

The 67 Series small-volume regulators (figure 1) are typically used to provide constantly controlled reduced pressures to pneumatic and electropneumatic controllers and other instruments. These self-operated regulators are suitable for most air or gas applications and may even be used for liquid service where material compatibility exists. Other applications include providing reduced pressures to air chucks, air jets, spray guns, and liquified petroleum gas (LPG) torches and burners.

Features

- **Compactness**—The small size of the 67 Series regulators makes them particularly useful in installations with space limitations.

- **Ease of Maintenance**—No special tools are required to service these regulators, and they need not be removed from lines when servicing and repair are necessary.

- **Filtering Action**—A Type 67AF, 67AFR, 67AFS, or 67AFSR regulator (figure 2) has an internal filter to help clean impurities from the process fluid, removing particles that might damage the regulator or downstream equipment. The filter has a free area of 12 times the pipe area and can be obtained in glass, resin-impregnated cellulose, or stainless steel.

- **Internal Relief**—Although not designed to provide full overpressure protection, a token-capacity internal relief valve (indicated by an R in the type number as shown in table 1) allows partial reduction of downstream pressure without the necessity of an external relief valve being opened. The internal relief valve seat (figure 2 or 3) has a soft molded diaphragm insert.

- **Panel Mounting**—Some 67 Series regulators are available with either 1-hole or 3-hole panel mounting (figure 3).

- **Tamper Resistant**—To detect tampering with the outlet pressure setting, a Type 67AF or 67AFR regulator may be obtained with the adjusting screw wired to a machine screw or other body part after the outlet pressure is set.

- **Sour Gas Service Capability**—For sour gas, the body, spring case, and trim are available in materials that comply with National Association of Corrosion Engineers (NACE) Standard MR-01-75.

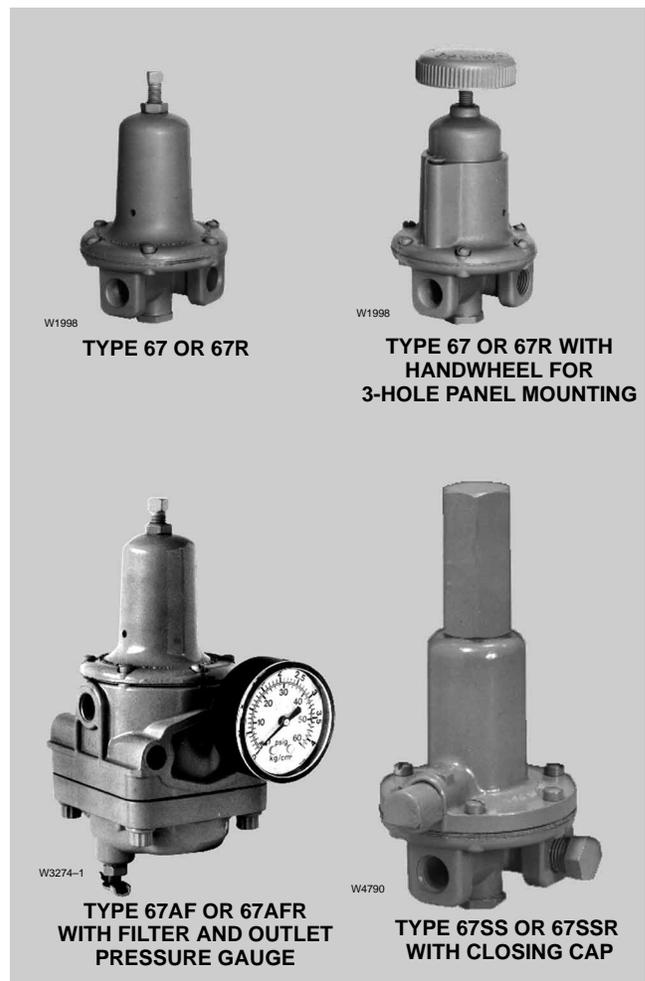


Figure 1. Typical 67 Series Regulators

- **High-Pressure Inlet Capability**—Type 67H/67HR brass or Type 67SS/67SSR stainless steel construction allows inlet pressures of up to 400 psig (27.6 bar).

