

TESCOM™ Pressure Reducing Regulators

Specifications

For other materials or modifications, please consult TESCOM.

OPERATING PARAMETERS

Pressure rating per criteria of ANSI/ASME B31.3

Maximum Inlet Pressure:

10,000 psig / 690 bar
15,000 psig / 1034 bar

Maximum Outlet Pressure:

Up to 10,000 psig / 690 bar standard

Design Proof Pressure:

150% maximum rated

Leakage

Non Metal Seat: Bubble-tight

Metal Seat: 2 drops/minute at 150 SUS at 2500 psig / 172 bar

Operating Temperature

Media: Limit determined by most restrictive element
(See table below).

Ambient: See note below table.

Flow Capacity

C_v = 0.02, 0.06, 0.12

MEDIA CONTACT MATERIALS

Body

316 Stainless Steel

Seal, Vent and Main Valve

See Part Number Selector

O-Ring and Back-Up Ring

See Part Number Selector

Remaining Parts

300 Series Stainless Steel, 17-4 PH Stainless Steel,
and Nitronic 60

OTHER

Cleaning

CGA 4.1 and ASTM G93

Weight

5.5 lbs / 2.5 kg

Vespel® is a registered trademark of E.I. du Pont de Nemours and Company.

O-RING SEAL	MEDIA TEMPERATURE
ETHYLENE PROPYLENE	-30 °F TO +200 °F / -34 °C TO +93 °C
BUNA-N	-30 °F TO +165 °F / -34 °C TO +74 °C
FKM	-15 °F TO +200 °F / -26 °C TO +93 °C

SEAT	MEDIA TEMPERATURE
VESPEL	-30 °F TO +200 °F / -34 °C TO +93 °C
17-4 STAINLESS STEEL	N/A

Note: Maximum ambient temperature rating is 165 °F (74 °C) for regulators with plastic hand knobs or air actuators. Minimum ambient temperature is determined by soft goods minimum media temperature.



Applications

- Wellhead control panels
- Subsea valve actuation
- Chemical injection
- Hydraulic Power Units (HPU)

Features and Benefits

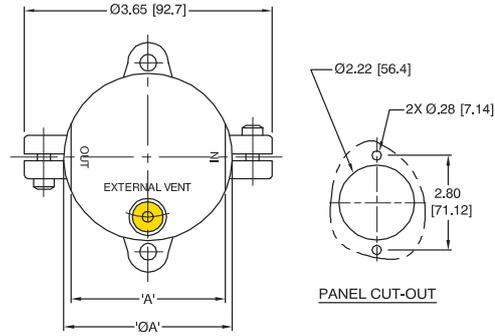
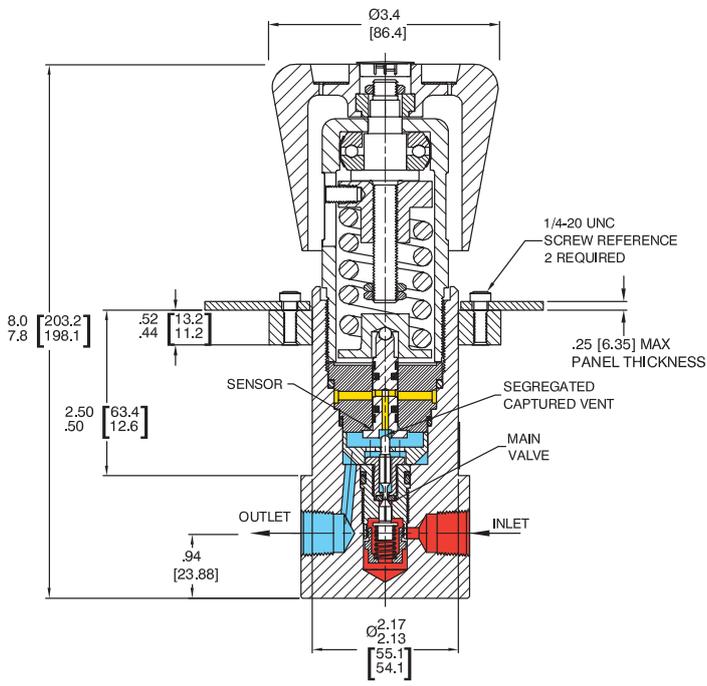
- New stem and seal design extends service life in crucial high pressure water-based hydraulic applications
- Specially designed seat and valve for excellent operation in hydraulic applications
- Segregated captured venting
- Tapered poppet design for better pressure control
- Higher pressure models are available

