



ANDERSON GREENWOOD SERIES H70DB PRIMARY INSTRUMENT ROOT VALVES

ANSI Class 2500, $\frac{3}{8}$ " (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)



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.

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, SS and various exotics
Seats:	Metal or soft
Connections	
Inlet:	$\frac{1}{2}$ " to 1" NPT, SW, BW, Flanged
Outlet:	$\frac{1}{2}$ " to 1" NPT, SW, BW, Flanged
Orifice size:	$\frac{3}{8}$ " (9.5 mm)
Pressure (max.):	6170 psig (426 barg)
Temperature (max.):	1000°F (538°C)

ANDERSON GREENWOOD SERIES H70DB PRIMARY INSTRUMENT ROOT VALVES

DOUBLE BLOCK AND BLEED - GENERAL DIMENSIONS

PRODUCT OVERVIEW

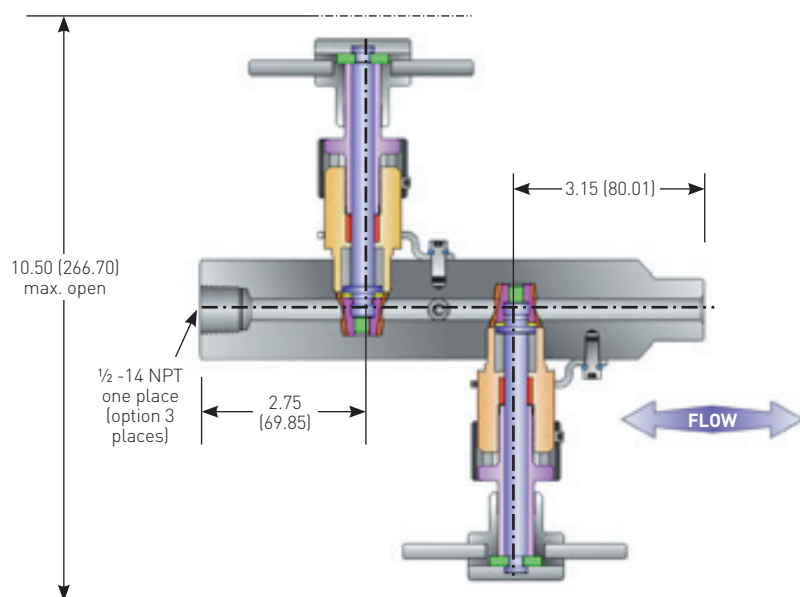
The H70DB instrument primary (root) valve features an installed bleed valve between the block valves to ensure controlled venting of the process and to eliminate costly field welds. It incorporates a primary and secondary block in a single barstock construction, eliminating the need to pipe up two independent 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.

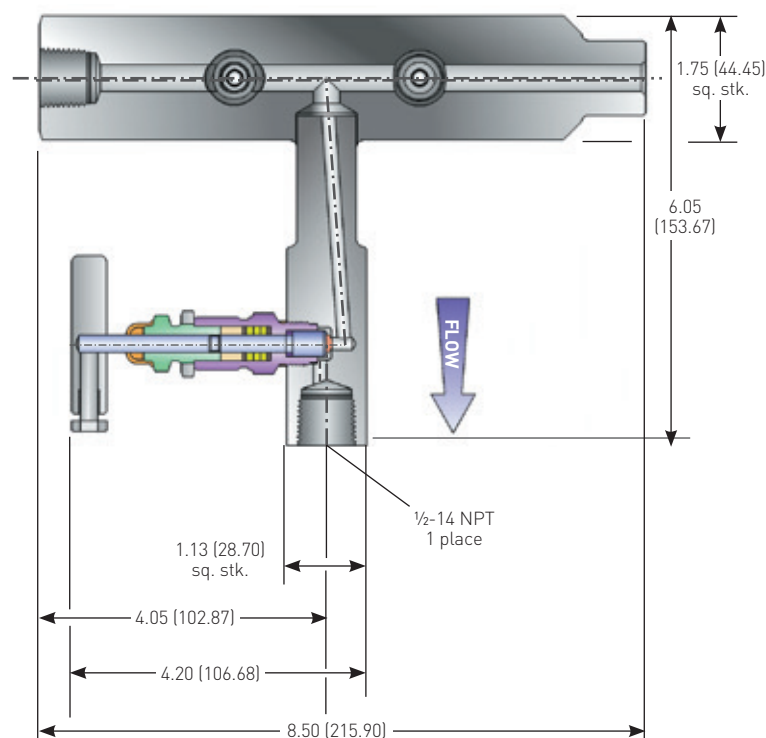
The valve is also available without the installed bleed valve.

All valves with male inlet connections are available threaded or prepared for welding with either standard or extended inlets.

