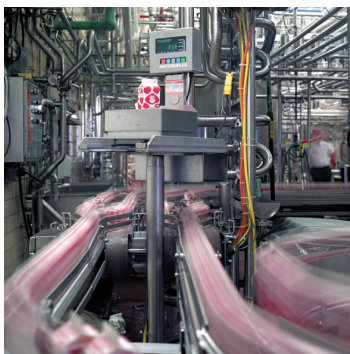




aerospace
climate control
electromechanical
filtration
fluid & gas handling
hydraulics
pneumatics
process control
sealing & shielding



Prep-Air® II

Miniature FRL Series

Catalogue PDE2591TCUK May 2020



ENGINEERING YOUR SUCCESS.

**CAUTION:**

Polycarbonate bowls and sight domes, being transparent and tough, are ideal for use with Filters and Lubricators. They are suitable for use in normal industrial environments, but should not be located in areas where they could be subjected to direct sunlight, an impact blow, nor temperatures outside of the rated range. As with most plastics, some chemicals can cause damage. Polycarbonate bowls and sight domes should not be exposed to chlorinated hydro-carbons, ketones, esters and certain alcohols. They should not be used in air systems where compressors are lubricated with fire-resistant fluids such as phosphate ester and di-ester types.

Metal bowls are recommended where ambient and/or media conditions are not compatible with polycarbonate bowls. Metal bowls resist the action of most such solvents, but should not be used where strong acids or bases are present or in salt laden atmospheres. Consult the factory for specific recommendations where these conditions exist.

TO CLEAN POLYCARBONATE BOWLS USE MILD SOAP AND WATER ONLY! DO NOT use cleansing agents such as acetone, benzene, carbon tetrachloride, gasoline, toluene, etc., which are damaging to this plastic. Metal bowl guards are recommended for all applications.

**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.

**WARNING**

FAILURE OR IMPROPER SELECTION OR IMPROPER USE OF THE PRODUCTS AND/OR SYSTEMS DESCRIBED HEREIN OR RELATED ITEMS CAN CAUSE DEATH, PERSONAL INJURY AND PROPERTY DAMAGE.

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The items described in this document are available for sale by Parker Hannifin Corporation, its subsidiaries or its authorized distributors. Any sale contract entered into by Parker will be governed by the provisions stated in Parker's standard terms and conditions of sale (copy available upon request).

Air Line Filters

 Series 14F 4 - 5

Air Line Coalescing Filters

 Series 10F 6 - 7

Air Line Regulators

 Series 14R..... 8 - 9

Air Line Filter / Regulators

 Series 14E 10 - 11

Air Line Lubricators

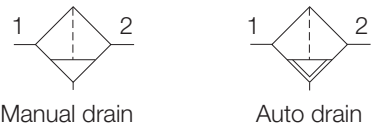
 Series 04L 12 - 13

Mounting Bracket Kits 14

14F Filters



Symbols



- Excellent water removal efficiency.
- Unique deflector plate that creates swirling of the air stream ensuring maximum water and dirt separation.
- 5 micron element standard.
- High Flow: 1/8" – 10 l/s[§]
1/4" – 11 l/s[§]

Options:

1

4

F

1

1

B

B

1

Port size	
1/8	0
1/4	1

Bowl type	
Twist drain	1
Automatic pulse drain	5

Element	
5µ element	B

Thread type	
NPT	Blank
BSPP	1

Note: Bold options are standard

Port size	Description	Order code	Max bar	Height mm	Width mm	Depth mm
G1/8	Twist drain with 5µ element - Poly bowl	14F01BB1	10.3	107	43	39
G1/8	Auto pulse drain - 5µ element - Poly bowl	14F05BB1	17.2	107	43	39
G1/4	Twist drain with 5µ element - Poly bowl	14F11BB1	10.3	107	43	39
G1/4	Auto pulse drain - 5µ element - Poly bowl	14F15BB1	17.2	107	43	39

[§] L/s = 6.2 bar inlet and 0.3 bar pressure drop.
[‡] For polycarbonate bowl see Caution on page 2.

