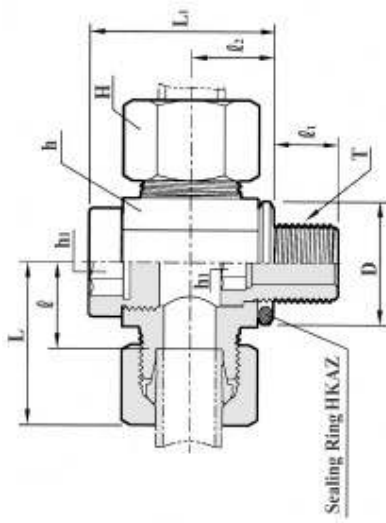


for BSP Parallel

Series	Part No.	Tube O.D.		D	h	h ₁	H	L	L ₁	ℓ	ℓ ₁	ℓ ₂	T	T	T
		D	D												
L light PN 250	HSVT 06L-02G	6	14	18	6	14	27	24	12	8	12	1/8	1/8	1/8	1/8
	HSVT 08L-04G	8	18	22	8	17	29	30	14	12	15	1/4	1/4	1/4	1/4
	HSVT 10L-04G	10	18	22	8	19	30	30	15	12	15	1/4	1/4	1/4	1/4
	HSVT 12L-06G	12	22	27	10	22	32	36	17,5	12	18	3/8	3/8	3/8	3/8
PN 160	HSVT 15L-08G	15	26	30	12	27	35	40	20	14	20	1/2	1/2	1/2	1/2
	HSVT 18L-08G	18	26	30	12	32	36	40	19,5	14	20	1/2	1/2	1/2	1/2
	HSVT 22L-12G	22	32	41	17	36	43	52	27	16	25	3/4	3/4	3/4	3/4
	HSVT 28L-16G	28	39	46	22	41	46	58	29,5	18	29	1	1	1	1
PN 100	HSVT 35L-20G	35	49	55	27	50	55	69	33	20	34	1 1/4	1 1/4	1 1/4	1 1/4
	HSVT 42L-24G	42	55	65	32	60	63	84	40	22	41	1 1/2	1 1/2	1 1/2	1 1/2
S heavy PN 630	HSVT 06S-04G	6	18	22	8	17	31	30	16	12	15	1/4	1/4	1/4	1/4
	HSVT 08S-04G	8	18	22	8	19	31	30	16	12	15	1/4	1/4	1/4	1/4
	HSVT 10S-06G	10	22	27	10	22	34	36	18	12	18	3/8	3/8	3/8	3/8
	HSVT 12S-06G	12	22	27	10	24	34	36	18	12	18	3/8	3/8	3/8	3/8
PN 400	HSVT 14S-08G	14	26	32	12	27	40	42	22	14	21	1/2	1/2	1/2	1/2
	HSVT 16S-08G	16	26	32	12	30	40	42	21,5	14	21	1/2	1/2	1/2	1/2
	HSVT 20S-12G	20	32	46	17	36	50	57	28,5	16	28	3/4	3/4	3/4	3/4
	HSVT 25S-16G	25	39	50	22	46	55	62	31	18	31	1	1	1	1
PN 250	HSVT 30S-20G	30	49	60	27	50	63	74	36,5	20	36	1 1/4	1 1/4	1 1/4	1 1/4
	HSVT 38S-24G	38	55	70	32	60	72	84	41	22	41	1 1/2	1 1/2	1 1/2	1 1/2