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50-2000 SERIES

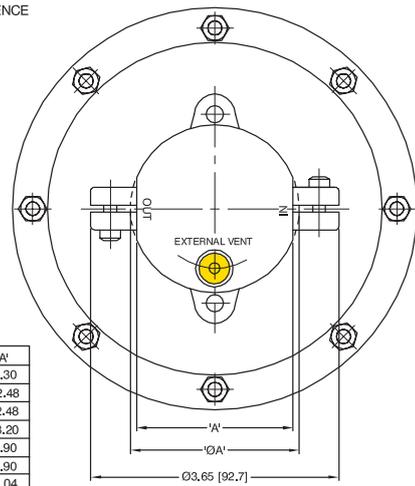
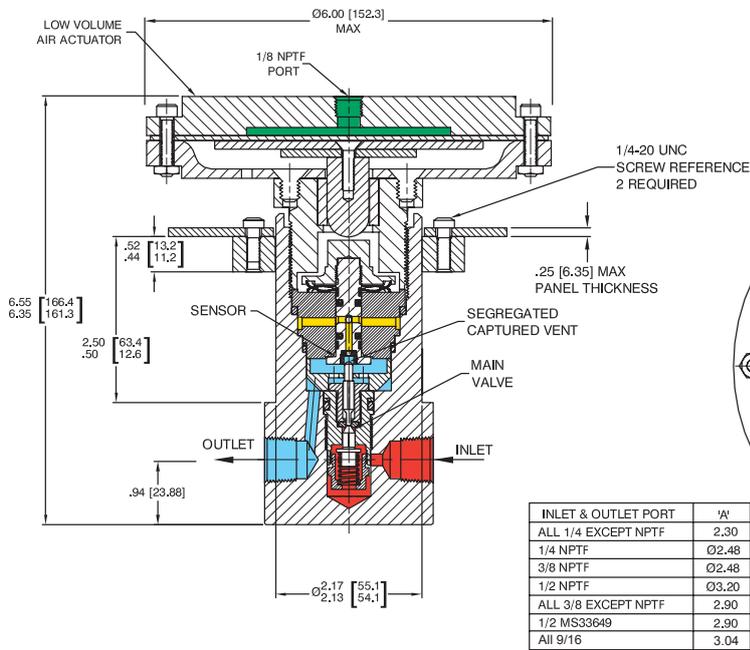
Regulator Drawings

SPRING LOAD



INLET & OUTLET PORT	'A'
ALL 1/4 EXCEPT NPTF	2.30
1/4 NPTF	Ø2.48
3/8 NPTF	Ø2.48
1/2 NPTF	Ø3.20
ALL 3/8 EXCEPT NPTF	2.90
1/2 MS33649	2.90
All 9/16	3.04

