MAKE IN INDIA

HYLOC®
the right connection
the right environment

Tube fittings | Pipe Flanges | Hydraulic Valves
Diagnostic Couplings

CELEBRATING
50 YEARS
OF INNOVATIVE GROWTH
SINCE 1974

hyloc hydrotechnic pvt. ltd.

Product E-Catalogue - 04/2026

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HYLOC®
the right connection
the right environment

ISO 9001, ISO 14001, ISO 45001 and ISO/TS 22163 (IRIS)
Certified Company
Type Approved supplier for Marine
CIN : U85110KA1991PTC011924

Approvals

Tube fittings as per ISO 8434/DIN 2353

Surface treatment : Zinc plating with Blue passivation

Tube fittings with

ZINC NICKEL

Surface treatment

SS 316,

Stainless Steel

Tube fittings

Hydraulic valves

Max. Pressure :

Up to 800 bar

Sizes : NG 06 t0 NG 80

End connections :

Pipe flanges as per ISO 6162/ISO 6164

Sizes available : 1/2” to 5” NB

Different configurations like,

Butt weld, Socket weld and Blind flanges.

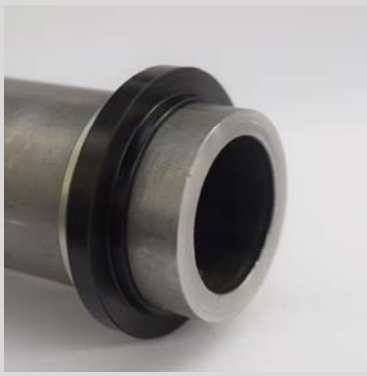
ZERO Leak Diagnostic couplings

Can also be used for air purging

Suitable for Micro bore hoses with M16x2.0 and M16x1.5 threads

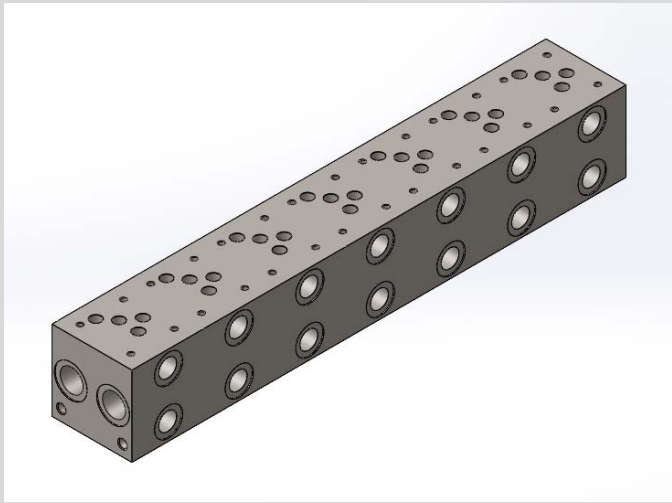
Varieties of stud ends with different sealing arrangements

Soft seal ferrules to suit ISO 8434-1 tube fittings



Quick Release Couplings
ISO 7241-1, Series A

Bar Manifolds
CETOP 3 and CETOP 5
Interface conforming to



Forged components
(Hot and Cold forgings)

Credentials

Hyloc is active member of BIS (Bureau of Indian standard) and contributes in preparation of technical documents related to Tube fittings for Fluid power sectional committee. PGD 36 is a Technical committee for Fluid power systems.

Hyloc is ‘P’ member of ISO/TC 131 Standardization in the field of fluid power systems and components, comprising terminology, construction, principal dimensions, safety requirements and testing and inspection methods.

Certifications


DNV

MANAGEMENT SYSTEM CERTIFICATE

Certificate no.: 180069-2015-AQ-IND-RvA | Initial certification date: 27 November 2001 | Valid: 12 September 2023 – 11 September 2026

This is to certify that the management system of
Hyloc Hydrotechnic Private Limited
88/89, Machhe Industrial Estate, Machhe, Belgaum - 590014, Karnataka, India

has been found to conform to the Quality Management System standard:
ISO 9001:2015


DNV

MANAGEMENT SYSTEM CERTIFICATE

Certificate no.: 180070-2015-AE-IND-RvA | Initial certification date: 26 July 2006 | Valid: 12 September 2023 – 11 September 2026

This is to certify that the management system of
Hyloc Hydrotechnic Private Limited
88/89, Machhe Industrial Estate, Machhe, Belgaum - 590014, Karnataka, India

has been found to conform to the Environmental Management System standard:
ISO 14001:2015


DNV

MANAGEMENT SYSTEM CERTIFICATE

Certificate no.: 10000369092-MSC-RvA-IND | Initial certification date: 12 September 2011 (based on OHSAS 18001) | Valid: 12 September 2023 – 11 September 2026

This is to certify that the management system of
Hyloc Hydrotechnic Private Limited
88/89, Machhe Industrial Estate, Machhe, Belgaum - 590014, Karnataka, India

has been found to conform to the Occupational Health and Safety Management System standard:
ISO 45001:2018


DNV·GL

TYPE APPROVAL CERTIFICATE

Certificate No: **P-15014**
File No: **792.21**
Job Id: **262.1-017801-1**

This is to certify:
That the Pipe Couplings, Bite and Compression Type

with type designation(s)
L series, S Series

Issued to
Hyloc Hydrotechnic Pvt. Ltd.
Belgaum, India

is found to comply with
Det Norske Veritas' Standards for Certification 2.9 No. 5-792.20
Det Norske Veritas' Rules for Classification of Ships Pt.4, Ch.6 "Piping Systems"


DIRECTORATE GENERAL OF AERONAUTICAL QUALITY ASSURANCE

MINISTRY OF DEFENCE, GOVERNMENT OF INDIA

REGISTRATION CERTIFICATE

This is to certify that firm **M/s Hyloc Hydrotechnic Pvt. Ltd., 88/89 Machhe Industrial Estate Machhe, Belgaum, Karnataka - 590014 (Regd. Mail ID at CPP Portal:sales@hyloc.co.in)** after verification of its capacity / capability is registered vide Registration No. **DGAQA/REGN/110/2023** and is found capable of **"Design, Development & Production"** ~~/Development & Production/ "Production"/ "Major, Repair & Overhaul"/ Authorised dealer/Stockist of foreign OEM~~ of the following Defence aviation stores. (*Strike out which is not applicable)

Sl No.	Nomenclature and details of the store (s).	Specifications
	"Design, Development & Production of Ermeto Fittings, Pipe Fittings, Tube Fittings, Flanges and Valves."	


IRIS Certification

CERTIFICATE

awarded to

HYLOC HYDROTECHNIC PVT. LTD
88, Machhe Industrial Estate, Machhe
590014, Belagavi
India

DQS GmbH

confirms, as an IRIS Certification® approved certification body, that the Management System of the above organization has been assessed and found to be in accordance with the

IRIS Certification® Conformity assessment:2020
and based on
ISO/TS 22163:2017

Approvals

मेकॉन लिमिटेड
भारत सरकार का संस्थान
MECON LIMITED
A Schedule “A” PSU under Govt. of India

RITES
THE INFRASTRUCTURE PEOPLE

DASTURCO
Total Engineering - Concept to Completion
M. N. DASTUR & COMPANY (P) LTD
Consulting Engineers

Infrastructure

Hyloc has complete infrastructure, which includes

- Hot and cold forging plant
- CNC turning centers, VMC, Multi spindles, thread rolling and many more.
- Fully automatic Surface treatment plant








- Tube Selection and Trouble Shooting Guide
- Ferrule Crimping process
- Weldable Nipple Assembly process
- Tightening Torques for stud ends
- Part Code tree
- Port Details - BSP and Metric flat face
- Port Details - Metric with O ring
- Port Details - SAE (UNF/UN) with O Ring
- ISO 6162 Flanged Port

General recommendations for Carbon Steel Tubes

Steel Type	**St 37.4**
Tensile Strength	340 N/mm^2
Yield Strength	235 N/mm^2
Condition	Seamless, Cold drawn, normal annealed as per DIN 2391C, Part 2

Seamless Steel Tubes, Material : St 37.4

Tolerances as per DIN 2391, Part 1

Tube OD (mm)	Tolerance	Wall thickness (mm)	Tube ID (mm)	Design Pressure (bar)		Burst Pressure (bar)	Weight Kg/m
				DIN 2413 - I Static	DIN 2413 - III Dynamic		
4	±0.08	0.50	3.0	313	273	1160	0.047
4		0.75	2.5	409	391	1820	0.063
4		1.00	2.0	522	500	2700	0.074
5	±0.08	1.00	3.0	432	416	2120	0.099
6	±0.08	0.75	4.5	333	288	1150	0.103
6		1.00	4.0	389	372	1650	0.123
6		1.50	3.0	549	526	2550	0.166
6		2.00	2.0	692	662	>3500	0.197
6		2.50	1.0	757	725	>3500	0.208
8	±0.08	1.00	6.0	333	288	1175	0.222
8		1.50	5.0	431	412	1925	0.240
8		2.00	4.0	549	526	2500	0.296
8		2.50	3.0	658	630	2650	0.339
10		1.00	8.0	282	248	900	0.222
10	±0.08	1.50	7.0	373	357	1450	0.314
10		2.00	6.0	478	458	2025	0.395
10		2.50	5.0	576	551	2675	0.462
10		3.00	4.0	666	638	>3500	0.518
12		1.00	10.0	253	209	750	0.271
12		1.50	9.0	353	303	1150	0.388
12	±0.08	2.00	8.0	409	391	1600	0.493
12		2.50	7.0	495	474	2025	0.586
12		3.00	6.0	576	551	2600	0.666
12		3.50	5.0	651	624	---	0.734
15	±0.08	1.00	13.0	188	170	575	0.345
15		1.50	12.0	282	248	950	0.499
15		2.00	11.0	336	321	1275	0.641
15		3.00	9.0	478	458	2000	0.888
16	±0.08	1.50	13.0	264	233	850	0.536
16		2.00	12.0	353	303	1175	0.691
16		2.50	11.0	386	370	1500	0.832
16		3.00	10.0	452	433	1850	0.962
18	±0.08	1.00	16.0	157	143	450	0.419
18		1.50	15.0	235	209	700	0.610
18		2.00	14.0	313	273	975	0.789
18		2.50	13.0	348	333	1300	0.956
18		3.00	12.0	409	391	1575	1.111

General recommendations for Carbon Steel Tubes

Steel Type	**St 37.4**
Tensile Strength	340 N/mm^2
Yield Strength	235 N/mm^2
Condition	Seamless, Cold drawn, normal annealed as per DIN 2391C, Part 2

Seamless Steel Tubes, Material : St 37.4

Tolerances as per DIN 2391, Part 1

Tube OD (mm)	Tolerance	Wall thickness (mm)	Tube ID (mm)	Design Pressure (bar)		Burst Pressure (bar)	Weight Kg/m
				DIN 2413 - I Static	DIN 2413 - III Dynamic		
20	±0.08	1.50	17.0	212	190	675	0.648
20		2.00	16.0	282	248	900	0.888
20		2.50	15.0	353	303	1100	1.079
20		3.00	14.0	373	357	1400	1.258
20		3.50	13.0	426	408	1650	1.424
20		4.00	12.0	478	458	2000	1.578
22	±0.08	1.50	19.0	192	173	550	0.758
22		2.00	18.0	256	227	775	0.986
22		2.50	17.0	320	278	1025	1.202
22		3.00	16.0	343	328	1175	1.406
25	±0.08	2.00	21.0	226	201	725	1.134
25		2.50	20.0	282	248	850	1.387
25		3.00	19.0	338	292	1025	1.628
25		4.00	17.0	394	378	1500	2.072
25		4.50	16.0	437	418	1625	2.275
28	±0.08	1.50	25.0	151	138	425	0.980
28		2.00	24.0	201	181	600	1.282
28		2.50	23.0	252	223	750	1.572
28		3.00	22.0	302	264	900	1.850
30		2.00	26.0	188	170	575	1.381
30	±0.08	2.50	25.0	235	209	725	1.695
30		3.00	24.0	282	248	850	1.998
30		4.00	22.0	336	321	1175	2.565
30		5.00	20.0	409	391	1600	3.083
35	±0.15	2.00	31.0	161	147	450	1.628
35		2.50	30.0	201	181	600	2.004
35		3.00	29.0	242	215	700	2.367
35		4.00	27.0	322	280	960	3.058
38	±0.15	2.50	33.0	186	168	550	2.189
38		3.00	32.0	223	199	675	2.589
38		4.00	30.0	297	260	900	3.354
38		5.00	28.0	332	318	1150	4.069
38		6.00	26.0	390	373	---	4.735
38		7.00	24.0	446	427	1700	5.325
42	±0.20	2.00	38.0	134	123	375	1.973
42		3.00	36.0	201	181	575	2.885
42		4.00	34.0	269	237	850	3.749
50	±0.20	6.00	38.0	338	292	---	6.511
65	±0.30	8.00	49.0	347	299	---	11.246

General recommendations for Stainless Steel Tubes

Stainless Steel	**1.4571 / 1.4541**
Tensile Strength	500 N/mm^2
Yield Strength	245 N/mm^2
Condition	Seamless, Cold drawn, free of scale as per DIN 17458 tab.6

Seamless Stainless Steel Tubes, Material : 1.4571 / 1.4541

Tolerances as per DIN 2391, Part 1

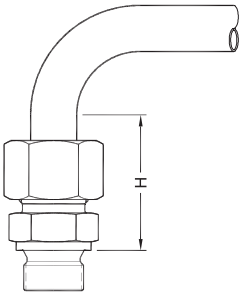
Tube OD (mm)	Tolerance	Wall thickness (mm)	Tube ID (mm)	Design Pressure (bar)		Burst Pressure (bar)	Weight Kg/m
				DIN 2413 - I Static	DIN 2413 - III Dynamic		
4	±0.08	1.0	2.0	600	539	---	0.075
6	±0.08	1.0	4.0	426	383	1850	0.125
6		1.5	3.0	600	539	2900	0.169
8	±0.08	1.0	6.0	368	297	1300	0.175
8		1.5	5.0	472	424	2050	0.244
10	±0.08	1.0	8.0	294	242	950	0.225
10		1.5	7.0	389	349	1750	0.319
10		2.0	6.0	498	447	2400	0.401
12	±0.08	1.0	10.0	245	205	850	0.275
12		1.5	9.0	368	297	1400	0.394
12		2.0	8.0	426	383	1900	0.501
15	±0.08	1.0	13.0	196	166	675	0.351
15		1.5	12.0	294	242	1100	0.507
15		2.0	11.0	392	314	1400	0.651
16	±0.08	1.5	13.0	276	228	950	0.545
16		2.0	12.0	368	297	1300	0.701
16		2.5	11.0	403	362	1850	0.845
16		3.0	10.0	472	424	2400	0.977
18	±0.08	1.5	15.0	245	205	800	0.620
18		2.0	14.0	327	267	1150	0.801
20	±0.08	2.0	16.0	294	242	1050	0.901
20		2.5	15.0	368	297	1400	1.095
20		3.0	14.0	389	349	1800	1.277
22	±0.08	1.5	19.0	200	170	650	0.770
22		2.0	18.0	267	222	900	1.002
25	±0.08	2.5	20.0	294	242	1050	1.408
25		3.0	19.0	353	286	1275	1.653
28	±0.08	1.5	25.0	158	135	550	0.995
28		2.0	24.0	210	177	700	1.302
30	±0.08	2.5	25.0	245	205	850	1.722
30		3.0	24.0	294	242	1150	2.028
30		4.0	22.0	392	314	1500	2.605
35	±0.15	2.0	31.0	168	143	550	1.653
38	±0.15	4.0	30.0	309	254	1150	3.405
42	±0.20	2.0	38.0	140	121	475	2.003
42		3.0	36.0	210	177	750	2.930

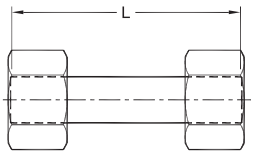
Trouble Shooting guidelines

Problem	Probable Cause	Suggested Solution
Leak	Tightening of the joint is not adequate	Tighten the nut according to the correct assembly procedure. Use suitable spanners and spanner extensions especially for larger sizes. Check visible collar after tightening.
	Tube not bottomed into fitting shoulder	Cut tube to correct length. Observe minimum straight length before tube bending. Deburr tube ends and no heavy chamfers have to be provided.
	Damaged fitting	Check for damage. Handle all child parts carefully.
	Hidden cracks	Check for cracks, replace if necessary.
	Contamination between sealing surfaces	Keep all components clean
	Shallow bite	Inspect for the turned up ridge of the material. Failure to achieve this ridge can be traced either to the nut not being tightened enough or tube not being bottomed against the stop.
	Over set ferrule	Too much pressure or more than recommended turns from Finger tight position. This type of assembly should be scrapped.
	No bite	If all of the prior checks have been made and the ferrule still shows no sign of biting the tube, it may be that the Tube is too hard. This assembly should be scrapped.
Tube fractured behind the nut	Fatigue failure of the tube under vibration	Verify assembly. Undertightening reduces vibrarion resistance. Use proper clamps at appropriate places as support.
Crack	Tightening of the joint is not adequate.	Tighten the nut according to the correct assembly procedure. Use suitable spanners and spanner extensions especially for larger sizes. Check visible collar after tightening.

Assembly Process

Preparation of Tube





Maximum height H for Straight tube end

Minimum length L for short piece of tube

Series	LL Series			L Series										S Series							
Tube o.d.	4	6	8	6	8	10	12	15	18	22	28	35	42	6	8	10	12	16	20	25	30	38
H min	24	25	26	31	31	33	33	36	38	42	42	48	48	35	35	37	37	43	50	54	58	65
L min	30	32	33	39	39	42	42	45	48	53	53	60	60	44	44	47	47	54	63	68	73	82

Saw off Tube at 90º

Do not use Tube cutters

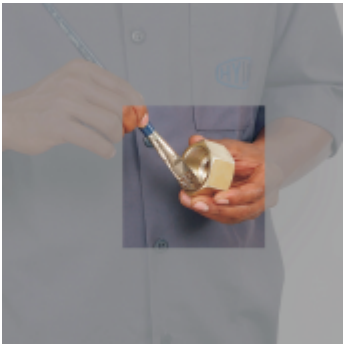
Tube cut with tube cutter
generates heavy burr/bevel cut

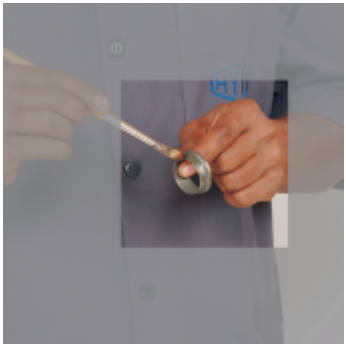
Saw off Tube

Deburr inside and Outside edges
of tube upto 0.2x45º

Assembly Process

Lubricate threads (Exteral and Internal), cone of the Coupling body and the Ferrule





Slip the Coupling Nut and Ferrule over tube end

Assembly Process

Ensure Coupling Nut and Ferrule are facing the right way

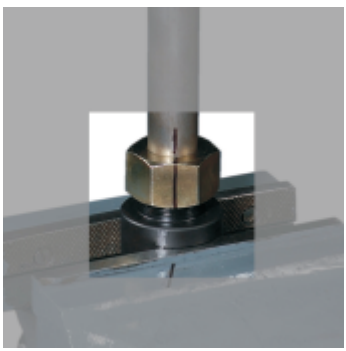
✓ **Correct**

✗ **Incorrect**

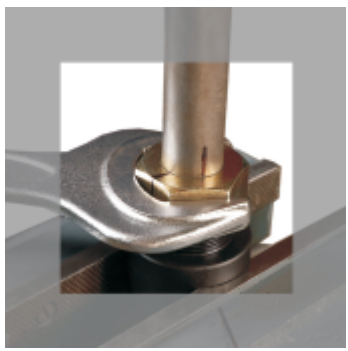
Screw the Coupling Nut manually on to Coupling body until finger tight.

Tighten the coupling Nut by spanner until the tube stops rotating by hand

Mark the Coupling Nut and holding device to measure the prescribed turns

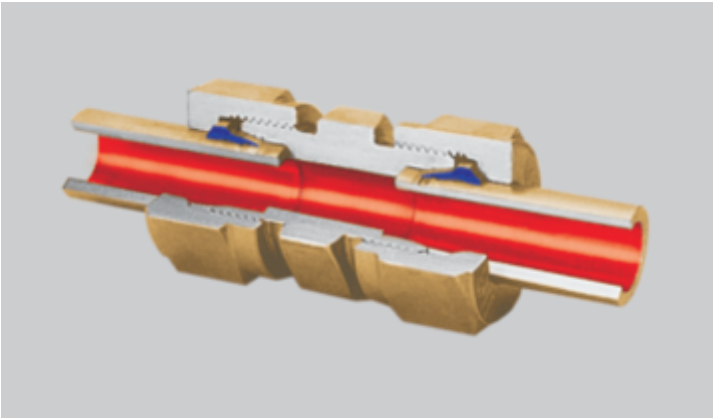


Tighten the Coupling Nut around 1 1/4 to 1 1/2 round **Tube must not rotate**



Assembly Process

Sectional View of Straight Coupling assembly with Tube



Weldable Nipple assembly Process

Depending on the specifications and application, special care should be taken for..
Tube preparation, Welding process, operator qualification and inspection of welding quality and surface finish.

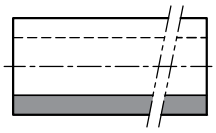
Here are some tips.....

Tube preparation : Cut and deburr thoroughly. Do not assemble tubes in stretched condition. (Pulling action)

Material combination : Select suitable tube material for Steel as well as Stainless Steel.

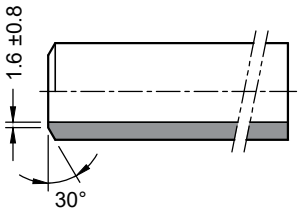
Assembly Process

Cut Tube squarely
(±1° max deviation)
DO NOT USE TUBE CUTTERS !!



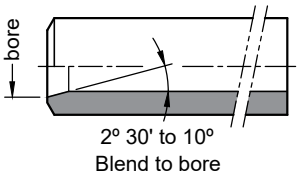
Bevel the tube end as shown.

Note : Wall thickness of tube and weldable nipple should be equal

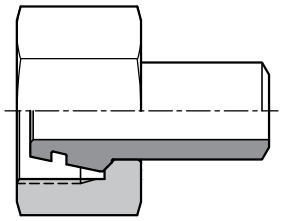


Bevel the tube end as shown.

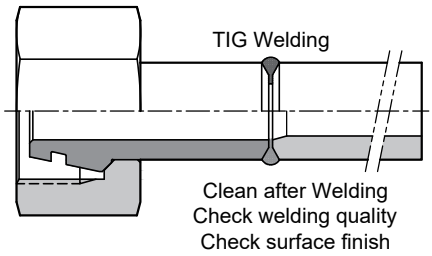
If wall thickness of tube and weld nipple are different, blend thicker wall as shown



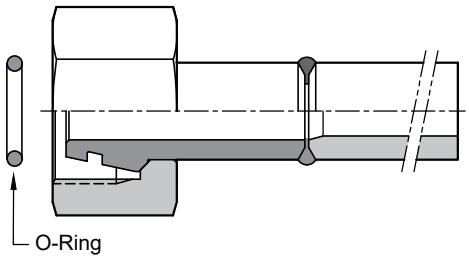
Slide the coupling nut on to the Weld Nipple **BEFORE WELDING** as shown



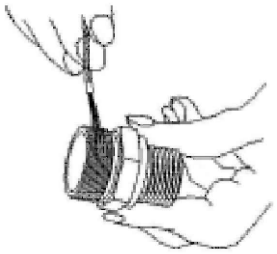
TIG Weld the tube to weld nipple
Weld Nipple and tube must be aligned.
Remove all seals before welding, if any



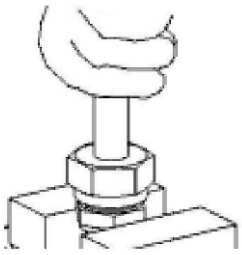
Lubricate O' ring before assembly on weld nipple
Avoid damage or twisting of O' Ring



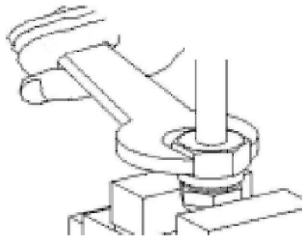
Lubricate threads and Cone of the coupling body



Screw the coupling nut manually onto the coupling body until finger tight

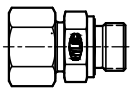
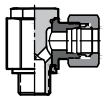


Then tighten coupling nut firmly by 1/4 turn (Maximum)



Tightening Torque

Torque values for stud ends as per DIN 3852

Assembly Torque, Nm +10% -0				
		 Male Stud Couplings	 Banjo Elbow	 Socket Head Plugs
Tube OD	Stud end size	GE-GE / ME with Elastomeric seal	WH with KDS Soft seal	VSTI-GE / ME with Elastomeric seal
6	G 1/8 A	18	18	13
8	G 1/4 A	35	45	30
10	G 1/4 A	35	45	--
12	G 3/8 A	70	70	60
15	G 1/2 A	110	120	80
18	G 1/2 A	110	120	--
22	G 3/4 A	180	230	140
28	G1 A	310	320	200
35	G1.1/4 A	450	540	450
42	G1.1/2 A	540	700	450
6	G 1/4 A	55	45	
8	G 1/4 A	55	45	
10	G 3/8 A	80	70	
12	G 3/8 A	80	70	
16	G 1/2 A	115	120	
20	G 3/4 A	180	230	
25	G1 A	310	320	
30	G1.1/4 A	450	540	
38	G1.1/2 A	540	700	
6	M10 x 1.0	18	18	12
8	M12 x 1.5	25	45	25
10	M14 x 1.5	45	55	35
12	M16 x 1.5	55	80	50
15	M18 x 1.5	70	100	65
18	M22 x 1.5	125	140	90
22	M26 x 1.5	180	320	135
28	M33 x 2.0	310	360	225
35	M42 x 2.0	450	540	360
42	M48 x 2.0	540	700	360
6	M12 x 1.5	40	45	
8	M14 x 1.5	40	55	
10	M16 x 1.5	70	80	
12	M18 x 1.5	90	100	
16	M22 x 1.5	135	135	
20	M27 x 2.0	180	320	135
25	M33 x 2.0	310	360	
30	M42 x 2.0	450	540	
38	M48 x 2.0	540	700	

Note : Lubricate the threads before assembly.

Tightening torques given above are for steel fittings assembled in steel components.

316 -	GE	16	P	S	G03	E	-	V	- P

Body Material	
Omit	Steel
304	SS-304
316	SS-316

Coupling Type	
Tube Couplings	
Straight	G
Equal Elbow	W
Equal Tee	T
Equal Cross	K
Stud Couplings	
Straight Male Stud	GE
Straight Female Stud	GAI
Male Stud Elbow	WE
Male Stud Branch Tee	TE
Male Stud Barrel Tee	LE
Bulkheads and weld Couplings	
Straight Bulkhead	SV
Elbow Bulkhead	WSV
Weld Bulkhead	ESV
Weld Coupling	AS
Weldable Nipples	WNA
Reducers / Expanders	
Reducing Standpipe, soft seal	RED
Straight Reducer	GR
Swivel Couplings	
Banjo	HSWV
Banjo, soft seal	WH
Straight Stud Standpipe, soft seal	EGE-GE
Female standpipes, soft seal	EGE-GF
Swivel Elbow, soft seal	EW
Swivel Branch Tee, soft seal	ET
Swivel Barrel Tee, soft seal	EL
Straight Swivel Union	GZ
Blanking Plugs / Ends	
Blanking Plug	VKA
Blanking End	BUZT
Hex head Plug	VST
Socket Head Plug	VSTI
Pressure Gauge Connectors	
Pressure Gauge Connector	MAV
Pressure Gauge Standpipe	MAVE
Gauge mounting Adaptor	1GA-GE
Adaptors	
Male Female Adaptor	MFA
Hose Adaptor	HA

Tube Size
Refer Stud End Table for standard tube sizes, & stud end combinations.

Surface Treatment	
Omit	Trivalent Zinc Plated and Blue Chromated
P	Phosphated (Refer Note)
ZnNi	Zinc Nickel

Note : Parts WSV, ESV, AS and WNA will be phosphated as standard practice since these are weldable. Need not to add suffix 'P' in the part code for these parts.

(Since these are weldable parts)

Seal Material	
Omit	Nitrile ~ 90 Shore
V	Viton ~ 85 Shore

Seal type	
E	Elastomeric Seal
O	O-Ring Sealing

Stud End — **Standard Tube Size**

BSP Thread (G)		*BSPT Thread ®*		*SAE Straight Threads(S)*		*NPT/NPTF Taper Threads*		*Metric Thread*		*Metric Taper Threads*		*Standard Combinations* L	*Standard Combinations* S
G01	G1/8	R01	R1/8			N01	1/8	M08	M8x1.0	T08	M8x1.0		
								M10	M10x1.0	T10	M10x1.0		
		R02	R1/4										
G01	G1/8	R01	R1/8	S04	7/16-20 UNF	N01	1/8	M10	M10x1.0	M10	M10x1.0	06	
G02	G1/4	R02	R1/4			N02	1/4	M12	M12x1.5	M12	M12x1.5	08	06
								M14	M14x1.5	M14	M14x1.5	10	08
G03	G3/8	R03	R3/8	S06	9/16-18 UNF	N03	3/8	M16	M16x1.5	M16	M16x1.5	12	10
								M18	M18x1.5	M18	M18x1.5		12
G04	G1/2	R04	R1/2	S08	3/4-16 UNF	N04	1/2					15	14
								M22	M22x1.5	M22	M22x1.5	18	16
G06	G3/4	R06	R3/4	S10	7/8-14 UNF	N06	3/4	M27	M27x2.0	M27	M27x2.0	22	20
G08	G1	R08	R1	S12	1.1/16-12 UN	N08	1	M33	M33x2.0	M33	M33x2.0	28	25
G10	G1.1/4	R10	R1.1/4	S16	1.5/16-12 UN	N10	1.1/4	M42	M42x2.0	M42	M42x2.0	35	30
G12	G1.1/2	R12	R1.1/2	S20	1.5/8-12 UN	N12	1.1/2	M48	M48x2.0	M48	M48x2.0	42	38
G16	G2			S24	1.7/8-12 UN			M60	M60X2.0	M60	M60X2.0		
Other Thread Sizes				S02	5/16-24 UNF	N00	1/16	M20	M20x1.5				
G05	G5/8			S03	3/8-24 UNF								
				S05	1/2-20 UNF								
				S14	1.3/16-12 UN								

For standard combinations, thread size can be omitted. Eg: 16 OD Male Stud Coupling with G1/2 stud end with Elastomeric seal, Part number is - GE16PSGE

Pressure Series	
L	Light
S	Heavy

Connection Type	
P	Ferrule
W**	Weld Nipple
	** is tube thickness
	Eg: W20 - 2mm wall thickness
X	Without Nut and Ferrule
SRD	With Soft Seal Ferrule Assembly

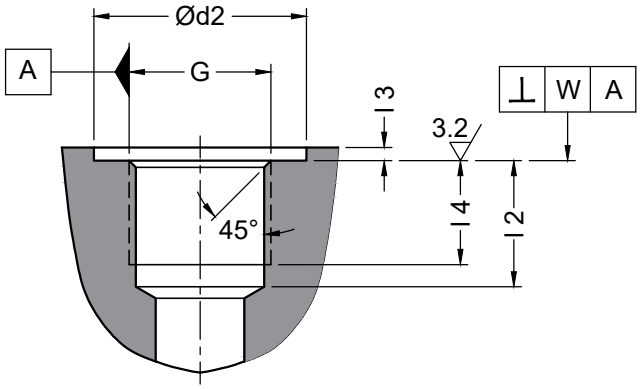
Reference No : H07700-R4

	2026	Date	Name	
HYLOC®	APD			Part Code Tree
	PPD	26/03	G.R.D	

Port Details

Flat Face port with British Standard Pipe Parallel (BSPP) Threads (DIN 3852, Part 2)

ISO 228-1, "G" threads

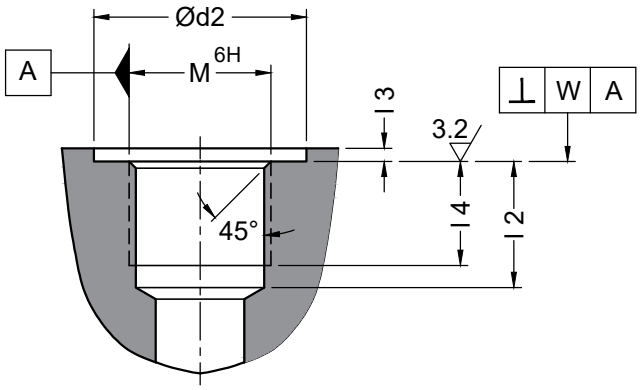


Dimensions in mm

G Thread Size (ISO 228-1)	Ød2 Small	Ød2 Wide	l 3	l 4 (min)	l 2	W
G 1/8	15	19	1.0	8	13.0	0.1
G 1/4	20	25	1.5	12	18.5	0.1
G 3/8	23	28	2.0	12	18.5	0.1
G 1/2	28	34	2.5	14	22.0	0.2
G 3/4	33	42	2.5	16	24.0	0.2
G 1	41	47	2.5	18	27.0	0.2
G1.1/4	51	58	2.5	20	29.0	0.2
G1.1/2	56	65	2.5	22	31.0	0.2

Flat Face port with Metric Threads (DIN 3852, Part 1)

ISO 261, "M" threads



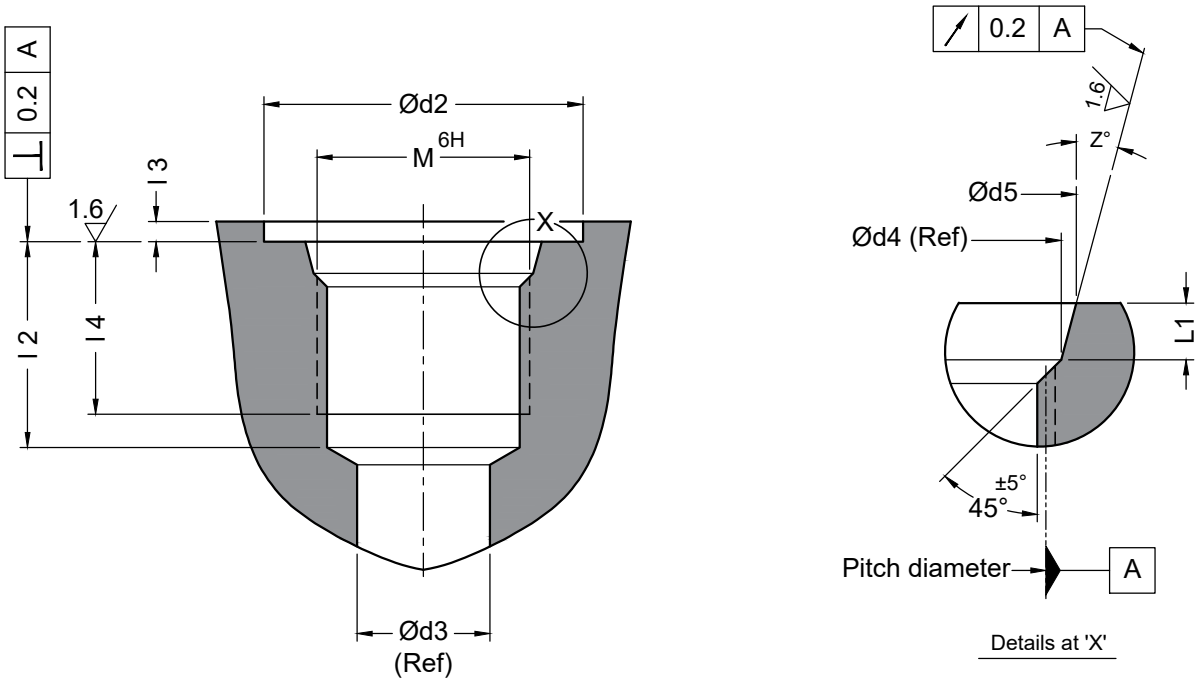
Dimensions in mm

M Thread Size (ISO 261)	Ød2 Small	Ød2 Wide	l 3	l 4 (min)	l 2	W
M8 x 1.0	13	17	1.0	8	13.5	0.1
M10 x 1.0	15	20	1.0	8	13.5	0.1
M12 x 1.5	18	25	1.5	12	18.5	0.1
M14 x 1.5	20	25	1.5	12	18.5	0.1
M16 x 1.5	23	28	1.5	12	18.5	0.1
M18 x 1.5	25	30	2.0	12	18.5	0.1
M20 x 1.5	27	34	2.0	14	20.5	0.1
M22 x 1.5	28	34	2.5	14	20.5	0.1
M26 x 1.5	33	42	2.5	16	22.5	0.2
M27 x 2.0	33	42	2.5	16	24.0	0.2
M33 x 2.0	41	47	2.5	18	26.0	0.2
M42 x 2.0	51	58	2.5	20	28.0	0.2
M48 x 2.0	56	65	2.5	22	30.0	0.2

Port Details

ISO 6149-1

Metric Ports with truncated housing for O-Ring seal at stud ends - with ISO 261, "M" threads



Dimensions in mm

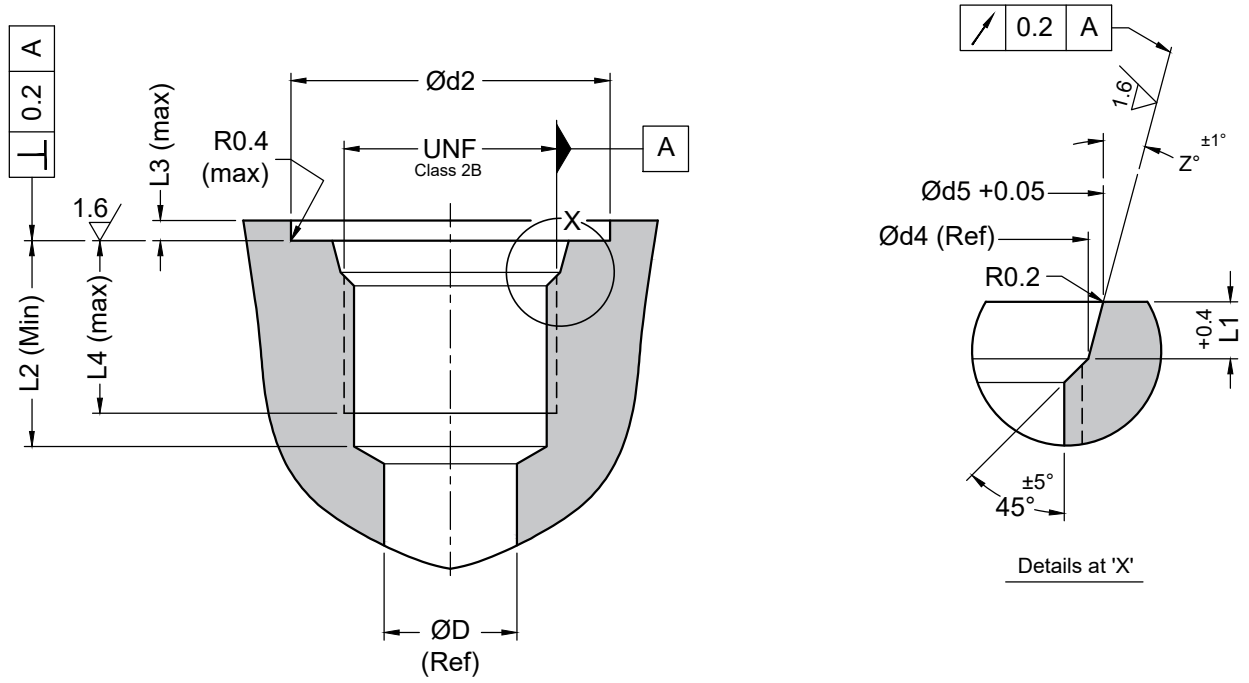
M Thread Size (ISO 261)	Ød2	Ød3	Ød4	Ød5	l 3	l 4 min	l 2	L1	Z°
M8 x 1.0	14	3	8.42	9.1	1.0	10.0	11.5	1.6	12°
M10 x 1.0	16	4.5	10.42	11.1	1.0	10.0	11.5	1.6	12°
M12 x 1.5	19	6	12.51	13.8	1.5	11.5	14.0	2.4	15°
M14 x 1.5	21	7.5	14.51	15.8	1.5	11.5	14.0	2.4	15°
M16 x 1.5	24	9	16.51	17.8	1.5	13.0	15.5	2.4	15°
M18 x 1.5	26	11	18.51	19.8	2.0	14.5	17.0	2.4	15°
✻ **M20 x 1.5**	29	--	20.51	21.8	2.0	14.5	--	2.4	15°
M22 x 1.5	29	14	22.51	23.8	2.0	15.5	18.0	2.4	15°
M27 x 2.0	34	18	27.74	29.4	2.0	19.0	22.0	3.1	15°
M30 x 2.0	38	21	30.74	32.4	2.0	19.0	22.0	3.1	15°
M33 x 2.0	43	23	33.74	35.4	2.5	19.0	22.0	3.1	15°
M42 x 2.0	52	30	42.74	44.4	2.5	19.5	22.5	3.1	15°
M48 x 2.0	57	36	48.74	50.4	2.5	22.0	25.0	3.1	15°
M60 x 2.0	67	44	60.74	62.4	2.5	24.5	27.5	3.1	15°

✻ For Cartridge Valve cavity applications only (See ISO 7789)

Port Details

ISO 11926 - 1
UNF (SAE) Ports with truncated housing for O-Ring seal at stud ends - with ISO 725, UNF / UN threads

Note : This port should not be used for new designs in Hydraulic Fluid Power application



Dimensions in mm

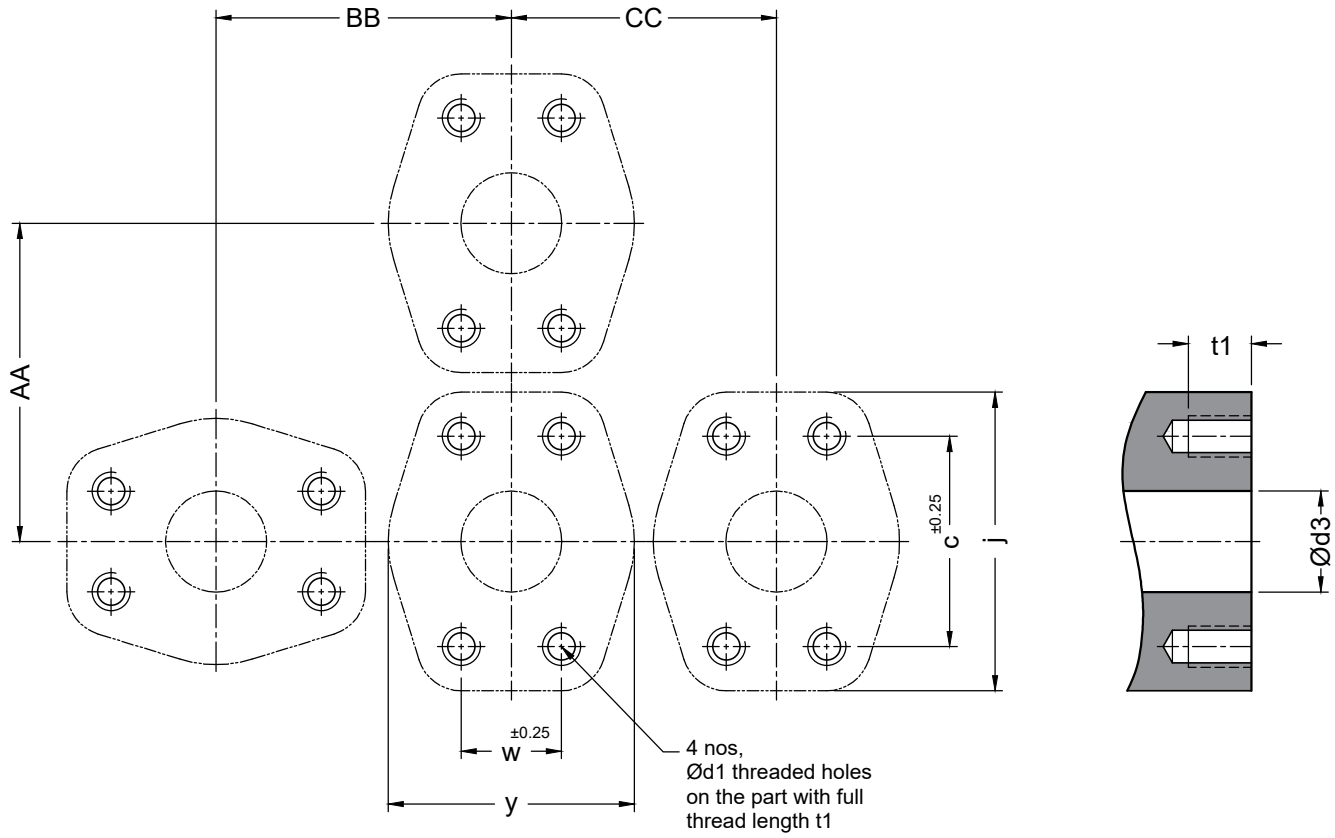
Dash Size	Tube Size	UNF/UN Thread (ISO 725)	✻ ØM	Tap Drill Size Ød1	Ød2	ØD	Ød4	Ød5	L1	L2	L3	L4	Z°
- 3	3/16	**3/8 - 24 UNF**	7.92	8.38 / 8.63	19	3.5	9.85	10.75	1.9	12	1.6	10.0	12°
- 4	1/4	**7/16 - 20 UNF**	9.12	9.73 / 10.03	21	4.5	11.34	12.45	2.4	14	1.6	11.5	12°
- 5	5/16	**1/2 - 20 UNF**	10.72	11.33 / 11.60	23	6	12.94	14.05	2.4	14	1.6	11.5	12°
- 6	3/8	**9/16 - 18 UNF**	11.91	12.75 / 13.08	25	7.5	14.55	15.70	2.5	15.5	1.6	12.7	12°
- 8	1/2	**3/4 - 16 UNF**	16.66	17.33 / 17.67	30	10	19.20	20.65	2.5	17.5	2.4	14.3	15°
- 10	5/8	**7/8 - 14 UNF**	19.83	20.27 / 20.67	34	12.5	22.55	24.00	2.5	20	2.4	16.7	15°
- 12	3/4	**1.1/16 - 12 UN**	23.82	24.68 / 25.15	41	16	27.32	29.20	3.3	23	2.4	19.0	15°
- 14	7/8	**1.3/16 - 12 UN**	--	27.86 / 28.32	45	18	30.52	32.40	3.3	23	2.4	19.0	15°
- 16	1	**1.5/16 - 12 UN**	30.17	31.03 / 31.50	49	21	33.67	35.55	3.3	23	3.2	19.0	15°
- 20	1.1/4	**1.5/8 - 12 UN**	38.10	38.98 / 39.45	58	27	41.67	43.55	3.3	23	3.2	19.0	15°
- 24	1.1/2	**1.7/8 - 12 UN**	44.45	45.34 / 45.79	65	33	48.02	49.90	3.3	23	3.2	19.0	15°
- 32	2	**2.1/2 - 12 UN**	--	61.21 / 61.67	88	45	63.87	65.75	3.3	23	3.2	19.0	15°

✻ Pre drill size (optional) in case of form tool only.

Flanged Port Details

ISO 6162 - 1 amd ISO 6162 - 2

Port dimensions for flange connections and recommended flange pad widths



Standard Pressure Series - ISO 6162 -1 (Code 61)

Dimensions in mm

Nominal Flange Size	Ød3 DN Size	Thread Metric d1	t1 Min depth	Thread UNC d1	t1 Min depth	c	j Max	w	y	AA	BB	CC
1/2	13	M8 x 1.25	16	5/16 - 18	20	38.1	58	17.5	50	59	55	51
3/4	19	M10 x 1.5	18	3/8 - 16	22	47.6	69	22.3	56	70	63	57
1	25	M10 x 1.5	18	3/8 - 16	22	52.4	74	26.2	63	75	69	64
1.1/4	32	M10 x 1.5	18	7/16 - 14	25	58.7	83	30.2	77	84	81	78
1.1/2	38	M12 x 1.75	23	1/2 - 13	27	69.9	98	35.7	86	99	93	87
2	51	M12 x 1.75	23	1/2 - 13	27	77.8	106	42.9	101	107	104	102
2.1/2	64	M12 x 1.75	23	1/2 - 13	27	88.9	119	50.8	113	120	117	114
3	76	M16 x 2.0	30	5/8 - 11	30	106.4	140	61.9	135	141	138	136
3.1/2	89	M16 x 2.0	30	5/8 - 11	30	120.7	157	69.9	144	158	151	145
4	102	M16 x 2.0	30	5/8 - 11	30	130.2	167	77.8	156	168	162	157
5	127	M16 x 2.0	30	5/8 - 11	30	152.4	189	92.1	185	190	188	186

High Pressure Series - ISO 6162 - 2 (Code 62)

Nominal Flange Size	Ød3 DN Size	Thread Metric d1	t1 Min depth	Thread UNC d1	t1 Min depth	c	j Max	w	y	AA	BB	CC
1/2	13	M8 x 1.25	16	5/16 - 18	21	40.5	60	18.2	52	61	57	53
3/4	19	M10 x 1.5	18	3/8 - 16	24	50.8	75	23.8	64	76	70	65
1	25	M12 x 1.75	23	7/16 - 14	27	57.2	85	27.8	74	86	80	75
1.1/4	32	M12 x 1.75	23	1/2 - 13	25	66.7	99	31.8	82	100	91	83
1.1/2	38	M16 x 2.0	27	5/8 - 11	35	79.4	117	36.5	99	118	109	100
2	51	M20 x 2.5	35	3/4 - 10	38	96.8	138	44.5	118	139	129	119
2 1/2	64	M24 x 3.0	50	-----	-----	123.8	180	58.7	151	183	169	156
3	76	M30 x 3.5	60	-----	-----	152.4	219	71.4	179	218	202	184

For use with medium strength Metric Screws (Property class 10.9 screw strength) or Grade 8 for Inch Screws.

Product Groups

Tube fittings

Pipe Flanges

Hydraulic Valves

Diagnostic Couplings

Tube Clamps

Tube fittings - Visual Index

Tube to Tube

Straight Coupling I **G**

Equal Elbow Coupling I **W**

Equal Tee Coupling I **T**

Equal Cross Coupling I **K**

Tube to Taper Male Stud (BSPT)

Male Stud Coupling I **GE-R**

Male Stud Elbow Coupling I **WE-R**

Male Stud Branch Tee I **TE-R**

Male Stud Barrel Tee I **LE-R**

Tube to Taper Male Stud (NPT)

Male Stud Coupling I **GE-N**

Male Stud Elbow Coupling I **WE-N**

Tube to Male Stud with Elastomeric seal

Male Stud Coupling I **GE-GE**

Male Stud Coupling I **GE-ME**

Tube to Male Stud with O-Ring

Male Stud Coupling I **GE-MO**

Male Stud Coupling I **GE-S**

Bulkheads

Straight Bulkhead I **SV**

Elbow Bulkhead I **WSV**

Weld Bulkhead I **ESV**

Weld Bulkhead I **AS**

Tube fittings - Visual Index

Female Connectors

Straight Female Coupling I **GAI-G**

Straight Female Coupling I **GAI-M**

Reducers / Expanders

Straight Reducers I **GR**

Reducing Standpipes I **RED**

Banjo Couplings

Banjo Couplings I **HSWV-G**

Banjo Coupling, Soft seal I **WH-GE**

Swivel Connectors, Soft seal

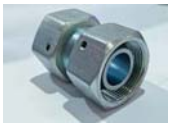
Straight Stud Standpipe I **EGE-GE**

Straight Stud Standpipe I **EGE-ME**

Swivel Elbow I **EW**

Swivel Branch Tee I **ET**

Swivel Barrel Tee I **EL**



Straight Swivel Union I **GZ**

Swivel Stud Connectors, Soft seal

Swivel Stud Elbow I **EW-GE**

Swivel Stud Branch Tee I **ET-GE**

Swivel Stud Barrel Tee I **EL-GE**

Tube fittings - Visual Index

Weld Nipples

Weldable Nipples I **WNA**

Reducer Weldable Nipples I **WNR**

Blanking Ends

Blanking Plugs I **VKA**

Blanking Ends I **BUZT**

Gauge Adaptors

Pressure Gauge Connectors I **MAV-G**

Pressure Gauge Standpipes I **MAVE-G**

Gauge Mounting Adaptors I **1GA-GE**

Plugs

Hex Head Plug I **VST-GE**

Socket Head Plug I **VSTI-GE**

Hex Head Plug I **VST-ME**

Socket Head Plug I **VSTI-ME**

Hex Head Plug I **VST-S**

Socket Head Plug I **VSTI-S**

Hex Head Plug I **VST-MO**

Socket Head Plug I **VSTI-MO**

Hex Head Plug I **VST-R**

Socket Head Plug I **VSTI-R**

Hex Head Plug I **VST-N**

Socket Head Plug I **VSTI-N**

Tube fittings - Visual Index

Adaptors

Male Female Adaptors I **MFA-GE-G**

Male Female Adaptors I **MFA-GE-S**

Male Female Adaptors I **MFA-S-G**

Hose Adaptors I **HA-G**

SAE Flanged connections

Swivel Flange connections I **GFS**

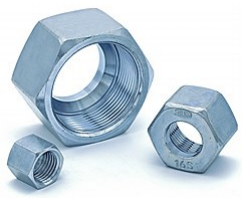
Swivel Flange connections I **WFS**

Swivel Flange connections I **AS**

Tools / Seals / Nuts / Ferrules / Locknuts

Pre-setting Tools I **PST**

Elastomeric Seals I **ED**



Coupling Nuts I **M**

Ferrules I **P**

Soft seal Ferrules I **SRD**

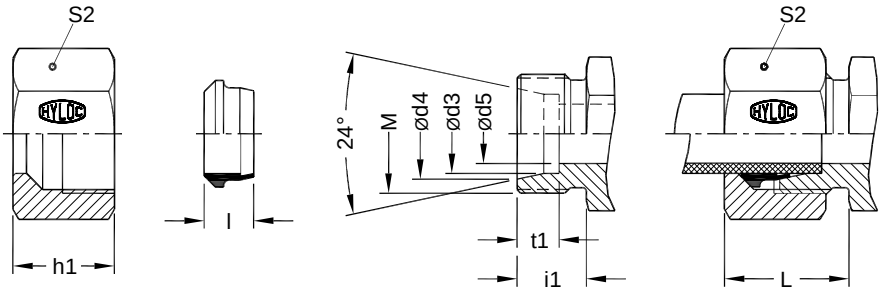
Locknuts I **GM**

Tube Connection Parts

Metric Tube end as per ISO 8434

All dimensions in millimeters.

Nut : M **Ferrule : P** **Dimensions** **Assembled component**



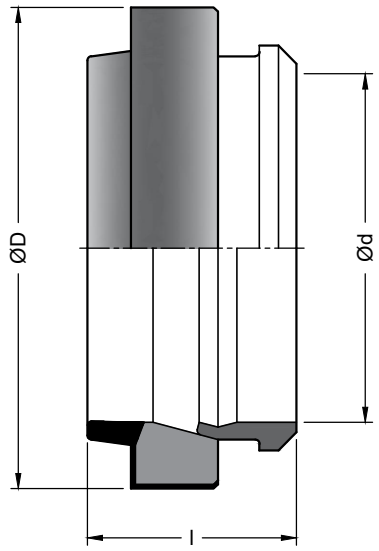
Part No Nut	Part No Ferrule	Series	Tube od	DN Size	M	Ød3	Ød4	Ød5	t 1	i 1	S2	h1	l	L *
M04LL	P04LL	LL	4	3	M 8 x 1.0	4	5.0	3	4.0	8	10	11.5	7.0	14
M05LL	P05LL	Very Light	5	--	M 10 x 1.0	5	6.5	3.5	5.5	8	12	11.5	7.0	14
M06LL	P06LL	NP 100	6	4	M 10 x 1.0	6	7.5	4.5	5.5	8	12	12.0	7.0	14
M08LL	P08LL		8	6	M 12 x 1.0	8	9.5	6	5.5	9	14	12.5	7.0	15
M06L	P06L	L	6	4	M 12 x 1.5	6	8.1	4	7.0	10	14	14.5	10.0	18
M08L	P08L	Light	8	6	M 14 x 1.5	8	10.1	6	7.0	10	17	14.5	9.5	18
M10L	P10L	NP 250	10	8	M 16 x 1.5	10	12.3	8	7.0	11	19	15.5	10.0	20
M12L	P12L		12	10	M 18 x 1.5	12	14.3	10	7.0	11	22	15.5	9.5	19
M15L	P15L		15	12	M 22 x 1.5	15	17.3	12	7.0	12	27	17.0	10.0	21
M18L	P18L	NP 160	18	16	M 26 x 1.5	18	20.3	15	7.5	12	32	18.0	10.0	22
M22L	P22L		22	20	M 30 x 2.0	22	24.3	19	7.5	14	36	20.0	10.5	24
M28L	P28L	NP 100	28	25	M 36 x 2.0	28	30.3	24	7.5	14	41	21.0	11.0	25
M35L	P35L		35	32	M 45 x 2.0	35	38.0	30	10.5	16	50	24.0	13.0	28
M42L	P42L		42	40	M 52 x 2.0	42	45.0	36	11.0	16	60	24.0	13.0	28
M06S	P06S	S	6	3	M 14 x 1.5	6	8.1	4	7.0	12	17	16.5	10.0	20
M08S	P08S	Heavy	8	4	M 16 x 1.5	8	10.1	5	7.0	12	19	16.5	9.5	20
M10S	P10S	NP 630	10	6	M 18 x 1.5	10	12.3	7	7.5	12	22	17.5	10.0	22
M12S	P12S		12	8	M 20 x 1.5	12	14.3	8	7.5	12	24	17.5	9.5	21
M16S	P16S	NP 400	16	12	M 24 x 1.5	16	18.3	12	8.5	14	30	20.5	10.0	25
M20S	P20S		20	16	M 30 x 2.0	20	22.9	16	10.5	16	36	24.0	12.0	28
M25S	P25S		25	20	M 36 x 2.0	25	27.9	20	12.0	18	46	27.0	12.0	31
M30S	P30S	NP 250	30	25	M 42 x 2.0	30	33.0	25	13.5	20	50	29.0	13.0	35
M38S	P38S		38	32	M 52 x 2.0	38	41.0	32	16.0	22	60	32.5	13.0	38

* Dimensions given are approx figures with tightened nut.

SRD Soft seal Ferrule

Suitable for Metric Tube end as per ISO 8434-1

Dimensions in mm



Series	Part No.	Ød ⊕	ØD	l
L	**SRD06L**	06	10	9.6
Light	**SRD08L**	08	12	9.6
250 bar	**SRD10L**	10	14	9.6
	SRD12L	12	16	9.6
	SRD15L	15	19.5	9.6
160 bar	**SRD18L**	18	23.5	10
	SRD22L	22	27	12.5
100 bar	**SRD28L**	28	33	13
	SRD35L	35	42	14.2
	SRD42L	42	49	13.7
S	**SRD06S**	06	12	9.6
Heavy	**SRD08S**	08	14	9.6
630 bar	**SRD10S**	10	16	9.6
	SRD12S	12	18	9.6
400 bar	**SRD16S**	16	21.5	9.6
	SRD20S	20	27	13.7
	SRD25S	25	32.5	13.7
250 bar	**SRD30S**	30	39	14.5
	SRD38S	38	49	13.7

Standard material : Carbon Steel

For Stainless steel material, add prefix 316 - to the part code, Example : 316-SRD25S

For Carbon Steel,

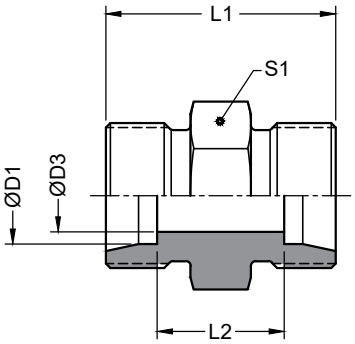
Standard surface treatment : Chrome free Alkaline Zinc Plating. For Zinc Nickel surface treatment, add suffix - ZnNi

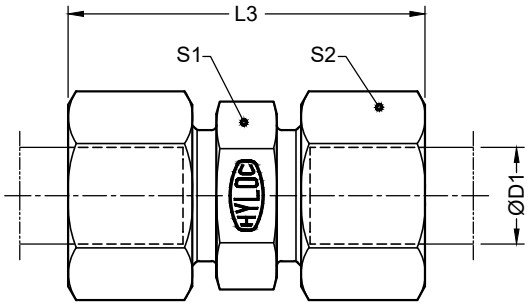
Example : SRD25S-ZnNi

G Straight Couplings

24° Tube end as per ISO 8434-1

Dimensions in mm





Series	Part No. **Body**	Part No. **Assembly**	D1 ⊕	D3	L1	L2	Approx. L3	S1	S2
L	**G06XL**	**G06PL**	06	4	24	10	45	12	14
Light	**G08XL**	**G08PL**	08	6	25	11	45	14	17
250 bar	**G10XL**	**G10PL**	10	8	27	13	49	17	19
	G12XL	**G12PL**	12	10	28	14	49	19	22
	G15XL	**G15PL**	15	12	30	16	53	24	27
160 bar	**G18XL**	**G18PL**	18	15	31	16	55	27	32
	G22XL	**G22PL**	22	19	35	20	60	32	36
100 bar	**G28XL**	**G28PL**	28	24	36	21	63	41	41
	G35XL	**G35PL**	35	30	41	20	72	46	50
	G42XL	**G42PL**	42	36	43	21	74	55	60
S	**G06XS**	**G06PS**	06	4	30	16	51	14	17
Heavy	**G08XS**	**G08PS**	08	5	32	18	52	17	19
630 bar	**G10XS**	**G10PS**	10	7	32	17	56	19	22
	G12XS	**G12PS**	12	8	34	19	57	22	24
400 bar	**G16XS**	**G16PS**	16	12	38	21	64	27	30
	G20XS	**G20PS**	20	16	44	23	74	32	36
	G25XS	**G25PS**	25	20	50	26	82	41	46
250 bar	**G30XS**	**G30PS**	30	25	54	27	89	46	50
	G38XS	**G38PS**	38	32	61	29	98	55	60

Assembly consists of Double bite ferrule.

For soft seal ferrules, replace 'P' with 'SRD' in Part code. Example : G16SRDS

Standard material : Carbon Steel

For Stainless steel material, add prefix 316 - to the part code

Example : 316-G16PS

Standard surface treatment : Chrome free Alkaline Zinc Plating.

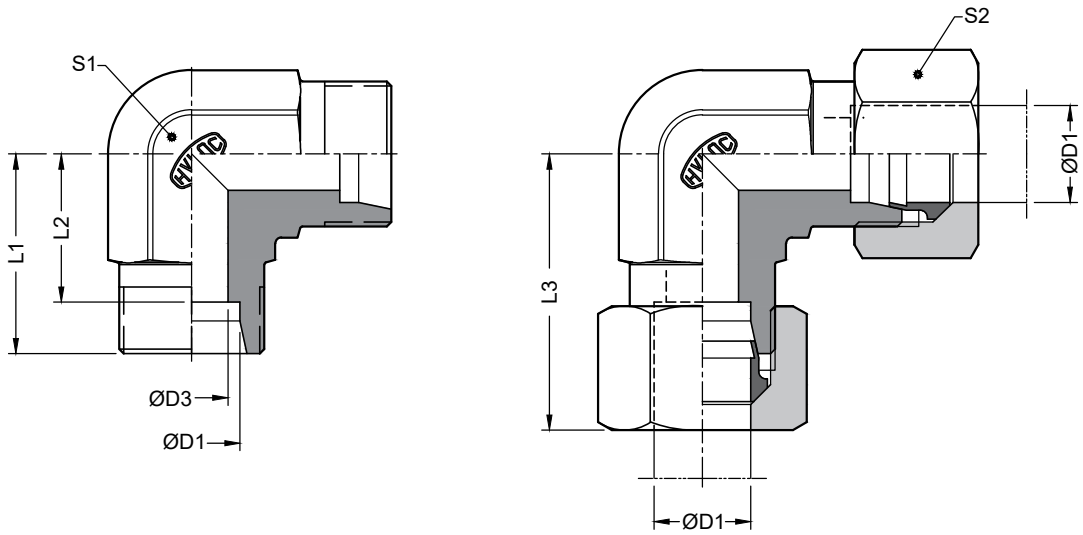
For Zinc Nickel surface treatment, add suffix - ZnNi

Example : G16PS-ZnNi

W Equal Elbow Couplings

24° Tube end as per ISO 8434-1

Dimensions in mm



Series	Part No. **Body**	Part No. **Assembly**	D1 ⊕	D3	L1	L2	Approx. L3	S1	S2
L	**W06XL**	**W06PL**	06	4	19	12	29.5	12	14
Light	**W08XL**	**W08PL**	08	6	21	14	31	12	17
250 bar	**W10XL**	**W10PL**	10	8	22	15	33	14	19
	W12XL	**W12PL**	12	10	24	17	34.5	17	22
	W15XL	**W15PL**	15	12	28	21	39.5	19	27
160 bar	**W18XL**	**W18PL**	18	15	31	23.5	43	24	32
	W22XL	**W22PL**	22	19	35	27.5	47.5	27	36
100 bar	**W28XL**	**W28PL**	28	24	38	30.5	51.5	36	41
	W35XL	**W35PL**	35	30	45	34.5	60.5	41	50
	W42XL	**W42PL**	42	36	51	40	66.5	50	60
S	**W06XS**	**W06PS**	06	4	23	16	33.5	12	17
Heavy	**W08XS**	**W08PS**	08	5	24	17	34	14	19
630 bar	**W10XS**	**W10PS**	10	7	25	17.5	37	17	22
	W12XS	**W12PS**	12	8	29	21.5	40.5	17	24
400 bar	**W16XS**	**W16PS**	16	12	33	24.5	46	24	30
	W20XS	**W20PS**	20	16	37	26.5	52	27	36
	W25XS	**W25PS**	25	20	42	30	58	36	46
250 bar	**W30XS**	**W30PS**	30	25	49	35.5	66.5	41	50
	W38XS	**W38PS**	38	32	57	41	75.5	50	60

Assembly consists of Double bite ferrule.

For soft seal ferrules, replace 'P' with 'SRD' in Part code. Example : W16SRDS

Standard material : Carbon Steel

For Stainless steel material, add prefix 316 - to the part code

Example : 316-W16PS

Standard surface treatment : Chrome free Alkaline Zinc Plating.

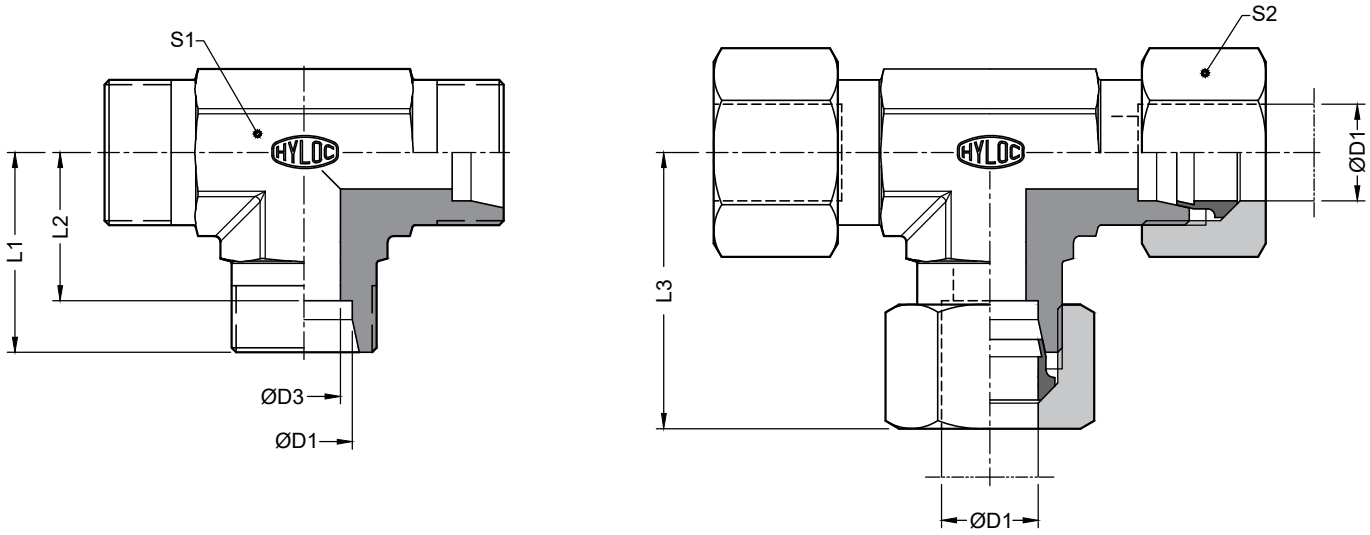
For Zinc Nickel surface treatment, add suffix - ZnNi

Example : W16PS-ZnNi

T Equal Tee Couplings

24° Tube end as per ISO 8434-1

Dimensions in mm



Series	Part No. **Body**	Part No. **Assembly**	D1 ⊕	D3	L1	L2	Approx. L3	S1	S2
L	**T06XL**	**T06PL**	06	4	19	12	29.5	12	14
Light	**T08XL**	**T08PL**	08	6	21	14	31	12	17
250 bar	**T10XL**	**T10PL**	10	8	22	15	33	14	19
	T12XL	**T12PL**	12	10	24	17	34.5	17	22
	T15XL	**T15PL**	15	12	28	21	39.5	19	27
160 bar	**T18XL**	**T18PL**	18	15	31	23.5	43	24	32
	T22XL	**T22PL**	22	19	35	27.5	47.5	27	36
100 bar	**T28XL**	**T28PL**	28	24	38	30.5	51.5	36	41
	T35XL	**T35PL**	35	30	45	34.5	60.5	41	50
	T42XL	**T42PL**	42	36	51	40	66.5	50	60
S	**T06XS**	**T06PS**	06	4	23	16	33.5	12	17
Heavy	**T08XS**	**T08PS**	08	5	24	17	34	14	19
630 bar	**T10XS**	**T10PS**	10	7	25	17.5	37	17	22
	T12XS	**T12PS**	12	8	29	21.5	40.5	17	24
400 bar	**T16XS**	**T16PS**	16	12	33	24.5	46	24	30
	T20XS	**T20PS**	20	16	37	26.5	52	27	36
	T25XS	**T25PS**	25	20	42	30	58	36	46
250 bar	**T30XS**	**T30PS**	30	25	49	35.5	66.5	41	50
	T38XS	**T38PS**	38	32	57	41	75.5	50	60

Assembly consists of Double bite ferrule.

For soft seal ferrules, replace 'P' with 'SRD' in Part code. Example : T16SRDS

Standard material : Carbon Steel

For Stainless steel material, add prefix 316 - to the part code

Example : 316-T16PS

Standard surface treatment : Chrome free Alkaline Zinc Plating.

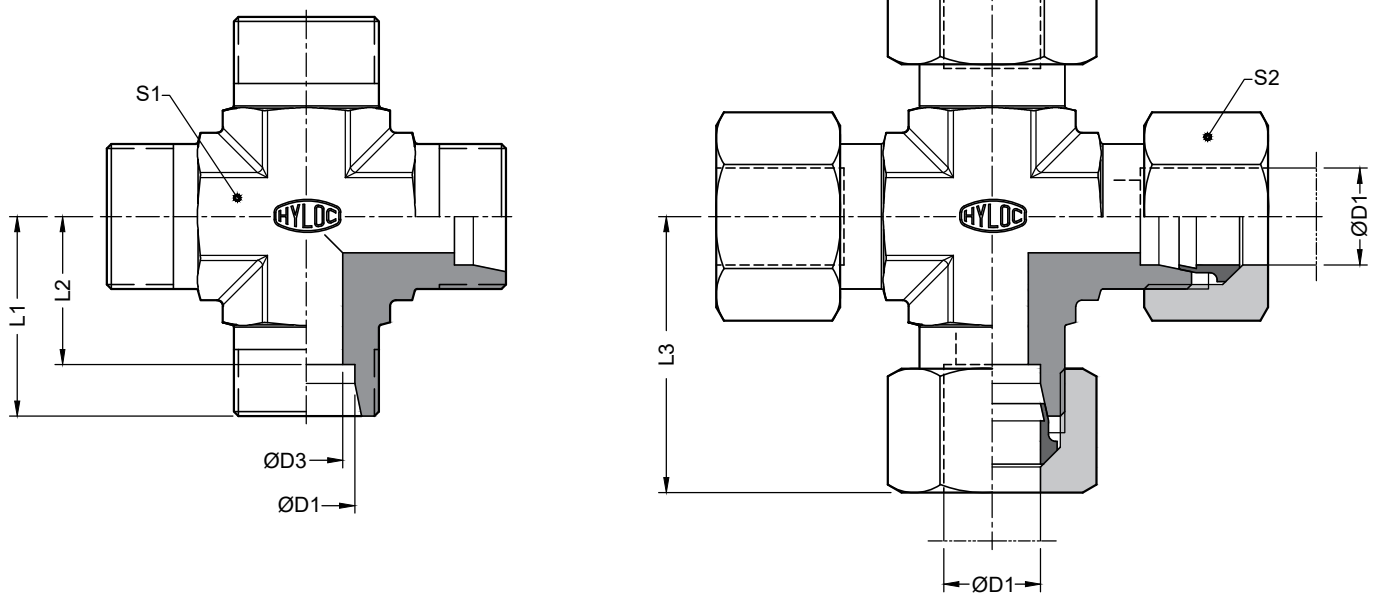
For Zinc Nickel surface treatment, add suffix - ZnNi

Example : T16PS-ZnNi

K Equal Cross Couplings

24° Tube end as per ISO 8434-1

Dimensions in mm



Series	Part No. **Body**	Part No. **Assembly**	D1 ⊕	D3	L1	L2	Approx. L3	S1	S2
L	**K06XL**	**K06PL**	06	4	19	12	29.5	12	14
Light	**K08XL**	**K08PL**	08	6	21	14	31	12	17
250 bar	**K10XL**	**K10PL**	10	8	22	15	33	14	19
	K12XL	**K12PL**	12	10	24	17	34.5	17	22
	K15XL	**K15PL**	15	12	28	21	39.5	19	27
160 bar	**K18XL**	**K18PL**	18	15	31	23.5	43	24	32
	K22XL	**K22PL**	22	19	35	27.5	47.5	27	36
100 bar	**K28XL**	**K28PL**	28	24	38	30.5	51.5	36	41
	K35XL	**K35PL**	35	30	45	34.5	60.5	41	50
	K42XL	**K42PL**	42	36	51	40	66.5	50	60
S	**K06XS**	**K06PS**	06	4	23	16	33.5	12	17
Heavy	**K08XS**	**K08PS**	08	5	24	17	34	14	19
630 bar	**K10XS**	**K10PS**	10	7	25	17.5	37	17	22
	K12XS	**K12PS**	12	8	29	21.5	40.5	17	24
400 bar	**K16XS**	**K16PS**	16	12	33	24.5	46	24	30
	K20XS	**K20PS**	20	16	37	26.5	52	27	36
	K25XS	**K25PS**	25	20	42	30	58	36	46
250 bar	**K30XS**	**K30PS**	30	25	49	35.5	66.5	41	50
	K38XS	**K38PS**	38	32	57	41	75.5	50	60

* Dimensions given are approx. figures with tightened nut

Assembly consists of Double bite ferrule.