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

THROTTLEFREE BANJO TEE(METRIC PARALLELED) WITH HKAZ-RING
HSVT-G/M



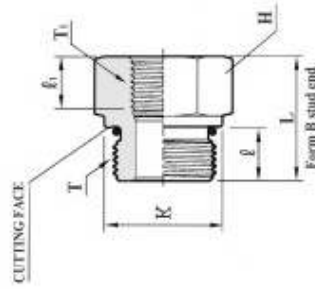
for Metric Paralleled

Series	Part No.	Tube O.D.		D	h	h ₁	H	L	L ₁	L ₂	Q ₁	Q ₂	T ₁ (Metric)
		6	8										
L light PN 250	HSVT 06L-M10	6	14	18	6	14	27	24	12	8	12	12	M 10X1
	HSVT 08L-M12	8	17	20	6	17	28	27	13	12	14	14	M 12X1.5
	HSVT 10L-M14	10	19	22	8	19	30	30	15	12	15	15	M 14X1.5
	HSVT 12L-M16	12	21	27	10	22	32	36	17.5	12	18	18	M 16X1.5
PN 160	HSVT 15L-M18	15	23	30	12	27	35	39	20	12	19	19	M 18X1.5
	HSVT 18L-M22	18	27	32	14	32	37	41	20.5	14	20	20	M 22X1.5
	HSVT 22L-M26	22	31	36	17	36	41	46	24.5	16	22	22	M 26X1.5
	HSVT 28L-M33	28	39	46	22	41	46	58	29.5	18	29	29	M 33X2
PN 100	HSVT 35L-M42	35	49	55	27	50	55	69	33	20	33	33	M 42X2
	HSVT 42L-M48	42	55	65	32	60	63	84	40	22	41	41	M 48X2
S heavy PN 630	HSVT 06S-M12	6	17	20	6	17	30	27	15	12	14	14	M 12X1.5
	HSVT 08S-M14	8	19	22	8	19	31	30	16	12	15	15	M 14X1.5
	HSVT 10S-M16	10	21	27	10	22	34	36	18	12	18	18	M 16X1.5
	HSVT 12S-M18	12	23	30	12	24	36	39	19.5	12	19	19	M 18X1.5
PN 400	HSVT 14S-M20	14	25	32	12	27	40	41	22	14	20	20	M 20X1.5
	HSVT 16S-M22	16	27	36	14	30	42	45	23.5	14	22	22	M 22X1.5
	HSVT 20S-M27	20	32	46	17	36	50	58	28.5	16	28	28	M 27X2
	HSVT 25S-M33	25	39	50	22	46	55	62	31	18	31	31	M 33X2
PN 250	HSVT 30S-M42	30	49	60	27	50	63	74	36.5	20	36	36	M 42X2
	HSVT 38S-M48	38	55	70	32	60	72	84	41	22	41	41	M 48X2

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

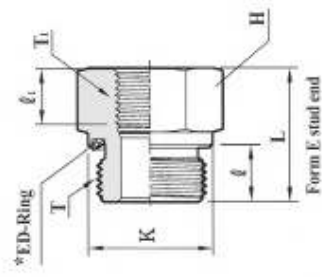
MALE FEMALE ADAPTER (BSP PARALLELED)
HFAD

PB	Part No.	H	K	L	Q	Q ₁	T ₁ (BSPP)
PB630	HFAD 06G-02G	22	22	22.5	12	8	3/8
PB630	HFAD 08G-02G	27	26	24	14	8	1/2
PB400	HFAD 08G-04G	27	26	24	14	12	1/4
PB400	HFAD 12G-04G	32	32	26	16	12	3/4
	HFAD 12G-06G	32	32	26	16	12	3/4
	HFAD 16G-04G	41	39	29	18	12	1
PB400	HFAD 16G-06G	41	39	29	18	12	1
	HFAD 16G-08G	41	39	29	18	14	1/2
	HFAD 20G-08G	50	49	32	20	14	1 1/4
PB250	HFAD 20G-12G	50	49	32	20	16	1 1/4
	HFAD 24G-08G	55	55	36	22	14	1 1/2
PB250	HFAD 24G-12G	55	55	36	22	16	1 1/2
	HFAD 24G-16G	55	55	36	22	18	1 1/2



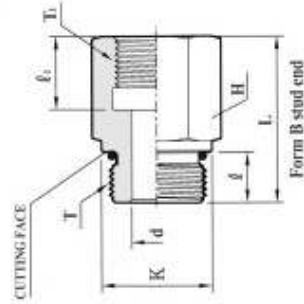
MALE FEMALE ADAPTER (BSP PARALLELED) WITH *ED-RING
HFAD-ED

