



ANDERSON GREENWOOD SERIES M50/H70 PRIMARY ROOT VALVES

API firesafe 607 rated, ANSI Class 2500 instrument primary (root) valves with a $\frac{3}{8}$ " (9.5 mm) or optional $\frac{5}{8}$ " (16 mm) straight through roddable bore for pressures to 6000 psig (414 barg)



FEATURES

- Compact design requires minimum space for operation and installation; low weight increases connection strength and reduces gauge whip.
- In-line replaceable soft or metal seats eliminate the need for valve removal.
- Straight through bore allows rodding out.
- Non-rotating stem design eliminates packing wear and seat galling, extending valve life.
- API Firesafe 607 rated primary block 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 from body yet easy maintenance and repair.
- M50's multi-port gauge connections allow versatile positioning of gauges or pressure switches without additional penetration of the main piping.

GENERAL APPLICATION

M50 and H70 valves are suited for severe service, instrument primary (root) type installations requiring rugged durability, reliability and safety. Both are intended to replace gate and globe valves found in traditional installations.

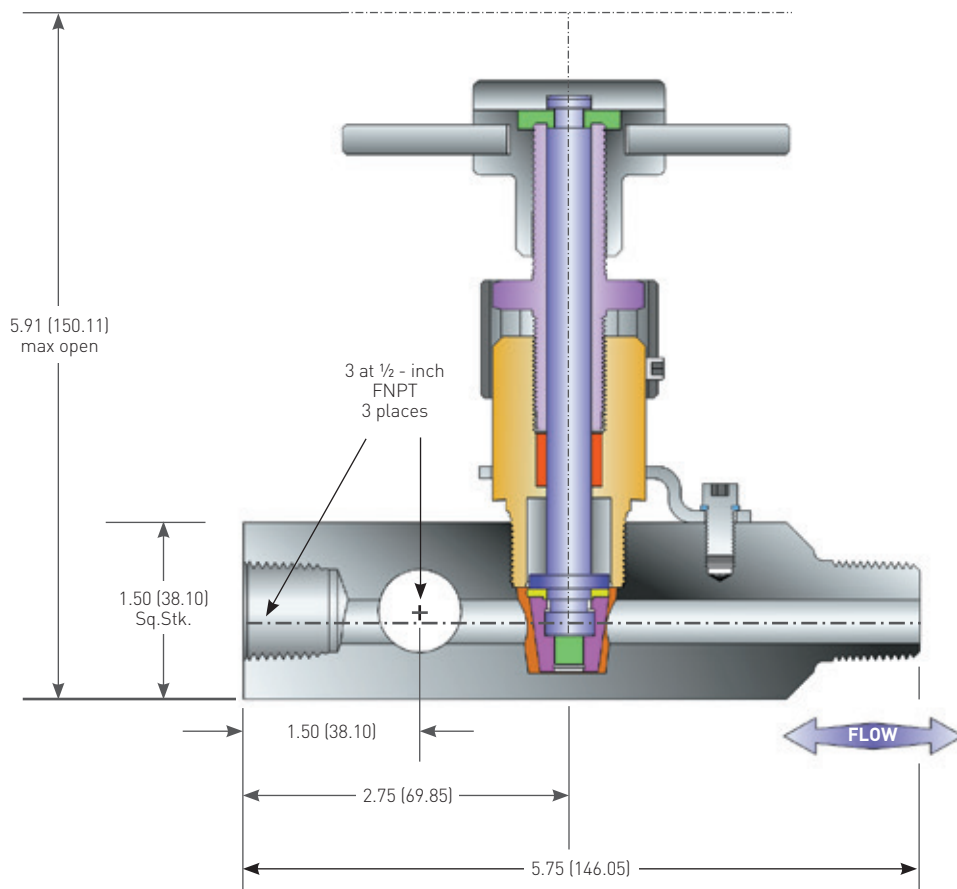
TECHNICAL DATA

Materials:	CS, SS, Monel, Hastelloy
Seats:	Metal or soft
Connections:	
Inlet:	$\frac{1}{2}$ " to 1" NPT
Outlet:	$\frac{1}{2}$ " to $\frac{3}{4}$ " NPT
Orifice size:	$\frac{3}{8}$ " (9.5 mm); $\frac{5}{8}$ " (16 mm) optional
Pressure (max):	6000 psig (414 barg)
Temperature (max):	1000°F (538°C)

