R10 / R11 General Purpose Regulators



Features

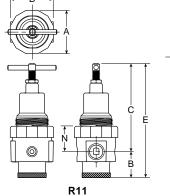
 High Flow Performance Featuring Rugged Design for the Most Demanding Applications

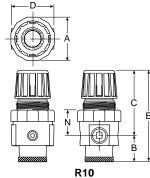
(Revised 10-07-08)

- 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 Ga	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			

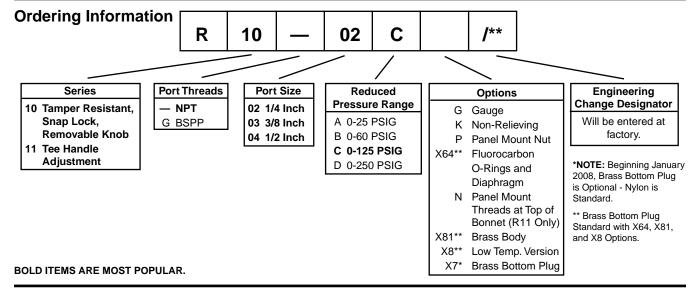
Bold items are most popular.

For other models refer to ordering information below.

R10 Regulator Dimensions					
Α	В	С	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.





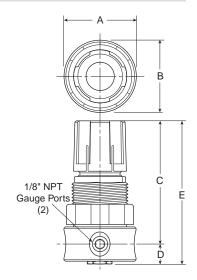
[§] SCFM = Standard cubic feet per minute at 100 PSIG inlet, 75 PSIG no flow secondary setting, and 20 PSIG pressure drop.

R364, R374 Regulators - Miniature



Features

- · High Flow and High Sensitivity
- Constant Bleed Option for Semi-Precision Applications
- · Can be Used for Water Service (Non-Relieving)
- Unbalanced Poppet Standard
- Diaphragm Operated for Fast Response
- · Non-rising Adjusting Knob
- Stainless Steel Version Available (See Stainless Steel Section of Catalog)
- High Flow: 10 SCFM[§] (Air) 1.25 GPM (Water)



Port Size	NPT	
Brass		
1/8"	R364-01C	
1/4"	R364-02C	
Aluminum		
1/8"	R374-01C	
1/4"	R374-02C	

Bold Items are Most Popular.

For other models refer to ordering information below.

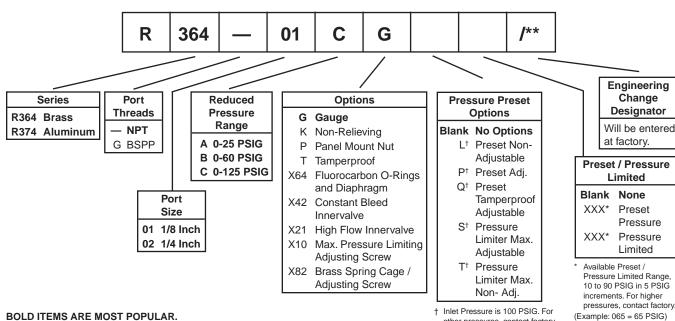
NOTE: 1.250 Dia. (31.8mm) hole required for panel mounting.

§ SCFM = Standard cubic feet per minute at 100 PSIG inlet, 75 PSIG no flow secondary setting and 25% pressure drop.

R364, R374 Regulator Dimensions			
A 1.56 (39.7)	B 1.56 (39.7)	C 2.56 (65.1)	
D 0.50 (12.7)	E 3.06 (77.8)		

Inches (mm)

Ordering Information

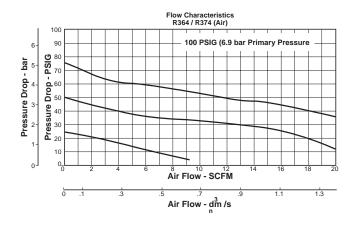


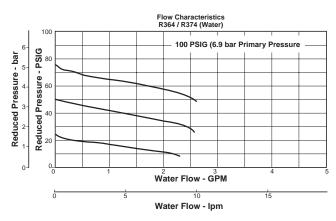


other pressures, contact factory.

Technical Specifications - R364, R374

Technical Information





MARNING

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.

R364, R374 Regulator Kits & Accessories

Gauges -	1-1/2" Dial Size, 1/8" Back Connection 0 to 60 PSIG (0 to 400 kPa)K4	515N18060		
	1-1/2" Dial Size, 1/8" Back Connection 0 to 160 PSIG, (0 to 1100 kPa)K4	515N18160		
_	Bracket Kit	. SA161X57		
Panel Mou	unt Nut - Plastic			
Spring Ca	ge & Knob	CKR364Y		
Spring Cage Kit (Tamperproof)CKR3647				
Non-Rel	ts – rd Nitrile lieving Diaphragm, Valve Assembly g Diaphragm, Valve Assembly			
	carbon lieving Diaphragm, Valve AssemblyRl ig Diaphragm, Valve Assembly			

Specifications

Gauge Ports (2)	1/8 Inch
Port Threads	1/8, 1/4 Inch
Primary Pressure Rating	2 to 125 PSIG (-15 to 8.5 bar)
Supply Pressure	300 PSIG Maximum (20.4 bar)
Temperature Rating	40°F to 125°F (4.4°C to 52°C)
Weight - Brass Body	
Aluminum Body	

Adjusting Screw	Steel
Body - R364	Brass
R374	Aluminum
Springs – Adjusting	Steel
Bottom	Stainless Steel
Spring Cage	Acetal
Bottom Plug, Innervalve, Diaphragm Buttom	Brass



R354, R364 Regulator - Miniature



Features

- Stainless Steel Construction Handles Most Corrosive Environments
- Large Diaphragm to Valve Area Ratio for Precise Regulation and High Flow Capacity
- Meets NACE Specifications MR-01-75/ISO 15156
- High Flow: 1/4" 12 SCFM§





	Series	Adjustment Type	Port Size	NPT	BSPP
I	R364	Knob	1/4"	R364-02CSS	R364G02CSS
I	R354	All Metal	1/4"	R354-02CSS	R354G02CSS