For soft seal ferrules, replace 'P' with 'SRD' in Part code. Example : K16SRDS

Standard material : Carbon Steel

For Stainless steel material, add prefix 316 - to the part code

Example : 316-K16PS

Standard surface treatment : Chrome free Alkaline Zinc Plating.

For Zinc Nickel surface treatment, add suffix - ZnNi

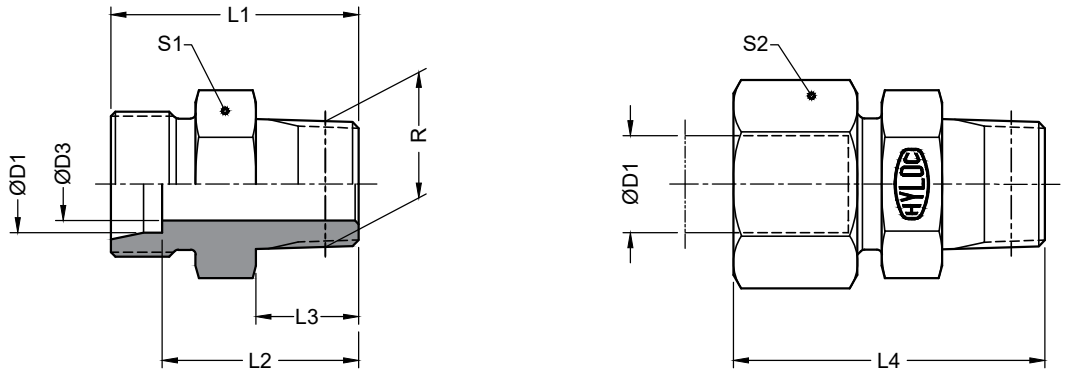
Example : K16PS-ZnNi

GE-R Male Stud Couplings

24° Tube end as per ISO 8434-1

Male BSP Taper (R) stud end

Dimensions in mm



Series	Part No. **Body**	Part No. **Assembly**	D1 ⊕	D3	R Male BSPT thread	L1	L2	L3	Approx. L4	S1	S2
L	**GE06XLR**	**GE06PLR**	06	4	R 1/8	21.5	14.5	7.5	32	14	14
Light	**GE06XLR02**	**GE06PLR02**	06	4	R 1/4	25	18	11	35.5	14	14
250 bar	**GE08XLR**	**GE08PLR**	08	6	R 1/4	26	19	11	36	17	17
	GE10XLR	**GE10PLR**	10	8	R 1/4	27	20	11	38	17	19
	GE12XLR02	**GE12PLR02**	12	10	R 1/4	27	20	11	37.5	19	22
	GE12XLR	**GE12PLR**	12	10	R 3/8	27.5	20.5	11.5	38	19	22
	GE12XLR04	**GE12PLR04**	12	10	R 1/2	32	25	15	42.5	22	22
	GE15XLR	**GE15PLR**	15	12	R 1/2	33	26	15	44.5	24	27
160 bar	**GE18XLR**	**GE18PLR**	18	15	R 1/2	34	26.5	15	46	27	32
	GE22XLR	**GE22PLR**	22	19	R 3/4	37.5	30	16.5	50	32	36
100 bar	**GE28XLR**	**GE28PLR**	28	24	R 1	41	33.5	19	54.5	41	41
	GE35XLR	**GE35PLR**	35	30	R1.1/4	45.5	35	21.5	61	46	50
	GE42XLR	**GE42PLR**	42	36	R1.1/2	48.5	37.5	21.5	64	55	60
S	**GE06XSR**	**GE06PSR**	06	4	R 1/4	29	22	11	39.5	17	17
Heavy	**GE08XSR**	**GE08PSR**	08	5	R 1/4	29	22	11	39	17	19
630 bar	**GE10XSR02**	**GE10PSR02**	10	7	R 1/4	31	23.5	11	43	19	22
	GE10XSR	**GE10PSR**	10	7	R 3/8	31.5	24	11.5	43.5	19	22
	GE12XSR02	**GE12PSR02**	12	8	R 1/4	33	25.5	11	44.5	22	24
	GE12XSR	**GE12PSR**	12	8	R 3/8	33.5	26	11.5	45	22	24
	GE12XSR04	**GE12PSR04**	12	8	R 1/2	37	29.5	15	48.5	22	24
400 bar	**GE16XSR**	**GE16PSR**	16	12	R 1/2	39	30.5	15	52	27	30
	GE20XSR	**GE20PSR**	20	16	R 3/4	44.5	34	16.5	59.5	32	36
	GE25XSR	**GE25PSR**	25	20	R1	51	39	19	67	41	46
250 bar	**GE30XSR**	**GE30PSR**	30	25	R1.1/4	55.5	42	21.5	73	46	50
	GE38XSR	**GE38PSR**	38	32	R1.1/2	60.5	44.5	21.5	79	55	60

Assembly consists of Double bite ferrule.

For soft seal ferrules, replace 'P' with 'SRD' in Part code. Example : GE16SRDSR
Standard material : Carbon Steel

For Stainless steel material, add prefix 316 - to the part code

Example : 316-GE16PSR

Standard surface treatment : Chrome free Alkaline Zinc Plating.

For Zinc Nickel surface treatment, add suffix - ZnNi

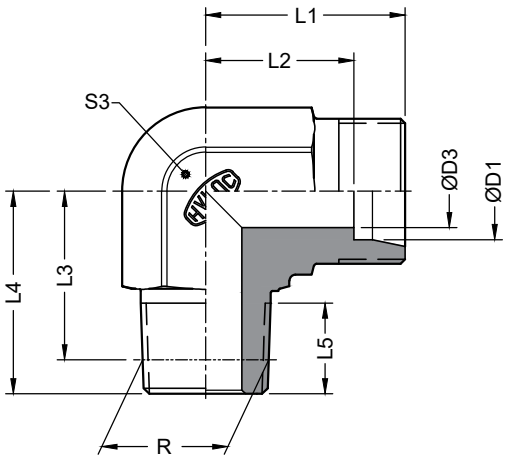
Example : GE16PSR-ZnNi

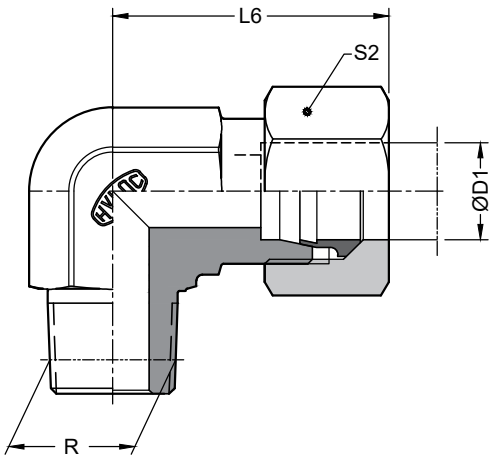
WE-R Male Stud Elbow Couplings

24° Tube end as per ISO 8434-1

and BSP Taper (R) stud end

Dimensions in mm





Series	Part No. **Body**	Part No. **Assembly**	D1 ⊕	R Male BSPT thread	D3	L1	L2	L3 Min	L3 Max	L4	L5	Approx. L6	S2	S3
L	**WE06XLR**	**WE06PLR**	06	R 1/8	4	20	13	16.1	17.9	21	7.5	30.5	14	12
Light	**WE08XLR**	**WE08PLR**	08	R 1/4	6	22.5	15.5	20.2	22.8	27.5	11	32.5	17	14
250 bar	**WE10XLR**	**WE10PLR**	10	R 1/4	8	22	15	19.7	22.3	27	11	33	19	17
	WE12XLR	**WE12PLR**	12	R 3/8	10	24	17	20.3	22.9	28	11.5	34.5	22	17
	WE15XLR	**WE15PLR**	15	R 1/2	12	29	22	25	28.6	35	15	40.5	27	22
160 bar	**WE18XLR**	**WE18PLR**	18	R 1/2	15	31	23.5	26	29.6	36	15	43	32	27
S	**WE06XSR**	**WE06PSR**	6	R 1/4	4	23	16	18.7	21.3	26	11	33.5	17	14
Heavy	**WE08XSR**	**WE08PSR**	8	R 1/4	5	24	17	19.7	22.3	27	11	34	19	17
630 bar	**WE10XSR**	**WE10PSR**	10	R 3/8	7	25	17.5	20.3	22.9	28	11.5	37	22	19
	WE12XSR	**WE12PSR**	12	R 3/8	8	29	21.5	20.3	22.9	28	11.5	40.5	24	22
400 bar	**WE16XSR**	**WE16PSR**	16	R 1/2	12	33	24.5	23.5	27.1	33.5	15	46	30	24

Assembly consists of Double bite ferrule.

For soft seal ferrules, replace 'P' with 'SRD' in Part code. Example : WE16SRDSR

Standard material : Carbon Steel

For Stainless steel material, add prefix 316 - to the part code

Example : 316-WE16PSR

Standard surface treatment : Chrome free Alkaline Zinc Plating.

For Zinc Nickel surface treatment, add suffix - ZnNi

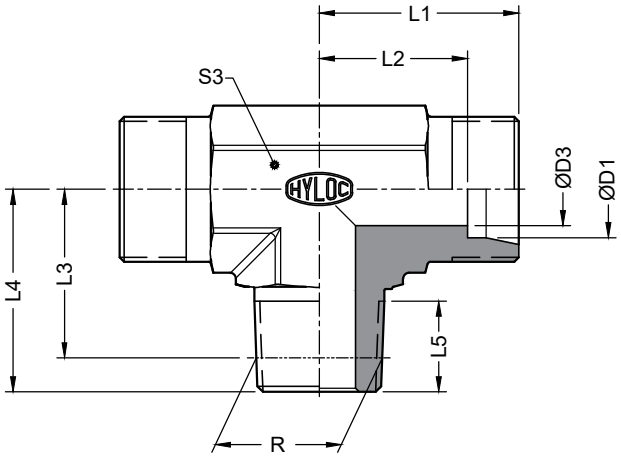
Example : WE16PSR-ZnNi

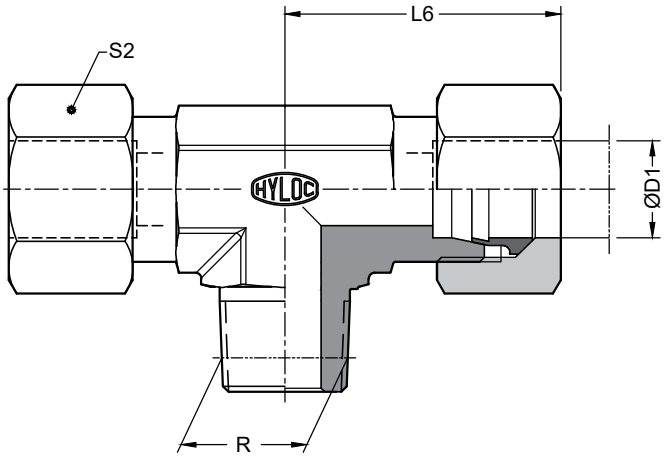
TE-R Male Stud Branch Tee Couplings

24° Tube end as per ISO 8434-1

and BSP Taper (R) stud end

Dimensions in mm





Series	Part No. **Body**	Part No. **Assembly**	D1 ⊕	R Male BSPT thread	D3	L1	L2	L3 Min	L3 Max	L4	L5	Approx. L6	S2	S3
L	**TE06XLR**	**TE06PLR**	06	R 1/8	4	20	13	16.1	17.9	21	7.5	30.5	14	12
Light	**TE08XLR**	**TE08PLR**	08	R 1/4	6	22.5	15.5	20.2	22.8	27.5	11	32.5	17	14
250 bar	**TE10XLR**	**TE10PLR**	10	R 1/4	8	22	15	19.7	22.3	27	11	33	19	17
	TE12XLR	**TE12PLR**	12	R 3/8	10	24	17	20.3	22.9	28	11.5	34.5	22	19
	TE15XLR	**TE15PLR**	15	R 1/2	12	29	22	25	28.6	35	15	40.5	27	22
160 bar	**TE18XLR**	**TE18PLR**	18	R 1/2	15	31	23.5	26	29.6	36	15	43	32	27
S	**TE06XSR**	**TE06PSR**	6	R 1/4	4	23	16	18.7	21.3	26	11	33.5	17	14
Heavy	**TE08XSR**	**TE08PSR**	8	R 1/4	5	24	17	19.7	22.3	27	11	34	19	17
630 bar	**TE10XSR**	**TE10PSR**	10	R 3/8	7	25	17.5	20.3	22.9	28	11.5	37	22	19
	TE12XSR	**TE12PSR**	12	R 3/8	8	29	21.5	20.3	22.9	28	11.5	40.5	24	22
400 bar	**TE16XSR**	**TE16PSR**	16	R 1/2	12	33	24.5	23.5	27.1	33.5	15	46	30	24

Assembly consists of Double bite ferrule.

For soft seal ferrules, replace 'P' with 'SRD' in Part code. Example : TE16SRDSR

Standard material : Carbon Steel

For Stainless steel material, add prefix 316 - to the part code

Example : 316-TE16PSR

Standard surface treatment : Chrome free Alkaline Zinc Plating.

For Zinc Nickel surface treatment, add suffix - ZnNi

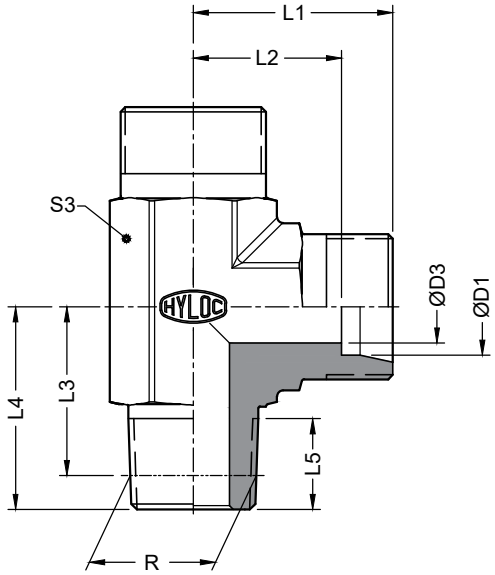
Example : TE16PSR-ZnNi

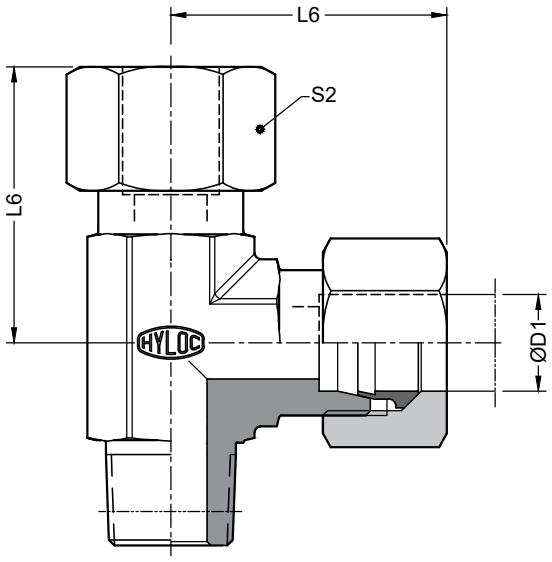
LE-R Male Stud Barrel Tee Couplings

24° Tube end as per ISO 8434-1

and BSP Taper (R) stud end

Dimensions in mm





Series	Part No. **Body**	Part No. **Assembly**	D1 ⊕	R Male BSPT thread	D3	L1	L2	L3 Min	L3 Max	L4	L5	Approx. L6	S2	S3
L	**LE06XLR**	**LE06PLR**	06	R 1/8	4	20	13	16.1	17.9	21	7.5	30.5	14	12
Light	**LE08XLR**	**LE08PLR**	08	R 1/4	6	22.5	15.5	20.2	22.8	27.5	11	32.5	17	14
250 bar	**LE10XLR**	**LE10PLR**	10	R 1/4	8	22	15	19.7	22.3	27	11	33	19	17
	LE12XLR	**LE12PLR**	12	R 3/8	10	24	17	20.3	22.9	28	11.5	34.5	22	19
	LE15XLR	**LE15PLR**	15	R 1/2	12	29	22	25	28.6	35	15	40.5	27	22
160 bar	**LE18XLR**	**LE18PLR**	18	R 1/2	15	31	23.5	26	29.6	36	15	43	32	27
S	**LE06XSR**	**LE06PSR**	6	R 1/4	4	23	16	18.7	21.3	26	11	33.5	17	14
Heavy	**LE08XSR**	**LE08PSR**	8	R 1/4	5	24	17	19.7	22.3	27	11	34	19	17
630 bar	**LE10XSR**	**LE10PSR**	10	R 3/8	7	25	17.5	20.3	22.9	28	11.5	37	22	19
	LE12XSR	**LE12PSR**	12	R 3/8	8	29	21.5	20.3	22.9	28	11.5	40.5	24	22
400 bar	**LE16XSR**	**LE16PSR**	16	R 1/2	12	33	24.5	23.5	27.1	33.5	15	46	30	24

Assembly consists of Double bite ferrule.

For soft seal ferrules, replace 'P' with 'SRD' in Part code. Example : LE16SRDSR

Standard material : Carbon Steel

For Stainless steel material, add prefix 316 - to the part code

Example : 316-LE16PSR

Standard surface treatment : Chrome free Alkaline Zinc Plating.

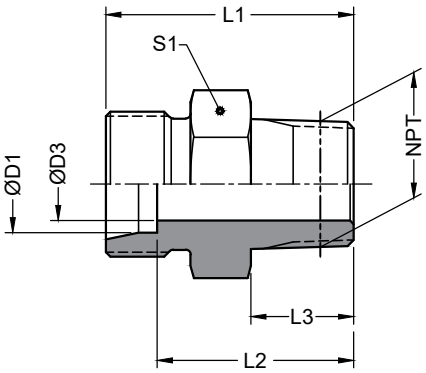
For Zinc Nickel surface treatment, add suffix - ZnNi

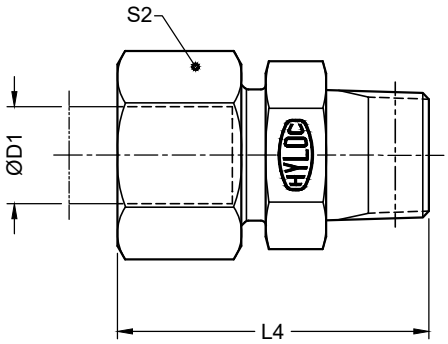
Example : LE16PSR-ZnNi

GE-N Male Stud Couplings

24° Tube end as per ISO 8434-1
Male NPT stud end

Dimensions in mm





Series	Part No. **Body**	Part No. **Assembly**	D1 ⊕	D3	Male NPT thread	L1	L2	L3	Approx. L4	S1	S2
L	**GE06XLN**	**GE06PLN**	06	4	1/8"-27	24	17	9.9	34.5	12	14
Light	**GE06XLN02**	**GE06PLN02**	06	4	1/4"-18	30	23	15.1	40.5	17	14
250 bar	**GE08XLN**	**GE08PLN**	08	6	1/4"-18	30	23	15.1	40	17	17
	GE10XLN	**GE10PLN**	10	8	1/4"-18	31	24	15.1	42	17	19
	GE12XLN02	**GE12PLN02**	12	9	1/4"-18	32	25	15.1	42.5	19	22
	GE12XLN	**GE12PLN**	12	9	3/8"-18	32	25	15.2	42.5	19	22
	GE12XLN04	**GE12PLN04**	12	9	1/2"-14	37	30	19.8	47.5	22	22
	GE15XLN	**GE15PLN**	15	12	1/2"-14	38	31	19.8	49.5	24	27
160 bar	**GE18XLN**	**GE18PLN**	18	15	1/2"-14	39	31.5	19.8	51	27	32
	GE22XLN	**GE22PLN**	22	19	3/4"-14	41	33.5	20.1	53.5	32	36
100 bar	**GE28XLN**	**GE28PLN**	28	24	1"-11 1/ 2	47	39.5	25	60.5	41	41
	GE35XLN	**GE35PLN**	35	30	1.1/4"-11 1/2	51	40.5	25.6	66.5	46	50
	GE42XLN	**GE42PLN**	42	36	1.1/2"-11 1/2	53	42	26	68.5	55	60
S	**GE06XSN**	**GE06PSN**	06	4	1/4"-18	35	28	15.1	45.5	17	17
Heavy	**GE08XSN**	**GE08PSN**	08	5	1/4"-18	35	28	15.1	45	17	19
630 bar	**GE10XSN02**	**GE10PSN02**	10	7	1/4"-18	35	27.5	15.1	47	19	22
	GE10XSN	**GE10PSN**	10	7	3/8"-18	35	27.5	15.2	47	19	22
	GE12XSN02	**GE12PSN02**	12	8	1/4"-18	37	29.5	15.1	48.5	22	24
	GE12XSN	**GE12PSN**	12	8	3/8"-18	37	29.5	15.2	48.5	22	24
	GE12XSN04	**GE12PSN04**	12	8	1/2"-14	42	34.5	19.8	53.5	22	24
400 bar	**GE16XSN**	**GE16PSN**	16	12	1/2"-14	44	35.5	19.8	56.5	27	30
	GE20XSN	**GE20PSN**	20	16	3/4"-14	48	37.5	20.1	63	32	36
	GE25XSN	**GE25PSN**	25	20	1"-11 1/ 2	57	45	25	73	41	46
250 bar	**GE30XSN**	**GE30PSN**	30	25	1.1/4"-11 1/2	60	46.5	25.6	77.5	46	50
	GE38XSN	**GE38PSN**	38	32	1.1/2"-11 1/2	65	49	26	83.5	55	60

Assembly consists of Double bite ferrule.

For soft seal ferrules, replace 'P' with 'SRD' in Part code. Example : GE16SRDSN
Standard material : Carbon Steel

For Stainless steel material, add prefix 316 - to the part code

Example : 316-GE16PSN

Standard surface treatment : Chrome free Alkaline Zinc Plating.

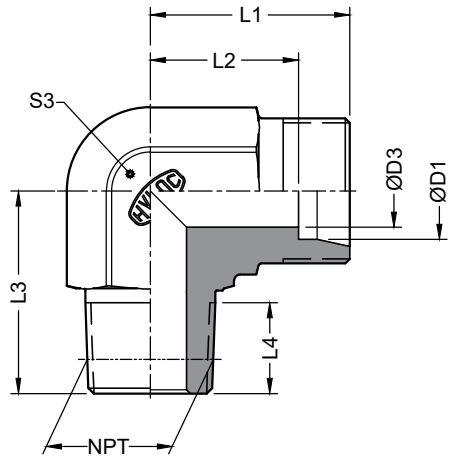
For Zinc Nickel surface treatment, add suffix - ZnNi

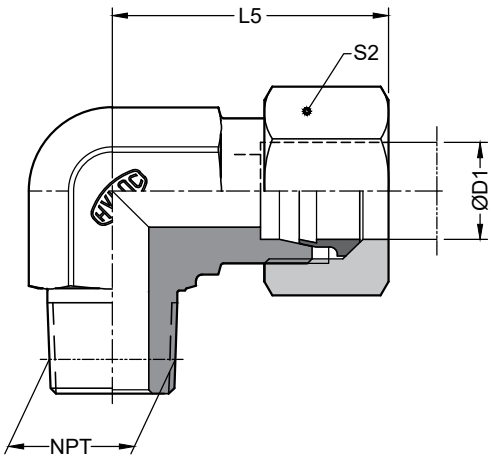
Example : GE16PSN-ZnNi

WE-N Male Stud Elbow Couplings

24° Tube end as per ISO 8434-1
Male NPT stud end

Dimensions in mm





Series	Part No. **Body**	Part No. **Assembly**	D1 ⊕	D3	Male NPT thread	L1	L2	L3	L4	Approx. L5	S2	* S3
L	**WE06XLN**	**WE06PLN**	06	4	1/8"-27	19	12	20	6.7	29.5	14	12
Light	**WE08XLN**	**WE08PLN**	08	6	1/4"-18	21	14	26	10.2	31	17	14
250 bar	**WE10XLN**	**WE10PLN**	10	8	1/4"-18	22	15	28	10.2	33	19	17
	WE12XLN	**WE12PLN**	12	10	3/8"-18	24	17	30	10.3	34.5	22	19
	WE15XLN	**WE15PLN**	15	12	1/2"-14	28	21	37	13.5	39.5	27	22
160 bar	**WE18XLN**	**WE18PLN**	18	15	1/2"-14	31	23.5	40	13.5	43	32	27
	WE22XLN	**WE22PLN**	22	19	3/4"-14	35	27.5	42	13.8	47.5	36	27
100 bar	**WE28XLN**	**WE28PLN**	28	24	1"-11 1/ 2	38	30.5	50	17.3	51.5	41	36
	WE35XLN	**WE35PLN**	35	30	1.1/4"-11 1/2	45	34.5	56	17.9	60.5	50	46
	WE42XLN	**WE42PLN**	42	36	1.1/2"-11 1/2	51	40	62	18.3	66.5	60	55
S	**WE06XSN**	**WE06PSN**	06	4	1/4"-18	23	16	26	10.2	33.5	17	14
Heavy	**WE08XSN**	**WE08PSN**	08	5	1/4"-18	24	17	28	10.2	34	19	14
630 bar	**WE10XSN**	**WE10PSN**	10	7	3/8"-18	25	17.5	30	10.3	37	22	17
	WE12XSN	**WE12PSN**	12	8	3/8"-18	29	21.5	31	10.3	40.5	24	19
400 bar	**WE16XSN**	**WE16PSN**	16	12	1/2"-14	33	24.5	39	13.5	46	30	24
	WE20XSN	**WE20PSN**	20	16	3/4"-14	37	26.5	43	13.8	52	36	27
	WE25XSN	**WE25PSN**	25	20	1"-11 1/ 2	42	30	54	17.3	58	46	36
250 bar	**WE30XSN**	**WE30PSN**	30	25	1.1/4"-11 1/2	49	35.5	56	17.9	66.5	50	46
	WE38XSN	**WE38PSN**	38	32	1.1/2"-11 1/2	57	41	62	18.3	75.5	60	55

*
S3 - Spanner flat dimensions may differ from the values given due to continuous development in forgings.

Assembly consists of Double bite ferrule.

For soft seal ferrules, replace 'P' with 'SRD' in Part code. Example : WE16SRDSN
Standard material : Carbon Steel

For Stainless steel material, add prefix 316 - to the part code

Example : 316-WE16PSN

Standard surface treatment : Chrome free Alkaline Zinc Plating.

For Zinc Nickel surface treatment, add suffix - ZnNi

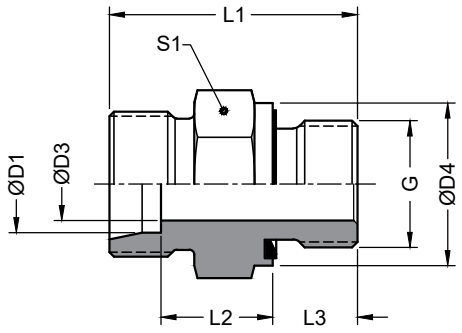
Example : W16EPSN-ZnNi

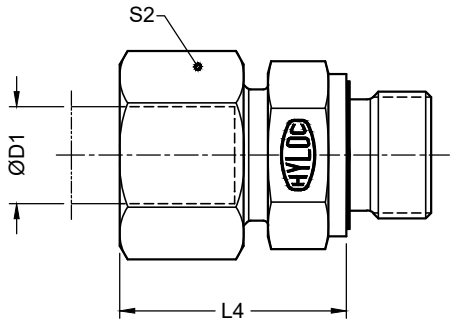
GE-GE Male Stud Couplings

24° Tube end as per ISO 8434-1

Dimensions in mm

Male BSPP (G) threads as per DIN 3852, Part 11 with Elastomeric seal





Series	Part No. **Body**	Part No. **Assembly**	D1 ⊕	D3	G Male BSPP thread	D4	L1	L2	L3	Approx. L4	S1	S2
L	**GE06XLGE**	**GE06PLGE**	06	4	G 1/8 A	14	23.5	8.5	8	26	14	14
Light	**GE08XLGE**	**GE08PLGE**	08	6	G 1/4 A	19	29	10	12	27	19	17
250 bar	**GE10XLGE**	**GE10PLGE**	10	7	G 1/4 A	19	30	11	12	29	19	19
	GE12XLGE	**GE12PLGE**	12	9	G 3/8 A	22	31.5	12.5	12	30	22	22
	GE15XLGE	**GE15PLGE**	15	11	G 1/2 A	27	35	14	14	32.5	27	27
160 bar	**GE18XLGE**	**GE18PLGE**	18	14	G 1/2 A	27	36	14.5	14	34	27	32
	GE22XLGE	**GE22PLGE**	22	18	G 3/4 A	32	40	16.5	16	36.5	32	36
100 bar	**GE28XLGE**	**GE28PLGE**	28	23	G 1 A	40	43	17.5	18	38.5	41	41
	GE35XLGE	**GE35PLGE**	35	30	G1.1/4 A	50	48	17.5	20	43.5	50	50
	GE42XLGE	**GE42PLGE**	42	36	G1.1/2 A	55	52	19	22	45.5	55	60
S	**GE06XSGE**	**GE06PSGE**	06	4	G 1/4 A	19	32	13	12	30.5	19	17
Heavy	**GE08XSGE**	**GE08PSGE**	08	5	G 1/4 A	19	34	15	12	32	19	19
630 bar	**GE10XSGE**	**GE10PSGE**	10	7	G 3/8 A	22	34.5	15	12	34.5	22	22
	GE12XSGE	**GE12PSGE**	12	8	G 3/8 A	22	36.5	17	12	36	22	24
400 bar	**GE16XSGE**	**GE16PSGE**	16	12	G 1/2 A	27	41	18.5	14	40	27	30
	GE20XSGE	**GE20PSGE**	20	16	G 3/4 A	32	47	20.5	16	46	32	36
	GE25XSGE	**GE25PSGE**	25	20	G1 A	40	53	23	18	51	41	46
250 bar	**GE30XSGE**	**GE30PSGE**	30	25	G1.1/4 A	50	57	23.5	20	54.5	50	50
	GE38XSGE	**GE38PSGE**	38	32	G1.1/2 A	55	64	26	22	60.5	55	60

Assembly consists of Double bite ferrule.

For soft seal ferrules, replace 'P' with 'SRD' in Part code. Example : GE16SRDSGE

Standard material : Carbon Steel

For Stainless steel material, add prefix 316 - to the part code

Example : 316-GE16PSGE

Standard surface treatment : Chrome free Alkaline Zinc Plating.

For Zinc Nickel surface treatment, add suffix - ZnNi

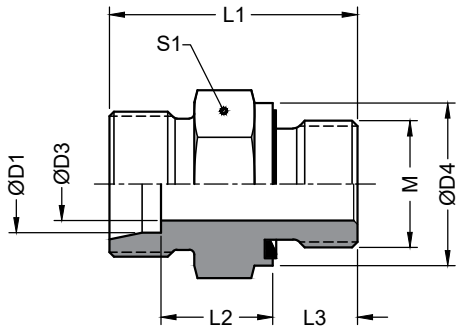
Example : GE16PSGE-ZnNi

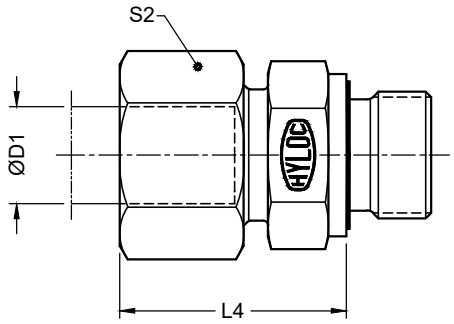
GE-ME Male Stud Couplings

24° Tube end as per ISO 8434-1

Dimensions in mm

Male Metric (M) threads as per DIN 3852, Part 11, ISO 9974 Form E' with Elastomeric seal





Series	Part No. **Body**	Part No. **Assembly**	D1 ⊕	D3	M Male Metric thread	D4	L1	L2	L3	Approx. L4	S1	S2
L	**GE06XLME**	**GE06PLME**	06	4	M10x1.0	14	23.5	8.5	8	26	14	14
Light	**GE08XLME**	**GE08PLME**	08	6	M12x1.5	17	29	10	12	27	17	17
250 bar	**GE10XLME**	**GE10PLME**	10	7	M14x1.5	19	30	11	12	29	19	19
	GE12XLME	**GE12PLME**	12	9	M16x1.5	22	31.5	12.5	12	30	22	22
	GE15XLME	**GE15PLME**	15	12	M18x1.5	24	32.5	13.5	12	32	24	27
160 bar	**GE18XLME**	**GE18PLME**	18	15	M22x1.5	27	36	14.5	14	34	27	32
	GE22XLME	**GE22PLME**	22	19	M26x1.5	32	40	16.5	16	36.5	32	36
100 bar	**GE28XLME**	**GE28PLME**	28	24	M33x2.0	40	43	17.5	18	38.5	41	41
	GE35XLME	**GE35PLME**	35	30	M42x2.0	50	48	17.5	20	43.5	50	50
	GE42XLME	**GE42PLME**	42	36	M48x2.0	55	52	19	22	45.5	55	60
S	**GE06XSME**	**GE06PSME**	06	4	M12x1.5	17	32	13	12	30.5	17	17
Heavy	**GE08XSME**	**GE08PSME**	08	5	M14x1.5	19	34	15	12	32	19	19
630 bar	**GE10XSME**	**GE10PSME**	10	7	M16x1.5	22	34.5	15	12	34.5	22	22
	GE12XSME	**GE12PSME**	12	8	M18x1.5	24	36.5	17	12	36	24	24
400 bar	**GE16XSME**	**GE16PSME**	16	12	M22x1.5	27	41	18.5	14	40	27	30
	GE20XSME	**GE20PSME**	20	16	M27x2.0	32	47	20.5	16	46	32	36
	GE25XSME	**GE25PSME**	25	20	M33x2.0	40	53	23	18	51	41	46
250 bar	**GE30XSME**	**GE30PSME**	30	25	M42x2.0	50	57	23.5	20	54.5	50	50
	GE38XSME	**GE38PSME**	38	32	M48x2.0	55	64	26	22	60.5	55	60

Assembly consists of Double bite ferrule.

For soft seal ferrules, replace 'P' with 'SRD' in Part code. Example : GE16SRDSME

Standard material : Carbon Steel

For Stainless steel material, add prefix 316 - to the part code

Example : 316-GE16PSME

Standard surface treatment : Chrome free Alkaline Zinc Plating.

For Zinc Nickel surface treatment, add suffix - ZnNi

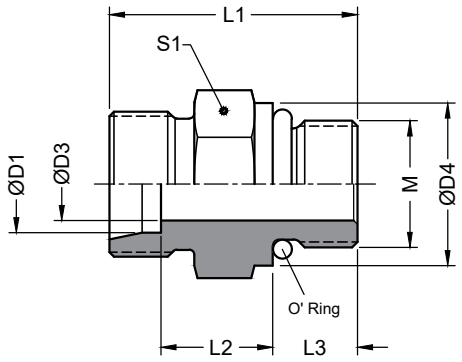
Example : GE16PSME-ZnNi

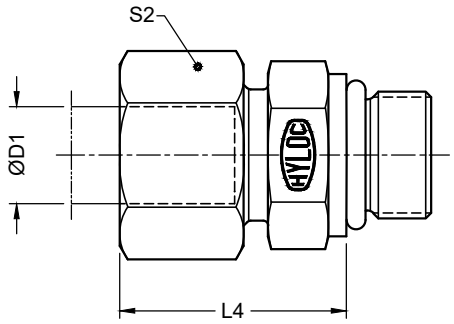
GE-MO Male Stud Couplings

24° Tube end as per ISO 8434-1

Dimensions in mm

Male Metric (M) threads with O' Ring sealing for port tappings according to ISO 6149 - 1 or DIN 3852, Part 3





Series	Part No. **Body**	Part No. **Assembly**	D1 ⌖	D3	M Male Metric thread	D4	L1	L2	L3	Approx. L4	S1	S2	O' Ring ID x CSD
L	**GE06XLMO**	**GE06PLMO**	06	4	M10x1.0	14	25	8.5	9.5	26	14	14	8.1 x 1.6
Light	**GE08XLMO**	**GE08PLMO**	08	6	M12x1.5	17	28	10	11	27	17	17	9.3 x 2.2
315 bar	**GE10XLMO**	**GE10PLMO**	10	8	M14x1.5	19	29	11	11	29	19	19	11.3 x 2.2
	GE12XLMO	**GE12PLMO**	12	10	M16x1.5	22	32	12.5	12.5	30	22	22	13.3 x 2.2
	GE15XLMO	**GE15PLMO**	15	12	M18x1.5	24	34.5	13.5	14	32	24	27	15.3 x 2.2
	GE18XLMO	**GE18PLMO**	18	15	M22x1.5	27	37	14.5	15	34	27	32	19.3 x 2.2
	GE22XLM27O	**GE22PLM27O**	22	19	M27x2.0	32	42.5	16.5	18.5	36.5	32	36	23.6 x 2.9
160 bar	**GE28XLMO**	**GE28PLMO**	28	24	M33x2.0	41	43.5	17.5	18.5	38.5	41	41	29.6 x 2.9
	GE35XLMO	**GE35PLMO**	35	30	M42x2.0	50	47	17.5	19	43.5	50	50	38.6 x 2.9
	GE42XLMO	**GE42PLMO**	42	36	M48x2.0	55	52	19.5	21.5	46	55	60	44.6 x 2.9
S	**GE06XSMO**	**GE06PSMO**	06	4	M12x1.5	17	31	13	11	30.5	17	17	9.3 x 2.2
Heavy	**GE08XSMO**	**GE08PSMO**	08	5	M14x1.5	19	33	15	11	32	19	19	11.3 x 2.2
630 bar	**GE10XSMO**	**GE10PSMO**	10	7	M16x1.5	22	35	15	12.5	34.5	22	22	13.3 x 2.2
	GE12XSMO	**GE12PSMO**	12	8	M18x1.5	24	38.5	17	14	36	24	24	15.3 x 2.2
400 bar	**GE16XSMO**	**GE16PSMO**	16	12	M22x1.5	27	42	18.5	15	40	27	30	19.3 x 2.2
	GE20XSMO	**GE20PSMO**	20	16	M27x2.0	32	49.5	20.5	18.5	46	32	36	23.6 x 2.9
	GE25XSMO	**GE25PSMO**	25	20	M33x2.0	41	53.5	23	18.5	51	41	46	29.6 x 2.9
	GE30XSMO	**GE30PSMO**	30	25	M42x2.0	50	56	23.5	19	54.5	50	50	38.6 x 2.9
	GE38XSMO	**GE38PSMO**	38	32	M48x2.0	55	64	26.5	21.5	61	55	60	44.6 x 2.9

Assembly consists of Double bite ferrule.

For soft seal ferrules, replace 'P' with 'SRD' in Part code. Example : GE16SRDSMO

Standard material : Carbon Steel

For Stainless steel material, add prefix 316 - to the part code

Example : 316-GE16PSMO

Standard surface treatment : Chrome free Alkaline Zinc Plating.

For Zinc Nickel surface treatment, add suffix - ZnNi

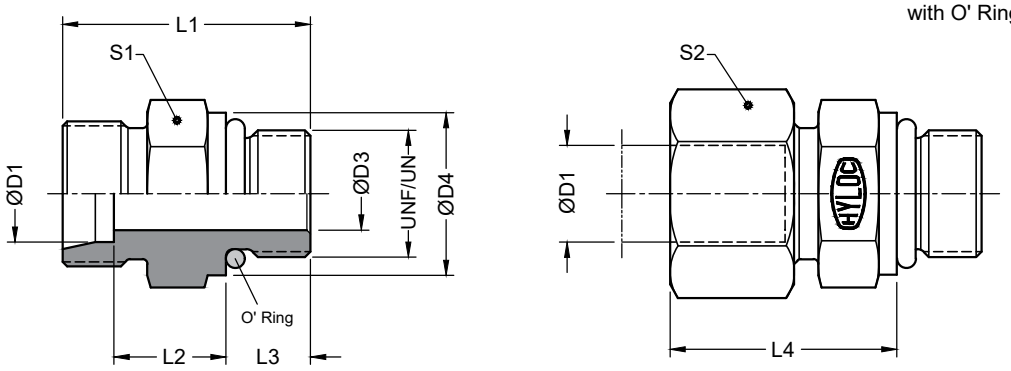
Example : GE16PSMO-ZnNi

GE-S Male Stud Couplings

24° Tube end as per ISO 8434-1

Dimensions in mm

Male stud - SAE Straight thread with O' Ring sealing



Series	Part No. **Body**	Part No. **Assembly**	D1 ⊕	D3	Male UNF/UN thread Class 2A	D4	L1	L2	L3	Approx. L4	S1	S2	O' Ring ID x CSD
L	**GE08XLS**	**GE08PLS**	08	4.5	7/16"-20 UNF	14.1	28	10	11	27	17	17	8.92 x 1.83
Light	**GE10XLS**	**GE10PLS**	10	4.5	7/16"-20 UNF	14.1	29	11	11	29	17	19	8.92 x 1.83
250 bar	**GE12XLS**	**GE12PLS**	12	7.5	9/16"-18 UNF	17.3	30	11	12	28.5	19	22	11.9 x 1.98
	GE12XLS08	**GE12PLS08**	12	10	3/4"-16 UNF	22	34	13	14	30.5	24	22	16.36 x 2.2
	GE12XLS10	**GE12PLS10**	12	12.5	7/8"-14 UNF	25.2	37	14	16	31.5	27	22	19.18 x 2.46
	GE15XLS	**GE15PLS**	15	10	3/4"-16 UNF	22	35	14	14	32.5	24	27	16.36 x 2.2
	GE15XLS10	**GE15PLS10**	15	12	7/8"-14 UNF	25.2	38	15	16	33.5	27	27	19.18 x 2.46
160 bar	**GE18XLS**	**GE18PLS**	18	10	3/4"-16 UNF	22	36	14.5	14	34	27	32	16.36 x 2.2
	GE18XLS10	**GE18PLS10**	18	12.5	7/8"-14 UNF	25.2	38	14.5	16	34	27	32	19.18 x 2.46
	GE22XLS	**GE22PLS**	22	12.5	7/8"-14 UNF	25.2	40	16.5	16	36.5	32	36	19.18 x 2.46
	GE22XLS12	**GE22PLS12**	22	15.5	1.1/16"-12 UN	31.5	42.5	16.5	18.5	36.5	32	36	23.47 x 2.95
	GE22XLS16	**GE22PLS16**	22	21.5	1.5/16"-12 UN	37.9	43.5	17.5	18.5	37.5	41	36	29.74 x 2.95
	GE28XLS	**GE28PLS**	28	15.5	1.1/16"-12 UN	31.5	43.5	17.5	18.5	38.5	41	41	23.47 x 2.95
100 bar	**GE28XLS16**	**GE28PLS16**	28	21.5	1.5/16"-12 UN	37.9	43.5	17.5	18.5	38.5	41	41	29.74 x 2.95
	GE35XLS	**GE35PLS**	35	21.5	1.5/16"-12 UN	37.9	46.5	17.5	18.5	43.5	46	50	29.74 x 2.95
	GE35XLS20	**GE35PLS20**	35	27.5	1.5/8"-12 UN	47.4	46.5	17.5	18.5	43.5	50	50	37.46 x 3.00
	GE42XLS	**GE42PLS**	42	27.5	1.5/8"-12 UN	47.4	48.5	19	18.5	45.5	55	60	37.46 x 3.00

Series	Part No. **Body**	Part No. **Assembly**	D1 ⊕	D3	Male UNF/UN thread Class 2A	D4	L1	L2	L3	Approx. L4	S1	S2	O' Ring ID x CSD
S	**GE08XSS**	**GE08PSS**	08	4.5	7/16"-20 UNF	14.1	33	15	11	32	17	19	8.92 x 1.83
Heavy	**GE10XSS**	**GE10PSS**	10	7	9/16"-18 UNF	17.3	34	14.5	12	34	19	22	11.9 x 1.98
630 bar	**GE12XSS**	**GE12PSS**	12	6	9/16"-18 UNF	17.3	34	14.5	12	33.5	22	24	11.9 x 1.98
	GE12XSS08	**GE12PSS08**	12	10	3/4"-16 UNF	22	39	17.5	14	36.5	24	24	16.36 x 2.2
400 bar	**GE16XSS**	**GE16PSS**	16	10	3/4"-16 UNF	22	38	15.5	14	37	24	30	16.36 x 2.2
	GE16XSS10	**GE16PSS10**	16	12.5	7/8"-14 UNF	25.2	43	18.5	16	40	27	30	19.18 x 2.46
	GE20XSS08	**GE20PSS08**	20	10	3/4"-16 UNF	22	45	20.5	14	46	32	36	16.36 x 2.2
	GE20XSS	**GE20PSS**	20	12.5	7/8"-14 UNF	25.2	47	20.5	16	46	32	36	19.18 x 2.46
	GE20XSS12	**GE20PSS12**	20	15.5	1.1/16"-12 UN	31.5	49.5	20.5	18.5	46	32	36	23.47 x 2.95
	GE25XSS	**GE25PSS**	25	15.5	1.1/16"-12 UN	31.5	53.5	23	18.5	51	36	46	23.47 x 2.95
	GE25XSS16	**GE25PSS16**	25	21.5	1.5/16"-12 UN	37.9	53.5	23	18.5	51	41	46	29.74 x 2.95
250 bar	**GE30XSS**	**GE30PSS**	30	21.5	1.5/16"-12 UN	37.9	55.5	23.5	18.5	54.5	46	50	29.74 x 2.95
	GE30XSS20	**GE30PSS20**	30	27.5	1.5/8"-12 UN	47.4	55.5	23.5	18.5	54.5	50	50	37.46 x 3.00
	GE30XSS24	**GE30PSS24**	30	33.5	1.7/8"-12 UN	53.8	55.5	23.5	18.5	54.5	55	50	43.69 x 3.00
	GE38XSS	**GE38PSS**	38	27.5	1.5/8"-12 UN	47.4	60.5	26	18.5	60.5	55	60	37.46 x 3.00
	GE38XSS24	**GE38PSS24**	38	33.5	1.7/8"-12 UN	53.8	60.5	26	18.5	60.5	55	60	43.69 x 3.00

Assembly consists of Double bite ferrule. For soft seal ferrules, replace 'P' with 'SRD' in Part code. Example : GE16SRDSS

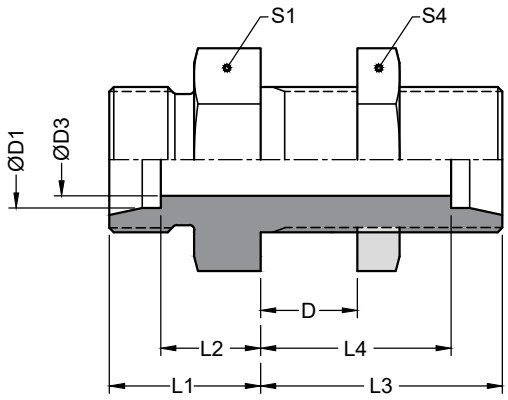
Standard material : Carbon Steel. For Stainless steel material, add prefix 316 - to the part code Example : 316-GE16PSS

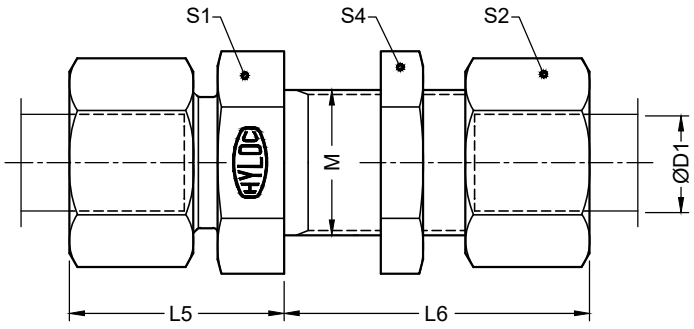
Standard surface treatment : Chrome free Alkaline Zinc Plating. For Zinc Nickel surface treatment, add suffix - ZnNi. Example : GE16PSS-ZnNi

SV Straight Bulkhead Couplings

24° Tube end as per ISO 8434-1

Dimensions in mm





Series	Part No. **Body**	Part No. **Assembly**	D1 ⊕	D3	L1	L2	L3	L4	Approx. **L5**	Approx. L6	M	S1	S2	S4
L	**SV06XL**	**SV06PL**	06	4	14	7	34	27	24.5	44.5	M12x1.5	17	14	17
Light	**SV08XL**	**SV08PL**	08	6	15	8	34	27	25	44	M14x1.5	19	17	19
250 bar	**SV10XL**	**SV10PL**	10	8	17	10	35	28	28	46	M16x1.5	22	19	22
	SV12XL	**SV12PL**	12	10	17	10	36	29	27.5	46.5	M18x1.5	24	22	24
	SV15XL	**SV15PL**	15	12	19	12	38	31	30.5	49.5	M22x1.5	27	27	30
160 bar	**SV18XL**	**SV18PL**	18	15	21	13.5	40	32.5	33	52	M26x1.5	32	32	36
	SV22XL	**SV22PL**	22	19	24	16.5	42	34.5	36.5	54.5	M30x2.0	36	36	41
100 bar	**SV28XL**	**SV28PL**	28	24	26	18.5	43	35.5	39.5	56.5	M36x2.0	41	41	46
	SV35XL	**SV35PL**	35	30	29	18.5	47	36.5	44.5	62.5	M45x2.0	50	50	55
	SV42XL	**SV42PL**	42	36	30	19	47	36	45.5	62.5	M52x2.0	60	60	65
S	**SV06XS**	**SV06PS**	06	4	19	12	36	29	29.5	46.5	M14x1.5	19	17	19
Heavy	**SV08XS**	**SV08PS**	08	5	20	13	36	29	30	46	M16x1.5	22	19	22
630 bar	**SV10XS**	**SV10PS**	10	7	22	14.5	37	29.5	32	49	M18x1.5	24	22	24
	SV12XS	**SV12PS**	12	8	22	14.5	38	30.5	33.5	49.5	M20x1.5	27	24	27
400 bar	**SV16XS**	**SV16PS**	16	12	25	16.5	40	31.5	38	53	M24x1.5	32	30	32
	SV20XS	**SV20PS**	20	16	28	17.5	44	33.5	43	59	M30x2.0	41	36	41
	SV25XS	**SV25PS**	25	20	32	20	47	35	48	63	M36x2.0	46	46	46
250 bar	**SV30XS**	**SV30PS**	30	25	35	21.5	51	37.5	52.5	68.5	M42x2.0	50	50	50
	SV38XS	**SV38PS**	38	32	38	22	53	37	56.5	71.5	M52x2.0	65	60	65

* Dimensions given are approx. figures with tightened nut

Assembly consists of Double bite ferrule.

For soft seal ferrules, replace 'P' with 'SRD' in Part code. Example :SV16SRDS

Standard material : Carbon Steel

For Stainless steel material, add prefix 316 - to the part code

Example : 316-SV16PS

Standard surface treatment : Chrome free Alkaline Zinc Plating.

For Zinc Nickel surface treatment, add suffix - ZnNi

Example :SV16PS-ZnNi

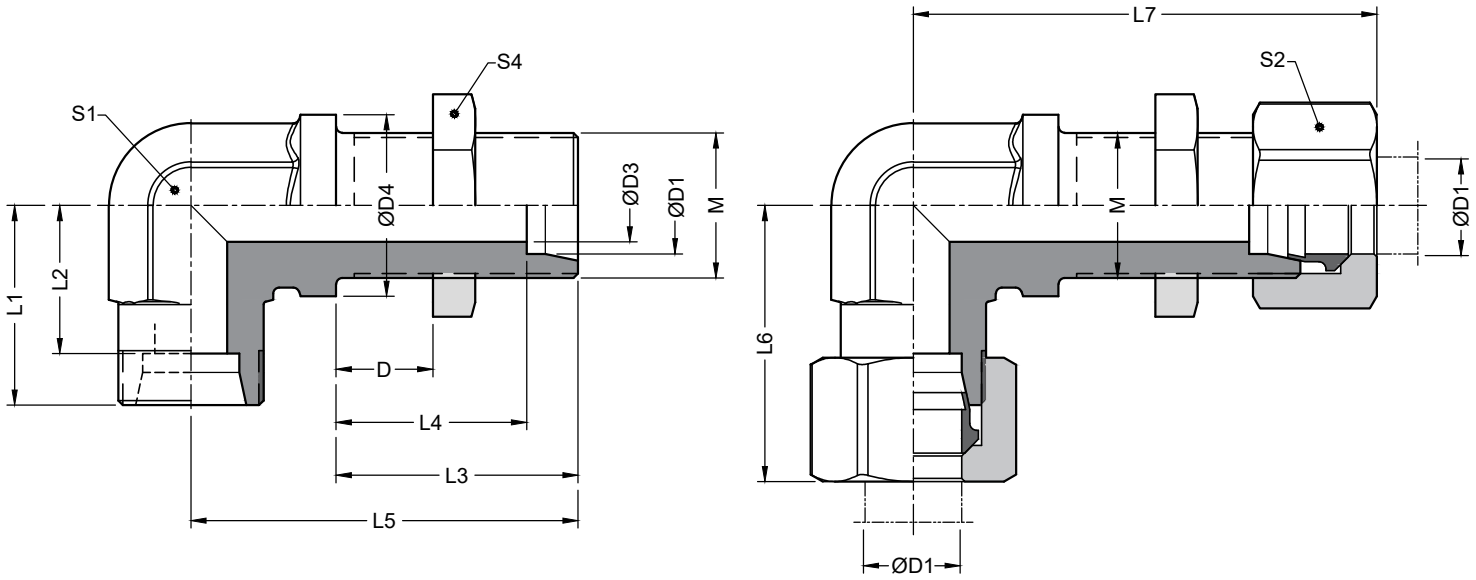
Bulhead thickness (D)

#	Tube OD	Min	Max
1	6L to 18L	3mm	16 mm
2	22L to 42L	4mm	16mm
3	6S to 16S	3mm	16mm
4	20S to 38S	4mm	16mm

WSV Elbow Bulkhead Couplings

24° Tube end as per ISO 8434-1

Dimensions in mm



Series	Part No. **Body**	Part No. **Assembly**	D1 ⊕	D3	D4	L1	L2	L3	L4	L5	Approx. L6	Approx. L7	M	✻ S1	S2	S4
L	**WSV06XL**	**WSV06PL**	06	4	17	19	12	34	27	48	29.5	58.5	M12x1.5	12	14	17
Light	**WSV08XL**	**WSV08PL**	08	6	19	21	14	34	27	51	31	61	M14x1.5	12	17	19
250 bar	**WSV10XL**	**WSV10PL**	10	8	22	22	15	35	28	53	33	64	M16x1.5	14	19	22
	WSV12XL	**WSV12PL**	12	10	24	24	17	36	29	56	34.5	66.5	M18x1.5	17	22	24
	WSV15XL	**WSV15PL**	15	12	27	28	21	38	31	61	39.5	72.5	M22x1.5	19	27	30
160 bar	**WSV18XL**	**WSV18PL**	18	15	32	31	23.5	40	32.5	64	43	76	M26x1.5	24	32	36
	WSV22XL	**WSV22PL**	22	19	36	35	27.5	42	34.5	72	47.5	84.5	M30x2.0	27	36	41
100 bar	**WSV28XL**	**WSV28PL**	28	24	42	38	30.5	43	35.5	77	51.5	90.5	M36x2.0	36	41	46
	WSV35XL	**WSV35PL**	35	30	50	45	34.5	47	36.5	86	60.5	101.5	M45x2.0	41	50	55
	WSV42XL	**WSV42PL**	42	36	60	51	40	47	36	90	66.5	105.5	M52x2.0	50	60	65
S	**WSV06XS**	**WSV06PS**	06	4	19	23	16	36	29	53	33.5	63.5	M14x1.5	12	17	19
Heavy	**WSV08XS**	**WSV08PS**	08	5	22	24	17	36	29	54	34	64	M16x1.5	14	19	22
630 bar	**WSV10XS**	**WSV10PS**	10	7	24	25	17.5	37	29.5	57	37	69	M18x1.5	17	22	24
	WSV12XS	**WSV12PS**	12	8	27	29	21.5	38	30.5	59	40.5	70.5	M20x1.5	17	24	27
400 bar	**WSV16XS**	**WSV16PS**	16	12	30	33	24.5	40	31.5	64	46	77	M24x1.5	24	30	32
	WSV20XS	**WSV20PS**	20	16	36	37	26.5	44	33.5	74	52	89	M30x2.0	27	36	41
	WSV25XS	**WSV25PS**	25	20	42	42	30	47	35	81	58	97	M36x2.0	36	46	46
250 bar	**WSV30XS**	**WSV30PS**	30	25	50	49	35.5	51	37.5	90	66.5	107.5	M42x2.0	41	50	50
	WSV38XS	**WSV38PS**	38	32	60	57	41	53	37	96	75.5	114.5	M52x2.0	50	60	65

✻ S1 - Spanner flat dimensions may differ from the values in case of these fittings machined from bar stock.

Assembly consists of Double bite ferrule.

For soft seal ferrules, replace 'P' with 'SRD' in Part code. Example :WSV16SRDS

Standard material : Carbon Steel

For Stainless steel material, add prefix 316 - to the part code. Example : 316-WSV16PS

Standard surface treatment : Chrome free Alkaline Zinc Plating.

For Zinc Nickel surface treatment, add suffix - ZnNi Example :WSV16PS-ZnNi

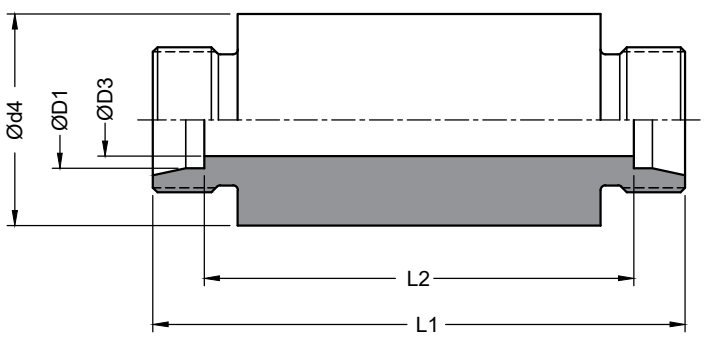
Bulhead thickness (D)

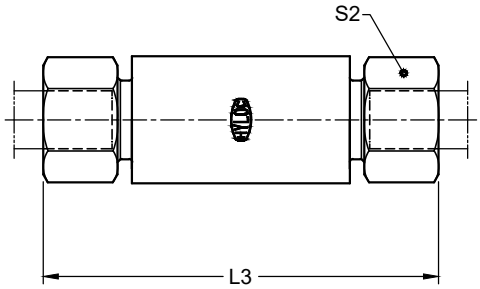
#	Tube OD	Min	Max
1	6L to 18L	3mm	16 mm
2	22L to 42L	4mm	16mm
3	6S to 16S	3mm	16mm
4	20S to 38S	4mm	16mm

ESV Weld Bulkhead Couplings

24° Tube end as per ISO 8434-1

Dimensions in mm





Series	Part No. **Body**	Part No. **Assembly**	D1 ⊕	D3	D4	L1	L2	Approx. L3	S2
L	**ESV06XL**	**ESV06PL**	06	4	18	70	56	91	14
Light	**ESV08XL**	**ESV08PL**	08	6	20	70	56	90	17
250 bar	**ESV10XL**	**ESV10PL**	10	8	22	72	58	94	19
	ESV12XL	**ESV12PL**	12	10	25	72	58	93	22
	ESV15XL	**ESV15PL**	15	12	28	84	70	107	27
160 bar	**ESV18XL**	**ESV18PL**	18	15	32	84	69	108	32
	ESV22XL	**ESV22PL**	22	19	36	88	73	113	36
100 bar	**ESV28XL**	**ESV28PL**	28	24	40	88	73	115	41
	ESV35XL	**ESV35PL**	35	30	50	92	71	123	50
	ESV42XL	**ESV42PL**	42	36	60	92	70	123	60
S	**ESV06XS**	**ESV06PS**	06	4	20	74	60	95	17
Heavy	**ESV08XS**	**ESV08PS**	08	5	22	74	60	94	19
630 bar	**ESV10XS**	**ESV10PS**	10	7	25	74	59	98	22
	ESV12XS	**ESV12PS**	12	8	28	74	59	97	24
400 bar	**ESV16XS**	**ESV16PS**	16	12	35	88	71	114	30
	ESV20XS	**ESV20PS**	20	16	38	92	71	122	36
	ESV25XS	**ESV25PS**	25	20	45	96	72	128	46
250 bar	**ESV30XS**	**ESV30PS**	30	25	50	100	73	135	50
	ESV38XS	**ESV38PS**	38	32	60	104	72	141	60

Assembly consists of Double bite ferrule.

For soft seal ferrules, replace 'P' with 'SRD' in Part code. Example : ESV16SRDS

Standard material : Carbon Steel

For Stainless steel material, add prefix 316L - to the part code

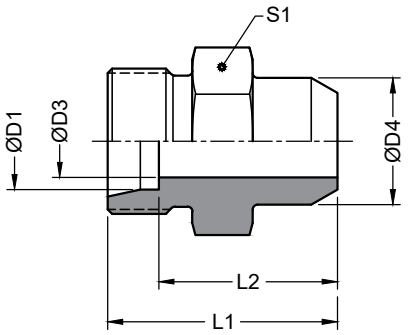
Example : 316L-ESV16PS

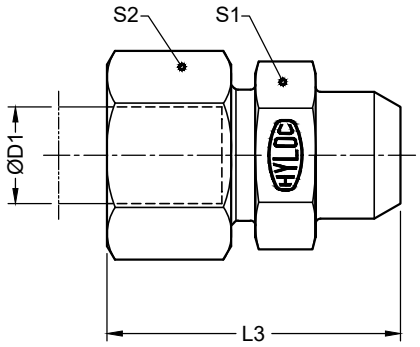
Standard surface treatment : Phosphated.

AS Weld Couplings

24° Tube end as per ISO 8434-1

Dimensions in mm





Series	Part No. **Body**	Part No. **Assembly**	D1 ⊕	D3	D4	L1	L2	Approx. L3	S1	S2
L	**AS06XL**	**AS06PL**	06	4	10	21	14	31.5	12	14
Light	**AS08XL**	**AS08PL**	08	6	12	23	16	33	14	17
250 bar	**AS10XL**	**AS10PL**	10	8	14	25	18	36	17	19
	AS12XL	**AS12PL**	12	10	16	25	18	35.5	19	22
	AS15XL	**AS15PL**	15	12	19	29	22	40.5	22	27
160 bar	**AS18XL**	**AS18PL**	18	15	22	31	23.5	43	27	32
	AS22XL	**AS22PL**	22	19	27	36	28.5	48.5	32	36
100 bar	**AS28XL**	**AS28PL**	28	24	32	38	30.5	51.5	41	41
	AS35XL	**AS35PL**	35	30	40	43	32.5	58.5	46	50
	AS42XL	**AS42PL**	42	36	46	46	35	61.5	55	60
S	**AS06XS**	**AS06PS**	06	4	11	26	19	36.5	14	17
Heavy	**AS08XS**	**AS08PS**	08	5	13	28	21	38	17	19
630 bar	**AS10XS**	**AS10PS**	10	7	15	30	22.5	42	19	22
	AS12XS	**AS12PS**	12	8	17	32	24.5	43.5	22	24
400 bar	**AS16XS**	**AS16PS**	16	12	21	35	26.5	48	27	30
	AS20XS	**AS20PS**	20	16	26	40	29.5	55	32	36
	AS25XS	**AS25PS**	25	20	31	44	32	60	41	46
250 bar	**AS30XS**	**AS30PS**	30	25	36	49	35.5	66.5	46	50
	AS38XS	**AS38PS**	38	32	44	54	38	72.5	55	60

Assembly consists of Double bite ferrule.

For soft seal ferrules, replace 'P' with 'SRD' in Part code. Example : AS16SRDS

Standard material : Carbon Steel

For Stainless steel material, add prefix 316L - to the part code

Example : 316L-AS16PS

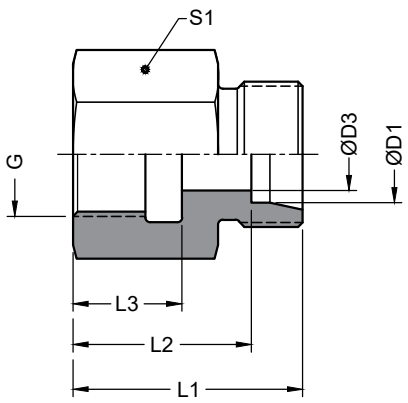
Standard surface treatment : Phosphated

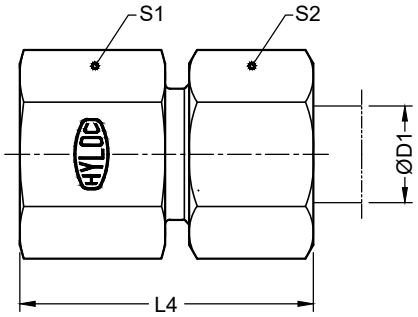
GAI-G Straight Female Couplings

24° Tube end as per ISO 8434-1

Female BSPP (G) threads

Dimensions in mm





Series	Part No. **Body**	Part No. **Assembly**	D1 ⌖	G Female BSPP thread	D3	L1	L2	L3	Approx. L4	S1	S2
L	**GAI06XLG**	**GAI06PLG**	06	G 1/8 A	4	26	19	12	36.5	14	14
Light	**GAI08XLG**	**GAI08PLG**	08	G 1/4 A	6	31	24	17	41	19	17
250 bar	**GAI10XLG**	**GAI10PLG**	10	G 1/4 A	8	32	25	17	43	19	19
	GAI12XLG	**GAI12PLG**	12	G 3/8 A	10	33	26	17	43.5	24	22
	GAI15XLG	**GAI15PLG**	15	G 1/2 A	12	38	31	20	49.5	27	27
160 bar	**GAI18XLG**	**GAI18PLG**	18	G 1/2 A	15	38	30.5	20	50	27	32
	GAI22XLG	**GAI22PLG**	22	G 3/4 A	19	43	35.5	22	55.5	36	36
100 bar	**GAI28XLG**	**GAI28PLG**	28	G 1 A	24	45.5	38	24.5	59	41	41
	GAI35XLG	**GAI35PLG**	35	G1.1 /4 A	30	51.5	41	26.5	67	55	50
	GAI42XLG	**GAI42PLG**	42	G1.1/2 A	36	53.5	42.5	28.5	69	60	60
S	**GAI06XSG**	**GAI06PSG**	06	G 1/4 A	4	33	26	17	43.5	19	17
Heavy	**GAI08XSG**	**GAI08PSG**	08	G 1/4 A	5	33	26	17	43	19	19
630 bar	**GAI10XSG**	**GAI10PSG**	10	G 3/8 A	7	34	26.5	17	46	24	22
	GAI12XSG	**GAI12PSG**	12	G 3/8 A	8	34	26.5	17	45.5	24	24
400 bar	**GAI16XSG**	**GAI16PSG**	16	G 1/2 A	12	40	31.5	20	53	27	30
	GAI20XSG	**GAI20PSG**	20	G 3/4 A	16	45	34.5	22	60	36	36
	GAI25XSG	**GAI25PSG**	25	G1 A	20	49.5	37.5	24.5	65.5	41	46
250 bar	**GAI30XSG**	**GAI30PSG**	30	G1.1/ 4 A	25	55.5	42	26.5	73	55	50
	GAI38XSG	**GAI38PSG**	38	G1.1/2 A	32	59.5	43.5	28.5	78	60	60

Assembly consists of Double bite ferrule.

For soft seal ferrules, replace 'P' with 'SRD' in Part code. Example : GAI16SRDSG

Standard material : Carbon Steel

For Stainless steel material, add prefix 316 - to the part code

Example : 316-GAI16PSG

Standard surface treatment : Chrome free Alkaline Zinc Plating.

For Zinc Nickel surface treatment, add suffix - ZnNi

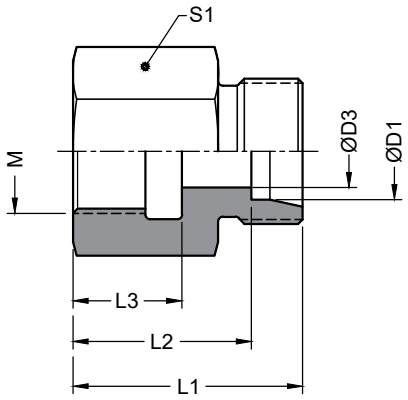
Example : GAI16PSG-ZnNi

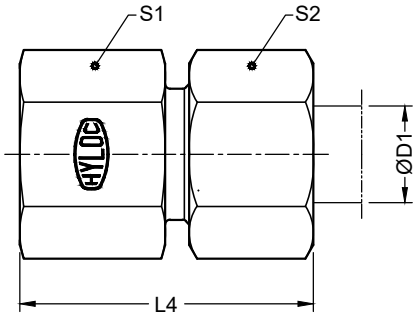
GAI-M Straight Female Couplings

24° Tube end as per ISO 8434-1

Female Metric (M) threads

Dimensions in mm





Series	Part No. **Body**	Part No. **Assembly**	D1 ⊕	M Female Metric thread	D3	L1	L2	L3	Approx. L4	S1	S2
L	**GAI06XLM**	**GAI06PLM**	06	M10x1.0	4	26.5	19.5	12.5	37	14	14
Light	**GAI08XLM**	**GAI08PLM**	08	M12x1.5	6	31	24	17	41	17	17
250 bar	**GAI10XLM**	**GAI10PLM**	10	M14x1.5	8	32	25	17	43	19	19
	GAI12XLM	**GAI12PLM**	12	M16x1.5	10	33	26	17	43.5	22	22
	GAI15XLM	**GAI15PLM**	15	M18x1.5	12	35	28	17	46.5	24	27
160 bar	**GAI18XLM**	**GAI18PLM**	18	M22x1.5	15	37	29.5	19	49	30	32
	GAI22XLM	**GAI22PLM**	22	M26x1.5	19	42	34.5	21	54.5	32	36
100 bar	**GAI28XLM**	**GAI28PLM**	28	M33x2.0	24	45	37.5	24	58.5	41	41
	GAI35XLM	**GAI35PLM**	35	M42x2.0	30	51	40.5	26	66.5	55	50
	GAI42XLM	**GAI42PLM**	42	M48x2.0	36	53	42	28	68.5	60	60
S	**GAI06XSM**	**GAI06PSM**	06	M12x1.5	4	33	26	17	43.5	17	17
Heavy	**GAI08XSM**	**GAI08PSM**	08	M14x1.5	5	33	26	17	43	19	19
630 bar	**GAI10XSM**	**GAI10PSM**	10	M16x1.5	7	34	26.5	17	46	22	22
	GAI12XSM	**GAI12PSM**	12	M18x1.5	8	35	27.5	17	46.5	24	24
400 bar	**GAI16XSM**	**GAI16PSM**	16	M22x1.5	12	39	30.5	19	52	30	30
	GAI20XSM	**GAI20PSM**	20	M27x2.0	16	45	34.5	22	60	36	36
	GAI25XSM	**GAI25PSM**	25	M33x2.0	20	49	37	24	65	41	46
250 bar	**GAI30XSM**	**GAI30PSM**	30	M42x2.0	25	55	41.5	26	72.5	55	50
	GAI38XSM	**GAI38PSM**	38	M48x2.0	32	59	43	28	77.5	60	60

Assembly consists of Double bite ferrule.

For soft seal ferrules, replace 'P' with 'SRD' in Part code. Example : GAI16SRDSM

Standard material : Carbon Steel

For Stainless steel material, add prefix 316 - to the part code

Example : 316-GAI16PSM

Standard surface treatment : Chrome free Alkaline Zinc Plating.

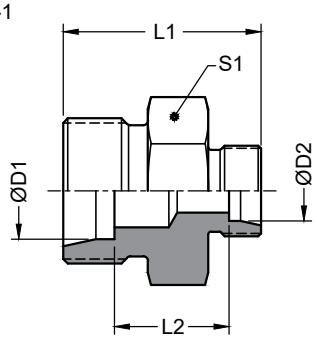
For Zinc Nickel surface treatment, add suffix - ZnNi

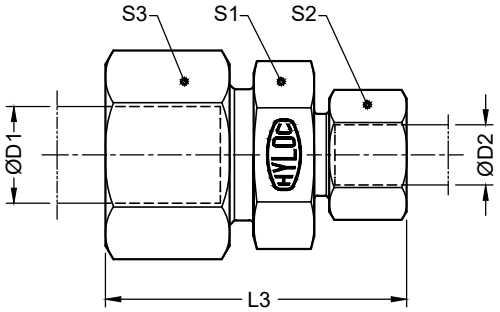
Example : GAI16PSM-ZnNi

GR Straight Reducers

24° Tube end as per ISO 8434-1

Dimensions in mm





Low Pressure Series

Pr (bar)	Part No. **Body**	Part No. **Assembly**	D1 ⌖	D2	L1	L2	Approx. L3	S1	S2	S3
315	**GR0806XL**	**GR0806PL**	08	06	25	11	45.5	14	14	17
315	**GR1006XL**	**GR1006PL**	10	06	26	12	47.5	17	14	19
	GR1008XL	**GR1008PL**	10	08	26	12	47	17	17	19
315	**GR1206XL**	**GR1206PL**	12	06	27	13	48	19	14	22
	GR1208XL	**GR1208PL**	12	08	27	13	47.5	19	17	22
	GR1210XL	**GR1210PL**	12	10	28	14	49.5	19	19	22
315	**GR1510XL**	**GR1510PL**	15	10	29	15	51.5	24	19	27
	GR1512XL	**GR1512PL**	15	12	29	15	51	24	22	27
315	**GR1810XL**	**GR1810PL**	18	10	30	15.5	53	27	19	32
	GR1812XL	**GR1812PL**	18	12	30	15.5	52.5	27	22	32
	GR1815XL	**GR1815PL**	18	15	31	16.5	54.5	27	27	32
160	**GR2212XL**	**GR2212PL**	22	12	32	17.5	55	32	22	36
	GR2215XL	**GR2215PL**	22	15	33	18.5	57	32	27	36
	GR2218XL	**GR2218PL**	22	18	33	18	57.5	32	32	36
160	**GR2818XL**	**GR2818PL**	28	18	34	19	59.5	41	32	41
	GR2822XL	**GR2822PL**	28	22	36	21	62	41	36	41
160	**GR3522XL**	**GR3522PL**	35	22	39	21	67	46	36	50
	GR3528XL	**GR3528PL**	35	28	39	21	68	46	41	50

High Pressure Series

Pr (bar)	Part No. **Body**	Part No. **Assembly**	D1 ⌖	D2	L1	L2	Approx. L3	S1	S2	S3
630	**GR0806XS**	**GR0806PS**	08	06	32	18	52.5	17	17	19
630	**GR1006XS**	**GR1006PS**	10	06	32	17.5	54.5	19	17	22
	GR1008XS	**GR1008PS**	10	08	32	17.5	54	19	19	22
630	**GR1206XS**	**GR1206PS**	12	06	34	19.5	56	22	17	24
	GR1208XS	**GR1208PS**	12	08	34	19.5	55.5	22	19	24
	GR1210XS	**GR1210PS**	12	10	34	19	57.5	22	22	24
400	**GR1612XS**	**GR1612PS**	16	12	36	20	60.5	27	24	30
400	**GR2010XS**	**GR2010PS**	20	10	40	22	67	32	22	36
	GR2012XS	**GR2012PS**	20	12	40	22	66.5	32	24	36
	GR2016XS	**GR2016PS**	20	16	42	23	70	32	30	36
400	**GR2516XS**	**GR2516PS**	25	16	46	25.5	75	41	30	46
	GR2520XS	**GR2520PS**	25	20	48	25.5	79	41	36	46
400	**GR3020XS**	**GR3020PS**	30	20	50	26	82.5	46	36	50
	GR3025XS	**GR3025PS**	30	25	52	26.5	85.5	46	46	50
315	**GR3830XS**	**GR3830PS**	38	30	59	29.5	95	55	50	60

Assembly consists of Double bite ferrule. For soft seal ferrules, replace 'P' with 'SRD' in Part code. Example : GR1612SRDS

Standard material : Carbon Steel, For Stainless steel material, add prefix 316 - to the part code Example : 316-GR1612PS

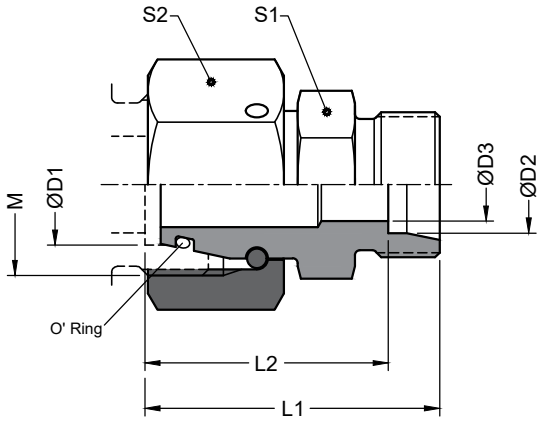
Standard surface treatment : Chrome free Alkaline Zinc Plating.

