

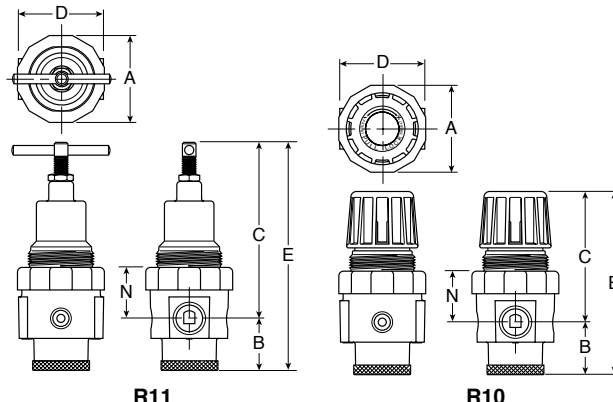
R10 / R11 General Purpose Regulators

B



Features

- High Flow Performance
Featuring Rugged Design for the Most Demanding Applications
- Diaphragm Operated Design with Balanced Poppet Design for Quick and Accurate Regulation
- Accurate Pressure Regulation
- Panel Mountable
- High Flow: 1/4" - 80 SCFM§
3/8" - 80 SCFM§
1/2" - 100 SCFM§
- **R10**: Push-to-Lock, Pull-to-Adjust.
Adjusting Lock is engaged when Knob is Removed Rendering Unit Tamper Resistant
- **R11**: Heavy Duty Tee Handle Adjustment



Port Size	R10 NPT	R11 NPT
	Relieving	Relieving
Without Gauge 0-125 PSIG Reduced Pressure		
1/4"	R10-02C	R11-02C
3/8"	R10-03C	R11-03C
1/2"	R10-04C	R11-04C
With Gauge 0-125 PSIG Reduced Pressure		
1/4"	R10-02CG	R11-02CG
3/8"	R10-03CG	R11-03CG
1/2"	R10-04CG	R11-04CG

R10 Regulator Dimensions					
A	B	C	D	E	N
R10					
2.25 (57)	1.40 (36)	3.38 (86)	2.33 (59)	4.78 (121)	1.38 (35)
R11					
2.25 (57)	1.40 (36)	4.72 (120)	2.33 (59)	6.13 (156)	1.38 (35)

inches
(mm)

NOTE: 1.75 Dia. (44mm) hole required for panel mounting.

Bold items are most popular.

For other models refer to ordering information below.

§ SCFM = Standard cubic feet per minute at 100 PSIG inlet, 75 PSIG no flow secondary setting, and 20 PSIG pressure drop.

Ordering Information

R	10	—	02	C	/**
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Series
10 Tamper Resistant, Snap Lock, Removable Knob
11 Tee Handle Adjustment

Port Threads
— NPT
G BSP

Port Size
02 1/4 Inch
03 3/8 Inch
04 1/2 Inch

Reduced Pressure Range
A 0-25 PSIG
B 0-60 PSIG
C 0-125 PSIG
D 0-250 PSIG

Options
G Gauge
K Non-Relieving
P Panel Mount Nut
X64** Fluorocarbon O-Rings and Diaphragm
N Panel Mount Threads at Top of Bonnet (R11 Only)
X81** Brass Body
X8** Low Temp. Version
X7* Brass Bottom Plug

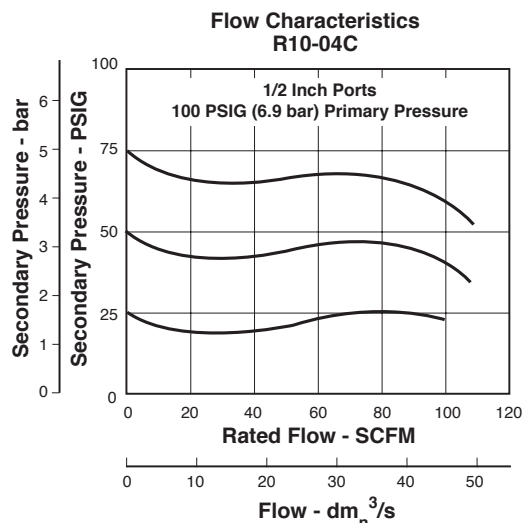
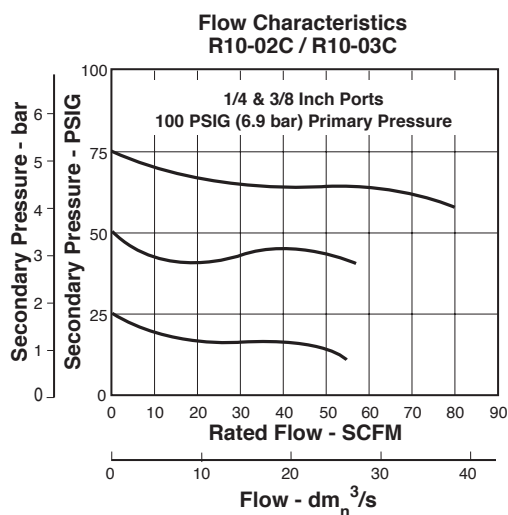
Engineering Change Designator
Will be entered at factory.

