

Y600A Series Pressure Reducing Regulators



W7095

Figure 1. Type Y600A Pressure Reducing Regulator

Introduction

Y600A Series direct-operated, spring-loaded regulators provide economical pressure-reducing control for a variety of residential, commercial, and industrial applications.

The large diaphragm area provides more accurate control at low pressure settings, and the pitot tube of the Type Y600A or Y600AR regulator also creates a dynamic boost that helps provide greater capacity.

The Type Y600A features internal registration. The Type Y600AR has internal registration and relief. The Type Y600AM uses external registration with a 1/2-inch threaded NPT downstream control line connection and an O-ring stem seal.

Features

- **Precision Control at Low-Pressure Settings**—The large diaphragm area provides more accurate control at low-pressure settings. The pitot tube of Types Y600A and Y600AR (Figure 2) regulators also creates a dynamic boost that helps provide greater capacity.
- **Easy Conversion Between Types Y600A and Y600AM**—The throat seal can be modified to either version. A new lower casing is not needed.
- **Tamper-Resistant Adjustment**—The closing cap and spring case (Figure 2) allow the installation of sealing wire to discourage or detect unauthorized adjustment of the pressure setting.
- **Easy to Maintain**—Trim parts can be replaced without removing the regulator body from the pipeline. A two-bolt connection between the body and diaphragm casing simplifies disassembly for maintenance.



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Specifications

Available Configurations

See Table 1

Body Sizes and End Connection Style

3/4 or 1-inch NPT

Maximum Inlet Pressure (Body Rating)⁽¹⁾

150 psig (10,3 bar)

Outlet Pressure Ranges⁽¹⁾

See Table 2

Maximum Outlet (Casing) Pressure⁽¹⁾

20 psig (1,4 bar)

Maximum Operating Outlet Pressure to Avoid Internal Parts Damage⁽¹⁾

2 psig (0,14 bar) above outlet pressure setting

Flow and Sizing Coefficients

See Table 4

Pressure Registration

See Table 1

Temperature Capabilities⁽¹⁾

-20° to 180°F (-29° to 82°C)

Spring Case Vent Connection

1/4-inch NPT

Diaphragm Case (Control Line) Connection

1/2-inch NPT

Construction Materials

See Table 5

Pressure Setting Adjustment

Adjusting screw

Approximate Weight

13 pounds (5,9 kg)

1. The pressure/temperature limits in this Bulletin and any applicable standard or code limitation should not be exceeded.

Table 1. Available Configurations

CONSTRUCTION FEATURE	TYPE NUMBER		
	Y600A	Y600AR	Y600AM
Internal pressure registration with pitot tube	X	X	----
External pressure registration with 1/2-inch NPT downstream control line connection and O-ring stem seal	----	----	X
Internal relief	----	X	----

Construction Features

- Internal Relief**—The Type Y600AR regulator (Figure 2) has limited capacity internal relief across the diaphragm to help minimize overpressure that could occur due to seat leakage. Any outlet pressure above the start-to-discharge point of the non-adjustable relief valve spring moves the diaphragm off the relief valve seat, allowing excess pressure to bleed out through the spring case vent.
- Downstream Control Line Connection**—The Type Y600AM regulator (Figure 2) has a blocked throat and a 1/2-inch NPT control line tapping in the diaphragm casing. A regulator with a downstream control line is used for monitoring installations or other applications where there is other equipment installed between the regulator and the pressure control point.

Table 2. Outlet Pressure Ranges

TYPES	CONTROL SPRING COLOR	CONTROL SPRING PART NUMBER	OUTLET PRESSURE RANGE WITH SPRING CASE ABOVE DIAPHRAGM ⁽¹⁾	APPROXIMATE POINT ABOVE PRESSURE SETTING AT WHICH TYPE Y600AR INTERNAL RELIEF START-TO-DISCHARGE
Y600A, Y600AM, Y600AR	Red	1B653827052	4 to 8-inches w.c. (10 to 20 mbar)	10 to 24-inches w.c. (25 to 60 mbar)
	Olive drab	1B653927022	7 to 16-inches w.c. (17 to 40 mbar)	10 to 26-inches w.c. (25 to 65 mbar)
	Yellow	1B537027052	15-inches w.c. to 1.2 psig (37 to 83 mbar)	
	Light green	1B537127022	1.2 to 2.5 psig (0,08 to 0,17 bar)	0.5 to 2 psig (0,034 to 0,14 bar)
	Light blue	1B537227022	2.5 to 4.5 psig (0,17 to 0,31 bar)	0.5 to 3 psig (0,034 to 0,21 bar)
	Black	1B537327052	4.5 to 7 psig (0,31 to 0,48 bar)	1 to 4 psig (0,069 to 0,28 bar)