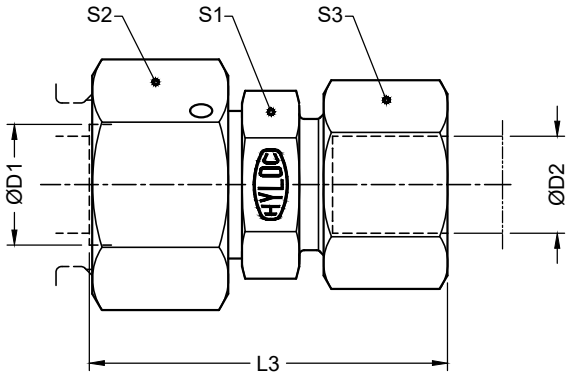
For Zinc Nickel surface treatment, add suffix - ZnNi, Example : GR1612PS-ZnNi

RED Reducing standpipes with O-Ring

24° Tube end as per ISO 8434-1

Dimensions in mm





Low Pressure Series

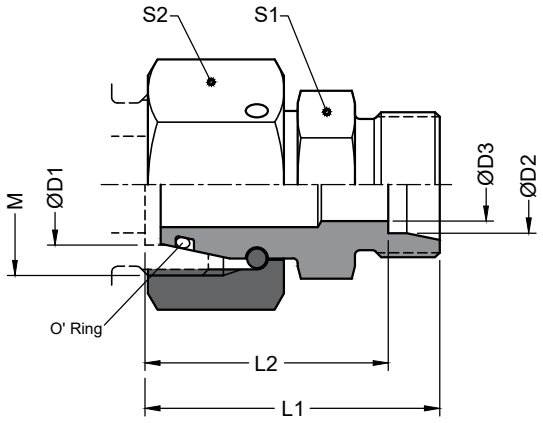
Pressure	Part No. **Body**	Part No. **Assembly**	D1 ⊕	D2 ⊕	D3	M	L1	L2	Approx. L3	S1	S2	S3	O' Ring ID x CSD
315 bar	**RED0806XL**	**RED0806PL**	08	6	4	M14x1.5	30.5	23.5	41	12	17	14	6.0 x 1.5
315 bar	**RED1006XL**	**RED1006PL**	10	6	4	M16x1.5	32	25	42.5	14	19	14	7.5 x 1.5
	RED1008XL	**RED1008PL**	10	8	6	M16x1.5	32	25	42	14	19	17	
315 bar	**RED1206XL**	**RED1206PL**	12	6	4	M18x1.5	32	25	42.5	17	22	14	9.0 x 1.5
	RED1208XL	**RED1208PL**	12	8	6	M18x1.5	32	25	42	17	22	17	
	RED1210XL	**RED1210PL**	12	10	7.5	M18x1.5	33	26	44	17	22	19	
315 bar	**RED1506XL**	**RED1506PL**	15	6	4	M22x1.5	35.5	28.5	46	19	27	14	12 x 2.0
	RED1508XL	**RED1508PL**	15	8	6	M22x1.5	35.5	28.5	45.5	19	27	17	
	RED1510XL	**RED1510PL**	15	10	8	M22x1.5	36.5	29.5	47.5	19	27	19	
	RED1512XL	**RED1512PL**	15	12	10	M22x1.5	36.5	29.5	47	19	27	22	
315 bar	**RED1806XL**	**RED1806PL**	18	6	4	M26x1.5	35	28	45.5	24	32	14	15 x 2.0
	RED1808XL	**RED1808PL**	18	8	6	M26x1.5	35	28	45	24	32	17	
	RED1810XL	**RED1810PL**	18	10	8	M26x1.5	36	29	47	24	32	19	
	RED1812XL	**RED1812PL**	18	12	10	M26x1.5	36	29	46.5	24	32	22	
	RED1815XL	**RED1815PL**	18	15	12	M26x1.5	37	30	48.5	24	32	27	
160 bar	**RED2206XL**	**RED2206PL**	22	6	4	M30x2.0	39	32	49.5	27	36	14	20 x 2.0
	RED2208XL	**RED2208PL**	22	8	6	M30x2.0	39	32	49	27	36	17	
	RED2210XL	**RED2210PL**	22	10	8	M30x2.0	40	33	51	27	36	19	
	RED2212XL	**RED2212PL**	22	12	10	M30x2.0	40	33	50.5	27	36	22	
	RED2215XL	**RED2215PL**	22	15	12	M30x2.0	41	34	52.5	27	36	27	
	RED2218XL	**RED2218PL**	22	18	15	M30x2.0	41	33.5	53	27	36	32	
160 bar	**RED2806XL**	**RED2806PL**	28	6	4	M36x2.0	41	34	51.5	32	41	14	26 x 2.0
	RED2808XL	**RED2808PL**	28	8	6	M36x2.0	41	34	51	32	41	17	
	RED2810XL	**RED2810PL**	28	10	8	M36x2.0	42	35	53	32	41	19	
	RED2812XL	**RED2812PL**	28	12	10	M36x2.0	42	35	52.5	32	41	22	
	RED2815XL	**RED2815PL**	28	15	12	M36x2.0	43	36	54.5	32	41	27	
	RED2818XL	**RED2818PL**	28	18	15	M36x2.0	43	35.5	55	32	41	32	
	RED2822XL	**RED2822PL**	28	22	19	M36x2.0	45	37.5	57.5	32	41	36	

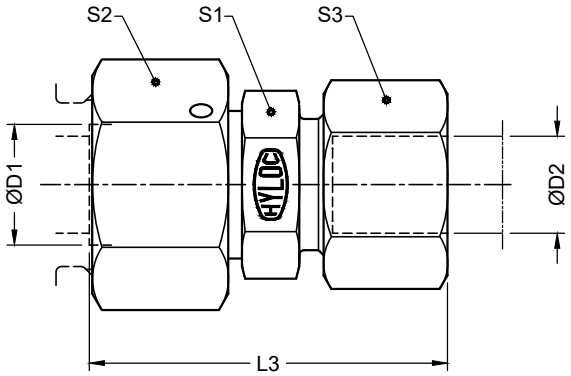
Refer next page for remaining sizes

RED Reducing standpipes with O-Ring

24° Tube end as per ISO 8434-1

Dimensions in mm





Low Pressure Series (Continued.....)

Pressure	Part No. **Body**	Part No. **Assembly**	D1 ⊕	D2 ⊕	D3	M	L1	L2	Approx. L3	S1	S2	S3	O' Ring ID x CSD
160 bar	**RED3506XL**	**RED3506PL**	35	6	4	M45 x 2.0	44	37	54.5	41	50	14	32 x 2.5
	RED3508XL	**RED3508PL**	35	8	6	M45 x 2.0	44	37	54	41	50	17	
	RED3510XL	**RED3510PL**	35	10	8	M45 x 2.0	45	38	56	41	50	19	
	RED3512XL	**RED3512PL**	35	12	10	M45 x 2.0	45	38	55.5	41	50	22	
	RED3515XL	**RED3515PL**	35	15	12	M45 x 2.0	46	39	57.5	41	50	27	
	RED3518XL	**RED3518PL**	35	18	15	M45 x 2.0	46	38.5	58	41	50	32	
	RED3522XL	**RED3522PL**	35	22	19	M45 x 2.0	48	40.5	60.5	41	50	36	
	RED3528XL	**RED3528PL**	35	28	24	M45 x 2.0	48	40.5	61.5	41	50	41	
160 bar	**RED4210XL**	**RED4210PL**	42	10	8	M52 x 2.0	48.5	41.5	59.5	50	60	19	38 x 2.5
	RED4212XL	**RED4212PL**	42	12	10	M52 x 2.0	48.5	41.5	59	50	60	22	
	RED4215XL	**RED4215PL**	42	15	12	M52 x 2.0	49.5	42.5	61	50	60	27	
	RED4218XL	**RED4218PL**	42	18	15	M52 x 2.0	49.5	42	61.5	50	60	32	
	RED4222XL	**RED4222PL**	42	22	19	M52 x 2.0	51.5	44	64	50	60	36	
	RED4228XL	**RED4228PL**	42	28	24	M52 x 2.0	51.5	44	65	50	60	41	
	RED4235XL	**RED4235PL**	42	35	30	M52 x 2.0	53.5	43	69	50	60	50	

Assembly consists of Double bite ferrule. For soft seal ferrules, replace 'P' with 'SRD' in Part code.

Example : RED1815SRDL

Standard material : Carbon Steel. For Stainless steel material, add prefix 316 - to the part code

Example : 316-RED1815PL

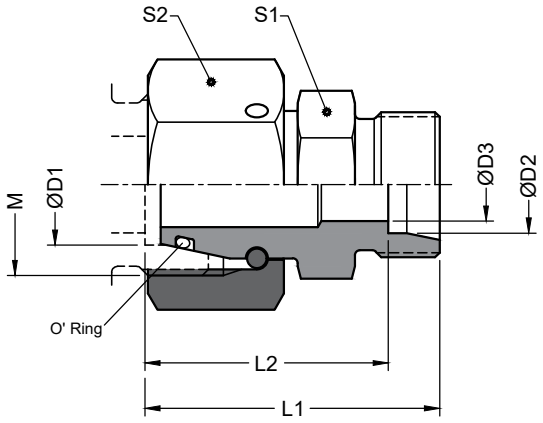
Standard surface treatment : Chrome free Alkaline Zinc Plating. For Zinc Nickel surface treatment, add suffix - ZnNi.

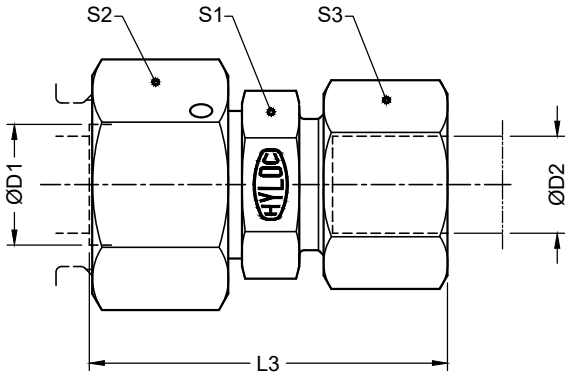
Example : RED1815PL-ZnNi

RED Reducing standpipes with O-Ring

24° Tube end as per ISO 8434-1

Dimensions in mm





High Pressure Series

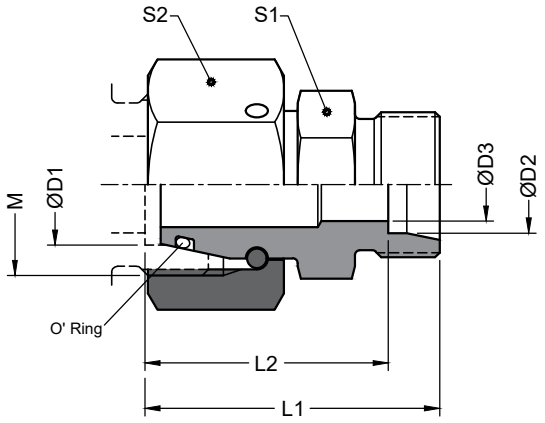
Pressure	Part No. **Body**	Part No. **Assembly**	D1	D2	D3	M	L1	L2	Approx. L3	S1	S2	S3	O' Ring ID x CSD
630 bar	**RED0806XS**	**RED0806PS**	8	6	4	M16 x 1.5	34	27	44.5	14	19	17	6.0 x 1.5
630 bar	**RED1006XS**	**RED1006PS**	10	6	4	M18 x 1.5	34.5	27.5	45	17	22	17	7.5 x 1.5
	RED1008XS	**RED1008PS**	10	8	5	M18 x 1.5	34.5	27.5	44.5	17	22	19	
630 bar	**RED1206XS**	**RED1206PS**	12	6	4	M20 x 1.5	36	29	46.5	17	24	17	9.0 x 1.5
	RED1208XS	**RED1208PS**	12	8	5	M20 x 1.5	36	29	46	17	24	19	
	RED1210XS	**RED1210PS**	12	10	7	M20 x 1.5	37	29.5	49	19	24	22	
400 bar	**RED1606XS**	**RED1606PS**	16	6	4	M24 x 1.5	39	32	49.5	22	30	17	12 x 2.0
	RED1608XS	**RED1608PS**	16	8	5	M24 x 1.5	39	32	49	22	30	19	
	RED1610XS	**RED1610PS**	16	10	7	M24 x 1.5	39	31.5	51	22	30	22	
	RED1612XS	**RED1612PS**	16	12	8	M24 x 1.5	39	31.5	50.5	22	30	24	
400 bar	**RED2006XS**	**RED2006PS**	20	6	4	M30 x 2.0	43	36	53.5	27	36	17	16.3 x 2.4
	RED2008XS	**RED2008PS**	20	8	5	M30 x 2.0	43	36	53	27	36	19	
	RED2010XS	**RED2010PS**	20	10	7	M30 x 2.0	43	35.5	55	27	36	22	
	RED2012XS	**RED2012PS**	20	12	8	M30 x 2.0	43	35.5	54.5	27	36	24	
	RED2016XS	**RED2016PS**	20	16	12	M30 x 2.0	45	36.5	58	27	36	30	

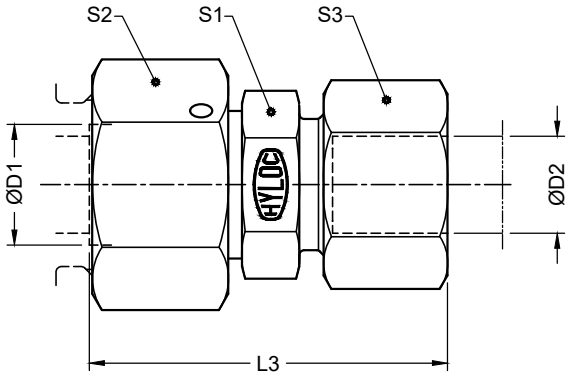
Refer next page for remaining sizes

RED Reducing standpipes with O-Ring

24° Tube end as per ISO 8434-1

Dimensions in mm





High Pressure Series (Continued.....)

Pressure	Part No. **Body**	Part No. **Assembly**	D1 ⊕	D2 ⊕	D3	M	L1	L2	Approx. L3	S1	S2	S3	O' Ring ID x CSD
400 bar	**RED2506XS**	**RED2506PS**	25	6	4	M36 x 2.0	45.5	38.5	56	32	46	17	20.3 x 2.4
	RED2508XS	**RED2508PS**	25	8	5	M36 x 2.0	45.5	38.5	55.5	32	46	19	
	RED2510XS	**RED2510PS**	25	10	7	M36 x 2.0	45.5	38	57.5	32	46	22	
	RED2512XS	**RED2512PS**	25	12	8	M36 x 2.0	45.5	38	57	32	46	24	
	RED2516XS	**RED2516PS**	25	16	12	M36 x 2.0	47.5	39	60.5	32	46	30	
	RED2520XS	**RED2520PS**	25	20	16	M36 x 2.0	49.5	39	64.5	32	46	36	
400 bar	**RED3006XS**	**RED3006PS**	30	6	4	M42 x 2.0	51	44	61.5	41	50	17	25.3 x 2.4
	RED3008XS	**RED3008PS**	30	8	5	M42 x 2.0	51	44	61	41	50	19	
	RED3010XS	**RED3010PS**	30	10	7	M42 x 2.0	51	43.5	63	41	50	22	
	RED3012XS	**RED3012PS**	30	12	8	M42 x 2.0	51	43.5	62.5	41	50	24	
	RED3016XS	**RED3016PS**	30	16	12	M42 x 2.0	53	44.5	66	41	50	30	
	RED3020XS	**RED3020PS**	30	20	16	M42 x 2.0	55	44.5	70	41	50	36	
	RED3025XS	**RED3025PS**	30	25	20	M42 x 2.0	57	45	73	41	50	46	
315 bar	**RED3810XS**	**RED3810PS**	38	10	7	M52 x 2.0	54.5	47	66.5	.50	60	22	33.3 x 2.4
	RED3812XS	**RED3812PS**	38	12	8	M52 x 2.0	54.5	47	66	50	60	24	
	RED3816XS	**RED3816PS**	38	16	12	M52 x 2.0	56.5	48	69.5	50	60	30	
	RED3820XS	**RED3820PS**	38	20	16	M52 x 2.0	58.5	48	73.5	50	60	36	
	RED3825XS	**RED3825PS**	38	25	20	M52 x 2.0	60.5	48.5	76.5	50	60	46	
	RED3830XS	**RED3830PS**	38	30	25	M52 x 2.0	62.5	49	80	50	60	50	

Assembly consists of Double bite ferrule. For soft seal ferrules, replace 'P' with 'SRD' in Part code.

Example : RED3020SRDS

Standard material : Carbon Steel. For Stainless steel material, add prefix 316 - to the part code

Example : 316-RED3020PS

Standard surface treatment : Chrome free Alkaline Zinc Plating. For Zinc Nickel surface treatment, add suffix - ZnNi.

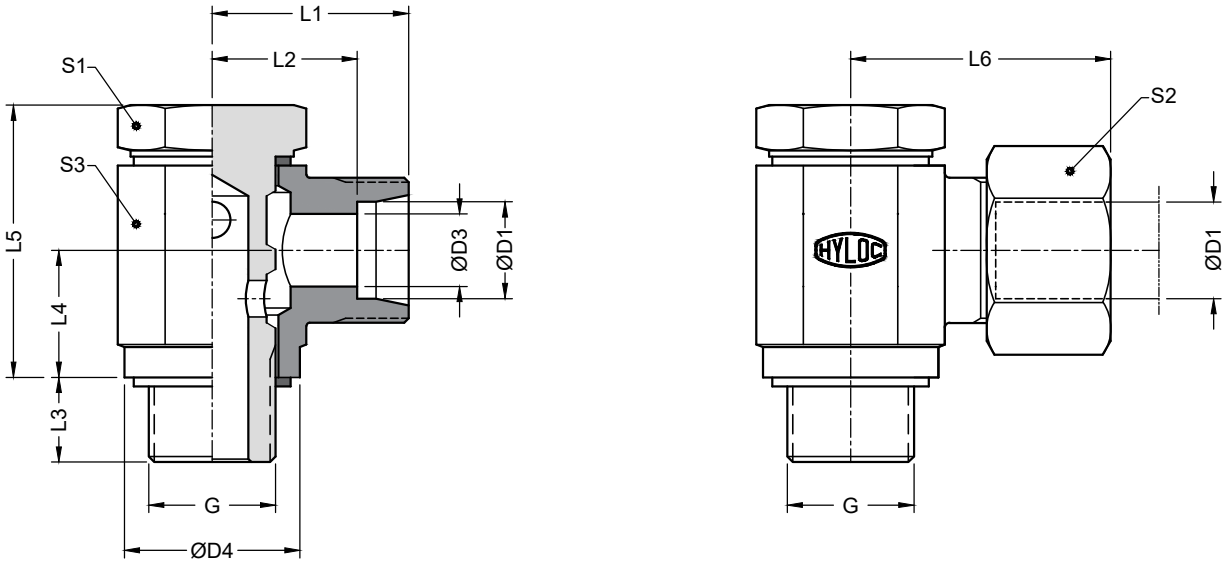
Example : RED3020PS-ZnNi

HSWV-G Banjo Couplings

24° Tube end as per ISO 8434-1

Stud end - Male BSPP (G) threads

Dimensions in mm



Series	Part No. **Body**	Part No. **Assembly**	D1 ⊕	D3	G Male BSPP thread	D4	L1	L2	L3	L4	L5	Approx. L6	S1	S2	S3
L	**HSWV06XLG**	**HSWV06PLG**	06	4	G 1/8 A	15	19.5	12.5	8	12	28	30	19	14	19
Light	**HSWV08XLG**	**HSWV08PLG**	08	6	G 1/4 A	20	21	14	12	15	33	31	19	17	22
250 bar	**HSWV10XLG**	**HSWV10PLG**	10	8	G 1/4 A	20	22	15	12	15	33	33	19	19	22
	HSWV12XLG	**HSWV12PLG**	12	10	G 3/8 A	24	24.5	17.5	12	18	40	35	22	22	27
	HSWV15XLG	**HSWV15PLG**	15	12	G 1/2 A	29	30	23	14	21	45	41.5	27	27	32
100 bar	**HSWV18XLG**	**HSWV18PLG**	18	15	G 1/2 A	29	27	19.5	14	21	45	39	27	32	32
	HSWV22XLG	**HSWV22PLG**	22	19	G 3/4 A	35	34.5	27	16	24	53	47	32	36	41
100 bar	**HSWV28XLG**	**HSWV28PLG**	28	24	G 1 A	43	43	29.5	18	29.5	63.5	56.5	41	41	46
	HSWV35XLG	**HSWV35PLG**	35	30	G1.1/4 A	53	45.5	35	20	33	74	61	50	50	55 *
	HSWV42XLG	**HSWV42PLG**	42	36	G1.1/2 A	59	51	40	22	38.5	83	66.5	60	60	70 *
S	**HSWV06XSG**	**HSWV06PSG**	06	4	G 1/4 A	20	23	16	12	15	33	33.5	19	17	22
Heavy	**HSWV08XSG**	**HSWV08PSG**	08	5	G 1/4 A	20	23	16	12	15	33	33	19	19	22
400 bar	**HSWV10XSG**	**HSWV10PSG**	10	7	G 3/8 A	24	25.5	18	12	18	40	37.5	22	22	27
	HSWV12XSG	**HSWV12PSG**	12	8	G 3/8 A	24	25.5	18	12	18	40	37	22	24	27
400 bar	**HSWV16XSG**	**HSWV16PSG**	16	12	G 1/2 A	29	30	21.5	14	21	45	43	27	30	32
	HSWV20XSG	**HSWV20PSG**	20	16	G 3/4 A	35	38.5	28	16	24	53	53.5	32	36	41
	HSWV25XSG	**HSWV25PSG**	25	20	G1 A	43	43	31	18	29.5	63.5	59	41	46	46
250 bar	**HSWV30XSG**	**HSWV30PSG**	30	25	G1.1/4 A	53	50	36.5	20	33	74	67.5	50	50	60 *
	HSWV38XSG	**HSWV38PSG**	38	32	G1.1/2 A	59	57	41	22	38.5	83	75.5	60	60	70 *

* Body machined from flat

Assembly consists of Double bite ferrule.

For soft seal ferrules, replace 'P' with 'SRD' in Part code. Example : HSWV16SRDSG

Standard material : Carbon Steel

For Stainless steel material, add prefix 316 - to the part code

Example : 316-HSWV16PSG

Standard surface treatment : Chrome free Alkaline Zinc Plating.

For Zinc Nickel surface treatment, add suffix - ZnNi

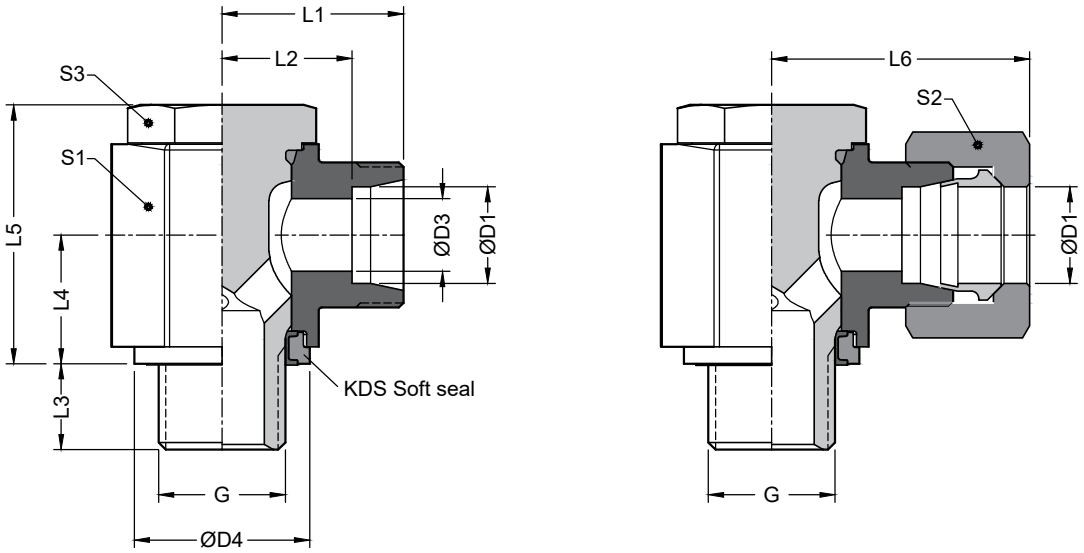
Example : HSWV16PSG-ZnNi

WH-GE Banjo Elbow

24° Tube end as per ISO 8434-1

Stud end - Male BSPP (G) threads

Dimensions in mm



Series	Part No. **Body**	Part No. **Assembly**	D1 ⊕	D3	G Male BSPP thread	D4	L1	L2	L3	L4	L5	Approx. L6	S1	S2	S3
L	**WH06XLGE**	**WH06PLGE**	06	4	G 1/8 A	14.9	20	13	8	10	21	30.5	19	14	14
Light	**WH06XLG02E**	**WH06PLG02E**	06	4	G 1/4 A	18.9	22	15	12	13.5	27	32.5	22	14	19
350 bar	**WH08XLGE**	**WH08PLGE**	08	6	G 1/4 A	18.9	21	14	12	13.5	27	31	22	17	19
	WH10XLGE	**WH10PLGE**	10	8	G 1/4 A	18.9	22	15	12	13.5	27	33	22	19	19
	WH12XLG02E	**WH12PLG02E**	12	10	G 1/4 A	18.9	22	15	10	15.5	30	32.5	22	22	19
	WH12XLGE	**WH12PLGE**	12	10	G 3/8 A	21.9	24.5	17.5	12	16	32.5	35	27	22	22
	WH15XLGE	**WH15PLGE**	15	12	G 1/2 A	26.9	28	21	14	19.5	43	39.5	32	27	27
	WH18XLGE	**WH18PLGE**	18	15	G 1/2 A	26.9	28	20.5	14	21.5	43	40	32	32	27
160 bar	**WH22XLGE**	**WH22PLGE**	22	19	G 3/4 A	32.9	34.5	27	16	24	48	47	41	36	32
	WH28XLGE	**WH28PLGE**	28	24	G 1 A	39.9	39	31.5	18	30.5	59	52.5	46	41	41
	WH35XLGE	**WH35PLGE**	35	30	G1.1/4 A	49.9	46	35.5	20	35.5	70	61.5	55	50	50 *
	WH42XLGE	**WH42PLGE**	42	36	G1.1/2 A	55.9	51	40	22	40.5	80	66.5	65	60	55 *
S	**WH06XSGE**	**WH06PSGE**	06	4	G 1/4 A	18.9	23	16	12	13.5	27	33.5	22	17	19
Heavy	**WH08XSGE**	**WH08PSGE**	08	5	G 1/4 A	18.9	23	16	12	13.5	27	33	22	19	19
350bar	**WH10XSGE**	**WH10PSGE**	10	7	G 3/8 A	21.9	25.5	18	12	16	32.5	37.5	27	22	22
	WH12XSGE	**WH12PSGE**	12	8	G 3/8 A	21.9	25.5	18	12	16	32.5	37	27	24	22
	WH16XSGE	**WH16PSGE**	16	12	G 1/2 A	26.9	30	21.5	14	21.5	43	43	32	30	27
	WH20XSGE	**WH20PSGE**	20	16	G 3/4 A	32.9	36.5	26	16	24	48	51.5	41	36	32
250 bar	**WH25XSGE**	**WH25PSGE**	25	20	G1 A	39.9	43	31	18	30.5	59	59	50	46	41
	WH30XSGE	**WH30PSGE**	30	25	G1.1/4 A	49.9	50	36.5	20	35.5	70	67.5	55	50	50 *
	WH38XSGE	**WH38PSGE**	38	32	G1.1/2 A	55.9	57	41	22	40.5	80	75.5	65	60	55 *

Assembly consists of Double bite ferrule.

For soft seal ferrules, replace 'P' with 'SRD' in Part code. Example : WH16SRDSGE

* Body machined from flat

Standard material : Carbon Steel

For Stainless steel material, add prefix 316 - to the part code

Example : 316-WH16PSGE

Standard surface treatment : Chrome free Alkaline Zinc Plating.

For Zinc Nickel surface treatment, add suffix - ZnNi

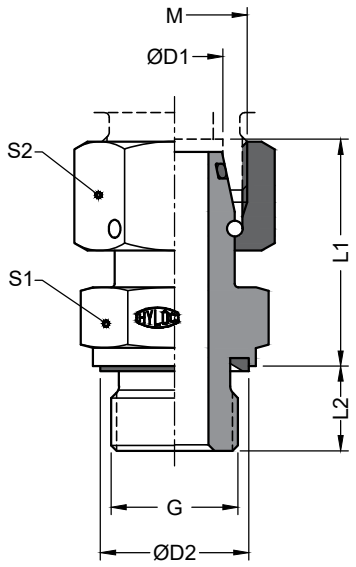
Example : WH16PSGE-ZnNi

EGE-GE Straight Stud Standpipes

Metric standpipe with Swivel Coupling Nut.

Male BSPP (G) threads as per
DIN 3852, Part 11 with Elastomeric seal

Dimensions in mm



Series	Part No. **Assembly**	D1 ⊕	G Male BSPP thread	D2	M	L1	L2	S1	S2	O Ring ID x CSD
L	**EGE06LGE**	06	G 1/8 A	14	M12 x 1.5	24.5	8	14	14	4.0 x 1.5
Light	**EGE08LGE**	08	G 1/4 A	19	M14 x 1.5	29.5	12	19	17	6.0 x 1.5
315 bar	**EGE10LGE**	10	G 1/4 A	19	M16 x 1.5	27.5	12	19	19	7.5 x 1.5
	EGE12LGE	12	G 3/8 A	22	M18 x 1.5	34	12	22	22	9.0 x 1.5
	EGE15LGE	15	G 1/2 A	27	M22 x 1.5	32	14	27	27	12.0 x 2.0
	EGE18LGE	18	G 1/2 A	27	M26 x 1.5	31.5	14	27	32	15.0 x 2.0
160 bar	**EGE22LGE**	22	G 3/4 A	32	M30 x 2.0	32.5	16	32	36	20.0 x 2.0
	EGE28LGE	28	G 1 A	40	M36 x 2.0	35	18	41	41	26.0 x 2.0
	EGE35LGE	35	G1.1/4 A	50	M45 x 2.0	42.5	20	50	50	32.0 x 2.5
	EGE42LGE	42	G1.1/2 A	55	M52 x 2.0	46.5	22	55	60	38.0 x 2.5
S	**EGE06SGE**	06	G 1/4 A	19	M14 x 1.5	27	12	19	17	4.0 x 1.5
Heavy	**EGE08SGE**	08	G 1/4 A	19	M16 x 1.5	29.5	12	19	19	6.0 x 1.5
630 bar	**EGE10SGE**	10	G 3/8 A	22	M18 x 1.5	32	12	22	22	7.5 x 1.5
	EGE12SGE	12	G 3/8 A	22	M20 x 1.5	34	12	22	24	9.0 x 1.5
400 bar	**EGE16SGE**	16	G 1/2 A	27	M24 x 1.5	37	14	27	30	12.0 x 2.0
	EGE20SGE	20	G 3/4 A	32	M30 x 2.0	43	16	32	36	16.3 x 2.4
	EGE25SGE	25	G1 A	40	M36 x 2.0	48	18	41	46	20.3 x 2.4
	EGE30SGE	30	G1.1/4 A	50	M42 x 2.0	51	20	50	50	25.3 x 2.4
315 bar	**EGE38SGE**	38	G1.1/2 A	55	M52 x 2.0	60	22	55	60	33.3 x 2.4

Standard material : Carbon Steel

For Stainless steel material, add prefix 316 - to the part code

Example : 316-EGE16SGE

Standard surface treatment : Chrome free Alkaline Zinc Plating.

For Zinc Nickel surface treatment, add suffix - ZnNi

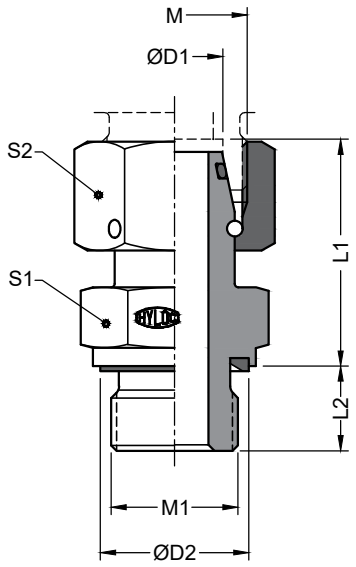
Example : EGE16SGE-ZnNi

EGE-ME Straight Stud Standpipes

Metric standpipe with Swivel Coupling Nut.

Male Metric (M) threads as per
DIN 3852, Part 11 / ISO 9974 Form E
with Elastomeric seal

Dimensions in mm



Series	Part No. **Assembly**	D1 ⊕	M1 Male Metric thread	D2	M	L1	L2	S1	S2	O Ring ID x CSD
L	**EGE06LME**	06	M10 x 1.0	14	M12 x 1.5	24.5	8	14	14	4.0 x 1.5
Light	**EGE08LME**	08	M12 x 1.5	17	M14 x 1.5	26.5	12	17	17	6.0 x 1.5
315 bar	**EGE10LME**	10	M14 x 1.5	19	M16 x 1.5	27.5	12	19	19	7.5 x 1.5
	EGE12LME	12	M16 x 1.5	22	M18 x 1.5	30.5	12	22	22	9.0 x 1.5
	EGE15LME	15	M18 x 1.5	24	M22 x 1.5	31.5	12	24	27	12.0 x 2.0
	EGE18LME	18	M22 x 1.5	27	M26 x 1.5	31.5	14	27	32	15.0 x 2.0
160 bar	**EGE22LME**	22	M26 x 1.5	32	M30 x 2.0	32.5	16	32	36	20.0 x 2.0
	EGE28LME	28	M33 x 2.0	40	M36 x 2.0	35	18	41	41	26.0 x 2.0
	EGE35LME	35	M42 x 2.0	50	M45 x 2.0	42.5	20	50	50	32.0 x 2.5
	EGE42LME	42	M48 x 2.0	55	M52 x 2.0	46.5	22	55	60	38.0 x 2.5
S	**EGE06SME**	06	M12 x 1.5	17	M14 x 1.5	27	12	17	17	4.0 x 1.5
Heavy	**EGE08SME**	08	M14 x 1.5	19	M16 x 1.5	29.5	12	19	19	6.0 x 1.5
630 bar	**EGE10SME**	10	M16 x 1.5	22	M18 x 1.5	32	12	22	22	7.5 x 1.5
	EGE12SME	12	M18 x 1.5	24	M20 x 1.5	34	12	24	24	9.0 x 1.5
400 bar	**EGE16SME**	16	M22 x 1.5	27	M24 x 1.5	37	14	27	30	12.0 x 2.0
	EGE20SME	20	M27 x 2.0	32	M30 x 2.0	43	16	32	36	16.3 x 2.4
	EGE25SME	25	M33 x 2.0	40	M36 x 2.0	48	18	41	46	20.3 x 2.4
	EGE30SME	30	M42 x 2.0	50	M42 x 2.0	51	20	50	50	25.3 x 2.4
315 bar	**EGE38SME**	38	M48 x 2.0	55	M52 x 2.0	60	22	55	60	33.3 x 2.4

Standard material : Carbon Steel

For Stainless steel material, add prefix 316 - to the part code

Example : 316-EGE16SME

Standard surface treatment : Chrome free Alkaline Zinc Plating.

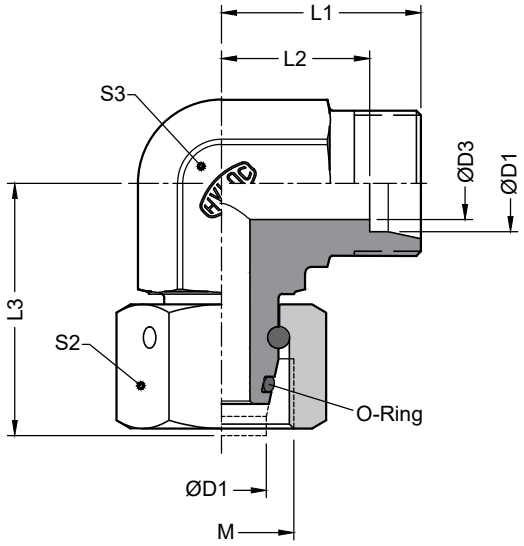
For Zinc Nickel surface treatment, add suffix - ZnNi

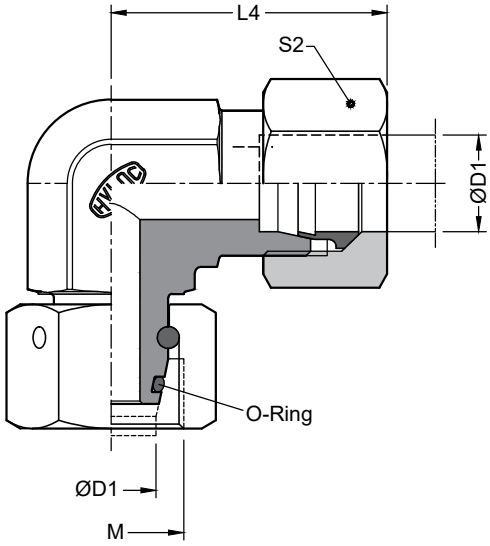
Example : EGE16SME-ZnNi

EW Swivel Elbow Couplings with O-Ring

24° Tube end as per ISO 8434-1

Dimensions in mm





Series	Part No. **Body**	Part No. **Assembly**	D1 ⊕	D3	M	L1	L2	L3	Approx. L4	S2	S3	O Ring ID x CSD
L	**EW06XL**	**EW06PL**	06	4	M12 x 1.5	19	12	26	29.5	14	12	4.0 x 1.5
Light	**EW08XL**	**EW08PL**	08	6	M14 x 1.5	21	14	27.5	31	17	12	6.0 x 1.5
315 bar	**EW10XL**	**EW10PL**	10	8	M16 x 1.5	22	15	29	33	19	14	7.5 x 1.5
	EW12XL	**EW12PL**	12	10	M18 x 1.5	24	17	29.5	34.5	22	17	9.0 x 1.5
	EW15XL	**EW15PL**	15	12	M22 x 1.5	28	21	32.5	39.5	27	19	12.0 x 2.0
	EW18XL	**EW18PL**	18	15	M26 x 1.5	31	23.5	35.5	43	32	24	15.0 x 2.0
160 bar	**EW22XL**	**EW22PL**	22	19	M30 x 2.0	35	27.5	38.5	47.5	36	27	20.0 x 2.0
	EW28XL	**EW28PL**	28	24	M36 x 2.0	38	30.5	41.5	51.5	41	36	26.0 x 2.0
	EW35XL	**EW35PL**	35	30	M45 x 2.0	45	34.5	51	60.5	50	41	32.0 x 2.5
	EW42XL	**EW42PL**	42	36	M52 x 2.0	51	40	56	66.5	60	50	38.0 x 2.5
S	**EW06XS**	**EW06PS**	06	4	M14 x 1.5	23	16	27	33.5	17	12	4.0 x 1.5
Heavy	**EW08XS**	**EW08PS**	08	5	M16 x 1.5	24	17	27.5	34	19	14	6.0 x 1.5
630 bar	**EW10XS**	**EW10PS**	10	7	M18 x 1.5	25	17.5	30	37	22	17	7.5 x 1.5
	EW12XS	**EW12PS**	12	8	M20 x 1.5	29	21.5	31	40.5	24	17	9.0 x 1.5
400 bar	**EW16XS**	**EW16PS**	16	12	M24 x 1.5	33	24.5	36.5	46	30	24	12.0 x 2.0
	EW20XS	**EW20PS**	20	16	M30 x 2.0	37	26.5	44.5	52	36	27	16.3 x 2.4
	EW25XS	**EW25PS**	25	20	M36 x 2.0	42	30	50	58	46	36	20.3 x 2.4
	EW30XS	**EW30PS**	30	25	M42 x 2.0	49	35.5	55	66.5	50	41	25.3 x 2.4
315 bar	**EW38XS**	**EW38PS**	38	32	M52 x 2.0	57	41	63	75.5	60	50	33.3 x 2.4

Assembly consists of Double bite ferrule.

For soft seal ferrules, replace 'P' with 'SRD' in Part code. Example : EW16SRDS

Standard material : Carbon Steel

For Stainless steel material, add prefix 316 - to the part code

Example : 316-EW16PS

Standard surface treatment : Chrome free Alkaline Zinc Plating.

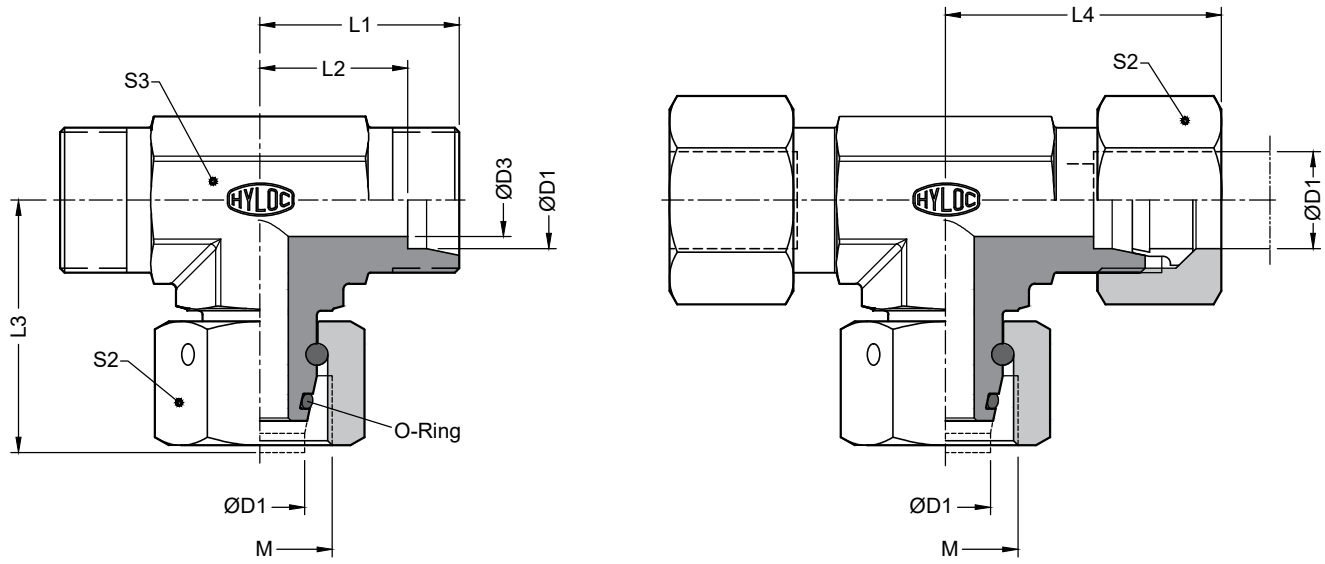
For Zinc Nickel surface treatment, add suffix - ZnNi

Example : EW16PS-ZnNi

ET Swivel Branch Tee Couplings with O-Ring

24° Tube end as per ISO 8434-1

Dimensions in mm



Series	Part No. **Body**	Part No. **Assembly**	D1 ⊕	D3	M	L1	L2	L3	Approx. L4	S2	S3	O Ring ID x CSD
L	**ET06XL**	**ET06PL**	06	4	M12 x 1.5	19	12	26	29.5	14	12	4.0 x 1.5
Light	**ET08XL**	**ET08PL**	08	6	M14 x 1.5	21	14	27.5	31	17	12	6.0 x 1.5
315 bar	**ET10XL**	**ET10PL**	10	8	M16 x 1.5	22	15	29	33	19	14	7.5 x 1.5
	ET12XL	**ET12PL**	12	10	M18 x 1.5	24	17	29.5	34.5	22	17	9.0 x 1.5
	ET15XL	**ET15PL**	15	12	M22 x 1.5	28	21	32.5	39.5	27	19	12.0 x 2.0
	ET18XL	**ET18PL**	18	15	M26 x 1.5	31	23.5	35.5	43	32	24	15.0 x 2.0
160 bar	**ET22XL**	**ET22PL**	22	19	M30 x 2.0	35	27.5	38.5	47.5	36	27	20.0 x 2.0
	ET28XL	**ET28PL**	28	24	M36 x 2.0	38	30.5	41.5	51.5	41	36	26.0 x 2.0
	ET35XL	**ET35PL**	35	30	M45 x 2.0	45	34.5	51	60.5	50	41	32.0 x 2.5
	ET42XL	**ET42PL**	42	36	M52 x 2.0	51	40	56	66.5	60	50	38.0 x 2.5
S	**ET06XS**	**ET06PS**	06	4	M14 x 1.5	23	16	27	33.5	17	12	4.0 x 1.5
Heavy	**ET08XS**	**ET08PS**	08	5	M16 x 1.5	24	17	27.5	34	19	14	6.0 x 1.5
630 bar	**ET10XS**	**ET10PS**	10	7	M18 x 1.5	25	17.5	30	37	22	17	7.5 x 1.5
	ET12XS	**ET12PS**	12	8	M20 x 1.5	29	21.5	31	40.5	24	17	9.0 x 1.5
400 bar	**ET16XS**	**ET16PS**	16	12	M24 x 1.5	33	24.5	36.5	46	30	24	12.0 x 2.0
	ET20XS	**ET20PS**	20	16	M30 x 2.0	37	26.5	44.5	52	36	27	16.3 x 2.4
	ET25XS	**ET25PS**	25	20	M36 x 2.0	42	30	50	58	46	36	20.3 x 2.4
	ET30XS	**ET30PS**	30	25	M42 x 2.0	49	35.5	55	66.5	50	41	25.3 x 2.4
315 bar	**ET38XS**	**ET38PS**	38	32	M52 x 2.0	57	41	63	75.5	60	50	33.3 x 2.4

Assembly consists of Double bite ferrule.

For soft seal ferrules, replace 'P' with 'SRD' in Part code. Example : ET16SRDS

Standard material : Carbon Steel

For Stainless steel material, add prefix 316 - to the part code

Example : 316-ET16PS

Standard surface treatment : Chrome free Alkaline Zinc Plating.

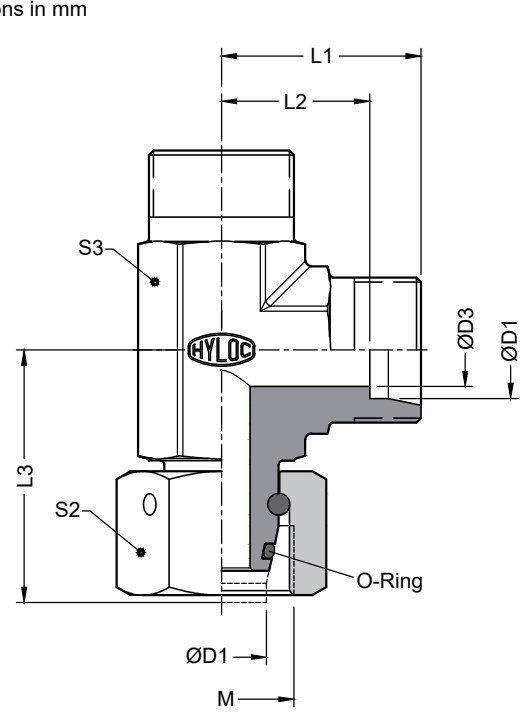
For Zinc Nickel surface treatment, add suffix - ZnNi

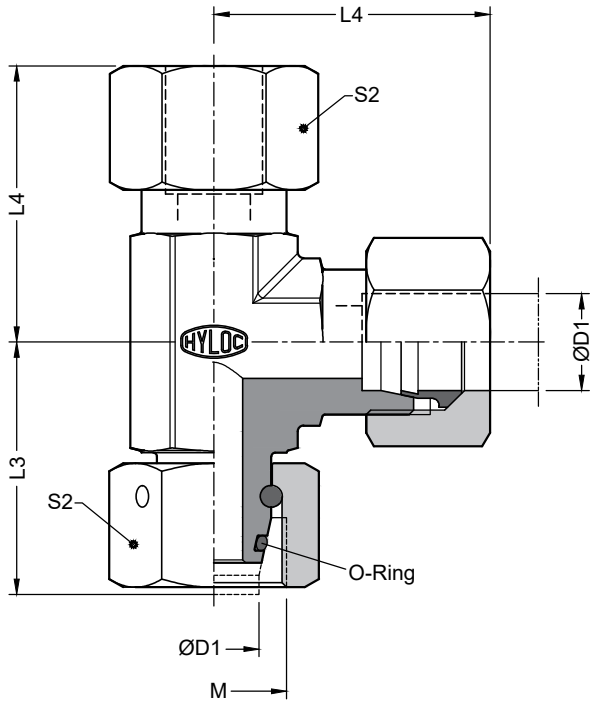
Example : ET16PS-ZnNi

EL Swivel Barrel Tee Couplings with O-Ring

24° Tube end as per ISO 8434-1

Dimensions in mm





Series	Part No. **Body**	Part No. **Assembly**	D1 ⊕	D3	M	L1	L2	L3	Approx. L4	S2	S3	O Ring ID x CSD
L	**EL06XL**	**EL06PL**	06	4	M12 x 1.5	19	12	26	29.5	14	12	4.0 x 1.5
Light	**EL08XL**	**EL08PL**	08	6	M14 x 1.5	21	14	27.5	31	17	12	6.0 x 1.5
315 bar	**EL10XL**	**EL10PL**	10	8	M16 x 1.5	22	15	29	33	19	14	7.5 x 1.5
	EL12XL	**EL12PL**	12	10	M18 x 1.5	24	17	29.5	34.5	22	17	9.0 x 1.5
	EL15XL	**EL15PL**	15	12	M22 x 1.5	28	21	32.5	39.5	27	19	12.0 x 2.0
	EL18XL	**EL18PL**	18	15	M26 x 1.5	31	23.5	35.5	43	32	24	15.0 x 2.0
160 bar	**EL22XL**	**EL22PL**	22	19	M30 x 2.0	35	27.5	38.5	47.5	36	27	20.0 x 2.0
	EL28XL	**EL28PL**	28	24	M36 x 2.0	38	30.5	41.5	51.5	41	36	26.0 x 2.0
	EL35XL	**EL35PL**	35	30	M45 x 2.0	45	34.5	51	60.5	50	41	32.0 x 2.5
	EL42XL	**EL42PL**	42	36	M52 x 2.0	51	40	56	66.5	60	50	38.0 x 2.5
S	**EL06XS**	**EL06PS**	06	4	M14 x 1.5	23	16	27	33.5	17	12	4.0 x 1.5
Heavy	**EL08XS**	**EL08PS**	08	5	M16 x 1.5	24	17	27.5	34	19	14	6.0 x 1.5
630 bar	**EL10XS**	**EL10PS**	10	7	M18 x 1.5	25	17.5	30	37	22	17	7.5 x 1.5
	EL12XS	**EL12PS**	12	8	M20 x 1.5	29	21.5	31	40.5	24	17	9.0 x 1.5
400 bar	**EL16XS**	**EL16PS**	16	12	M24 x 1.5	33	24.5	36.5	46	30	24	12.0 x 2.0
	EL20XS	**EL20PS**	20	16	M30 x 2.0	37	26.5	44.5	52	36	27	16.3 x 2.4
	EL25XS	**EL25PS**	25	20	M36 x 2.0	42	30	50	58	46	36	20.3 x 2.4
	EL30XS	**EL30PS**	30	25	M42 x 2.0	49	35.5	55	66.5	50	41	25.3 x 2.4
315 bar	**EL38XS**	**EL38PS**	38	32	M52 x 2.0	57	41	63	75.5	60	50	33.3 x 2.4

Assembly consists of Double bite ferrule.

For soft seal ferrules, replace 'P' with 'SRD' in Part code. Example : EL16SRDS

Standard material : Carbon Steel

For Stainless steel material, add prefix 316 - to the part code

Example : 316-EL16PS

Standard surface treatment : Chrome free Alkaline Zinc Plating.

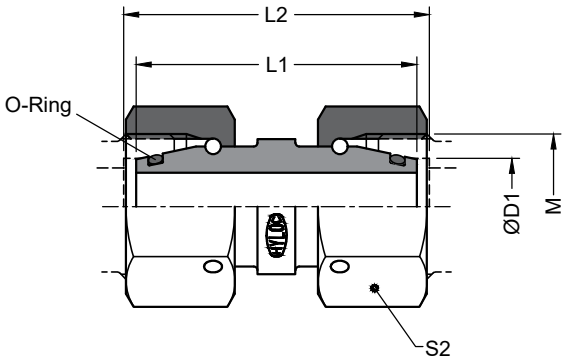
For Zinc Nickel surface treatment, add suffix - ZnNi

Example : EL16PS-ZnNi

GZ Straight Swivel Union

Union with Swivel Coupling Nut.
Can be directly connected to 24º Tube end as per ISO 8434-1

Dimensions in mm



Series	Part No. **Assembly**	D1 ⊕	M	L1	L2	S2	O Ring ID x CSD
L	**GZ06L**	06	M12 x 1.5	34.0	38.0	14	4.0 x 1.5
Light	**GZ08L**	08	M14 x 1.5	34.0	38.0	17	6.0 x 1.5
315 bar	**GZ10L**	10	M16 x 1.5	36.0	39.0	19	7.5 x 1.5
	GZ12L	12	M18 x 1.5	36.0	39.0	22	9.0 x 1.5
	GZ15L	15	M22 x 1.5	39.0	42.0	27	12.0 x 2.0
	GZ18L	18	M26 x 1.5	40.5	44.5	32	15.0 x 2.0
160 bar	**GZ22L**	22	M30 x 2.0	45.0	48.0	36	20.0 x 2.0
	GZ28L	28	M36 x 2.0	47.0	51.0	41	26.0 x 2.0
	GZ35L	35	M45 x 2.0	53.0	59.0	50	32.0 x 2.5
	GZ42L	42	M52 x 2.0	53.0	60.0	60	38.0 x 2.5
S	**GZ06S**	06	M14 x 1.5	37.0	41.0	17	4.0 x 1.5
Heavy	**GZ08S**	08	M16 x 1.5	37.0	41.0	19	6.0 x 1.5
630 bar	**GZ10S**	10	M18 x 1.5	41.0	45.0	22	7.5 x 1.5
	GZ12S	12	M20 x 1.5	42.0	46.0	24	9.0 x 1.5
400 bar	**GZ16S**	16	M24 x 1.5	46.0	51.0	30	12.0 x 2.0
	GZ20S	20	M30 x 2.0	55.0	60.0	36	16.3 x 2.4
	GZ25S	25	M36 x 2.0	58.0	67.0	46	20.3 x 2.4
	GZ30S	30	M42 x 2.0	62.0	73.0	50	25.3 x 2.4
315 bar	**GZ38S**	38	M52 x 2.0	67.0	84.0	60	33.3 x 2.4

Standard material : Carbon Steel

For Stainless steel material, add prefix 316 - to the part code

Example : 316-GZ16S

Standard surface treatment : Chrome free Alkaline Zinc Plating.

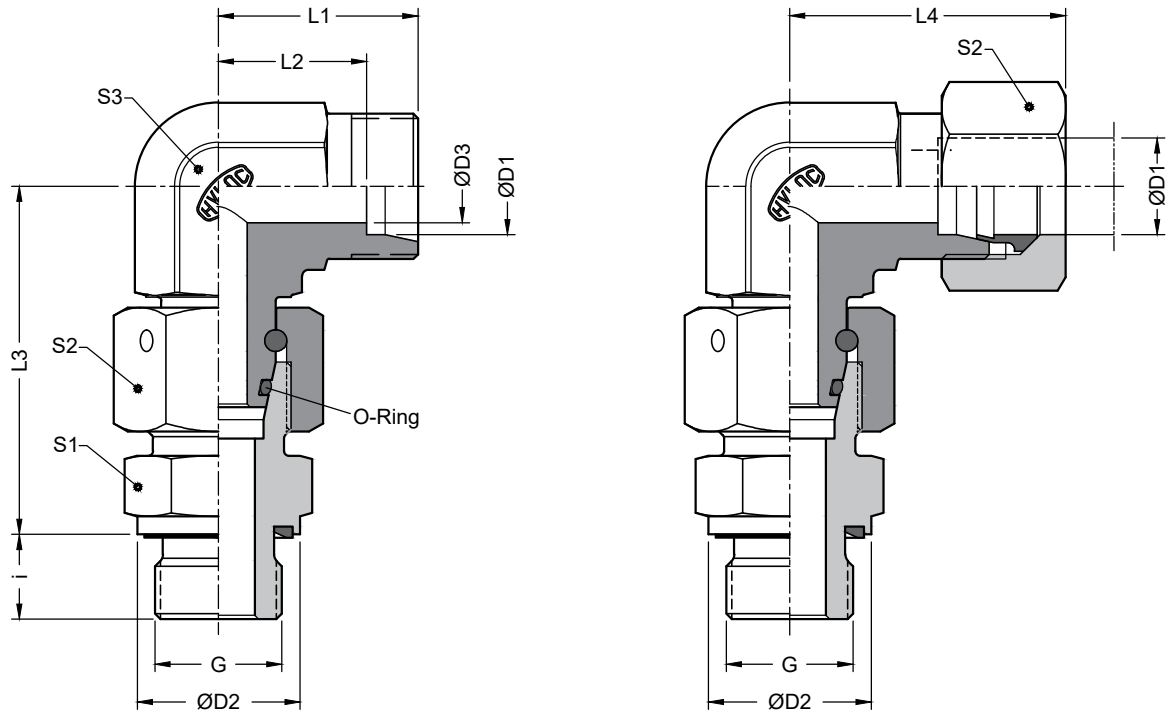
For Zinc Nickel surface treatment, add suffix - ZnNi

Example : GZ16S-ZnNi

EW-GE Swivel Stud Elbow Couplings with O-Ring

24° Tube end as per ISO 8434-1

Dimensions in mm



Series	Part No. **Body**	Part No. **Assembly**	D1 ⊕	G Male BSPP thread	i	ØD2	ØD3	L1	L2	L3	Approx. L4	S1	S2	S3
L	**EW06XLGE**	**EW06PLGE**	06	G 1/8 A	8	14	4	19	12	34.5	29.5	14	14	12
Light	**EW08XLGE**	**EW08PLGE**	08	G 1/4 A	12	19	6	21	14	37.5	31	19	17	12
315 bar	**EW10XLGE**	**EW10PLGE**	10	G 1/4 A	12	19	8	22	15	40.0	33	19	19	14
	EW12XLGE	**EW12PLGE**	12	G 3/8 A	12	22	10	24	17	42.0	34.5	22	22	17
	EW15XLGE	**EW15PLGE**	15	G 1/2 A	14	27	12	28	21	46.5	39.5	27	27	19
	EW18XLGE	**EW18PLGE**	18	G 1/2 A	14	27	15	31	23.5	50.0	43	27	32	24
160 bar	**EW22XLGE**	**EW22PLGE**	22	G 3/4 A	16	32	19	35	27.5	55.0	47.5	32	36	27
	EW28XLGE	**EW28PLGE**	28	G 1 A	18	40	24	38	30.5	59.0	51.5	41	41	36
	EW35XLGE	**EW35PLGE**	35	G1.1/4 A	20	50	30	45	34.5	68.5	60.5	50	50	41
	EW42XLGE	**EW42PLGE**	42	G1.1/2 A	22	55	36	51	40	75.0	66.5	55	60	50
S	**EW06XSGE**	**EW06PSGE**	06	G 1/4 A	12	19	4	23	16	40.0	33.5	19	17	12
Heavy	**EW08XSGE**	**EW08PSGE**	08	G 1/4 A	12	19	5	24	17	42.5	34	19	19	14
630 bar	**EW10XSGE**	**EW10PSGE**	10	G 3/8 A	12	22	7	25	17.5	45.0	37	22	22	17
	EW12XSGE	**EW12PSGE**	12	G 3/8 A	12	22	8	29	21.5	48.0	40.5	22	24	17
400 bar	**EW16XSGE**	**EW16PSGE**	16	G 1/2 A	14	27	12	33	24.5	55.0	46	27	30	24
	EW20XSGE	**EW20PSGE**	20	G 3/4 A	16	32	16	37	26.5	65.0	52	32	36	27
	EW25XSGE	**EW25PSGE**	25	G1 A	18	40	20	42	30	73.0	58	41	46	36
	EW30XSGE	**EW30PSGE**	30	G1.1/4 A	20	50	25	49	35.5	78.5	66.5	50	50	41
315 bar	**EW38XSGE**	**EW38PSGE**	38	G1.1/2 A	22	55	32	57	41	89.0	75.5	55	60	50

Assembly consists of Double bite ferrule.

For soft seal ferrules, replace 'P' with 'SRD' in Part code. Example : EW16SRDSGE

Standard material : Carbon Steel

For Stainless steel material, add prefix 316 - to the part code

Example : 316-EW16PSGE

Standard surface treatment : Chrome free Alkaline Zinc Plating.

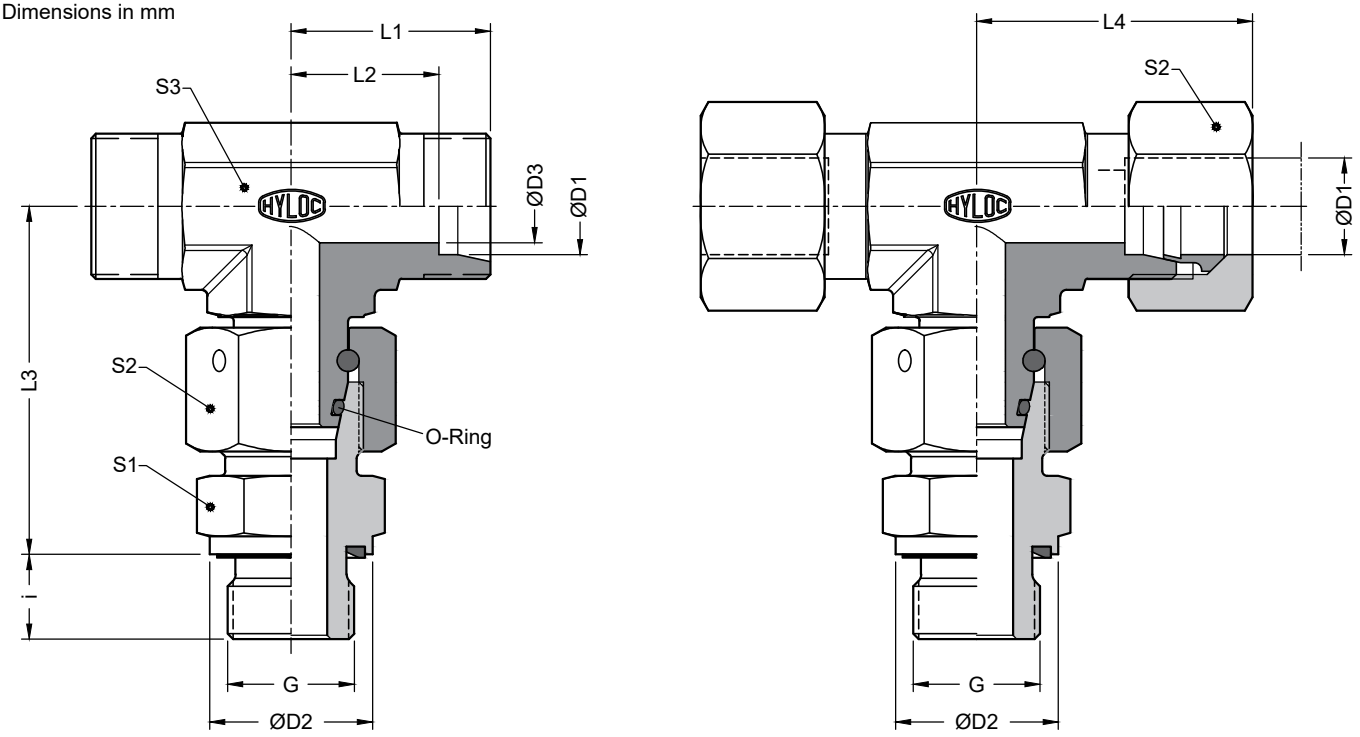
For Zinc Nickel surface treatment, add suffix - ZnNi

Example : EW16PSGE-ZnNi

ET-GE Swivel Stud Branch Tee Couplings with O-Ring

24° Tube end as per ISO 8434-1

Dimensions in mm



Series	Part No. **Body**	Part No. **Assembly**	D1 ⊕	G Male BSPP thread	i	ØD2	ØD3	L1	L2	L3	Approx. L4	S1	S2	S3
L	**ET06XLGE**	**ET06PLGE**	06	G 1/8 A	8	14	4	19	12	34.5	29.5	14	14	12
Light	**ET08XLGE**	**ET08PLGE**	08	G 1/4 A	12	19	6	21	14	37.5	31	19	17	12
315 bar	**ET10XLGE**	**ET10PLGE**	10	G 1/4 A	12	19	8	22	15	40.0	33	19	19	14
	ET12XLGE	**ET12PLGE**	12	G 3/8 A	12	22	10	24	17	42.0	34.5	22	22	17
	ET15XLGE	**ET15PLGE**	15	G 1/2 A	14	27	12	28	21	46.5	39.5	27	27	19
	ET18XLGE	**ET18PLGE**	18	G 1/2 A	14	27	15	31	23.5	50.0	43	27	32	24
160 bar	**ET22XLGE**	**ET22PLGE**	22	G 3/4 A	16	32	19	35	27.5	55.0	47.5	32	36	27
	ET28XLGE	**ET28PLGE**	28	G 1 A	18	40	24	38	30.5	59.0	51.5	41	41	36
	ET35XLGE	**ET35PLGE**	35	G1.1/4 A	20	50	30	45	34.5	68.5	60.5	50	50	41
	ET42XLGE	**ET42PLGE**	42	G1.1/2 A	22	55	36	51	40	75.0	66.5	55	60	50
S	**ET06XSGE**	**ET06PSGE**	06	G 1/4 A	12	19	4	23	16	40.0	33.5	19	17	12
Heavy	**ET08XSGE**	**ET08PSGE**	08	G 1/4 A	12	19	5	24	17	42.5	34	19	19	14
630 bar	**ET10XSGE**	**ET10PSGE**	10	G 3/8 A	12	22	7	25	17.5	45.0	37	22	22	17
	ET12XSGE	**ET12PSGE**	12	G 3/8 A	12	22	8	29	21.5	48.0	40.5	22	24	17
400 bar	**ET16XSGE**	**ET16PSGE**	16	G 1/2 A	14	27	12	33	24.5	55.0	46	27	30	24
	ET20XSGE	**ET20PSGE**	20	G 3/4 A	16	32	16	37	26.5	65.0	52	32	36	27
	ET25XSGE	**ET25PSGE**	25	G1 A	18	40	20	42	30	73.0	58	41	46	36
	ET30XSGE	**ET30PSGE**	30	G1.1/4 A	20	50	25	49	35.5	78.5	66.5	50	50	41
315 bar	**ET38XSGE**	**ET38PSGE**	38	G1.1/2 A	22	55	32	57	41	89.0	75.5	55	60	50

Assembly consists of Double bite ferrule.

For soft seal ferrules, replace 'P' with 'SRD' in Part code. Example : ET16SRDSGE

Standard material : Carbon Steel

For Stainless steel material, add prefix 316 - to the part code

Example : 316-ET16PSGE

Standard surface treatment : Chrome free Alkaline Zinc Plating.

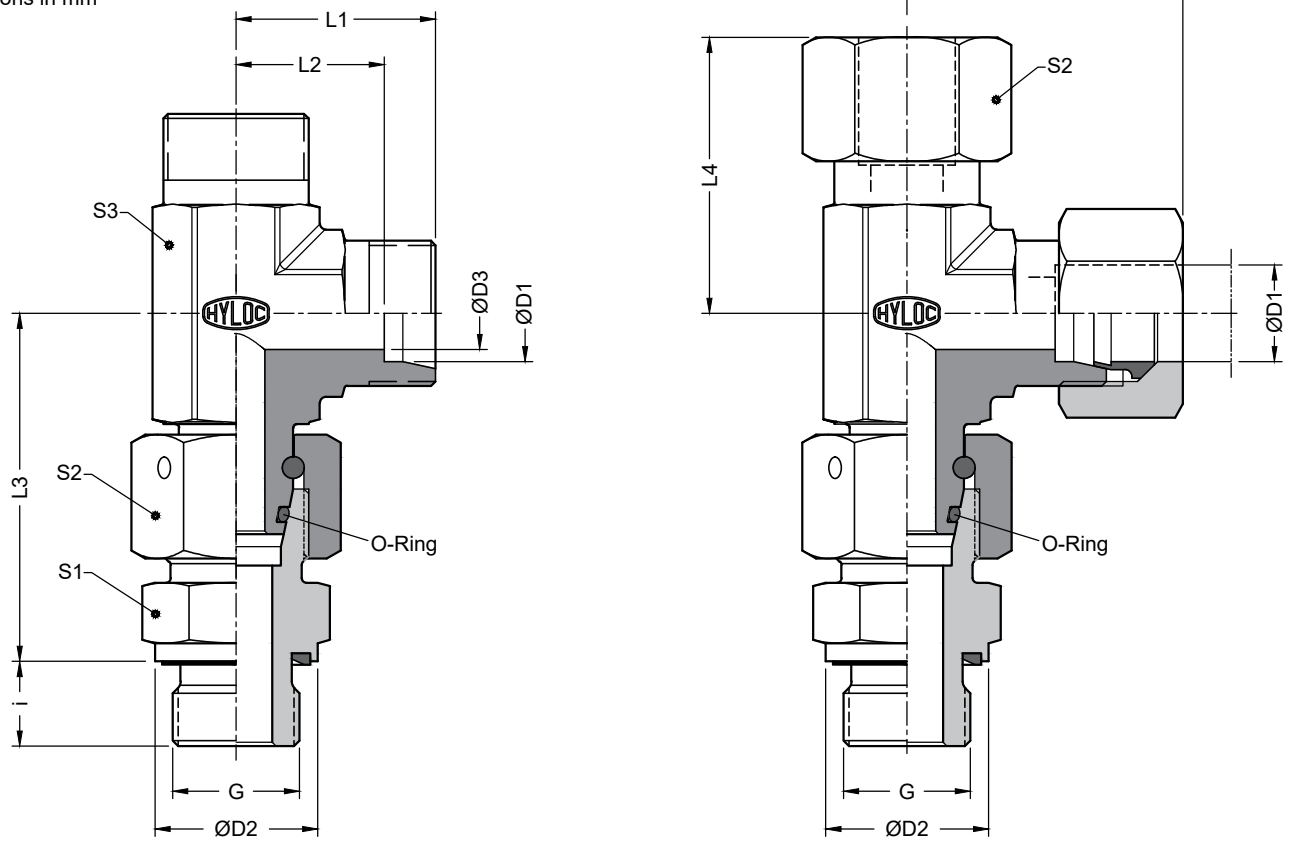
For Zinc Nickel surface treatment, add suffix - ZnNi

Example : ET16PSGE-ZnNi

EL-GE Swivel Stud Barrel Tee Couplings with O-Ring

24° Tube end as per ISO 8434-1

Dimensions in mm



Series	Part No. **Body**	Part No. **Assembly**	D1 ⌖	G Male BSPP thread	i	ØD2	ØD3	L1	L2	L3	Approx. L4	S1	S2	S3
L	**EL06XLGE**	**EL06PLGE**	06	G 1/8 A	8	14	4	19	12	34.5	29.5	14	14	12
Light	**EL08XLGE**	**EL08PLGE**	08	G 1/4 A	12	19	6	21	14	37.5	31	19	17	12
315 bar	**EL10XLGE**	**EL10PLGE**	10	G 1/4 A	12	19	8	22	15	40.0	33	19	19	14
	EL12XLGE	**EL12PLGE**	12	G 3/8 A	12	22	10	24	17	42.0	34.5	22	22	17
	EL15XLGE	**EL15PLGE**	15	G 1/2 A	14	27	12	28	21	46.5	39.5	27	27	19
	EL18XLGE	**EL18PLGE**	18	G 1/2 A	14	27	15	31	23.5	50.0	43	27	32	24
160 bar	**EL22XLGE**	**EL22PLGE**	22	G 3/4 A	16	32	19	35	27.5	55.0	47.5	32	36	27
	EL28XLGE	**EL28PLGE**	28	G 1 A	18	40	24	38	30.5	59.0	51.5	41	41	36
	EL35XLGE	**EL35PLGE**	35	G1.1/4 A	20	50	30	45	34.5	68.5	60.5	50	50	41
	EL42XLGE	**EL42PLGE**	42	G1.1/2 A	22	55	36	51	40	75.0	66.5	55	60	50
S	**EL06XSGE**	**EL06PSGE**	06	G 1/4 A	12	19	4	23	16	40.0	33.5	19	17	12
Heavy	**EL08XSGE**	**EL08PSGE**	08	G 1/4 A	12	19	5	24	17	42.5	34	19	19	14
630 bar	**EL10XSGE**	**EL10PSGE**	10	G 3/8 A	12	22	7	25	17.5	45.0	37	22	22	17
	EL12XSGE	**EL12PSGE**	12	G 3/8 A	12	22	8	29	21.5	48.0	40.5	22	24	17
400 bar	**EL16XSGE**	**EL16PSGE**	16	G 1/2 A	14	27	12	33	24.5	55.0	46	27	30	24
	EL20XSGE	**EL20PSGE**	20	G 3/4 A	16	32	16	37	26.5	65.0	52	32	36	27
	EL25XSGE	**EL25PSGE**	25	G1 A	18	40	20	42	30	73.0	58	41	46	36
	EL30XSGE	**EL30PSGE**	30	G1.1/4 A	20	50	25	49	35.5	78.5	66.5	50	50	41
315 bar	**EL38XSGE**	**EL38PSGE**	38	G1.1/2 A	22	55	32	57	41	89.0	75.5	55	60	50

Assembly consists of Double bite ferrule.