ANDERSON GREENWOOD SERIES M50/H70 PRIMARY ROOT VALVES

M50 SPECIFICATIONS

GENERAL DIMENSIONS



NOTE

1. Long body length 7.75 inch [198.8 mm]. Extra long body length 8.80 inch [223.5 mm].

STANDARD MATERIALS - METAL AND SOFT SEATS

Valve1	Body	Stem	Bonnet
CS	A105 CS2	303 SS	A105 CS
316 SS	A479-316 SS	A479-316 SS	A479-316 SS
316L3 SS	A479-316L SS	A479-316L SS	A479-316L SS
Monel®	Monel® 400	Monel® R405	Monel® R405
Hastelloy®	Hastelloy® C276	Hastelloy® C276	Hastelloy® C276

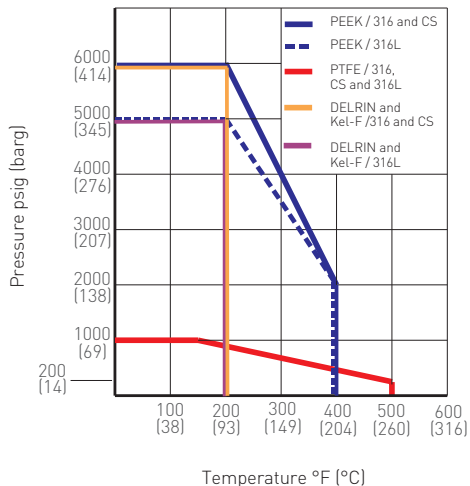
NOTES

1. Approximate valve weight: 4.2 lb [1.9 kg].
2. CS zinc plated to prevent corrosion.
3. All 316L SS valves meet the requirements of NACE MR-01-75, latest revision.
4. Monel® is a registered trademark of the International Nickel Company.
5. Hastelloy® is a registered trademark of Haynes International, Inc.

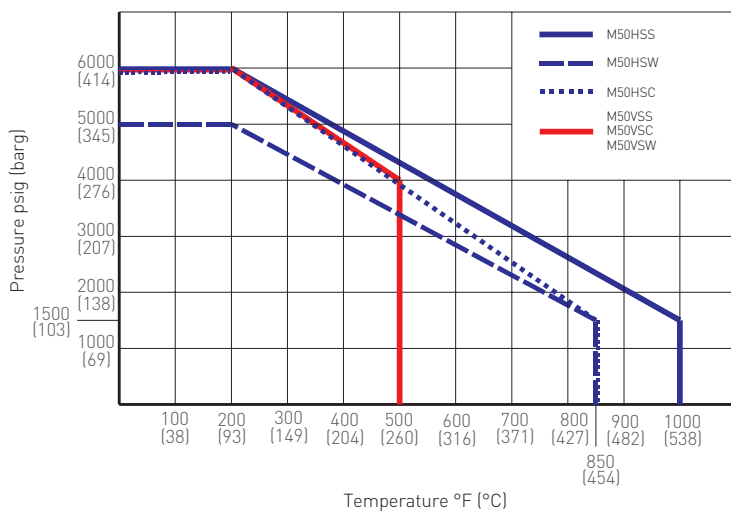
ANDERSON GREENWOOD SERIES M50/H70 PRIMARY ROOT VALVES

M50 SPECIFICATIONS

PRESSURE VS. TEMPERATURE - SOFT SEAT



PRESSURE VS. TEMPERATURE - 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.
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)
Soft seat/either seal		6000 psig at 200°F
		(414 barg at 93°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

- All B31.1 products are ASME Class 2500.