1. Minimum outlet pressure setting may be approximately 1-inch w.c. (2 mbar) lower if spring case is below diaphragm.

Table 3. Maximum Operating Inlet Pressures

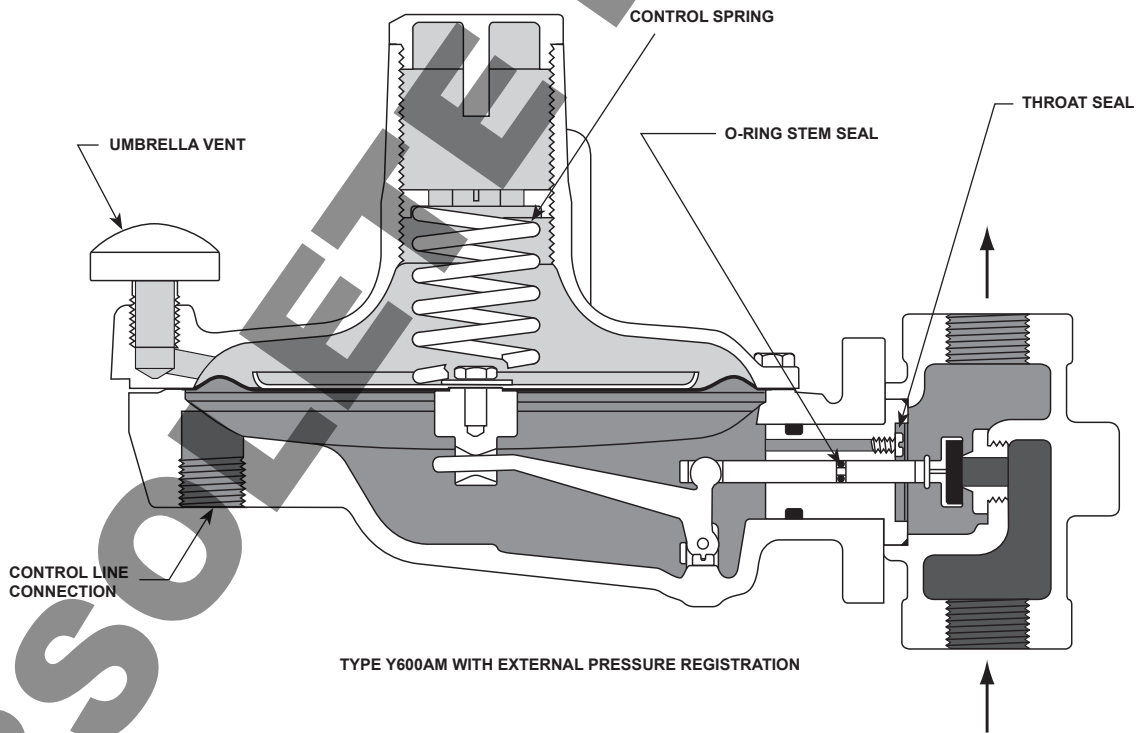
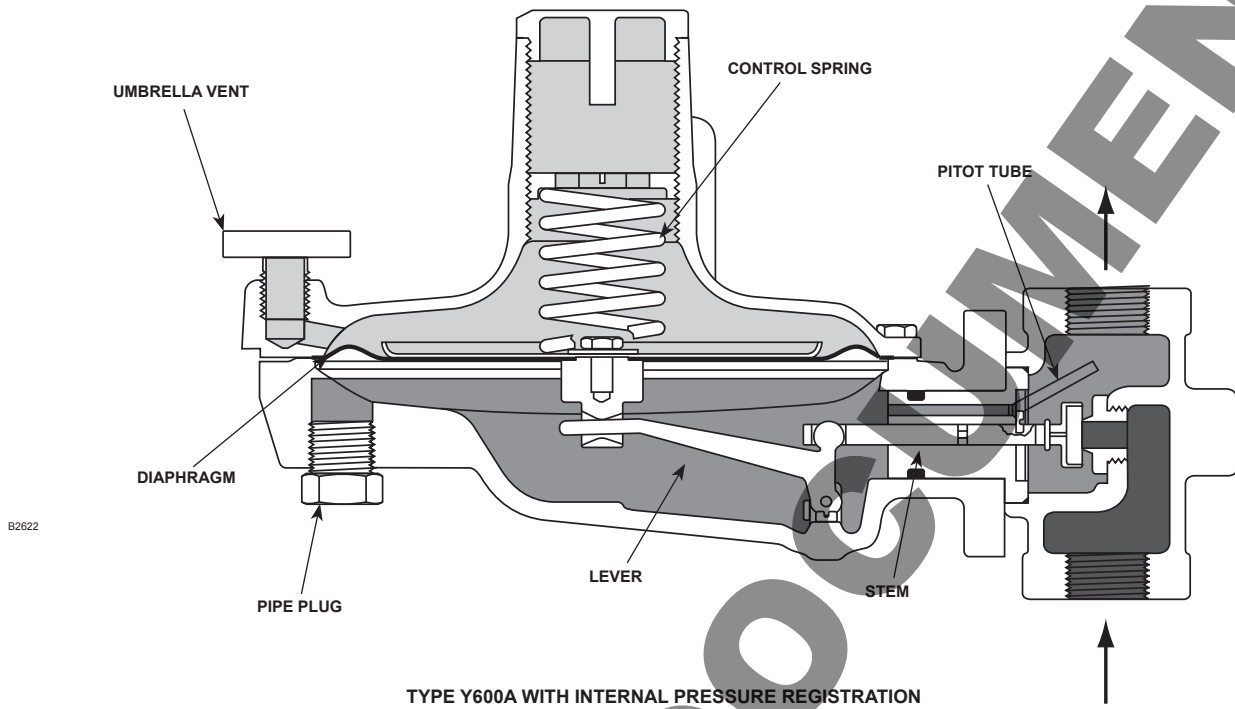
ORIFICE SIZE, INCHES (mm)	MAXIMUM OPERATING INLET PRESSURE, PSIG (bar)			
	With 1.2 PSIG (0,08 bar) or Less Outlet Pressure Setting	With 1.2 to 2.5 PSIG (0,08 to 0,17 bar) Outlet Pressure Setting	With 2.5 to 4.5 PSIG (0,17 to 0,31 bar) Outlet Pressure Setting	With 4.5 to 7 PSIG (0,31 to 0,48 bar) Outlet Pressure Setting
1/8 (3,17)	150 (10,3)	150 (10,3)	150 (10,3)	150 (10,3)
3/16 (4,76)				
1/4 (6,35)	75 (5,17)	60 (4,14)	60 (4,14)	60 (4,14)
3/8 (9,53)	35 (2,41)			
1/2 (12,7)	8 (0,55)	10 (0,69)	12 (0,83)	12 (0,83)
9/16 (14,3)	5 (0,34)	6 (0,41)	8 (0,55)	8 (0,55)

