

50-4000 Series

Regulators - Pressure Reducing

D50402088X012

Specifications

For other materials or modifications, please consult TESCO M.

OPERATING PARAMETERS

Pressure rating per criteria of ANSI/ASME B31.3

Maximum Inlet Pressure

10,000, 15,000, 20,000 psig / 690, 1034, 1379 bar

Outlet Pressure

9000 to 20,000 psig / 621 to 1379 bar

8000 to 15,000 psig / 552 to 1034 bar

6000 to 15,000 psig / 414 to 1034 bar

4000 to 10,000 psig / 276 to 690 bar

2000 to 6000 psig / 138 to 414 bar

2000 to 4000 psig / 138 to 276 bar

1700 to 2500 psig / 117 to 172 bar

Design Proof Pressure

150% maximum rated

Leakage

2 drops/min. at 150 S.U.S and 2500 psig / 172 bar

Operating Temperature

-15°F to 165°F / -26°C to 74°C

Flow Capacity

$C_v = 0.12$ (Control Regulator), $C_v = 1.9$ (Integrated Bypass)

MEDIA CONTACT MATERIALS

Body

316 Stainless Steel, Nitronic 60 (20,000 psig / 1379 bar Inlet)

Seat, Main Valve, Vent

17-4 Stainless Steel, Vespel®

O-ring

Buna-N, Viton®, EP

Back-up Ring

CTFE

Remaining Parts

316 Series Stainless Steel, 17-4 Stainless Steel, Nitronic® 60

OTHER

Cleaning

CGA 4.1 and ASTM G93

Weight (approximate)¹

50-4000: 15 lbs / 6.8 kg

50-4100: 20 lbs / 9.1 kg

50-4200: 20 lbs / 9.1 kg

¹ Air loaded versions will have an additional approx. 5 lbs / 2.3 kg to account for the actuator.

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SPRING LOADED

AIR LOADED

TESCOM 50-4000, 50-4100 and 50-4200 Series pressure reducing regulators, with their integrated bypass valve, control high pressure water glycol. These unique regulators decrease pressurization time and lower maintenance costs.

Applications

- Hydraulic Power Units (HPU)
- Wellhead control panels

Features and Benefits

- Unique integrated bypass valve simplifies the high pressure system design which results in fewer components and leak paths for added safety
- The addition of the 50-4000 Series to HPU units simplifies complex start up procedures while decreasing down time associated with filling long umbilicals
- Controls large variations in flow rates at pressures up to 20,000 psig / 1379 bar
- New stem and seal design extends regulator service life in crucial high pressure water-based hydraulic applications

50-4000 Series Regulator Drawing

1/4-20 UNC SCREW REF. 2X
PANEL REF. .25 MAX. THICKNESS
1/4 NPTF VENT
OPTIONAL INTEGRATED BYPASS MANUAL OVERRIDE SHUTOFF

0.52
0.44 [13.21]
11.18
1.81 [45.97]
3.74 [95.0]
10.94 [277.88]
1.31
1.20 [33.27]
[30.48]

3.56 [90.41]
ø3.48 [88.4]
1.40 [35.56]
2X ø.281
ø2.22
2.80 [71.12]
PANEL CUT-OUT

MOUNTING BRACKET

50-4000 FLOW DIAGRAM

INLET/OUTLET PORT	"A"
9/16 MEDIUM PRESSURE	3.40 [86.4]

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

50-4000 Series Regulator Part Number Selector

Repair Kits, Accessories & Modifications may be available for this product. Please contact TESCOM for more information.