PB	Part No.	H	K	L	Q	Q ₁	T ₁ (BSPP)
PB630	HFAD 06GED-02G	22	22	22.5	12	8	3/8
PB630	HFAD 08GED-02G	27	26	24	14	8	1/2
PB400	HFAD 08GED-04G	27	26	24	14	12	1/4
PB400	HFAD 12GED-04G	32	32	26	16	12	3/4
	HFAD 12GED-06G	32	32	26	16	12	3/4
	HFAD 16GED-04G	41	39	29	18	12	1
PB400	HFAD 16GED-06G	41	39	29	18	12	1
	HFAD 16GED-08G	41	39	29	18	14	1/2
	HFAD 20GED-08G	50	49	32	20	14	1 1/4
PB250	HFAD 20GED-12G	50	49	32	20	16	1 1/4
	HFAD 24GED-08G	55	55	36	22	14	1 1/2
PB250	HFAD 24GED-12G	55	55	36	22	16	1 1/2
	HFAD 24GED-16G	55	55	36	22	18	1 1/2

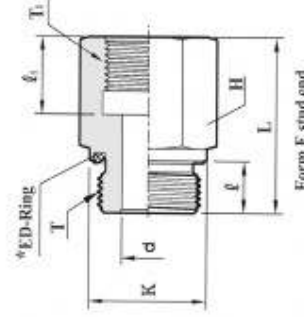




MALE FEMALE ADAPTER (BSP PARALLEL) HFAE



MALE FEMALE ADAPTER (BSP PARALLEL) WITH *ED-RING HFAE-ED

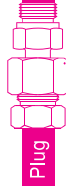


PB	Part No.	d	H	K	L	ℓ	ℓ ₁	T (BSPP)	T ₁ (BSPP)
PN 630	HFAE02G-04G	4	19	14	31	8	17	1/8	1/4
	HFAE02G-06G	4	24	14	32	8	17	1/8	3/8
PN 630	HFAE04G-02G	5	19	18	28	12	12	1/4	1/8
	HFAE04G-06G	5	24	18	36	12	17	1/4	3/8
PN 400	HFAE04G-08G	5	30	18	40	12	20	1/4	1/2
	HFAE04G-12G	5	36	18	43	12	22	1/4	3/4
PN 630	HFAE06G-04G	8	22	22	36	12	17	3/8	1/4
	HFAE06G-08G	8	30	22	41	12	20	3/8	1/2
PN 400	HFAE06G-12G	8	36	22	44	12	22	3/8	3/4
	HFAE08G-06G	12	27	26	36	14	17	1/2	3/8
PN 250	HFAE08G-12G	12	36	26	46	14	22	1/2	3/4
	HFAE08G-16G	12	41	26	49	14	24.5	1/2	1
PN 400	HFAE08G-20G	10	55	26	53	14	26.5	1/2	1 1/4
	HFAE12G-08G	16	32	32	41	16	20	3/4	1/2
PN 250	HFAE12G-16G	16	41	32	51	16	24.5	3/4	1
	HFAE12G-20G	16	55	32	55	16	26.5	3/4	1 1/4
PN 400	HFAE16G-12G	20	60	32	57	16	28.5	3/4	1 1/2
	HFAE16G-20G	20	41	39	47	18	22	1	3/4
PN 250	HFAE16G-24G	20	55	39	57	18	26.5	1	1 1/4
	HFAE20G-16G	25	50	49	52	20	24.5	1 1/4	1
PN 400	HFAE20G-24G	25	60	49	60	20	28.5	1 1/4	1 1/2
	HFAE24G-20G	32	55	55	58	22	26.5	1 1/2	1 1/4
	HFAE32G-24G	40	70	68	62	24	28.5	2	1 1/2

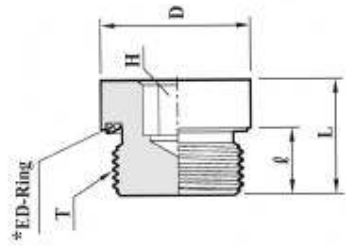
Male / Female thread adaptors with metric and NPT thread on request. All dimensions are in millimeters, for reference only subject to change.