Table 4. Flow and Sizing Coefficients

ORIFICE SIZE, INCHES (mm)	WIDE-OPEN FLOW COEFFICIENTS FOR EXTERNAL RELIEF SIZING		C ₁	IEC SIZING COEFFICIENTS		
	C _g	C _v		X _T	F _D	F _L
1/8 (3,17)	12.3	0.35	35	0.78	0.50	0.89
3/16 (4,76)	27.6	0.79				
1/4 (6,35)	50	1.43				
3/8 (9,53)	110	3.14				
1/2 (12,7)	200	5.71				
9/16 (14,3)	250	7.14				

Table 5. Construction Materials

BODY, DIAPHRAGM CASING, AND SPRING CASE	ORIFICE	SPRING AND LEVER	DIAPHRAGM AND DISK	PUSHER POST	ADJUSTING SCREW AND DISK HOLDER	CLOSING CAP	STEM	PITOT TUBE (FOR TYPES Y600A AND Y600AR ONLY) AND RELIEF VALVE SPRING
Cast iron	Aluminum or Brass	Zinc-plated steel	Nitrile (NBR)	Types Y600A and Y600AM: Aluminum Type Y600AR: Zinc	Aluminum	Thermoplastic	Stainless steel	Stainless steel



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- INLET PRESSURE
- OUTLET PRESSURE
- ATMOSPHERIC PRESSURE

Figure 2. Y600A Series Operational Schematic

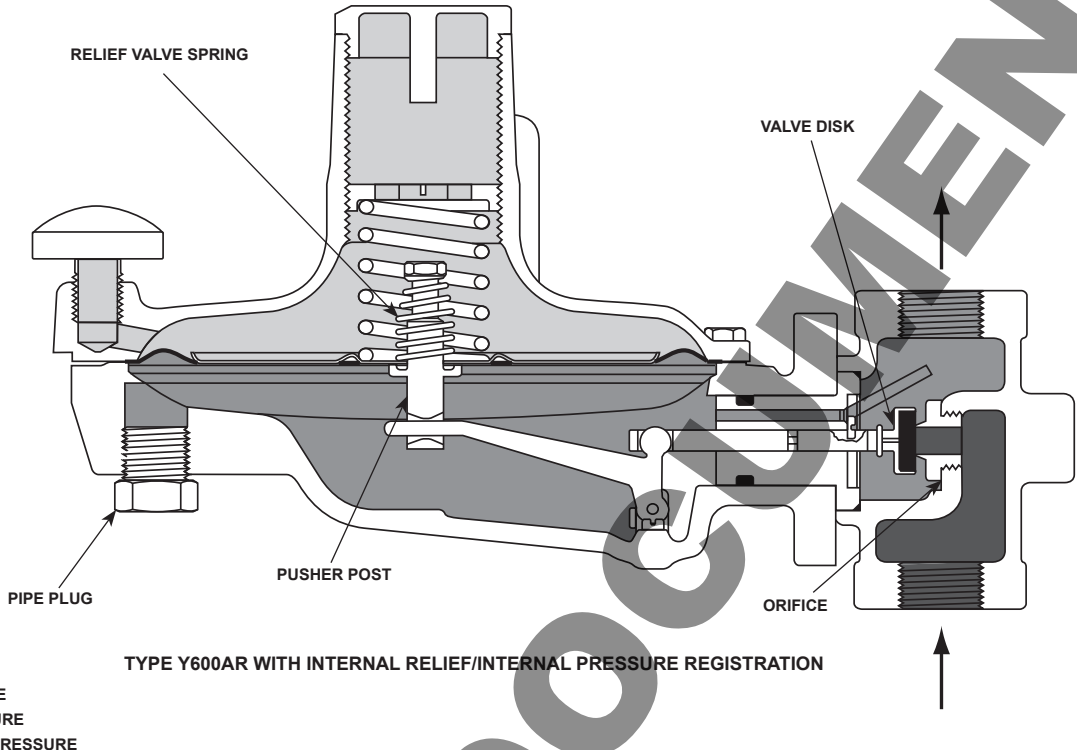


Figure 2. Y600A Series Operational Schematic (continued)

Principle of Operations

Refer to Figure 2. When downstream demand decreases, the pressure under the diaphragm increases. This pressure overcomes the regulator setting (which is set by a spring). Through the action of the pusher post assembly, the valve disk moves closer to the orifice and reduces gas flow. If demand downstream increases, pressure under the diaphragm decreases. Spring force pushes the pusher post assembly downward and the valve disk moves away from the orifice.