AIR LOAD

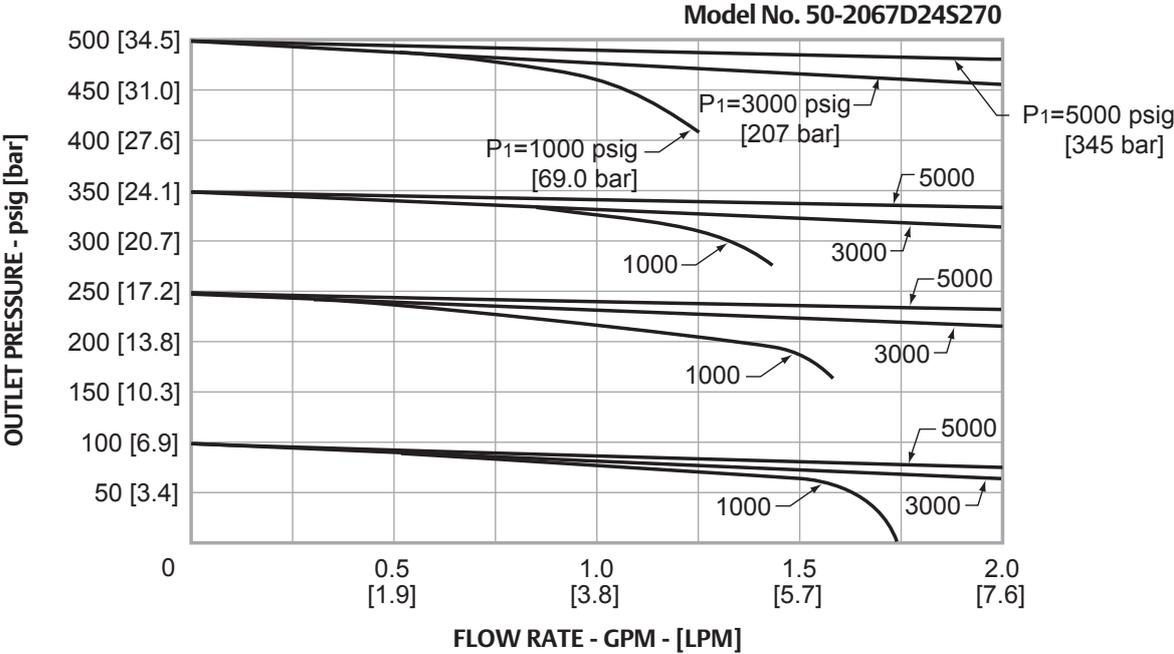
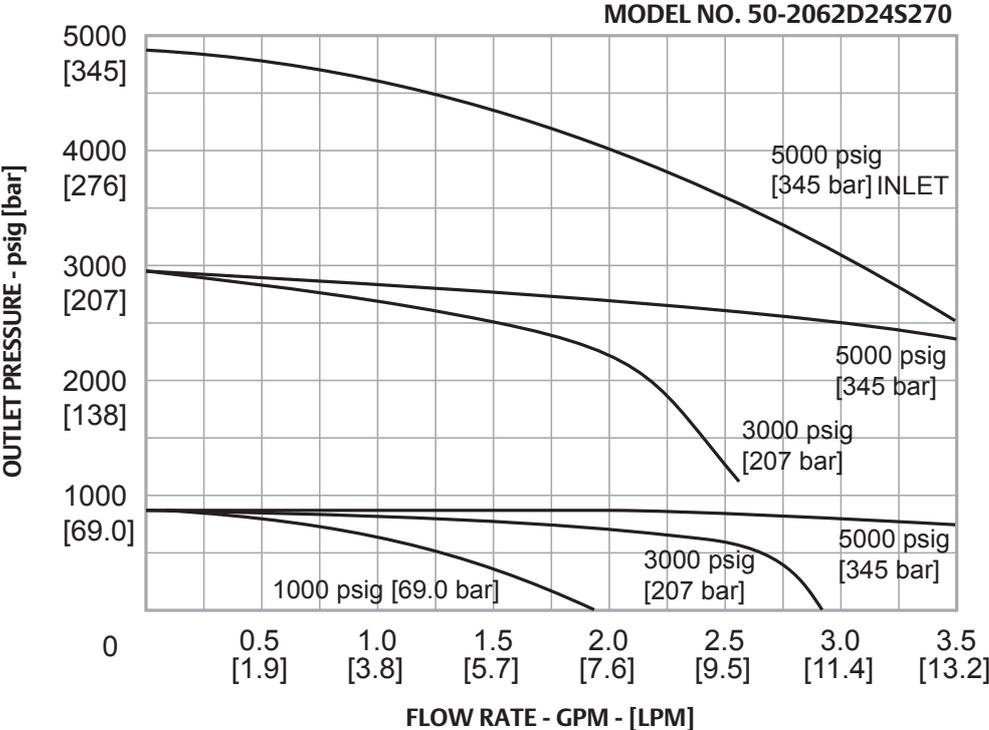