- **Smooth, Close Regulation and High Stability**—Regulator design (figure 2 or 3) isolates the diaphragm and pressure response chamber from the main flow stream.

- **Second Outlet Pressure Tapping**—Body side outlet connection is standard with the Type 67AFS, 67AFSR, 67SS, and 67SSR regulators and is available with all other types. A pipe plug or pressure gauge may be installed in the side outlet connection, and a Type 67 or 67R regulator additionally may have a tire valve installed in this connection.

Specifications

AVAILABLE CONFIGURATIONS	See table 1	CONSTRUCTION MATERIALS	For Type 67AF or 67AFR Filter Regulator: See table 4 For Type 67AFS or 67AFSR Filter Regulator: See table 5 For Type 67 or 67R Regulator Without Filter: See table 6 For Type 67H or 67HR Regulator Without Filter: See table 7 For Type 67SS or 67SSR Regulator Without Filter: See table 8
INLET AND END OUTLET SIZE AND CONNECTION STYLE	1/4-inch NPT screwed ⁽¹⁾	MATERIAL TEMPERATURE CAPABILITIES⁽²⁾	With Nitrile Diaphragm and Plug: -20 TO 180°F (-29 to 82°C) With Fluoroelastomer Diaphragm and Plug: 0 to 300°F (-18 to 149°C)
SIDE OUTLET SIZE AND CONNECTION STYLE (WHEN USED)	1/4-inch NPT screwed ⁽¹⁾	PRESSURE SETTING ADJUSTMENT	Adjustable throughout each Spring range by turning adjusting screw or handwheel
MAXIMUM INLET PRESSURE (BODY RATING)⁽²⁾	Type 67H, 67HR, 67SS, or 67SSR Regulator: 400 psig (27.6 bar) All Other Types: 250 psig (17.2 bar)	PRESSURE REGISTRATION	Internal
OUTLET PRESSURE RANGES	See table 2	STANDARD SPRING CASE VENT LOCATION	Over inlet
MAXIMUM DIAPHRAGM PRESSURE⁽²⁾	50 psi (3.4 bar) over outlet pressure setting, or 110 psig (7.6 bar), whichever is greater	SPRING CASE VENT CONNECTION	<ul style="list-style-type: none"> ■ 1/8 inch (3.2 mm) drilled hole or ■ 1/4 inch 18 NPT tapping depending on configuration
INTERNAL RELIEF PERFORMANCE (TYPE 67AFR, 67AFSR, 67HR, 67R, or 67SSR REGULATOR ONLY)	Low capacity for seat leakage only; external relief valve must be provided if inlet pressure can exceed maximum emergency outlet pressure	FILTER CAPABILITIES	Free Area: 12 times pipe area Rating <i>Cellulose or Stainless Steel Element:</i> 40 microns <i>Glass Element:</i> 10 microns
REGULATOR CAPACITIES	See table 3	DIMENSIONS	See figure 5 or 6
REGULATOR PERFORMANCE CURVES	See figure 4	APPROXIMATE WEIGHT	Up to 1-1/2 pounds (0.7 kg) depending on configuration
PORT DIAMETER	1/8 inch (3.2 mm)	OPTIONS	See table 1
FLOW COEFFICIENTS	Wide-Open C_g for External Relief Sizing: 8.5 Maximum C_v: 0.28 Representative C_1: 30.4		

1. End connection for other than ANSI standards can usually be provided; consult the Fisher sales office or sales representative.

