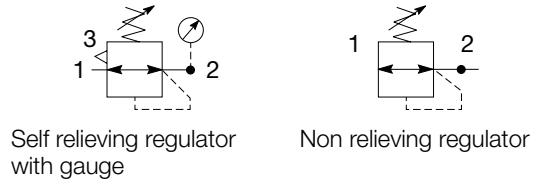


Global Air Preparation System

Mini Regulator - P31



Symbols



- Integral 1/4" ports (NPT, BSPP & BSPT)
- Robust but lightweight aluminum construction
- Secondary pressure ranges 0-2 bar (0-30 psig), 0-4 bar, (0-60 psig), 0-8 bar (0-125 psig), 0-17 bar (0-250 psig)
- Secondary aspiration plus balanced poppet provides quick response and accurate pressure regulation.
- Relieving & Non-relieving types
- Non-rising knob

Options:

P31R	A	9	2	B	N	N	P
Basic series Global modular mini regulator P31R	Engr level Current A	Thread type BSPP 1 BSPT 2 NPT 9	Port size 1/4" 2	Relief Relieving B Non-relieving N Reverse flow-relieving R	Mounting P Plastic panel mount nut		
				Adjustment range			
				With square gauge		With round gauge	
				psig	bar	Z	2 bar; 30 psig; 0.2 MPa
				1 = 30*	V = 2*	M	4 bar; 60 psig; 0.4 MPa
				3 = 60	S = 4	G	8 bar; 125 psig; 0.8 MPa
				5 = 125	T = 8	J [§]	17 bar; 250 psig; 1.7 MPa
				Without gauge			
						Y	2 bar; 30 psig; 0.2 MPa
						L	4 bar; 60 psig; 0.4 MPa
						N	8 bar; 125 psig; 0.8 MPa
						H [§]	17 bar; 250 psig; 1.7 MPa

* Unit comes with 0-4 bar or 0-60 psig gauge respectively.
 § Not available with poly bowl with bowl guard.

Bold items are most common.

Port size	Description	Order code†	Flow‡ dm ³ /s (scfm)	Max. bar (psig)	Height mm (inches)	Width mm (inches)	Depth mm (inches)
1/4"	8 bar (125 psig) relieving	P31RA92BNNP	30 (64)	20 (300)	100.1 (3.94)	40 (1.58)	40 (1.58)
1/4"	8 bar (125 psig) + gauge	P31RA92BN5P	30 (64)	20 (300)	100.1 (3.94)	40 (1.58)	64.3 (2.53)

† Standard part numbers shown in bold. For other models refer to Options chart above.

‡ Flow with 10 bar (145 psig) inlet pressure, 6.3 bar (91.3) psig) set pressure and 1 bar (14.5 psig) pressure drop.



Global Air Preparation System

Specifications

Flow capacity*	1/4	30 dm ³ /s (64 scfm)
Operating temperature†	-20°C to 65.5°C (-4°F to 150°F)	
Max. supply pressure	20 bar (300 psig)	
Adjusting range pressure	0-2 bar (30 psig) 0-4 bar (60 psig) 0-8 bar (125 psig) 0-17 bar (250 psig)	
Port size	BSPP / BSPT / NPT	1/4
Gauge port (2 ea.)**	BSPP / BSPT / NPT	1/8
Weight	0.17 kg (0.37 lbs)	

* Inlet pressure 10 bar (145 psig). Secondary pressure 6.3 bar (91.3 psig).

** Non-gauge option only.

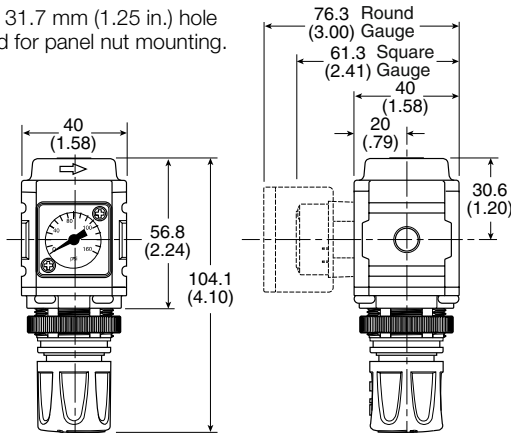
† Units with square gauges: -15°C to 65.5°C (5°F to 150°F)

Material Specifications

Body	Aluminum
Adjustment knob	Acetal
Body cap	ABS
Bonnet	PBT
Diaphragm assembly	Brass / Nitrile
Bottom plug	33% glass-filled nylon
Valve assembly	Brass / Nitrile
Springs	Steel
Seals	Nitrile
Panel nut	Acetal

Dimensions mm (inches)

NOTE: 31.7 mm (1.25 in.) hole required for panel nut mounting.