For soft seal ferrules, replace 'P' with 'SRD' in Part code. Example : EL16SRDSGE

Standard material : Carbon Steel, For Stainless steel material, add prefix 316 - to the part code. Example : 316-EL16PSGE

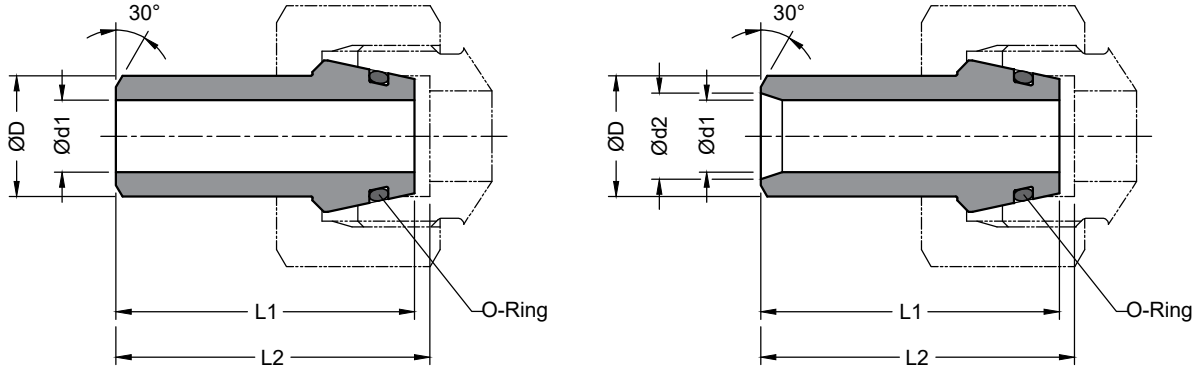
Standard surface treatment : Chrome free Alkaline Zinc Plating. For Zinc Nickel surface treatment, add suffix - ZnNi

Example : EL16PSGE-ZnNi

WNA Weldable Nipples

Suitable for 24° Tube end as per ISO 8434-1

Dimensions in mm



Low Pressure Series

Pressure (bar)	Part No. **Body**	Tube Size OD x Wall th.	O - Ring ID x CSD	ØD1	Ød1	Ød2	L1	L2
282	# **WNA1515**	15 x 1.5	12 x 2.0	15	10	12	34.5	35
376	**WNA1520**	15 x 2.0			10	11	34.5	35
409	**WNA1525**	15 x 2.5			10	--	34.5	35
313	# **WNA1820**	18 x 2.0	15 x 2.0	18	13	14	36.5	37
392	**WNA1825**	18 x 2.5			13	--	36.5	37
409	**WNA1830**	18 x 3.0			12	--	36.5	37
256	**WNA2220**	22 x 2.0	20 x 2.0	22	17	18	39	39.5
320	# **WNA2225**	22 x 2.5			17	--	39	39.5
252	# **WNA2825**	28 x 2.5	26 x 2.0	28	23	--	41.5	42.5
302	**WNA2830**	28 x 3.0			22	--	41.5	42.5
403	**WNA2840**	28 x 4.0			20	--	41.5	42.5
242	# **WNA3530**	35 x 3.0	32 x 2.5	35	29	--	48.5	49.5
322	**WNA3540**	35 x 4.0			27	--	48.5	49.5
403	**WNA3550**	35 x 5.0			25	--	48.5	49.5
134	**WNA4220**	42 x 2.0	38 x 2.5	42	36	38	49	50
201	**WNA4230**	42 x 3.0			36	--	49	50
269	# **WNA4240**	42 x 4.0			34	--	49	50

Standard wall thickness, unless specified

Standard material : Carbon Steel

For Stainless steel material, add prefix 316L - to the part code Example : 316L-WNA1825

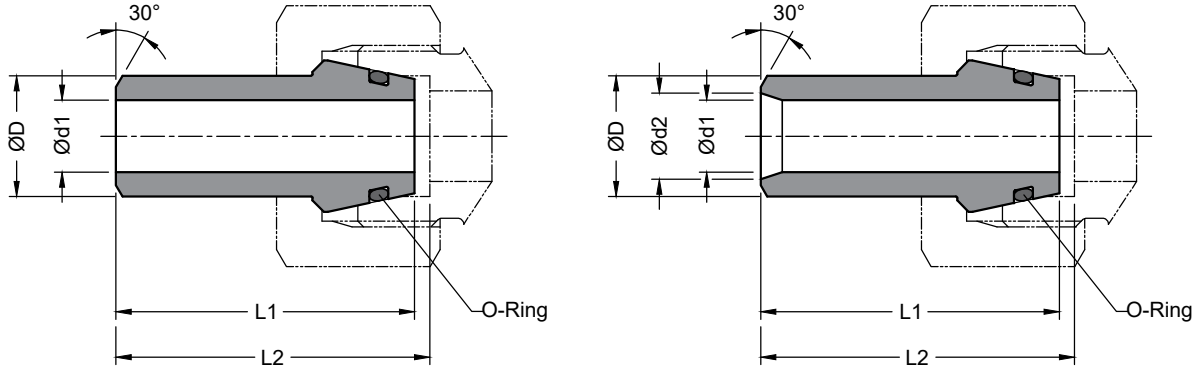
Standard surface treatment : Phosphated

Coupling Nut is not in the scope of supply.

WNA Weldable Nipples

Suitable for 24° Tube end as per ISO 8434-1

Dimensions in mm



High Pressure Series

Pressure (bar)	Part No. **Body**	Tube Size OD x Wall th.	O - Ring ID x CSD	ØD1	Ød1	Ød2	L1	L2
237	# **WNA0610**	6.0 x 1.0	4.0 x 1.5	6	2.5	4	31.5	32
237	**WNA0615**	6.0 x 1.5			2.5	3		
237	**WNA0810**	8.0 x 1.0	6.0 x 1.5	8	4	6	31	32
237	# **WNA0815**	8.0 x 1.5			4	5		
237	**WNA0820**	8.0 x 2.0			4	--		
237	**WNA1010**	10 x 1.0	7.5 x 1.5	10	6	8	32.5	33.5
370	# **WNA1015**	10 x 1.5			6	7		
508	**WNA1020**	10 x 2.0			6	--		
302	**WNA1215**	12 x 1.5	9.0 x 1.5	12	8	9	32.5	33.5
415	# **WNA1220**	12 x 2.0			8	--		
532	**WNA1225**	12 x 2.5			7	--		
221	**WNA1615**	16 x 1.5	12 x 2.0	16	11	13	39.5	40.5
302	**WNA1620**	16 x 2.0			11	12		
387	# **WNA1625**	16 x 2.5			11	--		
473	**WNA1630**	16 x 3.0			10	--		
237	**WNA2020**	20 x 2.0	16.3 x 2.4	20	14	16	46.5	47
302	**WNA2025**	20 x 2.5			14	15		
370	# **WNA2030**	20 x 3.0			14	--		
508	**WNA2040**	20 x 4.0			12	--		
289	**WNA2530**	25 x 3.0	20.3 x 2.4	25	19	--	52.5	53.5
397	# **WNA2540**	25 x 4.0			17	--		
508	**WNA2550**	25 x 5.0			15	--		
237	**WNA3030**	30 x 3.0	25.3 x 2.4	30	24	--	56.5	57.5
325	# **WNA3040**	30 x 4.0			22	--		
415	**WNA3050**	30 x 5.0			20	--		
508	**WNA3060**	30 x 6.0			18	--		
251	**WNA3840**	38 x 4.0	33.3 x 2.4	38	30	--	63.5	64.5
320	# **WNA3850**	38 x 5.0			28	--		
391	**WNA3860**	38 x 6.0			26	--		
464	**WNA3870**	38 x 7.0			24	--		

Standard wall thickness, unless specified

Standard material : Carbon Steel

For Stainless steel material, add prefix 316L - to the part code Example : 316L-WNA1625

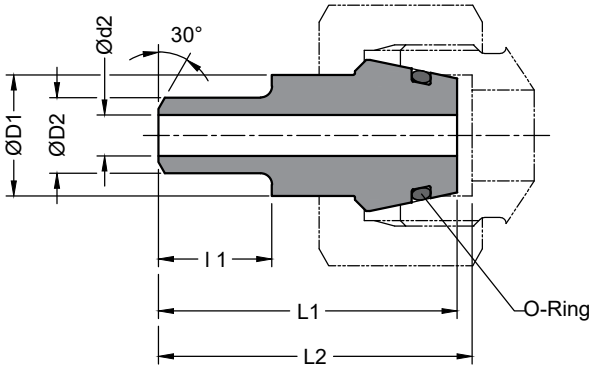
Standard surface treatment : Phosphated

Coupling Nut is not in the scope of supply.

WNR Reducer Weldable Nipples

Suitable for 24° Tube end as per ISO 8434-1

Dimensions in mm



Low Pressure Series

Pressure (bar)	Part No. **Body**	ØD1	ØD2	Ød2	Tube Size OD x Wall th.	O - Ring ID x CSD	l 1	L1	L2
160	**WNR181515**	18	15	12	15 x 1.5	15 x 2.0	16	36.5	37
160	**WNR221815**	22	18	15	18 x 1.5	20 x 2.0	18	39	39.5
	WNR221515	22	15	12	15 x 1.5				
100	**WNR282220**	28	22	18	22 x 2.0	26 x 2.0	21	41.5	42.5
	WNR281815	28	18	15	18 x 1.5				
	WNR281515	28	15	12	15 x 1.5				
100	**WNR352820**	35	28	24	28 x 2.0	32 x 2.5	25	48.5	49.5
	WNR352220	35	22	18	22 x 2.0				
	WNR351815	35	18	15	18 x 1.5				
	WNR351515	35	15	12	15 x 1.5				
100	**WNR423520**	42	35	31	35 x 2.0	38 x 2.5	22	49	50
	WNR422820	42	28	24	28 x 2.0				
	WNR422220	42	22	18	22 x 2.0				
	WNR421815	42	18	15	18 x 1.5				
	WNR421515	42	15	12	15 x 1.5				

Standard material : Carbon Steel

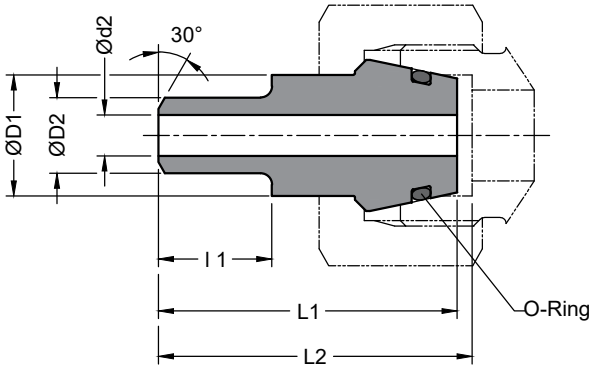
For Stainless steel material, add prefix 316L - to the part code Example : 316L-WNR281815

Standard surface treatment : Phosphated

WNR Reducer Weldable Nipples

Suitable for 24° Tube end as per ISO 8434-1

Dimensions in mm



High Pressure Series

Pressure (bar)	Part No. **Body**	ØD1	ØD2	Ød2	Tube Size OD x Wall th.	O - Ring ID x CSD	l 1	L1	L2
630	**WNR080620**	08	6	2	6 x 2.0	6.0 x 1.5	11	31	32
630	**WNR100825**	10	8	3	8 x 2.5	7.5 x 1.5	12	32.5	33.5
	WNR100620	10	6	2	6 x 2.0				
630	**WNR121030**	12	10	4	10 x 3.0	9.0 x 1.5	13	32.5	33.5
	WNR120825	12	8	3	8 x 2.5				
	WNR120620	12	6	2	6 x 2.0				
400	**WNR161220**	16	12	8	12 x 2.0	12 x 2.0	15	39.5	40.5
	WNR161020	16	10	6	10 x 2.0				
	WNR160815	16	8	5	8 x 1.5				
	WNR160615	16	6	3	6 x 1.5				
400	**WNR201630**	20	16	10	16 x 3.0	16.3 x 2.4	17	46.5	47
	WNR201220	20	12	8	12 x 2.0				
	WNR201020	20	10	6	10 x 2.0				
	WNR200815	20	8	5	8 x 1.5				
	WNR200615	20	6	3	6 x 1.5				
400	**WNR252035**	25	20	13	20 x 3.5	20.3 x 2.4	20	52.5	53.5
	WNR251630	25	16	10	16 x 3.0				
	WNR251220	25	12	8	12 x 2.0				
	WNR251020	25	10	6	10 x 2.0				
	WNR250815	25	8	5	8 x 1.5				
	WNR250615	25	6	3	6 x 1.5				
250	**WNR302525**	30	25	20	25 x 2.5	25.3 x 2.4	22	56.5	57.5
	WNR302020	30	20	16	20 x 2.0				
	WNR301620	30	16	12	16 x 2.0				
	WNR301215	30	12	9	12 x 1.5				
	WNR301015	30	10	7	10 x 1.5				
	WNR300815	30	8	5	8 x 1.5				
	WNR300610	30	6	4	6 x 1.0				
250	**WNR383030**	38	30	24	30 x 3.0	33.3 x 2.4	26	63.5	64.5
	WNR382525	38	25	20	25 x 2.5				
	WNR382020	38	20	16	20 x 2.0				
	WNR381620	38	16	12	16 x 2.0				
	WNR381215	38	12	9	12 x 1.5				
	WNR381015	38	10	7	10 x 1.5				
	WNR380815	38	8	5	8 x 1.5				
	WNR380610	38	6	4	6 x 1.0				

Standard material : Carbon Steel

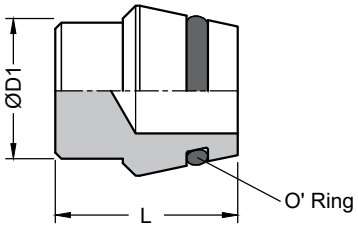
For Stainless steel material, add prefix 316L - to the part code Example : 316L-WNR281815

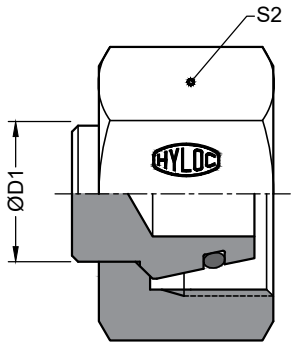
Standard surface treatment : Phosphated

VKA Blanking Plugs for 24º Tube ends

For Metric Tube ends (24º) as per ISO 8434

Dimensions in mm





Series	Part No. **Body**	Part No. **Assembly**	D1 ⌖	L	S2	O Ring ID x CSD
L	**VKA06**	**VKA06L**	06	17.5	14	4.0 x 1.5
Light	**VKA08**	**VKA08L**	08	17	17	6.0 x 1.5
250 bar	**VKA10**	**VKA10L**	10	18.5	19	7.5 x 1.5
	VKA12	**VKA12L**	12	18.5	22	9.0 x 1.5
	VKA15	**VKA15L**	15	19	27	12.0 x 2.0
160 bar	**VKA18**	**VKA18L**	18	20.5	32	15.0 x 2.0
	VKA22	**VKA22L**	22	21.5	36	20.0 x 2.0
100 bar	**VKA28**	**VKA28L**	28	22	41	26.0 x 2.0
	VKA35	**VKA35L**	35	27.5	50	32.0 x 2.5
	VKA42	**VKA42L**	42	28	60	38.0 x 2.5
S	**VKA06**	**VKA06S**	06	17.5	17	4.0 x 1.5
Heavy	**VKA08**	**VKA08S**	08	17	19	6.0 x 1.5
630 bar	**VKA10**	**VKA10S**	10	18.5	22	7.5 x 1.5
	VKA12	**VKA12S**	12	18.5	24	9.0 x 1.5
400 bar	**VKA16**	**VKA16S**	16	21.5	30	12.0 x 2.0
	VKA20	**VKA20S**	20	26	36	16.3 x 2.4
	VKA25	**VKA25S**	25	28	46	20.3 x 2.4
250 bar	**VKA30**	**VKA30S**	30	32.5	50	25.3 x 2.4
	VKA38	**VKA38S**	38	36.5	60	33.3 x 2.4

For Stainless steel material, add prefix 316 - to the part code. Example : 316 - VKA20

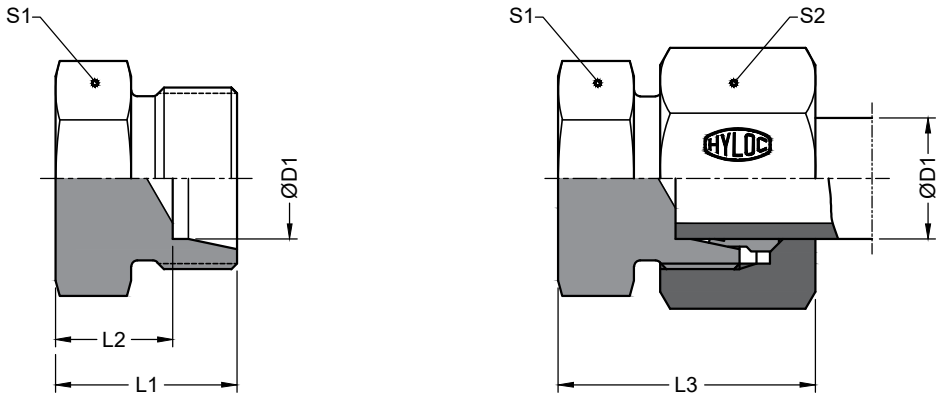
Standard surface treatment : Chrome free Alkaline Zinc Plating.

For Zinc Nickel surface treatment, add suffix - ZnNi Example : VKA20 - ZnNi

BUZT Blanking ends for Tubes

For Metric Tubes

Dimensions in mm



Series	Part No. **Body**	Part No. **Assembly**	D1 ⊕	L1	L2	Approx. L3	S1	S2
L	**BUZT06XL**	**BUZT06PL**	06	15	8	25.5	14	14
Light	**BUZT08XL**	**BUZT08PL**	08	15	8	25	17	17
250 bar	**BUZT10XL**	**BUZT10PL**	10	16	9	27	17	19
	BUZT12XL	**BUZT12PL**	12	17	10	27.5	19	22
	BUZT15XL	**BUZT15PL**	15	18	11	29.5	24	27
160 bar	**BUZT18XL**	**BUZT18PL**	18	19	11.5	31	27	32
	BUZT22XL	**BUZT22PL**	22	21	13.5	33.5	32	36
100 bar	**BUZT28XL**	**BUZT28PL**	28	22	14.5	35.5	36	41
	BUZT35XL	**BUZT35PL**	35	27	16.5	42.5	46	50
	BUZT42XL	**BUZT42PL**	42	30	19	45.5	55	60
S	**BUZT06XS**	**BUZT06PS**	06	20	13	30.5	14	17
Heavy	**BUZT08XS**	**BUZT08PS**	08	20	13	30	17	19
630 bar	**BUZT10XS**	**BUZT10PS**	10	20	12.5	32	19	22
	BUZT12XS	**BUZT12PS**	12	22	14.5	33.5	22	24
400 bar	**BUZT16XS**	**BUZT16PS**	16	24	15.5	37	27	30
	BUZT20XS	**BUZT20PS**	20	30	19.5	45	32	36
	BUZT25XS	**BUZT25PS**	25	30	18	46	41	46
250 bar	**BUZT30XS**	**BUZT30PS**	30	36	22.5	53.5	46	50
	BUZT38XS	**BUZT38PS**	38	39	23	57.5	55	60

For Stainless steel material, add prefix 316 - to the part code. Example : 316 - BUZT20PS

Standard surface treatment : Chrome free Alkaline Zinc Plating.

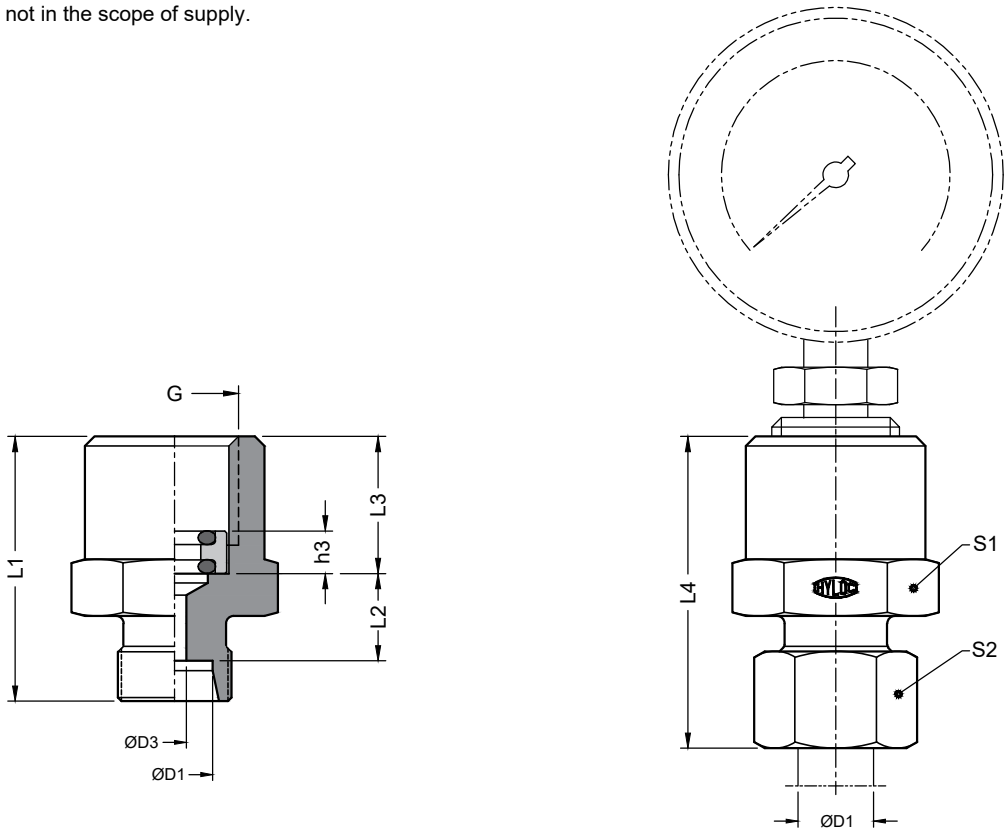
For Zinc Nickel surface treatment, add suffix - ZnNi Example : BUZT20PS - ZnNi

MAV-G Pressure Gauge Connectors

Metric tube end as per ISO 8434.

Dimensions in mm

Pressure Gauge is not in the scope of supply.



Series	Part No. **Body**	Part No. **Assembly**	D1 ⊕	'G' Gauge connection	D3	L1	L2	L3	Approx. L4	h3	S1	S2
250 bar	**MAV06XLG02**	**MAV06PLG02**	06	G 1/4	2.5	29	7.5	14.5	39.5	4.5	19	14
	MAV08XLG02	**MAV08PLG02**	08	G 1/4	5.5	29	7.5	14.5	39	4.5	19	17
	MAV10XLG02	**MAV10PLG02**	10	G 1/4	5.5	30	8.5	14.5	41	4.5	19	19
	MAV12XLG02	**MAV12PLG02**	12	G 1/4	5.5	30	8.5	14.5	40.5	4.5	19	22
250 bar	**MAV06XLG03**	**MAV06PLG03**	06	G 3/8	2.5	33	9.5	16.5	43.5	5.5	22	14
	MAV08XLG03	**MAV08PLG03**	08	G 3/8	5.5	33	9.5	16.5	43	5.5	22	17
	MAV10XLG03	**MAV10PLG03**	10	G 3/8	5.5	34	10.5	16.5	45	5.5	22	19
	MAV12XLG03	**MAV12PLG03**	12	G 3/8	5.5	34	10.5	16.5	44.5	5.5	22	22
630 bar	**MAV06XSG03**	**MAV06PSG03**	06	G 3/8	3.5	33	9.5	16.5	43.5	5.5	22	17
	MAV08XSG03	**MAV08PSG03**	08	G 3/8	3.5	33	9.5	16.5	43	5.5	22	19
	MAV10XSG03	**MAV10PSG03**	10	G 3/8	7	33	9	16.5	45	5.5	22	22
	MAV12XSG03	**MAV12PSG03**	12	G 3/8	7	33	9	16.5	44.5	5.5	22	24
630 bar	**MAV06XSG04**	**MAV06PSG04**	06	G 1/2	3.5	38	11	20	48.5	5.5	27	17
	MAV08XSG04	**MAV08PSG04**	08	G 1/2	3.5	38	11	20	48	5.5	27	19
	MAV10XSG04	**MAV10PSG04**	10	G 1/2	7	38	10.5	20	50	5.5	27	22
	MAV12XSG04	**MAV12PSG04**	12	G 1/2	7	38	10.5	20	49.5	5.5	27	24

Assembly consists of Double bite ferrule.

For soft seal ferrules, replace 'P' with 'SRD' in Part code. Example : MAV10SRDSG04
Standard material : Carbon Steel

For Stainless steel material, add prefix 316 - to the part code

Example : 316-MAV10PSG04

Standard surface treatment : Chrome free Alkaline Zinc Plating.

For Zinc Nickel surface treatment, add suffix - ZnNi

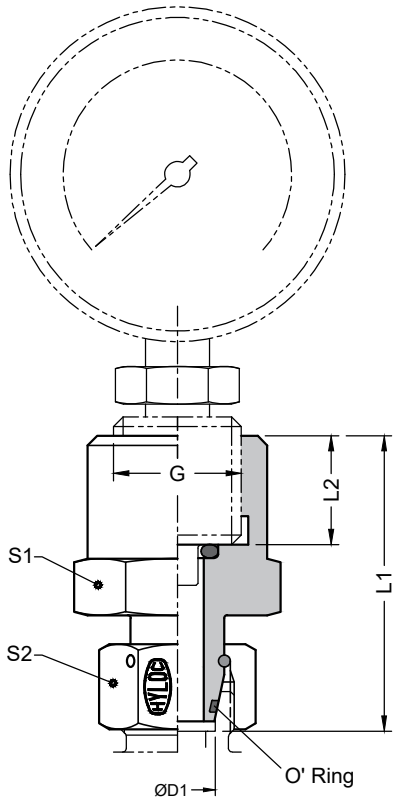
Example : MAV10PSG04-ZnNi

MAVE-G Adjustable Pressure Gauge standpipe (With O ring)

For Metric tube ends (24º) as per ISO 8434.

Dimensions in mm

Pressure Gauge is not in the scope of supply.



Series	Part No. **Assembly**	D1 ⌖	'G' Gauge connection	L1	L2	S1	S2	O Ring ID x CSD
L	**MAVE06LG02**	06	G 1/4	35.5	10	19	14	4.0 x 1.5
250 bar	**MAVE08LG02**	08	G 1/4	35.5	10	19	17	6.0 x 1.5
	MAVE10LG02	10	G 1/4	36	10	19	19	7.5 x 1.5
	MAVE12LG02	12	G 1/4	36	10	19	22	9.0 x 1.5
250 bar	**MAVE06LG03**	06	G 3/8	37	13	24	14	4.0 x 1.5
	MAVE08LG03	08	G 3/8	37.5	13	24	17	6.0 x 1.5
	MAVE10LG03	10	G 3/8	38.5	13	24	19	7.5 x 1.5
	MAVE12LG03	12	G 3/8	38	13	24	22	9.0 x 1.5
630 bar	**MAVE06LG04**	06	G 1/2	42.5	16	27	14	4.0 x 1.5
	MAVE08LG04	08	G 1/2	43	16	27	17	6.0 x 1.5
	MAVE10LG04	10	G 1/2	43.5	16	27	19	7.5 x 1.5
	MAVE12LG04	12	G 1/2	45	16	27	22	9.0 x 1.5
S	**MAVE06SG02**	06	G 1/4	35.5	10	19	17	4.0 x 1.5
630 bar	**MAVE08SG02**	08	G 1/4	35.5	10	19	19	6.0 x 1.5
	MAVE10SG02	10	G 1/4	39	10	19	22	7.5 x 1.5
	MAVE12SG02	12	G 1/4	39	10	19	24	9.0 x 1.5
630 bar	**MAVE06SG03**	06	G 3/8	37	13	24	17	4.0 x 1.5
	MAVE08SG03	08	G 3/8	36	13	24	19	6.0 x 1.5
	MAVE10SG03	10	G 3/8	37.5	13	24	22	7.5 x 1.5
	MAVE12SG03	12	G 3/8	37	13	24	24	9.0 x 1.5
630 bar	**MAVE06SG04**	06	G 1/2	42.5	16	27	17	4.0 x 1.5
	MAVE08SG04	08	G 1/2	43	16	27	19	6.0 x 1.5
	MAVE10SG04	10	G 1/2	43.5	16	27	22	7.5 x 1.5
	MAVE12SG04	12	G 1/2	45	16	27	24	9.0 x 1.5

For Stainless steel material, add prefix 316 - to the part code. Example : 316-MAVE10SG03

Standard surface treatment : Chrome free Alkaline Zinc Plating.

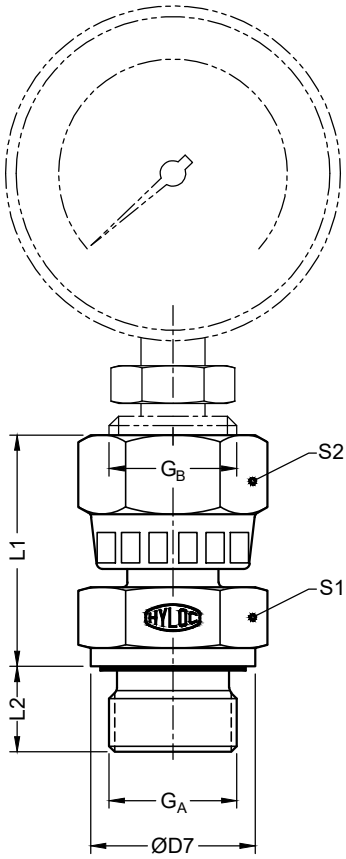
For Zinc Nickel surface treatment, add suffix - ZnNi Example : MAVE10SG03 - ZnNi

1GA-GE Gauge mounting adaptors

BSPP (G) Stud end with Elastomeric seal

Dimensions in mm

Pressure Gauge is not in the scope of supply.



Series	Part No. **Assembly**	'G_A' Stud end	'G_B' Gauge connection	ØD7	L1	L2	S1	S2
400 bar	**1GAG02EG02**	G 1/4	G 1/4	19	42	12	19	19
	1GAG02EG03	G 1/4	G 3/8	19	42	12	19	22
	1GAG02EG04	G 1/4	G 1/2	19	42	12	19	27
400 bar	**1GAG03EG02**	G 3/8	G 1/4	22	44.5	12	22	19
	1GAG03EG03	G 3/8	G 3/8	22	44.5	12	22	22
	1GAG03EG04	G 3/8	G 1/2	22	44.5	12	22	27
400 bar	**1GAG04EG02**	G 1/2	G 1/4	27	52	14	27	19
	1GAG04EG03	G 1/2	G 3/8	27	52	14	27	22
	1GAG04EG04	G 1/2	G 1/2	27	52	14	27	27

For Stainless steel material, add prefix 316 - to the part code. Example : 316 - **1GAG03EG04**

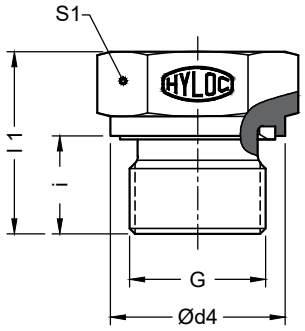
Standard surface treatment : Chrome free Alkaline Zinc Plating.

For Zinc Nickel surface treatment, add suffix - ZnNi Example : **1GAG03EG04** - ZnNi

VST - GE / VSTI - GE Plugs

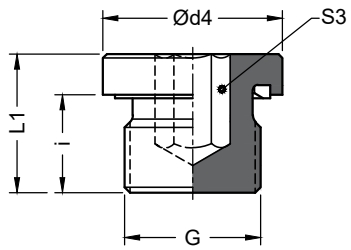
Dimensions in mm

Hex head Plug with Elastomeric seal as per DIN 3852, Part 11
Male BSPP (G) threads as per ISO 228



Part No.	G Male BSPP thread	Ød4	i	l 1	S1
VSTG01E	G 1/8 A	14	8	14.5	14
VSTG02E	G 1/4 A	19	12	20	19
VSTG03E	G 3/8 A	22	12	22.5	22
VSTG04E	G 1/2 A	27	14	24	27
VSTG06E	G 3/4 A	32	16	26	32
VSTG08E	G 1 A	40	16	27	41
VSTG10E	G1.1/4 A	50	16	28	50
VSTG12E	G1.1/2 A	55	16	30	55

Socket head Plug with Elastomeric seal as per DIN 3852, Part 11
Male BSPP (G) threads as per ISO 228



Part No.	G Male BSPP thread	Ød4	i	L1	S3
VSTIG01E	G 1/8 A	14	8	13	5
VSTIG02E	G 1/4 A	19	12	17	6
VSTIG03E	G 3/8 A	22	12	17	8
VSTIG04E	G 1/2 A	27	14	20	10
VSTIG06E	G 3/4 A	32	16	22	12
VSTIG08E	G 1 A	40	16	24	17
VSTIG10E	G1.1/4 A	50	16	24	22
VSTIG12E	G1.1/2 A	55	16	24	24

Standard material : Carbon Steel

For Stainless steel material, add prefix 316 - to the part code Example : 316 - VSTIG04E

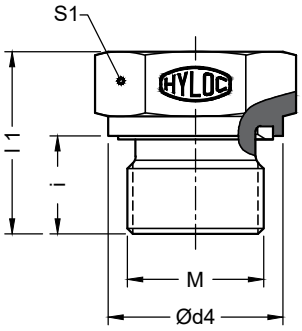
Standard surface treatment : Chrome free Alkaline Zinc Plating.

For Zinc Nickel surface treatment, add suffix - ZnNi Example : VSTIG04E - ZnNi

VST - ME / VSTI - ME Plugs

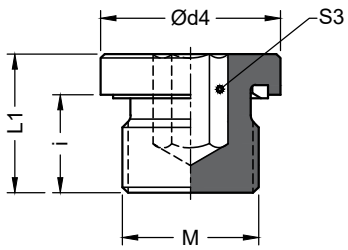
Dimensions in mm

Hex head Plug with Elastomeric seal as per ISO 9974-4
Male Metric (M) threads as per ISO 261



Pressure (bar)	Part No.	M Male Metric thread	Ød4	i	l 1	S1	Tightening Torque N-m
630	**VSTM10E**	M10 x 1.0	14	8	16	14	20
630	**VSTM12E**	M12 x 1.5	17	12	20	17	30
630	**VSTM14E**	M14 x 1.5	19	12	20	19	45
630	**VSTM16E**	M16 x 1.5	22	12	22	22	60
630	**VSTM18E**	M18 x 1.5	24	12	23	24	80
630	**VSTM20E**	M20 x 1.5	26	14	25	27	100
400	**VSTM22E**	M22 x 1.5	27	14	26	27	80
160	**VSTM26E**	M26 x 1.5	32	16	29	32	120
400	**VSTM27E**	M27 x 2.0	32	16	29	32	135
400	**VSTM33E**	M33 x 2.0	40	16	34	41	225
250	**VSTM42E**	M42 x 2.0	50	16	36	50	360
250	**VSTM48E**	M48 x 2.0	55	16	37	55	400

Socket head Plug with Elastomeric seal as per ISO 9974-4
Male Metric (M) threads as per ISO 261



Pressure (bar)	Part No.	M Male Metric thread	Ød4	i	L1	S3	Tightening Torque N-m
400	**VSTIM10E**	M10 x 1.0	14	8	12.3	5	12
400	**VSTIM12E**	M12 x 1.5	17	12	17.3	6	25
400	**VSTIM14E**	M14 x 1.5	19	12	17.3	6	35
400	**VSTIM16E**	M16 x 1.5	22	12	17.3	8	50
400	**VSTIM18E**	M18 x 1.5	24	12	17.3	8	60
400	**VSTIM20E**	M20 x 1.5	26	14	19.3	10	70
400	**VSTIM22E**	M22 x 1.5	27	14	19.3	10	80
160	**VSTIM26E**	M26 x 1.5	32	16	21.3	12	120
400	**VSTIM27E**	M27 x 2.0	32	16	21.3	12	135
400	**VSTIM33E**	M33 x 2.0	40	16	22.8	17	225
250	**VSTIM42E**	M42 x 2.0	50	16	22.8	22	360
250	**VSTIM48E**	M48 x 2.0	55	16	22.8	24	400

Standard material : Carbon Steel

For Stainless steel material, add prefix 316 - to the part code Example : 316 - VSTIM18E

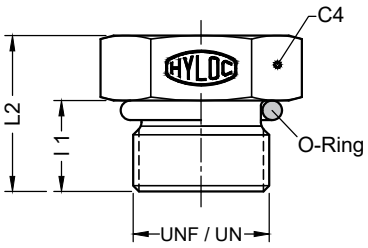
Standard surface treatment : Chrome free Alkaline Zinc Plating.

For Zinc Nickel surface treatment, add suffix - ZnNi Example : VSTIM18E - ZnNi

VST - S / VSTI - S Plugs

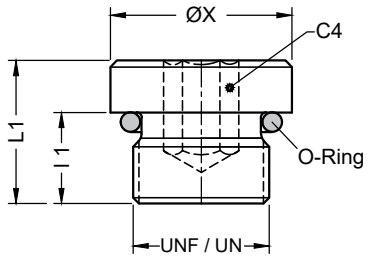
Dimensions in mm

Hex head Plug with O-Ring seal
Male SAE (UNF / UN) threads as per ISO 263



Part No.	Male thread UNF / UN	l 1	L2	C4	O-Ring ID x CSD
VSTS02	5/16" - 24	7.54	15.2	12	6.07 x 1.63
VSTS03	3/8" - 24	7.54	15.2	12	7.65 x 1.63
VSTS04	7/16" - 20	9.14	17	14	8.92 x 1.83
VSTS05	1/2" - 20	9.14	17	17	10.52 x 1.83
VSTS06	9/16" - 18	9.93	18.5	17	11.89 x 1.98
VSTS08	3/4" - 16	11.13	20.3	22	16.36 x 2.21
VSTS10	7/8" - 14	12.7	23.6	27	19.18 x 2.46
VSTS12	1.1/16" - 12	15.09	27.7	32	23.47 x 2.95
VSTS14	1.3/16" - 12	15.09	27.7	36	26.62 x 2.95
VSTS16	1.5/16" - 12	15.09	28.4	41	29.74 x 2.95
VSTS20	1.5/8" - 12	15.09	30.5	46	37.47 x 3.00
VSTS24	1.7/8" - 12	15.09	32.3	55	43.69 x 3.00
VSTS32	2.1/2" - 12	15.09	36.3	70	59.36 x 3.00

Socket head Plug with O-Ring seal
Male SAE (UNF / UN) threads as per ISO 263



Part No.	Male thread UNF / UN	ØX	l 1	L1	C5	O-Ring ID x CSD
VSTIS02	5/16" - 24	11.13	7.54	10.2	3	6.07 x 1.63
VSTIS03	3/8" - 24	12.70	7.54	10.2	3	7.65 x 1.63
VSTIS04	7/16" - 20	14.30	9.14	11.9	5	8.92 x 1.83
VSTIS05	1/2" - 20	15.88	9.14	11.9	5	10.52 x 1.83
VSTIS06	9/16" - 18	17.48	9.93	12.7	6	11.89 x 1.98
VSTIS08	3/4" - 16	22.00	11.13	14.7	8	16.36 x 2.21
VSTIS10	7/8" - 14	25.40	12.7	16.5	10	19.18 x 2.46
VSTIS12	1.1/16" - 12	31.75	15.09	19.5	14	23.47 x 2.95
VSTIS14	1.3/16" - 12	34.92	15.09	19.5	14	26.62 x 2.95
VSTIS16	1.5/16" - 12	38.10	15.09	19.5	17	29.74 x 2.95
VSTIS20	1.5/8" - 12	47.62	15.09	19.5	19	37.47 x 3.00
VSTIS24	1.7/8" - 12	53.98	15.09	19.5	19	43.69 x 3.00
VSTIS32	2.1/2" - 12	69.85	15.09	19.5	19	59.36 x 3.00

Standard material : Carbon Steel

For Stainless steel material, add prefix 316 - to the part code Example : 316 - VSTIS10

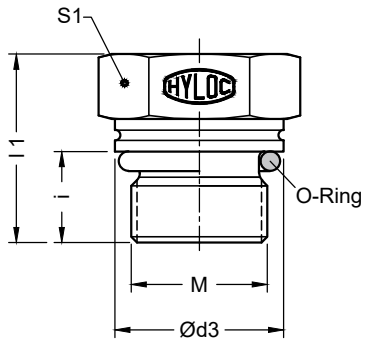
Standard surface treatment : Chrome free Alkaline Zinc Plating.

For Zinc Nickel surface treatment, add suffix - ZnNi Example : VSTIS10 - ZnNi

VST - MO / VSTI - MO Plugs

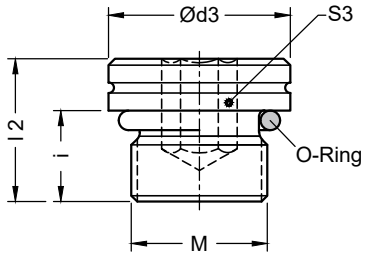
Dimensions in mm

Hex head Plug with O-Ring seal as per ISO 6149-4
Male Metric (M) threads as per ISO 261



Pressure (bar)	Part No.	M Male Metric thread	Ød3	i	l 1	S1	O-Ring ID x CSD	Tightening Torque N-m
630	**VSTM10O**	M10 x 1.0	13.8	9.5	17	14	8.1 x 1.6	20
630	**VSTM12O**	M12 x 1.5	16.8	11	18.5	17	9.3 x 2.2	35
630	**VSTM14O**	M14 x 1.5	18.8	11	19.5	19	11.3 x 2.2	45
630	**VSTM16O**	M16 x 1.5	21.8	12.5	22	22	13.3 x 2.2	55
630	**VSTM18O**	M18 x 1.5	23.8	14	24	24	15.3 x 2.2	70
630	**VSTM22O**	M22 x 1.5	26.8	15	26	27	19.3 x 2.2	100
400	**VSTM27O**	M27 x 2.0	31.8	18.5	31.5	32	23.6 x 2.9	170
400	**VSTM30O**	M30 x 2.0	35.8	18.5	33	36	26.6 x 2.9	215
400	**VSTM33O**	M33 x 2.0	40.8	18.5	34	41	29.6 x 2.9	310
250	**VSTM42O**	M42 x 2.0	49.8	19	36.5	50	38.6 x 2.9	330
250	**VSTM48O**	M48 x 2.0	54.8	21.5	40	55	44.6 x 2.9	420
250	**VSTM60O**	M60 x 2.0	64.8	24	44.5	65	56.6 x 2.9	500

Socket head Plug with O-Ring seal as per ISO 6149-4
Male Metric (M) threads as per ISO 261



Pressure (bar)	Part No.	M Male Metric thread	Ød3	i	l 2	S3	O-Ring ID x CSD	Tightening Torque N-m
420	**VSTIM10O**	M10 x 1.0	13.8	9.5	13.5	5	8.1 x 1.6	15
420	**VSTIM12O**	M12 x 1.5	16.8	11	15.5	6	9.3 x 2.2	22
630	**VSTIM14O**	M14 x 1.5	18.8	11	16	6	11.3 x 2.2	45
630	**VSTIM16O**	M16 x 1.5	21.8	12.5	17.5	8	13.3 x 2.2	55
630	**VSTIM18O**	M18 x 1.5	23.8	14	19	8	15.3 x 2.2	70
630	**VSTIM22O**	M22 x 1.5	26.8	15	20	10	19.3 x 2.2	100
✻ 400	**VSTIM26O**	M26 x 1.5	31.0	16	21	12	23.0 x 2.4	---
400	**VSTIM27O**	M27 x 2.0	31.8	18.5	23.5	12	23.6 x 2.9	170
400	**VSTIM30O**	M30 x 2.0	35.8	18.5	24.5	14	26.6 x 2.9	215
400	**VSTIM33O**	M33 x 2.0	40.8	18.5	24.5	14	29.6 x 2.9	310
250	**VSTIM42O**	M42 x 2.0	49.8	19	25	17	38.6 x 2.9	330
250	**VSTIM48O**	M48 x 2.0	54.8	21.5	27.5	17	44.6 x 2.9	420
250	**VSTIM60O**	M60 x 2.0	64.8	24	30	19	56.6 x 2.9	500

✻ Not included in ISO 6149-4 standard

Standard material : Carbon Steel

For Stainless steel material, add prefix 316 - to the part code Example : 316 - VSTIM18O

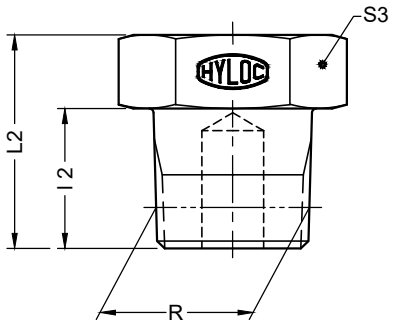
Standard surface treatment : Chrome free Alkaline Zinc Plating.

For Zinc Nickel surface treatment, add suffix - ZnNi Example : VSTIM18O - ZnNi

VST - R / VSTI - R Plugs

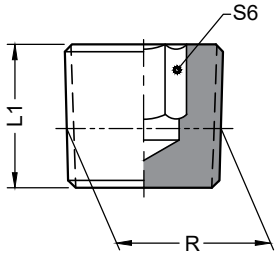
Dimensions in mm

Hex head Plug
Male threads : BSP Taper (R)



Part No.	Male thread BSPT (R)	l 2	L2	S3
VSTR01	R 1/8 - 27	7.5	11.5	12
VSTR02	R 1/4 - 18	11	17	14
VSTR03	R 3/8 - 18	11.5	17.5	19
VSTR04	R 1/2 - 14	15	25	22
VSTR06	R 3/4 - 14	16.5	26.5	30
VSTR08	R1 - 11 1/2	19	31	36
VSTR10	R1.1/4 - 11 1/2	21.5	35	46
VSTR12	R1.1/2 - 11 1/2	21.5	35	50

Socket head Plug
Male threads : BSP Taper (R)



Part No.	Male thread BSPT (R)	L1	S6
VSTIR01	R 1/8 - 27	8	5
VSTIR02	R 1/4 - 18	10	7
VSTIR03	R 3/8 - 18	10	8
VSTIR04	R 1/2 - 14	10	10
VSTIR06	R 3/4 - 14	12	12
VSTIR08	R1 - 11 1/2	12	17
VSTIR10	R1.1/4 - 11 1/2	18	22
VSTIR12	R1.1/2 - 11 1/2	20	24

Standard material : Carbon Steel

For Stainless steel material, add prefix 316 - to the part code Example : 316 - VSTIR08

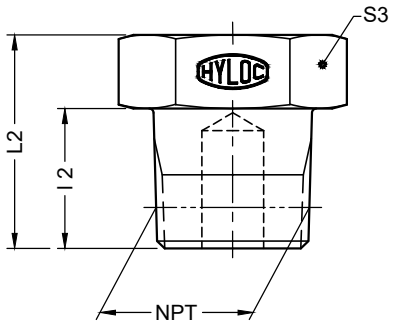
Standard surface treatment : Chrome free Alkaline Zinc Plating.

For Zinc Nickel surface treatment, add suffix - ZnNi Example : VSTIR08 - ZnNi

VST - NPT / VSTI - NPT Plugs

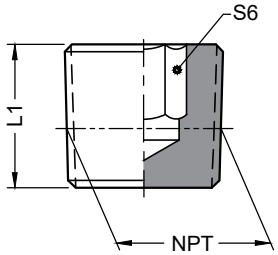
Dimensions in mm

Hex head Plug
Male threads : NPT



Part No.	Male thread NPT	l 2	L2	S3
VSTN01	1/8 - 27	9.7	14.5	12
VSTN02	1/4 - 18	14.2	19	17
VSTN03	3/8 - 18	14.2	19.5	19
VSTN04	1/2 - 14	19.05	24	24
VSTN06	3/4 - 14	19.05	27	30
VSTN08	1 - 11 1/2	23.9	32	36
VSTN10	1.1/4 - 11 1/2	24.6	32.5	46
VSTN12	1.1/2 - 11 1/2	25.4	35	50
VSTN16	2 - 11 1/2	26.2	38	65

Socket head Plug
Male threads : NPT



Part No.	Male thread NPT	L1	S6
VSTIN00	1/16 - 27	7.8	4
VSTIN01	1/8 - 27	7.8	5
VSTIN02	1/4 - 18	12	6
VSTIN03	3/8 - 18	12	8
VSTIN04	1/2 - 14	16	10
VSTIN06	3/4 - 14	16.2	14
VSTIN08	1 - 11 1/2	20	14
VSTIN10	1.1/4 - 11 1/2	20	25.4
VSTIN12	1.1/2 - 11 1/2	20	30
VSTIN16	2 - 11 1/2	21	30

Standard material : Carbon Steel

For Stainless steel material, add prefix 316 - to the part code Example : 316 - VSTIN08

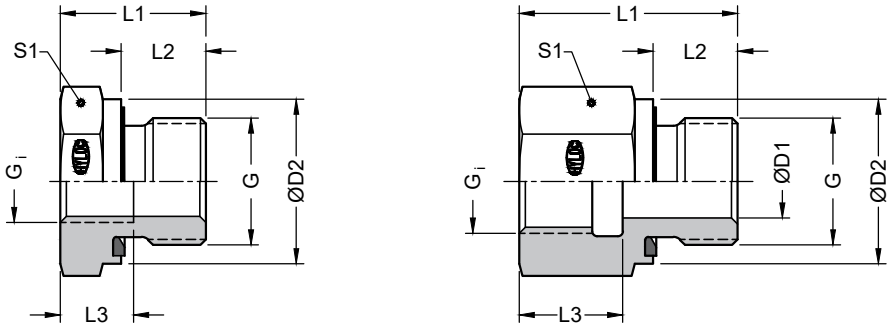
Standard surface treatment : Chrome free Alkaline Zinc Plating.

For Zinc Nickel surface treatment, add suffix - ZnNi Example : VSTIN08 - ZnNi

MFA- GE - G Male Female Adaptors

Male thread : BSPP (G) as per ISO 228
Female thread : BSPP (G)

Dimensions in mm



Pressure (bar)	Part No.	G Male thread	G_i Female thread	D1	D2	L1	L2	L3	S1
630	**MFAG01EG02**	G 1/8 A	G 1/4	4	14	31	8	17	19
630	**MFAG01EG03**	G 1/8 A	G 3/8	4	14	32	8	17	24
630	**MFAG02EG01**	G 1/4 A	G 1/8	5	19	28	12	12	19
630	**MFAG02EG03**	G 1/4 A	G 3/8	5	19	36	12	17	24
630	**MFAG02EG04**	G 1/4 A	G 1/2	5	19	40	12	20	30
630	**MFAG02EG06**	G 1/4 A	G 3/4	5	19	43	12	22	36
630	**MFAG03EG01**	G 3/8 A	G 1/8	--	22	22.5	12	8	22
630	**MFAG03EG02**	G 3/8 A	G 1/4	8	22	36	12	17	22
630	**MFAG03EG04**	G 3/8 A	G 1/2	8	22	41	12	20	30
400	**MFAG03EG06**	G 3/8 A	G 3/4	8	22	44	12	22	36
630	**MFAG04EG02**	G 1/2 A	G 1/4	--	27	24	14	12	27
630	**MFAG04EG03**	G 1/2 A	G 3/8	12	27	36	14	17	27
400	**MFAG04EG06**	G 1/2 A	G 3/4	12	27	46	14	22	36
400	**MFAG04EG08**	G 1/2 A	G 1	12	27	49	14	24.5	41
250	**MFAG04EG10**	G 1/2 A	G 1.1/4	10	27	53	14	26.5	55
400	**MFAG06EG02**	G 3/4 A	G 1/4	--	32	26	16	12	32
400	**MFAG06EG03**	G 3/4 A	G 3/8	--	32	26	16	12	32
400	**MFAG06EG04**	G 3/4 A	G 1/2	16	32	41	16	20	32
400	**MFAG06EG08**	G 3/4 A	G 1	16	32	51	16	24.5	41
250	**MFAG06EG10**	G 3/4 A	G 1.1/4	16	32	55	16	26.5	55
250	**MFAG06EG12**	G 3/4 A	G 1.1/2	16	32	57	16	28.5	60
400	**MFAG08EG02**	G1 A	G 1/4	--	40	29	18	12	41
400	**MFAG08EG03**	G1 A	G 3/8	--	40	29	18	12	41
400	**MFAG08EG04**	G1 A	G 1/2	--	40	29	18	14	41
400	**MFAG08EG06**	G1 A	G 3/4	20	40	47	18	22	41
250	**MFAG08EG10**	G1 A	G 1.1/4	20	40	57	18	26.5	55
250	**MFAG08EG12**	G1 A	G 1.1/2	20	40	59	18	28.5	60
250	**MFAG10EG04**	G1.1/4 A	G $\frac{1}{2}$	--	50	32	20	14	50
250	**MFAG10EG06**	G1.1/4 A	G $\frac{3}{4}$	--	50	32	20	16	50
250	**MFAG10EG08**	G1.1/4 A	G 1	25	50	52	20	24.5	50
250	**MFAG10EG12**	G1.1/4 A	G 1.1/2	25	50	60	20	28.5	60
250	**MFAG12EG04**	G1.1/2 A	G 1/2	--	55	36	22	14	55
250	**MFAG12EG06**	G1.1/2 A	G 3/4	--	55	36	22	16	55
250	**MFAG12EG08**	G1.1/2 A	G 1	--	55	36	22	18	55
250	**MFAG12EG10**	G1.1/2 A	G 1.1/4	32	55	58	22	26.5	55

Standard material : Carbon Steel

For Stainless steel material, add prefix 316 - to the part code Example : 316 - MFAG08EG06

Standard surface treatment : Chrome free Alkaline Zinc Plating.

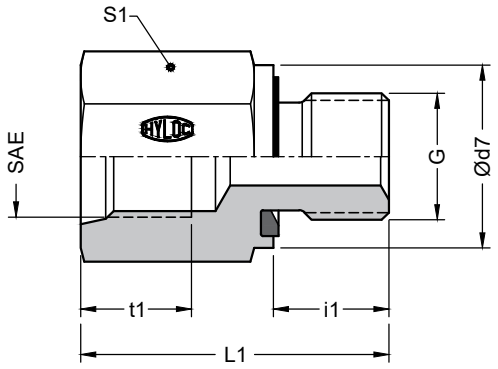
For Zinc Nickel surface treatment, add suffix - ZnNi Example : MFAG08EG06 - ZnNi

MFA- GE - S Male Female Adaptors

Male thread : BSPP (G) as per ISO 228
DIN 3852-Part 11 with Elastomeric seal

Female thread : UN/UNF (SAE)

Dimensions in mm



Pressure (bar)	Part No.	G Male thread	Female SAE Class 2B	Ød7	i1	t1	L1	S1
350	**MFAG01ES02**	G 1/8 A	5/16" - 24	14	8	10	24	14
350	**MFAG01ES03**	G 1/8 A	3/8" - 24	14	8	10	24	17
350	**MFAG02ES04**	G 1/4 A	7/16" - 20	19	12	11.5	30	19
350	**MFAG02ES05**	G 1/4 A	1/2" - 20	19	12	11.5	32	19
350	**MFAG02ES06**	G 1/4 A	9/16" - 18	19	12	13	34	22
350	**MFAG03ES08**	G 3/8 A	3/4" - 16	22	12	14	36	27
350	**MFAG04ES10**	G 1/2 A	7/8" - 14	27	14	16.5	42	30
350	**MFAG06ES12**	G 3/4 A	1.1/16" - 12	32	16	19	45	36
350	**MFAG08ES14**	G1 A	1.3/16" - 12	40	18	19	50	41
350	**MFAG08ES16**	G1 A	1.5/16" - 12	40	18	19	50	41
350	**MFAG10ES20**	G 1.1/4 A	1.5/8" - 12	50	20	19	53	55
350	**MFAG12ES24**	G 1.1/2 A	1.7/8" - 12	55	22	19	55	60
350	**MFAG16ES32**	G2 A ✻	2.1/2" - 12	75	24	19	62	75

✻ Thread size - G2 is not included in DIN 3852 Part 11

Standard material : Carbon Steel

For Stainless steel material, add prefix 316 - to the part code Example : 316 - MFAG08ES14

Standard surface treatment : Chrome free Alkaline Zinc Plating.

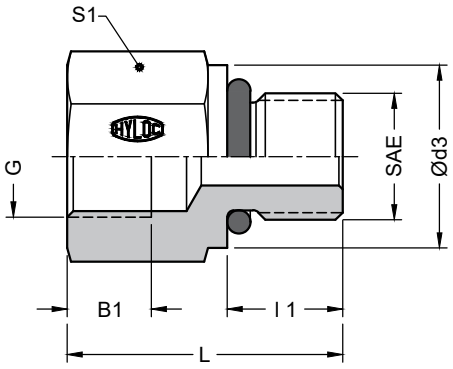
For Zinc Nickel surface treatment, add suffix - ZnNi Example : MFAG08ES14 - ZnNi

MFA- S - G Male Female Adaptors

Male thread : UN/UNF (SAE)
with O-Ring sealing (NBR 90 Shore)

Female thread : BSPP (G)

Dimensions in mm



Pressure (bar)	Part No.	Male SAE Class 2A	Female thread 'G'	Ød3	l 1	B1	L	S1	O-Ring
350	**MFAS02G01**	5/16" - 24	G 1/8	11	7.5	9	24	17	6.07 x 1.63
350	**MFAS03G01**	3/8" - 24	G 1/8	13	7.5	9	24	17	7.65 x 1.63
350	**MFAS04G02**	7/16" - 20	G 1/4	14.5	9	13	32	22	8.92 x 1.83
350	**MFAS05G02**	1/2" - 20	G 1/4	16	9	13	32	22	10.52 x 1.83
350	**MFAS06G02**	9/16" - 18	G 1/4	17.5	10	13	34	22	11.89 x 1.98
350	**MFAS08G03**	3/4" - 16	G 3/8	22	11	13	34	27	16.36 x 2.21
350	**MFAS10G04**	7/8" - 14	G 1/2	25.5	13	15	40	30	19.18 x 2.46
350	**MFAS12G06**	1.1/16" - 12	G 3/4	32	15	17	45	36	23.47 x 2.95
350	**MFAS14G08**	1.3/16" - 12	G1	35	15	19	50	46	26.62 x 2.95
350	**MFAS16G08**	1.5/16" - 12	G1	38	15	19	50	46	29.74 x 2.95
350	**MFAS20G10**	1.5/8" - 12	G 1.1/4	48	15	21	55	55	37.47 x 3.00
350	**MFAS24G12**	1.7/8" - 12	G 1.1/2	54	15	23	55	60	43.69 x 3.00
350	**MFAS32G16**	2.1/2" - 12	G2	70	15	25	60	75	59.36 x 3.00

Standard material : Carbon Steel

For Stainless steel material, add prefix 316 - to the part code Example : 316 - MFAS14G08

Standard surface treatment : Chrome free Alkaline Zinc Plating.

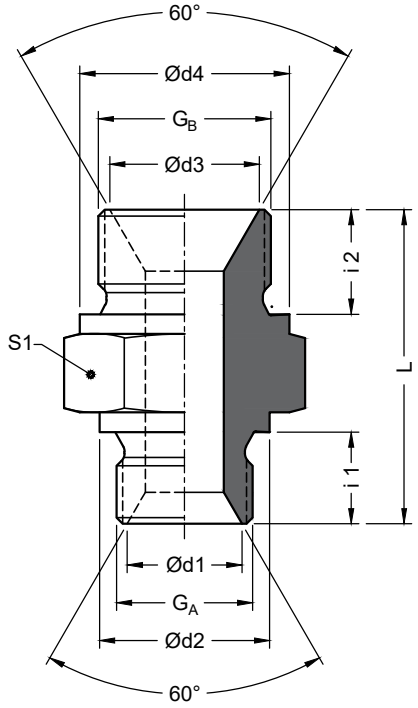
For Zinc Nickel surface treatment, add suffix - ZnNi Example : MFAS14G08 - ZnNi

HA - G Hose Adaptors

Hose Adaptors as per BS 5200

Dimensions in mm

Male threads : BSPP (G) as per ISO 228



Pressure (bar)	Part No.	G_A	G_B	Ød1	Ød2	Ød3	Ød4	i 1	i 2	L	S1
350	**HAG01G01**	G 1/8 A	G 1/8 A	7.5	14	7.5	14	8	8	26	14
350	**HAG01G02**	G 1/8 A	G 1/4 A	7.5	14	10.4	18	8	11	29.5	19
775	**HAG02G02**	G 1/4 A	G 1/4 A	10.4	18	10.4	18	11	11	33	19
690	**HAG02G03**	G 1/4 A	G 3/8 A	10.4	18	14	22	11	12	36.5	22
515	**HAG02G04**	G 1/4 A	G 1/2 A	10.4	18	17.5	26	11	14	39	27
690	**HAG03G03**	G 3/8 A	G 3/8 A	14	22	14	22	12	12	38	22
515	**HAG03G04**	G 3/8 A	G 1/2 A	14	22	17.5	26	12	14	40.5	27
430	**HAG03G06**	G 3/8 A	G 3/4 A	14	22	22.9	32	12	16	44.5	32
515	**HAG04G04**	G 1/2 A	G 1/2 A	17.5	26	17.5	26	14	14	43	27
430	**HAG04G06**	G 1/2 A	G 3/4 A	17.5	26	22.9	32	14	16	47	32
345	**HAG04G08**	G 1/2 A	G 1 A	17.5	26	28.7	39	14	19	50	41
430	**HAG06G06**	G 3/4 A	G 3/4 A	22.9	32	22.9	32	16	16	49	32
345	**HAG06G08**	G 3/4 A	G 1 A	22.9	32	28.7	39	16	19	52	41
345	**HAG06G10**	G 3/4 A	G 1.1/4 A	22.9	32	36.8	49	16	20	57	50
345	**HAG08G08**	G 1 A	G 1 A	28.7	39	28.7	39	19	19	55	41
345	**HAG08G10**	G 1 A	G 1.1/4 A	28.7	39	36.8	49	19	20	60	50
345	**HAG08G12**	G 1 A	G 1.1/2 A	28.7	39	42.7	55	19	22	63	55
345	**HAG10G10**	G1.1/4 A	G 1.1/4 A	36.8	49	36.8	49	20	20	61	50
345	**HAG10G12**	G1.1/4 A	G 1.1/2 A	36.8	49	42.7	55	20	22	64	55
345	**HAG12G12**	G1.1/2 A	G 1.1/2 A	42.7	55	42.7	55	22	22	66	55

Standard material : Carbon Steel

For Stainless steel material, add prefix 316 - to the part code Example : 316 - HAG08G10

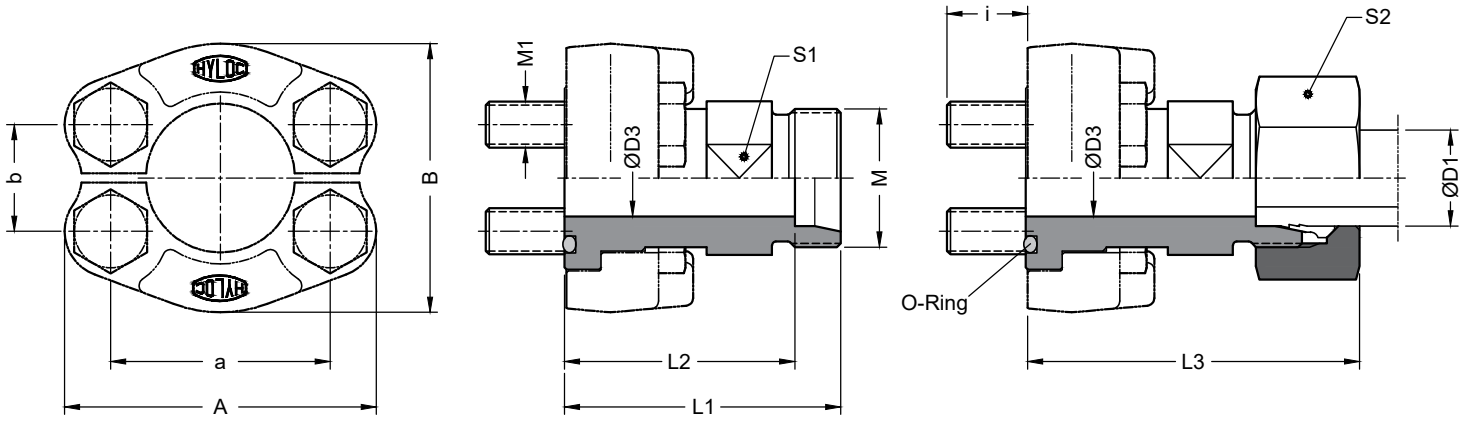
Standard surface treatment : Chrome free Alkaline Zinc Plating.

For Zinc Nickel surface treatment, add suffix - ZnNi Example : HAG08G10 - ZnNi

GFS Swivel flange connections

Mounting Interface conforms to ISO 6162 - 1

Dimensions in mm



Standard Pressure Series (Code 61)

Part No. **Body**	Part No. **Assembly**	Pr. (bar)	D1 ⌖	D3	M	Flange Nominal Size	Nominal DN Size	A	a	B	b	i	O Ring ID x CSD	Screw Size (10.9) M1
GFS3215XL	**GFS3215PL**	315	15	12	M22x1.5	1/2	13	54	38.1	46	17.5	12	19.0 x 3.55	M8 x 25
GFS3216XS	**GFS3216PS**	350	16	12	M24x1.5									
GFS3318XL	**GFS3318PL**	315	18	15	M26x1.5	3/4	19	65	47.6	52	22.3	16	25.0 x 3.55	M10 x 30
GFS3322XL	**GFS3322PL**	160	22	19	M30x2.0									
GFS3320XS	**GFS3320PS**	350	20	16	M30x2.0									
GFS3325XS	**GFS3325PS**	350	25	17	M36x2.0									
GFS3428XL	**GFS3428PL**	160	28	24	M36x2.0	1	25	70	52.4	59	26.2	14	32.5 x 3.55	M10 x 30
GFS3430XS	**GFS3430PS**	350	30	24	M42x2.0									
GFS3535XL	**GFS3535PL**	160	35	30	M45x2.0	1.1/4	32	79	58.7	73	30.2	16	37.5 x 3.55	M10 x 30
GFS3525XS	**GFS3525PS**	280	25	20	M36x2.0									
GFS3530XS	**GFS3530PS**	280	30	25	M42x2.0									
GFS3538XS	**GFS3538PS**	280	38	28	M52x2.0									
GFS3642XL	**GFS3642PL**	160	42	36	M52x2.0	1.1/2	38	94	69.9	83	35.7	19	47.5 x 3.55	M12 x 35
GFS3638XS	**GFS3638PS**	210	38	32	M52x2.0									

Part No. **Body**	Part No. **Assembly**	Pr. (bar)	D1 ⌖	L1	L2	L3	S1	S2
GFS3215XL	**GFS3215PL**	315	15	48	41	59.5	24	27
GFS3216XS	**GFS3216PS**	350	16	50	41.5	63.0	24	30
GFS3318XL	**GFS3318PL**	315	18	53	45.5	65.0	30	32
GFS3322XL	**GFS3322PL**	160	22	53	45.5	65.5	30	36
GFS3320XS	**GFS3320PS**	350	20	57	46.5	72.0	30	36
GFS3325XS	**GFS3325PS**	350	25	57	45	73.0	30	46
GFS3428XL	**GFS3428PL**	160	28	54	46.5	67.5	36	41
GFS3430XS	**GFS3430PS**	350	30	63	49.5	80.5	36	50
GFS3535XL	**GFS3535PL**	160	35	58	47.5	73.5	41	50
GFS3525XS	**GFS3525PS**	280	25	60	48	76.0	41	46
GFS3530XS	**GFS3530PS**	280	30	62	48.5	79.5	41	50
GFS3538XS	**GFS3538PS**	280	38	66	50	84.5	46	60
GFS3642XL	**GFS3642PL**	160	42	64	53	79.5	46	60
GFS3638XS	**GFS3638PS**	210	38	70	54	88.5	46	60

Note:

Split flanges are not in the scope of supply.

While ordering these assemblies along with Split flanges, add suffix - **SFS** to the assembly part numbers.

Example : **GFS3430PS-SFS**

While ordering these assemblies along with Split flanges and also mounting hardwares, further add suffix - **BKM** to the assembly part numbers.

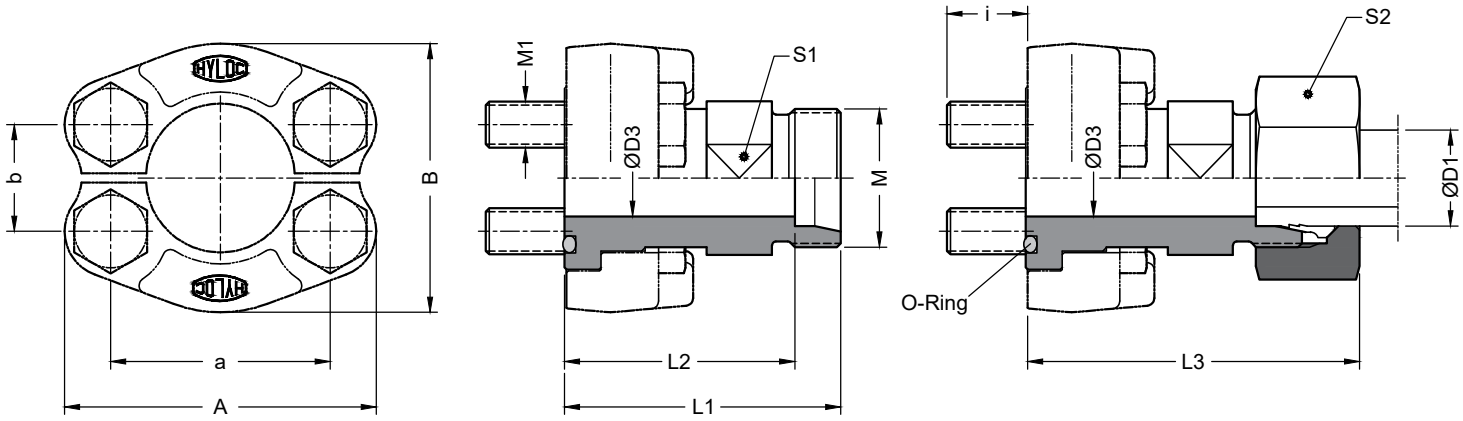
Example : **GFS3430PS-SFS/BKM**

Screw lengths are calculated for steel. Use of other material require different screw lengths.

GFS Swivel flange connections

Mounting Interface conforms to ISO 6162 - 2

Dimensions in mm



High Pressure Series (Code 62)

Part No. **Body**	Part No. **Assembly**	Pr. (bar)	D1 ⊕	D3	M	Flange Nominal Size	Nominal DN Size	A	a	B	b	i	O Ring ID x CSD	Screw Size (10.9) M1
GFS6216XS	**GFS6216PS**	400	16	12	M24x1.5	1/2	13	56	40.5	48	18.2	14	19.0 x 3.55	M8 x 30
GFS6316XS	**GFS6316PS**	400	16	12	M24x1.5	3/4	19	71	50.8	60	23.8	16	25.0 x 3.55	M10 x 35
GFS6320XS	**GFS6320PS**	400	20	16	M30x2.0									
GFS6325XS	**GFS6325PS**	400	25	17	M36x2.0									
GFS6425XS	**GFS6425PS**	400	25	20	M36x2.0	1	25	81	57.2	70	27.8	21	32.5 x 3.55	M12 x 45
GFS6430XS	**GFS6430PS**	400	30	24	M42x2.0									
GFS6530XS	**GFS6530PS**	400	30	25	M42x2.0	1.1/4	32	95	66.6	78	31.8	18	37.5 x 3.55	M12 x 45
GFS6538XS	**GFS6538PS**	315	38	30	M52x2.0									
GFS6638XS	**GFS6638PS**	315	38	30	M52x2.0	1.1/2	38	113	79.3	95	36.5	25	47.5 x 3.55	M16 x 55

Part No. **Body**	Part No. **Assembly**	Pr. (bar)	D1 ⊕	L1	L2	L3	S1	S2
GFS6216XS	**GFS6216PS**	400	16	53.0	44.5	66.0	24	30
GFS6316XS	**GFS6316PS**	400	16	59.0	50.5	72.0	30	30
GFS6320XS	**GFS6320PS**	400	20	61.0	50.5	76.0	30	36
GFS6325XS	**GFS6325PS**	400	25	63.0	51.0	79.0	30	46
GFS6425XS	**GFS6425PS**	400	25	72.0	60.0	88.0	36	46
GFS6430XS	**GFS6430PS**	400	30	74.0	60.5	91.5	36	50
GFS6530XS	**GFS6530PS**	400	30	79.0	65.5	96.5	41	50
GFS6538XS	**GFS6538PS**	315	38	83.0	67.0	101.5	41	60
GFS6638XS	**GFS6638PS**	315	38	89.0	73.0	107.5	46	60

Note:

Split flanges are not in the scope of supply.

While ordering these assemblies along with Split flanges, add suffix - **SFS** to the assembly part numbers.

Example : **GFS6430PS-SFS**

While ordering these assemblies along with Split flanges and also mounting hardwares, further add suffix - **BKM** to the assembly part numbers.

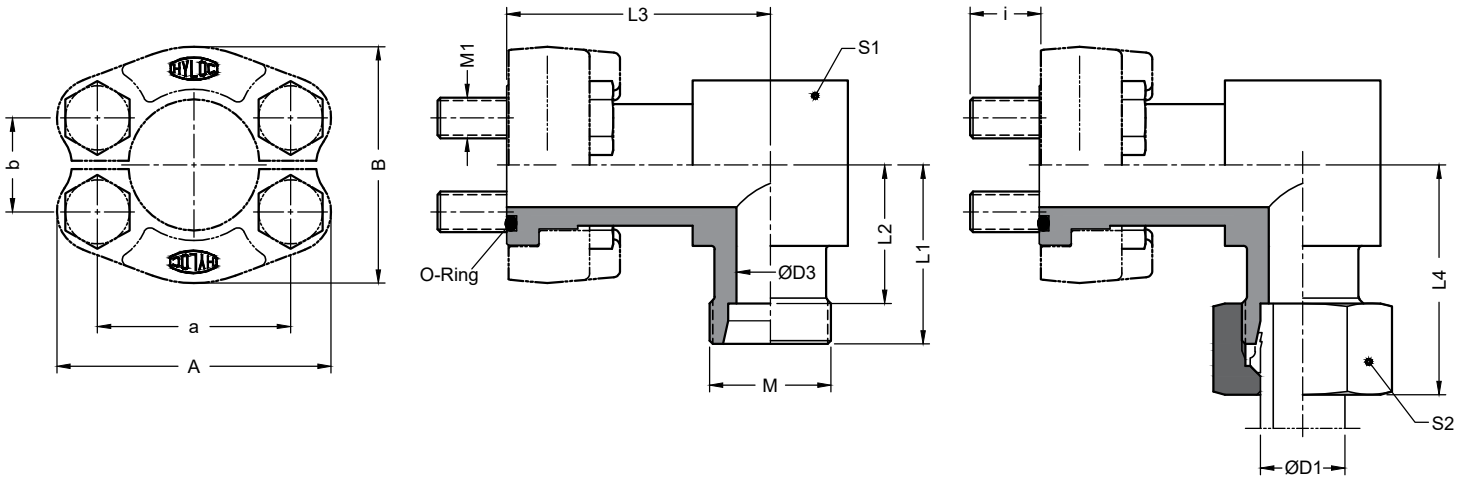
Example : **GFS6430PS-SFS/BKM**

Screw lengths are calculated for steel. Use of other material require different screw lengths.