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

C	E1
	. ↓
	R364

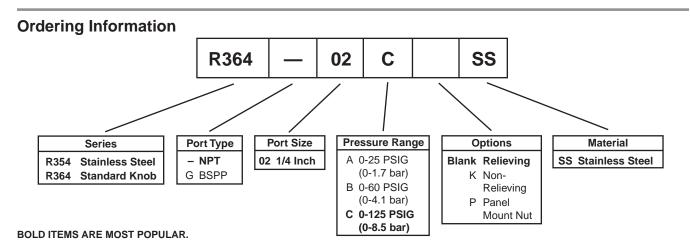
R354, R364 Regulator Dimensions			
A	C	C ₁	
1.56	2.00	2.56	
(40)	(51)	(65)	
D	E	E ₁	
0.50	2.50	3.06	
(13)	(64)	(78)	

inches (mm)

NOTE: 1.25 Dia. (32mm) hole required for panel mounting.

⚠ WARNING

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



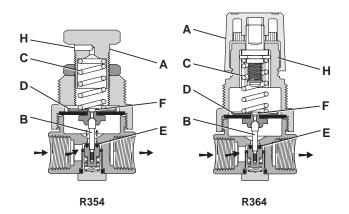


SCFM = Standard cubic feet per minute at 100 PSIG inlet, 75 PSIG no flow secondary setting and 15 PSIG pressure drop.

R354, R364 Series

Air Line Regulators

Operation



With the adjusting knob (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.)

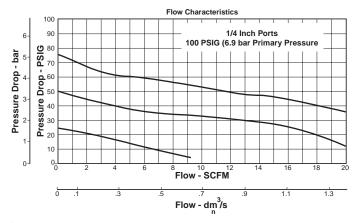
Technical Information

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.



R354, R364 Regulator Kits & Accessories R354 Bonnet KitCKR354YSS
R364 Bonnet Kit (Knob Included)CKR364YSS
Gauge (Stainless) – 160 PSIG (0 to 1100 kPa), 1-1/2" FaceK4515N14160SS
Panel Mount Bracket (Stainless)161X57-SS
Panel Mount Nut –
Stainless R05X51-SS Plastic R05X51-P
Pipe Nipple – 1/4" 316 Stainless Steel
Service Kit –
RelievingRKR364YSS
Non-RelievingRKR364KYSS
Springs –
0-25 PSIG RangeSPR-375-2-SS
0-60 PSIG RangeSPR-376-1-SS
0-125 PSIG RangeSPR-377-1-SS
Specifications
Gauge Port
OperationFluorocarbon Diaphragm

Pressure & Temperature Ratings –	
R354	300 PSIG Max (20.7 bar)
	0°F to 180°F (-18°C to 82°C)
R364	300 PSIG Max (20.7 bar)
	0°F to 150°F (-18°C to 66°C)
Note: Air must be dry enough to avo	oid ice formation at
temperatures below 32°F (0°C)).
Weight	0.5 lb. (0.23 kg)
Materials of Construction	on
Adjustment Mechanism / Springs	316 Stainless Steel
Adjusting Knob (R354)	316 Stainless Steel
Adjusting Knob (R364)	Polypropylene
Body	316 Stainless Steel
Bonnet (R354)	316 Stainless Steel
Bonnet (R364)	Acetal
Bottom Plug	316 Stainless Steel
Poppet	316 Stainless Steel
Seals	Fluorocarbon



R354, R364 Regulator - Miniature



Features

- Stainless Steel Construction Handles Most Corrosive Environments
- Large Diaphragm to Valve Area Ratio for Precise Regulation and High Flow Capacity
- Meets NACE Specifications MR-01-75/ISO 15156
- High Flow: 1/4" 12 SCFM§





	Series	Adjustment Type	Port Size	NPT	BSPP
I	R364	Knob	1/4"	R364-02CSS	R364G02CSS
I	R354	All Metal	1/4"	R354-02CSS	R354G02CSS

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

C	E1
	. ↓
	R364

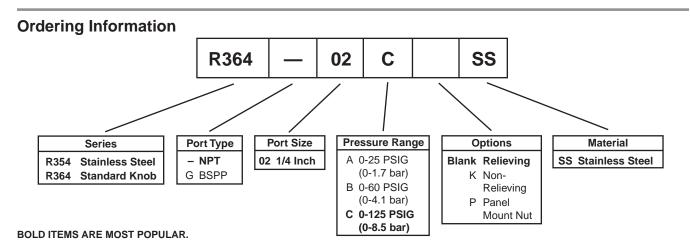
R354, R364 Regulator Dimensions			
A	C	C ₁	
1.56	2.00	2.56	
(40)	(51)	(65)	
D	E	E ₁	
0.50	2.50	3.06	
(13)	(64)	(78)	

inches (mm)

NOTE: 1.25 Dia. (32mm) hole required for panel mounting.

⚠ WARNING

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



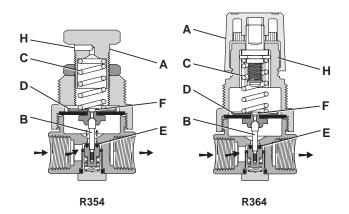


SCFM = Standard cubic feet per minute at 100 PSIG inlet, 75 PSIG no flow secondary setting and 15 PSIG pressure drop.

R354, R364 Series

Air Line Regulators

Operation



With the adjusting knob (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.)

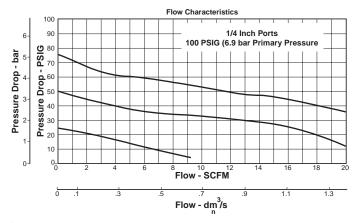
Technical Information

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.