The Type Y600AR regulator includes an internal relief valve for over pressure protection. If the downstream pressure exceeds the regulator setting by 10-inches w.c. to 4 psig (25 mbar to 0,28 bar) (depending on the main spring used), the relief valve opens and excess gas is vented through the stabilizer vent in the upper spring case.

Installation

A Y600A Series regulator may be installed in any orientation as long as flow through it matches the direction of the arrow cast on the body. Normal installation is with the spring case vertical above or below the diaphragm case. External dimensions and connections are shown in Figure 3.

Fisher® provides an instruction manual with every regulator shipped. Refer to this for complete installation, operation and maintenance instructions. Included is a complete listing of individual parts and recommended spare parts.

Overpressure Protection

Like most pressure-reducing regulators, Y600A Series regulators have outlet pressure ratings that are lower than their inlet pressure ratings. A pressure relieving or pressure limiting device is needed if the inlet pressure can exceed the outlet pressure rating. A Type Y600AR regulator—because of its internal relief—does provide limited downstream overpressure protection, but this internal relief should not be considered complete protection against overpressure. Overpressuring any portion of a regulator or associated equipment may cause personal injury, leakage, or property damage due to bursting of pressure-containing parts or explosion of accumulated gas. Regulator operation within ratings does not prevent the possibility of damage from external sources or from debris in the pipeline. Refer to the Capacity Information section and the relief sizing coefficients in Table 4 to determine the required relief valve capacity.

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Capacity Information

Tables 6 and 7 give the natural gas regulating capacities of Y600A Series regulators at selected inlet pressures and outlet pressure settings. Flows are in SCFH (60°F and 14.7 psia) of 0.6 specific gravity gas. To determine equivalent capacities for air, propane, butane, or nitrogen, multiply the Table 6 or 7 capacity by the following appropriate conversion factor: 0.775 for air, 0.628 for propane, 0.548 for butane, or 0.789 for nitrogen. For gases of other specific gravities, multiply the given capacity by 0.775, and divide by the square root of the appropriate specific gravity. Then, if capacity is desired in normal cubic meters per hour at 0°C and 1,01325 bar, multiply SCFH by 0.0168. To determine wide-open flow capacities for relief sizing, use the following formula:

where,

$$Q = \sqrt{\frac{520}{GT}} C_g P_1 \text{SIN} \left(\frac{3417}{C_1} \sqrt{\frac{\Delta P}{P_1}} \right) \text{deg}$$

- C_g = gas sizing coefficient from Table 4
- C_1 = C_g / C_v , or 35 from Table 4
- G = gas specific gravity (air = 1.0)
- $P_{1\text{abs}}$ = inlet pressure, psia (add 14.7 psi to gauge inlet pressure to obtain absolute inlet pressure)
- Q = flow rate, SCFH
- T = absolute temperature of gas at inlet in °Rankine
- ΔP = differential pressure, psid

Table 6. Y600A Series Capacities for 3/4-Inch Body Size

OUTLET PRESSURE RANGE, CONTROL SPRING PART NUMBER, AND COLOR	OFFSET FROM SETPOINT	OUTLET PRESSURE SETTING	INLET PRESSURE, PSIG (bar)	3/4-INCH BODY SIZE					
				Capacities in SCFH (Nm³/h) of 0.6 Specific Gravity Natural Gas					
				Orifice Size, Inches (mm)					
				1/8 (3,17)	3/16 (4,76)	1/4 (6,35)	3/8 (9,53)	1/2 (12,7)	9/16 (14,3)
4 to 8-inches w.c. (10 to 20 mbar) 1B653827052 Red	1-inch w.c. (2 mbar)	7-inches w.c. (17 mbar)	1 (0,069)	90 (2,41)	170 (4,56)	230 (6,16)	250 (6,70)	410 (11,0)	440 (11,8)
			5 (0,34)	220 (5,89)	280 (7,50)	450 (12,1)	490 (13,1)	520 (13,9)	970 (25,9)
			8 (0,55)	230 (6,16)	480 (12,9)	530 (14,2)	540 (14,5)	590 (15,8)	
			20 (1,38)	520 (13,9)	600 (16,1)	620 (16,6)	650 (17,4)		
			35 (2,41)	660 (17,7)	670 (18,0)	840 (22,5)	900 (24,1)		
			75 (5,17)	770 (20,6)	840 (22,5)	960 (25,7)			
7 to 16-inches w.c. (17 to 40 mbar) 1B653927022 Olive drab	1-inch w.c. (2 mbar)	11-inches w.c. (27 mbar)	1 (0,069)	90 (2,41)	130 (3,48)	160 (4,29)	190 (5,09)	230 (6,16)	250 (6,70)
			5 (0,34)	160 (4,29)	250 (6,70)	280 (7,50)	350 (9,38)	530 (14,2)	750 (20,1)
			8 (0,55)	170 (4,56)	350 (9,38)	430 (11,5)	450 (12,1)	540 (14,5)	
			20 (1,38)	350 (9,38)	490 (13,1)	590 (15,8)	610 (16,3)		
			35 (2,41)	520 (13,9)	530 (14,2)	620 (16,6)	650 (17,4)		
			75 (5,17)	650 (17,4)	660 (17,7)	940 (25,2)			
15-inches w.c. to 1.2 psig (37 mbar to 83 mbar) 1B537027052 Yellow	5.5-inches w.c. (14 mbar)	15-inches w.c. (37 mbar)	2 (0,14)	90 (2,41)	340 (9,11)	500 (13,4)	900 (24,1)	1100 (29,5)	1150 (30,8)
			6 (0,41)	250 (6,70)	540 (14,5)	930 (24,9)	1640 (43,9)	2100 (56,3)	
			10 (0,69)	340 (9,11)	800 (21,4)	1380 (37,0)	1940 (51,9)		
			30 (2,07)	680 (18,2)	1450 (38,8)	2390 (64,0)	2450 (65,7)		
			60 (4,13)	1160 (31,1)	2460 (66,0)	3480 (89,3)			
			150 (10,3)	2570 (68,8)	2710 (72,6)				
			2 (0,14)	90 (2,41)	260 (6,97)	410 (11,0)	600 (16,1)	810 (21,7)	700 (18,7)
	1.2 psig (83 mbar)	1.2 psig (83 mbar)	6 (0,41)	250 (6,70)	460 (12,3)	700 (18,7)	1290 (34,6)	1420 (38,0)	
			10 (0,69)	310 (8,31)	660 (17,7)	1020 (27,3)	1420 (38,0)		
			30 (2,07)	670 (18,0)	1109 (29,7)	2060 (55,2)	2430 (65,1)		
			60 (4,13)	1140 (30,6)	2180 (58,4)	3350 (89,8)			
			150 (10,3)	2480 (66,5)	2650 (71,0)				