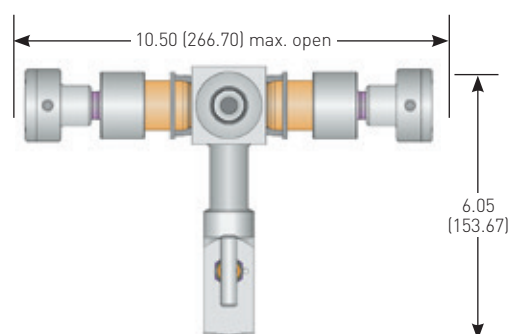
BLOCK VALVE



BLEED VALVE



BLOCK AND BLEED



ANDERSON GREENWOOD SERIES H70DB PRIMARY INSTRUMENT ROOT VALVES

DOUBLE BLOCK AND BLEED - SPECIFICATIONS

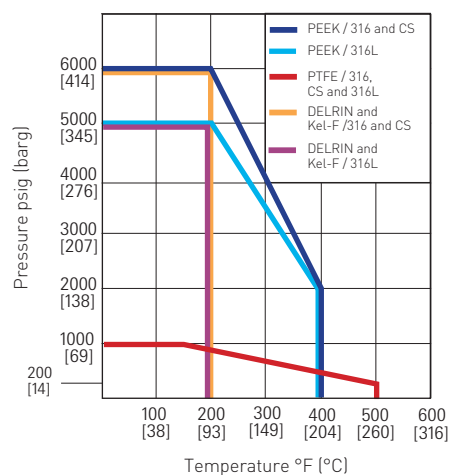
STANDARD MATERIALS - METAL AND SOFT SEATS

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

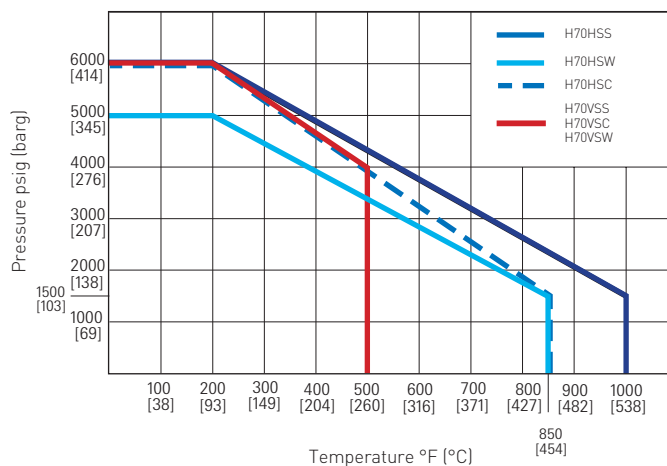
NOTES

1. Approximate valve weight: standard 8.0 lb (3.6 kg).
2. CS zinc plated to prevent corrosion.
3. All valves meet the requirements of NACE MR-01-75, latest revision.

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)
	SS	1500 psig at 1000°F (103 barg at 538°C)
		6000 psig at 200°F (414 barg at 93°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)
	2915 psig at 1000°F	(201 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.

ANDERSON GREENWOOD SERIES H70DB PRIMARY INSTRUMENT ROOT VALVES

DOUBLE BLOCK AND BLEED - SPECIFICATIONS

6000 psig (414 barg)

SELECTION GUIDE

Example:	H70DB	V	S	S	46C
Orifice size					
H70	¾ inch (9.5 mm) bore				
H70A	¾ inch (16 mm) bore				
Packing					
H	GRAFOIL® bonnet				
V	PTFE bonnet				
Seat					
S	SS, A479-316/A479L - 316 SSL				
D	Delrin®				
E	PEEK				
K	PCTFE (Polychlorotrifluoroethylene exact equivalent of Kel-F®)				
Body materials					
S	SS, A479-316/A479L - 316 SSL	J	Hastelloy®		
C	CS, A105	W	A479L - 316SS L		
M	Monel®	L	A350-LF2		
Connections (inlet/outlet)					
4	½ inch FNPT x ½ inch FNPT	66	¾ inch MNPT x ¾ inch FNPT		
4C	½ inch FSWP x ½ inch FSWP	68	1 inch MNPT x ¾ inch FNPT		
6	¾ inch FNPT x ¾ inch FNPT	44C	½ inch MSW x ½ inch FNPT		
6C	¾ inch FSWP x ¾ inch FSWP	46C	¾ inch MSW x ½ inch FNPT		
44	½ inch MNPT x ½ inch FNPT	48C	1 inch MSW x ½ inch FNPT		
46	¾ inch MNPT x ½ inch FNPT	66C	¾ inch MSW x ¾ inch FNPT		
48	1 inch MNPT x ½ 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]

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

NOTES

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

Neither Emerson, Emerson Automation Solutions, nor any of their affiliated entities assumes responsibility for the selection, use or maintenance of any product. Responsibility for proper selection, use, and maintenance of any product remains solely with the purchaser and end user.

Anderson Greenwood is a mark owned by one of the companies in the Emerson Automation Solutions business unit of Emerson Electric Co. Emerson Automation Solutions, Emerson and the Emerson logo are trademarks and service marks of Emerson Electric Co. All other marks are the property of their respective owners.

The contents of this publication are presented for informational purposes only, and while every effort has been made to ensure their accuracy, they are not to be construed as warranties or guarantees, express or implied, regarding the products or services described herein or their use or applicability. All sales are governed by our terms and conditions, which are available upon request. We reserve the right to modify or improve the designs or specifications of such products at any time without notice.

Emerson.com/FinalControl