R354, R364 Regulator Kits & Accessories R354 Bonnet KitCKR354YSS
R364 Bonnet Kit (Knob Included)CKR364YSS
Gauge (Stainless) – 160 PSIG (0 to 1100 kPa), 1-1/2" FaceK4515N14160SS
Panel Mount Bracket (Stainless)161X57-SS
Panel Mount Nut –
Stainless R05X51-SS Plastic R05X51-P
Pipe Nipple – 1/4" 316 Stainless Steel
Service Kit –
RelievingRKR364YSS
Non-RelievingRKR364KYSS
Springs –
0-25 PSIG RangeSPR-375-2-SS
0-60 PSIG RangeSPR-376-1-SS
0-125 PSIG RangeSPR-377-1-SS
Specifications
Gauge Port
OperationFluorocarbon Diaphragm

Pressure & Temperature Ratings –	
R354	300 PSIG Max (20.7 bar)
	0°F to 180°F (-18°C to 82°C)
R364	300 PSIG Max (20.7 bar)
	0°F to 150°F (-18°C to 66°C)
Note: Air must be dry enough to avo	oid ice formation at
temperatures below 32°F (0°C)).
Weight	0.5 lb. (0.23 kg)
Materials of Construction	on
Adjustment Mechanism / Springs	316 Stainless Steel
Adjusting Knob (R354)	316 Stainless Steel
Adjusting Knob (R364)	Polypropylene
Body	316 Stainless Steel
Bonnet (R354)	316 Stainless Steel
Bonnet (R364)	Acetal
Bottom Plug	316 Stainless Steel
Poppet	316 Stainless Steel
Seals	Fluorocarbon

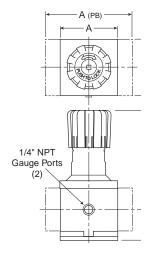


R255 Regulators - Hi-Flow



Features

- Port Blocks (PB) Available to Provide 1-1/2" Port Extension to 1" Ported Bodies
- Self Relieving Feature Plus Balanced Poppet Provides Quick Response and Accurate Pressure Regulation
- Solid Control Piston for Extended Life
- High Flow: 3/4" 200 SCFM[§]
 1" 300 SCFM[§]



Port Size	NPT Without Gauge
3/4"	R255-06C
1"	R255-08C

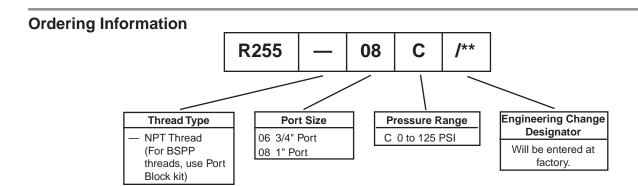
	R255 Regulator Dimensions					
1	Α	A (PB)	В	С	D	Е
ı	3.62	5.91	3.62	6.38	2.08	8.46
	(92)	(150)	(92)	(162)	(53)	(215)

Inches (mm)

Bold Items are Most Popular.

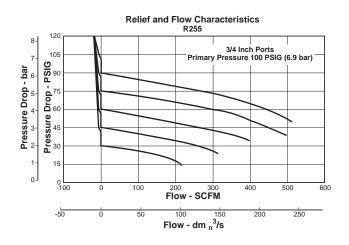
For other models refer to ordering information below.

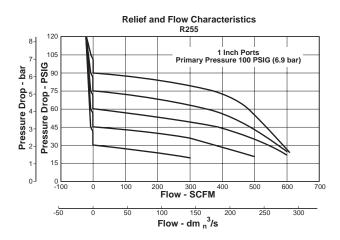
§ SCFM = Standard Cubic Feet Per Minute at 100 PSIG Inlet, 75 PSIG No Flow Secondary Setting, and 10 PSIG Pressure Drop.



BOLD ITEMS ARE MOST POPULAR.







MARNING

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.

R255 Regulator Kits & Accessories

Gauges – 60 PSIG (0 to 4.1 bar)	K4520N14160
Service Kit – Relieving Non-Relieving	
Springs – 1 to 60 PSIG Range 2 to 125 PSIG Range 5 to 250 PSIG Range	C10A1308
Mounting Bracket Kit Port Block Kit (1-1/2" NPT Ports)	

Specifications

Gauge Ports Tw (Can be used as additional High Flow 1/4 Inch Outlet F	
Port Threads	3/4", 1"
Primary Pressure Rating – Maximum Primary Pressure250 PSI	G (17.2 bar)
Temperature Rating32°F to 175°F (0	0°C to 80°C)
Weight – 3/4 Inch 4. 1 Inch 4.	

materiale or construction	
Adjusting Stem	Steel
Body	Aluminum
Bonnet	Aluminum
Knob	Plastic
Piston	Plastic
Poppet Assembly	Brass
Seals	Nitrile
Springs: Poppet & Control	Steel



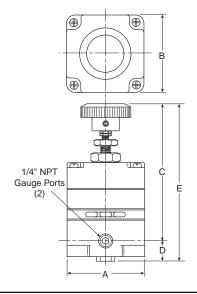
R210 / R220 Series

R210 / R220 High Precision Regulator



Features

- Accurate Pressure Regulation Controls Output Pressure to within 0.1% Accuracy
- Multi-Stage Regulation for Maximum Control and Stability
- Two Full Flow Gauge Ports
- Super Sensitive Relief. Downstream Pressure Buildup, Down to 0.005 PSIG Above the Set Pressure, is Automatically Vented through Internal Relief Valve
- R220 has High Exhaust Relief Capacity



R210 / R220 Regulator Dimensions				
Α	В	С	D	
2.06	4.35	3.82	0.53	
(52)	(110)	(97)	(13.5)	

inches (mm)



The R210 / R220 are high precision,

This pressure controller provides the

repeatability available and is ideal for

applications that call for the utmost in

control and maximum stability under

A stainless steel measuring capsule is

used as a sensing element to activate the high gain servo balanced control

mechanism in which the main valve is

controlled by a pilot valve. This allows

for greater accuracy and eliminates many of the problems associated with

conventional regulators using range

variable operating conditions.

highest level of regulation accuracy and

multi-stage pressure regulators.