WFS Elbow Swivel flange connections

Mounting Interface conforms to ISO 6162 - 1

Dimensions in mm



Standard Pressure Series (Code 61)

Part No. **Body**	Part No. **Assembly**	Pr. (bar)	D1 ⌖	D3	M	Flange Nominal Size	Nominal DN Size	A	a	B	b	i	O Ring ID x CSD	Screw Size (10.9) M1
WFS3215XL	**WFS3215PL**	315	15	12	M22x1.5	1/2	13	54	38.1	46	17.5	12	19.0 x 3.55	M8 x 25
WFS3216XS	**WFS3216PS**	350	16	12	M24x1.5									
WFS3318XL	**WFS3318PL**	315	18	15	M26x1.5	3/4	19	65	47.6	52	22.3	16	25.0 x 3.55	M10 x 30
WFS3322XL	**WFS3322PL**	160	22	19	M30x2.0									
WFS3320XS	**WFS3320PS**	350	20	16	M30x2.0									
WFS3325XS	**WFS3325PS**	350	25	17	M36x2.0									
WFS3428XL	**WFS3428PL**	160	28	24	M36x2.0	1	25	70	52.4	59	26.2	14	32.5 x 3.55	M10 x 30
WFS3430XS	**WFS3430PS**	350	30	24	M42x2.0									
WFS3535XL	**WFS3535PL**	160	35	30	M45x2.0	1.1/4	32	79	58.7	73	30.2	16	37.5 x 3.55	M10 x 30
WFS3525XS	**WFS3525PS**	280	25	20	M36x2.0									
WFS3530XS	**WFS3530PS**	280	30	25	M42x2.0									
WFS3538XS	**WFS3538PS**	280	38	28	M52x2.0									
WFS3642XL	**WFS3642PL**	160	42	36	M52x2.0	1.1/2	38	94	69.9	83	35.7	19	47.5 x 3.55	M12 x 35
WFS3638XS	**WFS3638PS**	210	38	32	M52x2.0									

Part No. **Body**	Part No. **Assembly**	Pr. (bar)	D1 ⌖	L1	L2	L3	L4	S1	S2
WFS3215XL	**WFS3215PL**	315	15	36.0	29.0	45.5	47.5	27	27
WFS3216XS	**WFS3216PS**	350	16	38.0	29.5	45.5	51.0	27	30
WFS3318XL	**WFS3318PL**	315	18	39.0	31.5	52.5	51.0	27	32
WFS3322XL	**WFS3322PL**	160	22	41.0	33.5	54.0	53.5	30	36
WFS3320XS	**WFS3320PS**	350	20	43.0	32.5	54.0	58.0	30	36
WFS3325XS	**WFS3325PS**	350	25	45.0	33.0	57.0	60.0	36	46
WFS3428XL	**WFS3428PL**	160	28	44.0	36.5	57.0	57.5	36	41
WFS3430XS	**WFS3430PS**	350	30	50.0	36.5	62.0	67.5	46	50
WFS3535XL	**WFS3535PL**	160	35	87.0	46.5	69.0	102.5	46	50
WFS3525XS	**WFS3525PS**	280	25	55.0	43.0	69.0	71.0	46	46
WFS3530XS	**WFS3530PS**	280	30	57.0	43.5	69.0	74.5	46	50
WFS3538XS	**WFS3538PS**	280	38	59.0	43.0	73.5	77.5	55	60
WFS3642XL	**WFS3642PL**	160	42	58.0	47.0	73.5	73.5	55	60
WFS3638XS	**WFS3638PS**	210	38	64.0	48.0	73.5	82.5	55	60

Note :

Split flanges are not in the scope of supply.

While ordering these assemblies along with Split flanges, add suffix - **SFS** to the assembly part numbers.

Example : **WFS3430PS-SFS**

While ordering these assemblies along with Split flanges and also mounting hardwares, further add suffix - **BKM** to the assembly part numbers.

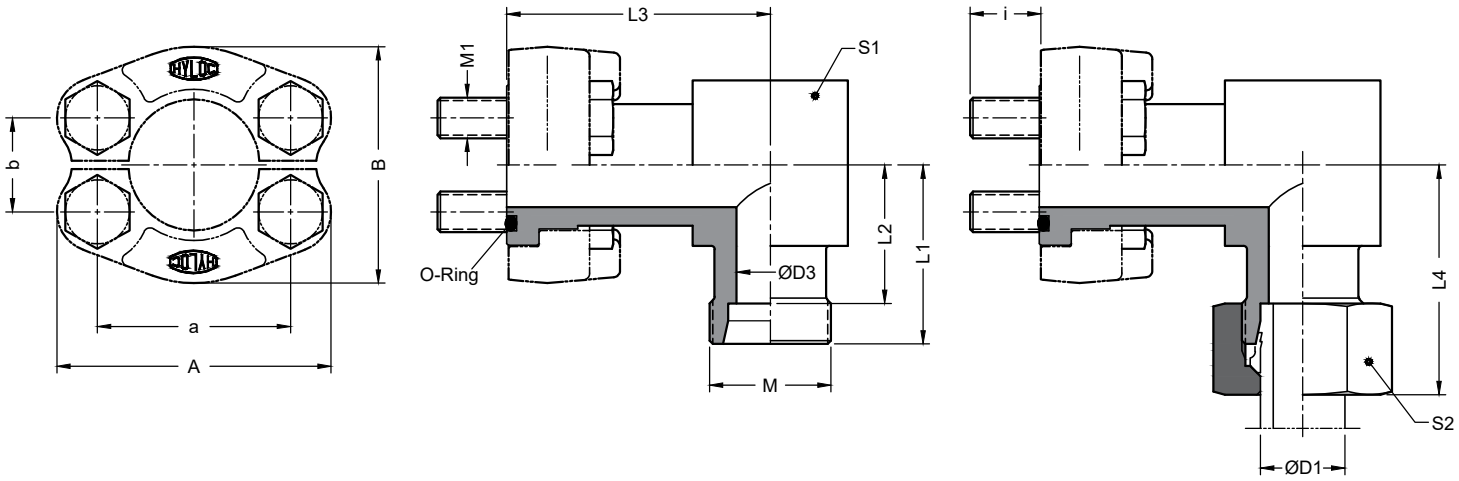
Example : **WFS3430PS-SFS/BKM**

Screw lengths are calculated for steel. Use of other material require different screw lengths.

WFS Elbow Swivel flange connections

Mounting Interface conforms to ISO 6162 - 2

Dimensions in mm



High Pressure Series (Code 62)

Part No. **Body**	Part No. **Assembly**	Pr. (bar)	D1 ⌖	D3	M	Flange Nominal Size	Nominal DN Size	A	a	B	b	i	O Ring ID x CSD	Screw Size (10.9) M1
WFS6216XS	**WFS6216PS**	400	16	12	M24x1.5	1/2	13	56	40.5	48	18.2	14	19.0 x 3.55	M8 x 30
WFS6316XS	**WFS6316PS**	400	16	12	M24x1.5	3/4	19	71	50.8	60	23.8	16	25.0 x 3.55	M10 x 35
WFS6320XS	**WFS6320PS**	400	20	16	M30x2.0									
WFS6325XS	**WFS6325PS**	400	25	17	M36x2.0									
WFS6425XS	**WFS6425PS**	400	25	20	M36x2.0	1	25	81	57.2	70	27.8	21	32.5 x 3.55	M12 x 45
WFS6430XS	**WFS6430PS**	400	30	24	M42x2.0									
WFS6530XS	**WFS6530PS**	400	30	25	M42x2.0	1.1/4	32	95	66.6	78	31.8	18	37.5 x 3.55	M12 x 45
WFS6538XS	**WFS6538PS**	315	38	30	M52x2.0									
WFS6638XS	**WFS6638PS**	315	38	30	M52x2.0	1.1/2	38	113	79.3	95	36.5	25	47.5 x 3.55	M16 x 55

Part No. **Body**	Part No. **Assembly**	Pr. (bar)	D1 ⌖	L1	L2	L3	L4	S1	S2
WFS6216XS	**WFS6216PS**	400	16	38.0	29.5	50.5	51.0	27	30
WFS6316XS	**WFS6316PS**	400	16	45.0	36.5	62.0	58.0	36	30
WFS6320XS	**WFS6320PS**	400	20	46.0	35.5	62.0	61.0	36	36
WFS6325XS	**WFS6325PS**	400	25	48.0	36.0	62.0	64.0	36	46
WFS6425XS	**WFS6425PS**	400	25	53.0	41.0	78.0	69.0	46	46
WFS6430XS	**WFS6430PS**	400	30	55.0	41.5	78.0	72.5	46	50
WFS6530XS	**WFS6530PS**	400	30	58.0	44.5	85.0	75.5	46	50
WFS6538XS	**WFS6538PS**	315	38	61.0	45.0	89.5	79.5	55	60
WFS6638XS	**WFS6638PS**	315	38	72.0	56.0	95.5	90.5	55	60

Note:

Split flanges are not in the scope of supply.

While ordering these assemblies along with Split flanges, add suffix - **SFS** to the assembly part numbers.

Example : **WFS6430PS-SFS**

While ordering these assemblies along with Split flanges and also mounting hardwares, further add suffix - **BKM** to the assembly part numbers.

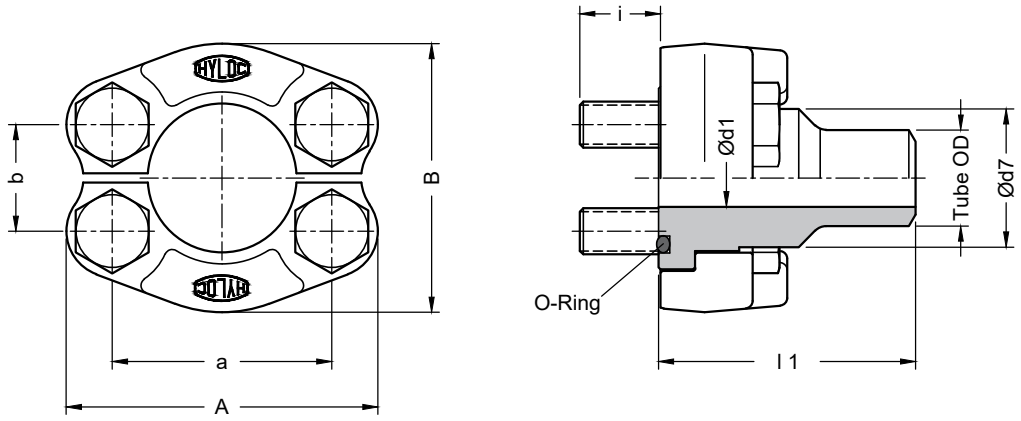
Example : **WFS6430PS-SFS/BKM**

Screw lengths are calculated for steel. Use of other material require different screw lengths.

AS** Swivel flange connections

Mounting Interface conforms to ISO 6162 - 1

Dimensions in mm



Standard Pressure Series (Code 61)

Part No. **Weldneck**	Part No. **Assembly**	Pressure (bar)	Nominal Size	Nominal DN Size	Tube Size OD x thickness	A	a	B	b	i	Ød1	Ød7	l 1	O Ring ID x CSD	Screw Size
WN - AS 3215L	**AS3215L**	323	1/2	13	15 x 2.0	54	38.1	46	17.5	12	11	23.9	38	19.0 x 3.55	M8 x 25
WN - AS3216S	**AS3216S**	350			16 x 3.0						10				
WN - AS3318L	**AS3318L**	210	3/4	19	18 x 1.5	65	47.6	52	22.3	16	15	31.8	50	25.0 x 3.55	M10 x 30
WN - AS3322L	**AS3322L**	228			22 x 2.0						18				
WN - AS3320S	**AS3320S**	350			20 x 3.0						14				
WN - AS3325S	**AS3325S**	350			25 x 4.0						17				
WN - AS3428L	**AS3428L**	182	1	25	28 x 2.0	70	52.4	59	26.2	14	24	38.0	50	32.5 x 3.55	M10 x 30
WN - AS3430S	**AS3430S**	350			30 x 4.5						21				
WN - AS3535L	**AS3535L**	147	1.1/4	32	35 x 2.0	79	58.7	73	30.2	16	31	43.0	55	37.5 x 3.55	M10 x 30
WN - AS3525S	**AS3525S**	280			25 x 3.0						19				
WN - AS3530S	**AS3530S**	280			30 x 4.0						22				
WN - AS3538S	**AS3538S**	280			38 x 5.0						28				
WN - AS3642L	**AS3642L**	182	1.1/2	38	42 x 3.0	94	69.9	83	35.7	19	36	50.0	57	47.5 x 3.55	M12 x 35
WN - AS3638S	**AS3638S**	210			38 x 4.0						30				
WN - AS3850L	**AS3850L**	210	2	51	50 x 6.0	102	77.8	97	42.9	19	38	62.0	62	56.0 x 3.55	M12 x 35
WN - AS3865L	**AS3865L**	210			65 x 8.0						49	65.0			

While ordering these assemblies along with mounting hardwares, add suffix - **BKM** to the assembly part numbers.

Example : **AS3325S - BKM** - for Metric Bolts

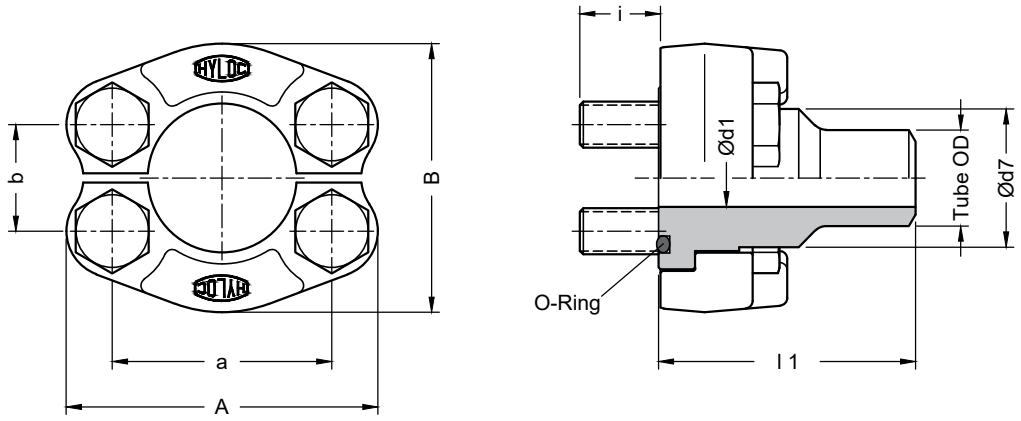
Metric screws of property class 10.9

Screw lengths are calculated for steel. Use of other material require different screw lengths.

AS** Swivel flange connections

Mounting Interface conforms to ISO 6162 - 2

Dimensions in mm



High Pressure Series (Code 62)

Part No. **Weldneck**	Part No. **Assembly**	Pressure (bar)	Nominal Size	Nominal DN Size	Tube Size OD x thickness	A	a	B	b	i	Ød1	Ød7	l 1	O Ring ID x CSD	Screw Size
WN - AS6216S	**AS6216S**	415	1/2	13	16 x 3.0	56	40.5	48	18.2	14	10	23.9	41	19.0 x 3.55	M8 x 30
WN - AS6316S	**AS6316S**	415	3/4	19	16 x 3.0	71	50.8	60	23.8	16	10	31.8	55	25.0 x 3.55	M10 x 35
WN - AS6320S	**AS6320S**	415			20 x 4.0						12				
WN - AS6325S	**AS6325S**	415			25 x 5.0						15				
WN - AS6425S	**AS6425S**	415	1	25	25 x 5.0	81	57.2	70	27.8	21	15	38.0	67	32.5 x 3.55	M12 x 45
WN - AS6430S	**AS6430S**	323			30 x 4.0						22				
WN - AS6530S	**AS6530S**	323	1.1/4	32	30 x 4.0	95	66.7	78	31.8	18	18	43.7	78	37.5 x 3.55	M12 x 45
WN - AS6538S	**AS6538S**	415			38 x 5.0						22				
WN - AS6638S	**AS6638S**	319	1.1/2	38	38 x 5.0	113	79.4	95	36.5	25	18	50.8	85	47.5 x 3.55	M16 x 55
WN - AS6850S	**AS6850S**	415	2	51	50 x 9.0	133	96.8	114	44.5	33	28	66.6	116	56.0 x 3.55	M20 x 70
WN - AS6865S	**AS6865S**	300			65 x 8.0						22				

While ordering these assemblies along with mounting hardwares, add suffix - **BKM** to the assembly part numbers.

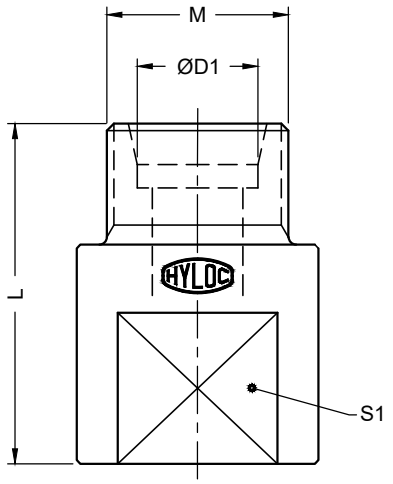
Example : **AS6425S - BKM** - for Metric Bolts

Metric screws of property class 10.9

Screw lengths are calculated for steel. Use of other material require different screw lengths.

PST Pre Setting Tools

Dimensions in mm



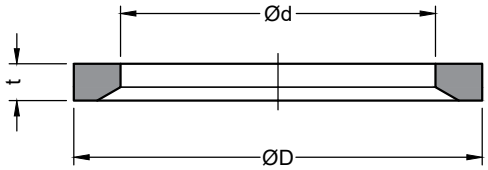
Part No.	D1 ⊕	M	L	S1
PST06L	06	M12 x 1.5	45	24
PST08L	08	M14 x 1.5	45	24
PST10L	10	M16 x 1.5	45	24
PST12L	12	M18 x 1.5	45	24
PST15L	15	M22 x 1.5	45	24
PST18L	18	M26 x 1.5	45	24
PST22L	22	M30 x 2.0	60	50
PST28L	28	M36 x 2.0	60	50
PST35L	35	M45 x 2.0	60	50
PST42L	42	M52 x 2.0	60	50
PST06S	06	M14 x 1.5	45	24
PST08S	08	M16 x 1.5	45	24
PST10S	10	M18 x 1.5	45	24
PST12S	12	M20 x 1.5	45	24
PST16S	16	M24 x 1.5	45	24
PST20S	20	M30 x 2.0	60	50
PST25S	25	M36 x 2.0	60	50
PST30S	30	M42 x 2.0	60	50
PST38S	38	M52 x 2.0	60	50

ED Elastomeric Seal

Dimensions in mm

Elastomeric Seals (DIN 3869)

Soft seals for Male Stud ends



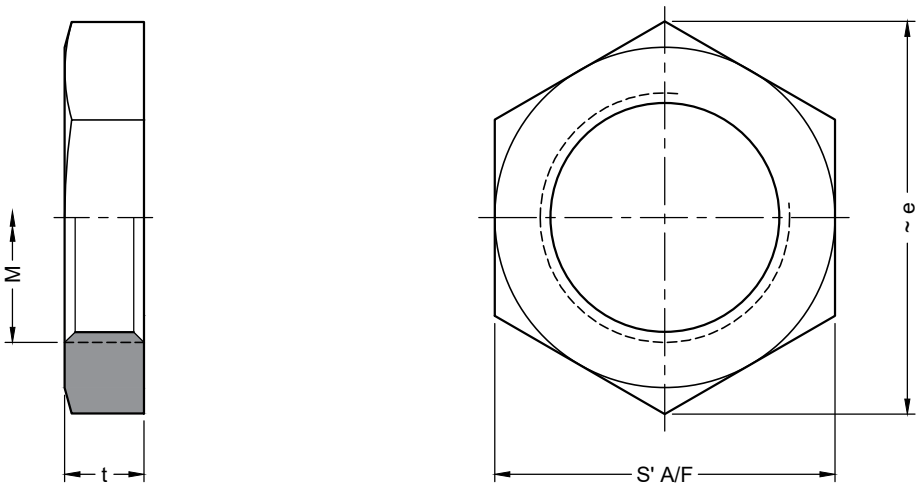
Part No. NBR	Part No. Viton	For Male Metric (M) threads	For Male BSPP (G) threads	Ød	ØD	t
ED10	**ED10 - V**	M10 x 1.0	G 1/8	8.4	11.9	1.0
ED12	**ED12 - V**	M12 x 1.5	---	9.8	14.4	1.5
ED14	**ED14 - V**	M14 x 1.5	G 1/4	11.6	16.5	1.5
ED16	**ED16 - V**	M16 x 1.5	---	13.8	18.9	1.5
ED17	**ED17 - V**	---	G 3/8	14.7	18.9	1.5
ED18	**ED18 - V**	M18 x 1.5	---	15.7	20.9	1.5
ED20	**ED20 - V**	M20 x 1.5	---	17.8	22.9	1.5
ED21	**ED21 - V**	---	G 1/2	18.5	23.9	1.5
ED22	**ED22 - V**	M22 x 1.5	---	19.6	24.3	1.5
ED27	**ED27 - V**	M26 x 1.5 M27 x 2.0	G 3/4	23.9	29.2	1.5
ED33	**ED33 - V**	M33 x 2.0	G 1	29.7	35.7	2.0
ED42	**ED42 - V**	M42 x 2.0	G1.1/4	38.8	45.8	2.0
ED48	**ED48 - V**	M48 x 2.0	G1.1/2	44.7	50.7	2.0

GM Lock nuts

Dimensions in mm

For Bulkhead type tube fittings

Dimensions in mm



Part No	M	t	S	~ e
GM12	M12 x 1.5	6	17	19.6
GM14	M14 x 1.5	6	19	21.9
GM16	M16 x 1.5	6	22	25.4
GM18	M18 x 1.5	6	24	27.7
GM20	M20 x 1.5	6	27	31.2
GM22	M22 x 1.5	7	30	34.6
GM24	M24 x 1.5	7	32	36.9
GM26	M26 x 1.5	8	36	41.6
GM30	M30 x 2.0	9	41	47.3
GM36	M36 x 2.0	9	46	53.1
GM42	M42 x 2.0	9	50	57.5
GM45	M45 x 2.0	9	55	63.5
GM52	M52 x 2.0	10	65	75.0

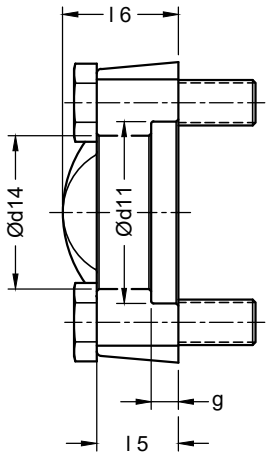
Pipe Flanges

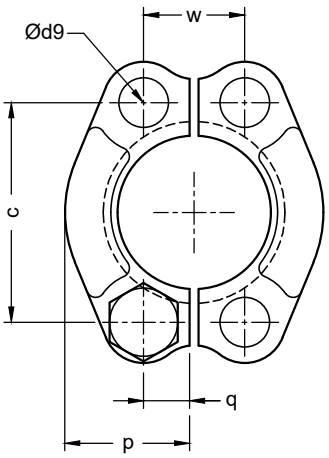
01	Split and Monoblock forged flanges	Datasheet
02	Buttweld Swivel Flanges - ISO 6162 (Standard Pr. Series)	Datasheet
03	Buttweld Swivel Flanges - ISO 6162 (High Pr. Series)	Datasheet
04	Buttweld Solid Flanges - ISO 6162 (Standard Pr. Series)	Datasheet
05	Buttweld Solid Flanges - ISO 6162 (High Pr. Series)	Datasheet
06	Socket weld Flanges - ISO 6162 (Standard Pr. Series)	Datasheet
07	Socket weld Flanges - ISO 6162 (High Pr. Series)	Datasheet
08	Blind Flanges - ISO 6162	Datasheet
09	Buttweld Swivel Flanges - ISO 6164 (PN 250 and PN 400)	Datasheet
10	Buttweld Solid Flanges - ISO 6164 (PN 250 and PN 400)	Datasheet
11	Blind Flanges - ISO 6164	Datasheet

SFS / MFS Split and Monoblock forged flanges

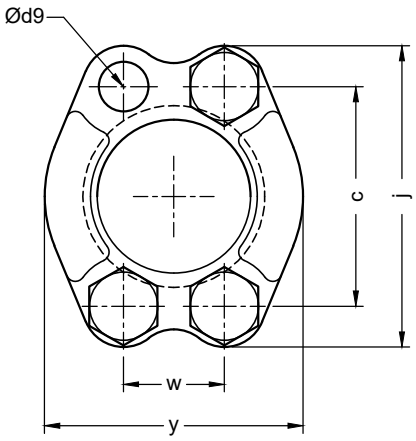
Mounting Interface conforms to ISO 6162 - 1

Dimensions in mm





Split Flanges : **SFS**



Monoblock Flanges : **MFS**

Standard Pressure Series (Code 61)

Part No. **Split Flanges**	Part No. **Monoblock**	Pressure (bar)	Nominal Size	Nominal DN Size	Ød11	Ød14	g	l 5	l 6	c	p	q	j	w	y
SFS 04	**MFS 04**	350	1/2	13	31	24.3	6.2	13	19	38.1	21.8	8	54	17.5	46
SFS 06	**MFS 06**	350	3/4	19	38.9	32.2	6.2	14	22	47.6	24.9	10	65	22.3	52
SFS 08	**MFS 08**	320	1	25	45.3	38.5	7.5	16	24	52.4	28.2	12	70	26.2	59
SFS 10	**MFS 10**	280	1.1/4	32	51.6	43.7	7.5	14	24	58.7	35.3	14	79	30.2	73
SFS 12	**MFS 12**	210	1.1/2	38	61.1	50.8	7.5	16	25	69.9	40.1	17	94	35.7	83
SFS 16	**MFS 16**	210	2	51	72.3	62.8	9.0	16	26	77.8	47.2	21	102	42.9	97
SFS 20	**MFS 20**	175	2.1/2	64	84.9	74.9	9.0	19	38	88.9	53.1	24	115	50.8	109
SFS 24	**MFS 24**	160	3	76	102.4	90.9	9.0	22	41	106.4	64.3	30	135	61.9	131
SFS 28	**MFS 28**	35	3.1/2	89	115.1	102.4	10.7	22	28	120.7	68.6	34	152	69.9	140
SFS 32	**MFS 32**	35	4	102	127.8	115.0	10.7	25	35	130.2	74.9	38	162	77.8	152
SFS 40	**MFS 40**	35	5	127	153.2	140.5	10.7	28	41	152.4	89.4	45	184	92.1	181

Part No. **Split Flanges**	Part No. **Monoblock**	Pressure (bar)	Nominal Size	Nominal DN Size	Ød9 for Metric	Ød9 for UNC	Metric bolt size	# Torque N / mm	UNC (Inch) bolt size	# Torque N/ mm
SFS 04	**MFS 04**	350	1/2	13	8.9	8.9	M8 x 25	32	5/16"-18 x 32	32
SFS 06	**MFS 06**	350	3/4	19	10.6	10.6	M10 x 30	70	3/8"-16 x 32	60
SFS 08	**MFS 08**	320	1	25	10.6	10.6	M10 x 30	70	3/8"-16 x 32	60
SFS 10	**MFS 10**	280	1.1/4	32	10.6	12	M10 x 30	70	7/16"-14 x 38	92
SFS 12	**MFS 12**	210	1.1/2	38	13.3	13.3	M12 x 35	130	1/2"-13 x 38	150
SFS 16	**MFS 16**	210	2	51	13.5	13.5	M12 x 35	130	1/2"-13 x 38	150
SFS 20	**MFS 20**	175	2.1/2	64	13.5	13.5	M12 x 40	130	1/2"-13 x 44	150
SFS 24	**MFS 24**	160	3	76	16.7	16.7	M16 x 50	295	5/8"-11 x 44	295
SFS 28	**MFS 28**	35	3.1/2	89	16.7	16.7	M16 x 50	295	5/8"-11 x 51	295
SFS 32	**MFS 32**	35	4	102	16.7	16.7	M16 x 50	295	5/8"-11 x 51	295
SFS 40	**MFS 40**	35	5	127	16.7	16.7	M16 x 55	295	5/8"-11 x 57	295

While ordering the flanges with mounting hardwares, add suffix - **BKM / BKU** to the flange part numbers.

Example : **SFS 08 - BKM** - for Metric Bolts

SFS 08 - BKU - for UNC (Inch) Bolts

Metric screws of property class 10.9

UNC (Inch) screws of grade 8 in accordance with SAE J429

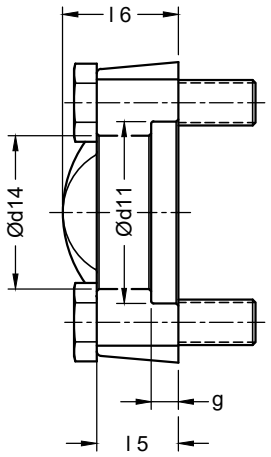
Screw lengths are calculated for steel. Use of other material require different screw lengths.

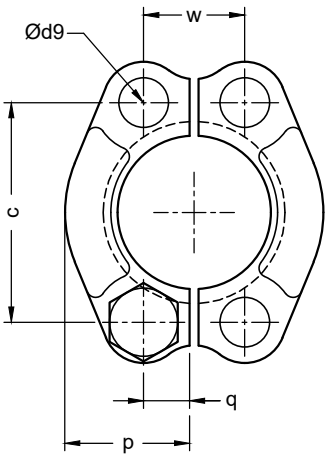
These torque values are only a guide when using lubricated screws, calculated with a coefficient of friction of 0.17
Net tightening torque depends on many factors, including lubrication, coating and surface finish

SFH / MFH Split and Monoblock forged flanges

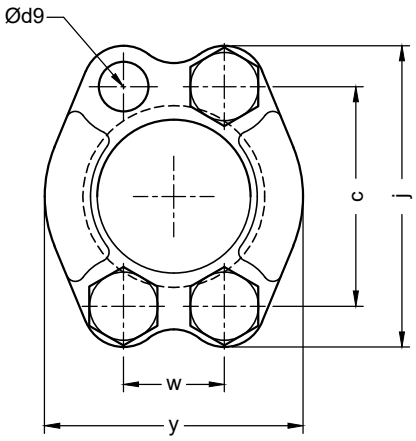
Mounting Interface conforms to ISO 6162 - 2

Dimensions in mm





Split Flanges : **SFH**



Monoblock Flanges : **MFH**

High Pressure Series (Code 62)

Part No. **Split Flanges**	Part No. **Monoblock**	Pressure (bar)	Nominal Size	Nominal DN Size	Ød11	Ød14	g	l 5	l 6	c	p	q	j	w	y
SFH 04	**MFH 04**	420	1/2	13	32.5	24.6	7.2	16	22	40.5	22.6	8	56	18.2	48
SFH 06	**MFH 06**	420	3/4	19	42.0	32.5	8.2	19	28	50.8	29.0	11	71	23.8	60
SFH 08	**MFH 08**	420	1	25	48.4	38.8	9.0	24	33	57.2	33.8	13	81	27.8	70
SFH 10	**MFH 10**	420	1.1/4	32	54.8	44.5	9.8	27	38	66.7	37.6	15	95	31.8	78
SFH 12	**MFH 12**	420	1.1/2	38	64.3	51.6	12.0	30	43	79.4	46.5	17	113	36.5	95
SFH 16	**MFH 16**	420	2	51	80.2	67.6	12.0	37	52	96.8	55.9	21	133	44.5	114
SFH 20	**MFH 20**	420	2.1/2	64	108.5	89.5	20	48	--	123.8	74	28	175	58.7	150
SFH 24	**MFH 24**	420	3	76	132.5	114.5	25	58	--	152.4	88	34	216	71.4	176

Part No. **Split Flanges**	Part No. **Monoblock**	Pressure (bar)	Nominal Size	Nominal DN Size	Ød9 for Metric	Ød9 for UNC	Metric bolt size	Torque N / mm	UNC (Inch) bolt size	Torque N/ mm
SFH 04	**MFH 04**	420	1/2	13	8.9	8.9	M8 x 30	32	5/16"-18 x 32	32
SFH 06	**MFH 06**	420	3/4	19	10.6	10.6	M10 x 35	70	3/8"-16 x 38	60
SFH 08	**MFH 08**	420	1	25	13.3	12	M12 x 45	130	7/16"-14 x 44	92
SFH 10	**MFH 10**	420	1.1/4	32	13.3	13.3	M12 x 45	130	1/2"-13 x 44	150
SFH 12	**MFH 12**	420	1.1/2	38	16.7	16.7	M16 x 55	295	5/8"-11 x 57	295
SFH 16	**MFH 16**	420	2	51	20.6	20.6	M20 x 70	550	3/4"-10 x 70	450
SFH 20	**MFH 20**	420	2.1/2	64	25	--	M24 x 80	550	--	--
SFH 24	**MFH 24**	420	3	76	31	--	M30 x 90	650	--	--

While ordering the flanges with mounting hardwares, add suffix - **BKM / BKU** to the flange part numbers.

Example : **SFH 08 - BKM** - for Metric Bolts

SFH 08 - BKU - for UNC (Inch) Bolts

Metric screws of property class 10.9

UNC (Inch) screws of grade 8 in accordance with SAE J429

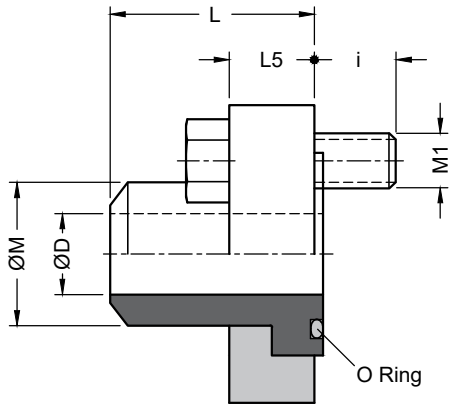
Screw lengths are calculated for steel. Use of other material require different screw lengths.

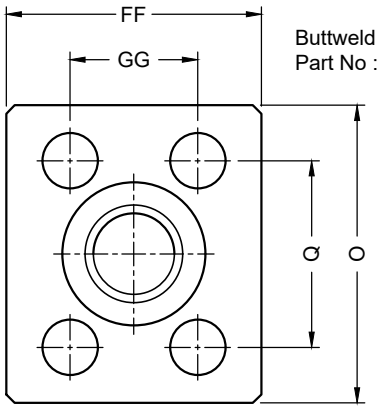
These torque values are only a guide when using lubricated screws, calculated with a coefficient of friction of 0.17
Net tightening torque depends on many factors, including lubrication, coating and surface finish

SAO / SAOC Buttweld Swivel flanges

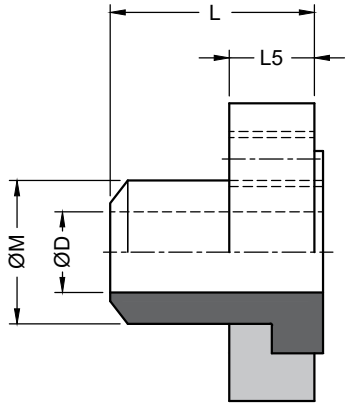
Mounting Interface conforms to ISO 6162

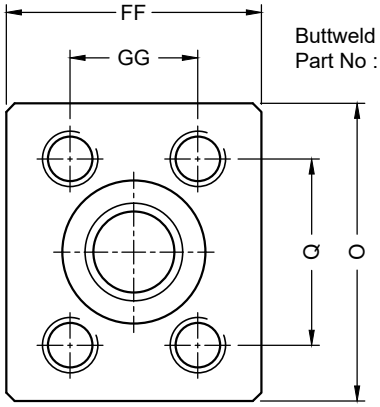
Dimensions in mm





Buttweld Swivel Flanges
Part No : **SAO**





Buttweld Swivel Counter Flanges
Part No : **SAOC**

Standard Pressure Series (Code 61)

Part No. Flanges	Part No. Counter Flanges	Flange Nominal Size	Pipe Sch	Pr. (bar)	ØM	ØD	O	Q	FF	GG	L5	i	L	O Ring ID x CSD	Screw Size (10.9) M1
SAO-21.3-80	**SAOC-21.3-80**	1/2"	80	288	21.3	14	54	38.1	46	17.5	13	12	46	19.0 x 3.55	M8 x 25
SAO-21.3-160	**SAOC-21.3-160**		160	345		12									
SAO-26.6-80	**SAOC-26.6-80**	3/4"	80	246	26.6	19	65	47.6	52	22.3	15	15	55	25.0 x 3.55	M10 x 30
SAO-26.6-160	**SAOC-26.6-160**		160	345		15									
SAO-33.4-80	**SAOC-33.4-80**	1"	80	246	33.4	24	70	52.4	59	26.2	15	15	55	32.5 x 3.55	M10 x 30
SAO-33.4-160	**SAOC-33.4-160**		160	345		21									
SAO-42.2-80	**SAOC-42.2-80**	1.1/4"	80	211	42.2	32	79	58.7	73	30.2	15	15	65	37.5 x 3.55	M10 x 30
SAO-42.2-160	**SAOC-42.2-160**		160	276		30									
SAO-48.3-80	**SAOC-48.3-80**	1.1/2"	80	197	48.3	38	94	69.9	83	35.7	17	18	65	47.5 x 3.55	M12 x 35
SAO-60.3-80	**SAOC-60.3-80**	2"	80	176	60.3	49	102	77.8	97	42.9	17	18	75	56.0 x 3.55	M12 x 35
SAO-60.3-160	**SAOC-60.3-160**		160	207		43									
SAO-73.0-40	**SAOC-73.0-40**	2.1/2"	40	134	73.0	63	114	88.9	109	50.8	22	18	75	69.0 x 3.55	M12 x 40
SAO-73.0-80	**SAOC-73.0-80**		80	172		59									
SAO-88.9-40	**SAOC-88.9-40**	3"	40	113	88.9	78	135	106.4	131	61.9	26	24	75	85.0 x 3.55	M16 x 50
SAO-88.9-80	**SAOC-88.9-80**		80	138		74									
SAO-101.6-40	**SAOC-101.6-40**	3.1/2"	40	34	101.6	90	152	120.7	140	69.9	26	24	75	97.5 x 3.55	M16 x 50
SAO-114.3-40	**SAOC-114.3-40**	4"	40	34	114.3	102	162	130.2	152	77.8	26	24	85	112.0 x 3.55	M16 x 50
SAO-141.3-40	**SAOC-141.3-40**	5"	40	34	141.3	128	184	152.4	181	92.1	31	24	85	136.0 x 3.55	M16 x 55

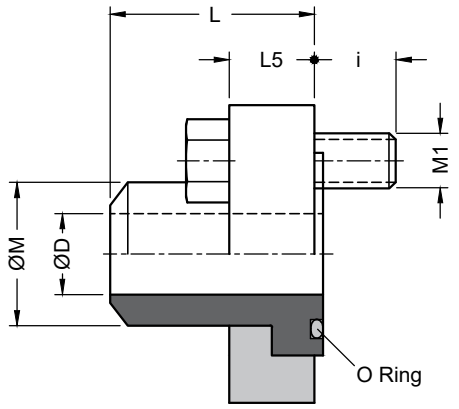
Mounting bolts or screws are not in scope of supply. While ordering the flanges with mounting hardwares, add suffix - BKM to the flange part numbers.

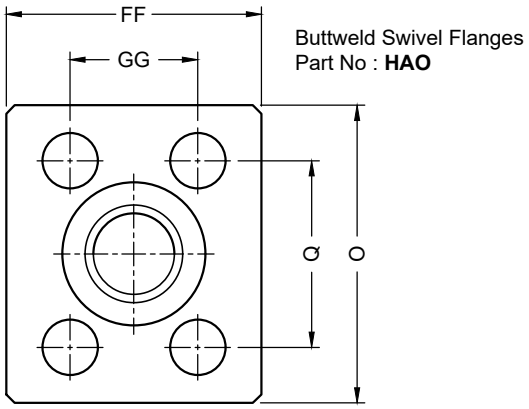
Example : **SAO-60.3-160 - BKM**

HAO / HAOC Buttweld Swivel flanges

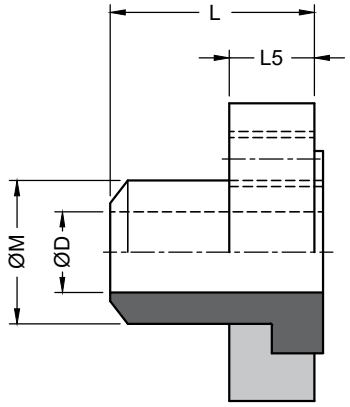
Mounting Interface conforms to ISO 6162

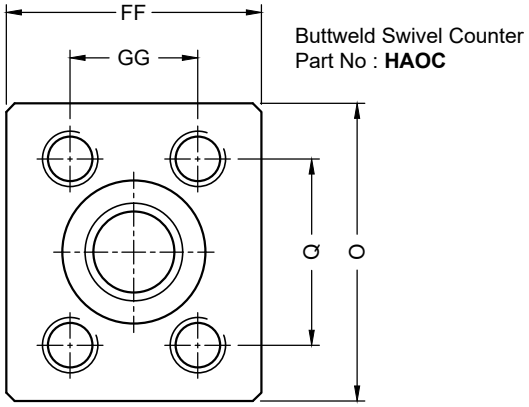
Dimensions in mm





Buttweld Swivel Flanges
Part No : **HAO**





Buttweld Swivel Counter Flanges
Part No : **HAOC**

High Pressure Series (Code 62)

Part No. Flanges	Part No. Counter Flanges	Flange Nominal Size	Pipe Sch	Pr. (bar)	ØM	ØD	O	Q	FF	GG	L5	i	L	O Ring ID x CSD	Screw Size (10.9) M1
HAO-21.3-160	**HAOC-21.3-160**	1/2"	160	414	21.3	12	56	40.5	48	18.2	18	12	55	19.0 x 3.55	M8 x 30
HAO-26.6-160	**HAOC-26.6-160**	3/4"	160	414	26.6	16	71	50.8	60	23.8	20	15	65	25.0 x 3.55	M10 x 35
HAO-33.4-160	**HAOC-33.4-160**	1"	160	401	33.4	21	81	57.2	70	27.8	27	18	85	32.5 x 3.55	M12 x 45
HAO-42.2-160	**HAOC-42.2-160**	1.1/4"	160	310	42.2	30	95	66.6	78	31.8	27	18	95	37.5 x 3.55	M12 x 45
HAO-42.2-XXS	**HAOC-42.2-XXS**		XXS	414		23									
HAO-48.3-160	**HAOC-48.3-160**	1.1/2"	160	317	48.3	34	113	79.3	95	36.5	31	24	102	47.5 x 3.55	M16 x 55
HAO-48.3-XXS	**HAOC-48.3-XXS**		XXS	414		28									
HAO-60.3-160	**HAOC-60.3-160**	2"	160	324	60.3	43	133	96.8	114	44.5	40	30	130	56.0 x 3.55	M20 x 70
HAO-60.3-XXS	**HAOC-60.3-XXS**		XXS	414		38									
HAO-73.0-160	**HAOC-73.0-160**	2.1/2"	160	296	73.0	54	175	123.8	149	58.7	47	33	140	69.0 x 3.55	M22 x 80
HAO-73.0-XXS	**HAOC-73.0-XXS**		XXS	414		45									
HAO-88.9-160	**HAOC-88.9-160**	3"	160	288	88.9	66	216	152.4	178	71.4	65	45	185	85.0 x 3.55	M30 x 110
HAO-88.9-XXS	**HAOC-88.9-XXS**		XXS	414		58									

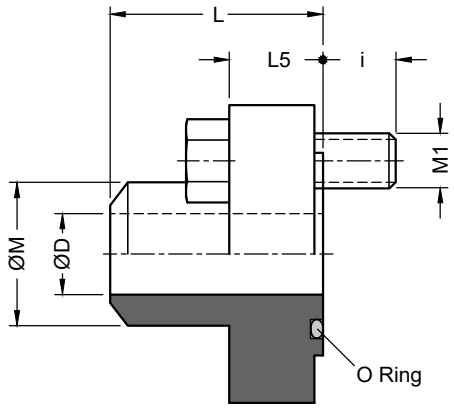
Mounting bolts or screws are not in scope of supply. While ordering the flanges with mounting hardwares, add suffix - BKM to the flange part numbers.

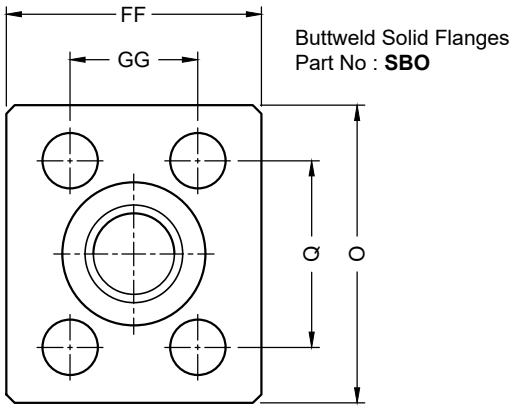
Example : **HAO-60.3-160 - BKM**

SBO / SBOC Buttweld Solid flanges

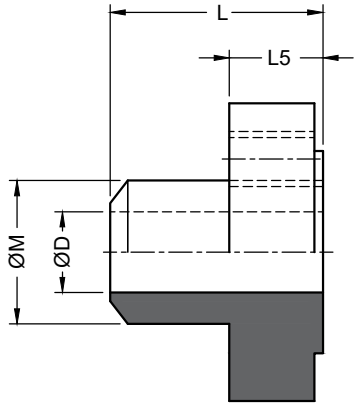
Mounting Interface conforms to ISO 6162

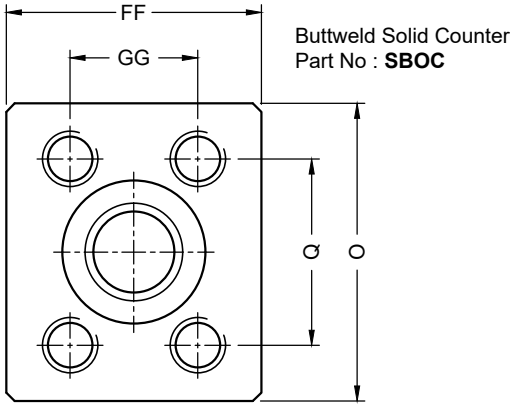
Dimensions in mm





Buttweld Solid Flanges
Part No : **SBO**





Buttweld Solid Counter Flanges
Part No : **SBOC**

Standard Pressure Series (Code 61)

Part No. Flanges	Part No. Counter Flanges	Flange Nominal Size	Pipe Sch	Pr. (bar)	ØM	ØD	O	Q	FF	GG	L5	i	L	O Ring ID x CSD	Screw Size (10.9) M1
SBO-21.3-80	**SBOC-21.3-80**	1/2"	80	288	21.3	14	54	38.1	38	17.5	13	12	32	19.0 x 3.55	M8 x 25
SBO-21.3-160	**SBOC-21.3-160**		160	345		12									
SBO-26.6-80	**SBOC-26.6-80**	3/4"	80	246	26.6	19	65	47.6	45	22.3	15	15	32	25.0 x 3.55	M10 x 30
SBO-26.6-160	**SBOC-26.6-160**		160	345		15									
SBO-33.4-80	**SBOC-33.4-80**	1"	80	246	33.4	24	70	52.4	51	26.2	15	15	32	32.5 x 3.55	M10 x 30
SBO-33.4-160	**SBOC-33.4-160**		160	345		21									
SBO-42.2-80	**SBOC-42.2-80**	1.1/4"	80	211	42.2	32	79	58.7	64	30.2	15	15	32	37.5 x 3.55	M10 x 30
SBO-42.2-160	**SBOC-42.2-160**		160	276		30									
SBO-48.3-80	**SBOC-48.3-80**	1.1/2"	80	197	48.3	38	94	69.9	70	35.7	17	18	38	47.5 x 3.55	M12 x 35
SBO-60.3-80	**SBOC-60.3-80**	2"	80	176	60.3	49	102	77.8	83	42.9	17	18	38	56.0 x 3.55	M12 x 35
SBO-60.3-160	**SBOC-60.3-160**		160	207		43									
SBO-73.0-40	**SBOC-73.0-40**	2.1/2"	40	134	73.0	63	114	88.9	102	50.8	22	18	45	69.0 x 3.55	M12 x 40
SBO-73.0-80	**SBOC-73.0-80**		80	172		59									
SBO-88.9-40	**SBOC-88.9-40**	3"	40	113	88.9	78	135	106.4	114	61.9	26	24	51	85.0 x 3.55	M16 x 50
SBO-88.9-80	**SBOC-88.9-80**		80	138		74									
SBO-101.6-40	**SBOC-101.6-40**	3.1/2"	40	34	101.6	90	152	120.7	127	69.9	26	24	38	97.5 x 3.55	M16 x 50
SBO-114.3-40	**SBOC-114.3-40**	4"	40	34	114.3	102	162	130.2	140	77.8	26	24	38	112.0 x 3.55	M16 x 50
SBO-141.3-40	**SBOC-141.3-40**	5"	40	34	141.3	128	184	152.4	178	92.1	26	24	51	136.0 x 3.55	M16 x 50

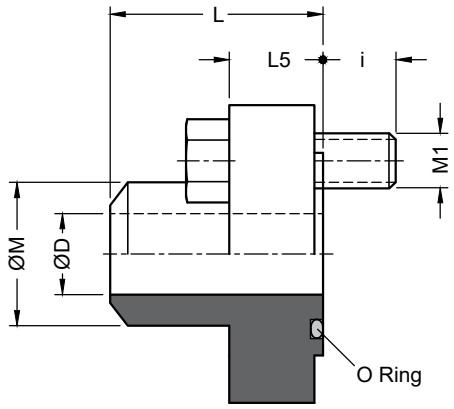
Mounting bolts or screws are not in scope of supply. While ordering the flanges with mounting hardwares, add suffix - BKM to the flange part numbers.

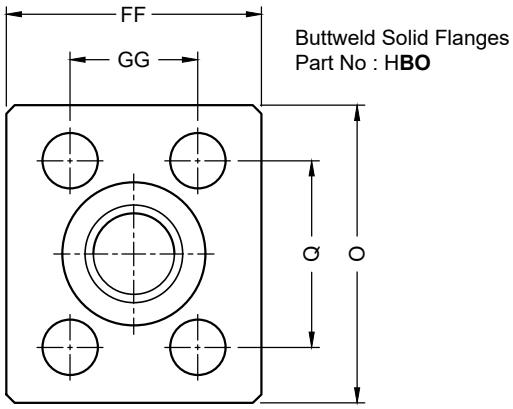
Example : **SBO-60.3-160 - BKM**

HBO / HBOC Buttweld Solid flanges

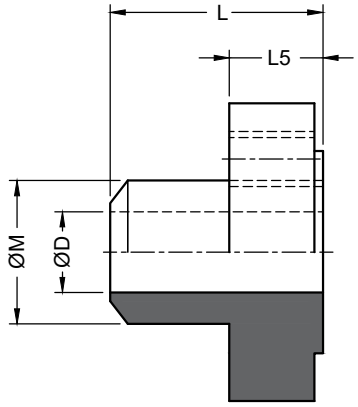
Mounting Interface conforms to ISO 6162

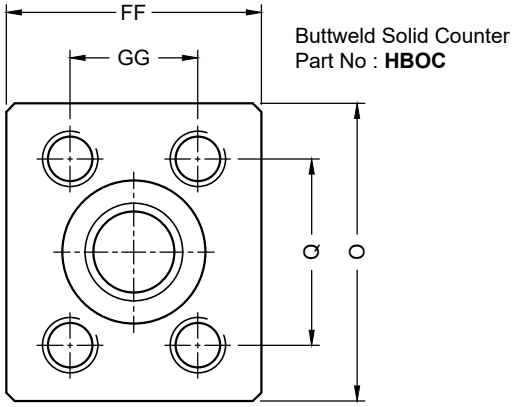
Dimensions in mm





Buttweld Solid Flanges
Part No : H**BO**





Buttweld Solid Counter Flanges
Part No : **HBOC**

High Pressure Series (Code 62)

Part No. Flanges	Part No. Counter Flanges	Flange Nominal Size	Pipe Sch	Pr. (bar)	ØM	ØD	O	Q	FF	GG	L5	i	L	O Ring ID x CSD	Screw Size (10.9) M1
HBO-21.3-160	**HBOC-21.3-160**	1/2"	160	414	21.3	12	56	40.5	45	18.2	18	12	32	19.0 x 3.55	M8 x 30
HBO-26.6-160	**HBOC-26.6-160**	3/4"	160	414	26.6	16	71	50.8	51	23.8	20	15	32	25.0 x 3.55	M10 x 35
HBO-33.4-160	**HBOC-33.4-160**	1"	160	401	33.4	21	81	57.2	57	27.8	22	18	32	32.5 x 3.55	M12 x 40
HBO-42.2-160	**HBOC-42.2-160**	1.1/4"	160	310	42.2	30	95	66.6	70	31.8	22	18	32	37.5 x 3.55	M12 x 40
HBO-42.2-XXS	**HBOC-42.2-XXS**		XXS	414		23									
HBO-48.3-160	**HBOC-48.3-160**	1.1/2"	160	317	48.3	34	113	79.3	83	36.5	21	24	38	47.5 x 3.55	M16 x 45
HBO-48.3-XXS	**HBOC-48.3-XXS**		XXS	414		28									
HBO-60.3-160	**HBOC-60.3-160**	2"	160	324	60.3	43	133	96.8	102	44.5	30	30	45	56.0 x 3.55	M20 x 60
HBO-60.3-XXS	**HBOC-60.3-XXS**		XXS	414		38									
HBO-73.0-160	**HBOC-73.0-160**	2.1/2"	160	296	73.0	54	175	123.8	127	58.7	32	33	51	69.0 x 3.55	M22 x 65
HBO-73.0-XXS	**HBOC-73.0-XXS**		XXS	414		45									
HBO-88.9-160	**HBOC-88.9-160**	3"	160	288	88.9	66	216	152.4	153	71.4	35	45	63	85.0 x 3.55	M30 x 80
HBO-88.9-XXS	**HBOC-88.9-XXS**		XXS	414		58									

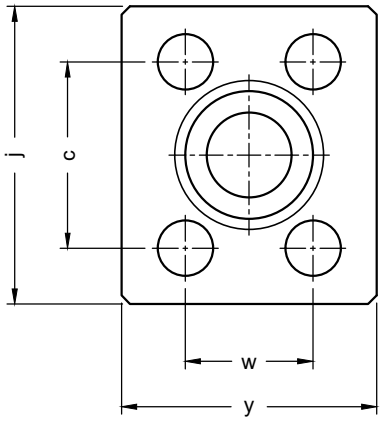
Mounting bolts or screws are not in scope of supply. While ordering the flanges with mounting hardwares, add suffix - BKM to the flange part numbers.

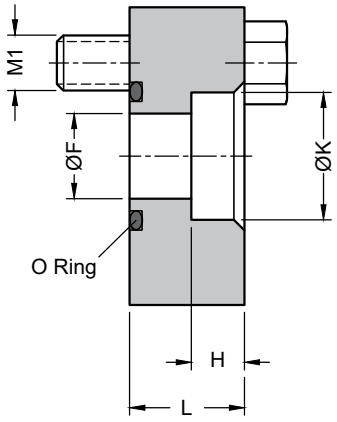
Example : **HBO-60.3-160 - BKM**

SCO / SCOC Socket Weld flanges

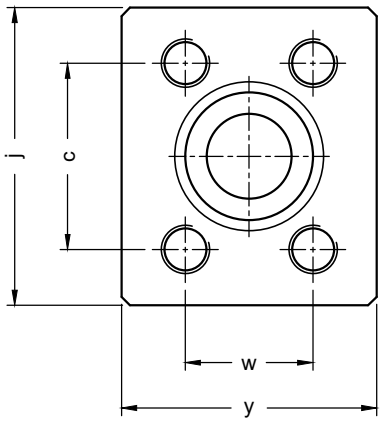
Mounting Interface conforms to ISO 6162

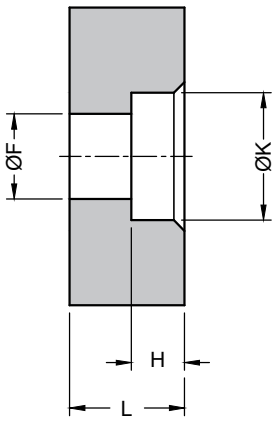
Dimensions in mm





Socket Weld Flanges
Part No : **SCO**





Socket Weld Counter Flanges
Part No : **SCOC**

Standard Pressure Series (Code 61)

Part No. Flanges	Part No. Counter Flanges	Flange Nominal Size	Pr. (bar)	ØK	ØF	j	c	y	w	H	L	O Ring ID x CSD	Screw Size (10.9) M1
SCO-21.3	**SCOC-21.3**	1/2"	350	21.8	13	54	38.1	46	17.5	10	18	19.0 x 3.55	M8 x 30
SCO-26.6	**SCOC-26.6**	3/4"	350	27.0	19	65	47.6	52	22.3	13	25	25.0 x 3.55	M10 x 40
SCO-33.4	**SCOC-33.4**	1"	350	33.7	25	70	52.4	59	26.2	13	25	32.5 x 3.55	M10 x 40
SCO-42.2	**SCOC-42.2**	1.1/4"	250	42.6	32	79	58.7	73	30.2	13	25	37.5 x 3.55	M10 x 40
SCO-48.3	**SCOC-48.3**	1.1/2"	200	48.7	38	94	69.9	83	35.7	13	32	47.5 x 3.55	M12 x 50
SCO-60.3	**SCOC-60.3**	2"	200	61.2	49	102	77.8	97	42.9	16	37	56.0 x 3.55	M12 x 55
SCO-73.0	**SCOC-73.0**	2.1/2"	160	73.9	61	114	88.9	109	50.8	19	42	69.0 x 3.55	M12 x 60
SCO-88.9	**SCOC-88.9**	3"	100	89.9	75	135	106.4	131	61.9	19	51	85.0 x 3.55	M16 x 75
SCO-101.6	**SCOC-101.6**	3.1/2"	25	102.7	86	152	120.7	140	69.9	19	36	97.5 x 3.55	M16 x 60
SCO-114.3	**SCOC-114.3**	4"	25	115.5	99	162	130.2	152	77.8	19	36	112.0 x 3.55	M16 x 60
SCO-141.3	**SCOC-141.3**	5"	25	142.8	127	184	152.4	181	92.1	19	51	136.0 x 3.55	M16 x 75

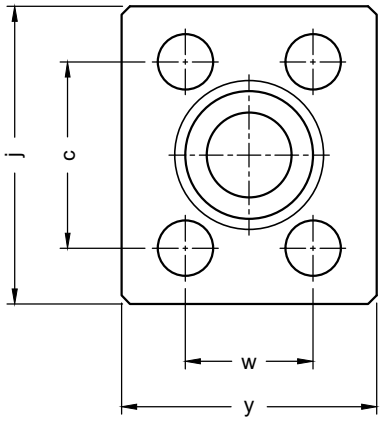
Mounting bolts or screws are not in scope of supply.While ordering the flanges with mounting hardwares, add suffix - BKM to the flange part numbers.

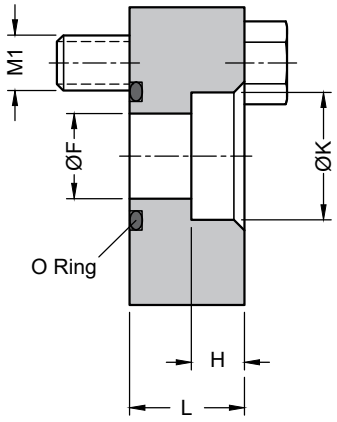
Example : **SCO-48.3 - BKM**

HCO / HCOC Socket Weld flanges

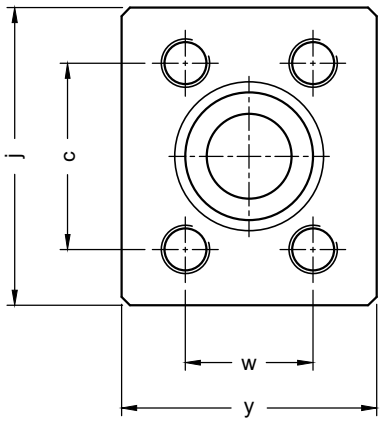
Mounting Interface conforms to ISO 6162

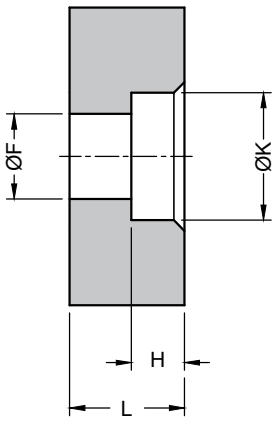
Dimensions in mm





Socket Weld Flanges
Part No : H**CO**





Socket Weld Counter Flanges
Part No : **HCOC**

High Pressure Series (Code 62)

Part No. Flanges	Part No. Counter Flanges	Flange Nominal Size	Pr. (bar)	ØK	ØF	j	c	y	w	H	L	O Ring ID x CSD	Screw Size (10.9) M1
HCO-21.3	**HCOC-21.3**	1/2"	400	21.8	13	56	40.5	48	18.2	13	23	19.0 x 3.55	M8 x 35
HCO-26.6	**HCOC-26.6**	3/4"	400	27.0	19	71	50.8	60	23.8	13	25	25.0 x 3.55	M10 x 40
HCO-33.4	**HCOC-33.4**	1"	400	33.7	25	81	57.2	70	27.8	13	27	32.5 x 3.55	M12 x 45
HCO-42.2	**HCOC-42.2**	1.1/4"	400	42.6	32	95	66.6	78	31.8	13	32	37.5 x 3.55	M12 x 50
HCO-48.3	**HCOC-48.3**	1.1/2"	400	48.7	38	113	79.3	95	36.5	13	36	47.5 x 3.55	M16 x 60
HCO-60.3	**HCOC-60.3**	2"	400	61.2	50	133	96.8	114	44.5	16	45	56.0 x 3.55	M20 x 75
HCO-73.0	**HCOC-73.0**	2.1/2"	400	73.9	60	175	123.8	149	58.7	16	52	69.0 x 3.55	M22 x 85
HCO-88.9	**HCOC-88.9**	3"	400	89.9	75	216	152.4	178	71.4	16	65	85.0 x 3.55	M30 x 110

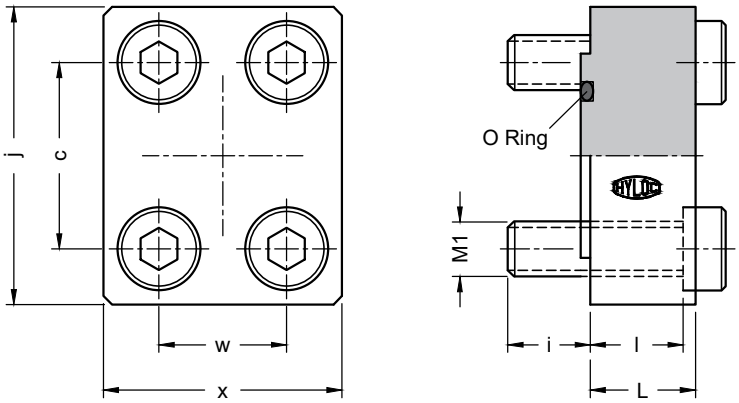
Mounting bolts or screws are not in scope of supply.While ordering the flanges with mounting hardwares, add suffix - BKM to the flange part numbers.

Example : **HCO-48.3 - BKM**

OSB / OHB Blind flanges

Mounting Interface conforms to ISO 6162

Dimensions in mm



Standard Pressure Series (Code 61)

Part No. Flanges	Flange Nominal Size	Pr. (bar)	j	c	x	w	i	l	L	O Ring ID x CSD	Screw Size (10.9) M1
OSB - 04	1/2"	350	54	38.1	33	17.5	12	13	13	19.0 x 3.55	M8 x 25
OSB - 06	3/4"	350	65	47.6	41	22.3	15	15	15	25.0 x 3.55	M10 x 30
OSB - 08	1"	350	70	52.4	48	26.2	15	15	17	32.5 x 3.55	M10 x 30
OSB - 10	1.1/4"	250	79	58.7	54	30.2	15	15	17	37.5 x 3.55	M10 x 30
OSB - 12	1.1/2"	200	94	69.9	64	35.7	18	17	22	47.5 x 3.55	M12 x 35
OSB - 16	2"	200	102	77.8	76	42.9	18	17	25	56.0 x 3.55	M12 x 35
OSB - 20	2.1/2"	160	114	88.9	89	50.8	18	22	27	69.0 x 3.55	M12 x 40
OSB - 24	3"	100	135	106.4	106	61.9	24	26	30	85.0 x 3.55	M16 x 50
OSB - 28	3.1/2"	25	152	120.7	119	69.9	24	26	26	97.5 x 3.55	M16 x 50
OSB - 32	4"	25	162	130.2	132	77.8	24	26	26	112.0 x 3.55	M16 x 50
OSB - 40	5"	25	184	152.4	151	92.1	24	26	32	136.0 x 3.55	M16 x 50

High Pressure Series (Code 62)

Part No. Flanges	Flange Nominal Size	Pr. (bar)	j	c	x	w	i	l	L	O Ring ID x CSD	Screw Size (10.9) M1
OHB - 04	1/2"	400	56	40.5	38	18.2	12	18	18	19.0 x 3.55	M8 x 30
OHB - 06	3/4"	400	71	50.8	48	23.8	15	20	20	25.0 x 3.55	M10 x 35
OHB - 08	1"	400	81	57.2	54	27.8	18	22	22	32.5 x 3.55	M12 x 40
OHB - 10	1.1/4"	400	95	66.6	60	31.8	18	22	22	37.5 x 3.55	M12 x 40
OHB - 12	1.1/2"	400	113	79.3	70	36.5	24	21	30	47.5 x 3.55	M16 x 45
OHB - 16	2"	400	133	96.8	86	44.5	30	30	36	56.0 x 3.55	M20 x 60
OHB - 20	2.1/2"	400	175	123.8	116	58.7	33	32	50	69.0 x 3.55	M22 x 65
OHB - 24	3"	400	216	152.4	132	71.4	45	35	63	85.0 x 3.55	M30 x 80

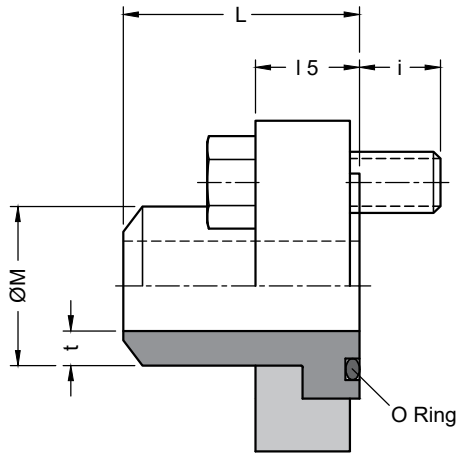
Mounting bolts or screws are not in scope of supply. While ordering the flanges with mounting hardwares, add suffix - BKM to the flange part numbers.

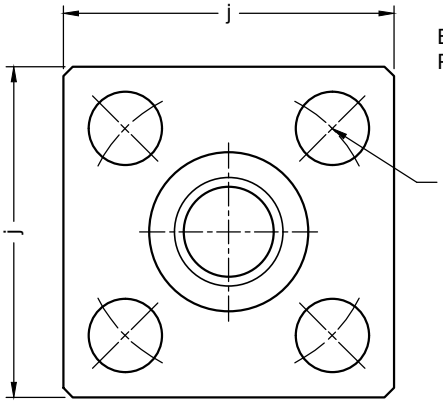
Example : **OSB - 08 - BKM**

SAI / SAIC Buttweld Swivel flanges

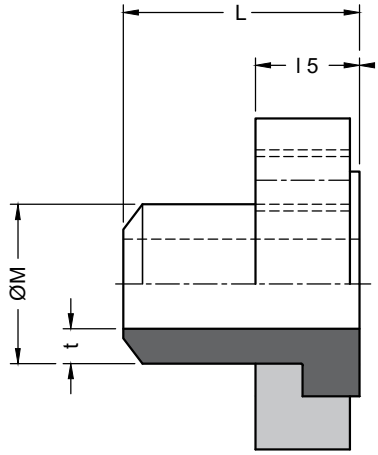
Mounting Interface conforms to ISO 6164

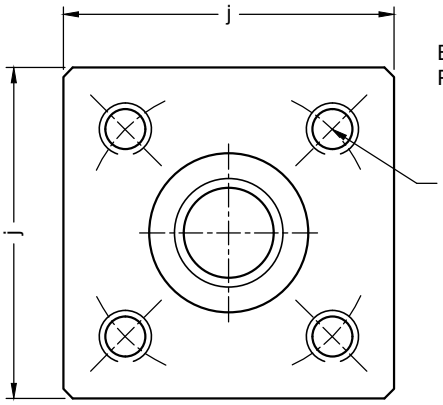
Dimensions in mm





Buttweld Swivel Flanges
Part No : **SAI / HAI**





Buttweld Swivel Counter Flanges
Part No : **SAIC / HAIC**

Part No. Flanges	Part No. Counter Flanges	Flange Nominal Size	DN Size	ØM	Pipe Sch	t	Øe	l 5	j	i	L	O Ring ID x CSD	Screw Size (10.9) M1
PN 250 bar													
SAI-21.3-80	**SAIC-21.3-80**	1/2"	13	21.3	80	3.70	42	23	45	12	30	19.0 x 3.55	M8 x 35
SAI-26.6-80	**SAIC-26.6-80**	3/4"	19	26.6	80	3.92	50	23	50	12	35	25.0 x 3.55	M8 x 35
SAI-33.4-80	**SAIC-33.4-80**	1"	25	33.4	80	4.54	62	25	65	15	40	32.5 x 3.55	M10 x 40
SAI-42.2-160	**SAIC-42.2-160**	1.1/4"	32	42.2	160	6.35	73	32	75	18	45	37.5 x 3.55	M12 x 50
SAI-48.3-160	**SAIC-48.3-160**	1.1/2"	38	48.3	160	7.13	85	36	90	24	50	47.5 x 3.55	M16 x 60
SAI-60.3-160	**SAIC-60.3-160**	2"	51	60.3	160	8.71	98	41	100	24	60	56.0 x 3.55	M16 x 65
SAI-73.0-160	**SAIC-73.0-160**	2.1/2"	56	73.0	160	9.52	118	50	120	30	70	69.0 x 3.55	M20 x 80
SAI-88.9-160	**SAIC-88.9-160**	3"	63	88.9	160	11.00	145	60	140	30	80	85.0 x 3.55	M20 x 90
SAI-114.3-160	**SAIC-114.3-160**	4"	80	114.3	160	13.50	175	75	180	45	135	112.0 x 3.55	M30 x 120
PN 400 bar													
HAI-21.3-160	**HAIC-21.3-160**	1/2"	13	21.3	160	4.75	42	23	45	12	40	19.0 x 3.55	M8 x 35
HAI-26.6-160	**HAIC-26.6-160**	3/4"	19	26.6	160	5.56	50	23	50	12	45	25.0 x 3.55	M8 x 35
HAI-33.4-160	**HAIC-33.4-160**	1"	25	33.4	160	6.35	62	25	65	15	50	32.5 x 3.55	M10 x 40
HAI-42.2-XXS	**HAIC-42.2-XXS**	1.1/4"	32	42.2	XXS	9.70	73	32	75	18	55	37.5 x 3.55	M12 x 50
HAI-48.3-XXS	**HAIC-48.3-XXS**	1.1/2"	38	48.3	XXS	10.16	85	36	90	24	60	47.5 x 3.55	M16 x 60
HAI-60.3-XXS	**HAIC-60.3-XXS**	2"	51	60.3	XXS	11.07	98	41	100	24	70	56.0 x 5.30	M16 x 65
HAI-73.0-XXS	**HAIC-73.0-XXS**	2.1/2"	56	73.0	XXS	14.02	118	50	120	30	80	69.0 x 5.30	M20 x 80
HAI-88.9-XXS	**HAIC-88.9-XXS**	3"	63	88.9	XXS	15.24	145	54	150	36	105	75.0 x 5.30	M24 x 90
HAI-101.6-XXS	**HAIC-101.6-XXS**	3.1/2"	70	101.6	XXS	16.15	160	64	160	36	105	85.0 X 5.30	M24 x 100
HAI-114.3-XXS	**HAIC-114.3-XXS**	4"	80	114.3	XXS	17.12	175	75	180	45	135	87.5 X 5.30	M30 x 120

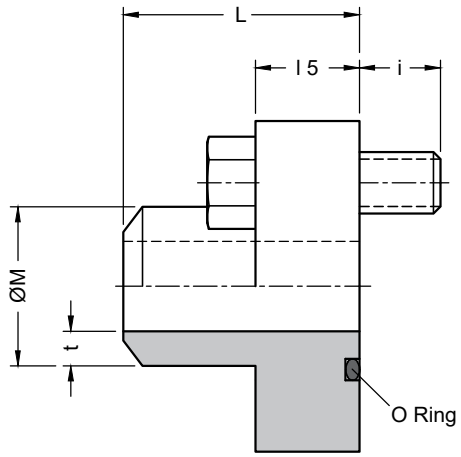
Mounting bolts or screws are not in scope of supply. While ordering the flanges with mounting hardwares, add suffix - BKM to the flange part numbers.