PB	Part No.	d	H	K	L	ℓ	ℓ ₁	T (BSPP)	T ₁ (BSPP)
PN 630	HFAE02GED-04G	4	19	14	31	8	17	1/8	1/4
	HFAE02GED-06G	4	24	14	32	8	17	1/8	3/8
PN 630	HFAE04GED-02G	5	19	18	28	12	12	1/4	1/8
	HFAE04GED-06G	5	24	18	36	12	17	1/4	3/8
PN 400	HFAE04GED-08G	5	30	18	40	12	20	1/4	1/2
	HFAE04GED-12G	5	36	18	43	12	22	1/4	3/4
PN 630	HFAE06GED-04G	8	22	22	36	12	17	3/8	1/4
	HFAE06GED-08G	8	30	22	41	12	20	3/8	1/2
PN 400	HFAE06GED-12G	8	36	22	44	12	22	3/8	3/4
	HFAE08GED-06G	12	27	26	36	14	17	1/2	3/8
PN 250	HFAE08GED-12G	12	36	26	46	14	22	1/2	3/4
	HFAE08GED-16G	12	41	26	49	14	24.5	1/2	1
PN 400	HFAE08GED-20G	10	55	26	53	14	26.5	1/2	1 1/4
	HFAE12GED-08G	16	32	32	41	16	20	3/4	1/2
PN 250	HFAE12GED-16G	16	41	32	51	16	24.5	3/4	1
	HFAE12GED-20G	16	55	32	55	16	26.5	3/4	1 1/4
PN 400	HFAE16GED-12G	20	60	32	57	16	28.5	3/4	1 1/2
	HFAE16GED-20G	20	41	39	47	18	22	1	3/4
PN 250	HFAE16GED-24G	20	55	39	57	18	26.5	1	1 1/4
	HFAE20GED-16G	25	50	49	52	20	24.5	1 1/4	1
PN 400	HFAE20GED-24G	25	60	49	60	20	28.5	1 1/4	1 1/2
	HFAE24GED-20G	32	55	55	58	22	26.5	1 1/2	1 1/4
	HFAE32GED-24G	40	70	68	62	24	28.5	2	1 1/2

All dimensions are in millimeters, for reference only subject to change. *ED-Ring and O-Ring of NBR(e.g.perbunan) standard, FRM(e.g.viton) on request (see page 16)

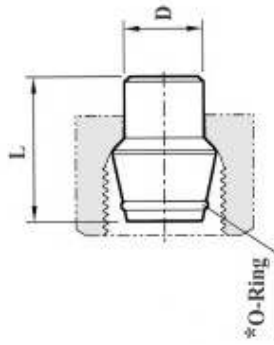


BLANKING PLUGS FOR PORT WITH *ED-RING HVSTI-GED/MED



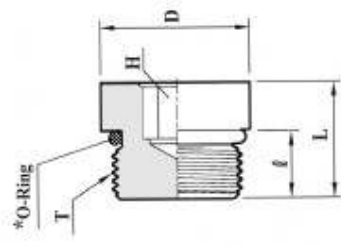
PB	Part No.(M)	Part No.(G)	T (Metric)	T (BSPP)	D	H	L	Ø
PN 630	HVSTI-M10ED	HVSTI-02GED	M 10X1	1/8	14	5	12	8
	HVSTI-M12ED	-	M 12X1.5	-	17	6	17	12
	HVSTI-M14ED	HVSTI-04GED	M 14X1.5	1/4	19	6	17	12
PN 400	HVSTI-M16ED	HVSTI-06GED	M 16X1.5	3/8	22	8	17	12
	HVSTI-M18ED	-	M 18X1.5	-	23.9	8	17	12
	HVSTI-M20ED	-	M 20X1.5	-	25.9	10	19	14
PN 250	HVSTI-M22ED	HVSTI-08GED	M 22X1.5	1/2	27	10	19	14
	HVSTI-M26ED	-	M 26X1.5	-	31.9	12	21	16
	HVSTI-M27ED	HVSTI-12GED	M 27X2	3/4	32	12	21	16
PN 100	HVSTI-M33ED	HVSTI-16GED	M 33X2	1	39.9	17	22.5	16
	HVSTI-M42ED	HVSTI-20GED	M 42X2	1 1/4	49.9	22	22.5	16
	HVSTI-M48ED	HVSTI-24GED	M 48X2	1 1/2	55	24	22.5	16