ANDERSON GREENWOOD SERIES M50/H70 PRIMARY ROOT VALVES

M50 SPECIFICATIONS

6000 psig (414 barg), API FIRESAFE 607 RATED

SELECTION GUIDE

Example:	M50	V	S	S	46C
Orifice size					
M50	3/8 inch (9.5 mm) bore				
M50A	3/8 inch (16 mm) bore				
Packing					
H	GRAF0IL® bonnet				
V	PTFE bonnet				
Seat					
S	SS, A479-316/A479L - 316 SSL				
M	Monel®				
D	Delrin®				
E	PEEK				
K	PCTFE (Polychlorotrifluoroethylene exact equivalent of Kel-F®)				
Body materials					
S	SS, A479-316/A479L - 316 SSL				
C	CS, A105				
M	Monel®				
J	Hastelloy®				
W	A479L - 316SS L				
Connections (inlet/outlet)					
44	1/2 inch MNPT x 3 at 1/2 inch FNPT				
46	3/4 inch MNPT x 3 at 1/2 inch FNPT				
48	1 inch MNPT x 3 at 1/2 inch FNPT				
66	3/4 inch MNPT x 3 at 3/4 inch FNPT				
68	1 inch MNPT x 3 at 3/4 inch FNPT				
44C	1/2 inch MSW x 3 at 1/2 inch FNPT				
46C	3/4 inch MSW x 3 at 1/2 inch FNPT				
48C	1 inch MSW x 3 at 1/2 inch FNPT				
66C	3/4 inch MSW x 3 at 3/4 inch FNPT				
68C	1 inch MSW x 3 at 3/4 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

OC	Cleaned for oxygen service
CC	Cleaned for chlorine service
GUS	Removable gusset (support bracket) option
SP	Special requirements - please specify
XP	For B31.1 applications GRAF0IL® bonnet packing, metal seat, bonnet lock and HYDRO to MSS-SP61

