

**MTR-300
MTR-400
Regulator**

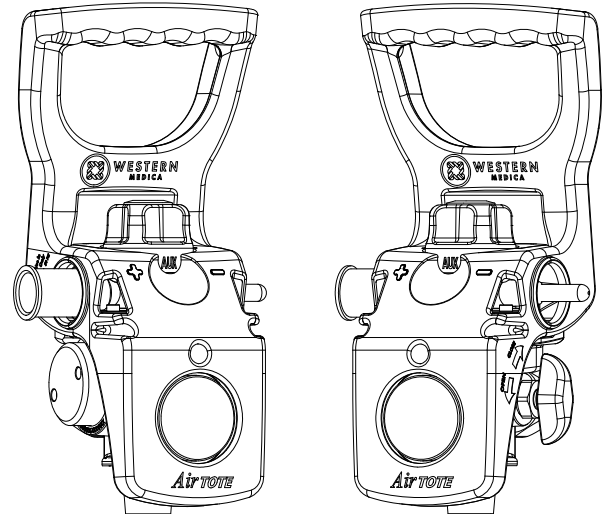
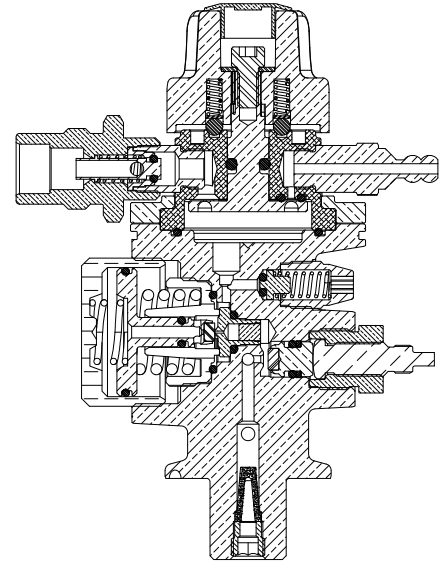
**Brass Cylinder
Valve Regulator
1.0 – 25 lpm**



G A S C O N T R O L T E C H N O L O G Y

MATERIALS OF CONSTRUCTION

DESCRIPTION	WET	MATERIAL
Body	Y	UNS C37700 Brass
Internal Brass Components	Y	UNS C36000 or JISH3520 C3604 Brass
Filters	Y	Sintered Porous Bronze
Regulator Seat	Y	PTFE
O-rings	Y	EPDM – 70 Durometer
	Y	Fluorocarbon – 75 & 90 Durometer
Delivery Spring	N	Zinc Plated Music Wire
Secondary Delivery Spring	Y	UNS 17700 SST
Bonnet	Y	Aluminum 6262-T6511, Hardcoat Anodized
Detent Ball & Dowels	N	UNS S31600 SST
Relief Valve and Burst Disc		
Cap, Poppet	Y	UNS C36000 Brass
Burst Disk	Y	Nickel Alloy No. 201
Burst Disc Gasket	Y	PA 101
Relief Valve Spring	Y	Zinc Plated Music Wire
Relief Valve O-ring	Y	EPDM – 80 Durometer
Filler Valve Assembly		
Poppet, Insert	Y	UNS C36000 Brass
O-ring (s)	Y	Fluorocarbon (GLT) – 75 Durometer
Spring	Y	UNS S30200 or S30400 SST
High Pressure Shut-Off Valve		
Stem, Piston, Packing	Y	UNS C36000 Brass
O-ring	Y	Fluorocarbon – 75 Durometer
Back-up Ring	N	PTFE
Seat	Y	PCTFE
Other		
Lubrication	Y	Krytox GPL-206, 240AC, GPL-205
Shroud / Knobs	N	Nylon 6/6 or Polycarbonate
Shroud & Retaining Screws	N	Zinc Plated Steel
Bonnet Screws	N	Nickel Plated Steel
Auxiliary Valve		
Bushing and Plunger	Y	UNS C36000 Brass
Body	Y	Nickel Plated UNS C36000 Brass
Spring	Y	UNS S30200 or S30400 SST
O-ring	Y	EPDM – 70 Durometer



Physical Specifications

- Dimensions:
Height from Cylinder Neck: 7 ¾“, Outer Diameter: 4 ½“
Unit Weight: 2 lbs 10 ozs
- Filler Valve Filtration: 90 – 250 micron
Cylinder and Regulator Inlet Filtration: 40 – 70 micron
- Inlet Threads: ¾ - 16 UNF
- Fill Port Thread: CGA-346
- Outlet: ¼” OD Hose Barb
- Demand Outlet: DISS 1160
- 1½” Inlet Pressure Gauge - Range: 0 -3000 psig, UL listed