Applications

The R210 and R220 regulators are well suited for any process that requires very precise regulation of air pressure in pipes and vessels. These regulators are often used, but not limited to the following applications:

- Air Gauging
- Gas Mixing
- · Calibration Standards
- Air Hoists
- Web Tensioning
- · Gate Actuators
- Roll Loading
- Valve Operators
- Cylinder Loading

Ordering Information

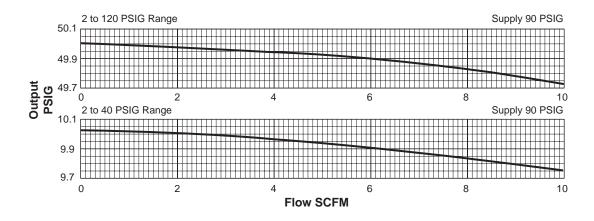
springs and diaphragms.

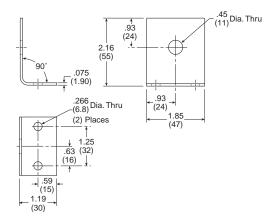
	Reduced Pressure Range (PSIG)			ge (PSIG)
Relieving		2 to 40	2 to 120	2 to 120 High Relief
In / Out Ports	1/4"	R210-02A	R210-02C	R220-02C



High Precision Regulators

Technical Information





Mounting Bracket: 446-707-045

MARNING

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

CAUTION:

Operating Pressure Range:

PRIMARY - Maximum

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.

PSIG

150

bar

10.34

R210 / R220 Regulator Kits & Accessories

3	
Mounting Bracket Kits -	
Pipe Mounting (Pair)	SA200YW57
Right Angle Mounting	446-707-045
Service Kits –	
2-40 PSIG	RKR210A*
2-120 PSIG	RKR210C*
2-120 PSIG (High Relieving)	RKR220C*
* Parts in Kit: Diaphragms, Gasket, Bleed Orifice	
Specifications	

Specification	าร
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(Equals Bleed Rate plus other consumption)
Total Air Consumption
Effect of Supply Pressure Variation of 25 PSIG (1.7 bar) on Outlet: Less than 0.005 PSIG (0.0003 bar)
Exhaust (Relief) Capacity –

Constant Bleed RateLess than 0.08 SCFM (0.15m³/hr)

At 5	6 PSIG (0.34 bar) above 20 P	SIG (1.38 bar) Setpoint	
S	tandard Model	3 SCFM	(3.4m ³ /hr)
Н	ligh-Relief Model	11 SCFN	/ (17m³/hr)

Flow Capacity -

At 100 PSIG (6.89 par) Supply,		
20 PSIG (1.38 bar) Outlet	14 SCFM (25m ³ /hr)

Gauge Ports	1/4" NPTF
(Can be use	ed as additional full flow 1/4" outlet ports)

SECONDARY – Sp 40 PSIG	oring Pressure Minimum	2	0.14
40 F3IG	Maximum	40	2.76
120 PSIG	Minimum	2	0.14
120 P3IG	Maximum	120	8.27
Operating Temper * Temperatures be			(0°F* to 150°F)
Repeatability / Se	nsitivity	0.005 PSI Inches of Water	
Weight			1.4 lb (0.64 kg)
Materials of	Construc	tion	
Adjusting Stem &	Capsule		Stainless Steel
Body			Zinc
Control Knob			
Diaphragm(s)			Buna-N
Seals			Buna-N
Springs			Stainless Steel
Valve Poppet			
• • • • • • • • • • • • • • • • • • • •			

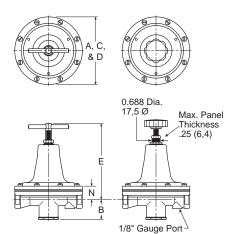


R216 Precision Regulators



Features

- High Flow Performance Featuring Rugged Design for the Most Demanding Applications
- Ideal for Those Installations Calling for Constant Pressure with Wide Variation in Flow
- Diaphragm Operated with Large Surface Area and Aspirator for Quick and Precise Regulation
- Heavy Duty Tee Handle Adjustment
- Panel Mount Version Available
- High Flow: 1/4" & 3/8" 40 SCFM§



Port Size	NPT Relieving	BSPP Relieving	
Tee Handle, Without Gauge 0-20 PSIG Reduced Pressure			
1/4"	R216-02F	R216G02F	
3/8"	R216-03F	R216G03F	
Hand Wheel Knob, Without Gauge 0-20 PSIG Reduced Pressure			
1/4"	R216-02FP	R216G02FP	
3/8"	R216-03FP	R216G03FP	

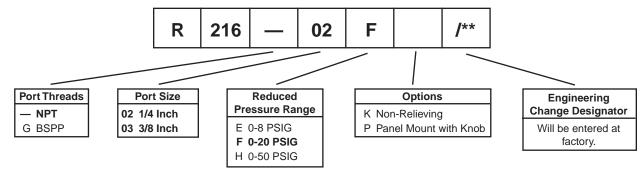
Bold Items are Most Popular.

For other models refer to ordering information below.

R216 Regulator Dimensions					
Α	В	С	D	E	N
R216-	R216-02F, R216-03F				
4.25 (108)	1.24 (31.6)	4.25 (108)	4.25 (108)	4.78 (121)	0.85 (21.5)
R216-02FP, R216-03FP					
4.25 (108)	1.24 (31.6)	4.25 (108)	4.25 (108)	4.78 (121)	0.85 (21.5)

inches (mm)

Ordering Information



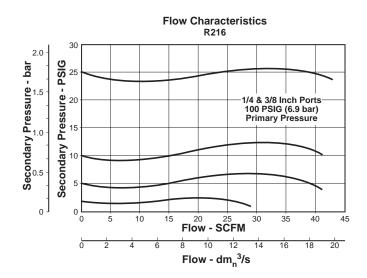
BOLD ITEMS ARE MOST POPULAR.



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

Precision Regulators

Technical Information



MARNING

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.