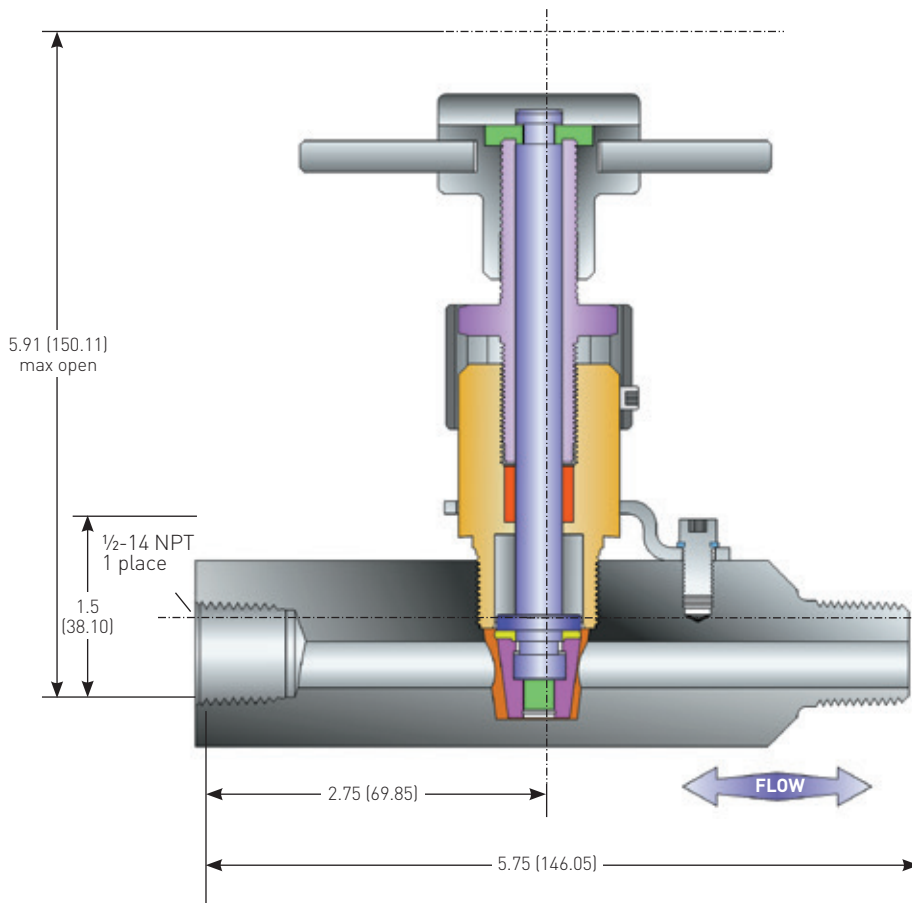
NOTE

1. Delrin® is a registered trademark of E.I. duPont de Nemours Company.

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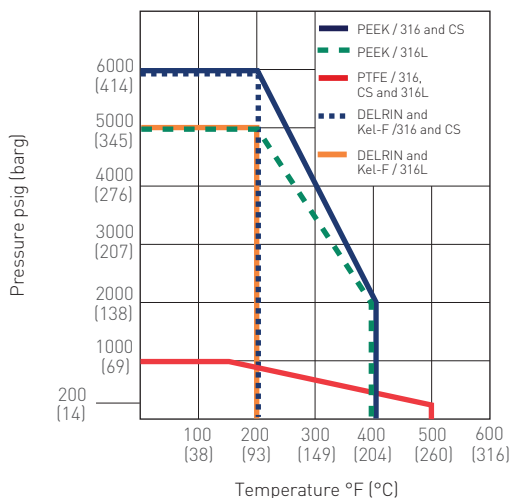
NOTES

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3. All 316L SS valves meet the requirements of NACE MR-01-75, latest revision.

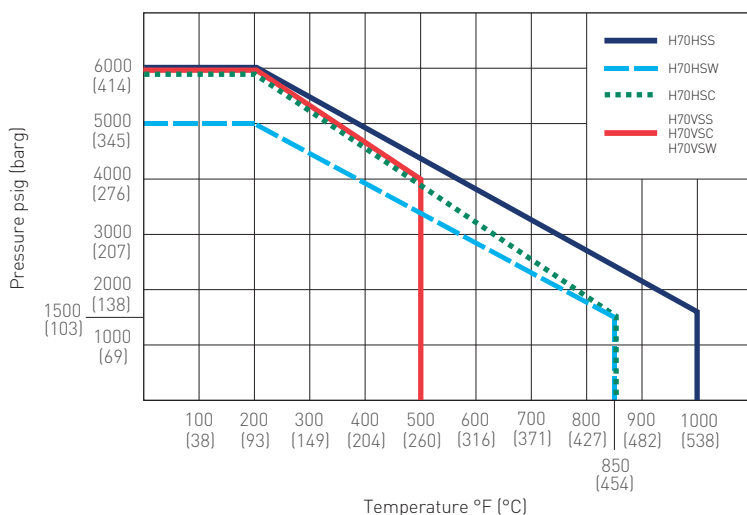
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	4000 psig at 500°F Max. (276 barg at 204°C)
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ORDERING INFORMATION

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H70A	¾ inch (16 mm) bore				
Packing					
H	GRAFOL® bonnet				
V	PTFE bonnet				
Seat					
S	SS, A479-316/A479L - 316 SSL				
M	Monel®				
D	Delrin®				
E	PEEK				
K	PCTFE (Polychlorotrifluoroethylene exact equivalent of Kel-F®)				
V	PTFE				
Body materials					
S	SS, A479-316/A479L - 316 SSL				
C	CS, A105				
M	Monel®				
J	Hastelloy®				
W	A479L - 316SS L				
Connections (inlet/outlet)					
-4	½ inch FNPT x ½ inch FNPT				
-4C	½ inch FSWP x ½ inch FSWP				
-6	¾ inch FNPT x ¾ inch FNPT				
-6C	¾ inch FSWP x ¾ inch FSWP				
44	½ inch MNPT x ½ inch FNPT				
46	¾ inch MNPT x ½ inch FNPT				
48	1 inch MNPT x ½ inch FNPT				
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OPTIONS

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GUS	Removable gusset (support bracket) option
SP	Special requirements - please specify
XP	For B31.1 applications GRAPHOIL® bonnet packing, metal seat, bonnet lock and HYDRO to MSS-SP61

NOTE

- All 316 SS/316 SSL dual rated valves in the Root (primary) valve series are rated to NACE MR-01-75 and do not require the standard 'SG' option denotation for this requirement.

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