2. The pressure/temperature limits in this bulletin and any applicable standard limitation should not be exceeded.

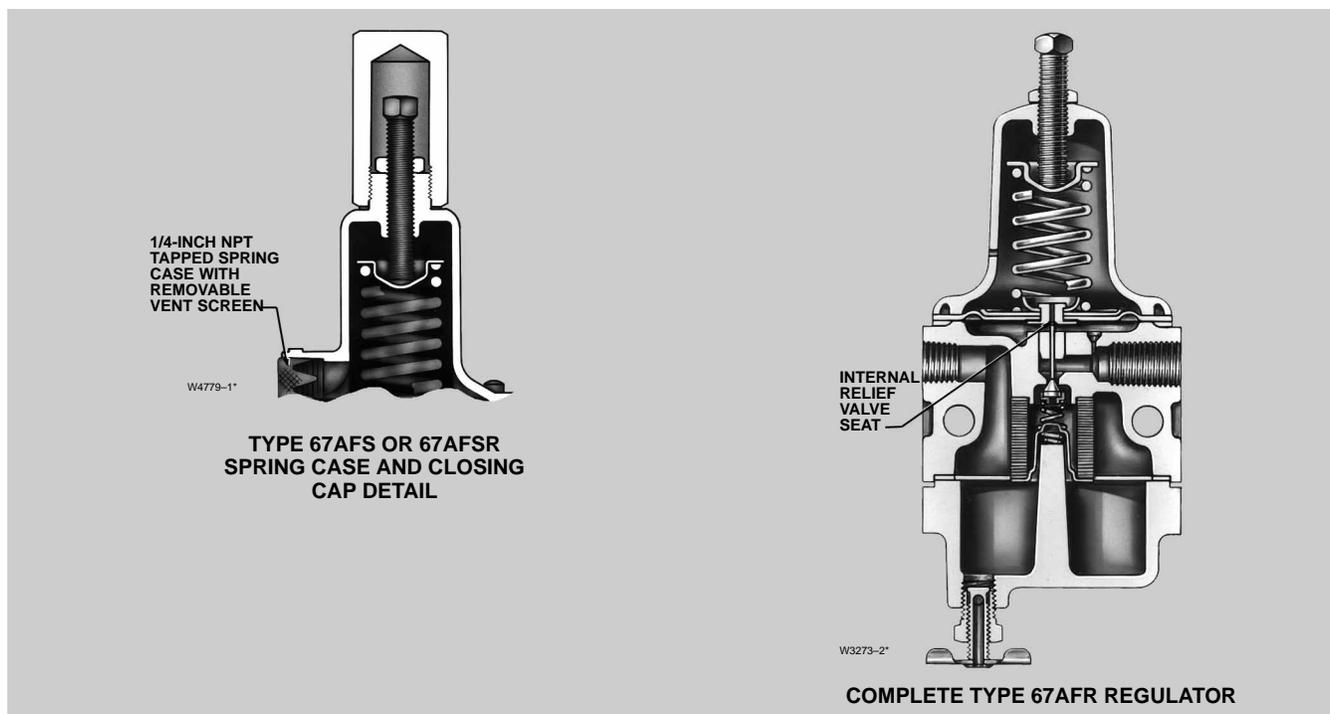


Figure 2. Filter Regulator Construction Features

Table 1. Available Configurations

CONSTRUCTION FEATURE		TYPE NUMBER									
		67	67AF	67AFR	67AFS	67AFSR	67H	67HR	67R	67SS	67SSR
Standard	Aluminum body & spring case	X	X	X					X		
	Brass body & spring case						X	X			
	Stainless steel body & spring case				X	X				X	X
	Filter		X	X	X	X					
	Internal relief			X		X		X	X		X
	NACE-qualified materials	X	X	X	X	X			X		
Optional	Aluminum/alloy 400 (UNS N04400) inlet screen	X	X	X			X	X	X		
	Steel/stainless steel inlet screen				X	X				X	X
	Pressure gauge ⁽¹⁾ in side outlet	X	X	X	X	X	X	X	X	X	X
	Tire valve in side outlet	X							X		
	Type H800 relief valve ⁽¹⁾ in end outlet connection for outlet pressure settings of 35 psig (2.4 bar) or less	X	X	X	X	X	X	X	X	X	X
	■ Plain or ■ chrome-plated handwheel adjusting screw	X	X	X			X	X	X		
	Spring case with handwheel adjusting screw	X	X	X			X	X	X		
	TFE diaphragm protector for liquid ammonia service	X									
	Extra-thick diaphragm						X				
	Adjusting screw safety wiring		X	X							
Spring case for mounting Type 661 remote control drive unit (can't be ordered with handwheel or 1/4-inch 18 NPT vent tapping)	X	X	X					X			

1. Construction covered more fully in separate bulletin.