R216 Regulator Kits & Accessories

Round Plastic Knob118Y51	
Panel Mount Conversion Kit (Spring Cage, Knob, Hardware)	
Repair Kits –	
Non-Relieving Diaphragm, Valve Assembly (1/4", 3/8")RK216KY	
Relieving Diaphragm, Valve Assembly (1/4", 3/8")RK216Y	

Specifications

Gauge Port (1)	1/8 Inch
Port Threads	1/4, 3/8 Inch
Reduced Pressure Range	5 to 20 PSIG (0.03 to 1.4 bar)
Supply Pressure	
Temperature Rating	40°F to 125°F (4.4°C to 52°C)
Weight	2.2 lb. (1.00 kg) / Unit
	18 lb. (8.16 kg) / 8-Unit Master Pack

Body, Spring Cage	Zinc
Bottom Plug	Brass
Seals	Buna N



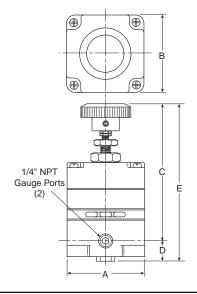
R210 / R220 Series

R210 / R220 High Precision Regulator



Features

- Accurate Pressure Regulation Controls Output Pressure to within 0.1% Accuracy
- Multi-Stage Regulation for Maximum Control and Stability
- Two Full Flow Gauge Ports
- Super Sensitive Relief. Downstream Pressure Buildup, Down to 0.005 PSIG Above the Set Pressure, is Automatically Vented through Internal Relief Valve
- R220 has High Exhaust Relief Capacity



R210 / R220 Regulator Dimensions			
Α	В	С	D
2.06	4.35	3.82	0.53
(52)	(110)	(97)	(13.5)

inches (mm)



The R210 / R220 are high precision,

This pressure controller provides the

repeatability available and is ideal for

applications that call for the utmost in

control and maximum stability under

A stainless steel measuring capsule is

used as a sensing element to activate the high gain servo balanced control

mechanism in which the main valve is

controlled by a pilot valve. This allows

for greater accuracy and eliminates many of the problems associated with

conventional regulators using range

variable operating conditions.

highest level of regulation accuracy and

multi-stage pressure regulators.

Applications

The R210 and R220 regulators are well suited for any process that requires very precise regulation of air pressure in pipes and vessels. These regulators are often used, but not limited to the following applications:

- Air Gauging
- Gas Mixing
- · Calibration Standards
- Air Hoists
- Web Tensioning
- · Gate Actuators
- Roll Loading
- Valve Operators
- Cylinder Loading

Ordering Information

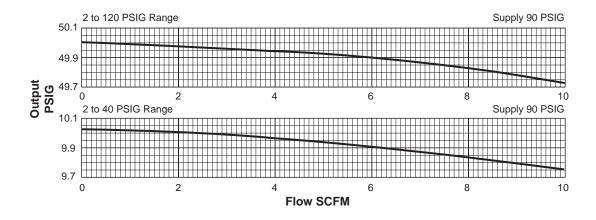
springs and diaphragms.

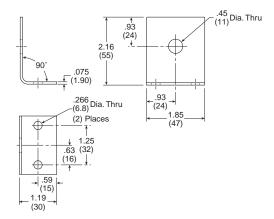
	Reduced Pressure Range (PSIG)			
Relieving	2 to 40 2 to 120 2 to 120 High Relief			
In / Out Ports	1/4"	R210-02A	R210-02C	R220-02C



High Precision Regulators

Technical Information





Mounting Bracket: 446-707-045

⚠ 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.

R210 / R220 Regulator Kits & Accessories

Mounting Bracket Kits -	
Pipe Mounting (Pair)	SA200YW57
Right Angle Mounting	446-707-045
Service Kits –	
2-40 PSIG	RKR210A*
2-120 PSIG	RKR210C*
2-120 PSIG (High Relieving)	RKR220C*
* Parts in Kit: Diaphragms, Gasket	Bleed Orifice
Specifications	
Comptent Discal Date	Lana than 0.00 CCEM (0.45 m)

opecinications		
Constant Bleed Rate	Less than 0.08 SCFM (0.15m³/hr)	
(Equals Bleed Rate plus other consumption)		
Total Air Consumption		

Effect of Supply Pressure Variation of 25 PSIG (1.7 bar) on Outlet: Less than 0.005 PSIG (0.0003 bar)

Exhaust (Relief) Capacity –	
At 5 PSIG (0.34 bar) above 20 PSIG (1	.38 bar) Setpoint
Standard Model	3 SCFM (3.4m ³ /hr)
High-Relief Model	11 SCFM (17m ³ /hr)

Flow Capacity –
At 100 PSIG (6.89 bar) Supply,
20 PSIG (1.38 bar) Outlet
Gauge Ports

(Can be used as additional full flow 1/4" outlet ports)

Operating Pressure Range:		PSIG	bar
PRIMARY – Maximum		150	10.34
SECONDARY -	Spring Pressure		
40 PSIG	Minimum	2	0.14
	Maximum	40	2.76
120 PSIG	Minimum	2	0.14
	Maximum	120	8.27
Operating Temperature Range18°C * to 65°C (0°F* to 150°F)			

* Temperatures below 0°C (32°F) require moisture free air. **Repeatability / Sensitivity**0.005 PSIG (0.0003 bar)

Stainless Steel
Zinc
Plastic
Buna-N
Buna-N
Stainless Steel
Stainless Steel



R119 Standard Regulators



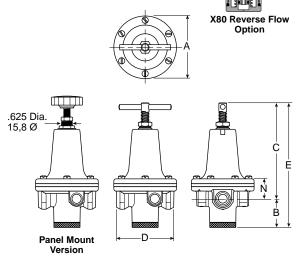
Features

· High Flow Performance Featuring Rugged Design for the Most **Demanding Applications**

(Revised 10-07-08)

- · Ideal for Those Installations Calling for Constant Pressure with Wide Variation
- Diaphragm Operated Design with Balanced Poppet Design for Quick and Accurate Regulation
- · Secondary Aspiration Plus Balanced Poppet Provides Quick Response and Accurate Pressure Regulation
- Heavy Duty Tee Handle Adjustment
- Reverse Flow Version Available
- Panel Mount Version Available
- High Flow: 1/4" 100 SCFM§ 3/8" - 110 SCFM§

