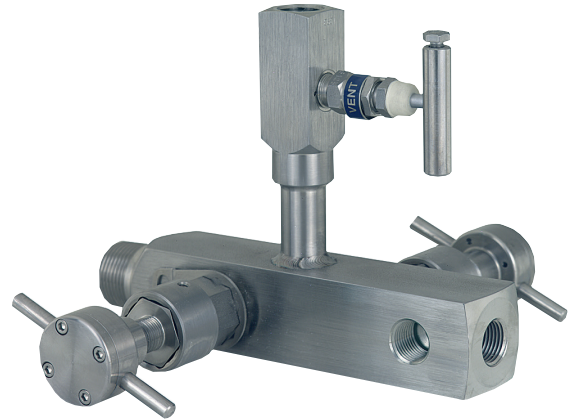


Primary Isolation Valves

ANSI Class 2500, 3/8" (9.5 mm) rod-able bore, double block and bleed primary isolation root valves. Meets the requirements of ASME B16.34 and fire tested to BS 6755 for pressures up to 6000 psig (414 barg)

General Application

The H70DB is designed to provide redundant block valve capabilities in severe or hazardous process conditions. It is intended to replace the gate, globe, gauge and bleed valves found in traditional instrument installations.



TECHNICAL DATA

Materials

CS, 316 SS and various exotics

Seats:

Metal or soft

Connections

Inlet:

1/2" to 1" NPT, SW, BW, flanged

Outlet:

1/2" to 1" NPT, SW, BW, flanged

Orifice sizes:

3/8" (9.5 mm)

Pressure (max):

6170 psig (426 barg)

Temperature (max):

1000°F (538°C)

Features

- Elimination of up to 80% of leak points produced by traditional 'piped-up' instrumentation penetrations increases operator and facility safety.
- Reduced cost of ownership through reduction of necessary components.
- Single-piece barstock construction and pre-installed bleed valve provide maximum strength and rigidity and eliminate requirement for fittings, tees, valves and tubing.
- Fast installation reduces costs: valve is shipped complete and hydrostatically tested for immediate, hassle-free installation.
- Compact design requires minimum space for operation and installation.
- Replaceable soft or metal seats can be removed and replaced easily in-line eliminating the need for valve removal.
- Non-rotating stem design eliminates packing wear and seat galling, extending valve life.
- Provides assured reliability in severe service applications.
- Metal-to-metal body-to-bonnet seal in constant compression prevents bonnet thread corrosion, eliminates possible tensile breakage and gives a reliable seal point.
- Safety back seating prevents stem blowout or accidental removal while in operation and provides a metal-to-metal secondary stem seal while in the full open position.
- Bonnet lock plate prevents accidental separation of bonnet from body while allowing easy maintenance and repair.
- Optional multi-port gauge connections allow versatile positioning of gauges or pressure switches without additional penetration of the main piping.