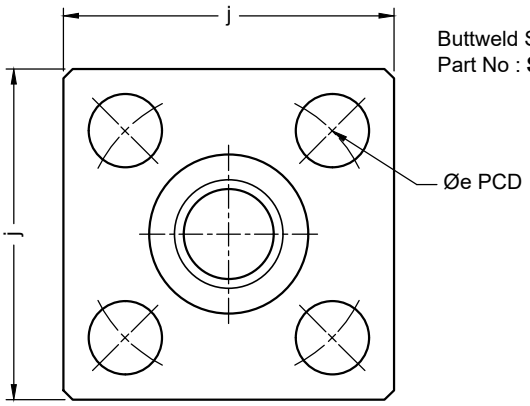
Example : **HAI-48.3 - XXS - BKM**

SBI / SBIC Buttweld Solid flanges

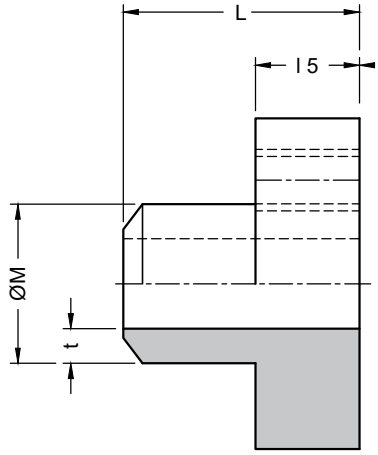
Mounting Interface conforms to ISO 6164

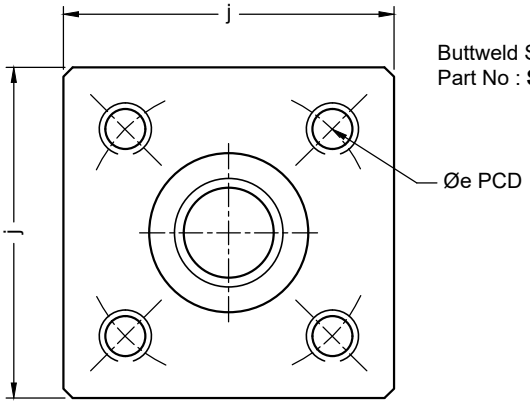
Dimensions in mm





Buttweld Solid Flanges
Part No : **SBI / HBI**





Buttweld Solid Counter Flanges
Part No : **SBIC / HBIC**

Part No. Flanges	Part No. Counter Flanges	Flange Nominal Size	DN Size	ØM	Pipe Sch	t	Øe	l 5	j	i	L	O Ring ID x CSD	Screw Size (10.9) M1
					PN 250 bar								
SBI-21.3-80	**SBIC-21.3-80**	1/2"	13	21.3	80	3.70	42	23	45	12	30	19.0 x 3.55	M8 x 35
SBI-26.6-80	**SBIC-26.6-80**	3/4"	19	26.6	80	3.92	50	23	50	12	35	25.0 x 3.55	M8 x 35
SBI-33.4-80	**SBIC-33.4-80**	1"	25	33.4	80	4.54	62	25	65	15	40	32.5 x 3.55	M10 x 40
SBI-42.2-160	**SBIC-42.2-160**	1.1/4"	32	42.2	160	6.35	73	32	75	18	45	37.5 x 3.55	M12 x 50
SBI-48.3-160	**SBIC-48.3-160**	1.1/2"	38	48.3	160	7.13	85	36	90	24	50	47.5 x 3.55	M16 x 60
SBI-60.3-160	**SBIC-60.3-160**	2"	51	60.3	160	8.71	98	41	100	24	60	56.0 x 3.55	M16 x 65
SBI-73.0-160	**SBIC-73.0-160**	2.1/2"	56	73.0	160	9.52	118	50	120	30	70	69.0 x 3.55	M20 x 80
SBI-88.9-160	**SBIC-88.9-160**	3"	63	88.9	160	11.00	145	60	140	30	80	85.0 x 3.55	M20 x 90
SBI-114.3-160	**SBIC-114.3-160**	4"	80	114.3	160	13.50	175	75	180	45	135	112.0 x 3.55	M30 x 120
					PN 400 bar								
HBI-21.3-160	**HBIC-21.3-160**	1/2"	13	21.3	160	4.75	42	23	45	12	40	19.0 x 3.55	M8 x 35
HBI-26.6-160	**HBIC-26.6-160**	3/4"	19	26.6	160	5.56	50	23	50	12	45	25.0 x 3.55	M8 x 35
HBI-33.4-160	**HBIC-33.4-160**	1"	25	33.4	160	6.35	62	25	65	15	50	32.5 x 3.55	M10 x 40
HBI-42.2-XXS	**HBIC-42.2-XXS**	1.1/4"	32	42.2	XXS	9.70	73	32	75	18	55	37.5 x 3.55	M12 x 50
HBI-48.3-XXS	**HBIC-48.3-XXS**	1.1/2"	38	48.3	XXS	10.16	85	36	90	24	60	47.5 x 3.55	M16 x 60
HBI-60.3-XXS	**HBIC-60.3-XXS**	2"	51	60.3	XXS	11.07	98	41	100	24	70	56.0 x 5.30	M16 x 65
HBI-73.0-XXS	**HBIC-73.0-XXS**	2.1/2"	56	73.0	XXS	14.02	118	50	120	30	80	69.0 x 5.30	M20 x 80
HBI-88.9-XXS	**HBIC-88.9-XXS**	3"	63	88.9	XXS	15.24	145	54	150	36	105	75.0 x 5.30	M24 x 90
HBI-101.6-XXS	**HBIC-101.6-XXS**	3.1/2"	70	101.6	XXS	16.15	160	64	160	36	105	85.0 X 5.30	M24 x 100
HBI-114.3-XXS	**HBIC-114.3-XXS**	4"	80	114.3	XXS	17.12	175	75	180	45	135	87.5 X 5.30	M30 x 120

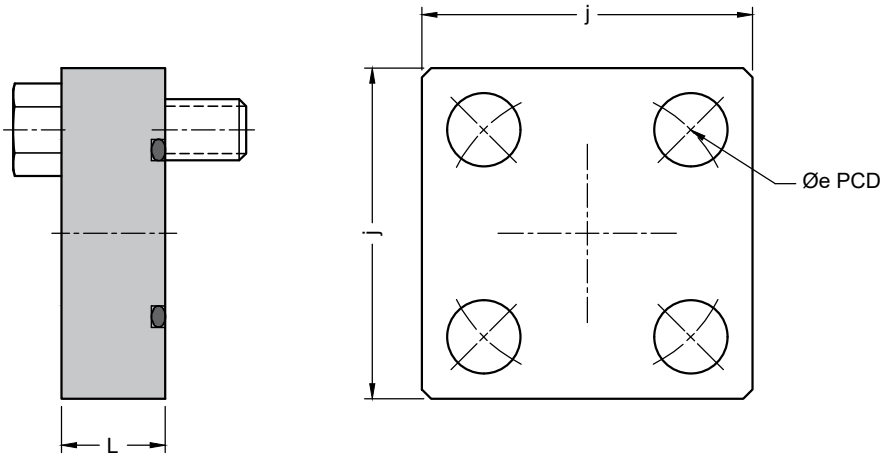
Mounting bolts or screws are not in scope of supply. While ordering the flanges with mounting hardwares, add suffix - BKM to the flange part numbers.

Example : **HBI-48.3 - XXS - BKM**

SSB / SHB Blind flanges

Mounting Interface conforms to ISO 6164

Dimensions in mm



Part No. Flanges	Flange Nominal Size	DN Size	Øe	j	L	O Ring ID x CSD	Screw Size (10.9) M1
PN 250 bar							
SSB - 04	1/2"	13	42	45	23	19.0 x 3.55	M8 x 35
SSB - 06	3/4"	19	50	50	23	25.0 x 3.55	M8 x 35
SSB - 08	1"	25	62	65	25	32.5 x 3.55	M10 x 40
SSB - 10	1.1/4"	32	73	75	32	37.5 x 3.55	M12 x 50
SSB - 12	1.1/2"	38	85	90	36	47.5 x 3.55	M16 x 60
SSB - 16	2"	51	98	100	41	56.0 x 3.55	M16 x 65
SSB - 20	2.1/2"	56	118	120	50	69.0 x 3.55	M20 x 80
SSB - 24	3"	63	145	140	60	85.0 x 3.55	M20 x 90
PN 400 bar							
SHB - 04	1/2"	13	42	45	23	19.0 x 3.55	M8 x 35
SHB - 06	3/4"	19	50	50	23	25.0 x 3.55	M8 x 35
SHB - 08	1"	25	62	65	25	32.5 x 3.55	M10 x 40
SHB - 10	1.1/4"	32	73	75	32	37.5 x 3.55	M12 x 50
SHB - 12	1.1/2"	38	85	90	36	47.5 x 3.55	M16 x 60
SHB - 16	2"	51	98	100	41	56.0 x 5.30	M16 x 65
SHB - 20	2.1/2"	56	118	120	50	69.0 x 5.30	M20 x 80
SHB - 24	3"	63	145	150	54	75.0 x 5.30	M24 x 90
SHB - 28	3.1/2"	70	160	160	64	85.0 X 5.30	M24 x 100
SHB - 32	4"	80	175	180	75	87.5 X 5.30	M30 x 120

Mounting bolts or screws are not in scope of supply. While ordering the flanges with mounting hardwares, add suffix - BKM to the flange part numbers.

Example : **SHB - 16 - BKM**

Hydraulic Valves

#	Description	Part code	Remarks
01	Cartridge - Shut off valve	KHSL	Datasheet
02	Cartridge - Shut off valve (Balanced Piston)	KHSLB	Datasheet
03	Shut off valve - Inline and Right Angle	SLG	Datasheet
04	Shut off valve - Sub plate mounting	MHSL	Datasheet
05	Shut off valve - Sub plate mounting	MHSLB	Datasheet
06	Shut off valve - Sub plate mounting	MSSL06	Datasheet
07	Cartridge - Needle valve	KHNL	Datasheet
08	Needle valve - Inline and Right Angle	NLG	Datasheet
09	Needle valve - Sub plate mounting	MHNL	Datasheet
10	Needle valve - Sub plate mounting	MSNL06	Datasheet
11	Check Valve - Screw in Cartridge	KSC	Datasheet
12	Reverse Check Valve - Screw in Cartridge	KSD	Datasheet
13	Check Valve - Inline	RHD/RHV/RHZ/RHF	Datasheet
14	Adjustable Throttle and Throttle Check valves	TCT / TT	Datasheet
15	Inline Throttle Check valves	TCG	Datasheet
16	Throttle Check valves - Sub plate	TCMS	Datasheet

#	Description	Part code	Remarks
17	Gauge Isolators	1GI	Datasheet
18	Gauge Isolators	1GI06PS	Datasheet
19	Gauge Isolators	1GIMS	Datasheet
20	Gauge mounting Block	GMB	Datasheet
21	Gauge Isolators (PUSH to READ)	GI	Datasheet
22	Quick disconnect Couplings	QDC	Datasheet
23	Quick Release Couplings	QRC	Datasheet
24	Ball Valves - TWO way	BV-G	Datasheet
25	Accumulator Safety Block	ASB	Datasheet

The right connection
The right environment

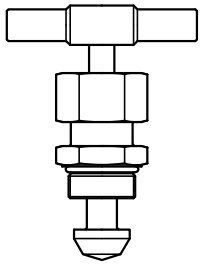
Shut off Valve - Cartridge
KHSL

Ref. No. H04085
Release: Apr 2025

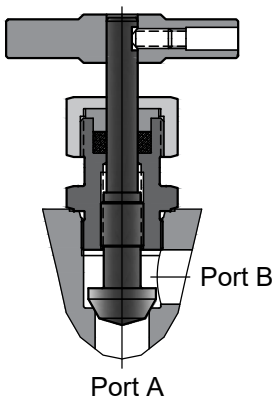
Description

Shut off valve Cartridge **KHSL** are rising spindle, seat type valves with metal to metal seat for leak free closure between its port 'A' and Port 'B'

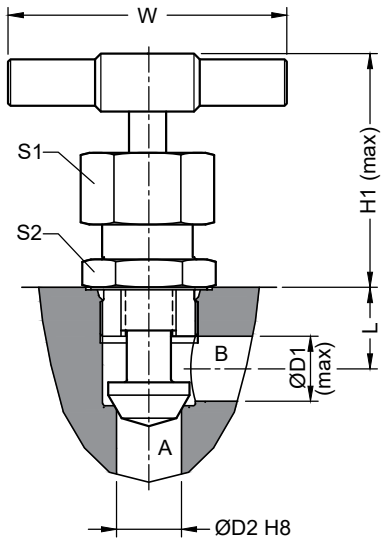
The mounting cavity conforms to Factory standard.



Section



Hydraulic Symbol

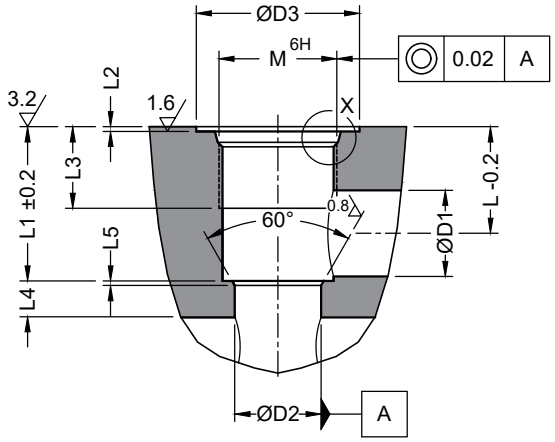


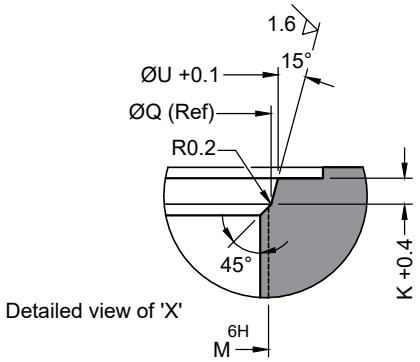
Unit Dimensions

Dimensions in mm.

Part code	Size	L	H1	W	ØD1	ØD2	S1	S2
KHSL08-2.0	08	18	67.5	64	11	8	27	27
KHSL11-2.0	11	18	67.5	64	11	11	27	27
KHSL19-2.0	19	23	88.5	84	19	19	32	32
KHSL28-2.0	28	33	115.0	120	28	28	50	50

Cavity Machining details





Dimensions in mm

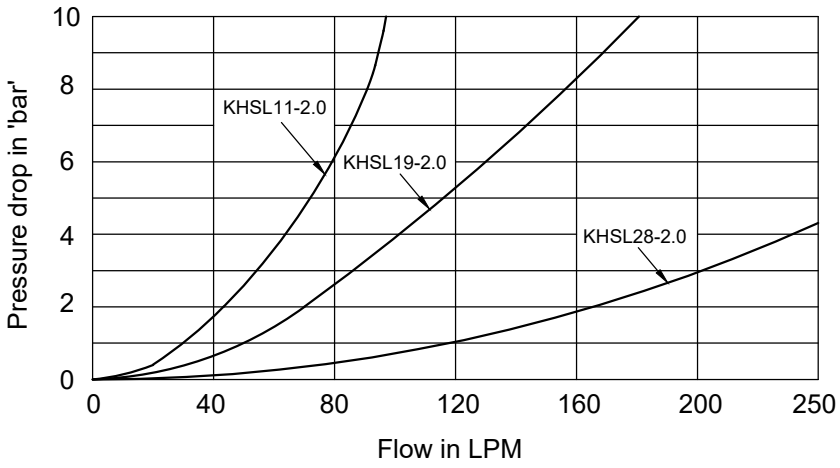
Part code	ØD1	ØD2	ØD3	L	L1	ØU	ØQ	L2	L3	L4	L5	K	M
KHSL08-2.0	10	8	31.0	18	24	21.8	20.5	0.2	16	3	0.5	2.4	M20 x 1.5
KHSL11-2.0	10	11	31.0	18	24	21.8	20.5	0.2	16	3	0.5	2.4	M20 x 1.5
KHSL19-2.0	19	19	36.0	23	33	27.8	26.5	0.2	18	5	1.0	2.4	M26 x 1.5
KHSL28-2.0	28	28	54.5	35	51	44.4	42.7	1.0	24	7	1.5	3.1	M42 x 2.0

Technical Specifications

Construction	Seat type valve
Mounting type	Insert in cavity conforming to factory standard
Mounting position	Optional
Flow direction	From port 'A' to port 'B'
Operating pressure	350 bar.
Hydraulic medium	Mineral oil.
Viscosity range	10 cSt to 380 cSt.
Fluid temperature range	-20 ºC to +70 ºC
Fluid cleanliness requirement	As per ISO 4406 20/18/15
Nom. flow handling capacity	Refer graph

Performance curves

Oil used : ISO VG 68
Viscosity : 68 cSt @ 40 °C
Test conducted at : 50 ºC
Condition : Valve fully opened



Ordering Code

K	H	SL	11	-	2.0

- K: Screw in Cartridge
- H: Factory standard Cavity
- SL: Shut off valve
- 11: Size
  - DN 08 - **08**
  - DN 11 - **11**
  - DN 19 - **19**
  - DN 28 - **28**
- 2.0: Design Series Subject to revision
- Seals
  - (blank): Omit for Nitrile
  - **V**: FKM (Viton)

Note : Add prefix 316 to the above part code for SS 316 Valves.
e.g. **316-KHSL11-2.0**

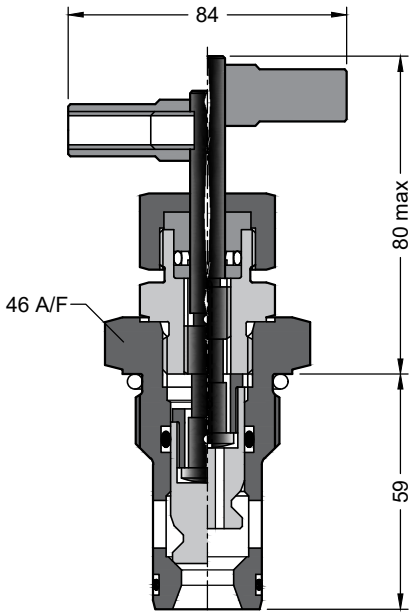
Description

Shut off valve Cartridge **KHSLB25-2.0** is rising spindle, seat type valve.
'Balanced sealed poppet' construction to reduce operating forces.

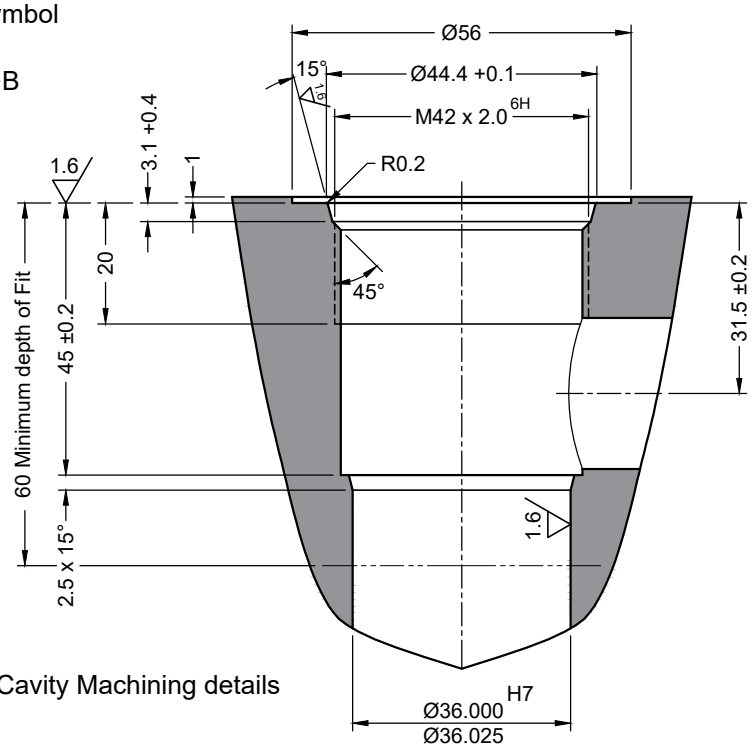
The mounting cavity conforms to Factory standard.

Unit Dimensions

Dimensions in mm.



Hydraulic Symbol



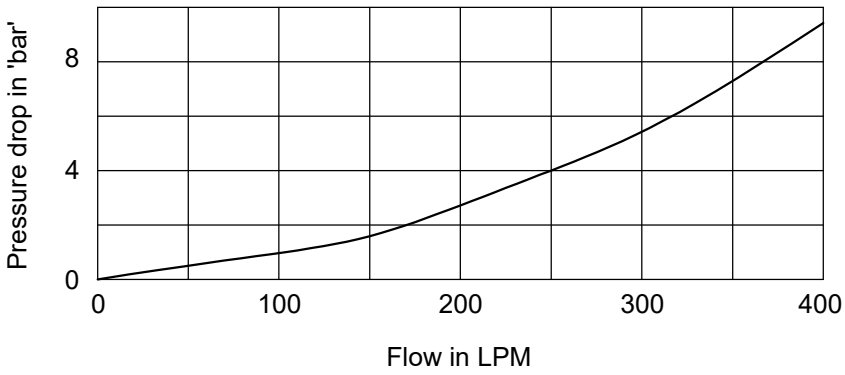
Cavity Machining details

Technical Specifications

Construction	Seat type valve
Mounting type	Insert in cavity conforming to factory standard
Mounting position	Optional
Flow direction	From port 'A' to port 'B'
Operating pressure	350 bar.
Hydraulic medium	Mineral oil.
Viscosity range	10 cSt to 380 cSt.
Fluid temperature range	-20 ºC to +70 ºC
Fluid cleanliness requirement	As per ISO 4406 20/18/15
Nom. flow handling capacity	Refer graph

Performance curves

Oil used : ISO VG 68
Viscosity : 68 cSt @ 40 °C
Test conducted at : 50 ºC
Condition : Valve fully opened



Ordering Code

K	H	SLB	25	-	-	2.0

- **K** — Screw in Cartridge
- **H** — Factory standard Cavity
- **SLB** — Shut off valve, Balanced Piston Construction
- **25** — Size: DN 25 - **25**
- **2.0** — Design Series, Subject to revision
- Seals
  - (blank) — Omit for Nitrile
  - **V** — FKM (Viton)

Note : Add prefix 316 to the above part code for SS 316 Valves.
e.g. **316-KHSLB25-2.0**

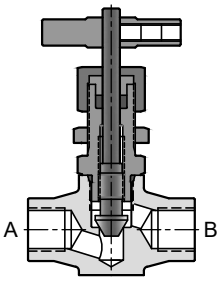
Shut off Valves - Inline and Right angle
SLG / SLWG

Description

Shut off valve model SLG, SLWG are two way, seat type valves.

These are used for isolating the oil flow in the direction as indicated by an arrow mark shown on the valve body.

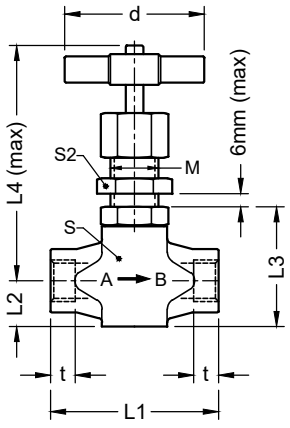
Section



Hydraulic Symbol

Unit Dimensions

In-line threaded ports



Right angle threaded ports

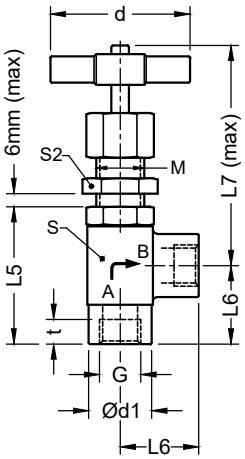
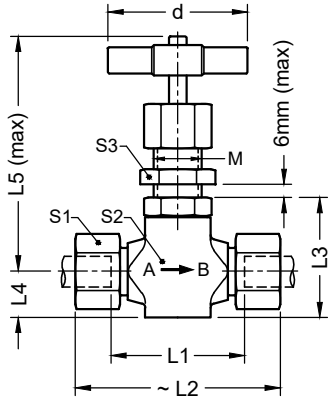


Table-1

Dimensions in mm.

G	Ød1	Pr. (bar)	L1	t	L2	L3	L4	L5	L6	L7	d	S	S2	M
G 1/4	22	350	70	14	21	54.5	110.5	56.5	30	103.5		30		
G 3/8	25	350	70	14	21	54.5	110.5	56.5	30	103.5	64	30	30	M22x1.5
G 1/2	29	350	77	17	21	54.5	110.5	62.5	36	103.5		30		
G 3/4	35	350	93	17	27	71.0	122.0	77.0	45	110.0	84	36	36	M26x1.5
G1	44	350	93	18	27	72.0	122.0	77.0	45	110.0		46		
G1.1/4	58	250	162	22	51.5	105.0	162.0	113.0	65	143.0	120	60	50	M42x2.0
G1.1/2	58	250	162	24	51.5	105.0	162.0	113.0	65	143.0		60		

In-line Tube mounting



Right Angle Tube mounting

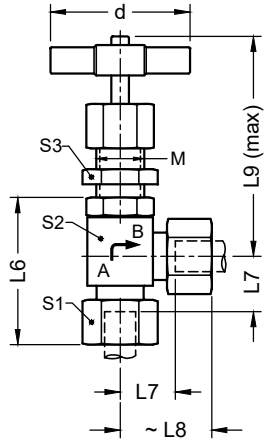


Table-2

Tube OD	Pr. (bar)	L1	L2	L3	L4	L5	L6	L7	L8	L9	d	S1	S2	S3	M
10	350	55	88				65.5		39.0			22	30		
12	350	55	88	54.5	21	110.5	65.5	22	39.0	103.5	64	24	30	30	M22x1.5
16	350	60	97				67.5		41.0			30	30		
20	350	72	115	71.5	28	122.0	77.0	28	68.0	110.0	84	36	36	36	M26x1.5
25	350	69	117				82.5		73.5			46	46		
30	250	135	188	118.0	52	162.0	111.0	40	63.0	143.0	120	50	60	50	M42x2.0
38	250	130	192				115.0		67.0			60	60		

Shut off Valves - Inline and Right angle
SLG / SLWG

Technical Specifications

Construction ---------- Seat type Valves.

Mounting style ---------- Inline or right angle port or tube mounting.

Mounting position ---------- Optional.

Flow direction ---------- Either side.

Operating pressure ---------- Refer Table -1 and Table-2.

Hydraulic medium ---------- Mineral oil.

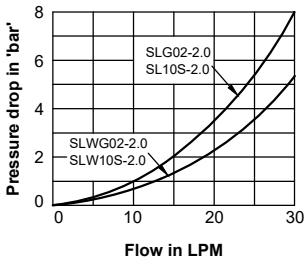
Viscosity range ---------- 10 cSt to 380 cSt.

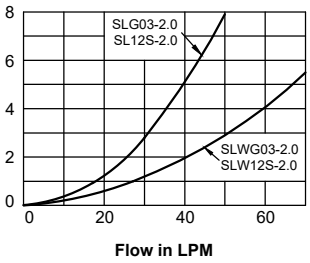
Fluid temperature range ---------- -20 ºC to +80 ºC

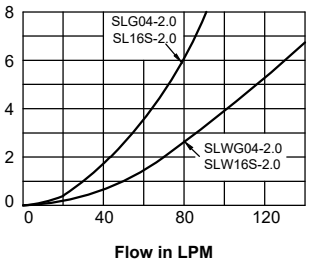
Fluid cleanliness requirement ---------- As per ISO 4406 20/18/15

Nom. flow handling capacity ---------- Refer graphs

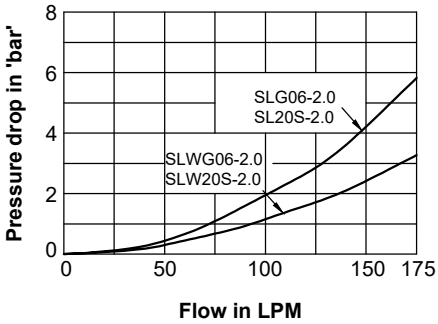
Performance curves

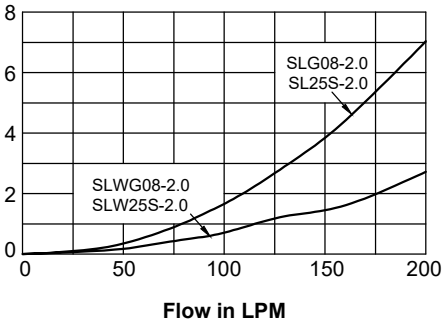


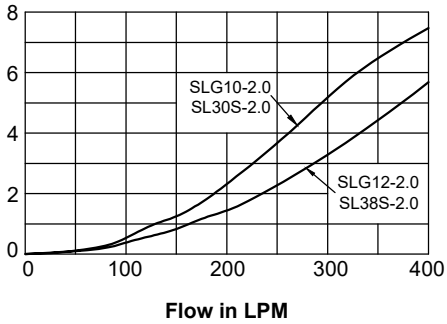




Oil used : ISO VG 68
Viscosity : 68 cSt @ 40 °C
Test conducted at : 50 ºC
Condition : Valve fully opened







Ordering Code

SL		G02		2.0

Shut off Valve	SL

Mounting style	
Omit for In-line	
Right angle	W

For Valves with G (BSPP) Ports	G 1/4	G02
	G 3/8	G03
	G 1/2	G04
	G 3/4	G06
	G1	G08
	G1 1/4	G10
	G1 1/2	G12
For Valves with Tube ends (Will have Double bite ferrule)	10 OD	10S
	12 OD	12S
	16 OD	16S
	20 OD	20S
	25 OD	25S
	30 OD	30S
	38 OD	38S

Design Series Subject to revision	2.0

Seals	
	Omit for Nitrile
V	FKM (Viton)

Note : Add prefix 316 to the above part code for SS 316 Valves.
e.g. **316-SLG04-2.0**

Shut off Valves, Sub-plate mounting
MHSL

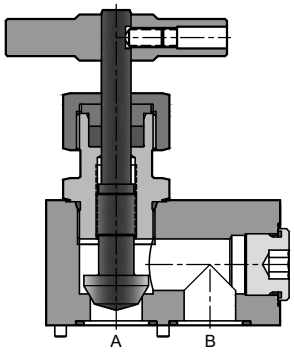
Ref. No. H04087
Release: Apr 2025

Description

Shut off valves model **MHSL** are rising spindle valves with metal seat for leak free closure between its port 'A' and Port 'B'

The mounting interface conforms to factory standard.

Section

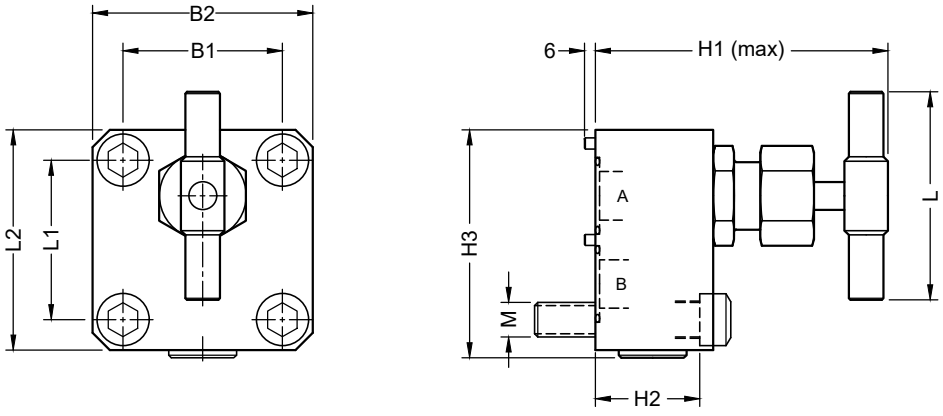


Hydraulic Symbol

Unit Dimensions

Dimensions in mm.

Sub-plate mounting



Size	Part code	B1	B2	L1	L2	H1	H2	H3	L	Mounting screws (10.9)	Torque	Mass (Kg)
DN 11	**MHSL11-2.0**	47.8	65	60.5	78	106	35.0	79	64	M10 x 50 Long	20 Nm	1.5
DN 19	**MHSL19-2.0**	65.0	97	81.0	113	135	26.0	118	84	M16 x 50 Long	110 Nm	3.6
DN 28	**MHSL28-2.0**	92.0	127	92.0	127	186	60.0	131	120	M20 x 90 Long	225 Nm	8.5

Technical Specifications

Construction ---------- Rising spindle.

Mounting style ---------- Sub-plate mounting.

Mounting Interface ---------- Factory standard.

Flow direction ---------- From 'A' to 'B' or 'B' to 'A'

Operating pressure ---------- 350 bar.

Hydraulic medium ---------- Mineral oil.

Viscosity range ---------- 10 cSt to 380 cSt.

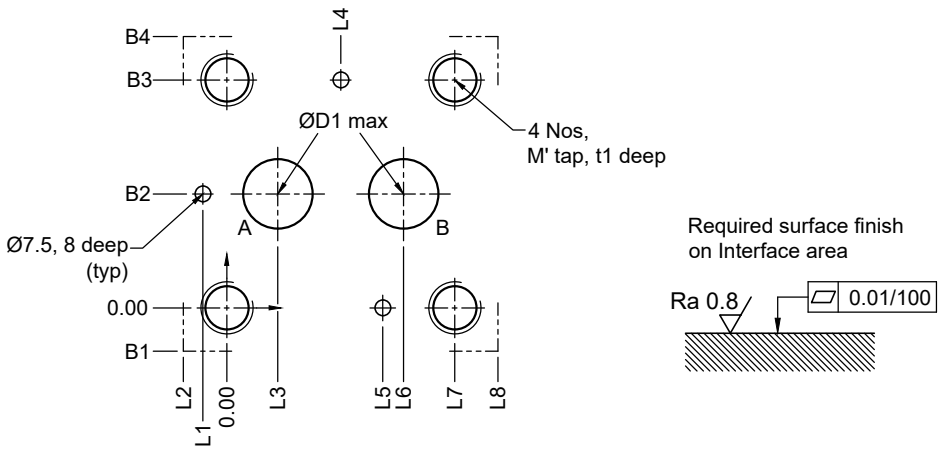
Fluid temperature range ---------- -20 ºC to +70 ºC

Fluid cleanliness requirement --------- As per ISO 4406 20/18/15

Nom. flow handling capacity ---------- Refer graphs

Shut off Valves, Sub-plate mounting
MHSL

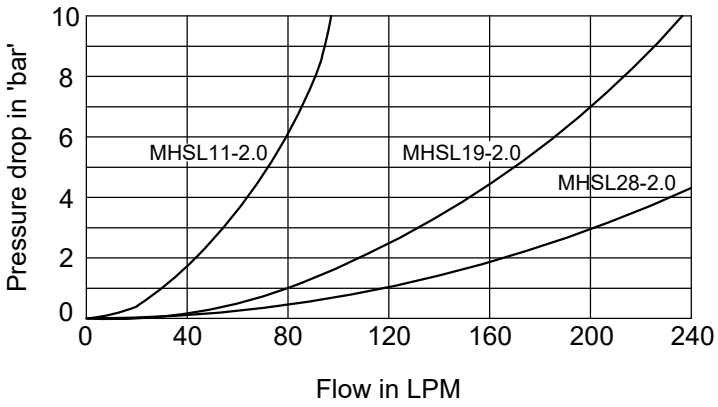
Interface - Factory standard



Size	Part code	ØD1	L1	L2	L3	L4	L5	L6	L7	L8	B1	B2	B3	B4	M	t 1
DN 11	**MHSL11-2.0**	11.0	---	-8.6	12.7	30.3	47.8	47.8	60.5	69.4	-8.6	23.9	47.8	56.4	M10	18
DN 19	**MHSL19-2.0**	19.0	-8.70	-16.0	22.2	40.5	---	68.3	81.0	97.0	-16.0	32.5	65.0	81.0	M16	28
DN 28	**MHSL28-2.0**	28.0	-9.65	-17.5	20.6	46.0	---	71.4	92.0	109.5	-17.5	46.0	92.0	109.5	M20	35

Performance curves

Oil used : ISO VG 68
Viscosity : 68 cSt @ 40 °C
Test conducted at : 50 ºC
Condition : Valve fully opened



Ordering Code

M	H	SL	11	-	-	2.0

- **M** — Subplate mounting
- **H** — Factory standard Interface
- **SL** — Shut off valve
- **11** — Size: DN 11 - **11**; DN 19 - **19**; DN 28 - **28**
- **2.0** — Design Series, Subject to revision
- Seals: (blank) Omit for Nitrile; **V** FKM (Viton)

Note : Add prefix 316 to the above part code for SS 316 Valves.
e.g. **316-MHSL11-2.0**

The right connection
The right environment

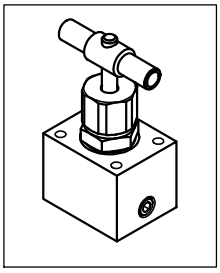
Shut off Valves, Sub-plate mounting
MSSL06

Ref. No. H02651
Release: Apr 2025

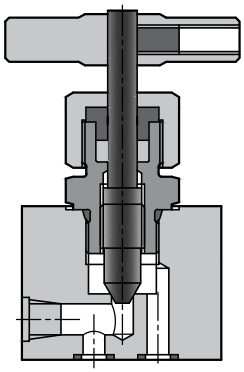
Description

Shut off valves model **MSSL06** are rising spindle, seat type valves with metal to metal seat for leak free closure between its port 'A' and Port 'B'

The mounting interface conforms to ISO 5781-AB-03-4-B.



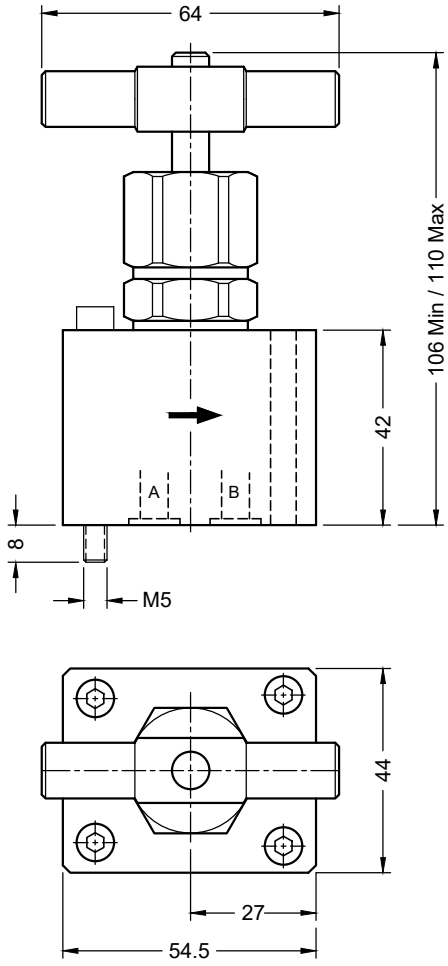
Section



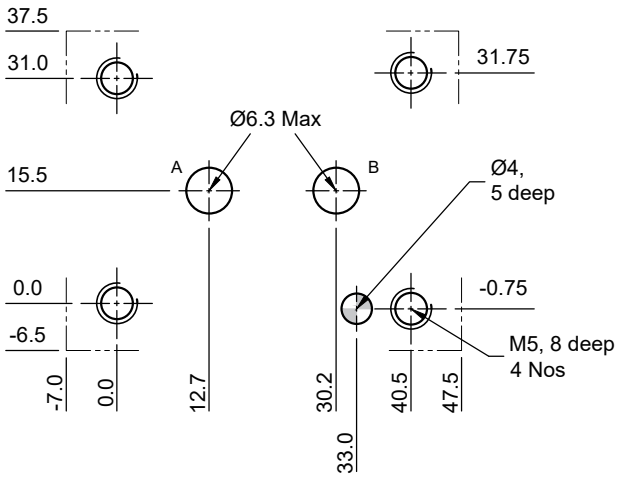
Hydraulic Symbol

Unit Dimensions

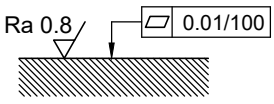
Dimensions in mm.



Mounting Interface



Required surface finish
on Interface area



Valve mounting Screws : M5 x 50 Long (10.9) - 4 Nos.

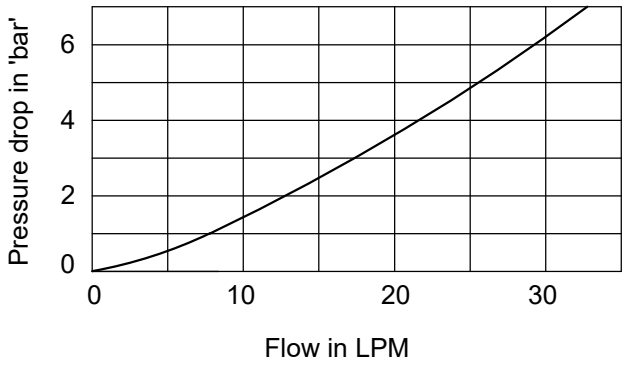
Tightening Torque : 9 Nm

Technical Specifications

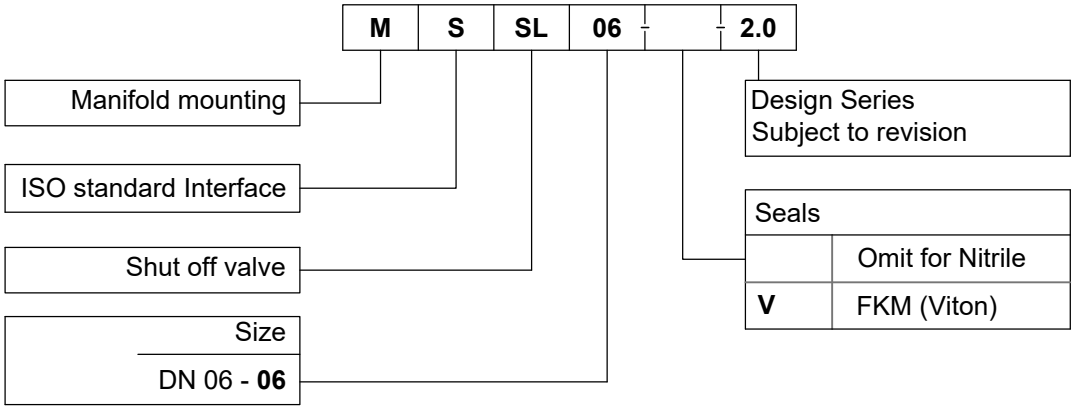
Construction	Seat type
Mounting type	Sub-plate mounting.
Mounting Interface	ISO 5781-AB-03-4-B
Mounting position	Optional
Flow direction	From 'A' to 'B'
Operating pressure	315 bar.
Hydraulic medium	Mineral oil.
Viscosity range	10 cSt to 380 cSt.
Fluid temperature range	-20 ºC to +80 ºC
Fluid cleanliness requirement	As per ISO 4406 20/18/15
Mass	0.9 Kg
Nom. flow handling capacity	Refer graph

Performance curves

Oil used : ISO VG 68
Viscosity : 68 cSt @ 40 °C
Test conducted at : 50 ºC
Condition : Valve fully opened



Ordering Code



Note : Add prefix 316 to the above part code for SS 316 Valves.
e.g. **316-MSSL06-2.0**

The right connection
The right environment

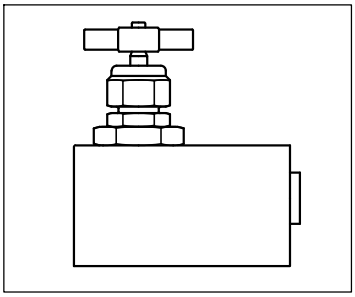
Shut off Valves (Screw In Cartridge), Sub-plate mounting
MHSLB25

Ref. No. H03656
Release: Apr 2025

Description

Shut off valves model **MHSLB25** are seat type valves with replacable cartridge.
Balanced sealed poppet construction to reduce operating forces.

The mounting interface conforms to factory standard.



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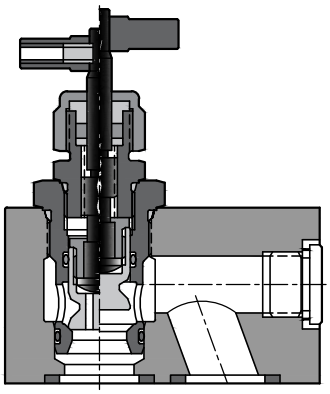
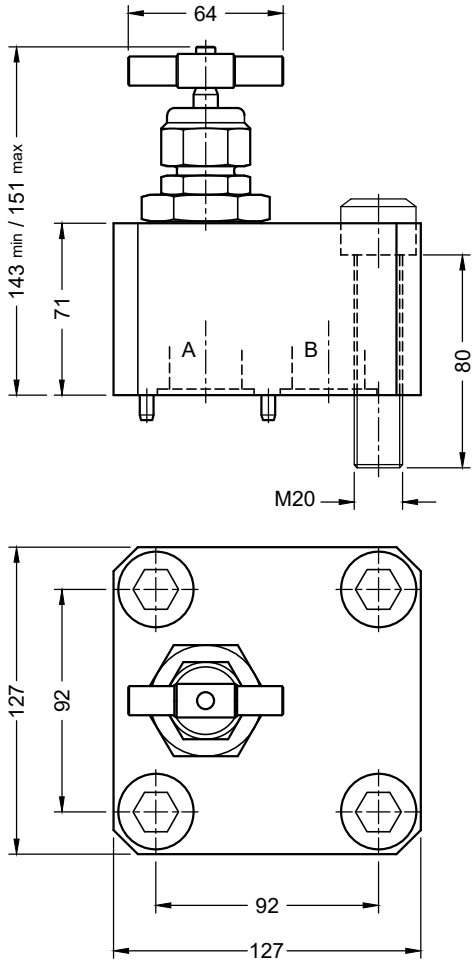


Hydraulic Symbol

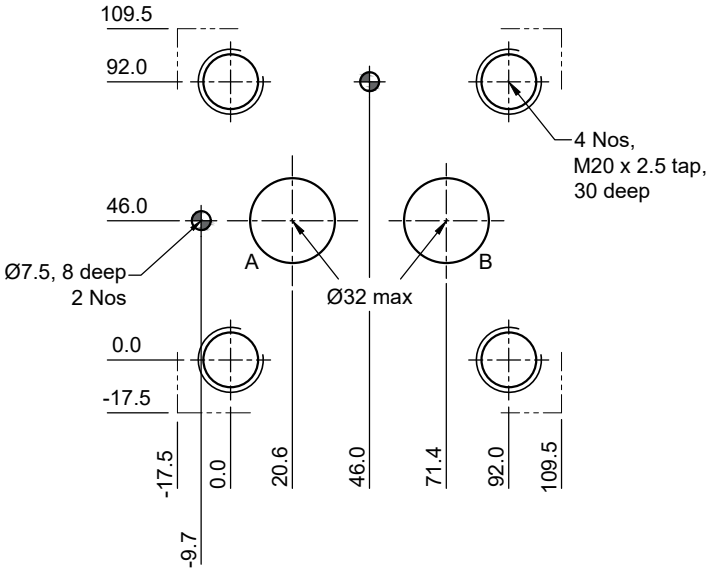
Unit Dimensions

Sub-plate mounting

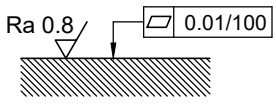
Dimensions in mm.



Interface - Factory standard



Required surface finish
on Interface area



Valve mounting Screws : M20 x 2.5 x 80 Long (10.9) - 4 Nos
Tightening torque : 312 Nm

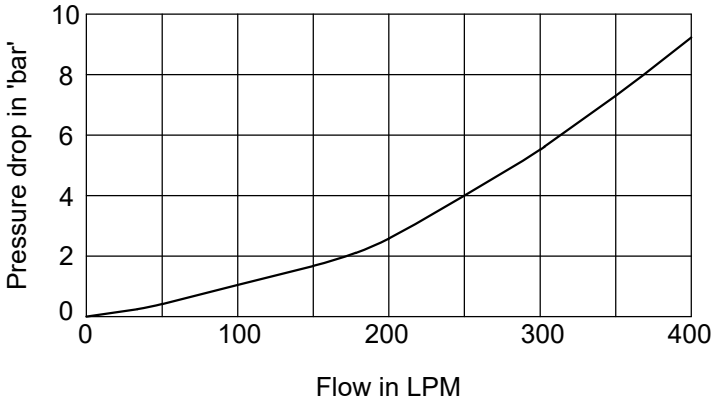
Shut off Valves (Screw In Cartridge), Sub-plate mounting
MHSLB25

Technical Specifications

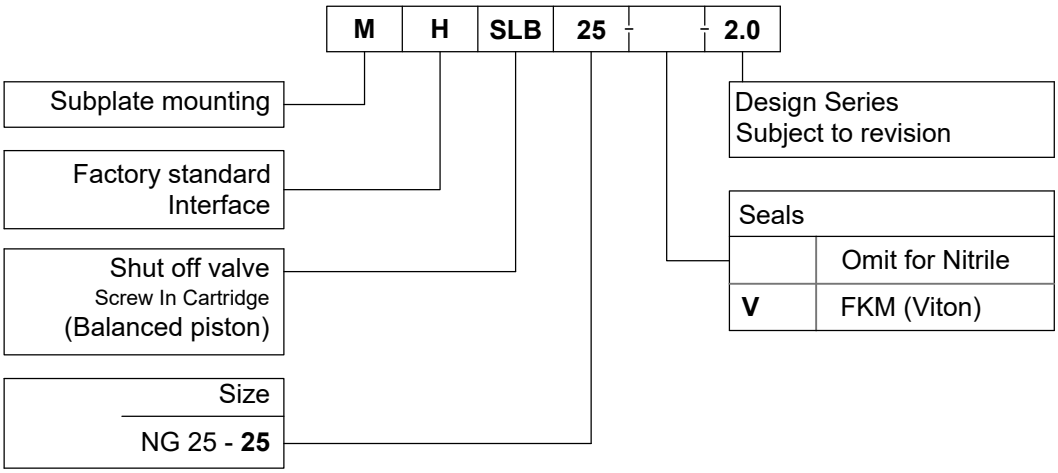
Construction	Seat type Screw in cartridge
Mounting style	Sub-plate mounting
Mounting Interface	Factory standard
Flow direction	From 'A' to 'B'
Operating pressure	350 bar.
Hydraulic medium	Mineral oil.
Viscosity range	10 cSt to 380 cSt
Fluid temperature range	-20 ºC to +80 ºC
Fluid cleanliness requirement	As per ISO 4406 20/18/15
Nom. flow handling capacity	Refer graphs

Performance curves

Oil used : ISO VG 68
Viscosity : 68 cSt @ 40 °C
Test conducted at : 50 ºC
Condition : Valve fully opened



Ordering Code



Note : Add prefix 316 to the above part code for SS 316 Valves.
e.g. **316-MHSLB25-2.0**

The right connection
The right environment

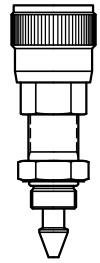
Needle Valve - Cartridge
KHNL

Ref. No. H03082
Release: Apr 2025

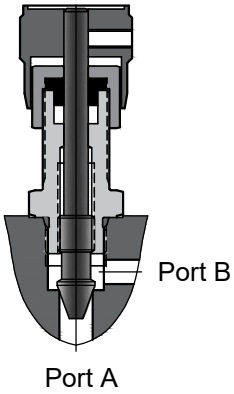
Description

Needle valve Cartridge **KHNL** are rising spindle, seat type valves with metal to metal seat for leak free closure between its port 'A' and Port 'B'

The mounting cavity conforms to Factory standard.



Section

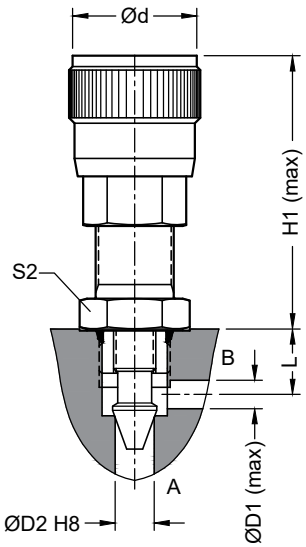


Hydraulic Symbol

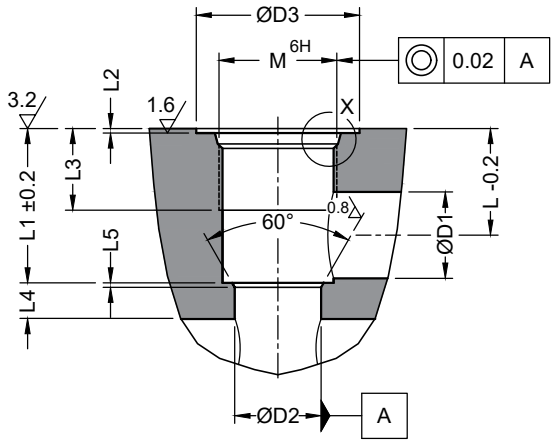
Unit Dimensions

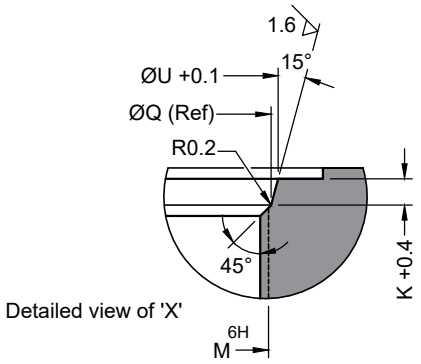
Dimensions in mm

Part code	Size	L	H1	ØD1	ØD2	Ød	S2
KHNL08-2.0	08	18	85.5	11	8	37	27
KHNL11-2.0	11	18	85.5	11	11	37	27
KHNL14-2.0	14	23	87.0	19	14	48	32
KHNL19-2.0	19	23	87.0	19	19	48	32
KHNL28-2.0	28	33	108.5	28	28	68	50



Cavity Machining details





Dimensions in mm

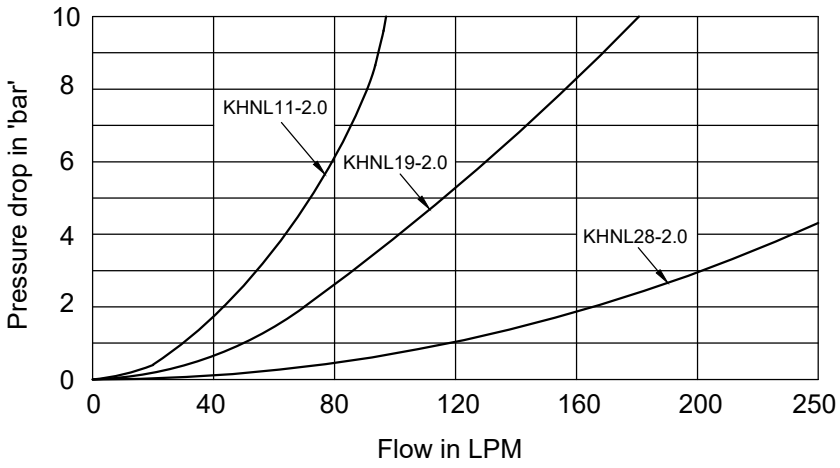
Part code	ØD1	ØD2	ØD3	L	L1	ØU	ØQ	L2	L3	L4	L5	K	M
KHNL08-2.0	10	8	31.0	18	24	21.8	20.5	0.2	16	3	0.5	2.4	M20 x 1.5
KHNL11-2.0	10	11	31.0	18	24	21.8	20.5	0.2	16	3	0.5	2.4	M20 x 1.5
KHNL14-2.0	19	14	36.0	23	33	27.8	26.5	0.2	18	5	1.0	2.4	M26 x 1.5
KHNL19-2.0	19	19	36.0	23	33	27.8	26.5	0.2	18	5	1.0	2.4	M26 x 1.5
KHNL28-2.0	28	28	54.5	35	51	44.4	42.7	1.0	24	7	1.5	3.1	M42 x 2.0

Technical Specifications

Construction	Seat type valve
Mounting type	Insert in cavity conforming to factory standard
Mounting position	Optional
Flow direction	From port 'A' to port 'B'
Operating pressure	350 bar.
Hydraulic medium	Mineral oil.
Viscosity range	10 cSt to 380 cSt.
Fluid temperature range	-20 ºC to +70 ºC
Fluid cleanliness requirement	As per ISO 4406 20/18/15
Nom. flow handling capacity	Refer graph

Performance curves

Oil used : ISO VG 68
Viscosity : 68 cSt @ 40 °C
Test conducted at : 50 ºC
Condition : Valve fully opened



Ordering Code

K	H	NL	11	-	-	2.0

- K: Screw in Cartridge
- H: Factory standard Cavity
- NL: Shut off valve
- 11: Size
  - DN 08 - **08**
  - DN 11 - **11**
  - DN 14 - **14**
  - DN 19 - **19**
  - DN 28 - **28**
- 2.0: Design Series Subject to revision
- Seals
  - (blank): Omit for Nitrile
  - **V**: FKM (Viton)

Note : Add prefix 316 to the above part code for SS 316 Valves.
e.g. **316-KHNL11-2.0**

Needle Valves - Inline and Right angle
NLG / NLWG

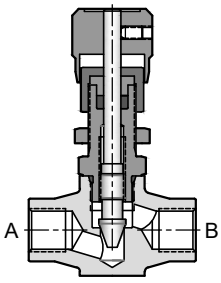
Description

Needle valve model NL, NLW are two way Throttle valves.

The Valve allows accurate adjustment of flow by throttling action. The throttling can be varied by rotation of the Hand knob. These valves offer constant flow rate so long as the pressure drop across the valve and the viscosity of oil remains constant.

The throttle is effective in either direction.

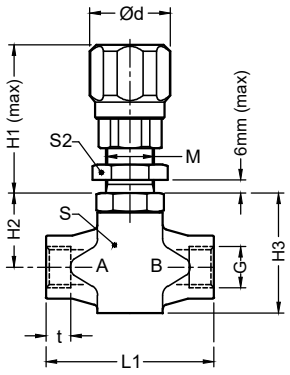
Section



Hydraulic Symbol

Unit Dimensions

In-line threaded ports



Right angle threaded ports

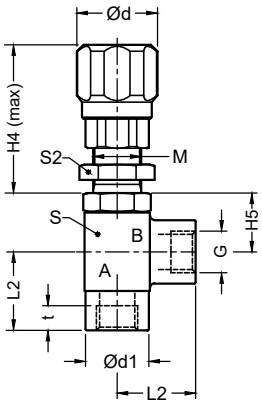
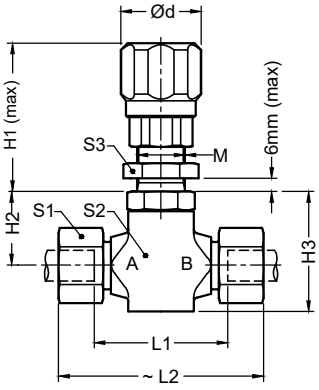


Table-1

Dimensions in mm.

G	Ød1	Pr. (bar)	L1	t	L2	H1	H2	H3	H4	H5	Ød	S	S2	M
G 1/4	22	350	70	14	30							30		
G 3/8	25	350	70	14	30	76.5	34.0	55.0	77.0	27.0	40	30	30	M22x1.5
G 1/2	29	350	77	17	36							30		
G 3/4	35	350	93	17	45	78.0	44.0	70.0	78.0	32.0	48	36	36	M26x1.5
G1	44	350	93	18	45							46		
G1.1/4	58	250	162	22	65	95.5	66.5	117.0	95.0	47.0	68	60	50	M42x2.0
G1.1/2	58	250	162	24	65							60		

In-line Tube mounting



Right Angle Tube mounting

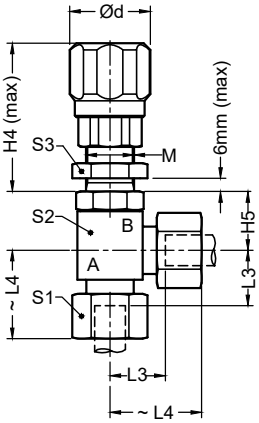


Table-2

Tube OD	Pr. (bar)	L1	L2	L3	L4	H1	H2	H3	H4	H5	Ød	S1	S2	S3	M
10	350	55	88		39.0							22			
12	350	55	88	22	39.0	76.5	34.0	55.0	76.5	27.0	40	24	30	30	M22x1.5
16	350	60	97		41.0							30			
20	350	72	115	28	68.0	78.5	43.5	71.5	78.0	32.0	48	36	41	36	M26x1.5
25	350	69	117		73.5							46			
30	250	135	188	40	63.0	95.5	66.5	118.0	95.0	48.0	68	50	60	50	M42x2.0
38	250	130	192		67.0							60			

Needle Valves - Inline and Right angle
NLG / NLWG

Technical Specifications

Construction ---------- Rising conical spindle.

Mounting style ---------- Inline or right angle port or tube mounting.

Mounting position ---------- Optional

Flow direction ---------- Either side.

Operating pressure ---------- Refer Table -1 and Table-2.

Hydraulic medium ---------- Mineral oil.

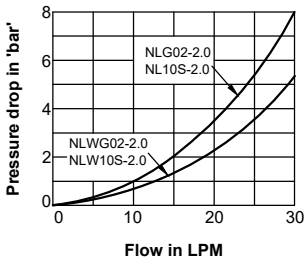
Viscosity range ---------- 10 cSt to 380 cSt.

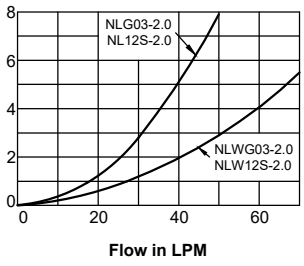
Fluid temperature range ---------- -20 ºC to +80 ºC

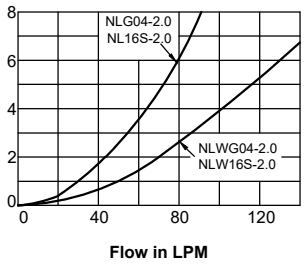
Fluid cleanliness requirement ---------- As per ISO 4406 20/18/15

Nom. flow handling capacity ---------- Refer graphs

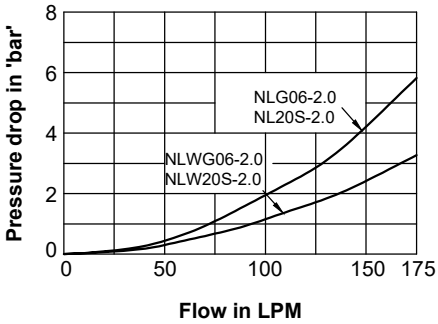
Performance curves

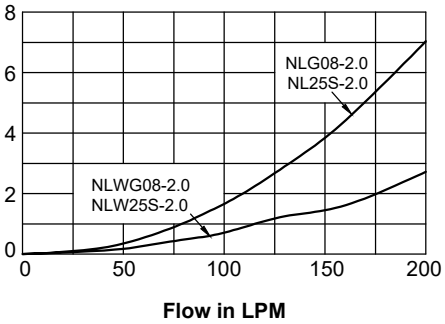


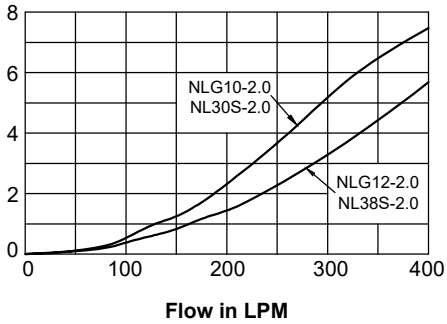




Oil used : ISO VG 68
Viscosity : 68 cSt @ 40 °C
Test conducted at : 50 ºC
Condition : Valve fully opened







Ordering Code

NL		G02		2.0

Needle Valve — NL

Mounting style

Omit for In-line	
Right angle	W

For Valves with G (BSPP) Ports

G 1/4	G02
G 3/8	G03
G 1/2	G04
G 3/4	G06
G1	G08
G1 1/4	G10
G1 1/2	G12

For Valves with Tube ends (Will have Double bite ferrule)

10 OD	10S
12 OD	12S
16 OD	16S
20 OD	20S
25 OD	25S
30 OD	30S
38 OD	38S

Design Series
Subject to revision — 2.0

Seals

	Omit for Nitrile
V	FKM (Viton)

Note : Add prefix 316 to the above part code for SS 316 Valves.
e.g. **316-NLG04-2.0**

The right connection
The right environment

Needle Valves, Sub-plate mounting
MHNL

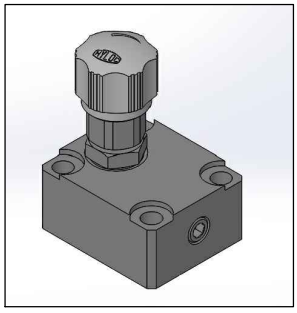
Ref. No. H02758
Release: Apr 2025

Description

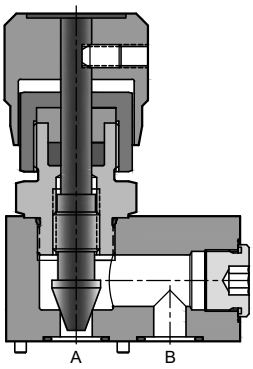
Needle valves model **MHNL** are rising spindle valves with taper needle construction.

The throttle is effective in either direction.

The mounting interface conforms to factory standard.



Section



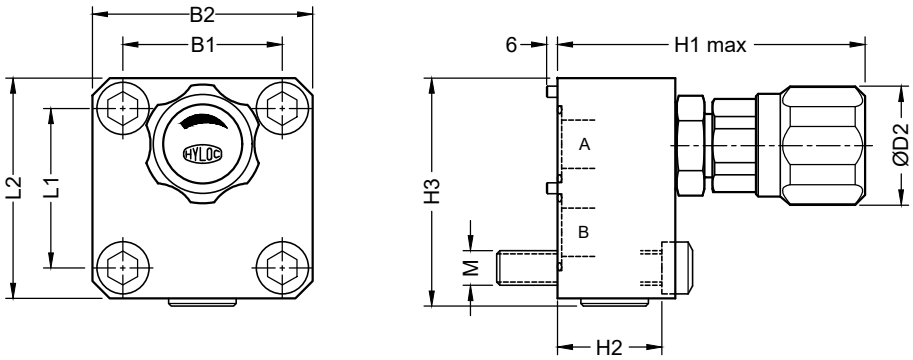
Model : **MHNL**

Hydraulic Symbol

Unit Dimensions

Sub-plate mounting

Dimensions in mm.



Size	Part code	B1	B2	L1	L2	H1	H2	H3	ØD2	Mounting screws (10.9)	Torque	Mass (Kg)
DN 11	**MHNL11-2.0**	47.8	65	60.5	78	116.0	35.0	79	40	M10 x 50 Long	20 Nm	1.5
DN 19	**MHNL19-2.0**	65.0	97	81.0	113	140.0	26.0	118	48	M16 x 50 Long	110 Nm	3.6
DN 28	**MHNL28-2.0**	92.0	127	92.0	127	156.5	60.0	131	68	M20 x 90 Long	225 Nm	8.5

Technical Specifications

Construction ---------- Rising conical spindle.

Mounting style ---------- Sub-plate mounting.

Mounting Interface ---------- Factory standard.

Flow direction ---------- From 'A' to 'B' or 'B' to 'A'

Operating pressure ---------- 350 bar.

Hydraulic medium ---------- Mineral oil.

Viscosity range ---------- 10 cSt to 380 cSt.

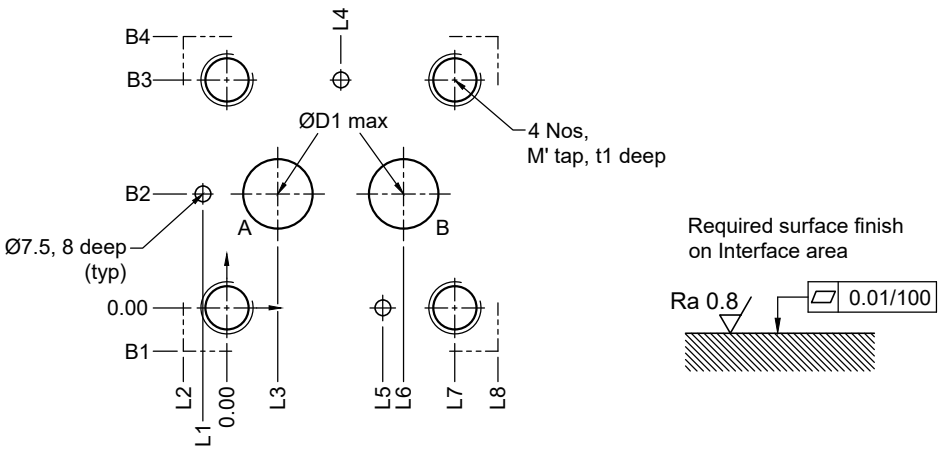
Fluid temperature range ---------- -20 ºC to +70 ºC

Fluid cleanliness requirement --------- As per ISO 4406 20/18/15

Nom. flow handling capacity ---------- Refer graphs

Needle Valves, Sub-plate mounting
MHNL

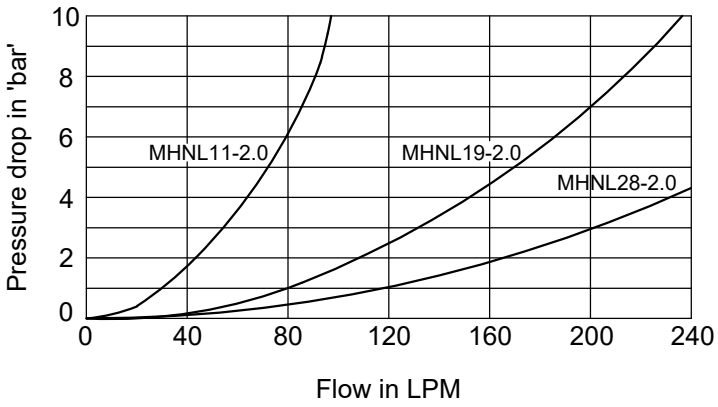
Interface - Factory standard



Size	Part code	ØD1	L1	L2	L3	L4	L5	L6	L7	L8	B1	B2	B3	B4	M	t 1
DN 11	**MHNL11-2.0**	11.0	---	-8.6	12.7	30.3	47.8	47.8	60.5	69.4	-8.6	23.9	47.8	56.4	M10	18
DN 19	**MHNL19-2.0**	19.0	-8.70	-16.0	22.2	40.5	---	68.3	81.0	97.0	-16.0	32.5	65.0	81.0	M16	28
DN 28	**MHNL28-2.0**	28.0	-9.65	-17.5	20.6	46.0	---	71.4	92.0	109.5	-17.5	46.0	92.0	109.5	M20	35

Performance curves

Oil used : ISO VG 68
Viscosity : 68 cSt @ 40 °C
Test conducted at : 50 ºC
Condition : Valve fully opened



Ordering Code

M	H	NL	11	-	-	2.0

- M — Subplate mounting
- H — Factory standard Interface
- NL — Needle valve
- 11 — Size: DN 11 - **11**; DN 19 - **19**; DN 28 - **28**
- 2.0 — Design Series, Subject to revision
- Seals: (omit for Nitrile); **V** — FKM (Viton)

Note : Add prefix 316 to the above part code for SS 316 Valves.
e.g. **316-MHNL11-2.0**

The right connection
The right environment

Needle Valve, Sub-plate mounting
MSNL06

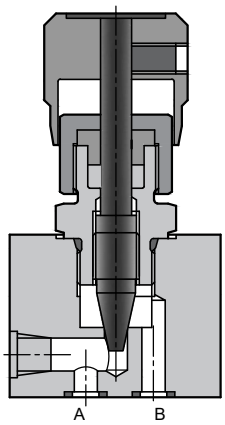
Ref. No. H15674
Release: Dec 2025

Description

Needle valves model **MSNL06** are rising spindle, seat type valves with metal to metal seat for leak free closure between its port 'A' and Port 'B'

The mounting interface conforms to ISO 5781-AB-03-4-B.

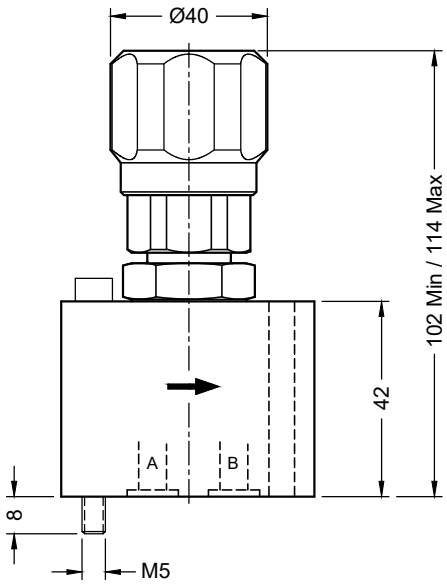
Section

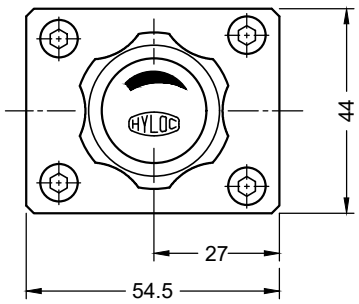


Hydraulic Symbol

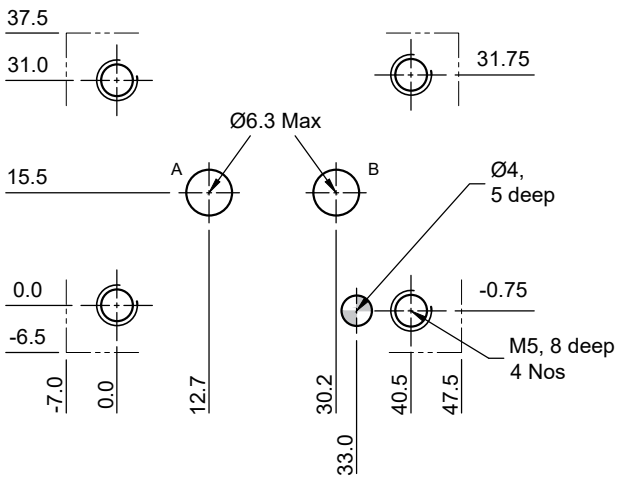
Unit Dimensions

Dimensions in mm.

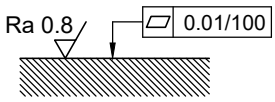




Mounting Interface



Required surface finish on Interface area



Valve mounting Screws : M5 x 50 Long (10.9) - 4 Nos.

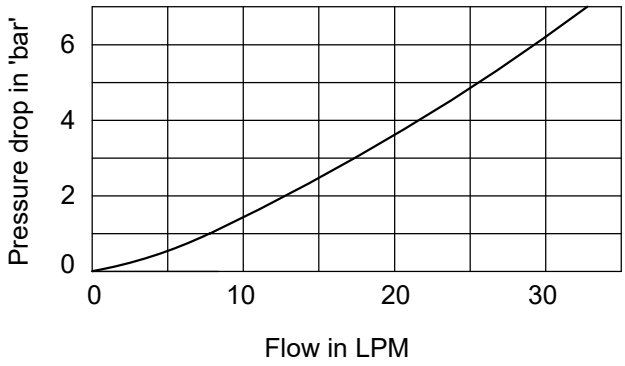
Tightening Torque : 9 Nm

Technical Specifications

Construction	Seat type
Mounting type	Sub-plate mounting.
Mounting Interface	ISO 5781-AB-03-4-B
Mounting position	Optional
Flow direction	From 'A' to 'B'
Operating pressure	315 bar.
Hydraulic medium	Mineral oil.
Viscosity range	10 cSt to 380 cSt.
Fluid temperature range	-20 ºC to +80 ºC
Fluid cleanliness requirement	As per ISO 4406 20/18/15
Mass	0.9 Kg (Approx)
Nom. flow handling capacity	Refer graph

Performance curves

Oil used : ISO VG 68
Viscosity : 68 cSt @ 40 °C
Test conducted at : 50 ºC
Condition : Valve fully opened



Ordering Code

M	S	NL	06	-	-	2.0

- **M** — Manifold mounting
- **S** — ISO standard Interface
- **NL** — Needle valve
- **06** — Size: DN 06 - **06**
- Seals:
  - (blank) — Omit for Nitrile
  - **V** — FKM (Viton)
- **2.0** — Design Series, Subject to revision

Note : Add prefix 316 to the above part code for SS 316 Valves.
e.g. **316-MSNL06-2.0**

The right connection
The right environment

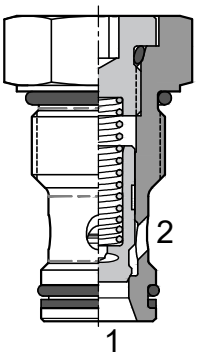
Check Valve - Screw in cartridge
KSC

Ref. No. H06925
Release: Apr 2025

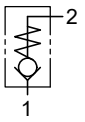
Description

KSC Check valves are TWO port screw in cartridge valves that are designed to fit in a cavity conforming to ISO 7789
These are seat type valves, available in four different sizes and with five different cracking pressures in each size.
Check valves allow free flow in one direction while providing leak free closure in reverse direction.