1/2" - 150 SCFM§



Port	NPT	BSPP		
Size	Relieving	Relieving		
Without Ga	uge 0-125 PSIG Reduced P	ressure		
1/4"	R119-02C	R119G02C		
3/8"	R119-03C	R119G03C		
1/2"	R119-04C	R119G04C		
With Gauge 0-125 PSIG Reduced Pressure				
1/4"	R119-02CG			
3/8"	R119-03CG	_		
1/2"	R119-04CG	_		

R119 Regulator Dimensions					
Α	В	С	D	E	N
R119-02C, R119-03C					
3.00 (76)	1.38 (35)	4.60 (117)	2.74 (705)	5.98 (152)	0.96 (24)
R119-04C					
3.56 (90)	1.56 (40)	5.20 (132)	3.25 (83)	6.76 (172)	1.27 (32)
inches					

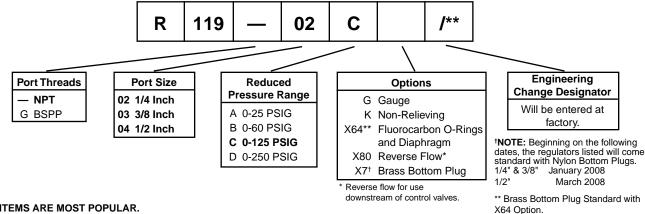
(mm)

Bold Items are Most Popular.

For other models refer to ordering information below.

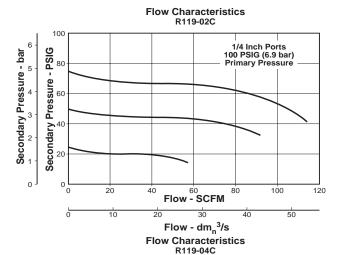
§ SCFM = Standard cubic feet per minute at 100 PSIG inlet, 75 PSIG no flow secondary setting, and 20 PSIG pressure drop.

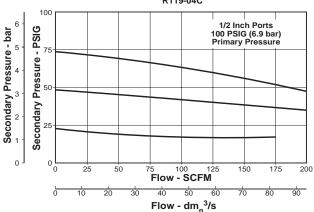
Ordering Information

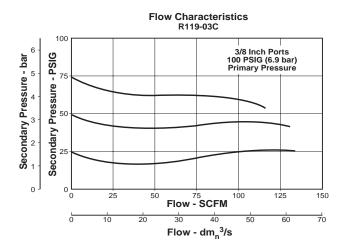












MARNING

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.

R119 Regulator Kits & Accessories

Gauges –
2" Dial Size, 1/4" Back Connection 0 to 60 PSIG (0 to 400 kPa)
2" Dial Size, 1/4" Back Connection 0 to 160 PSIG (0 to 1100 kPa)
2" Dial Size, 1/4" Back Connection 0 to 300 PSIG (0 to 2068 kPa)
Mounting Bracket Kit –
1/4", 3/8"SA15Y57 1/2"18A57
Panel Mount Conversion Kit –
1/4", 3/8" 4202 1/2" 4204
Repair Kits –
Non-Relieving Diaphragm, Valve Assembly (1/4", 3/8"; All PSIG)RK118Y
Relieving Diaphragm, Valve Assembly (1/4", 3/8"; All PSIG)RK119Y
Non-Relieving Diaphragm, Valve Assembly (1/2"; 25, 60, 125 PSIG)RK118A
Non-Relieving Diaphragm, Valve Assembly (1/2"; 250 PSIG)RK118A250
Relieving Diaphragm, Valve Assembly (1/2"; 25, 60, 125 PSIG)RK119A

Relieving Diaphragm,	
Valve Assembly (1/2"; 250 PSIG)	RK119A250
For Fluorocarbon Repair Kits, add X	(64 to Kit Number suffix

Specifications

Gauge Ports (2)	1/4 Inch
Port Threads	1/4, 3/8, 1/2 Inch
Reduced Pressure Range .	2 to 125 PSIG (0.15 to 8.5 bar)
Supply Pressure	300 PSIG Maximum (20.4 bar)
Temperature Rating	40°F to 125°F (4.4°C to 52°C)
Weight -	
R119-02, R119-03	1.8 lb. (0.82 kg) / Unit
	26 lb. (11.79 kg) / 12-Unit Master Pack
R119-04	
	27 lb. (12.25 kg) / 8-Unit Master Pack

Adjusting Screw, Springs	Steel
Body, Spring Cage	Zinc
Bottom Plug	Nylon
Innervalve	Brass
Seals	Buna N



R105 Regulator

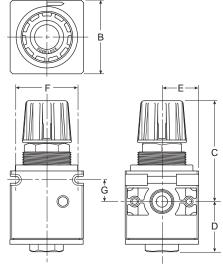


Features

- Connects to Other QUBE Units Using Just Screws and O-rings (Included)
- Integral Mounting Slots Eliminate Need for Mounting Brackets
- Diaphragm Operated Design with Balanced Poppet Design for Quick and Accurate Regulation
- Panel Mountable

High Flow: 1/2" - 150 SCFM§

3/4" - 150 SCFM§



Port NPT		BSPP			
Size	Relieving	Relieving			
Witho	Without Gauge 0-125 PSIG Reduced Pressure				
1/2"	R105-04C	R105G04C			
3/4"	R105-06C	R105G06C			
With (With Gauge 0-125 PSIG Reduced Pressure				
1/2"	R105-04CG	_			
3/4"	R105-06CG	_			

R105 Regulator Dimensions								
A* A† B C D E F* F† G								G
2.69 3.03 2.69 3.75 1.81 1.35 2.30 2.55 0.81 (68.3) (77.0) (68.3) (95.4) (46.1) (34.1) (58.3) (64.8) (20.6)								

Inches (mm)

- * 3/8 and 1/2 inch ports
- † 3/4 inch ports

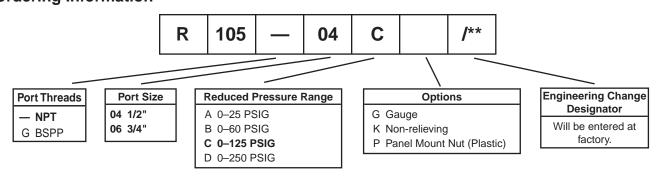
NOTE: 1.75 Dia. (44mm) hole required for panel mounting.