***NOTE:** Beginning January 2008, Brass Bottom Plug is Optional - Nylon is Standard.

** Brass Bottom Plug Standard with X64, X81, and X8 Options.

BOLD ITEMS ARE MOST POPULAR.

Technical Information

**⚠ WARNING**

Product rupture can cause serious injury.
Do not connect regulator to bottled gas.
Do not exceed maximum primary pressure rating.

⚠ CAUTION:

REGULATOR PRESSURE ADJUSTMENT – The working range of knob adjustment is designed to permit outlet pressures within their full range. Pressure adjustment beyond this range is also possible because the knob is not a limiting device. This is a common characteristic of most industrial regulators, and limiting devices may be obtained only by special design. For best performance, regulated pressure should always be set by increasing the pressure up to the desired setting.

R10 / R11 Regulator Kits & Accessories

Control Knob (R10) R10Y54

Tee Handle (R11) SA16Y53

Gauges –2" Dial Size, 1/4" Back Connection
0 to 60 PSIG (0 to 400 kPa) K4520N140602" Dial Size, 1/4" Back Connection
0 to 160 PSIG (0 to 1100 kPa) K4520N141602" Dial Size, 1/4" Back Connection
0 to 300 PSIG (0 to 2068 kPa) K4520N14300

Mounting Bracket Kit SAR10Y57

Panel Mount Nut –

Plastic R10X51-P

Aluminum R10X51-A

Repair Kits –

Non-Relieving RKR10KY

Non-Relieving (Viton) RKR10KYX64

Relieving RKR10Y

Relieving (Viton) RKR10YX64

Cage Kit –

R10 CKR10Y

R11 CKR11Y

Specifications

Gauge Ports (2) 1/4 Inch

Port Threads 1/4, 3/8, 1/2 Inch

Supply Pressure 300 PSIG Maximum (20.4 bar)

Temperature Rating 40°F to 125°F (4.4°C to 52°C)

Weight 1.3 lb. (0.59 kg) / Unit
32 lb. (14.51 kg) / 24-Unit Master Pack**Materials of Construction****Adjusting Knob –**

R10 Acetal

R11 (Tee Handle) Steel

Body Zinc

Bottom Plug Nylon

Optional Brass

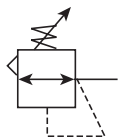
Elastomers Buna N

Spring Case –

R10 Acetal

R11 Zinc

R10, R11 Regulator – Standard



Features

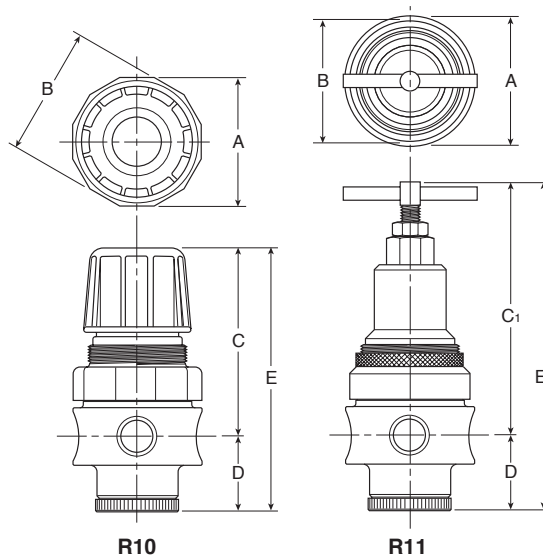
- Stainless Steel Construction Handles Most Corrosive Environments
- Large Daphragm to Valve Area Ratio for Precise Regulation and High Flow Capacity
- Meets NACE Specifications MR-01-75/ISO 15156
- Low Temperature Version Available
- High Flow: 1/2" – 80 SCFM[§]



R11



R10



Series	Adjustment Type	Port Size	NPT	BSPP
R10	Knob	1/2"	R10-04CSS	R10G04CSS
R11	Tee Handle	1/2"	R11-04CSS	R11G04CSS

Standard part numbers shown bold. For other models refer to ordering information below.

