

**MTR-500
MTR-600
Regulator**

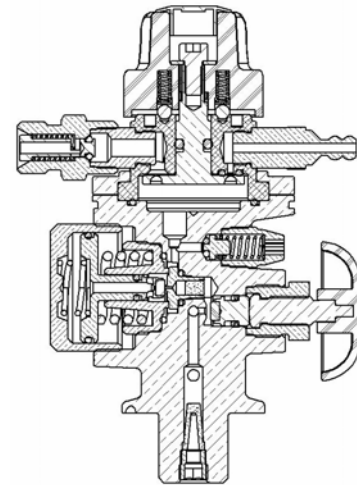
**Brass Cylinder
Valve Regulator
0.5 - 25 lpm**



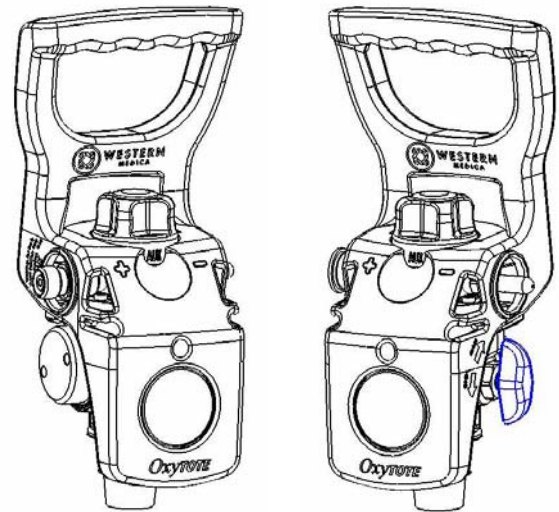
G A S C O N T R O L T E C H N O L O G Y

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	Viton - 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	Zytel 101
Relief Valve Spring	N	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	Viton (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	Viton – 75 Durometer
Back-up Ring	N	PTFE – Teflon
Seat	Y	PCTFE
Other		
Inlet o-ring	Y	PTFE
Lubrication	Y	Krytox GPL-206, 240AC, GPL-205
Shroud / Knobs	N	Polyethylene, 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



MTR-6X0 Unit shown with Auxiliary Valve
Not all internal components shown



Physical Specifications

- Dimensions (unit w/ Shroud):
Height from Cylinder Neck: 7 ¾", Outer Diameter: 4 ½"
- Filler Valve Filtration: 90 - 250 micron
- Cylinder and Regulator Inlet Filtration: 40 - 70 micron
- Inlet Threads: ¾ - 16 UNF or ½ - 14 NGT
- Fill Port Thread: CGA 540
- Outlet: ¼" OD Hose Barb
- Demand Outlet: CGA DISS 1240
- Regulator & Shroud Assembly Shipping Weight: 2 lbs 10 oz
- 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 4 LPM O₂ 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 Oxygen
- 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-50X 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 3.3 Tesla/meter or less.
- The MTS-603 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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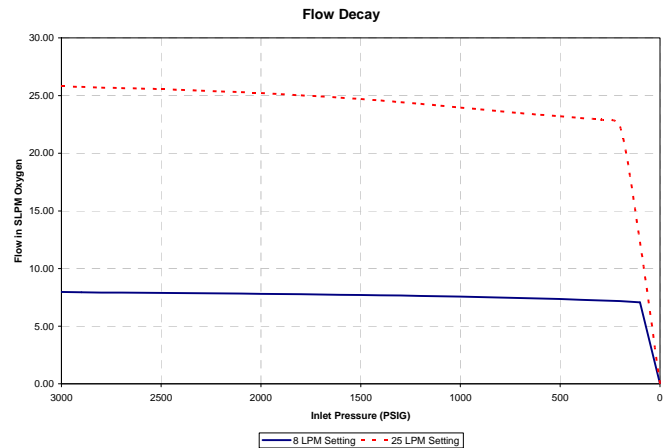
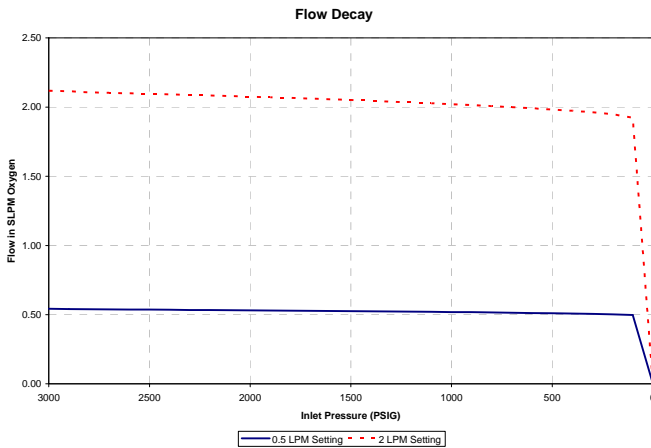
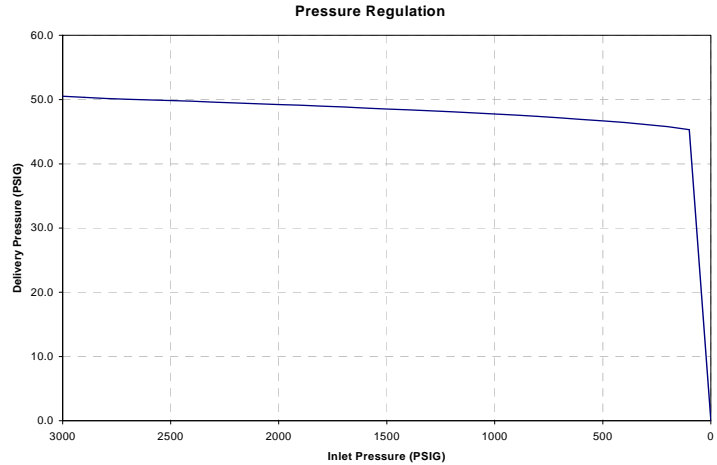
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Performance Specifications

- 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)
 - 1/2 lpm setting - 0.001 lpm/100 psig
 - 2 lpm setting - 0.005 lpm/100 psig
 - 8 lpm setting - 0.02 lpm/100 psig
 - 25 lpm setting - 0.09 lpm/100 psig
- Flow Coefficients, C_v :
 - Filler Valve: 0.030
 - Regulator: 0.008
 - Relief Valve: 0.06
- Auxiliary Valve Flow Capacity:
 - 100 SLPM O₂ min at > 900 psig inlet
 - 60 SLPM O₂ min at > 600 psig inlet



Unit Flow Accuracy
All values at 1350 PSIG Inlet

Indicated Flow (lpm O ₂)	0.5	1	1.5	2	3	4	5	6	8	10	15	25
Maximum Flow (lpm O ₂)	0.60	1.2	1.8	2.2	3.3	4.4	5.5	6.6	8.8	11.0	17.25	28.75
Minimum Flow (lpm O ₂)	0.40	0.8	1.2	1.8	2.7	3.6	4.5	5.4	7.2	9.0	12.75	21.25
Accuracy (% of Reading)	±20%	±20%	±20%	±10%	±10%	±10%	±10%	±10%	±10%	±10%	±15%	±15%

NOTE: Not all data applies to all models. 500 Series models do not have an auxiliary 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