BLANKING PLUG WITH *O-RING HVKA



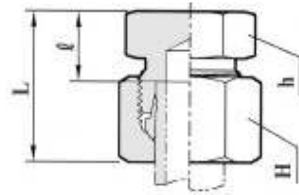
Series	Part No.	Tube O.D.		L
		D	D	
L Light PN 250	HVKA-06L/S	6	6	18.5
	HVKA-08L/S	8	8	18.5
	HVKA-10L/S	10	10	20
	HVKA-12L/S	12	12	20.5
	HVKA-15L	15	15	20.5
PN 160	HVKA-18L	18	18	22.5
	HVKA-22L	22	22	25
	HVKA-28L	28	28	25.5
PN 100	HVKA-35L	35	35	30
	HVKA-42L	42	42	30
S Heavy PN 630	HVKA-14S	14	14	22.5
	HVKA-16S	16	16	23.5
PN 400	HVKA-20S	20	20	28.5
	HVKA-25S	25	25	29
	HVKA-30S	30	30	30.5
PN 250	HVKA-38S	38	38	33

BLANKING PLUGS WITH *O-RING (ACCORD. TO ISO 6149-3/DIN 3585) HVSTI



PB	Part No.	T (Metric)	D	H	L	Ø
PN 630	HVSTI-M10	M 10X1	13	5	14	10
	HVSTI-M12	M 12X1.5	17	6	16.5	11.5
	HVSTI-M14	M 14X1.5	19	6	16.5	11.5
PN 400	HVSTI-M16	M 16X1.5	21	6	18	13
	HVSTI-M18	M 18X1.5	23	8	19.5	14.5
	HVSTI-M22	M 22X1.5	27	10	20.5	15.5
PN 250	HVSTI-M26	M 26X1.5	31	12	21	16
	HVSTI-M27	M 27X2	32	12	24	19
	HVSTI-M33	M 33X2	38	17	25.5	19
	HVSTI-M42	M 42X2	48	22	26	19.5

TUBE CAP HCA

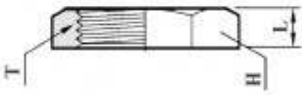


Series	Part No.	Tube O.D.		L	L	h	H	Ø
		D	D					
L Light PN 250	HCA-06L	6	6	14	12	12	14	7
	HCA-08L	8	8	17	14	14	17	8
	HCA-10L	10	10	19	17	17	19	9
	HCA-12L	12	12	22	19	19	22	10
	HCA-15L	15	15	27	24	24	27	11
PN 160	HCA-18L	18	18	32	27	27	32	11.5
	HCA-22L	22	22	36	32	32	36	13.5
	HCA-28L	28	28	41	41	41	41	14.5
PN 100	HCA-35L	35	35	50	46	46	50	14.5
	HCA-42L	42	42	60	55	55	60	16
	HCA-06S	6	6	17	17	17	17	11
S Heavy PN 630	HCA-08S	8	8	19	17	17	19	13
	HCA-10S	10	10	22	19	19	22	12.5
	HCA-12S	12	12	24	22	22	24	14.5
PN 400	HCA-14S	14	14	27	24	24	27	16
	HCA-16S	16	16	30	27	27	30	15.5
	HCA-20S	20	20	36	32	32	36	17.5
PN 250	HCA-25S	25	25	46	41	41	46	20
	HCA-30S	30	30	50	46	46	50	20.5
	HCA-38S	38	38	60	55	55	60	23

Dimensions given approximate length with tightened nut. All dimensions are in millimeters, for reference only subject to change.
*O-Ring of NBR(e.g.Perbunan)Standard, of FPM(e.g. Viton) on request (See Page 16)