WARNING

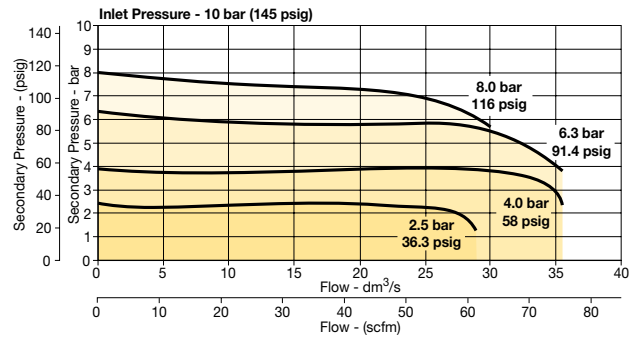
Product rupture can cause serious injury. Do not connect regulator to bottled gas. Do not exceed Maximum primary pressure rating.

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.

Flow Charts

1/4 Regulator



Repair and Service Kits

Regulator repair kit - relieving	P31KA00RB
Regulator repair kit - non-relieving	P31KA00RC
Panel mount nut - aluminum	P31KA00MM
Panel mount nut - plastic	P31KA00MP
Angle bracket (uses panel mount threads)	P31KB00MR
C-bracket (fits to body)	P31KA00MW
T-bracket with body connector	P31KA00MT
Body connector	P31KA00CB

Gauges

Square flush mount gauge

0-4 bar	K4511SCR04B
0-10 bar	K4511SCR11B
0-60 psig	K4511SCR060
0-150 psig	K4511SCR150

Square with adapter kit

0-4 bar	P6G-PR11040
0-10 bar	P6G-PR11100
0-60 psig	P6G-PR11P06
0-150 psig	P6G-PR11P15

1.00" Round 1/8" center back mount

0-60 psig / 0-4 bar	K4510N18060
0-160 psig / 0-11 bar	K4510N18160

40mm Round 1/8" center back mount

(Not for use with Common Port Regulators)

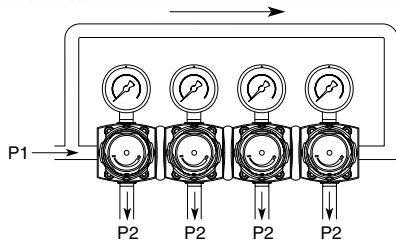
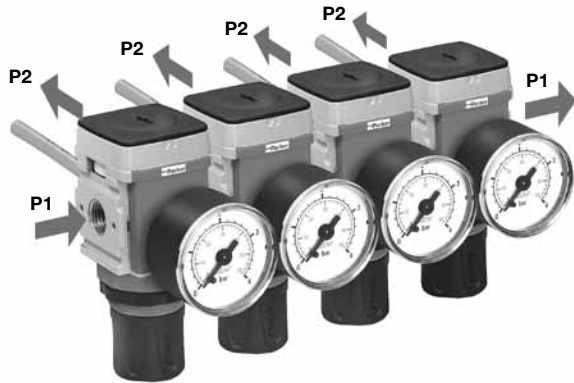
0-30 psig / 0-2 bar	K4515N18030
0-60 psig / 0-4 bar	K4515N18060
0-160 psig / 0-11 bar	K4515N18160

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

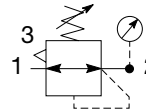


Global Air Preparation System

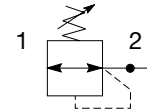
Mini Common - P1 Regulator - P31



Symbols



Self relieving regulator with gauge



Non relieving regulator

- Manifold style regulator with line pressure on both sides.
- Pressure output is at front or rear.
- Integral 1/4" ports (NPT, BSPP & BSPT)
- Robust construction
- Secondary pressure ranges 0-2 bar (0-30 psig), 0-4 bar, (0-60 psig), 0-8 bar (0-125 psig), 0-17 bar (0-250 psig)
- Secondary aspiration plus balanced poppet provides quick response and accurate pressure regulation
- Relieving & Non-relieving types
- Non-rising knob

Options:

P31H	A	9	2	B	N	N	P																																								
Basic series Global modular mini common regulator P31H	Engr level Current A	Thread type BSPP 1 BSPT 2 NPT 9	Port size 1/4 2	Relief Relieving B Non-relieving N	Mounting P Plastic panel mount nut			Adjustment range																																							
						<table border="1"> <thead> <tr> <th colspan="2">With square gauge</th> <th colspan="2">With round gauge</th> </tr> <tr> <th>psig</th> <th>bar</th> <th>Z</th> <th></th> </tr> </thead> <tbody> <tr> <td>1 = 30*</td> <td>V = 2*</td> <td>M</td> <td>4 bar; 60 psig; 0.4 MPa</td> </tr> <tr> <td>3 = 60</td> <td>S = 4</td> <td>G</td> <td>8 bar; 125 psig; 0.8 MPa</td> </tr> <tr> <td>5 = 125</td> <td>T = 8</td> <td>J[§]</td> <td>17 bar; 250 psig; 1.7 MPa</td> </tr> <tr> <td colspan="4">Without gauge</td> </tr> <tr> <td></td> <td></td> <td>Y</td> <td>2 bar; 30 psig; 0.2 MPa</td> </tr> <tr> <td></td> <td></td> <td>L</td> <td>4 bar; 60 psig; 0.4 MPa</td> </tr> <tr> <td></td> <td></td> <td>N</td> <td>8 bar; 125 psig; 0.8 MPa</td> </tr> <tr> <td></td> <td></td> <td>H[§]</td> <td>17 bar; 250 psig; 1.7 MPa</td> </tr> </tbody> </table>		With square gauge		With round gauge		psig	bar	Z		1 = 30*	V = 2*	M	4 bar; 60 psig; 0.4 MPa	3 = 60	S = 4	G	8 bar; 125 psig; 0.8 MPa	5 = 125	T = 8	J [§]	17 bar; 250 psig; 1.7 MPa	Without gauge						Y	2 bar; 30 psig; 0.2 MPa			L	4 bar; 60 psig; 0.4 MPa			N	8 bar; 125 psig; 0.8 MPa			H [§]	17 bar; 250 psig; 1.7 MPa
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Bold items are most common.