H70DB SERIES

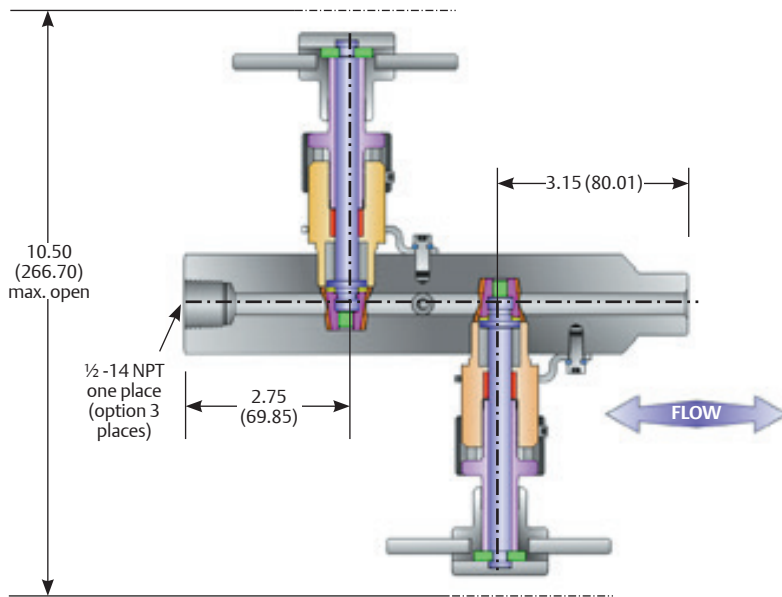
Primary Isolation Valves

Product Overview

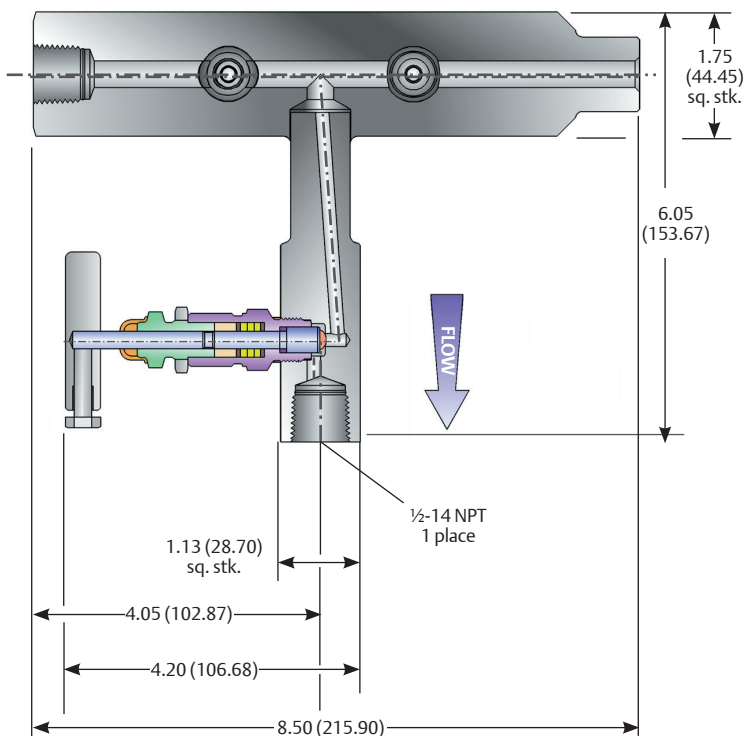
The H70DB instrument primary (root) valve features an installed bleed valve between the block valves to ensure controlled venting of the process and to eliminate costly field welds. It incorporates a primary and secondary block in a single barstock construction, eliminating the need to pipe up two independent valves and the required bleed unit. This eliminates numerous leak points and installation weakness, which are associated with decreased facility and operator safety as well as high cost of installation.

The valve is also available without the installed bleed valve. All valves with male inlet connections are available threaded or prepared for welding with either standard or extended inlets.

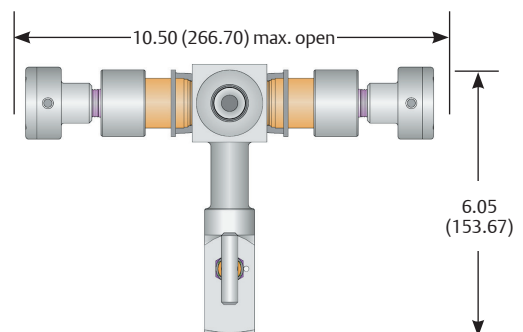
Block Valve



Bleed Valve



Block and Bleed



Primary Isolation Valves

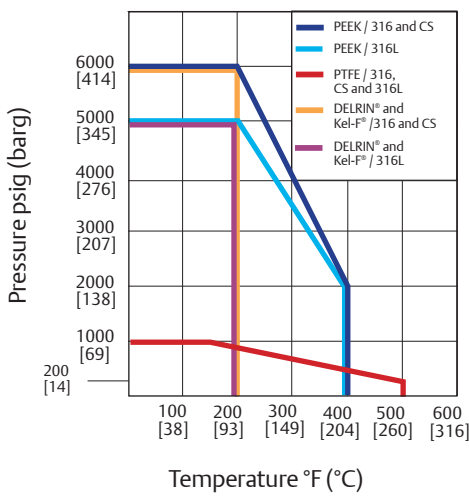
Standard Materials - Metal and Soft Seats

Valve ^[1]	Body	Stem	Bonnet
CS	A105 CS	A479-316 SS	A479-316 SS
316 SS	A479-316 SS	A479-316 SS	A479-316 SS
316L SS	A479-316L SS	A479-316 SS	A479-316 SS
A350-LF2	A350-LF2	A479-316 SS	A479-316 SS