*BULKHEAD LOCK NUT

HLN

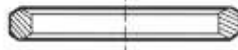


Series	Part No.	Tube O.D.		H	L	T
		Light	Heavy			
L	HLN 06L	6	-	17	6	M12X1.5
L/S	HLN 08L-06S	8	6	19	6	M14X1.5
L/S	HLN 10L-08S	10	8	22	6	M16X1.5
L/S	HLN 12L-10S	12	10	24	6	M18X1.5
S	HLN 12S	-	12	27	6	M20X1.5
L/S	HLN 15L-14S	15	14	30	7	M22X1.5
S	HLN 16S	-	16	32	7	M24X1.5
L	HLN 18L	18	-	36	8	M26X1.5
L/S	HLN 22L-20	22	20	41	8	M30X2
L/S	HLN 28L-25S	28	25	46	9	M36X2
S	HLN 30S	-	30	50	9	M42X2
L	HLN 35L	35	-	55	10	M45X2
L/S	HLN 42L-38S	42	38	65	10	M52X2

*According to DIN 80705 for bulkhead screw-joint.
All dimensions are in millimeters, for reference only subject to change.

SEALING RINGS FOR HWH/HDT AND HSWVE

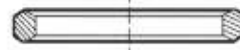
HKA



Part No.	External Thread	Part No.	External Thread
HKA-02G	BSPP 1/8	HKA-M10	M 10X1
HKA-04G	BSPP 1/4	HKA-M12	M 12X1.5
HKA-06G	BSPP 3/8	HKA-M14	M 14X1.5
HKA-08G	BSPP 1/2	HKA-M16	M 16X1.5
HKA-02GX4.5	BSPP 1/8	HKA-M18	M 18X1.5
HKA-12G	BSPP 3/4	HKA-M20	M 20X1.5
HKA-16G	BSPP 1	HKA-M22	M 22X1.5
HKA-20GM42	BSPP 1 1/4/M42X2	HKA-M26	M 26X1.5
HKA-24GM48	BSPP 1 1/2/M48X2	HKA-M26X3.5	M 26X1.5
		HKA-M27	M 26X2
		HKA-M33	M 33X2

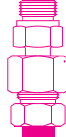
SEALING RINGS FOR HSWV / HSVT

HKAZ



Part No.	External Thread	Part No.	External Thread
HKAZ-02G	BSPP 1/8	HKAZ-M10	M 10X1
HKAZ-04G	BSPP 1/4	HKAZ-M12	M 12X1.5
HKAZ-06G	BSPP 3/8	HKAZ-M14	M 14X1.5
HKAZ-08G	BSPP 1/2	HKAZ-M16	M 16X1.5
HKAZ-12G	BSPP 3/4	HKAZ-M18	M 18X1.5
HKAZ-16G	BSPP 1	HKAZ-M20	M 20X1.5
HKAZ-20GM42	BSPP 1 1/4/M42X2	HKAZ-M22	M 22X1.5
HKAZ-24GM48	BSPP 1 1/2/M48X2	HKAZ-M26	M 26X1.5
		HKAZ-M27	M 27X2
		HKAZ-M33	M 33X2

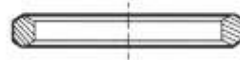
ED-Ring and O-Ring of NBR(e.g. Perbunan) standard, FPM(e.g. Viton) on request(See page 16)



Etc

SEALING RINGS FOR HGC

HKI



Part No.	Internal Thread
HKI-04G	BSPP 1/4
HKI-08G	BSPP 1/2

ED-RING

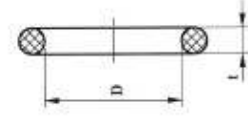
KP-B-S



Part No.	For Male Thread	
	Metric	G(SPP)
HP-B-S M8	M 8X1	-
HP-B-S01G	M 10X1	1/8
HP-B-SM12	M 12X1.5	-
HP-B-S02G	M 14X1.5	1/4
HP-B-SM16	M 16X1.5	-
HP-B-S03G	-	3/8
HP-B-SM18	M 18X1.5	-
HP-B-SM20	M 20X1.5	1/2
HP-B-S04G	-	-
HP-B-SM22	M 22X1.5	3/4
HP-B-S06G	M 26X1.5	-
	M 27X2	-
HP-B-S08G	M 33X2	1
HP-B-S10G	M 42X2	1 1/4
HP-B-S12G	M 48X2	1 1/2