* Unit comes with 0-4 bar or 0-60 psig gauge respectively.
 § Not available with poly bowl with bowl guard.

Port size	Description	Order code [†]	Flow [‡] dm ³ /s (scfm)	Max. bar (psig)	Height mm (inches)	Width mm (inches)	Depth mm (inches)
1/4"	8 bar (125 psig) relieving	P31HA92BNNP	18 (38)	20 (300)	100.1 (3.94)	40 (1.58)	40 (1.58)

[†] Standard part numbers shown in bold. For other models refer to Options chart above.

[‡] Flow with 10 bar (145 psig) inlet pressure, 6.3 bar (91.3 psig) set pressure and 1 bar (14.5 psig) pressure drop.



Global Air Preparation System

Specifications

Flow capacity*	1/4	18 dm ³ /s (38 scfm)
Operating temperature	-20°C to 65.5°C (-4°F to 150°F)	
Max. supply pressure	20 bar (300 psig)	
Adjusting range pressure	0-2 bar (30 psig) 0-4 bar (60 psig) 0-8 bar (125 psig) 0-17 bar (250 psig)	
P1 Port size (Inlet / Outlet)	BSPP / BSPT / NPT	1/4
P2 Regulated ports (2 ea.)	BSPP / BSPT / NPT	1/8
Weight	0.30 kg (0.66 lbs)	

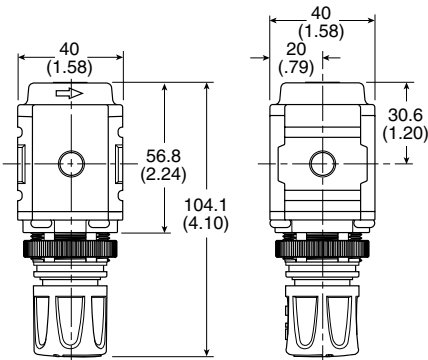
* Inlet pressure 10 bar (145 psig). Secondary pressure 6.3 bar (91.3 psig).

Materials of Construction

Body	Zinc
Adjustment knob	Acetal
Body cap	ABS
Bonnet	33% Glass-filled PBT
Diaphragm assembly	Brass / Nitrile
Bottom plug	33% Glass-filled nylon
Valve assembly	Brass / Nitrile

Dimensions mm (inches)

NOTE: 31.7 mm (1.25 in.) hole required for panel nut mounting.



WARNING

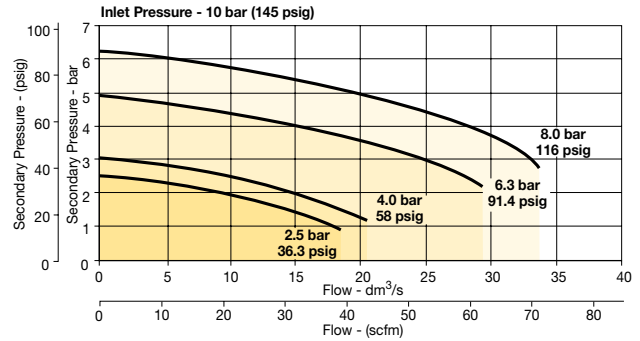
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Flow Charts

1/4 Common Regulator



Repair and Service Kits

Regulator repair kit - relieving	P31KA00RB
Regulator repair kit - non-relieving	P31KA00RC
Panel mount nut - aluminum	P31KA00MM
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Angle bracket (uses panel mount threads)	P31KB00MR
T-bracket with body connector	P31KA00MT
Body connector	P31KA00CB

Gauges

1.00" Round 1/8" center back mount

0-60 psig / 0-4 bar	K4510N18060
0-160 psig / 0-11 bar	K4510N18160

Square with adapter kit

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0-10 bar	P6G-PR11100
0-60 psig	P6G-PR11P06
0-150 psig	P6G-PR11P15

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