- Shaded areas indicate where maximum operating inlet pressure for a given orifice size is exceeded.

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Table 6. Y600A Series Capacities for 3/4-Inch Body Size (continued)

OUTLET PRESSURE RANGE, CONTROL SPRING PART NUMBER, AND COLOR	OFFSET FROM SETPOINT	OUTLET PRESSURE SETTING	INLET PRESSURE, PSIG (bar)	3/4-INCH BODY SIZE						
				Capacities in SCFH (Nm ³ /h) of 0.6 Specific Gravity Natural Gas						
				Orifice Size, Inches (mm)						
				1/8 (3,17)	3/16 (4,76)	1/4 (6,35)	3/8 (9,53)	1/2 (12,7)	9/16 (14,3)	
1.2 to 2.5 psig (83 to 172 mbar) 1B537127022 Light green	0.2 psig (14 mbar)	1.2 psig (83 mbar)	2 (0,14)	120 (3,22)	170 (4,56)	220 (5,89)	350 (9,38)	490 (13,1)	520 (13,9)	
			6 (0,41)	180 (4,82)	340 (9,11)	450 (12,1)	740 (19,8)	850 (22,8)	1070 (28,7)	
			10 (0,69)	190 (5,09)	440 (11,8)	590 (15,8)	1010 (27,0)	1170 (31,3)		
			30 (2,10)	560 (15,0)	900 (24,1)	1550 (41,5)	1720 (46,1)			
			60 (4,13)	860 (23,1)	1110 (29,7)	2480 (66,5)	2340 (62,7)			
		150 (10,3)	1990 (53,3)	3480 (93,3)	3500 (93,8)					
		2.5 psig (172 mbar)	6 (0,41)	140 (3,75)	190 (5,09)	260 (6,97)	450 (12,1)	590 (15,8)	680 (18,2)	
			10 (0,69)	170 (4,56)	340 (9,11)	490 (13,1)	570 (15,3)	860 (23,1)		
			30 (2,10)	430 (11,5)	660 (17,7)	980 (26,3)	1030 (27,6)			
			60 (4,13)	750 (20,1)	850 (22,8)	1940 (51,9)	2250 (60,3)			
	150 (10,3)		1480 (39,7)	2320 (62,2)	3350 (89,8)					
	2.5 to 4.5 psig (172 to 310 mbar) 1B537227022 Light blue	0.3 psig (21 mbar)	2.5 psig (172 mbar)	4 (0,28)	130 (3,48)	180 (4,82)	190 (5,09)	310 (8,31)	370 (9,92)	480 (12,9)
				8 (0,55)	140 (3,75)	280 (7,50)	360 (9,65)	520 (13,9)	710 (19,0)	800 (21,4)
				12 (0,82)	190 (5,09)	360 (9,65)	490 (13,1)	680 (18,2)	930 (24,9)	
30 (2,10)				430 (11,5)	620 (16,6)	900 (24,1)	1110 (29,7)			
60 (4,13)				660 (17,7)	1040 (27,0)	1730 (46,4)	1830 (49,0)			
150 (10,3)			1570 (42,1)	2060 (55,2)	4620 (124)					
4.5 psig (310 mbar)			8 (0,55)	120 (3,22)	190 (5,09)	250 (6,70)	400 (10,7)	520 (13,9)	540 (14,5)	
			12 (0,82)	160 (4,29)	210 (5,63)	320 (8,58)	530 (14,2)	720 (19,3)		
			30 (2,10)	300 (8,04)	460 (12,3)	760 (20,4)	830 (22,2)			
			60 (4,13)	590 (15,8)	810 (21,7)	1230 (32,9)	1340 (36,0)			
		150 (10,3)	1230 (32,9)	1640 (43,9)	3610 (96,8)					
4.5 to 7 psig (310 to 483 mbar) 1B537327052 Black		0.7 psig (48 mbar)	4.5 psig (310 mbar)	9 (0,62)	190 (5,09)	310 (8,31)	430 (11,5)	620 (16,6)	930 (24,9)	990 (26,5)
				12 (0,83)	210 (5,63)	400 (10,7)	560 (15,0)	810 (21,7)	1150 (30,8)	
				30 (2,10)	520 (13,9)	860 (23,1)	1100 (29,5)	1810 (48,5)		
	60 (4,13)			860 (23,1)	1520 (40,7)	2050 (55,0)	2710 (72,6)			
	150 (10,3)			1960 (52,5)	3480 (93,3)	5040 (135)				
	7 psig (483 mbar)	9 (0,62)	160 (4,29)	210 (5,63)	270 (7,24)	520 (13,9)	620 (16,6)	660 (17,7)		
		12 (0,83)	190 (5,09)	310 (8,31)	370 (9,92)	650 (17,4)	860 (23,1)			
		30 (2,10)	370 (9,92)	700 (18,7)	900 (24,1)	1330 (35,6)				
		60 (4,13)	800 (21,4)	1290 (34,6)	1720 (46,1)	2450 (65,7)				
		150 (10,3)	1910 (51,2)	3350 (89,8)	4050 (109)					