[§] SCFM = Standard cubic feet per minute at 100 PSIG inlet, 75 PSIG no flow secondary setting and 15 PSIG pressure drop.

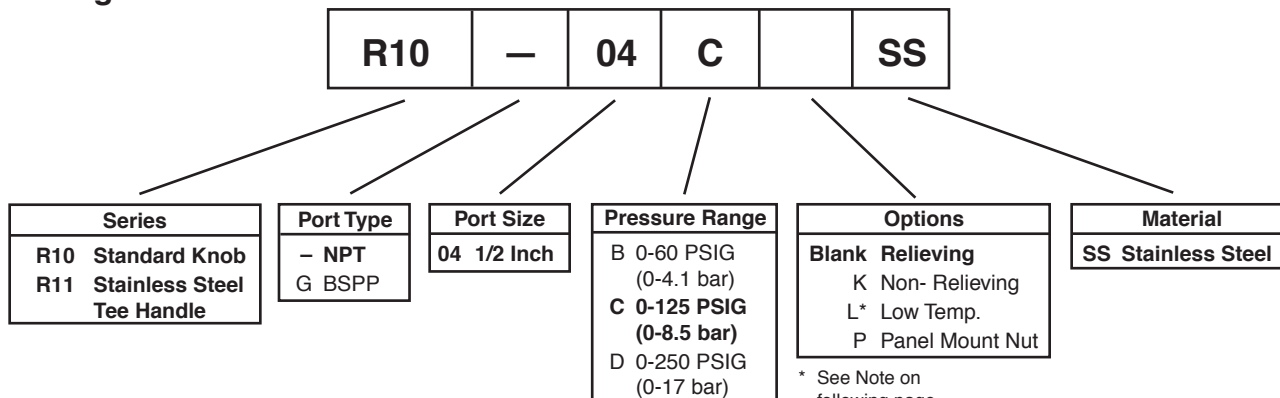
WARNING

Product rupture can cause serious injury.
Do not connect regulator to bottled gas.
Do not exceed maximum primary pressure rating.

R10, R11 Regulator Dimensions		
A	B	C
2.34 (60)	2.43 (62)	3.59 (91)
C ₁	D	E
4.70 (119)	1.38 (35)	4.97 (126)
E ₁		
6.08 (154)		

inches (mm)
 NOTE: 1.75 Dia. (44mm) hole required for panel mounting.

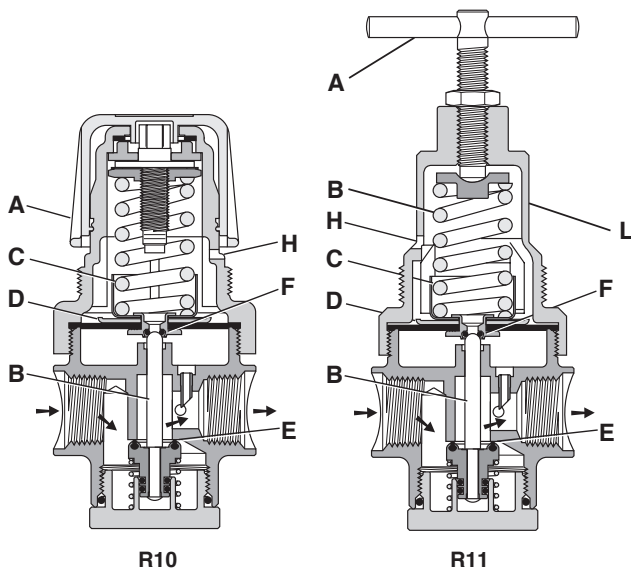
Ordering Information



BOLD ITEMS ARE MOST POPULAR.

* See Note on following page.