Bold Items are Most Popular.

For other models refer to ordering information below.

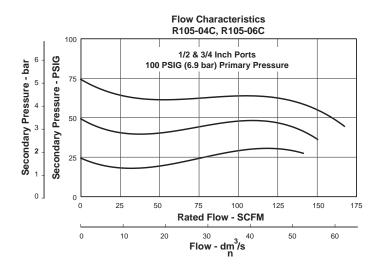
§ SCFM = Standard Cubic Feet Per Minute at 100 PSIG Inlet, 75 PSIG No Flow Secondary Setting, and 20 PSIG Pressure Drop.

Ordering Information



BOLD ITEMS ARE MOST POPULAR.





⚠ 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.

R105 Regulator Kits & Accessories

Cage Kit –
Cage Assembly with KnobCKR105
Control Knob
Gauges – 2" Dial Size, 1/4" Back Connection 0 to 60 PSIG (0 to 4 bar)
2" Dial Size, 1/4" Back Connection 0 to 160 PSIG (0 to 11 bar)
2" Dial Size, 1/4" Back Connection 0 to 300 PSIG (0 to 20,7 bar)
Panel Mounting Bracket Kit (Bonnet Threads)SAR10Y57
Face Mounting Bracket Kit (See Page A66)SAR105Y57
Panel Mount Nut –
PlasticR10X51-P
AluminumR10X51-A
Repair Kits – Non-Relieving Diaphragm, Valve Assembly

Specifications

Supply Pressure	300 PSIG Max. (20,4 bar)
Temperature Rating	40°F to 150°F (4.4°C to 65.5°C)
Weight	1.64 lbs. (.74 kg) / unit
Materials of Construct	ion
Adjusting Knob	Acetal
Body	Aluminum
Bottom Plug	Zinc
Cage	Glass-Filled Acetal Plastic
Elastomors	Rupa N

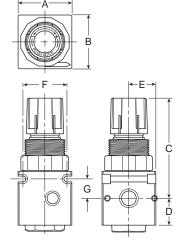


R35 Regulator



Features

- Compact Size Allows Greater Design Flexibility
- Nearly Double the Flow Capacity of Standard Miniature Regulators; Reduces Costly Pressure Drop
- Connects to Other QUBE Units Using Just Screws and O-rings (Included)
- Integral Mounting Slots Eliminate Need for Mounting Brackets
- Piston Operated for High Flow and Low Pressure Drop
- Panel Mountable
- High Flow: 1/8" 30 SCFM§ 1/4" - 40 SCFM§



Port	NPT	BSPP				
Size	Relieving	Relieving				
Witho	Without Gauge 0-125 PSIG Reduced Pressure					
1/8"	R35-01C	R35G01C				
1/4"	R35-02C	R35G02C				
With	With Gauge 0-125 PSIG Reduced Pressure					
1/8"	R35-01CG	_				
1/4"	R35-02CG	_				

R35 Regulator Dimensions						
A B C D E F G						
1.59						0.58
(40.6)	(40.6)	(75.7)	(28.2)	(20.3)	(33.3)	(14.6)

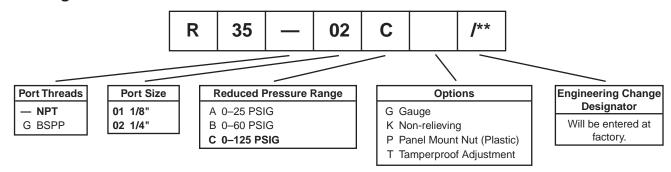
Inches (mm)

NOTE: 1.25 Dia. (32mm) hole required for panel mounting.

Bold Items are Most Popular.

For other models refer to ordering information below.

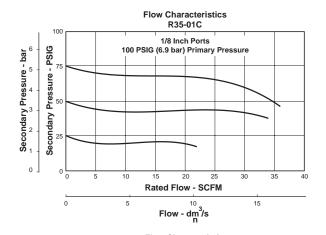
Ordering Information

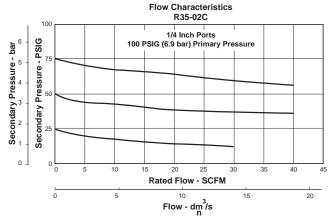


BOLD ITEMS ARE MOST POPULAR.



[§] SCFM = Standard Cubic Feet Per Minute at 100 PSIG Inlet, 75 PSIG No Flow Secondary Setting, and 20 PSIG Pressure Drop.





MARNING

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.

R35 Regulator Kits & Accessories

Cage Kits – A Range
Control Knob
Gauges – 1-1/2" Dial Size, 1/8" Back Connection 0 to 60 PSIG (0 to 4 bar)
1-1/2" Dial Size, 1/8" Back Connection 0 to 160 PSIG (0 to 11 bar) K4515N18160
Panel Mounting Bracket Kit (Bonnet Threads) SA161X57
Face Mounting Bracket Kit (See Page A66)SAR35Y57
Panel Mount Nut – Plastic
Repair Kits – Non-Relieving Piston, Valve Assembly

Specifications

Gauge Ports (2)	1/8 Inch
Port Threads	1/8 & 1/4 Inch
Supply Pressure	300 PSIG Max. (20,4 bar)
Temperature Rating	40°F to 125°F (4.4°C to 52°C)
Weight	

Adjusting Knob	Acetal
Body	Zinc
Bottom Plug	Glass-Filled Acetal
Cage	Plastic
Elastomers	Buna N



R230 High Flow Precision Regulator

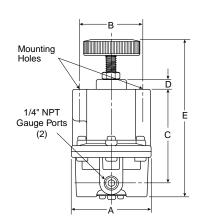






Features

- · Adjusting Knob.
- Diaphragm Design for Good Repeatability, Response and Sensitivity
- · Balanced Poppet
- Two Full Flow Gauge Ports
- Precise Regulation. Will Sense a Decrease in Downstream Pressure as Small as 1/4" of Water Column (0.010 PSIG)
- High Fow Capacity. Flows of 80 SCFM Attainable with Minimal Drop
- Stable Output. Dampening Action of Aspiration Tube makes Regulator Insensitive to Changes in Flow
- On-line Maintenance. Can be Serviced Without Removal of Air Line



The R230 is designed for applications that require high flow capacity and accurate process control. A poppet valve which is balanced by utilizing a rolling diaphragm, insures a constant output pressure even during wide supply pressure variations. Stability of regulated pressure is maintained under varying flow conditions through the use of an aspirator tube which adjusts the air supply in accordance with the flow velocity.