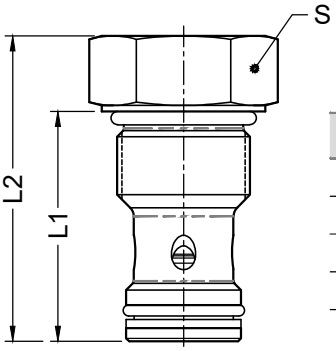
Section



Hydraulic Symbol



Unit dimensions



Part code	L1	L2	M	S	Torque
KSC06	30.0	41.5	M20	27	140 Nm
KSC10	38.0	52.5	M22	27	150 Nm
KSC16	49.5	81.5	M33	41	350 Nm
KSC20	55.0	91.0	M42	50	500 Nm

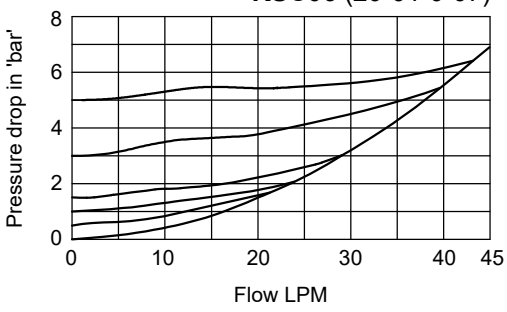
Technical Specifications

Construction ---------- Poppet seat type
Mounting style ---------- Screw in cavity as per ISO 7789
Mounting position ---------- Optional
Flow direction ---------- Free flow from 1 to 2
Operating pressure ---------- 350 bar

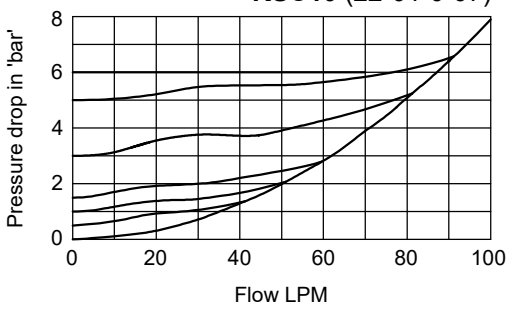
Hydraulic medium ---------- Mineral oil.
Viscosity range ---------- 10 cSt to 380 cSt
Fluid temperature range ---------- -20 °C to +80 °C (With Nitrile seals)
-10 ºC to +100 ºC (With Viton seals)
Fluid cleanliness requirement ----- As per ISO 4406 20/18/15
Nom. flow handling capacity ------- Refer graphs

Performance curves - Testing as per ISO 6403. Oil used : ISO VG 68, Viscosity : 46 cSt @ 40 °C Direction of flow 1 to 2

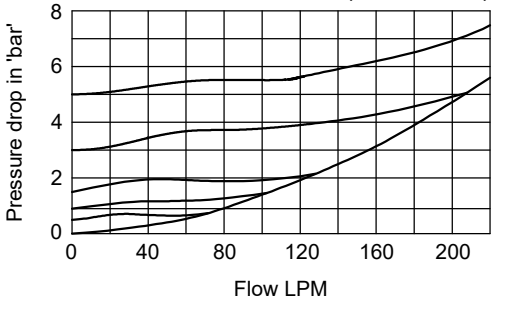
KSC06 (20-01-0-07)



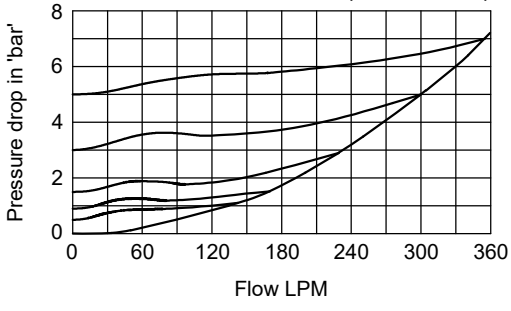
KSC10 (22-01-0-07)



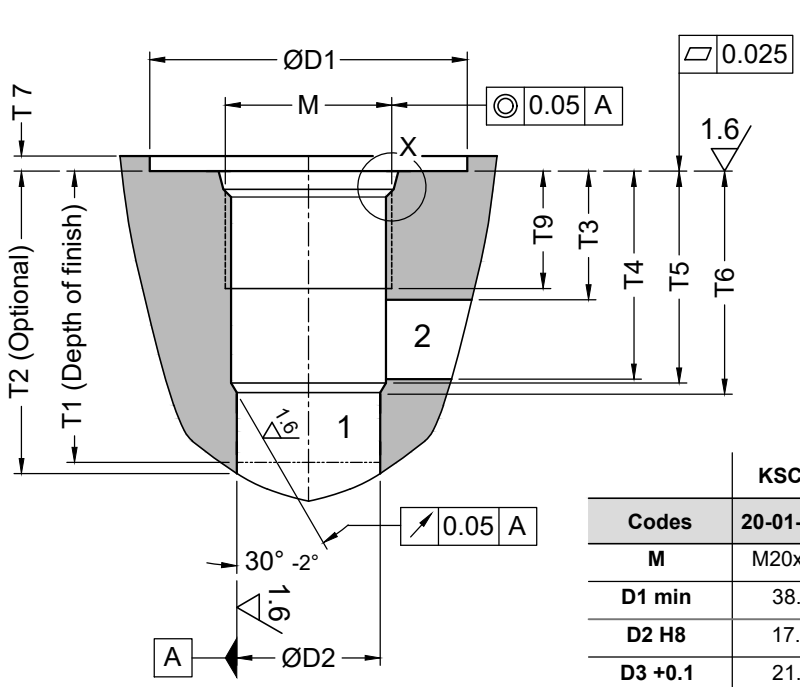
KSC16 (33-01-0-07)

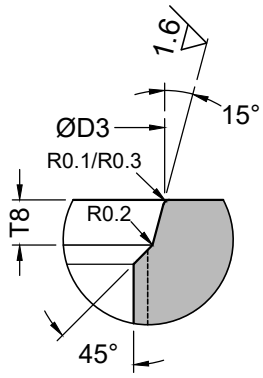


KSC20 (42-01-0-07)



Cavity details





	KSC06	KSC10	KSC16	KSC20
Codes	**20-01-0-07**	**22-01-0-07**	**33-01-0-07**	**42-01-0-07**
M	M20x1.5	M22x1.5	M33x2.0	M42x2.0
D1 min	38.0	42.0	58.0	74.0
D2 H8	17.0	19.0	29.0	38.0
D3 +0.1	21.8	23.8	35.4	44.4
T1 min	30.5	38.5	50.0	56.0
T2 +1	32.0	40.0	52.0	58.0
T3 min	14.5	17.0	22.0	23.0
T4 max	20.5	27.5	38.5	43.5
T5 +0.4 (ref)	21.0	28.0	39.0	44.0
T6 +0.4	22.3	29.3	40.7	45.7
T7 max	2.0	2.0	2.5	2.5
T8 +0.4	2.4	2.4	3.1	3.1
T9 min	14.5	15.5	19.0	19.5

Ordering Code

KS	C	10	A	X	V	1.X

KS — Screw in Cartridge

C — Check Valve - C

Valve Size	
20-01-0-07	**06**
22-01-0-07	**10**
33-01-0-07	**16**
42-01-0-07	**20**

Spring Cracking	
0.5 bar	**A**
1.0 bar	**B**
1.5 bar	**C**
3.0 bar	**D**
5.0 bar	**E**
No Spring	**X**

X — Non Adjustable cracking pressure

Seals	
N	Nitrile
V	Viton

1.X — Design Series
Subject to revision

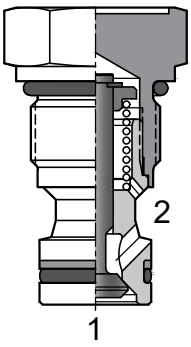
1.0 to 1.9
Externally interchangable

Reverse Check Valve - Screw in cartridge
KSD

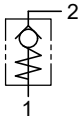
Description

KSD Check valves are TWO port screw in cartridge valves that are designed to fit in a cavity conforming to ISO 7789
These are seat type valves, available in four different sizes and with five different cracking pressures in each size.
Reverse check valves allow free flow in one direction while providing leak free closure in reverse direction.

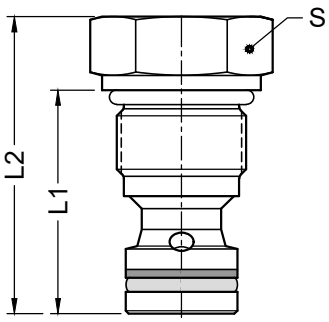
Section



Hydraulic Symbol



Unit dimensions



Part code	L1	L2	M	S	Torque
KSD06	30.0	42.0	M20	27	140 Nm
KSD10	38.0	50.5	M22	27	150 Nm
KSD16	49.5	74.5	M33	41	350 Nm
KSD20	55.5	85.0	M42	50	500 Nm

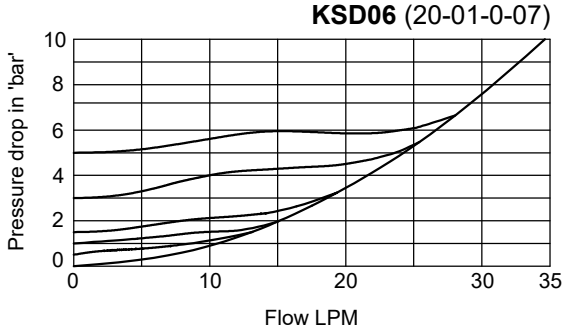
Technical Specifications

Construction ---------- Poppet seat type
Mounting style ---------- Screw in cavity as per ISO 7789
Mounting position ---------- Optional
Flow direction ---------- Free flow from 2 to 1
Operating pressure ---------- 350 bar

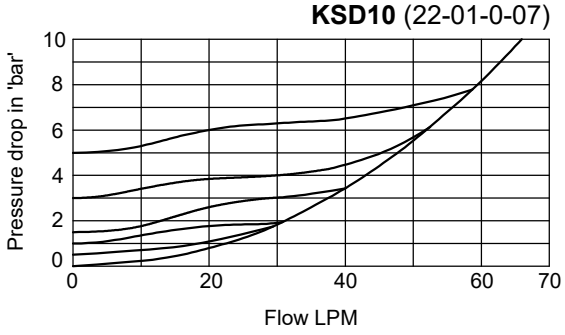
Hydraulic medium ---------- Mineral oil.
Viscosity range ---------- 10 cSt to 380 cSt
Fluid temperature range ---------- -20 °C to +80 °C.
Fluid cleanliness requirement ----- As per ISO 4406 20/18/15
Nom. flow handling capacity ------- Refer graphs

Performance curves - Testing as per ISO 6403. Oil used : ISO VG 68, Viscosity : 46 cSt @ 40 °C Direction of flow 2 to 1

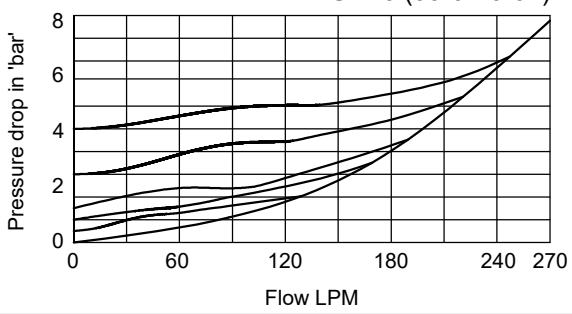
KSD06 (20-01-0-07)



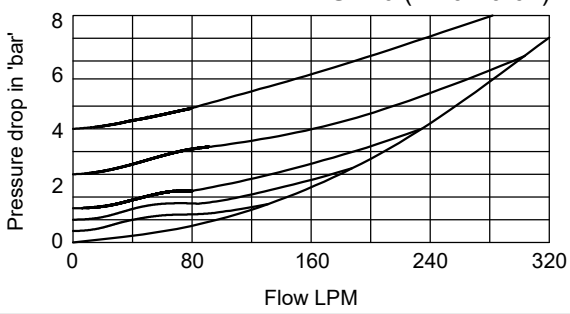
KSD10 (22-01-0-07)



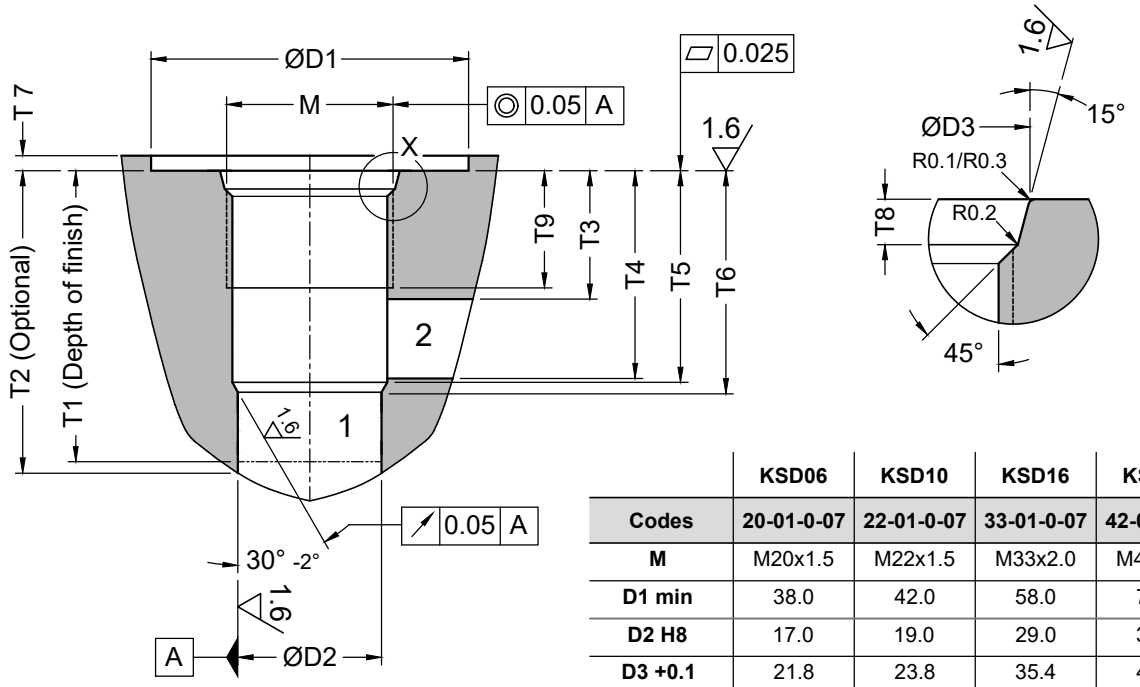
KSD16 (33-01-0-07)



KSD20 (42-01-0-07)



Cavity details



	KSD06	KSD10	KSD16	KSD20
Codes	**20-01-0-07**	**22-01-0-07**	**33-01-0-07**	**42-01-0-07**
M	M20x1.5	M22x1.5	M33x2.0	M42x2.0
D1 min	38.0	42.0	58.0	74.0
D2 H8	17.0	19.0	29.0	38.0
D3 +0.1	21.8	23.8	35.4	44.4
T1 min	30.5	38.5	50.0	56.0
T2 +1	32.0	40.0	52.0	58.0
T3 min	14.5	17.0	22.0	23.0
T4 max	20.5	27.5	38.5	43.5
T5 +0.4 (ref)	21.0	28.0	39.0	44.0
T6 +0.4	22.3	29.3	40.7	45.7
T7 max	2.0	2.0	2.5	2.5
T8 +0.4	2.4	2.4	3.1	3.1
T9 min	14.5	15.5	19.0	19.5

Ordering Code

KS	D	10	A	X	V	1.X

KS — Screw in Cartridge

D — Reverse Check Valve - **D**

10 — Valve Size

20-01-0-07	06
22-01-0-07	10
33-01-0-07	16
42-01-0-07	20

A — Spring Cracking

0.5 bar	A
1.0 bar	B
1.5 bar	C
3.0 bar	D
5.0 bar	E
No Spring	X

X

X	Non Adjustable cracking pressure

V — Seals

N	Nitrile
V	FKM (Viton)

1.X — Design Series
Subject to revision

1.0 to 1.9
Externally interchangable

Check Valve
RHD / RHZ / RHV / RHF

Ref. No. H04068
Release: Apr 2025

Description

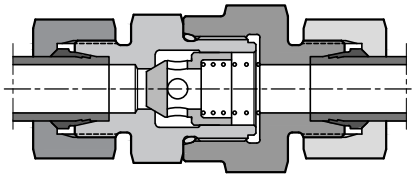
Inline mounted poppet type check valves, allow free flow in the direction of arrow and leak free closure in opposite direction.

Three mounting styles : Tube to tube - **RHD**
Tube to Male stud - **RHZ**
Male stud to Tube - **RHV**

Seven female port sizes from G 1/4 to G1.1/2

Five cracking pressures : 0, 0.5, 1.5, 3 and 5 bar

Section



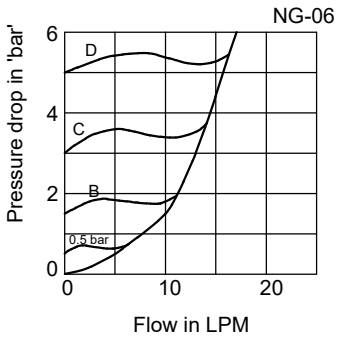
Hydraulic Symbol

Technical Specifications

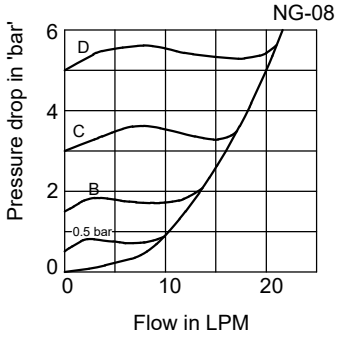
Construction	Poppet type
Mounting style	In line
Mounting position	Optional
Cracking pressure available	0, 0.5, 1.5, 3.0 and 5.0 bar
Free Flow direction	In the direction of arrow.
Maximum pressure	Refer table for Individual model
Hydraulic medium	Mineral oil.
Viscosity range	10 cSt to 380 cSt
Fluid temperature range	-20 °C to +70 °C.
Fluid cleanliness requirement	As per ISO 4406 20/18/15
Maximum flow handling capacity	Refer graph

Oil used : ISO VG 68
Viscosity : 68 cSt @ 40 °C

NG-06

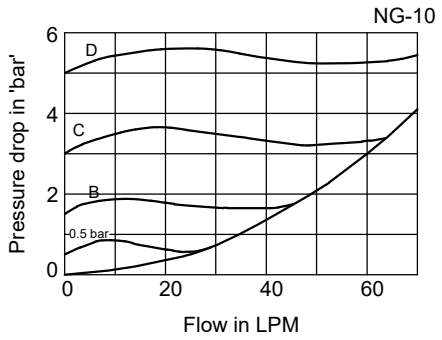


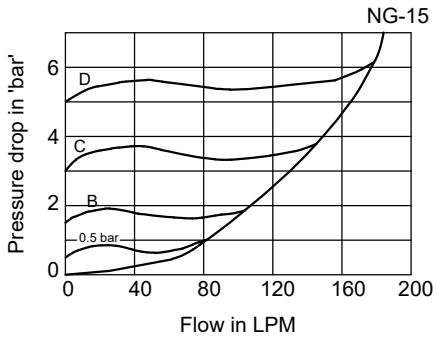
NG-08

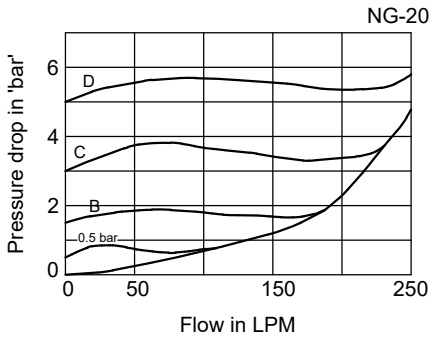


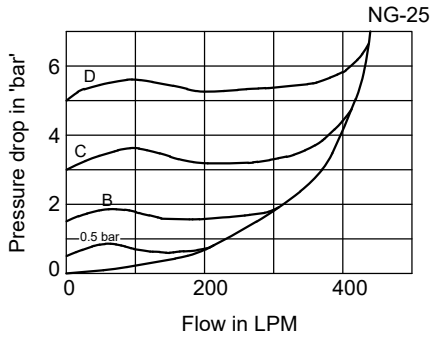
Expected performance curves

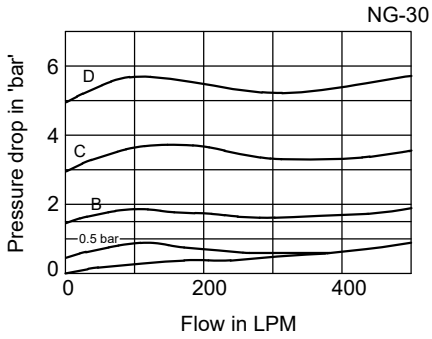
Oil used : ISO VG 68 Viscosity : 68 cSt @ 40 °C











Unit Dimensions

RHD - Tube end connections conform to ISO 8434

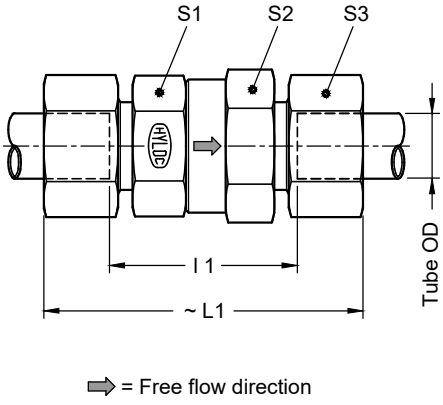
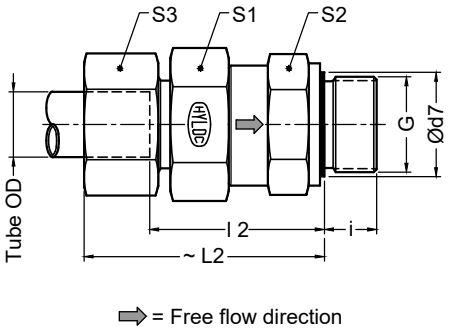


Table - 1

Part code	Size	Tube OD	Pressure Series	Pressure (bar)	I 1	L1	S1	S2	S3
RHD06PL-2.0	NG-06	06	L	250	35.5	65.5	22	24	14
RHD08PL-2.0		08	L	250	35.5	65.5			17
RHD06PS-2.0		06	S	315	39.5	69.5			17
RHD08PS-2.0		08	S	315	39.5	69.5			19
RHD10PL-2.0	NG-08	10	L	250	46.0	76.0	32	36	19
RHD10PS-2.0		10	S	315	47.0	80.0			22
RHD12PS-2.0		12	S	315	47.0	80.0			24
RHD12PL-2.0	NG-10	12	L	250	47.5	77.5	32	36	22
RHD15PL-2.0		15	L	250	49.5	79.5			27
RHD16PS-2.0		16	S	315	50.5	87.5			30
RHD18PL-2.0	NG-15	18	L	160	54.5	87.5	41	46	32
RHD20PS-2.0		20	S	315	56.5	99.5			36
RHD22PL-2.0	NG-20	22	L	160	70.0	103.0	50	55	36
RHD25PS-2.0		25	S	315	69.0	117.0			46
RHD28PL-2.0	NG-25	28	L	100	79.0	112.0	55	60	41
RHD30PS-2.0		30	S	250	79.0	132.0			50
RHD35PL-2.0	NG-30	35	L	100	87.0	130.0	65	70	50
RHD42PL-2.0		42	L	100	86.0	132.0			60
RHD38PS-2.0		38	S	250	88.0	150.0			60

RHZ - Tube end connections conform to ISO 8434 at inlet, BSP Male stud end (with ED seal) at outlet.



= Free flow direction

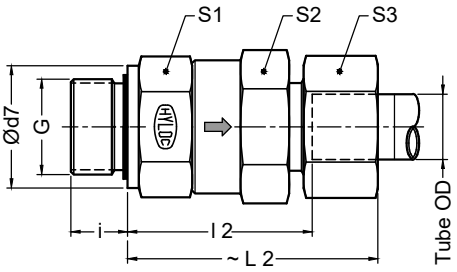
Table - 2

Part code	Size	Tube OD	Pr. Series	Pr. (bar)	G	i	l 2	L2	S1	S2	S3
RHZ06PLGE-2.0	NG-06	06	L	250	G 1/8	8.0	34.0	49.0	22	24	14
RHZ08PLGE-2.0		08	L	250	G 1/4	12.0	34.5	49.5			17
RHZ06PSGE-2.0		06	S	315	G 1/4	12.0	36.5	51.5			17
RHZ08PSGE-2.0		08	S	315	G 1/4	12.0	36.5	51.5			19
RHZ10PLGE-2.0	NG-08	10	L	250	G 1/4	12.0	44.0	59.0	32	36	19
RHZ10PSGE-2.0		10	S	315	G 3/8	12.0	45.0	61.5			22
RHZ12PSGE-2.0		12	S	315	G 3/8	12.0	45.0	61.5			24
RHZ12PLGE-2.0	NG-10	12	L	250	G 3/8	12.0	46.0	61.0	32	36	22
RHZ15PLGE-2.0		15	L	250	G 1/2	14.0	47.5	62.5			27
RHZ16PSGE-2.0		16	S	315	G 1/2	14.0	48.0	66.5			30
RHZ18PLGE-2.0	NG-15	18	L	160	G 1/2	14.0	53.0	69.5	41	46	32
RHZ20PSGE-2.0		20	S	315	G 3/4	16.0	54.0	75.5			36
RHZ22PLGE-2.0	NG-20	22	L	160	G 3/4	16.0	66.5	83.0	50	55	36
RHZ25PSGE-2.0		25	S	315	G 1	18.0	66.0	90.0			46
RHZ28PLGE-2.0	NG-25	28	L	100	G 1	18.0	75.5	92.0	55	60	41
RHZ30PSGE-2.0		30	S	250	G1.1/4	20.0	75.5	102.0			50
RHZ35PLGE-2.0	NG-30	35	L	100	G1.1/4	20.0	84.5	106.0	65	70	50
RHZ42PLGE-2.0		42	L	100	G1.1/2	22.0	84.0	107.0			60
RHZ38PSGE-2.0		38	S	250	G1.1/2	22.0	85.0	116.0			60

RHV - BSP Male stud end (with ED seal) at inlet, Tube end connections conform to ISO 8434 at outlet.

Table - 3

Part code	Size	Tube OD	Pr. Series	Pr. (bar)	G	i	l 2	L2	S1	S2	S3
RHV06PLGE-2.0	NG-06	06	L	250	G 1/8	8.0	34.0	49.0	22	24	14
RHV08PLGE-2.0		08	L	250	G 1/4	12.0	34.5	49.5			17
RHV06PSGE-2.0		06	S	315	G 1/4	12.0	36.5	51.5			17
RHV08PSGE-2.0		08	S	315	G 1/4	12.0	36.5	51.5			19
RHV10PLGE-2.0	NG-08	10	L	250	G 1/4	12.0	44.0	59.0	32	36	19
RHV10PSGE-2.0		10	S	315	G 3/8	12.0	45.0	61.5			22
RHV12PSGE-2.0		12	S	315	G 3/8	12.0	45.0	61.5			24
RHV12PLGE-2.0	NG-10	12	L	250	G 3/8	12.0	46.0	61.0	32	36	22
RHV15PLGE-2.0		15	L	250	G 1/2	14.0	47.5	62.5			27
RHV16PSGE-2.0		16	S	315	G 1/2	14.0	48.0	66.5			30
RHV18PLGE-2.0	NG-15	18	L	160	G 1/2	14.0	53.0	69.5	41	46	32
RHV20PSGE-2.0		20	S	315	G 3/4	16.0	54.0	75.5			36
RHV22PLGE-2.0	NG-20	22	L	160	G 3/4	16.0	66.5	83.0	50	55	36
RHV25PSGE-2.0		25	S	315	G 1	18.0	66.0	90.0			46
RHV28PLGE-2.0	NG-25	28	L	100	G 1	18.0	75.5	92.0	55	60	41
RHV30PSGE-2.0		30	S	250	G1.1/4	20.0	75.5	102.0			50
RHV35PLGE-2.0	NG-30	35	L	100	G1.1/4	20.0	84.5	106.0	65	70	50
RHV42PLGE-2.0		42	L	100	G1.1/2	22.0	84.0	107.0			60
RHV38PSGE-2.0		38	S	250	G1.1/2	22.0	85.0	116.0			60



= Free flow direction

Unit Dimensions

RHF - BSP Ports at inlet and at outlet.

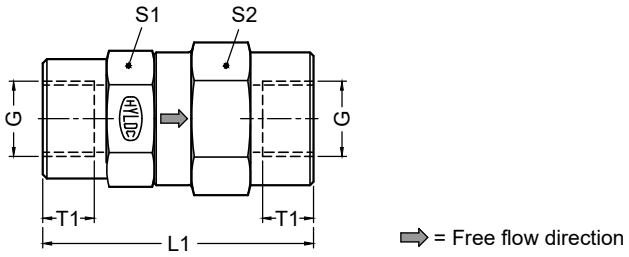


Table - 4

Part code	Pressure (bar)	G	T 1	L1	S1	S2
RHFG02-2.0		G 1/4	12	58	22	24
RHFG03-2.0		G 3/8	12	58	32	36
RHFG04-2.0		G 1/2	14	72	32	36
RHFG06-2.0	315	G 3/4	16	85	41	46
RHFG08-2.0		G 1	18	98	50	55
RHFG10-2.0		G1.1/4	20	120	55	60
RHFG12-2.0		G1.1/2	22	132	65	70

Ordering Code

RHZ	16	P	S	GE	-	-	2.0

Check Valve model

RHD	
RHZ	
RHV	
RHF	

Tube Size
For RHD, RHZ and RHV
Refer Table 1 to Table 3

Port Size
For RHF
Refer Table 4

End connection type
For RHD, RHZ and RHV
Omit for model RHF

With Double Bite Ferrule -	**P**

End connection type
For RHD, RHZ and RHV
Omit for model RHF

Low Pressure	**L**
High pressure	**S**

Design Series
Subject to revision

Seals

Omit	Nitrile
V	FKM (Viton)

Cracking Pressure

X	Without spring
Omit	0.5 bar
B	1.5 bar
C	3.0 bar
D	5.0 bar

End connection
For RHZ and RHV
G threads will be provided with Elastomeric seals
Refer
Table 2 and Table 3

Note : Add prefix 316 to the above part code for SS 316 Valves.
e.g. **316-RHD16PS-2.0**

The right connection
The right environment

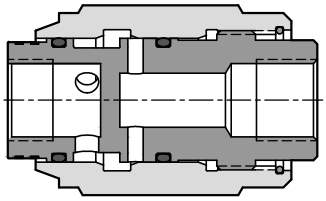
Adjustable Throttle and Throttle Check Valves
TT / TCT

Ref. No. H03364
Release: Apr 2025

Description

Non pressure and viscosity compensated valves.
Model TT Throttle valves allow adjustable throttled flow in both the directions.
Model TCT throttle check valves gives adjustable flow in one direction and allows free flow in opposite direction.

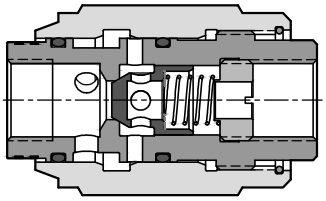
Section



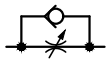
Hydraulic Symbol

TT

Model : TT



Hydraulic Symbol

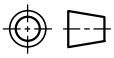


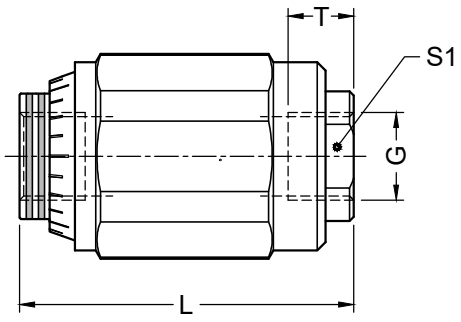
TCT

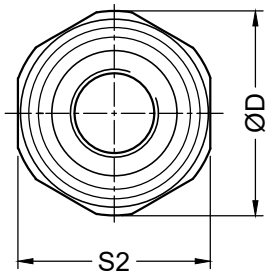
Model : TCT

Unit Dimensions

Dimensions in mm.





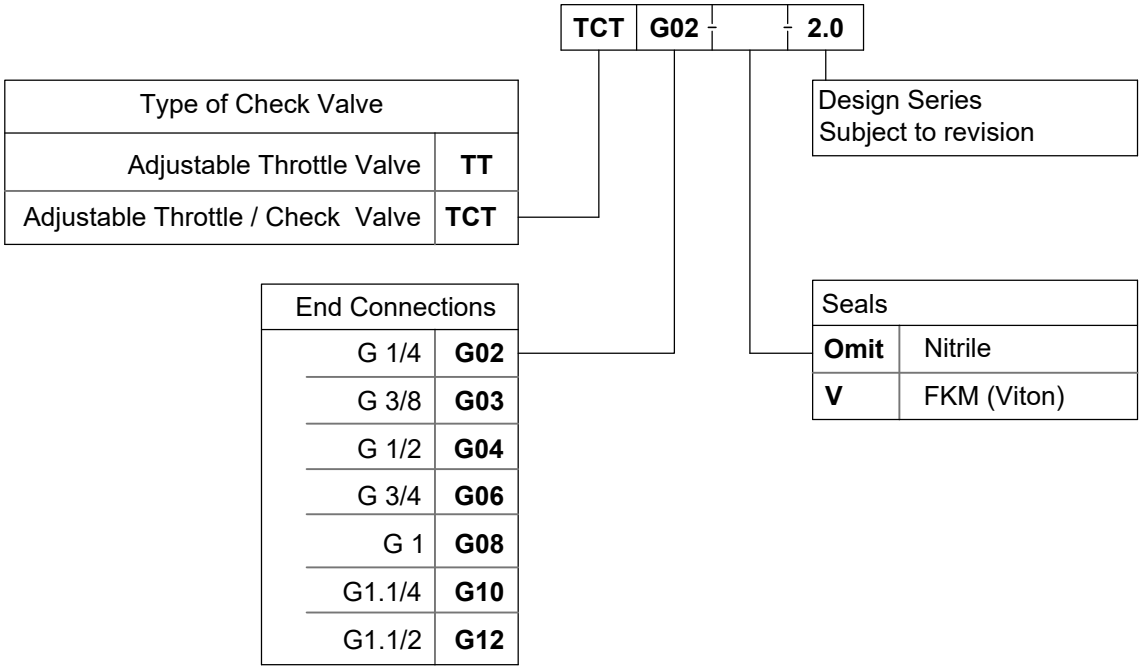


Part code		G	T	S1	S2	L	ØD	TCT Mass (Kg)	TT Mass (Kg)
TCTG02-2.0	**TTG02-2.0**	G 1/4	12	19	32	65	34	0.30	0.29
TCTG03-2.0	**TTG03-2.0**	G 3/8	13	22	36	65	38	0.35	0.33
TCTG04-2.0	**TTG04-2.0**	G 1/2	14	27	46	80	49	0.72	0.69
TCTG06-2.0	**TTG06-2.0**	G 3/4	18	32	55	100	58	1.25	1.20
TCTG08-2.0	**TTG08-2.0**	G 1	18	41	70	110	74	2.30	2.10
TCTG10-2.0	**TTG10-2.0**	G 1.1/4	22	50	85	130	87	3.80	3.60
TCTG12-2.0	**TTG12-2.0**	G 1.1/2	22	60	90	150	94	5.00	4.60

Technical Specifications

Construction	Inline threaded body with rotating sleeve for flow adjustment. Non pressure and viscosity compensated.
Mounting style	Inline, threaded body
Mounting position	Optional
Flow direction	For model TCT : Free flow in one direction. Adjustable throttled flow in opposite direction as indicated on the valve body. For model TT : Adjustable throttled flow in both the directions
Operating pressure	315 bar.
Hydraulic medium	Mineral oil.
Viscosity range	10 cSt to 380 cSt.
Fluid cleanliness requirement	As per ISO 4406 20/18/15
Fluid temperature range	-20 ºC to +70 ºC
Maximum flow handling capacity	TCTG02/TTG02 ---------- 25 l/min TCTG03/TTG03 ---------- 40 /min TCTG04/TTG04 ---------- 60 l/min TCTG06/TTG06 ---------- 120 l/min TCTG08/TTG08 ---------- 200 l/min TCTG10/TTG10 ---------- 320 l/min TCTG12/TTG12 ---------- 400 l/min

Ordering Code



Note : Add prefix 316 to the above part code for SS 316 valves.
e.g. **316-TCTG02-2.0**

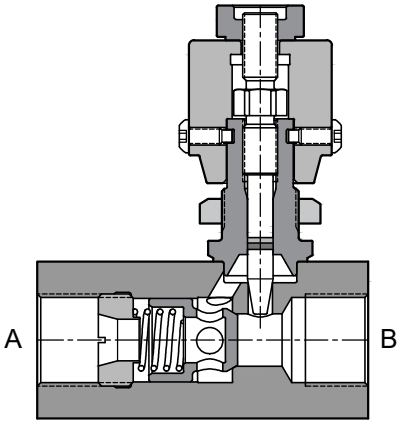
Description

The Valve allows accurate adjustment of flow by throttling action. The throttling can be varied by rotation of the Hand knob.

The valve is also equipped with a built - in check valve for free reverse flow.

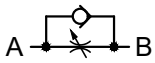
The valve is not viscosity or pressure compensated.

Section



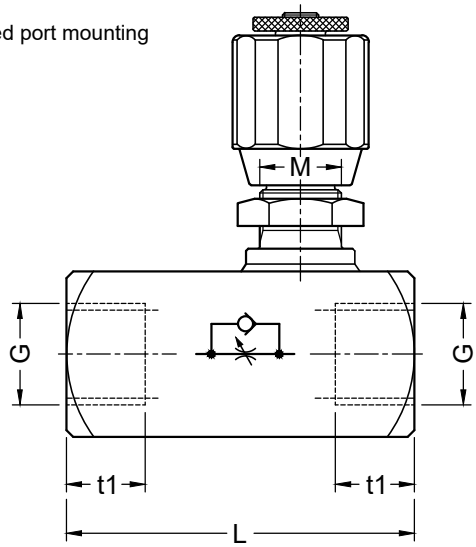
Model : TCG

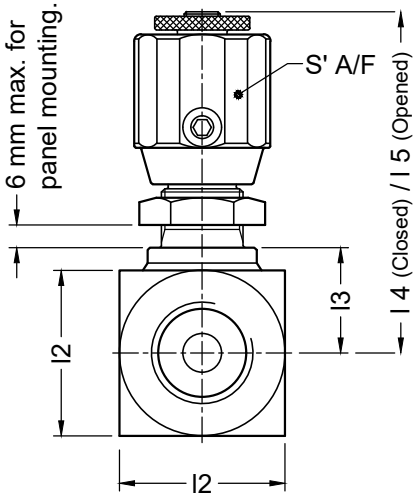
Hydraulic Symbol



Unit Dimensions

In-line threaded port mounting





Dimensions in mm.

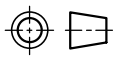


Table-1

Part code	Size	G	l 2	l 3	l 4	l 5	M	t 1	S	L	Pr. bar	Mass (Kg)
TCG02-2.0	NG-06	G 1/4	25	17.5	69.5	76.5	M18x1.5	12	30	64	315	0.45
TCG03-3.0	NG-08	G 3/8	30	20.0	72.0	79.0	M18x1.5	13	30	70	315	0.59
TCG04-2.0	NG-10	G 1/2	35	23.5	89.0	99.0	M22x1.5	14	41	80	315	0.96
TCG06-2.0	NG-15	G 3/4	45	28.5	94.0	104.0	M22x1.5	17	41	95	315	1.42
TCG08-2.0	NG-20	G 1	50	35.0	128.0	145.0	M36x2.0	18	50	125	315	2.80
TCG10-2.0	NG-25	G 1.1/4	60	40.0	133.0	150.0	M36x2.0	21	50	142	315	3.90
TCG12-2.0	NG-30	G 1.1/2	70	45.0	138.0	155.0	M36x2.0	22	50	150	315	5.30

In-line Tube mounting

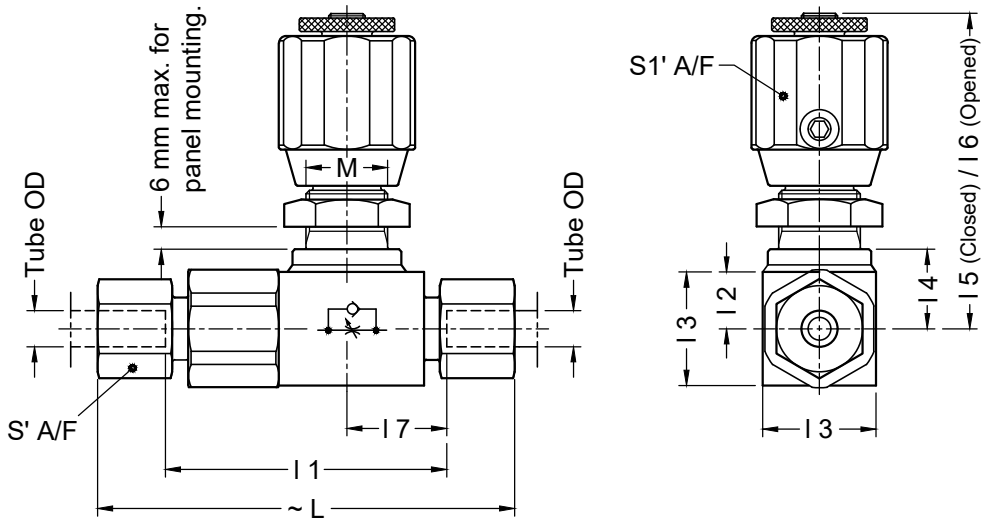


Table-2

Part code	Tube OD	Pressure Series	Pressure (bar)	Size	l 1	l 3	l 4	l 5	l 6	l 7	M	S	S1	L
TC06PL-2.0	06	L	250	NG-06	57.0	25.0	17.5	69.5	76.5	20.0	M18x1.5	14	30	87.0
TC08PL-2.0	08	L	250		57.0					20.0		17		87.0
TC06PS-2.0	06	S	315		61.0					22.0		17		91.0
TC08PS-2.0	08	S	315		61.0					22.0		19		91.0
TC10PL-2.0	10	L	250	NG-08	63.0	30.0	20.0	72.0	79.0	21.0	M18x1.5	19	30	93.0
TC10PS-2.0	10	S	315		64.0					21.5		22		97.0
TC12PS-2.0	12	S	315		64.0					21.5		24		97.0
TC12PL-2.0	12	L	250	NG-10	70.0	35.0	23.5	89.0	99.0	22.0	M22x1.5	22	41	100.0
TC15PL-2.0	15	L	250		72.0					23.0		27		102.0
TC16PS-2.0	16	S	315		74.0					23.5		30		110.0
TC18PL-2.0	18	L	160	NG-15	80.5	45.0	28.5	94.0	104.0	24.5	M22x1.5	32	41	113.5
TC20PS-2.0	20	S	315		82.5					25.5		36		125.5
TC22PL-2.0	22	L	160	NG-20	109.0	50.0	35.0	128.0	145.0	36.5	M36x2.0	36	50	142.0
TC25PS-2.0	25	S	315		108.0					36.0		46		156.0
TC28PL-2.0	28	L	100	NG-25	120.0	60.0	40.0	133.0	150.0	39.5	M36x2.0	41	50	153.0
TC30PS-2.0	30	S	250		120.0					39.5		50		173.0
TC35PL-2.0	35	L	100	NG-30	130.0	70.0	45.0	138.0	155.0	40.5	M36x2.0	50	50	173.0
TC42PL-2.0	42	L	100		129.0					40.0		60		175.0
TC38PS-2.0	38	S	250		131.0					41.0		60		193.0

Technical Specifications

Construction ---------- Conical throttling spool with rotation of hand knob for flow adjustment. Poppet valve for free reverse flow.

Mounting style ---------- Inline port or tube mounting.

Mounting position ---------- Optional

Flow direction ---------- Adjustable throttled flow from A to B, free flow from B to A.

Operating pressure ---------- Refer Table -1 and Table-2.

Hydraulic medium ---------- Mineral oil.

Viscosity range ---------- 10 cSt to 380 cSt.

Fluid temperature range ---------- -20 ºC to +80 ºC

Fluid cleanliness requirement ---------- As per ISO 4406 20/18/15

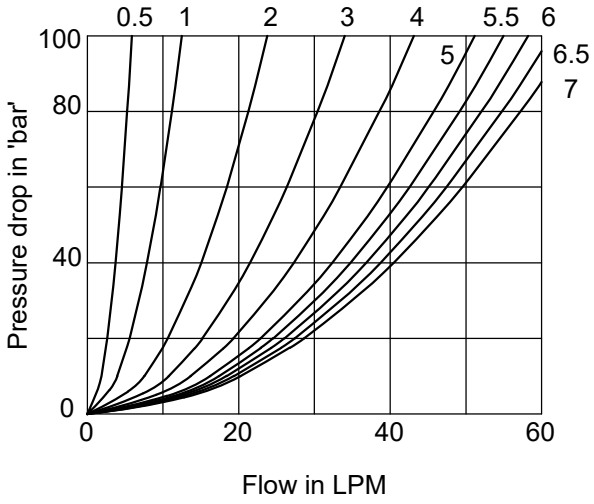
Nom. flow handling capacity ---------- Refer graphs

Expected performance curves

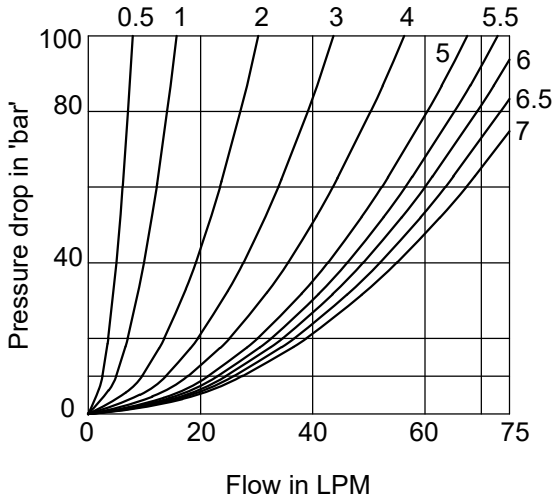
Oil used : ISO VG 68
Viscosity : 68 cSt @ 40 °C
Direction of flow : A to B

Graphs below shows Throttle position (No. of turns) from Closed position

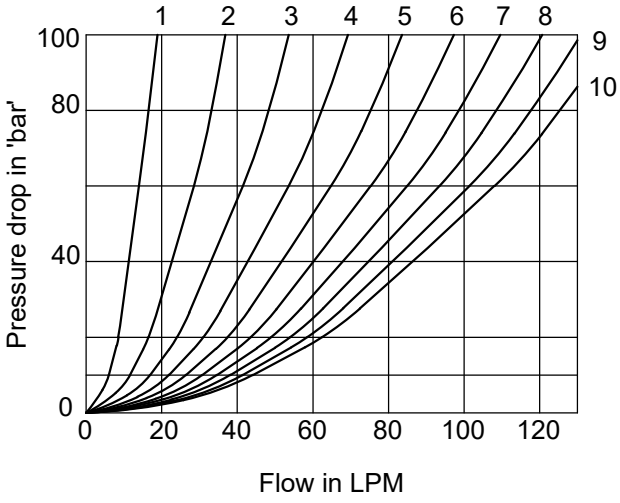
NG-06



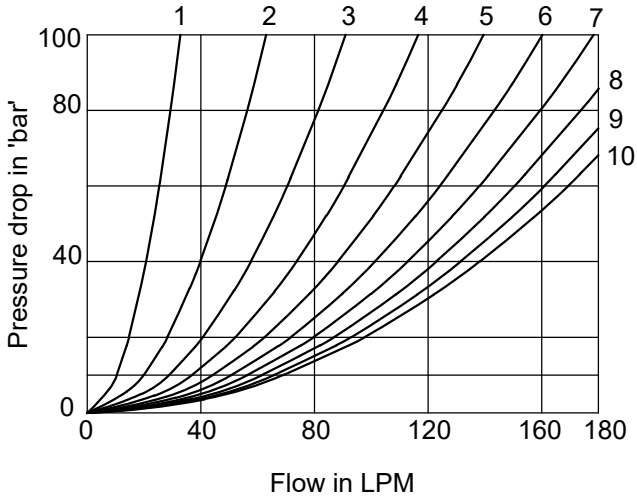
NG-08



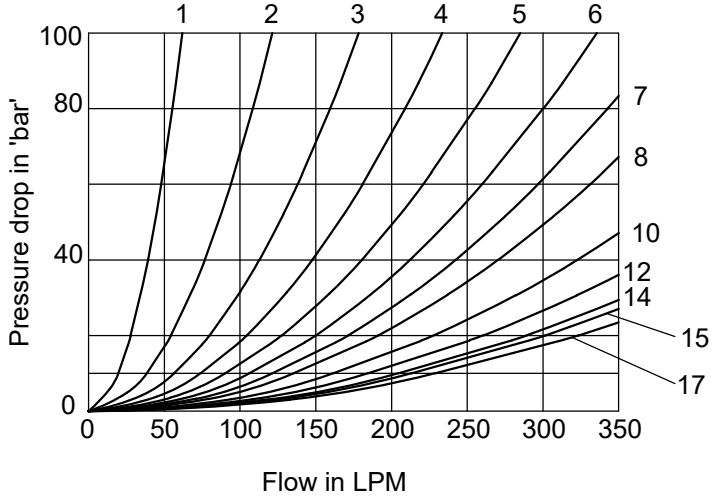
NG-10



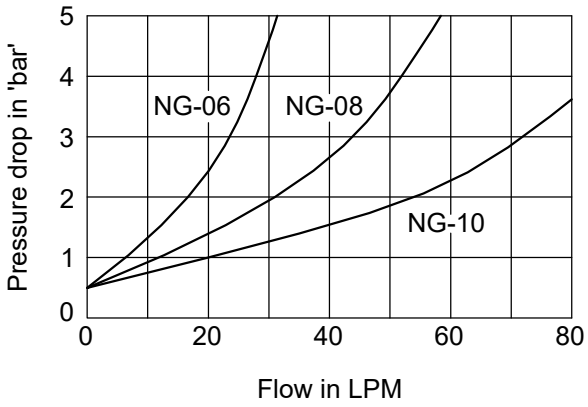
NG-15

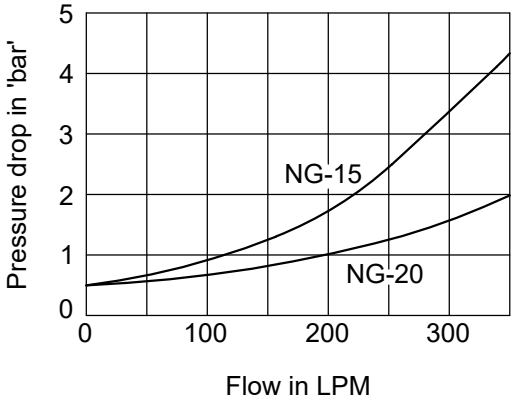


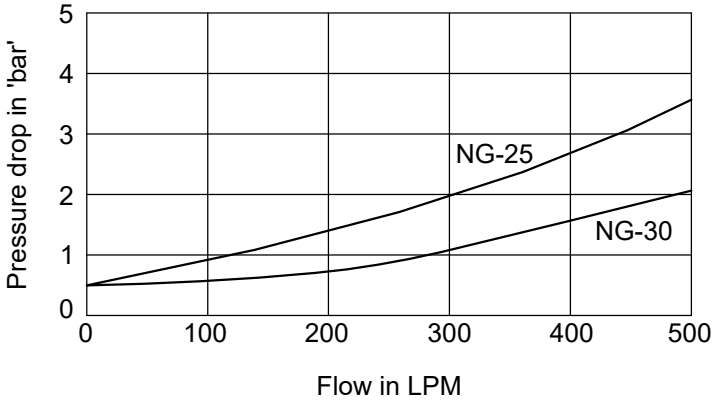
NG-20, NG-25 and NG-30



Direction of free flow from 'B' to 'A'







Ordering Code

TC	G02		-		-	2.0

Throttle / Check Valve

For Valves with G Ports	G 1/4	**G02**
	G3/8	**G03**
	G 1/2	**G04**
	G3/4	**G06**
	G 1	**G08**
	G1.1/4	**G10**
	G1.1/2	**G12**
For Valves with Tube ends (Will have Double bite ferrule)	Tube sizes	6 8 10 12 15 16 18 20 22 25 28 30 35 38 42

Design Series
Subject to revision

Seals	
Omit	Nitrile
V	FKM (Viton)

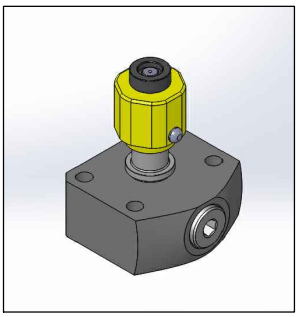
Pressure Series (For valves with tube ends only)	
Omit	For valves with G threads
L	Low Pressure
S	High Pressure

Description

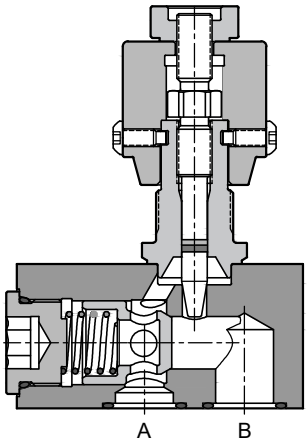
The Valve allows accurate adjustment of flow by throttling action. The throttling can be varied by rotation of the Hand knob.

The valve is also equipped with a built - in check valve for free reverse flow.

The mounting Interface conforms to ISO 5781

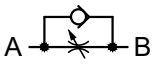


Section



Model : **TCMS**

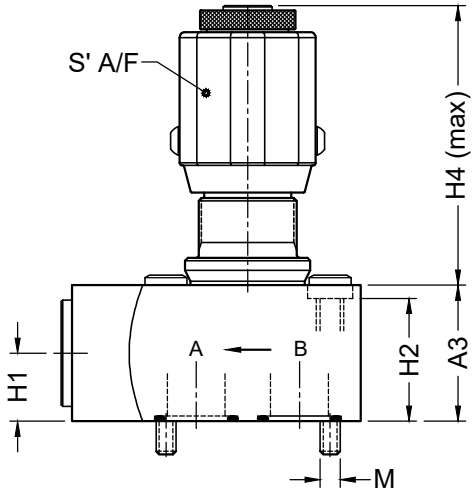
Hydraulic Symbol



Unit Dimensions

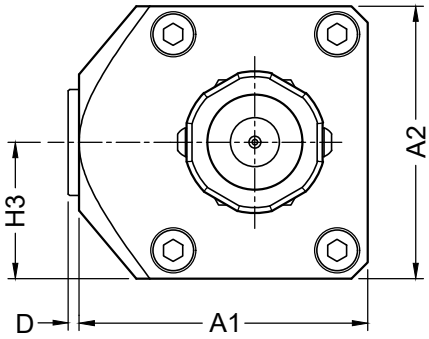
Dimensions in mm.

Sub-plate mounting

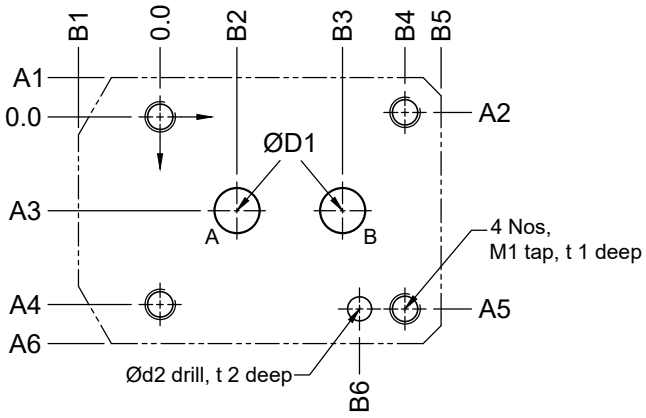


Part code	A1	A2	A3	H1	H2	H3	H4 (max)	D	S
TCMS06-2.0	60	44	25	12.5	22.5	22.0	64.0	3	30
TCMS10-3.0	81	88	40	22.5	40.0	44.0	81.5	3	41
TCMS20-2.0	106	100	50	25.0	45.0	50.0	120.0	4	50
TCMS30-2.0	135	117	70	35.0	65.0	58.5	120.0	4	50

Part code	Valve fixing screws, 10.9 grade	Torque
TCMS06-2.0	M5 x 0.8 x 30 Long, 4 Nos	5 Nm
TCMS10-3.0	M10 x 1.5 x 55 Long, 4 Nos	40 Nm
TCMS20-2.0	M10 x 1.5 x 60 Long, 4 Nos	52 Nm
TCMS30-2.0	M10 x 1.5 x 80 Long, 6 Nos	55 Nm

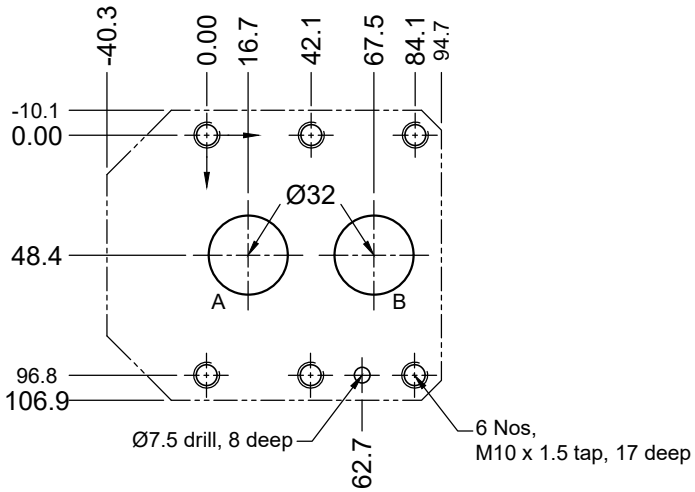


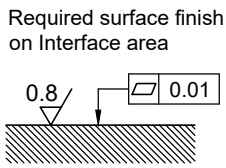
Interface details for NG-06, NG-10 and NG-20 as per ISO 5871



Part code	ØD1	A1	A2	A3	A4	A5	A6	B1	B2	B3	B4	B5	B6	M1	t 1	Ød2	t 2
TCMS06-2.0	7.5	-6.50	-0.75	15.5	31.0	31.75	37.5	-13.5	12.7	30.2	40.5	46.5	33.0	M5 x 0.8	9	4.0	5
TCMS10-2.0	14.0	-10.65	0.00	33.3	66.7	66.7	77.35	-27.5	7.1	35.7	42.9	53.5	31.8	M10 x1.5	17	7.5	8
TCMS20-2.0	22.0	-10.30	0.00	39.7	79.4	79.4	89.7	-34.5	11.1	49.2	60.3	71.5	44.5	M10 x 1.5	17	7.5	8

Interface details for **TCMS30-2.0**





Technical Specifications

Construction ---------- Conical throttling spool with rotation of hand knob for flow adjustment. Poppet valve for free reverse flow.

Mounting style ---------- Sub-plate mounting.

Mounting Interface ---------- As per ISO 5781

Mounting position ---------- Optional

Flow direction ---------- Adjustable throttled flow from A to B, free flow from B to A.

Operating pressure ---------- 315 bar.

Hydraulic medium ---------- Mineral oil.

Viscosity range ---------- 10 cSt to 380 cSt.

Fluid temperature range ---------- -20 ºC to +80 ºC

Fluid cleanliness requirement ---------- As per ISO 4406 20/18/15

Nom. flow handling capacity ---------- Refer graphs

Pressure Gauge Isolator Valve
1GI

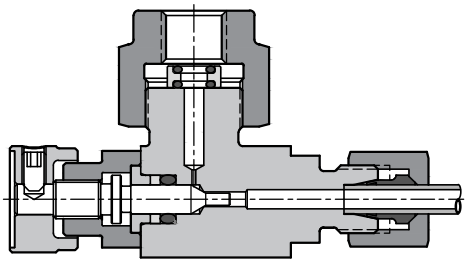
Description

Gauge Isolator valves, 1GI are meant for applications where a pressure gauge is connected to a pressure line and needs to be isolated when not in use. These can be mounted on a hydraulic manifold or a control panel.

These Isolator valves offer following advantages,

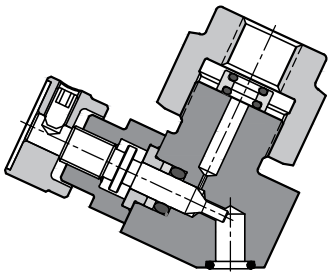
- Simple machining of the interface /panel
- Quick assembly,
- Ease of axial orientation of the Pressure gauge face for proper alignment.
- Compact and elegant assembly,
- Easy readability of the gauge.

Section



Panel Mounting, Model: 1GIP

Hydraulic Symbol

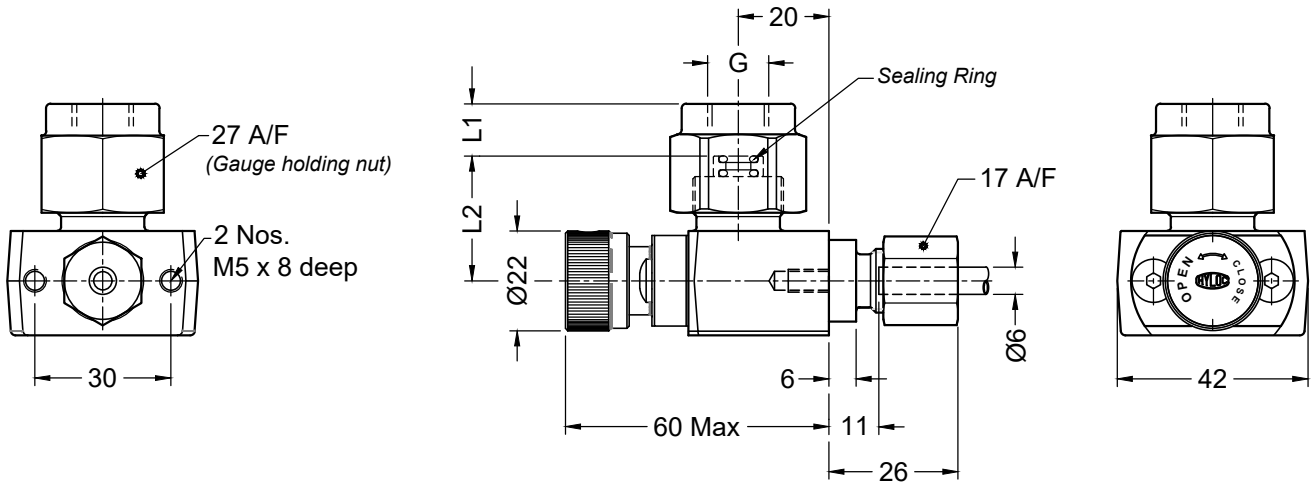


Sub-plate Mounting, Model: 1GIM

Unit Dimensions

Gauge Isolator Valve, Panel Mounting, Model: **1GIP**

Dimensions in mm.



G	G 1/4	G 3/8	G 1/2
L1	11.5	11.5	12.5
L2	27.5	27.5	28.5

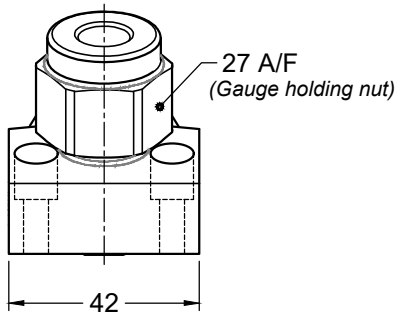
The right connection
The right environment

Pressure Gauge Isolator Valve
1GI

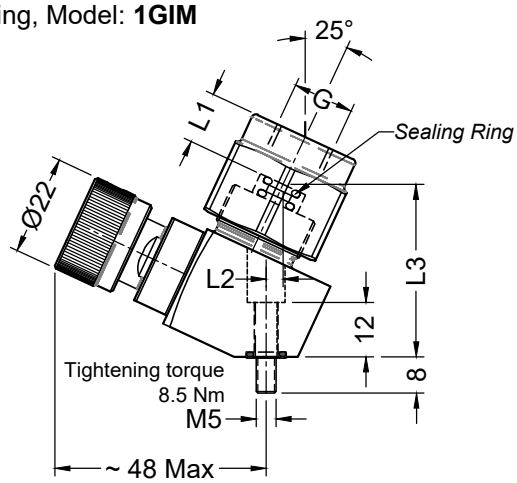
Ref. No. H03154
Release: Apr 2025

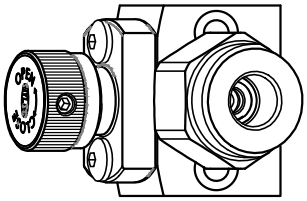
Unit Dimensions

Gauge Isolator Valve, Subplate Mounting, Model: **1GIM**



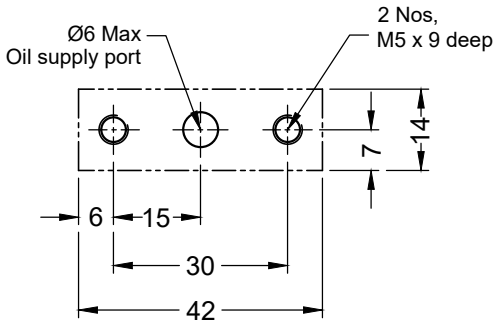
Mounting screws are not in scope of supply





G	G 1/4	G 3/8	G 1/2
L1	11.5	11.5	12.5
L2	4.0	4.0	4.5
L3	38.5	38.5	39.5

Mounting Interface



Technical Specifications

Construction	Seat type
Mounting	Sub-plate mounted or Panel mounted
Interface standard	Factory standard.
Mounting position	Optional
Operating pressure	350 bar.
Hydraulic medium	Mineral oil.
Fluid temperature range	-20 °C to +70 °C.
Fluid cleanliness requirement	As per ISO 4406 20/18/15

Instructions for Pressure Gauge assembly

How to orient and tighten the gauge face to the desired position?

- Screw in the *Gauge holding Nut* onto the valve till its bottom face of it touches the face of the valve body.
- Insert the sealing ring provided with the valve, from the top of the nut.
- Screw in the gauge into the *Gauge Holding Nut* till its sealing face touches the sealing ring.
- Loosen the gauge (if required) by rotating it in anti-clockwise direction till the face of the gauge points towards desired position.
- Mount the Gauge Isolating Valve on to the sub-plate or panel.
- Rotate the Gauge Holding Nut by means of a spanner in anti- clockwise direction to tighten the gauge onto the sealing ring.
- While rotating the nut, hold the gauge to its proper orientation.

Ordering Code

1GI – M – G02 – 2.0

Gauge Isolator Valve (with hand knob)	**1GI**
Sub plate mounting	**M**
Panel mounting	**P**
Gauge Port	
G 1/4	**G02**
G 3/8	**G03**
G 1/2	**G04**
Design Series Subject to revision	**2.0**
Seals	
Omit	Nitrile
V	FKM (Viton)

Note : Add prefix 316 to the existing part code for SS 316 valves.
e.g. **316-1GIMG02-2.0**

The right connection
The right environment

Pressure Gauge Isolator Valve
1GI06PS **

Ref. No. H05427
Release: Apr 2025

Description

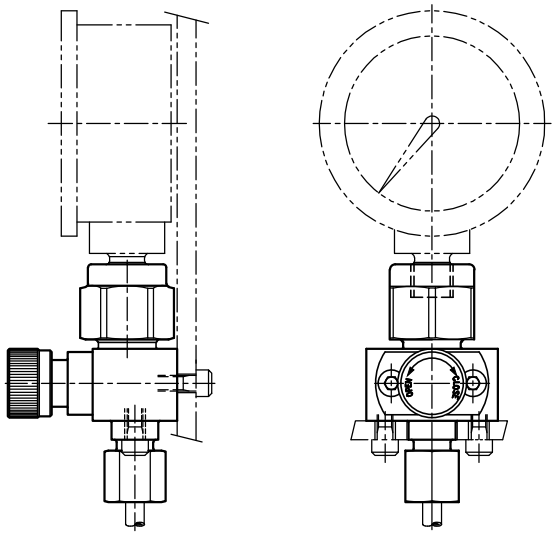
Seat type valve for isolating the pressure in the hydraulic systems.

Leakage free construction.

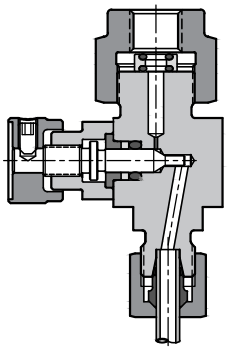
No return line needed.

Compact assembly.

Valve can be mounted on vertical as well as on the horizontal panel face.



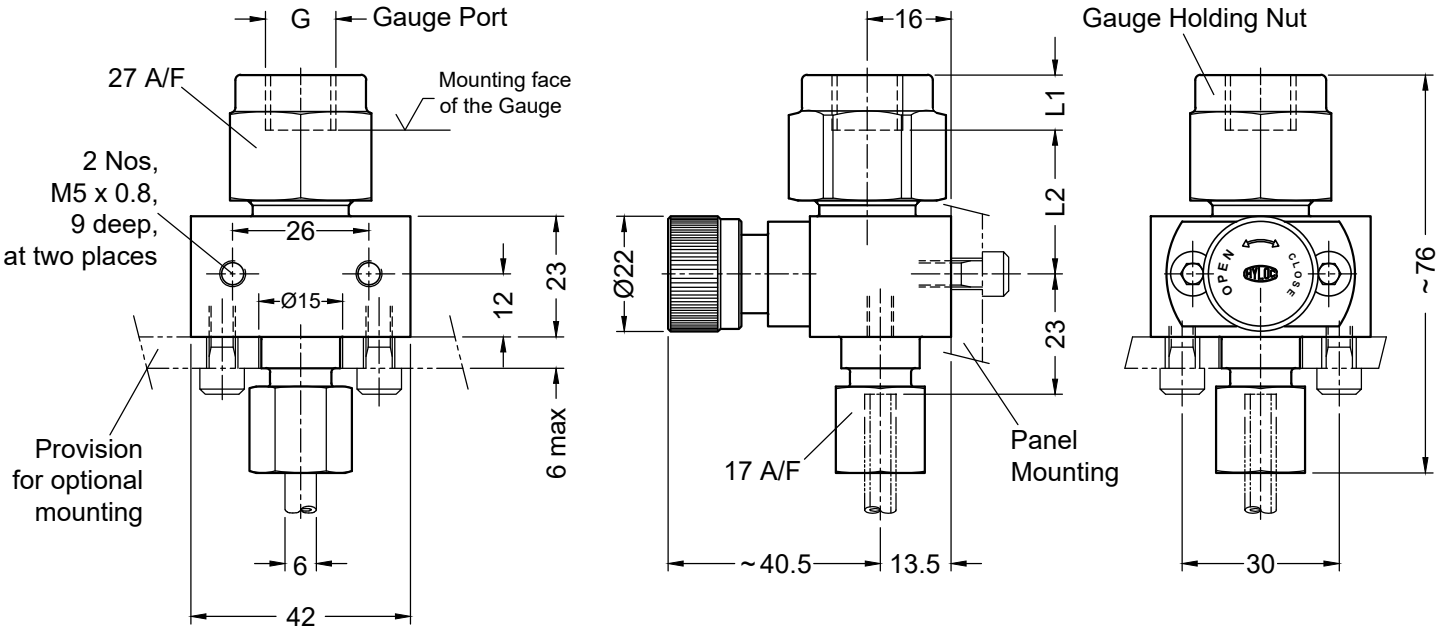
Section



Hydraulic Symbol

Unit Dimensions

Dimensions in mm.



G	G 1/4	G 3/8	G 1/2
L1	10.5	10.0	12.0
L2	27.5	28.5	28.5

The right connection
The right environment

Pressure Gauge Isolator Valve
1GI06PS **

Ref. No. H05427
Release: Apr 2025

Technical Specifications

Construction	Seat type
Mounting	Panel mounting
Mounting position	Optional
Operating pressure	350 bar.
Hydraulic medium	Mineral oil.
Viscosity range	10 cSt to 380 cSt
Fluid temperature range	-20 °C to +70 °C.
Fluid cleanliness requirement	As per ISO 4406 20/18/15

Instructions for Pressure Gauge assembly

How to orient and tighten the gauge face to the desired position?

- Screw in the *Gauge holding Nut* onto the valve till its bottom face of it touches the face of the valve body.
- Insert the sealing ring provided with the valve, from the top of the nut.
- Screw in the gauge into the *Gauge Holding Nut* till its sealing face touches the sealing ring.
- Loosen the gauge (if required) by rotating it in anti-clockwise direction till the face of the gauge points towards desired position.
- Mount the Gauge Isolating Valve on to the sub-plate or panel.
- Rotate the Gauge Holding Nut by means of a spanner in anti-clockwise direction to tighten the gauge onto the sealing ring.
- While rotating the nut, hold the gauge to its proper orientation.

Ordering Code

1GI	06	P	S	G02		2.0

Gauge Isolator Valve (with hand knob)

6mm OD	**06**

Connection	
With Ferrule	**P**

Pressure Series	
High Pressure	**S**

Design Series
Subject to revision

Seals	
Omit	Nitrile
V	FKM (Viton)

Gauge Port	
G02	G 1/4
G03	G 3/8
G04	G 1/2

Note : Add prefix 316 to the existing part code for SS 316 valves.
e.g. **316-1GI06PSG02-2.0**

The right connection
The right environment

Pressure Gauge Mounting Block
GMB

Ref. No. H14287
Release: Apr 2025

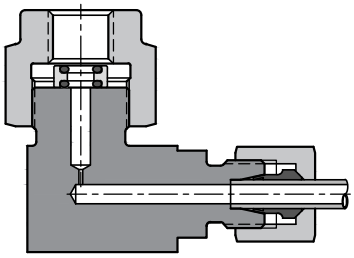
Description

Gauge mounting blocks GMB are meant for applications where a pressure gauge is permanently connected to a pressure line (no isolator valve in between) and needs to be mounted on a hydraulic manifold or a control panel.

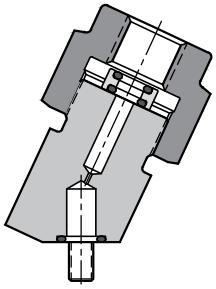
The mounting blocks offer following advantages,

- Simple machining of the interface /panel
- Quick assembly,
- Ease of axial orientation of the Pressure gauge face for proper alignment.
- Compact and elegant assembly,
- Easy readability of the gauge.