Operation



With the adjusting knob / Tee Handle (A) turned fully counter-clockwise (no spring load), and pressure supplied to the regulator inlet port, the valve poppet assembly (B) is closed. Turning the adjusting knob clockwise applies a load to control spring (C). This load causes the diaphragm (D) and the valve poppet assembly (B) to move downward allowing flow across the seat area (E) created between the poppet assembly and the seat. Pressure in the downstream line is sensed below the diaphragm (D) and offsets the load of spring (C). As downstream pressure rises, poppet assembly (B) and diaphragm (D) move upward until the area (E) is closed and the load of the spring (C) and pressure under diaphragm (D) are in balance. A reduced outlet pressure has now been obtained, depending on spring load. Creating a demand downstream, such as opening a valve, results in a reduced pressure under the diaphragm (D). The load of control spring (C) now causes the poppet assembly to move downward opening seat area (E) allowing air to flow to meet the downstream demand. The flow of downstream air is metered by the amount of opening (E).

Should downstream pressure exceed the desired regulated pressure, the excess pressure will cause the diaphragm (D) to move upward against control spring (C), open vent hole (F), and vent the excess pressure to atmosphere through the hole in the bonnet (H). (This occurs in the relieving type regulator only.)

Technical Information

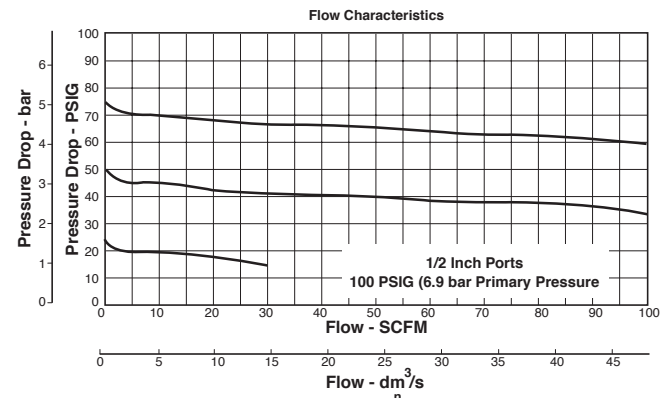
CAUTION:

REGULATOR PRESSURE ADJUSTMENT –

The working range of knob adjustment is designed to permit outlet pressures within their full range. Pressure adjustment beyond this range is also possible because the knob is not a limiting device. This is a common characteristic of most industrial regulators, and limiting devices may be obtained only by special design.

For best performance, regulated pressure should always be set by increasing the pressure up to the desired setting.

*** Note:** “Low Temperature” option is intended for applications where the ambient temperature may be down to -40° C/F. Air supply must be free of moisture to prevent ice formation and malfunction of units. These units contain EPDM seals. Make sure any oils in the airstream are compatible.



R10, R11 Regulator Kits & Accessories

R10 Bonnet Kit (Knob Included)	CKR10YSS
R11 Bonnet Kit	CKR11YSS
Gauge (Stainless) –	
160 PSIG (0 to 1100 kPa), 2" Face	K4520N14160SS
Panel Mount Bracket (Stainless)	R10Y57-SS
Panel Mount Nut –	
Stainless	R10X51-SS
Plastic	R10X51-P
Pipe Nipple –	
1/2" 316 Stainless Steel	616A28-SS
Service Kit –	
Relieving	RKR10YSS
Non-Relieving	RKR10KYSS
Springs –	
0-60 PSIG Range	SPR-388-1-SS
0-125 PSIG Range	SPR-389-1-SS
0-250 PSIG Range	SPR-390-1-SS

Specifications

Gauge Port	1/4 Inch
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Operation	Fluorocarbon Diaphragm
Port Threads	1/2 Inch
Pressure & Temperature Ratings –	
R10	300 PSIG Max (20.7 bar)
	0°F to 150°F (-18°C to 66°C)
R11	300 PSIG Max (20.7 bar)
	0°F to 180°F (-18°C to 82°C)
Option “L” Minimum Operating Temperature	-40° C/F
Note: Air must be dry enough to avoid ice formation at temperatures below 32°F (0°C).	
Weight	1.79 lb. (0.81 kg)

Materials of Construction

Adjustment Mechanism / Springs	316 Stainless Steel
Body	316 Stainless Steel
Bonnet / Tee Handle (R11)	316 Stainless Steel
Bonnet / Knob (R10)	Acetal
Bottom Plug	316 Stainless Steel
Poppet	316 Stainless Steel
Seals	Fluorocarbon