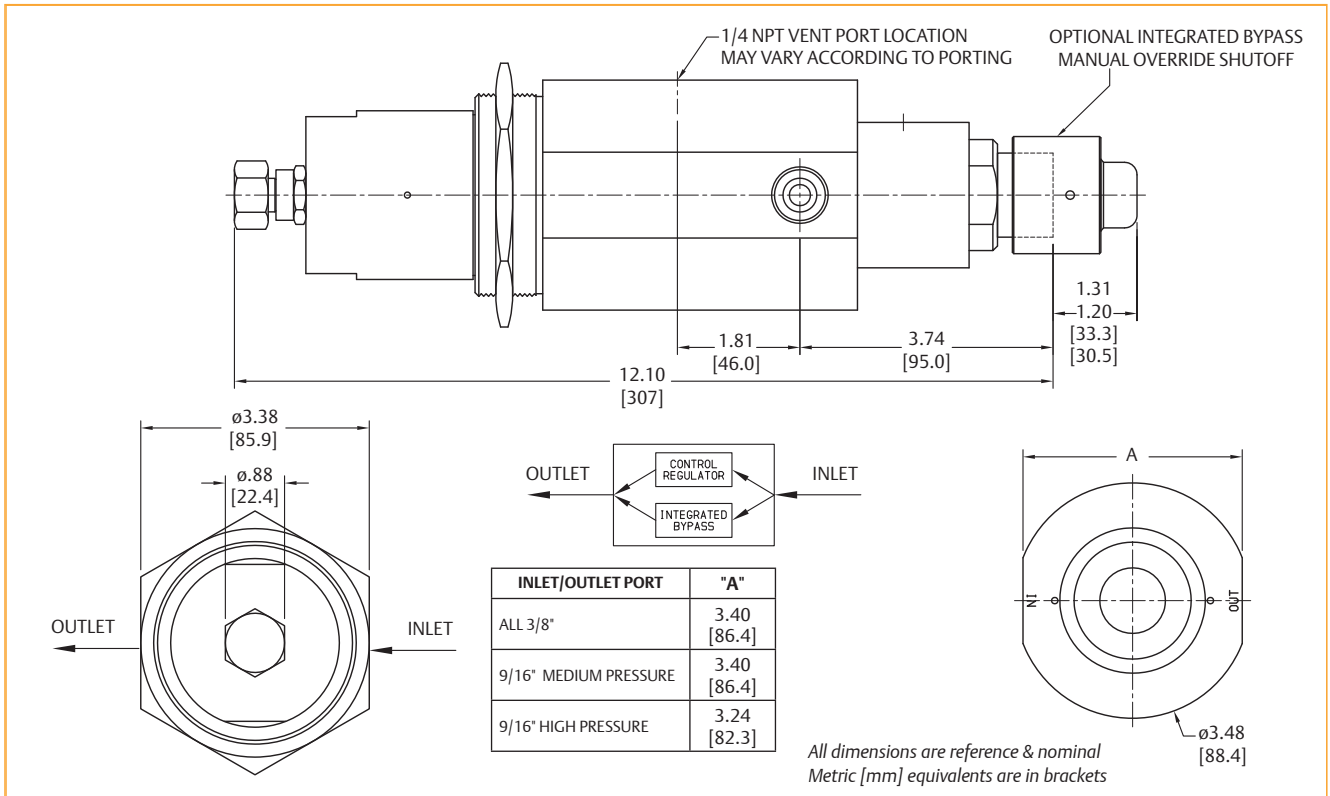
Example for selecting a part number:

50-40	9	1	D			6	9	S	3	5	0	A
BASIC SERIES	BODY MATERIAL --- MAXIMUM INLET PRESSURE ¹	OUTLET PRESSURE	SOFT GOODS MATERIAL			INLET AND OUTLET PORT TYPE (VENT PORT)	INLET AND OUTLET PORT SIZE	LOAD OPTION	FLOW CAPACITY	MAIN VALVE AND VENT SEAT	1/4" GAUGE PORT OPTIONS	INTEGRATED BYPASS MANUAL OVERRIDE SHUTOFF
		CONTROL REGULATOR --- INTEGRATED BYPASS	DYNAMIC O-RINGS	STATIC O-RINGS	BACK-UP RINGS							
50-40	9-316 SST --- 15,000 psig 1034 bar (Medium/High Pressure) 10,000 psig 690 bar (NPTF & BSPP)	1-4000 to 10,000 psig 276 to 690 bar --- 0 to 3000 psig 0 to 207 bar 4-2000 to 6000 psig 138 to 414 bar ⁵ 5-2000 to 4000 psig 138 to 276 bar ⁵ 6-1700 to 2500 psig 117 to 172 bar ⁵	D-Buna-N T-Viton® Z-EP	Buna-N Viton® EP	CTFE CTFE CTFE	0-BSPP (1/4") 2-NPTF (1/4") 4-High Pressure (1/4" NPTF) 6-Medium Pressure (1/4" NPTF)	6-3/8" ² 8-1/2" ³ 9-9/16" ⁴	S-Spring Load A-Air Load	3-C _V = 0.12 (Control Regulator) C _V = 1.9 (Integrated Bypass)	5-17-4 Stainless Steel 7-Vespel®	0-no gauge ports 5-one outlet gauge port at 90° (left hand inlet)	A-Included Blank-Not Included

