

Wheel operated cylinder valves - 'O' ring seal design

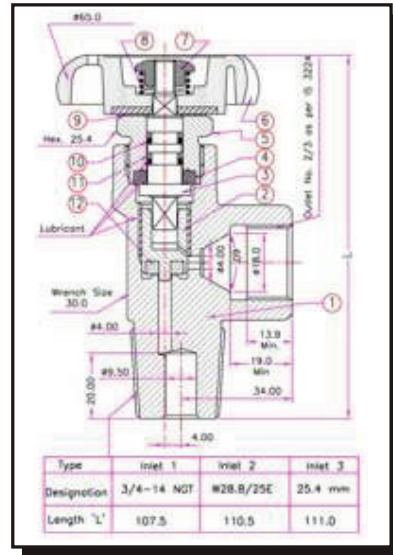
Horizontal Outlet Valve (IHO-10)

Product Features

- Valves certified by BAM Berlin to meet design and test requirements of EN ISO 10297:2006 for TP 360 Bar (Excluding Acetylene Service) and can be supplied with 'T' stamp.
 - Hand wheel is spring loaded, with provision of a friction washer, to avoid loosening during transportation and handling and eliminate gland leakage at very low pressures.
 - Gland side has face sealing of Nylon washer as primary protection and double 'O' ring as secondary protection. Back up split nylon ring prevents extrusion of 'O' ring under repeated cycling. Metal to metal sealing below gland nut threads ensures permanent seal which does not require retightening of gland nut and prevents pressure accumulation at top of the valve body.
 - Spindle construction is in two pieces with a robust square drive arrangement and precision machined on CNC vertical machining centre for perfect alignment and very low operating torque.
 - Valve spindles made from Naval Brass for extra toughness and wear resistance.
 - Bottom spindle is lubricated to eliminate seizing and galling under high pressure operation.
 - Valves available with inlet port in both offset and centre position with respect to the inlet thread.
- Optional:
- Threads for dip tube fitment as per buyers requirement.
 - Seal Cap for valves with external threads.
 - Safety provision as per buyer's requirement and requirements of CGA, BS and IS standard.
 - Nickel chrome plating for Medical service.



Active Member of CGA



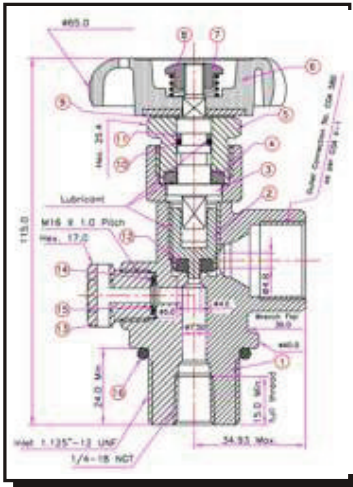
Material of Construction

Item No.	Description	Material
1	Valve body-forged	High tensile Brass to CuZn40Mn1Pb1FeSn to EN12165
2	Bottom spindle	Naval brass to ASTM B 21-C 46400
3	Top spindle	
4	Packing	Nylon 66
5	Gland nut	Free cutting brass IS 319 (Grade 1)
6	Wheel	30% glass filled Nylon 6 (V ₀) with brass plate
7	Nut	Brass
8	Spring	Spring steel (cadmium plated)
9	Friction washer	Nylon 66
10	'O' ring x 2	EPDM
11	Backup ring x 2	Nylon 66
12	Soft seating	
13*	Retainer plug	Free cutting brass IS 319 (Grade 1)
14*	Safety washer	Nylon 66/Aluminium
15*	Safety disc	Copper C 101/Nickel 201
16**	Intel 'O' ring	PTFE for Oxygen and Buna N for others

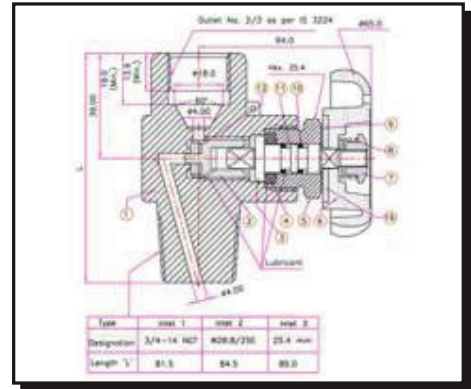
* As Required / ** For parallel threads only

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Vertical Outlet Valve (IVO-10)



Torque Values ←

Closing	3 Nm
Gland Nut Installation	70 Nm

Service Chart - for Horizontal (Series IHO -10) and Vertical (Series IVO-10) Outlet Valves ←

Gas service	Maximum working pressure of cylinder - Bar	Outlet connection							
		IS 3224:2002		CGA V-1-2005		BS 341 - 3 : 2002 (Up to 250 Bar)		DIN 477 - 1 : 1990 (Up to 300 Bar)	
		No.	Thread	No.	Thread	No.	Thread	No.	Thread
Compressed Gases									
Oxygen/ Medical Oxygen	250	3	G 5/8 Internal	540 (Up to 3000 psig)	.903-14 NGO RH-EXT	3	G 5/8 Internal	9	G 3/4 (External)
Hydrogen	300	2	G 5/8-LH Internal	350 (Up to 3000 psig)	.825-14 NGO-LH-EXT	4	G 5/8-LH Internal	1	W 21.80 x 1/14 LH (External)
Nitrogen		20	G 3/4 A (External)	580 (Up to 3000 psig)	0.965-14 NGO-RH-INT	3	G 5/8 Internal	10	W 24.32 x 1/14 (External)
Argon / Helium Krypton / Xenon / Neon		6	W 21.80 x 1/14 (External)						
Air		19	G 7/8 A (External)	346 (Up to 3000 psig)	.825 -14 NGO-RH-EXT			13	G 5/8 Internal
Liquefied Gases									
Carbon dioxide	250	7	W 21.8 x 1.814 - RH	320	.825-14 NGO RH-EXT	8	0.860" X14 tpi whitworth	6	W 21.8 x 1/14
Nitrous Oxide	250	12	Ext - W 17.26 x 1.27	326 (Up to 3000 psig)	.825-14 NGO-RH-EXT	13	11/16" - 20 (External)	11	G 3/8 (Ext.) For Cyl above 3 ltr.
Sulphur Hexafluoride	200	5	G 5/8 A-RH	590 (Up to 3000 psig)	.965-14 NGO-LH-INT	6	G 5/8 A (External)	6	W 21.80 x 1/14 (External)
Dichlorodifluoro methane and other refrigerant gases	50 - 250			660 (Up to 3000 psig)	1.030-14 NGO-RH-EXT				
Dissolved Gases									
Acetylene	60	2	G 5/8 - LH Internal	510 (Up to 500 psig)	.825-14 NG'O' LH-INT	2.4	G 5/8 - LH Internal	3	Yoke type connection
								3.1	M 24x2 External LH