- Shaded areas indicate where maximum operating inlet pressure for a given orifice size is exceeded.

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Table 7. Y600A Series Capacities for 1-Inch Body Size

OUTLET PRESSURE RANGE, CONTROL SPRING PART NUMBER, AND COLOR	OFFSET FROM SETPOINT	OUTLET PRESSURE SETTING	INLET PRESSURE, PSIG (bar)	1-INCH BODY SIZE					
				Capacities in SCFH (Nm ³ /h) of 0.6 Specific Gravity Natural Gas					
				Orifice Size, Inches (mm)					
				1/8 (3,17)	3/16 (4,76)	1/4 (6,35)	3/8 (9,53)	1/2 (12,7)	9/16 (14,3)
4 to 8-inches w.c. (10 to 20 mbar) 1B653827052 Red	1-inch w.c. (2 mbar)	7-inches w.c. (17 mbar)	1 (0,069)	90 (2,41)	220 (5,89)	250 (6,70)	300 (8,04)	410 (11,0)	530 (14,2)
			5 (0,34)	220 (5,89)	430 (11,5)	450 (12,1)	1140 (30,6)	1900 (50,9)	1920 (51,5)
			8 (0,55)	230 (6,16)	490 (13,1)	530 (14,2)	2140 (57,4)	2360 (63,3)	
			20 (1,38)	520 (13,9)	970 (25,9)	1810 (48,5)	1170 (31,4) ⁽¹⁾		
			35 (2,41)	710 (19,0)	1480 (39,7)	2300 (61,6) ⁽¹⁾	930 (24,9) ⁽¹⁾		
			75 (5,17)	1030 (27,6)	1100 (29,5) ⁽¹⁾	1390 (37,3) ⁽¹⁾			
			150 (10,3)	1680 (45,0) ⁽¹⁾	1160 (31,1) ⁽¹⁾				
7 to 16-inches w.c. (17 to 40 mbar) 1B653927022 Olive drab	1-inch w.c. (2 mbar)	11-inches w.c. (27 mbar)	1 (0,069)	90 (2,41)	160 (4,29)	170 (4,56)	210 (5,63)	230 (6,16)	250 (6,70)
			5 (0,34)	160 (4,29)	300 (8,04)	310 (8,31)	520 (13,9)	620 (16,6)	1160 (31,1)
			8 (0,55)	170 (4,56)	360 (9,65)	430 (11,5)	1160 (31,1)	1460 (39,1)	
			20 (1,38)	350 (9,38)	580 (15,5)	780 (20,9)	1630 (43,7)		
			35 (2,41)	560 (15,0)	1030 (27,6)	2840 (76,1)	1190 (31,8) ⁽¹⁾		
			75 (5,17)	1230 (32,9)	1290 (34,6)	1510 (40,5) ⁽¹⁾			
			150 (10,3)	1740 (46,6)	1240 (33,2) ⁽¹⁾				
15-inches w.c. to 1.2 psig (37 mbar to 83 mbar) 1B537027052 Yellow	5.5-inches w.c. (14 mbar)	15-inches w.c. (37 mbar)	2 (0,14)	90 (2,41)	460 (12,3)	500 (13,4)	1100 (29,5)	1160 (31,1)	1300 (34,8)
			6 (0,41)	250 (6,70)	750 (20,1)	930 (24,9)	2500 (67,0)	2800 (75,0)	
			10 (0,69)	340 (9,11)	920 (24,7)	1590 (42,6)	3250 (87,1)		
			30 (2,10)	680 (18,2)	1560 (41,8)	2830 (75,8)	5460 (146)		
			60 (4,13)	1160 (31,1)	2550 (68,3)	4620 (124)			
			150 (10,3)	2570 (68,9)	2770 (74,2)				
			150 (10,3)	2570 (68,9)	2770 (74,2)				
	1.2 psig (83 mbar)	1.2 psig (83 mbar)	2 (0,14)	90 (2,41)	400 (10,7)	460 (12,3)	820 (22,0)	840 (22,5)	900 (24,1)
			6 (0,41)	250 (6,70)	630 (16,9)	700 (18,7)	1550 (41,5)	1610 (43,1)	
			10 (0,69)	320 (8,58)	860 (23,1)	1020 (27,3)	2320 (62,2)		
			30 (2,10)	670 (18,0)	1540 (41,3)	2550 (68,3)	4390 (118)		
			60 (4,13)	1140 (30,6)	2550 (68,3)	4190 (112)			
			150 (10,3)	2570 (68,9)	3100 (83,1)				
			150 (10,3)	2570 (68,9)	3100 (83,1)				

1. Indicates capacity limited due to boost.
 - Shaded areas indicate where maximum operating inlet pressure for a given orifice size is exceeded.