Section



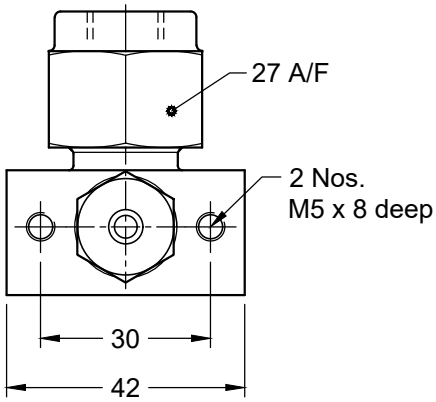
Panel Mounting, Model: GMB-P

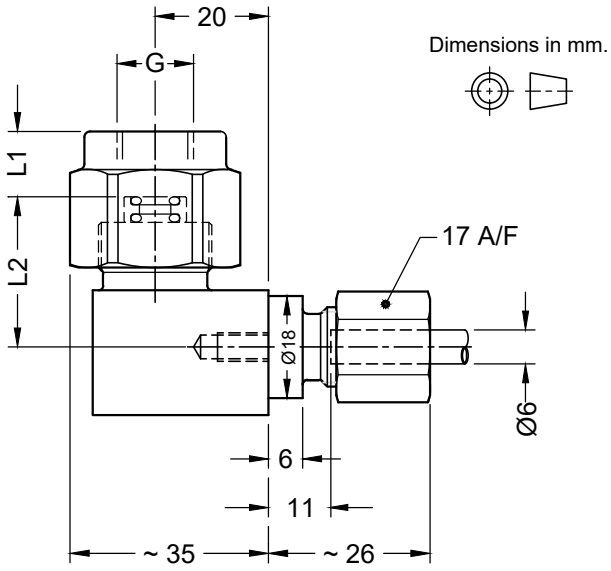


Panel Mounting, Model: GMB-M

Unit Dimensions

Gauge mounting Block, Panel Mounting
Model: GMB-P





G	G 1/4	G 3/8	G 1/2
L1	11.5	11.5	12.5
L2	27.5	28.5	28.5

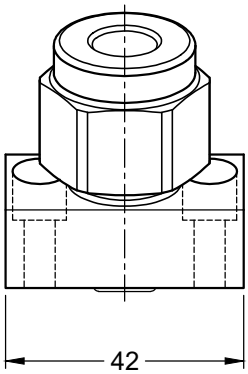
The right connection
The right environment

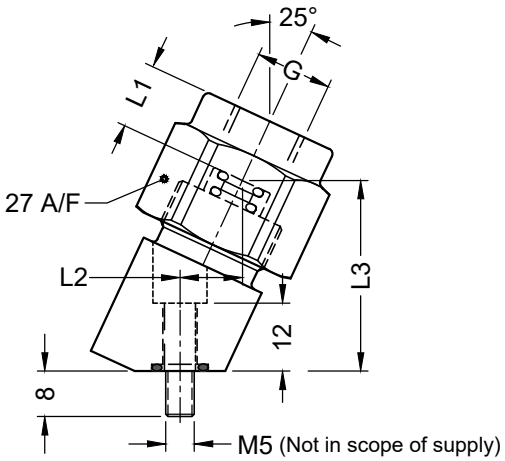
Pressure Gauge Mounting Block
GMB

Ref. No. H14287
Release: Apr 2025

Unit Dimensions

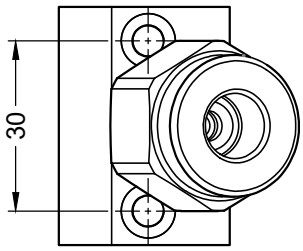
Gauge mounting Block,Subplate Mounting
Model: GMB-M



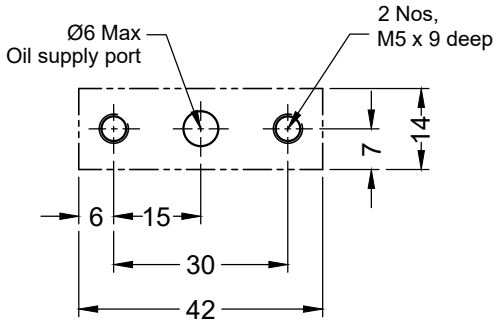


Tightening torque
8.5 Nm

G	G 1/4	G 3/8	G 1/2
L1	11.5	11.5	12.5
L2	11.0	11.5	11.5
L3	33.5	33.5	34.5



Mounting Interface



Technical Specifications

Mounting ---------- Sub-plate mounted or Panel mounted
Interface standard ---------- Factory standard.
Mounting position ---------- Optional
Operating pressure ---------- 350 bar.
Hydraulic medium ---------- Mineral oil.
Fluid temperature range ---------- -20 °C to +70 °C.

Ordering Code

GMB	M	G02		2.0

Gauge Mounting Block

Sub plate mounting	**M**
Panel mounting	**P**

Gauge Port	
G 1/4	**G02**
G 3/8	**G03**
G 1/2	**G04**

Design Series
Subject to revision

Seals	
Omit	Nitrile
V	FKM (Viton)

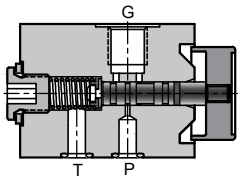
Pressure Gauge Isolator Valve (PUSH TO READ)
GI

Ref. No. H03542
Release: Apr 2025

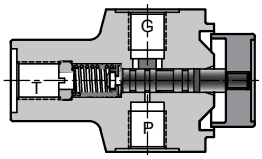
Description

The Pressure gauge Isolator valve, model **GI** is meant for checking the system pressure to which it is connected, whenever required.
The valve is a spool type, spring off-set, manually operated device.
In normal condition, the valve blocks the pressure port and keeps the pressure gauge connected to the drain. Thus isolating the gauge from system pressure surges and eliminating continuous pressure strain on the gauge.
By pushing the actuator knob of the valve, system pressure can be read on the gauge.
The valve is available either for Sub-plate mounting on a sub-plate or back face mounting or with threaded ports.
The pressure gauge can either be directly mounted on the valve or can be connected remotely.

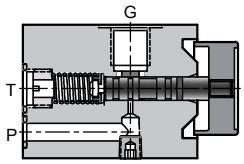
Section



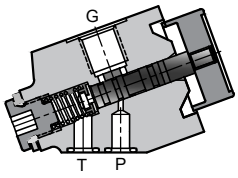
Sub-plate Mounting
Model: **GIM**



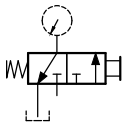
Panel mounting
Model: **GIP**



Back face Mounting
Model: **GIB**



Sub-plate Mounting
Model: **GIMH**

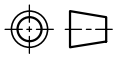


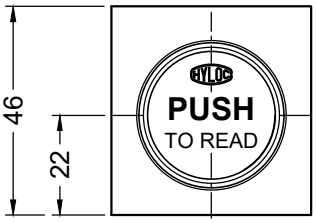
Hydraulic Symbol

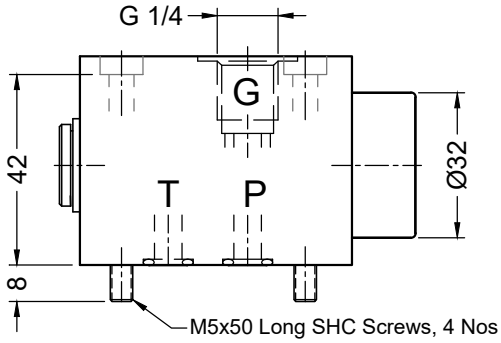
Unit Dimensions

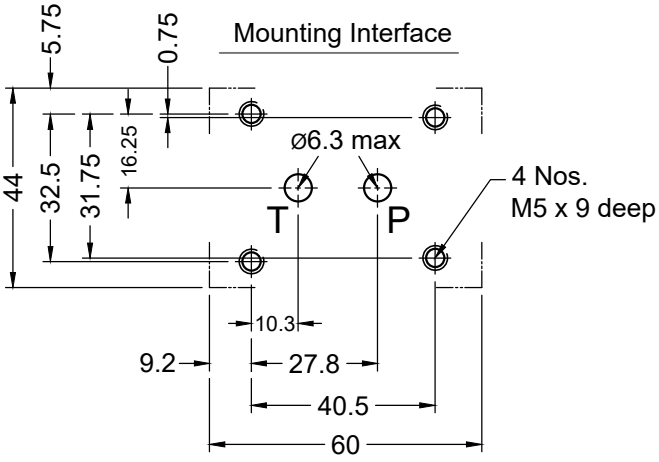
Gauge Isolator Valve, Sub-plate Mounting, Model: **GIM**

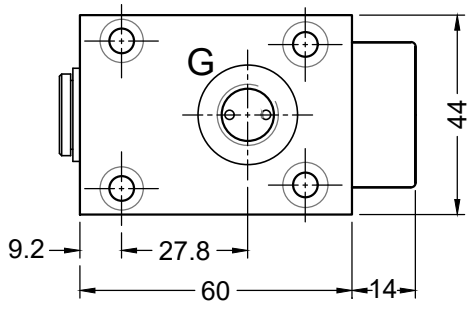
Dimensions in mm.





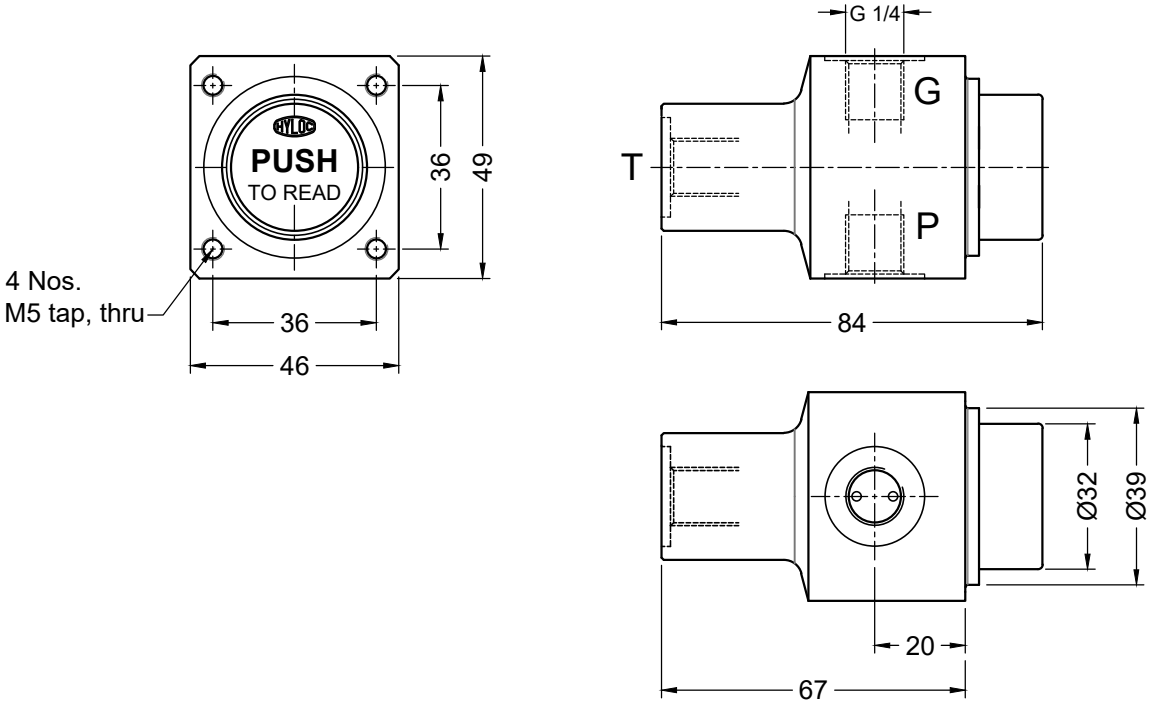




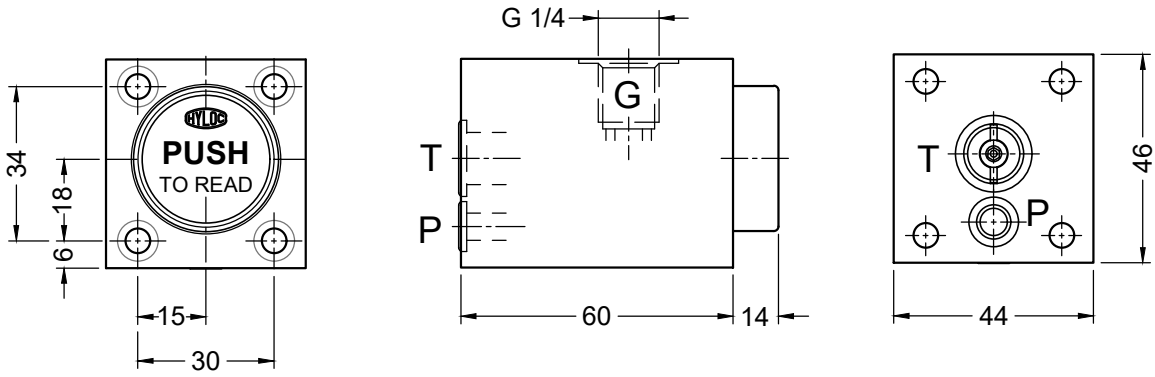


Unit Dimensions

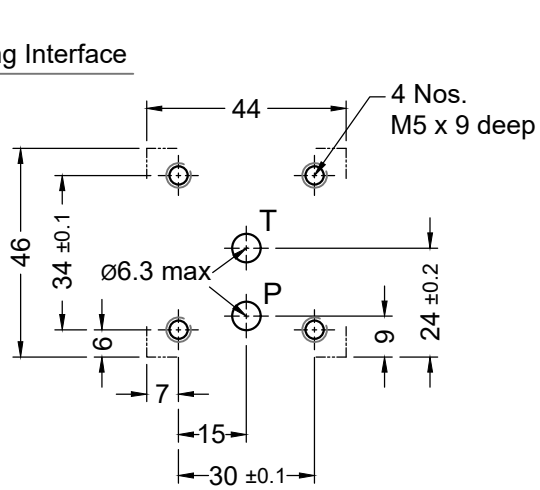
Gauge Isolator Valve, panel mounting, Model: **GIP**

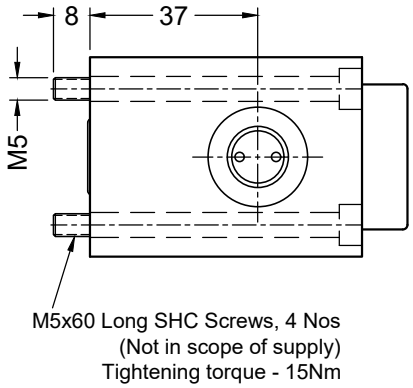


Gauge Isolator Valve, Back face mounting, Model: **GIB**



Mounting Interface





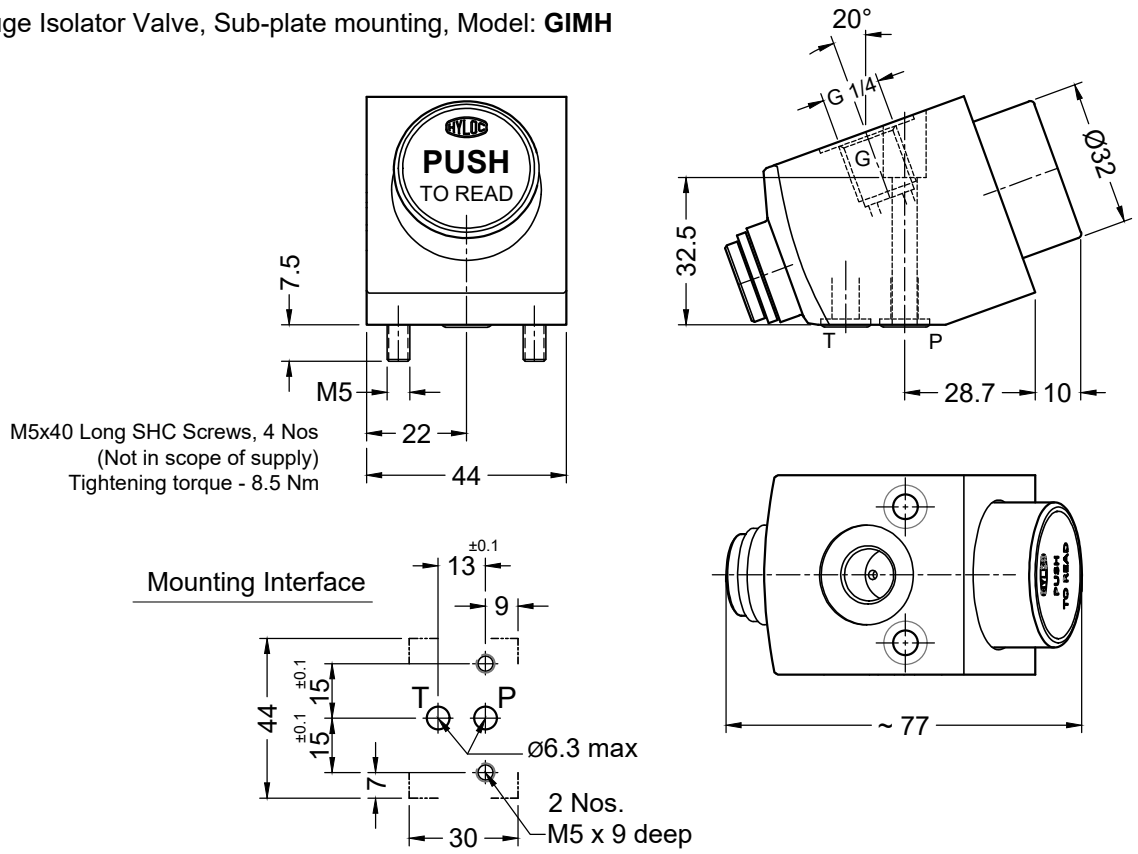
M5x60 Long SHC Screws, 4 Nos
(Not in scope of supply)
Tightening torque - 15Nm

The right connection
The right environment

Pressure Gauge Isolator Valve (PUSH TO READ)
GI

Ref. No. H03542
Release: Apr 2025

Gauge Isolator Valve, Sub-plate mounting, Model: **GIMH**



Technical Specifications

Construction	Spool type, manually operated, spring off-set.
Mounting	Sub-plate mounting / Panel mounting
Mounting position	Optional
Flow direction	As indicated by hydraulic symbol.
Operating pressure	210 bar.
Hydraulic medium	Mineral oil.
Fluid temperature range	-10 °C to +80 °C.
Fluid cleanliness requirement	As per ISO 4406 20/18/15

Ordering Code

GI	M	G02		2.0

Gauge Isolator Valve (PUSH TO READ)

Sub plate mounting	**M**
Panel mounting	**P**
Back face mounting	**B**
Subplate mounting (Angular)	**MH**

Gauge Port	
G 1/4	**G02**

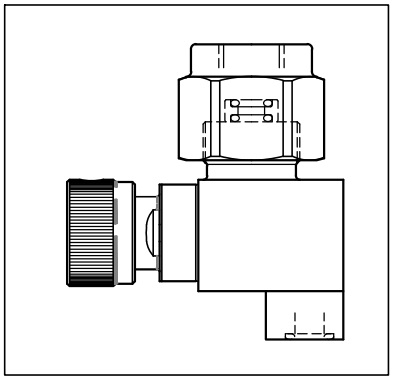
Design Series
Subject to revision

Seals	
Omit	Nitrile
V	FKM (Viton)

Note: Special adaptors with threads suitable for the gauge are available for mounting the Pressure Gauge on these valves which help the user to orient the face of the gauge to appropriate direction.
Please refer Gauge mounting adaptors, 1GAGE series.

Description

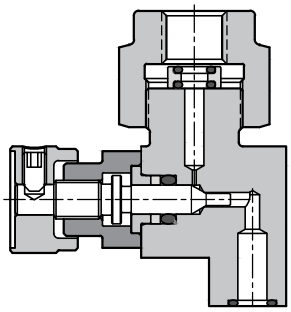
Gauge Isolator valves, 1GIMS are meant for applications where a pressure gauge is connected to a pressure line and needs to be isolated when not in use.
These can be mounted on a hydraulic manifold.



These Isolator valves offer following advantages,

- Simple machining of the interface,
- Quick assembly,
- Ease of axial orientation of the Pressure gauge face for proper alignment.
- Compact and elegant assembly,
- Easy readability of the gauge.

Section



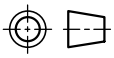
Sub-plate Mounting, Model: 1GIMS

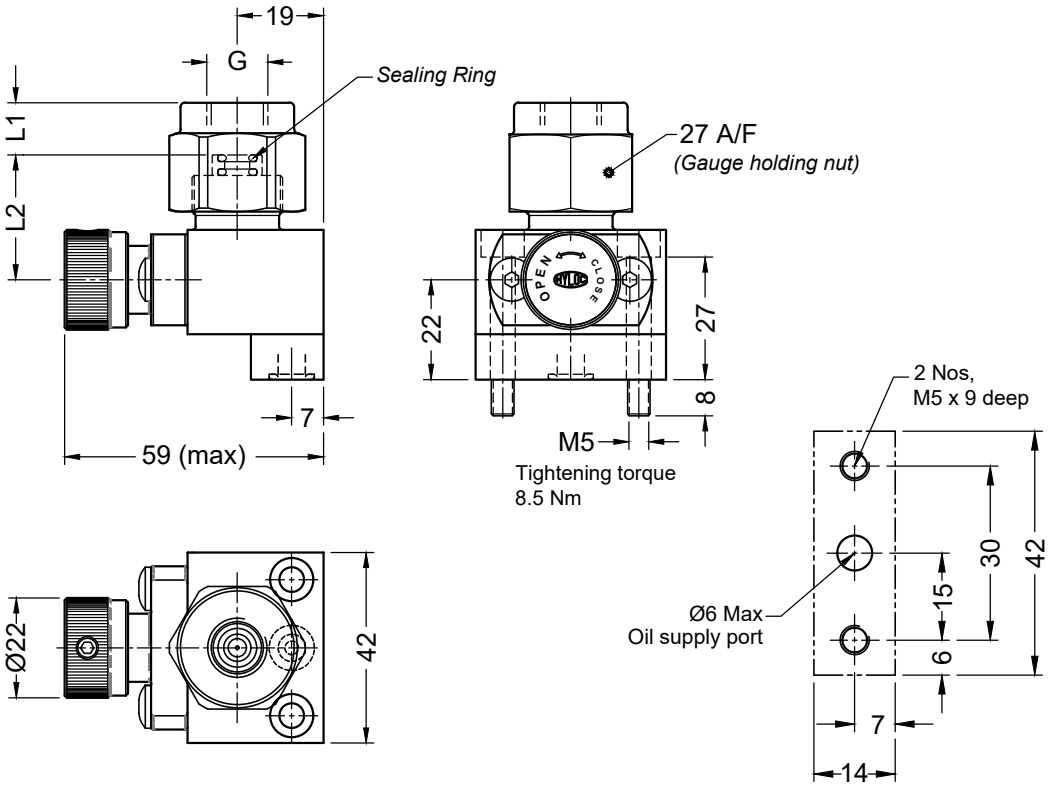
Hydraulic Symbol

Unit Dimensions

Gauge Isolator Valve, Sub-plate Mounting, Model: **1GIMS**

Dimensions in mm.





G	G 1/4	G 3/8	G 1/2
L1	11.5	11.5	12.5
L2	27.5	27.5	28.5

Mounting screws are not in scope of supply

Mounting Interface

Technical Specifications

Construction	Seat type
Mounting	Sub-plate mounted
Interface standard	Factory standard.
Mounting position	Optional
Operating pressure	350 bar.
Hydraulic medium	Mineral oil.
Fluid temperature range	-20 °C to +70 °C.
Fluid cleanliness requirement	As per ISO 4406 20/18/15

Instructions for Pressure Gauge assembly

How to orient and tighten the gauge face to the desired position?

- Screw in the *Gauge holding Nut* onto the valve till its bottom face of it touches the face of the valve body.
- Insert the sealing ring provided with the valve, from the top of the nut.
- Screw in the gauge into the *Gauge Holding Nut* till its sealing face touches the sealing ring.
- Loosen the gauge (if required) by rotating it in anti-clockwise direction till the face of the gauge points towards desired position.
- Mount the Gauge Isolating Valve on to the sub-plate or panel.
- Rotate the Gauge Holding Nut by means of a spanner in anti- clockwise direction to tighten the gauge onto the sealing ring.
- While rotating the nut, hold the gauge to its proper orientation.

Ordering Code

1GI – MS – G02 – – 2.0

Gauge Isolator Valve (with hand knob)	
Sub plate mounting *(Special)*	**MS**

Gauge Port	
G 1/4	**G02**
G 3/8	**G03**
G 1/2	**G04**

Design Series Subject to revision	

Seals	
Omit	Nitrile
V	FKM (Viton)

The right connection
The right environment

Quick Disconnect Coupling
QDC

Ref. No. H03297
Release: Apr 2025

Description

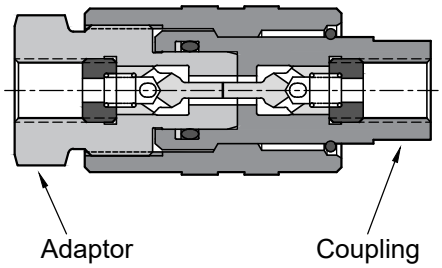
Quick disconnect couplings are designed for applications, where fast connection and disconnection of hydraulic lines is a need of the system.

These couplings when connected offers unrestricted flow passage.

They are designed for reliable and safe operations by avoiding premature flow before the coupling is fully closed.

Section

(Self sealing Coupling, Self sealing adaptor illustrated)



Hydraulic Symbol	Coupling Type	
	Through type Adaptor	AT
	Through type Coupling	CT
	Self sealing Adaptor	AS
	Through type Coupling	CT
	Through type Adaptor	AT
	Self sealing Coupling	CS
	Self sealing Adaptor	AS
	Self sealing Coupling	CS

Unit Dimensions

Dimensions in mm.

End connections (Female threading)
BSP - **G**
Metric - **M**

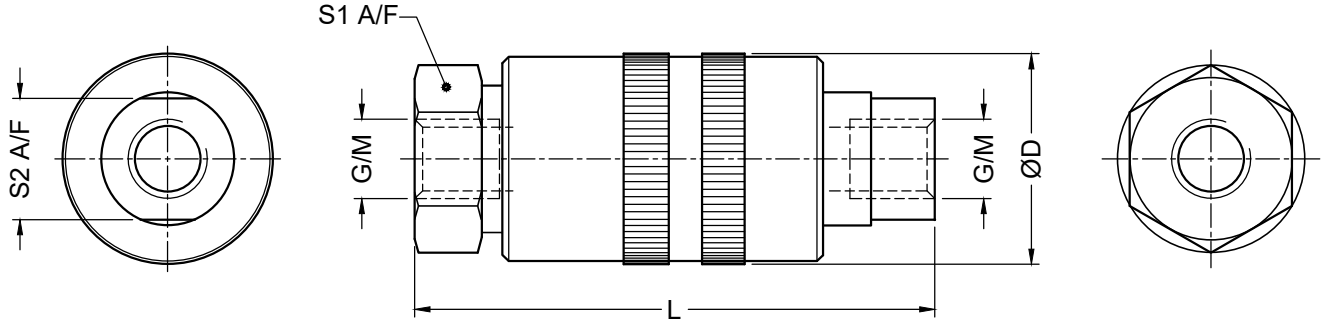


Table No. 1

Pressure (bar)	G	M	S1	S2	ØD	L	Mass (Kg)
800	G 1/4	M14x1.5	27	19	35	86	0.45
800	G 3/8	M18x1.5	32	22	37	88	0.53
600	G 1/2	M22x1.5	41	30	46	116	1.05
500	G 3/4	M26x1.5	50	36	56	130	1.80
400	G 1	M33x2.0	55	41	62	150	2.35

Technical Specifications

Construction	Poppet type
Operating pressure	Refer Table No. 1
Hydraulic medium	Mineral oil.
Viscosity range	10 cSt to 380 cSt
Fluid temperature range	-20 °C to +80 °C.
Fluid cleanliness requirement	As per ISO 4406 20/18/15

Caution : Pressure on the hydraulic lines must be released before they are connected / disconnected.

Ordering Code

QDC	G02	AS	CS	-	V	-	2.0

Quick Disconnect Coupling

End Connections	
G 1/4	**G02**
G 3/8	**G03**
G 1/2	**G04**
G 3/4	**G06**
G 1	**G08**
M14x1.5	**M14**
M18x1.5	**M18**
M22x1.5	**M22**
M26x1.5	**M26**
M33x2.0	**M33**

Design Series
Subject to revision

Seals	
Omit	Nitrile
V	FKM (Viton)

Coupling Type	
Omit	For Adaptor only
CS	Self Sealing
CT	Through type

Adaptor Type	
Omit	For Coupling only
AS	Self Sealing
AT	Through type

Note : Add prefix 316 to the above part code for SS 316 Quick disconnect couplings.
e.g. **316-QDCG02ASCS-2.0**

The right connection
The right environment

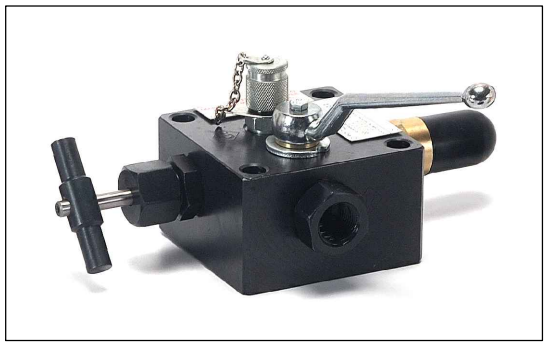
Accumulator Safety Block
ASB

Ref. No. H05648
Release: Apr 2025
ENGINEERING - 1 of 2

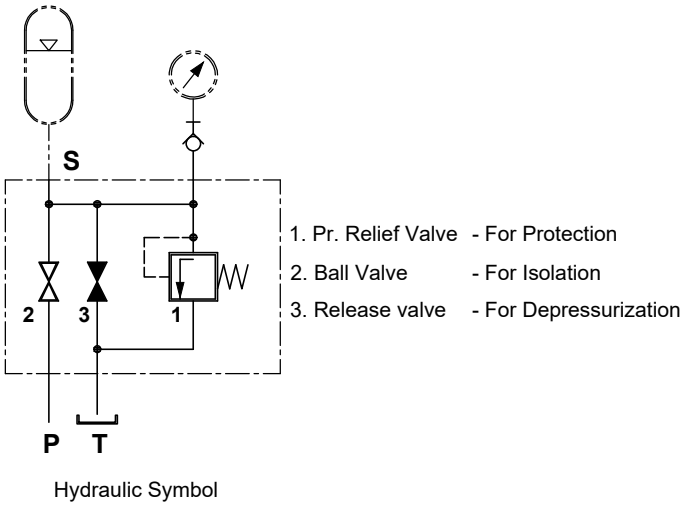
Description

The block is intended for
- Protection
- Isolation and
- Depressurization of a hydraulic accumulators.

Hyloc make Accumulator Safety Blocks are Compact, block shaped unit with adjustable Relief valve.

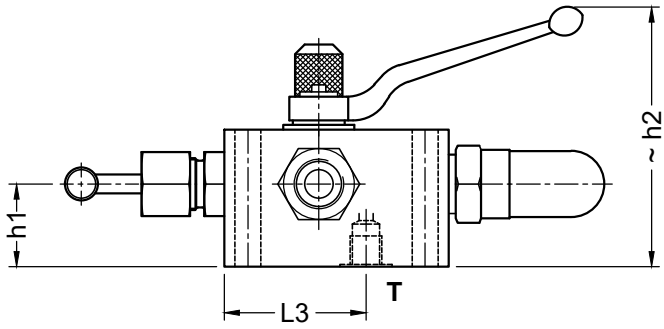


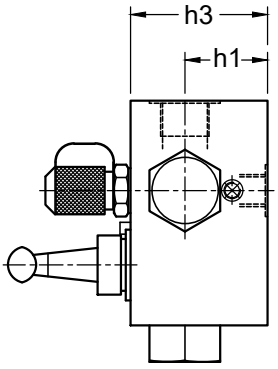
Unit dimensions

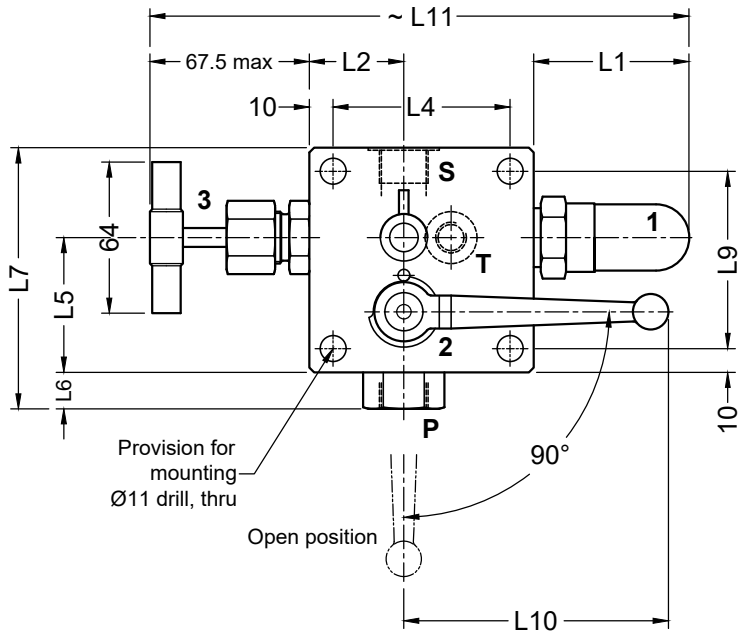


1. Pr. Relief Valve - For Protection
2. Ball Valve - For Isolation
3. Release valve - For Depressurization

Hydraulic Symbol







Part code	L1	L2	L3	L4	L5	L6	L7	L9	L10	L11	h1	h2	h3	S	P	T
ASB 10	65	40	60	75	57	15.5	110.5	75	112	227.5	35	110	58	G 1/2, 15 deep	G 1/2, 15 deep	G 1/4, 13 deep
ASB 20	80	41	69	90	67	16.5	121.5	85	187	295.5	39	128	70	G 3/4, 17 deep	G 3/4, 17 deep	G 3/8, 13 deep
ASB 32	80	41	69	90	67	38.0	158.0	100	187	295.5	39	128	70	G1.1/4, 21 deep	G1.1/4, 21 deep	G 3/8, 13 deep

Technical Specifications

Construction ---------- 1. Relief Valve - Poppet type (Metal to metal sealing)
2. Ball valve - Ball and synthetic seat type
3. Shut off valve - Seat type (Metal to metal sealing)

Mounting style ---------- Threaded ports

Interface ---------- Factory standard

Mounting position ---------- Optional

Flow direction ---------- Port 'P' to 'S' and Port 'S' to 'P'

Operating pressure ---------- Port 'P' and Port 'S' --- 350 bar
Port 'T' --- 16 bar

Pressure setting ranges ---------- 0 to 25, 50, 100, 200 and 350 bar

Hydraulic medium ---------- Mineral oil

Viscosity range ---------- 10 cSt to 380 cSt

Fluid temperature range ---------- -20 °C to +70 °C

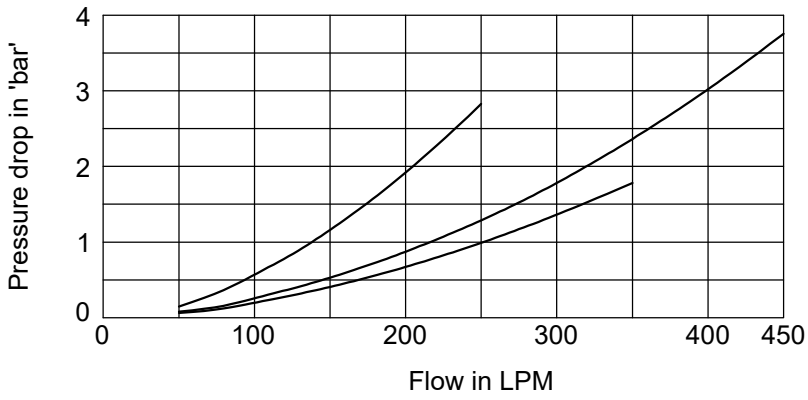
Fluid cleanliness requirement ------ As per ISO 4406 20/18/15

Mass ---------- **ASB 10** ----- 4.5 Kg
ASB 20 ----- 7.0 Kg
ASB 32 ----- 8.0 Kg

Flow handling capacity ---------- Refer graphs

Expected performance curves

Oil used : ISO VG 68 with viscosity of 68 cSt at 40 °C



Ordering Code

ASB	10	200	-	-	2.0

Accumulator Safety Block

Valve Size

DN 10	**10**
DN 20	**20**
DN 32	**32**

Pressure setting (bar)

25
50
100
200
350

Design Series
Subject to revision

Seals

Omit	Nitrile
V	FKM (Viton)

Description

QRC (Quick Release Couplings) are poppet type valves designed as per International standard, ISO 7241-1, Series "A"

Material of construction will be Carbon steel having surface treatment of Trivalent Zinc plating.

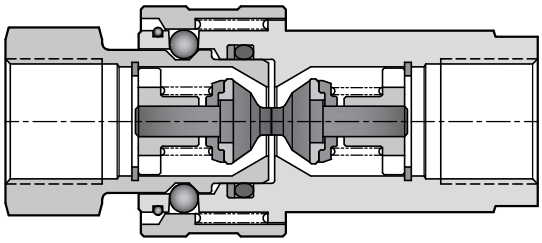
This series offers worldwide interchangeability and availibility of sizes ranging from G 1/4 to G1

This makes 'QRC' series one of the most widely used in a range of hydraulic applications mainly in industrial and agriculture segments.

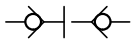
Some of the benefits are as under -

- The Poppet valve with Elastomer seal provides maximum sealing when disconnected.
- Compact Slim design
- Simple to use.

Section



Hydraulic Symbol



Unit Dimensions

Dimensions in mm.

End connections (Female threading)
BSP - **G**

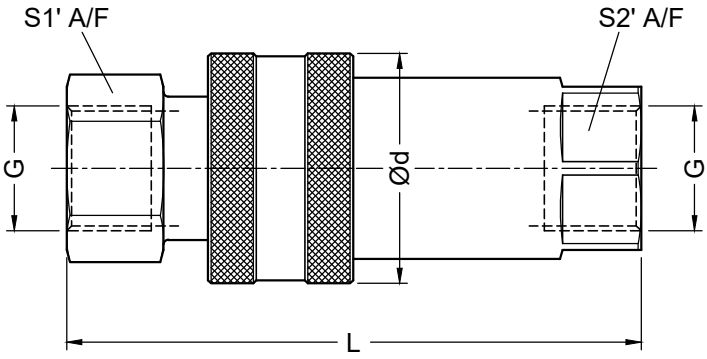


Table No. 1

G	Pressure (bar)	Ød	L	S1	S2
G 1/4	315	26	65	19	19
G 3/8	315	31	77	22	22
G 1/2	250	38	88	27	27
G 3/4	250	50	110	36	36
G1	250	55	127	41	41

Technical Specifications

Construction	Poppet type
Interchangeability	ISO 7241-1 series ‘A’
Valve system	Poppet type
Mechanical connections	Locking Balls
Connection system	Pulling back the sleeve and pushing one half into other
Disconnect system	Pulling back the sleeve
Connection with residual pressure	Not allowed
Disconnection with residual pressure	Not allowed
Construction of material	Carbon steel
Surface treatment	Crome III Zinc plating
Seals	NBR
Operating pressure	Refer table no.1
Hydraulic medium	Mineral oil.
Viscosity range	10 cSt to 380 cSt.
Fluid temperature range	-20 ºC to +80 ºC.
Fluid cleanliness	As per ISO 4406 20/18/15

Max Flow handling capacity

G 1/4	G 3/8	G 1/2	G 3/4	G1
3 lpm	23 lpm	45 lpm	106 lpm	189 lpm

Ordering Code

QRC | **G02** | **V** | **2.0**

- **QRC** — Quick Release Coupling
- **G02** — End Connections

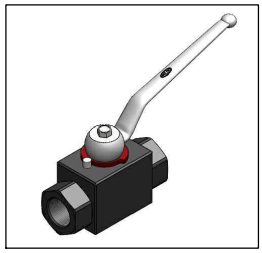
G 1/4	**G02**
G 3/8	**G03**
G 1/2	**G04**
G 3/4	**G06**
G 1	**G08**

- **V** — Seals

Omit	Nitrile
V	FKM (Viton)

- **2.0** — Design Series
Subject to revision

Description

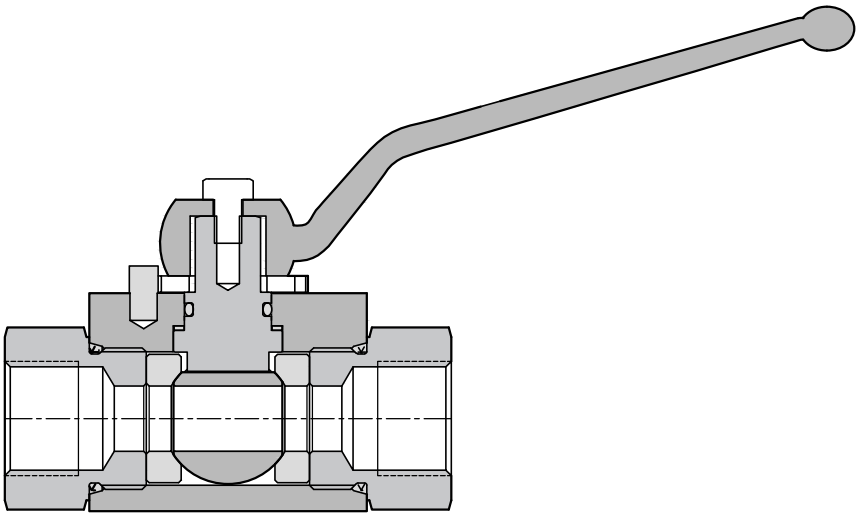


These are bi-directional, In-line valves, which are mostly used in all hydraulic application.

Ball valves, Series BV are having BSPP ports at inlet as well as outlet.

The Sizes are ranging from G 1/8 to G 1

Section



Unit Dimensions

Dimensions in mm.

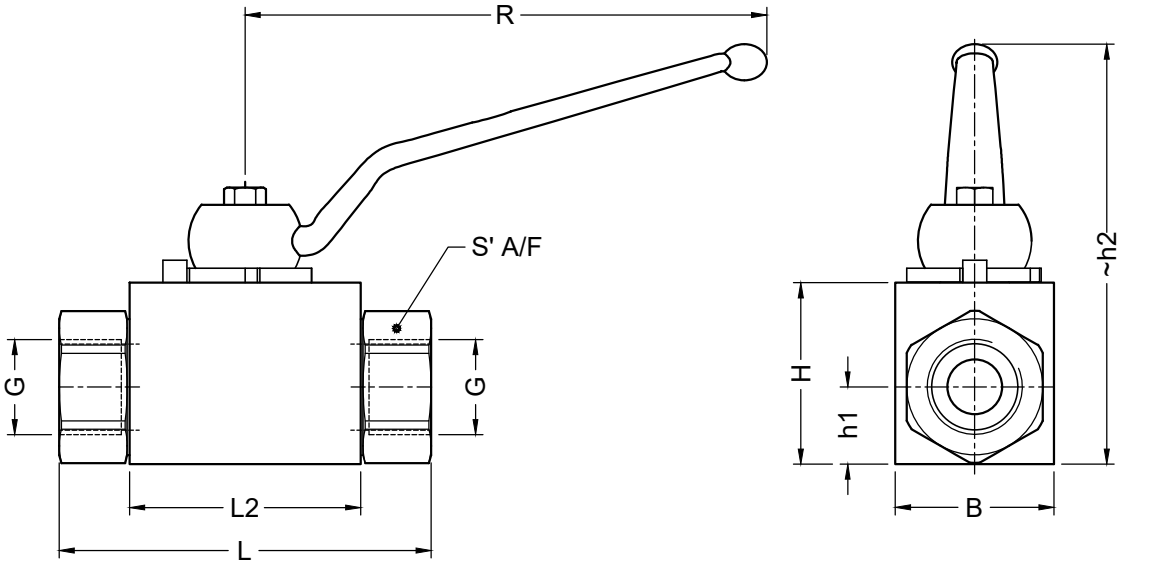


Table 1

Part code	G	Pr. (bar)	h1	h2	B	H	R	S	L2	L
BVG01-2.0	G 1/8	500	10	55	20	25	76	19	36	69
BVG02-2.0	G 1/4	500	10	55	20	25	76	19	36	69
BVG03-2.0	G 3/8	500	14.5	68	30	35	100	24	45	73
BVG04-2.0	G 1/2	500	17	92	35	40	125	30	51	82
BVG06-2.0	G 3/4	315	24	106	45	55	187	41	60	93
BVG08-2.0	G 1	315	26	118	55	60	187	50	70	115

Technical Specifications

Construction	Inline threaded body hand lever
Mounting style	Inline
Mounting position	Optional
Flow direction	Bi-directional
Operating pressure	Refer Table 1
Hydraulic medium	Mineral oil.
Viscosity range	10 cSt to 380 cSt.
Fluid cleanliness requirement	As per ISO 4406 20/18/15
Fluid temperature range	-20 ºC to +70 ºC

Ordering Code

BV	G02	-	2.0

BV — Ball Valve

G02 — End Connections

G 1/8	**G01**
G 1/4	**G02**
G 3/8	**G03**
G 1/2	**G04**
G 3/4	**G06**
G 1	**G08**

2.0 — Design Series
Subject to revision

Seals

Omit	Nitrile
V	FKM (Viton)

01	Diagnostic Couplings	Datasheet
02	Diagnostic Connectors	Datasheet

Description

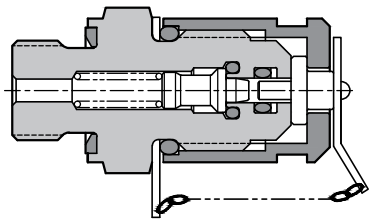
Diagnostic Couplings are intended to provide facility to access system pressure for the purpose of pressure measurement.

For transmitting pressure through these couplings to the measuring devices, no special tools are needed. These couplings can be connected by hand even at rated pressure.

These couplings are equipped with protective caps to avoid ingress of foreign particles, when the couplings are not in use. This is also a safety device against vibration.

These couplings also can be used for purging air from the system.
Working pressure 630 bar (9000 PSI) according to ISO 15171-2

Section

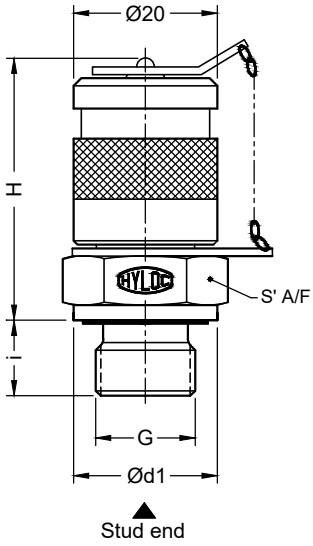


Hydraulic Symbol

Unit Dimensions

For **M16x2.0 (1620)**, **M16x1.5 (1615)** micro bore hose end

Dimensions in mm



Stud end threads	Sealing details	Working Pressure	Ød1	i	H	S
ISO 228 - G 1/8	Elastomeric seal (DIN 3852)	400 bar	14	8	38	17
ISO 228 - G 1/4		630 bar	19	10	35	19
ISO 228 - G 3/8		630 bar	22	10	35	22
M10 x 1.0	Elastomeric seal (DIN 3852)	630 bar	14	8.5	40	17
				✻9.5		
M12 x 1.5			17	10	35	17
				✻ 11		
M14 x 1.5	O Ring (ISO 6149)		19	10	35	19
				✻11.5		
M16 x 1.5			22	10	35	22
				✻12.5		
7/16"-20 UNF	O Ring (SAE J514)	630 bar	14.1	9	35	17
9/16"-18 UNF			17.3	10	35	19
1/8" NPTF	Self sealing threads	400 bar	---	9.7	35	17
1/4" NPTF			---	14.2	35	17
ISO 7/1 - R 1/8	Sealing by suitable jointing solutions	400 bar	---	7.5	35	17
ISO 7/1 - R 1/4		630 bar	---	11	35	17

✻ Marked dimensions are for stud ends with O ring sealing

Technical Specifications

Construction	Spring loaded, poppet type, opens on assembly by micro bore hose.	
Mounting position	Optional	
Hydraulic medium	Mineral oil	
Sealings	NBR (Standard)	
Temperature range	Sealing by NBR	-30 ºC to +100 ºC
	Sealing by FKM	-20 ºC to + 200 ºC

Ordering Code

MMC	1620	G02	E	V	-	20

MMC — Diagnostic Coupling

1620 — Micro bore flex hose thread size

M16x2.0	**1620**
M16x1.5	**1615**

G02 — Stud ends

Stud ends	Code
G 1/8	**G01**
G 1/4	**G02**
G 3/8	**G03**
M10 x 1.0	**M10**
M12 x 1.5	**M12**
M14 x 1.5	**M14**
M16 x 1.5	**M16**
7/16"-20 UNF	**S04**
9/16"-18 UNF	**S06**
1/8" NPTF	**N01**
1/4" NPTF	**N02**
R 1/8	**R01**
R 1/4	**R02**

E — Stud end Sealing

E	Elastomeric seal
O	O' Ring

V — Seals

	Omit for Nitrile
V	FKM (Viton)

20 — Design Series
Subject to revision

Note : Add prefix 316 to the above part code for SS 316 Diagnostic couplings.
e.g. **316-MMC1620G02E-20**

The right connection
The right environment

Diagnostic Connector
MMC - VK

Ref. No. H11212
Release: Apr 2025

Description

Diagnostic Connectors are intended to provide facility to access system pressure for the purpose of pressure measurement.

For transmitting pressure through these connectors to the measuring devices, no special tools are needed. These connectors can be connected by hand even at rated pressure.

These connectors are equipped with protective caps to avoid ingress of foreign particles, when the connectors are not in use. This is also a safety device against vibration.

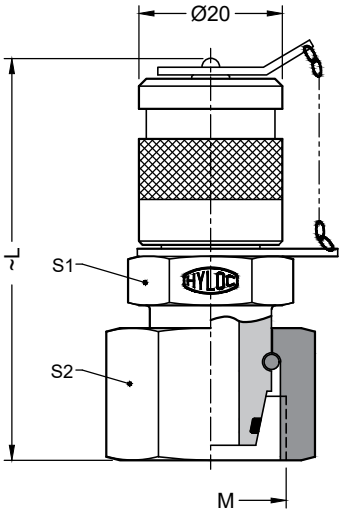
These connectors are also equipped with Swivel nut and O ring, which can be directly connected to any fitting having tube end as per ISO 8434-1

These couplings also can be used for purging air from the system.
Working pressure 630 bar (9000 PSI) according to ISO 15171-2

Unit Dimensions

For **M16x2.0 (1620)**, **M16x1.5 (1615)** micro bore hose end

Hydraulic Symbol



Dimensions in MM

Tube OD	Pressure	M	L	S1	S2
6L	315 bar	M12 x 1.5	52	17	14
8L		M14 x 1.5	52	17	17
10L		M16 x 1.5	52	17	19
12L		M18 x 1.5	52	17	22
15L		M22 x 1.5	52	19	27
18L	160 bar	M26 x 1.5	52	22	32
22L		M30 x 2.0	60	27	36
6S	630 bar	M14 x 1.5	52	17	17
8S		M16 x 1.5	52	17	19
10S		M18 x 1.5	52	17	22
12S		M20 x 1.5	52	17	24
16S	400 bar	M24 x 1.5	52	22	30
20S		M30 x 2.0	63	27	36

Technical Specifications

Construction	Spring loaded, poppet type, opens on assembly by micro bore hose.	
Mounting position	Optional	
Hydraulic medium	Mineral oil	
Sealings	NBR (Standard)	
Temperature range	Sealing by NBR	-30 ºC to +100 ºC
	Sealing by FKM	-20 ºC to + 200 ºC

Ordering Code

MMC	1620	VK	06L	V	-	20

Diagnostic Coupling

Micro bore flex hose thread size

M16x2.0	**1620**
M16x1.5	**1615**

Diagnsotic Connector

Stud ends	Code
6 OD (LP Series)	**06L**
8 OD (LP Series)	**08L**
10 OD (LP Series)	**10L**
12 OD (LP Series)	**12L**
15 OD (LP Series)	**15L**
18 OD (LP Series)	**18L**
22 OD (LP Series)	**22L**
6 OD (HP Series)	**06S**
8 OD (HP Series)	**08S**
10 OD (HP Series)	**10S**
12 OD (HP Series)	**12S**
16 OD (HP Series)	**16S**
20 OD (HP Series)	**20S**

Design Series
Subject to revision

Seals

	Omit for Nitrile
V	FKM (Viton)

Note : Add prefix 316 to the above part code for SS 316 Diagnostic couplings.
e.g. **316-MMC1620VK06L-20**

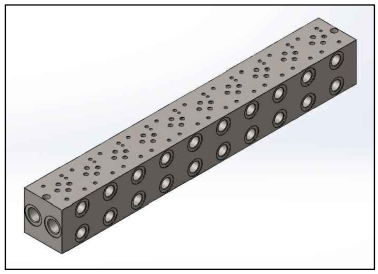
01	Bar Manifold - CETOP 3	Datasheet
02	Bar Manifold - CETOP 5	Datasheet
03	Ferrule Crimping Machine	Datasheet
04	Straight Couplings with Diagnostic	Datasheet

The right connection
The right environment

Multi station bar manifold for mounting four port valves having interface conforming to ISO 4401-03-04
BM-CETOP-03-XX-2.0

Ref. No. H14741
Release: Apr 2025

Description

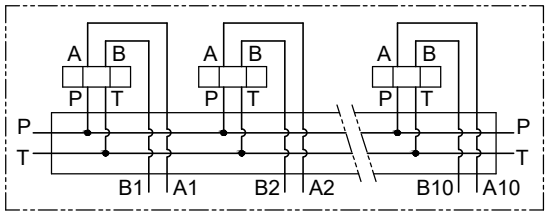


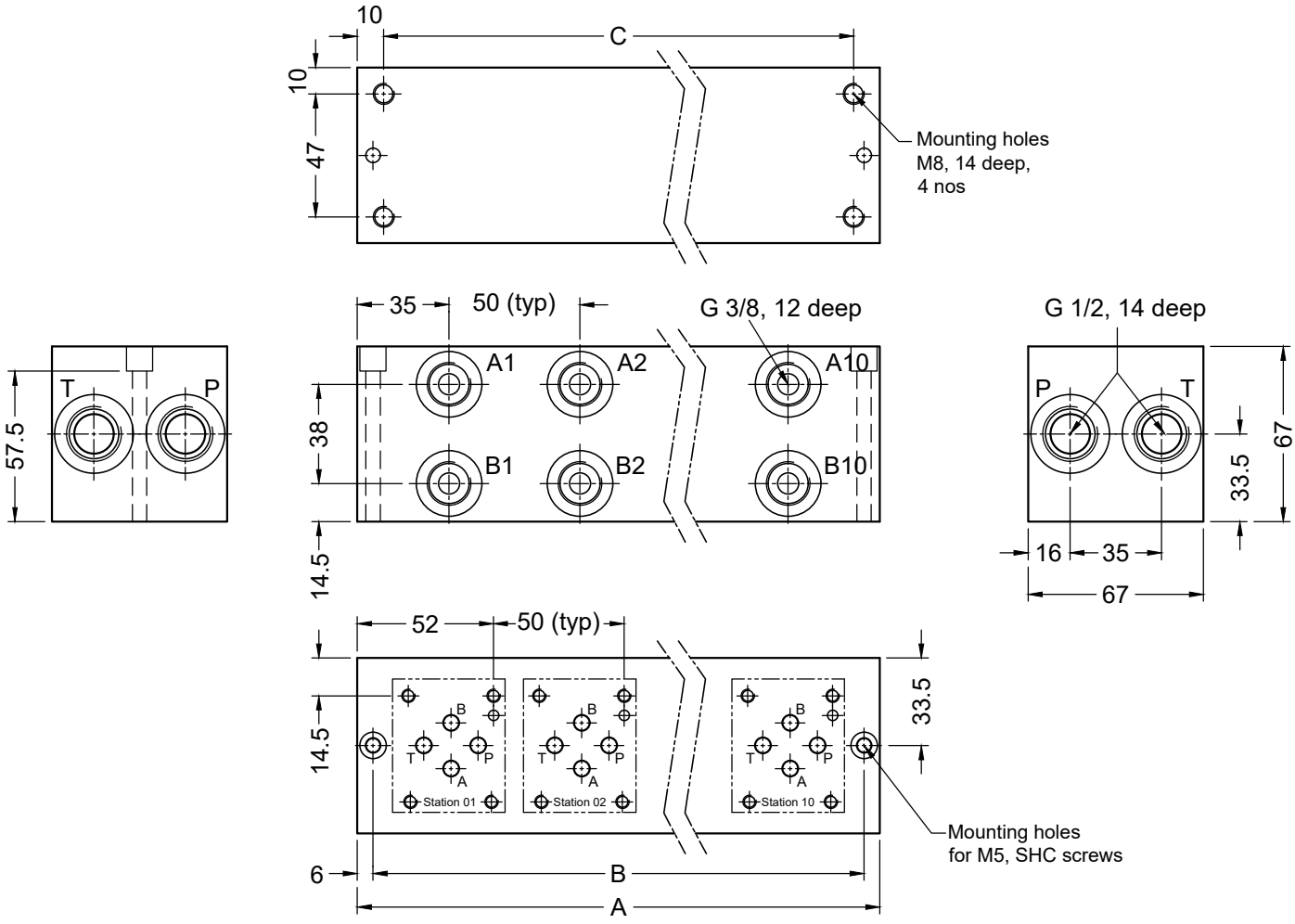
These bar manifolds are designed to connect valves having interface conforming to ISO 4401-03-04
Valves can be assembled parallel to each other with minimum space.
These manifold connects all 'P' ports of the interface to a common passage which is sized to provide minimum pressure drop.
The maximum number of interfaces available on manifold bar are 10.

Unit Dimensions

Dimensions in mm.

Hydraulic Symbol





Material : Carbon Steel (Max. Working pressure - 315 bar)

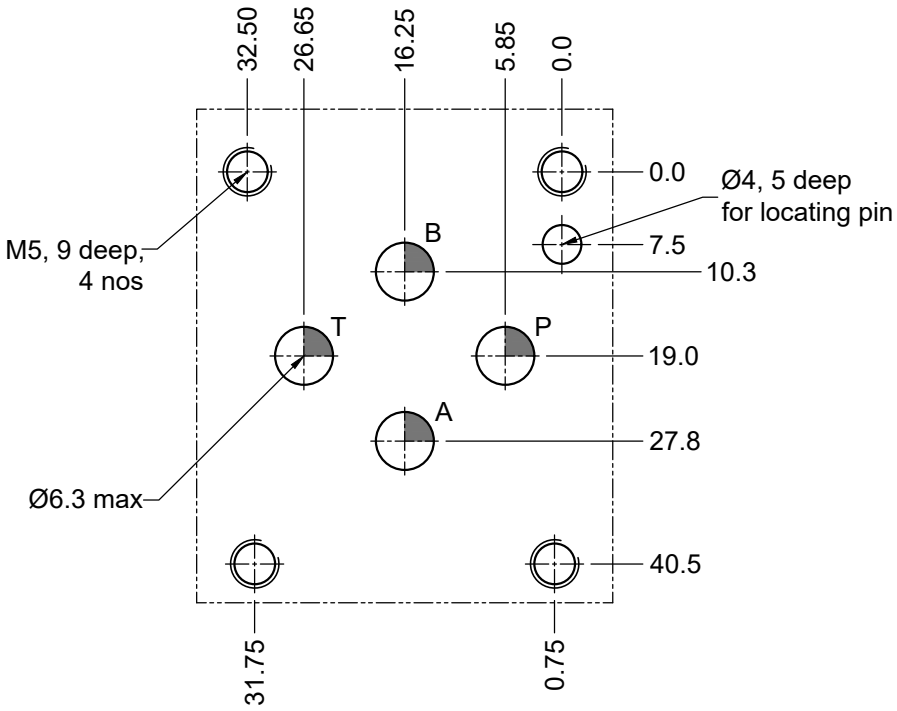
No. of Stations	01	02	03	04	05	06	07	08	09	10
Part number	BM-CETOP -03-01	BM-CETOP -03-02	BM-CETOP -03-03	BM-CETOP -03-04	BM-CETOP -03-05	BM-CETOP -03-06	BM-CETOP -03-07	BM-CETOP -03-08	BM-CETOP -03-09	BM-CETOP -03-10
A	70	120	170	220	270	320	370	420	470	520
B	58	108	158	208	258	308	358	408	458	508
C	50	100	150	200	250	300	350	400	450	500

Multi station bar manifold for mounting four port valves having interface conforming to ISO 4401-03-04

BM-CETOP-03-XX-2.0

Ref. No. H14741
Release: Apr 2025

Interface details



Ordering Code

BM	CETOP- 03	06	2.0

- BM: Bar Manifold
- CETOP- 03: Interface as per ISO 4401-03-04
- 06: Number of stations
  - 01
  - 02
  - 03
  - 04
  - 05
  - **06**
  - 07
  - 08
  - 09
  - 10
- 2.0: Design Series Subject to revision

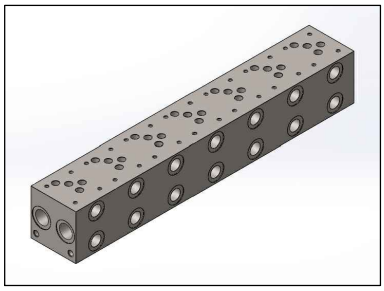
The right connection
The right environment

Multi station bar manifold for mounting four port valves having interface conforming to ISO 4401-05-04

BM-CETOP-05-XX-2.0

Ref. No. H14742
Release: Apr 2025

Description

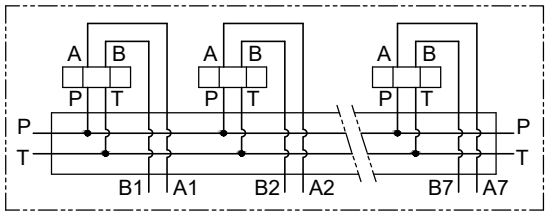


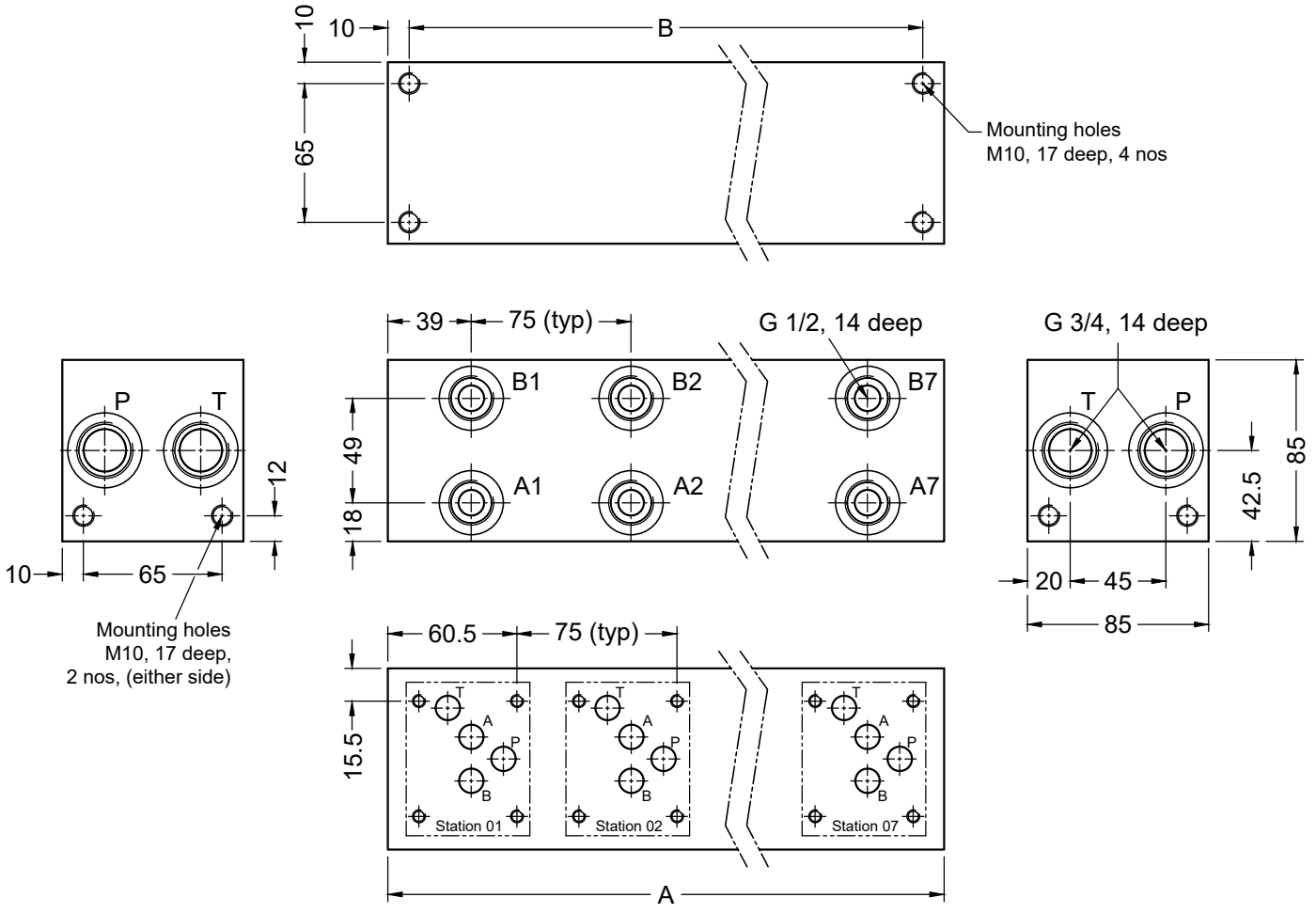
These bar manifolds are designed to connect valves having interface conforming to ISO 4401-05-04
Valves can be assembled parallel to each other with minimum space.
These manifold connects all 'P' ports of the interface to a common passage which is sized to provide minimum pressure drop.
The maximum number of interfaces available on manifold bar are 07.

Unit Dimensions

Dimensions in mm.

Hydraulic Symbol





Material : Carbon Steel (Max. Working pressure - 315 bar)

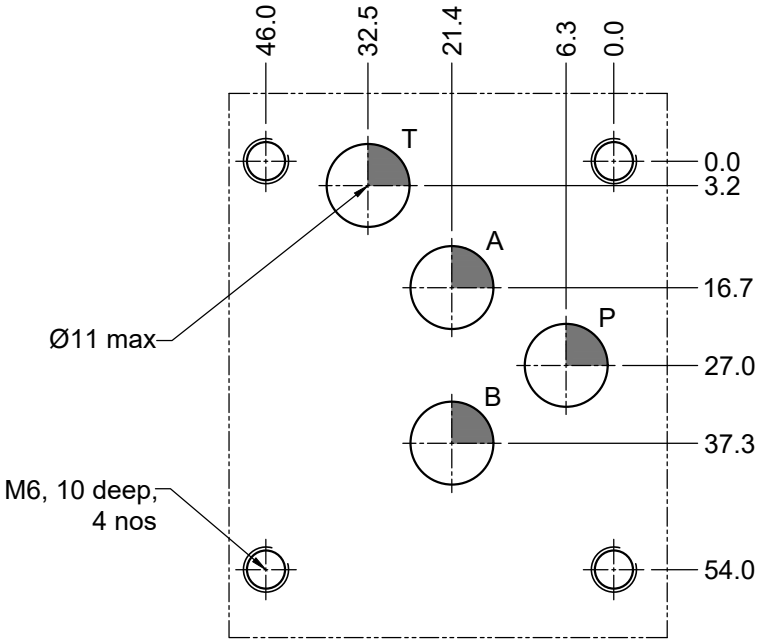
No. of Stations	01	02	03	04	05	06	07
Part number	BM-CETOP-05-01	BM-CETOP-05-02	BM-CETOP-05-03	BM-CETOP-05-04	BM-CETOP-05-05	BM-CETOP-05-06	BM-CETOP-05-07
A	75	150	225	300	375	450	525
B	55	130	205	280	355	430	505

Multi station bar manifold for mounting four port valves having interface conforming to ISO 4401-05-04

BM-CETOP-05-XX-2.0

Ref. No. H14742
Release: Apr 2025

Interface details



Ordering Code

BM	CETOP- 05	03	2.0

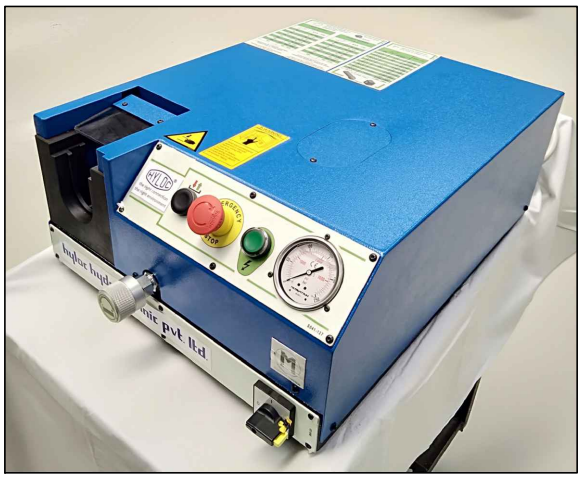
- **BM** — Bar Manifold
- **CETOP- 05** — Interface as per ISO 4401-05-04
- **03** — Number of stations
  - **01**
  - **02**
  - **03**
  - **04**
  - **05**
  - **06**
  - **07**
- **2.0** — Design Series Subject to revision

The right connection
The right environment

Ferrule Crimping Machine
EHFCM

Ref. No. H13949
Release: April 2025
ENGINEERING - 1 of 1

Description



Ferrule crimping machine is used to crimp the ferrules on seamless tubes, both Carbon steel and Stainless Steel.

The machine is designed to crimp from 6mm to 42mm in L series and 6mm to 38mm in S series.

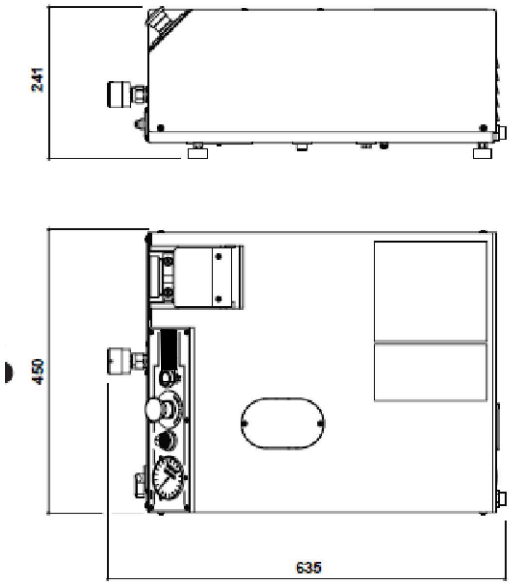
The machine has facility to set the required pressure for ferrule crimping of any size on the tube.

The main advantage of this machine is - It can make n' number of ferrule joints quickly. Human fatigue is totally eliminated.

Machine can be moved to any location with ease.
The machine design is compact and has all its drives and controls built in to the machine body itself.

The Hydraulic system is covered to the extent possible to avoid it from coming in contact with open ambience.

Unit Dimensions



Technical Specifications

Sizes for ferrule crimping	6L to 42L and 6S to 38S
Electrical Motor	0.736 Kw (1Hp)
Electrical conection	3 Phase
Operator controls voltage	12 - 24Volt + / - 10%
Required Oil quantity	1.3 Litres
Oil grade	VG46 or VG68
Noise pressure level	< or = 70 dB (A)
Weight of the machine (Static)	58 Kg
Max. admissible ambient temperature	+40 ºC
Max. admissible relative humidity	80%
Supply condition	Machine will be supplied without oil

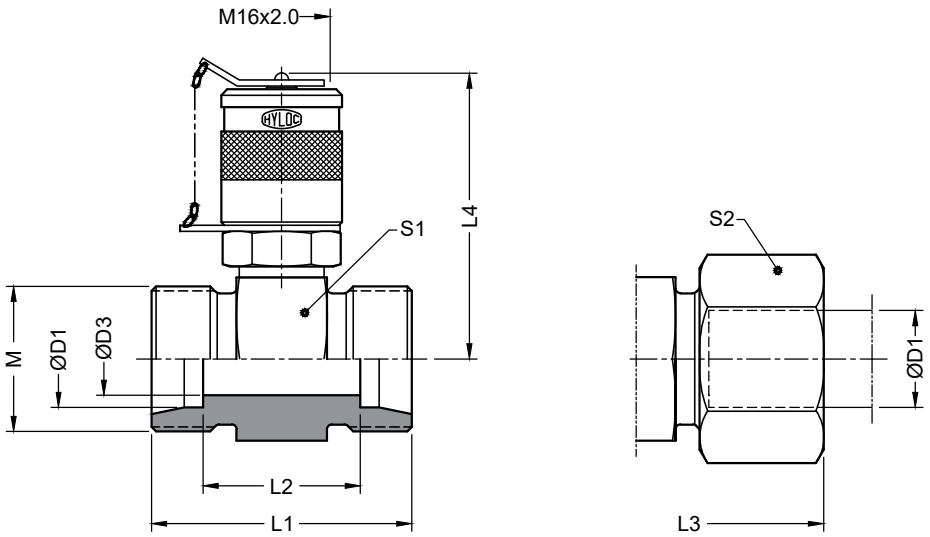
Ordering Code

EHFCM	–	Electro Hydrulic Ferrule Crimping machine

GMMC Straight Couplings with Diagnostic

24° Tube end as per ISO 8434-1

Dimensions in mm



Series	Part No. **Body**	Part No. **Assembly**	D1 ⌖	D3	L1	L2	Approx. L3	Approx. L4	S1	S2
L	**GMMC06XL**	**GMMC06PL**	06	4	35	21	56	50	24	14
Light	**GMMC08XL**	**GMMC08PL**	08	6	35	21	55	50	24	17
250 bar	**GMMC10XL**	**GMMC10PL**	10	7	37	23	59	50	24	19
	GMMC12XL	**GMMC12PL**	12	8	37	23	58	51.5	27	22
	GMMC15XL	**GMMC15PL**	15	11	39	25	62	53	30	27
160 bar	**GMMC18XL**	**GMMC18PL**	18	14	39	24	63	54	32	32
	GMMC22XL	**GMMC22PL**	22	18	43	28	68	56	36	36
100 bar	**GMMC28XL**	**GMMC28PL**	28	23	43	28	70	58.5	41	41
	GMMC35XL	**GMMC35PL**	35	30	47	26	78	61	46	50
	GMMC42XL	**GMMC42PL**	42	36	47	25	78	65.5	55	60
S	**GMMC06XS**	**GMMC06PS**	06	4	39	25	60	50	24	17
Heavy	**GMMC08XS**	**GMMC08PS**	08	5	39	25	59	50	24	19
630 bar	**GMMC10XS**	**GMMC10PS**	10	7	39	24	63	50	24	22
	GMMC12XS	**GMMC12PS**	12	7	39	24	62	50	24	24
400 bar	**GMMC16XS**	**GMMC16PS**	16	11	43	26	69	53	30	30
	GMMC20XS	**GMMC20PS**	20	15	47	26	77	56	36	36
	GMMC25XS	**GMMC25PS**	25	20	51	27	83	58.5	41	46
250 bar	**GMMC30XS**	**GMMC30PS**	30	25	55	28	90	61	46	50
	GMMC38XS	**GMMC38PS**	38	32	61	29	98	65.5	55	60

Assembly consists of Double bite ferrule.

For soft seal ferrules, replace 'P' with 'SRD' in Part code. Example : GMMC16SRDS

Standard material : Carbon Steel

For Stainless steel material, add prefix 316 - to the part code

Example : 316-GMMC16PS

Standard surface treatment : Chrome free Alkaline Zinc Plating.

For Zinc Nickel surface treatment, add suffix - ZnNi

Example : GMMC16PS-ZnNi

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