O-RINGS

KP-B-HS

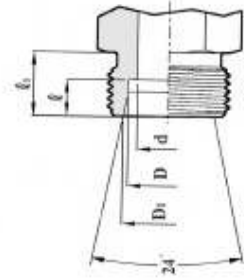


Part No.	D	T
HP-B-DS06	4	1.5
HP-B-DS08	6	1.5
HP-B-DS10	7.5	1.5
HP-B-DS12	9	1.5
HP-B-DS14	10	2
HP-B-DS16	12	2
HP-B-DS18	15	2
HP-B-DS20	16.3	2.4
HP-B-DS22	2	2
HP-B-DS25	20.3	2.4
HP-B-DS30	25.3	2.4
HP-B-DS28	26	2
HP-B-DS35	32	2.5
HP-B-DS38	33.3	2.4
HP-B-DS42	38	2.5

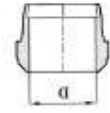
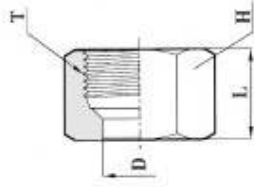
ED-Ring and O-Ring of NBR(e.g. Perbunan) standard, FPM(e.g. Viton) on request(See page 16)

TUBE END DIMENSION

NUT
HN



CUTTING RING
HS



Series	Part No. Nut	Part No. Cutting Ring	Tube O.D.	DN Size	D	D ₁	d	H	L	T (Metric)	Q	Q ₁
LL Very light	HN-04LL	HS-04LL	4	3	4	5	3	10	11.5	M 8X1.0	4	8
	HN-06LL	HS-06LL	6	4	6	7.5	4.5	12	12	M 10X1.0	5.5	8
	HN-08LL	HS-08LL	8	6	8	9.5	6	14	12.5	M 12X1.0	5.5	9
	HN-10LL	HS-10LL	10	8	10	11.5	8	17	12.5	M 14X1.0	6	9
	HN-12LL	HS-12LL	12	10	12	13.5	10	19	13	M 16X1.0	6	9
	HN-06L	HS-06L	6	4	6	8.1	4	14	15	M 12X1.5	7	10
	HN-08L	HS-08L	8	6	8	10.1	6	17	15	M 14X1.5	7	10
	HN-10L	HS-10L	10	8	10	12.3	8	19	16	M 16X1.5	7	11
	HN-12L	HS-12L	12	10	12	14.3	10	22	16	M 18X1.5	7	11
	HN-15L	HS-15L	15	12	15	17.3	12	27	17.5	M 22X1.5	7	12
	HN-18L	HS-18L	18	16	18	20.3	15	32	18	M 26X1.5	7.5	12
	L light	HN-22L	HS-22L	22	20	22	24.3	19	36	20.5	M 30X2	7.5	14
HN-28L		HS-28L	28	25	28	30.3	24	41	21	M 36X2	7.5	14
HN-35L		HS-35L	35	32	35	38	30	50	24	M 45X2	10.5	16
HN-42L		HS-42L	42	40	42	45	36	60	24	M 52X2	11	16
HN-06S		HS-06S	6	3	6	8.1	4	17	16.5	M 14X1.5	7	12
HN-08S		HS-08S	8	4	8	10.1	5	19	16.5	M 16X1.5	7	12
HN-10S		HS-10S	10	6	10	12.3	7	22	17.5	M 18X1.5	7.5	12
HN-12S		HS-12S	12	8	12	14.3	8	24	18	M 20X1.5	7.5	12
HN-14S		HS-14S	14	10	14	16.3	10	27	20.5	M 22X1.5	8	14
HN-16S		HS-16S	16	12	16	18.3	12	30	21	M 24X1.5	8.5	14
HN-20S		HS-20S	20	16	20	22.9	16	36	24	M 30X2	10.5	16
HN-25S		HS-25S	25	20	25	27.9	20	46	27	M 36X2	12	18
S heavy	HN-30S	HS-30S	30	25	30	33	25	50	29.5	M 42X2	13.5	20
	HN-38S	HS-38S	38	32	38	41	32	60	32.5	M 52X2	16	22

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