1. Pressure at which regulator is used must be compatible with the pressure rating of the regulator and port size/type provided
 2. Integrated Bypass C_V is limited to 1.0
 3. Not available in Medium Pressure and High Pressure
 4. Not available in NPTF and BSPP
 5. Integrated bypass pressure range:
 0 to 1000 psig at 10,000 psig inlet /
 0 to 69 bar at 689 bar or
 0 to 1600 psig at 15,000 psig inlet /
 0 to 110 bar at 1034 bar inlet.

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

50-4100 Series Regulator Drawing



50-4100 Series Regulator Part Number Selector

Repair Kits, Accessories & Modifications may be available for this product. Please contact TESCOM for more information.

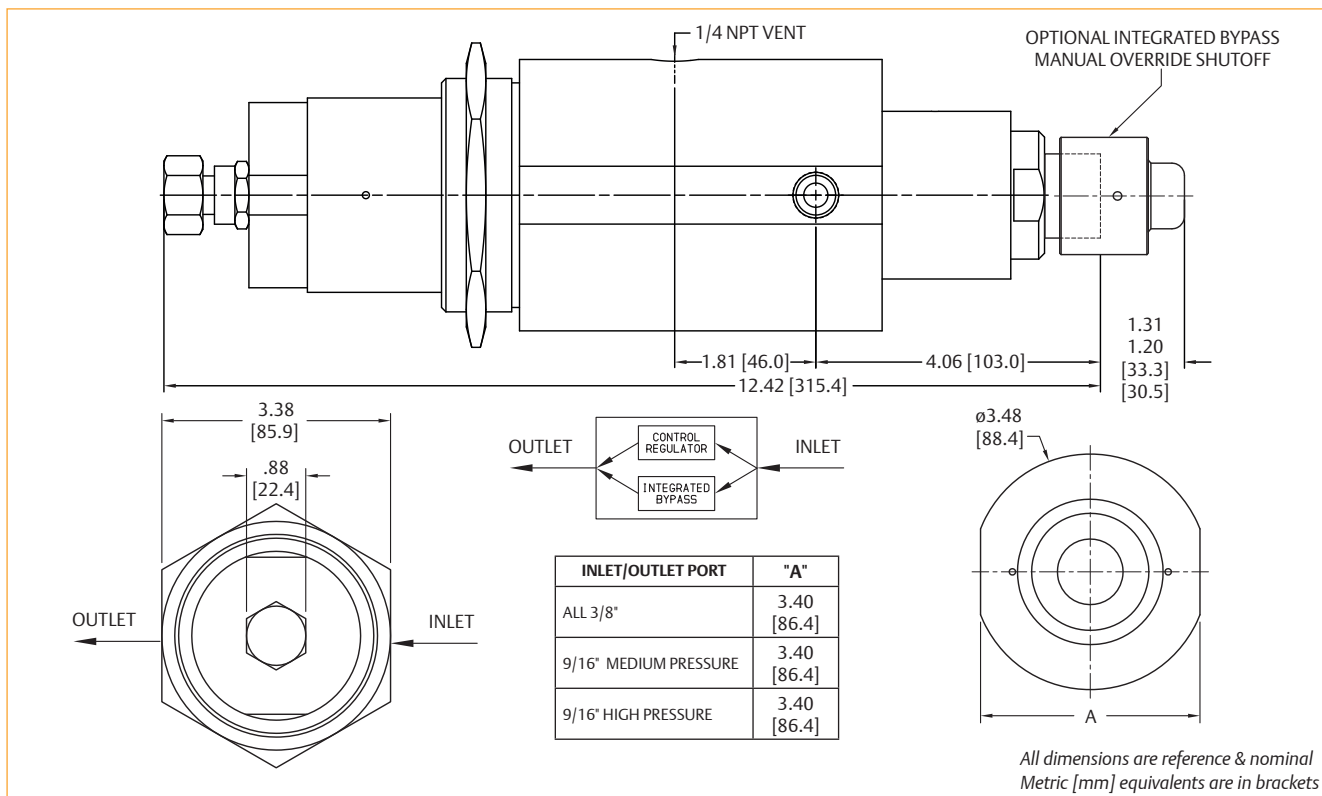
Example for selecting a part number:

50-41		9	0	D			6	9	S	3	5	0	A
BASIC SERIES	BODY MATERIAL --- MAXIMUM INLET PRESSURE ¹	OUTLET PRESSURE		SOFT GOODS MATERIAL			INLET AND OUTLET PORT TYPE (VENT PORT)	INLET AND OUTLET PORT SIZE	LOAD OPTION	FLOW CAPACITY	MAIN VALVE AND VENT SEAT	1/4" GAUGE PORT OPTIONS	INTEGRATED BYPASS MANUAL OVERRIDE SHUTOFF
		CONTROL REGULATOR --- INTEGRATED BYPASS	DYNAMIC O-RINGS	STATIC O-RINGS	BACK-UP RINGS								
50-41	9 – 316 SST --- 15,000 psig 1034 bar	0 – 6000 to 15,000 psig 414 to 1034 bar --- 0 to 5200 psig 0 to 359 bar	D – Buna-N T – Viton® Z – EP	Buna-N Viton® EP	CTFE CTFE CTFE	4 – High Pressure (1/4" NPTF) 6 – Medium Pressure (1/4" NPTF)	6 – 3/8"² 9 – 9/16"	S – Spring Load A – Air Load	3 – C _V = 0.12 (Control Regulator) C _V = 1.9 (Integrated Bypass)	5 – 17-4 Stainless Steel 7 – Vespel®	0 – no gauge ports  5 – one outlet gauge port at 90° (left hand inlet) 	A – Included Blank – Not Included	

1. Pressure at which regulator is used must be compatible with the pressure rating of the regulator and port size/type provided
2. Integrated Bypass C_V is limited to 1.0

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50-4200 Series Regulator Drawing



50-4200 Series Regulator Part Number Selector

Repair Kits, Accessories & Modifications may be available for this product. Please contact TESCOM for more information.

Example for selecting a part number:

BASIC SERIES	BODY MATERIAL --- MAXIMUM INLET PRESSURE ¹	OUTLET PRESSURE	SOFT GOODS MATERIAL			INLET AND OUTLET PORT TYPE (VENT PORT)	INLET AND OUTLET PORT SIZE	LOAD OPTION	FLOW CAPACITY	MAIN VALVE AND VENT SEAT	1/4" GAUGE PORT OPTIONS	INTEGRATED BYPASS MANUAL OVERRIDE SHUTOFF
		CONTROL REGULATOR --- INTEGRATED BYPASS	DYNAMIC O-RINGS	STATIC O-RINGS	BACK-UP RINGS							
50-42	N – Nitronic® 60 --- 20,000 psig 1379 bar	0 – 8000 to 15,000 psig 552 to 1034 bar --- 0 to 7000 psig 0 to 483 bar 1 – 9000 to 20,000 psig ³ 621 to 1379 bar ³ --- 0 to 8000 psig 0 to 552 bar	D – Buna-N T – Viton®	Buna-N Viton®	CTFE CTFE	4 – High Pressure (1/4" NPTF) 6 – Medium Pressure (1/4" NPTF)	6 – 3/8" ² 9 – 9/16"	S – Spring Load A – Air Load	3 – C _v = 0.12 (Control Regulator) C _v = 1.9 (Integrated Bypass)	5 – 17-4 SST	0 – no gauge ports 5 – one outlet gauge port at 90° (left hand inlet) 	A – Included Blank – Not Included

1. Pressure at which regulator is used must be compatible with the pressure rating of the regulator and port size/type provided

2. Integrated Bypass C_v is limited to 1.0

3. Outlet pressure only available with air loader option

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WARNING! Do not attempt to select, install, use or maintain this product until you have read and fully understood the TESCOM Safety, Installation and Operation Precautions.

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