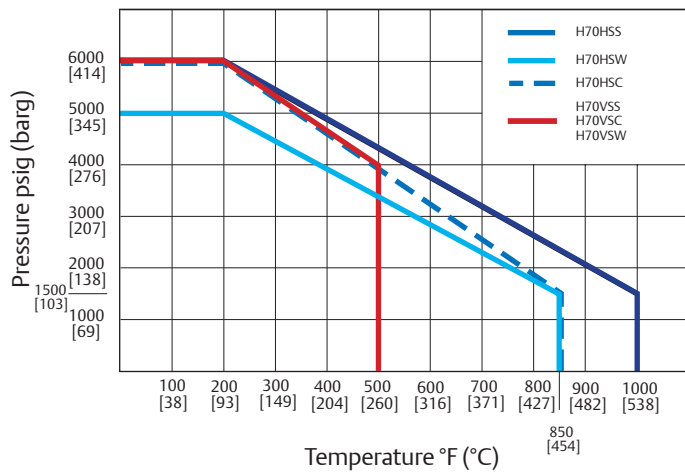
NOTES

1. Approximate valve weight: standard 8.0 lb (3.6 kg).
2. CS zinc TCP plated to prevent corrosion.
3. SG (Sour Gas) meets the requirements of NACE MR0175/ISO 15156 2015 (for chloride conditions ≤ 50 mg/l (ppm)) and NACE MR0103-2005.

Pressure vs. Temperature - H70DB Soft Seat



Pressure vs. Temperature - H70DB Hard Seat



Pressure and Temperature Ratings

Hard seat/PTFE seal	6000 psig at 200°F (414 barg at 93°C) 4000 psig at 500°F max. (276 barg at 204°C)
Hard seat/GRAFOIL® seal	6000 psig at 200°F (414 barg at 93°C)
CS	1500 psig at 850°F (103 barg at 454°C)
316 SS	1500 psig at 1000°F (103 barg at 538°C)
Soft seat / either seal	6000 psig at 200°F (414 barg at 93°C)
PEEK seat / either seal	6000 psig at 200°F (414 barg at 93°C) 2000 psig at 400°F (138 barg at 204°C)

Pressure and Temperature Ratings - B31.1 Metal Seat GRAFOIL® Packing

Body material	Pressure and temperature ratings
SS, A479-316	6000 psig at 100°F (414 barg at 38°C) 3030 psig at 1000°F (209 barg at 538°C)
CS, A105	6170 psig at 100°F (426 barg at 38°C) 3430 psig at 800°F (237 barg at 426°C)

NOTES

1. All B31.1 products are ASME Class 2500.
2. Minimum Temperature -70°F (-57°C)

H70DB SERIES

Primary Isolation Valves

Selection Guide - 6000 (414 barg)

H70DB		V	S	S	46C
BASIC SERIES		PACKING	SEAT	BODY MATERIALS	CONNECTIONS (INLET/OUTLET)
Orifice size					
H70DB	3/8 inch (9.5 mm) bore	H GRAFOIL® bonnet	S SS, A479-316/A479L - 316 SSL	S SS, A479-316/A479L-316SSL	4 ½ inch FNPT x ½ inch FNPT
H70A	5/8-inch [16 mm] bore	V PTFE bonnet	M Monel®	C CS, A105	4C ½ inch FSWP x ½ inch FSWP
			D Delrin®	M Monel®	6 ¾ inch FNPT x ¾ inch FNPT
			E PEEK	J Hastelloy®	6C ¾ inch FSWP x ¾ inch FSWP
			K PCTFE (Polychlorotrifluoroethylene exact equivalent of Kel-F®)	W A479L - 316SSL	46 ¾ inch MNPT x ½ inch FNPT
				L A350-LF2	48 1 inch MNPT x ½ inch FNPT
					66 ¾ inch MNPT x ¾ inch FNPT
					68 1 inch MNPT x ¾ inch FNPT
					44C ½ inch MSW x ¾ inch FNPT
					46C ¾ inch MSW x ½ inch FNPT
					48C 1 inch MSW x ½ inch FNPT
					66C ¾ inch MSW x ¾ inch FNPT
					68C 1 inch MSW x ¾ inch FNPT
					C Male plain end (CS is black oxide coated)
					L Long body extension (4 inch insulation)
					LL Extra long body extension (6 inch insulation)

OPTIONS^[3]

OC00	Cleaned for oxygen service
CC	Cleaned for chlorine service
GUS	Removable gusset (support bracket) option
NBV	Omit installation of bleed valve
NBVP	½" FNPT vent port only between block valves, omit installation of bleed valve
2MP	Add 2 at 1/2" FNPT multi-ports
BVC	Bleed valve ½ inch female socket weld outlet
XP	ASME B16.34, ASME B31.1 and B31.3 applications (GRAFOIL® bonnet packing, metal seat, bonnet lock and HYDRO to MSS-SP61)
PMI00	Positive Material Identification of Body

NOTES

- Bleed valve connection is standard ½ inch FNPT.
- Please consult for additional end connection options including flanges, butt-weld etc.
- All H70DB Series valves inherently meet the requirements of NACE MR0175 in use below 50ppm of Chlorides and do not require a part number designation.
- H70ADB valves are only available in soft seats with PTFE packing.