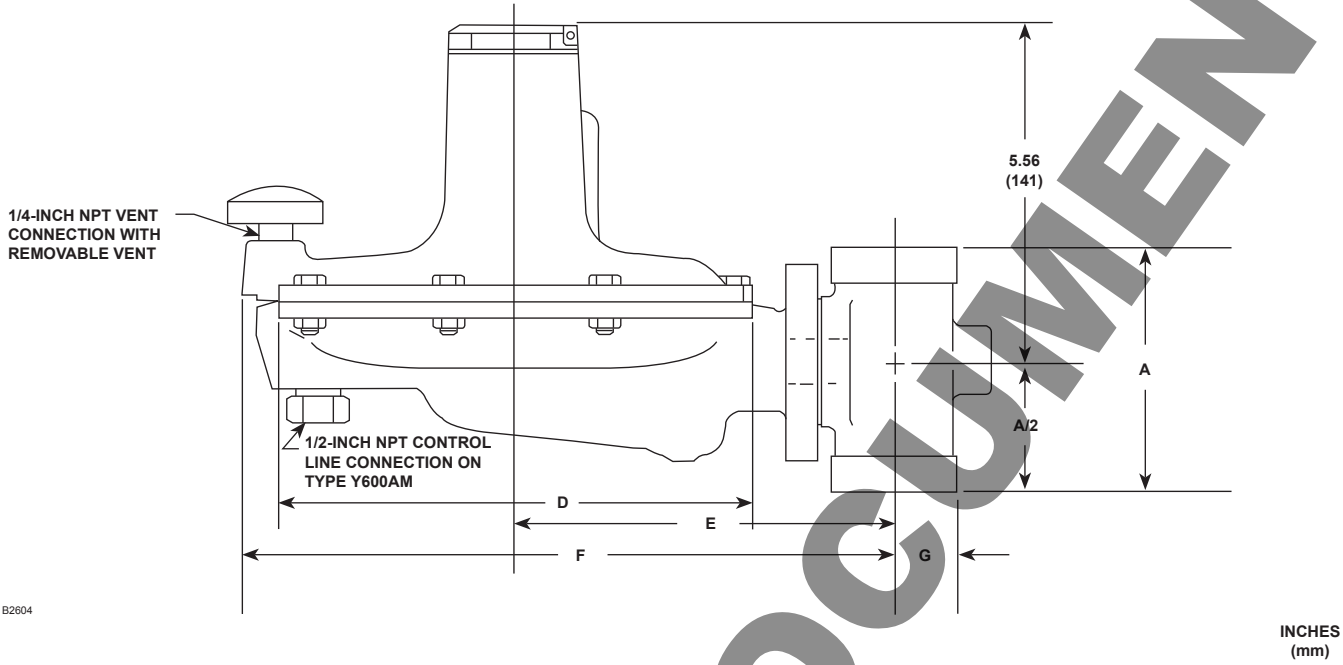
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Table 7. Y600A Series Capacities for 1-Inch Body Size (continued)