Performance Specifications

- Maximum Inlet Pressure: 3000 psig
Operating Pressure Range: 300 – 2400 psig
- Rated Delivery Pressure: 48-52 psig at 8 LPM Air at 1350 psig inlet
- Storage Temperature Range: -40°F to 140°F
- Operating Temperature Range: 0°F to 120°F
- Overall External Leak Rate: < 3 × 10⁻³ cc/sec Air
- Safety Relief Pressure: 80 – 120 psig
- Burst Disk Rupture Pressure: 3025 – 3360 psig
- Minimum Knob Operating Torque: 48 in-ozs
- OxyTOTE (MTR-XX0) met Oxygen Ignition Resistance per and EN 738-3 and modified Phase 2 testing per ASTM G 175
- The MTS-303 is MR Conditional for use outside of the bore of an MR machine under the following conditions: Static magnetic field of 3.0 Tesla or less and a spatial gradient field of 720 gauss/cm or less

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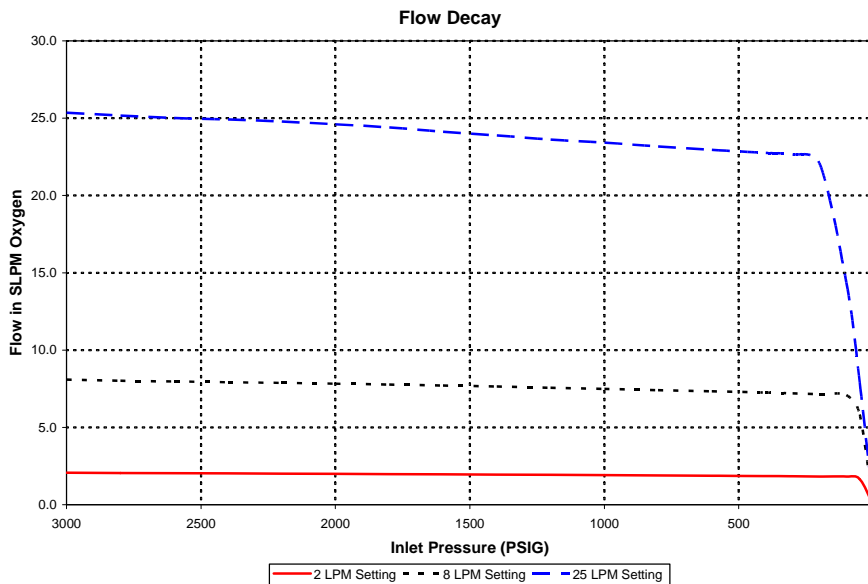
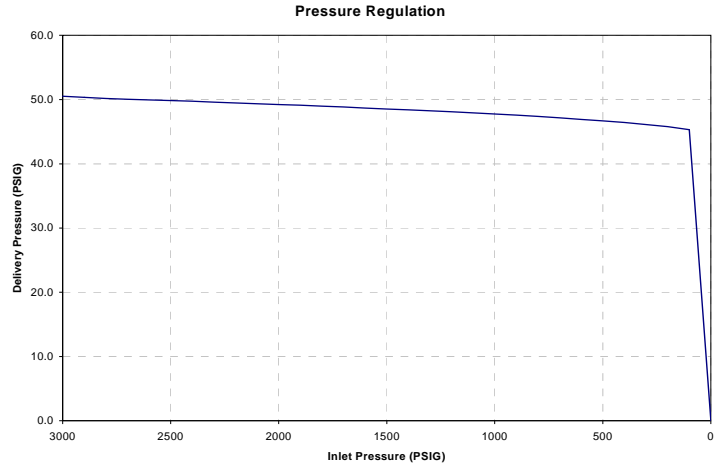
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PERFORMANCE CHARACTERISTICS

- Pressure Regulation Coefficient (i): 0.18
 - Irregularity Coefficient (i): -0.10
- Flow Decay Values: (2400 – 300 psig inlet)
(change in flow/100 psig change in inlet pressure)
 - 2 lpm setting – 0.005 lpm/100 psig
 - 8 lpm setting – 0.02 lpm/100 psig
 - 25 lpm setting - 0.10 lpm/100 psig
- Flow Coefficients, C_v :
 - Filler Valve: 0.030
 - Regulator: 0.008
 - Relief Valve: 0.06
- Auxiliary Valve Flow Capacity:
60 SLPM Air min at > 600 psig inlet



Unit Flow Accuracy
All values at 1350 PSIG Inlet

Indicated Flow (lpm Air)	1	2	3	4	6	8	10	12	15	20	25
Maximum Flow (lpm Air)	1.2	2.2	3.3	4.4	6.6	8.8	11.0	13.2	17.25	23.00	28.75
Minimum Flow (lpm Air)	0.8	1.8	2.7	3.6	5.4	7.2	9.0	10.8	12.75	17.00	21.25
Accuracy (% of Reading)	±20%	±10%	±10%	±10%	±10%	±10%	±10%	±10%	±15%	±15%	±15%

NOTE: Not all data applies to all models. 400 series model does not have a high-pressure shut-off valve.

Western reserves the right to make design changes without notice

For additional technical information or assistance in ordering, please contact Western Customer Service at 1.800.783.7890 or 440.871.2160