INLET & OUTLET PORT	'A'
ALL 1/4 EXCEPT NPTF	2.30
1/4 NPTF	Ø2.48
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1/2 NPTF	Ø3.20
ALL 3/8 EXCEPT NPTF	2.90
1/2 MS33649	2.90
All 9/16	3.04

All dimensions are reference & nominal
Metric [millimeter] equivalents are in brackets

Regulator Flow Charts

For more information on how to read flow curves, please refer to the Flow Curves and Calculations document (debul2007x012) in the TESCOM catalog or on www.tescom.com.



50-2000 SERIES

Regulator Part Number Selector

i Learn more about common options.
For modifications, repair kits and accessories, contact factory.

S – Spring Load
A – Air Load

50-20 6 1 - D 2 4 S 1 7 0

BASIC SERIES	MAXIMUM INLET PRESSURE	OUTLET PRESSURE	SOFT GOODS MATERIAL			INLET AND OUTLET PORT SIZE (VENT PORT)	INLET AND OUTLET PORT SIZE	FLOW CAPACITY	MAIN VALVE SEAT AND VENT SEAT MATERIAL	GAUGE PORT OPTIONS 1/4" NPTF
			O-RING		BACK-UP RING					
			DYNAMIC	STATIC						
50-20	6 – 10,000 psig 690 bar	Spring load	D – Buna-N	Buna-N	PTFE	1 – SAE (1/4" SAE)	4 – 1/4"	1 – C _v = 0.02 ³	5 – 17-4 Stainless Steel	0 – None
	9 – 15,000 psig ¹ 1034 bar	1 – 200-10,000 psig 13.8-690 bar 2 – 50-6000 psig 3.4-414 bar 3 – 25-4000 psig 1.7-276 bar 4 – 15-2500 psig 1.0-172 bar 5 – 10-1500 psig 0.69-103 bar 6 – 5-800 psig 0.35-55.2 bar 7 – 5-500 psig 0.35-34.5 bar Air load 1 – 200-10,000 psig 13.8-690 bar 2 – 50-6000 psig 3.4-414 bar 4 – 15-2500 psig 1.0-172 bar 5 – 10-1500 psig 0.69-103 bar	T – FKM FKM	PTFE	2 – NPTF (1/4" NPTF)	6 – 3/8"	2 – C _v = 0.06	7 – Vespel ^{®6}	1 – 1 outlet gauge at 90°	
			Z – Ethylene Propylene	Ethylene Propylene	PTFE	3 – MS33649 (1/4" MS33649)	8 – 1/2" ²	3 – C _v = 0.12 ⁴		2 – 2 gauge ports at 60°
						4 – High Pressure (1/4" NPTF)	9 – 9/16" ⁵			3 – 2 gauge ports at 60° (left hand inlet)
						6 – Medium Pressure (1/4" NPTF)				4 – 2 gauge ports at 90°
										5 – 1 gauge ports at 90° (left hand inlet)

1. 15,000 psig inlet requires a PCTFE back-up ring on main valve and is available only in 1/4" NPT, 1/4" High Pressure, 1/4" Medium Pressure, 3/8" High Pressure, 3/8" Medium Pressure, 9/16" High Pressure, 9/16" Medium Pressure.
 2. Not available in high or medium pressure.
 3. Not available for metal seated models.
 4. Not available with 15,000 psig / 1034 bar inlet with Vespel[®] seat.
 5. High pressure and medium pressure only.
 6. Spring load option has a 17-4 stainless steel vent seat.