OUTLET PRESSURE RANGE, CONTROL SPRING PART NUMBER, AND COLOR	OFFSET FROM SETPOINT	OUTLET PRESSURE SETTING	INLET PRESSURE, PSIG (bar)	1-INCH BODY SIZE					
				Capacities in SCFH (Nm ³ /h) of 0.6 Specific Gravity Natural Gas					
				Orifice Size, Inches (mm)					
				1/8 (3,17)	3/16 (4,76)	1/4 (6,35)	3/8 (9,53)	1/2 (12,7)	9/16 (14,3)
1.2 to 2.5 psig (83 to 172 mbar) 1B537127022 Light green	0.2 psig (14 mbar)	1.2 psig (83 mbar)	2 (0,14)	120 (3,22)	210 (5,63)	230 (6,16)	360 (9,65)	620 (16,6)	660 (17,7)
			6 (0,41)	180 (4,82)	340 (9,11)	450 (12,1)	750 (20,1)	880 (23,6)	1080 (29,0)
			10 (0,69)	190 (5,09)	560 (15,0)	650 (17,4)	1150 (30,8)	1750 (47,0)	
			30 (2,10)	630 (16,9)	1230 (32,9)	1600 (42,9)	1910 (51,2)		
			60 (4,13)	1010 (27,0)	2450 (65,7)	3600 (96,5)	2420 (64,9)		
	2.5 psig (172 mbar)	1.2 psig (83 mbar)	150 (10,3)	2440 (65,4)	3480 (93,3)	3870 (104)			
			6 (0,41)	140 (3,75)	260 (6,97)	270 (7,24)	500 (13,4)	670 (18,0)	680 (18,2)
			10 (0,69)	180 (4,82)	450 (12,1)	490 (13,1)	710 (19,0)	860 (23,1)	
			30 (2,10)	570 (15,3)	720 (19,3)	1030 (27,6)	1640 (43,9)		
			60 (4,13)	850 (22,8)	1830 (49,1)	2520 (67,5)	3130 (83,9)		
2.5 to 4.5 psig (172 to 310 mbar) 1B537227022 Light blue	0.3 psig (21 mbar)	2.5 psig (172 mbar)	4 (0,28)	140 (3,75)	180 (4,82)	190 (5,09)	410 (11,0)	430 (11,5)	480 (12,9)
			8 (0,55)	180 (4,82)	320 (8,58)	360 (9,65)	710 (19,0)	740 (19,8)	900 (24,1)
			12 (0,82)	190 (5,09)	400 (10,7)	490 (13,1)	930 (24,9)	960 (25,7)	
			30 (2,10)	430 (11,5)	620 (16,6)	900 (24,1)	1830 (49,0)		
			60 (4,13)	660 (17,7)	1610 (43,1)	1740 (46,6)	2970 (79,6)		
	4.5 psig (310 mbar)	2.5 psig (172 mbar)	150 (10,3)	2010 (53,9)	4090 (110)	6660 (178)			
			8 (0,55)	120 (3,22)	190 (5,09)	250 (6,70)	490 (13,1)	520 (13,9)	540 (14,5)
			12 (0,82)	160 (4,29)	210 (5,63)	320 (8,58)	610 (16,3)	850 (22,8)	
			30 (2,10)	390 (10,4)	520 (13,9)	760 (20,4)	1360 (36,4)		
			60 (4,13)	630 (16,9)	840 (22,5)	1230 (32,9)	2580 (69,1)		
4.5 to 7 psig (310 to 483 mbar) 1B537327052 Black	0.7 psig (48 mbar)	4.5 psig (310 mbar)	9 (0,62)	210 (5,63)	310 (8,31)	430 (11,5)	770 (20,6)	970 (25,9)	1050 (28,1)
			12 (0,83)	230 (6,16)	400 (10,7)	560 (15,0)	1010 (27,0)	1290 (34,6)	
			30 (2,10)	520 (13,9)	860 (23,1)	1100 (29,5)	2080 (55,7)		
			60 (4,13)	880 (23,6)	1520 (40,7)	2050 (55,0)	3650 (97,8)		
			150 (10,3)	2060 (55,2)	3510 (94,1)	6000 (161)			
	7 psig (483 mbar)	4.5 psig (310 mbar)	9 (0,62)	160 (4,29)	210 (5,63)	270 (7,24)	590 (15,8)	620 (16,6)	660 (17,7)
			12 (0,83)	210 (5,63)	310 (8,31)	370 (9,92)	770 (20,6)	890 (23,9)	
			30 (2,10)	370 (9,92)	700 (18,7)	900 (24,1)	1650 (44,2)		
			60 (4,13)	800 (21,4)	1290 (34,6)	1720 (46,1)	2760 (74,0)		
			150 (10,3)	2010 (53,9)	3390 (90,9)	4140 (111)			

Shaded areas indicate where maximum operating inlet pressure for a given orifice size is exceeded.

OBSOLETE



BODY SIZE, INCHES	DIMENSION, INCHES (mm)					APPROXIMATE SHIPPING WEIGHT, POUNDS (kg)
	A	D (Diameter)	E	F	G	
3/4 and 1	4 (102)	8.38 (213)	6.25 (159)	10.69 (272)	1.00 (25)	13 (5,9)

Figure 3. Dimensions

Ordering Information

When ordering, specify:

Application

1. Type of regulator
2. Body, spring case, diaphragm case, and trim materials
3. Control spring range in psig (bar)

Construction

Refer to the Specifications section on page 2 and to each referenced table. Specify the desired selection whenever there is a choice to be made. Always be sure to specify the regulator type number.

Ordering Guide

Type (Select One)

- Y600A (internal pressure registration)***
- Y600AM (external pressure registration)**
- Y600AR (internal relief/internal pressure registration)**

Body Size (Select One)

- 3/4-inch NPT***
- 1-inch NPT***

Orifice Size (Select One)

- 1/8-inch (3,2 mm)***
- 3/16-inch (4,8 mm)***
- 1/4-inch (6,4 mm)***
- 3/8-inch (9,5 mm)***
- 1/2-inch (12,7 mm)***
- 9/16-inch (14,3 mm)***

Outlet Pressure Ranges (Select One)

- 4 to 8-inches w.c. (10 to 20 mbar)***
- 7 to 16-inches w.c. (17 to 40 mbar)***
- 15-inches w.c. to 1.2 psig (37 to 83 mbar)***
- 1.2 to 2.5 psig (0,08 to 0,17 bar)***
- 2.5 to 4.5 psig (0,17 to 0,31 bar)***
- 4.5 to 7 psig (0,31 to 0,48 bar)***

Regulators Quick Order Guide	
***	Standard - Readily Available for Shipment
**	Non-Standard - Allow Additional Time for Shipment
*	Special Order, Constructed from Non-Stocked Parts. Consult your local Sales Office for Availability.
Availability of the product being ordered is determined by the component with the longest shipping time for the requested construction.	

Specification Worksheet

Application:
 Specific Use _____
 Line Size _____
 Gas Type and Specific Gravity _____
 Gas Temperature _____
 Does the Application Require Overpressure Protection?
 Yes No If yes, which is preferred:
 Relief Valve Monitor Regulator Shutoff Device
 Is overpressure protection equipment selection assistance desired? _____

Pressure:
 Maximum Inlet Pressure (P_{1max}) _____
 Minimum Inlet Pressure (P_{1min}) _____
 Downstream Pressure Setting(s) (P_2) _____
 Maximum Flow (Q_{max}) _____

Performance Required:
 Accuracy Requirements? _____
 Need for Extremely Fast Response? _____

Other Requirements: _____

SOLELY DOCUMENT

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For further information visit www.emersonprocess.com/regulators

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