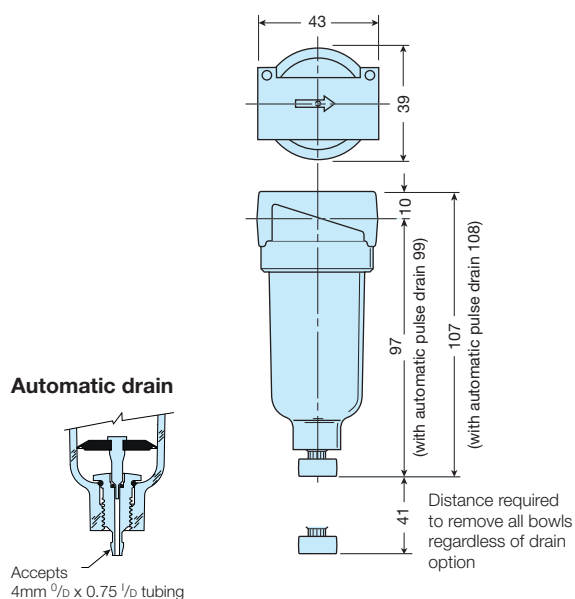
Specifications

Automatic pulse drain tube barb	4mm ^{OD} x 0.75 1/8
Bowl capacity	30 cm ³
Operating temperature	0°C to 52°C
Max supply pressure	Polycarbonate bowl 0 to 10.3 bar
	Automatic pulse drain 0.7 to 17.2 bar
Standard filtration	5 micron
Port size	G1/8 / G1/4
Weight	0.180 gm

Materials of Construction

Body	Zinc
Bowl - Transparent	Polycarbonate
Deflector, Element holder & Baffle	Plastic
Drains	Twist drain Body & Stem Seals Automatic pulse drain Piston & Seals Stem, Seat, Adaptor & Washers
	Plastic Nitrile Nitrile Aluminium
Filter elements 5 micron (standard)	Plastic
Seals	Nitrile

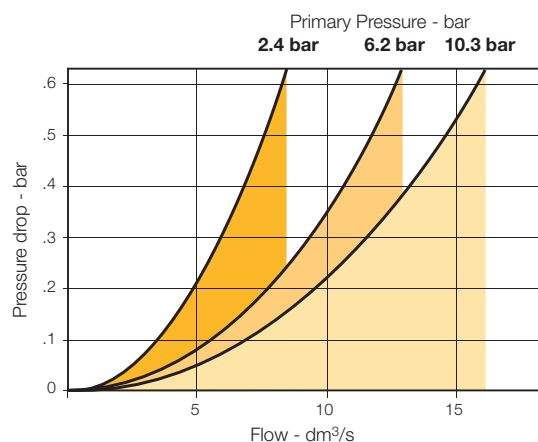
Dimensions



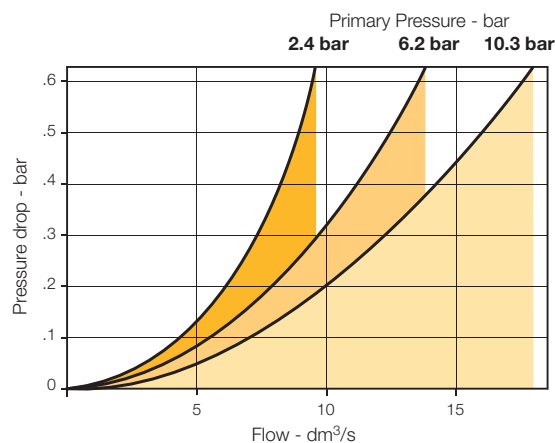
Flow Charts

5µ Filter

Flow Characteristics - 1/8 Inch Ports 14F01B*



Flow Characteristics - 1/4 Inch Ports 14F11B*



Accessories

Bowl kits, Poly bowl	Automatic pulse drain	PS408P
	Twist drain	PS404P
Filter element kits 5 micron		PS403P
Mounting bracket kit		PS417BP