Applications

The R230 regulators are an ideal choice for any application that calls for accurately maintained output pressure under high flow conditions. This includes, but is not limited to such applications as:

Test Equipment

- · Gas Mixing
- · Valve Operators
- Positioning Cylinders
- Laboratory Equipment
- · Web Tensioning
- · Clutch & Brake Controls
- Roll Loading
- Test Panels
- Actuators

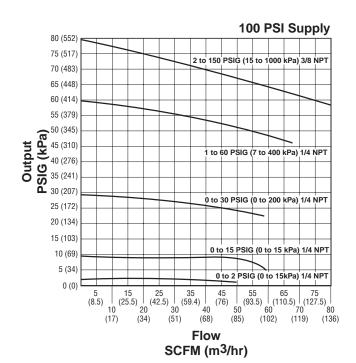
R230 Regulator Dimensions						
A B C D E						
3.00	0.38	3.40	6.06	2.25		
(76)	(10)	(86)	(154)	(57)		

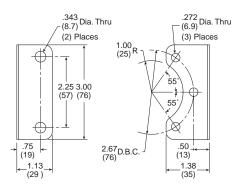
inches (mm)

Ordering Information

	Reduced Pressure Range (PSIG)				
Relieving	Port Size	0 to 2	0 to 30	0 to 60	0 to 150
In / Out Borto	1/4"	R230-02E	R230-02B	R230-02C	R230-02D
In / Out Ports	3/8"	N/A	R230-03B	R230-03C	R230-03D







Mounting Bracket: 446-707-025

⚠ 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.

R230 Regulator Kits & Accessories

Mounting Bracket Kit	446-707-025
Service Kits – Relieving	
0 to 2 PSIG	RKR230E*
0 to 30 PSIG	RKR230B*
0 to 60 PSIG	RKR230C*
0 to 150 PSIG	RKR230D*
* Parts in Kit: Diaphragm, Poppet, O-ring	

Specifications

Constant Bleed Rate	1.0 to	12.5 SCFH
(Depending upon output pressure)		

Gauge Ports Two Ports 1/4" (Can be used as additional Full Flow 1/4 Inch Outlet Ports)

Effect of Supply Pressure Variation –

Less than 0.1 PSIG for 100 PSIG (6.89 bar) change

Exhaust (Relief) Capacity -

4 SCFM with downstream pressure 5 PSIG above set pressure. ... Exhaust commences at 0.01 PSIG above set pressure.

Flow Capacity -

At 100 PSIG (6.89 bar) Supply,

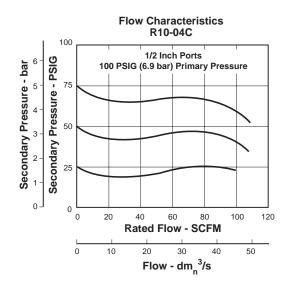
80 PSIG (5.5 bar) Outlet......80 SCFM (37.8 dm²/s)

Operating Temperature Range-40°C to 71°C (-40°F to 160°F)

Operating Pressure Range PRIMARY – Maximum	_	PSIG 250	
Port Threads			1/4'
Exhaust (Relief) Capacity (Downstream pressure 5 F			4.0 SCFN
Repeatability / Sensitivity Inches of Water Column =		10 PSIG (±0	.00068 bar)
Response The valve will open to full			
Weight		1 lb. 10 o	z. (0.74 kg)
Materials of Cons	truction		
Adjusting Stem & Spring			Steel
Biased Spring		Stai	nless Steel
Body, Bonnet			. Aluminum
Control Knob			Plastic
Diaphragm	Buna-N Elaston	ner and Polye	ester Fabric
Seals			Buna-N
Valve Poppet			Brass
Valve Poppet Seat			Buna-N



Flow Characteristics R10-02C / R10-03C 100 1/4 & 3/8 Inch Ports 100 PSIG (6.9 bar) Primary Pressure 100 PSIG (6.9 bar) Primary Pressure 100 PSIG (6.9 bar) Primary Pressure Rated Flow - SCFM 100 Flow - dm 3/s



MARNING

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)	. K4520N14060
2" Dial Size, 1/4" Back Connection 0 to 160 PSIG (0 to 1100 kPa)	. K4520N14160
2" Dial Size, 1/4" Back Connection 0 to 300 PSIG (0 to 2068 kPa)	. K4520N14300
Mounting Bracket Kit	SAR10Y57
Panel Mount Nut –	
Plastic	
PlasticAluminum	
Aluminum Repair Kits – Non-Relieving	R10X51-A
Aluminum Repair Kits – Non-Relieving Non-Relieving (Viton)	R10X51-A RKR10KY RKR10KYX64
Aluminum	R10X51-A RKR10KY RKR10KYX64 RKR10Y
Aluminum Repair Kits – Non-Relieving Non-Relieving (Viton)	R10X51-A RKR10KY RKR10KYX64 RKR10Y
Aluminum	R10X51-ARKR10KYRKR10KYX64RKR10YRKR10YX64
Aluminum	R10X51-ARKR10KYRKR10KYX64RKR10YRKR10YX64CKR10Y

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

Adjusting Knob –	
R10	Acetal
R11 (Tee Handle)	Steel
Body	Zinc
Bottom Plug	Nvlon
Optional	,
'	
Elastomers	Buna N
Spring Case –	
R10	Acetal
R11	Zinc