10F Coalescing Filters



Symbol



- Removes liquid aerosols and sub-micron particles.
- Liquids gravitate to the bottom of the element and will not re-enter the airstream.
- Oil free air for critical applications, such as air gauging and pneumatic instrumentation and controls.
- 99.97% DOP efficiency.
- High Flow: Grade 6 Element
1/8" – 8 l/s[§]
1/4" – 9 l/s[§]

Options:

1

0

F

1

1

E

D

1

Port size	
1/8	0
1/4	1

Bowl type	
Twist drain	1
Automatic pulse drain	5

Element	
0.01µ element	E

Thread type	
NPT	Blank
BSPP	1

Note: Bold options are standard

Port size	Description	Order code	Max bar	Height mm	Width mm	Depth mm
G1/8	Twist drain with 0.01µ element - Poly bowl	10F01ED1	0.7	107	43	39.6
G1/8	Auto pulse drain - 0.01µ element - Poly bowl	10F05ED1	0.7	107	43	39.6
G1/4	Twist drain with 0.01µ element - Poly bowl	10F11ED1	0.7	107	43	39.6
G1/4	Auto pulse drain - 0.01µ element - Poly bowl	10F15ED1	0.7	107	43	39.6

[§] L/s = 6.2 bar inlet and 0.3 bar pressure drop.

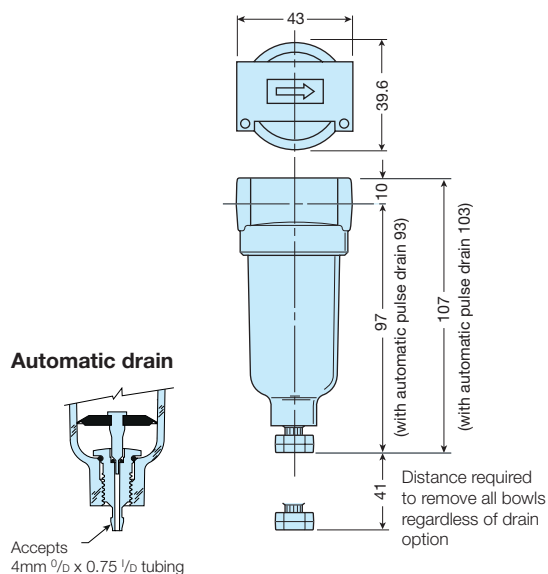
Specifications

Automatic pulse drain tube barb		4mm ^{OD} x 0.75 1/8
Bowl capacity		30 cm ³
Operation	Normal pressure drop	0.1 bar
	Maximum recommended pressure drop	0.7 bar
Operating temperature		0°C to 52°C
Max supply pressure	Polycarbonate bowl	0 to 10.3 bar
Standard filtration		0.01 micron
Port size		G1/8 / G1/4
Weight		0.180 gm

Materials of Construction

Body	Zinc		
Bowl - Transparent	Polycarbonate		
Drains	Twist drain	Body & Stem	Plastic
		Seals	Nitrile
	Automatic pulse drain	Piston & Seals	Nitrile
		Stem, Seat, Adaptor & Washers	Aluminium
Element holder	Plastic		
Filter element	Borosilicate & felt glass fibers 99.97% DOP efficiency		
Seals	Nitrile		

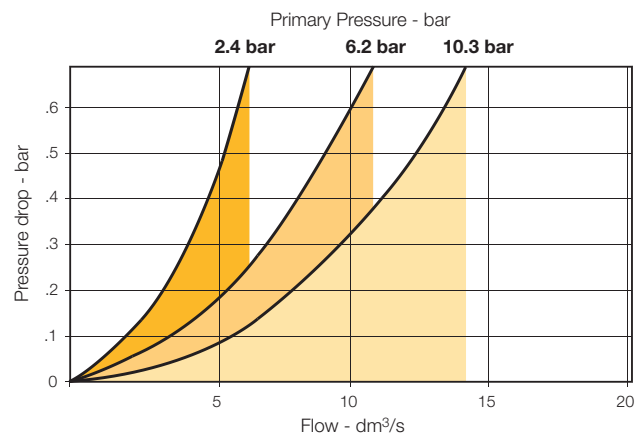
Dimensions



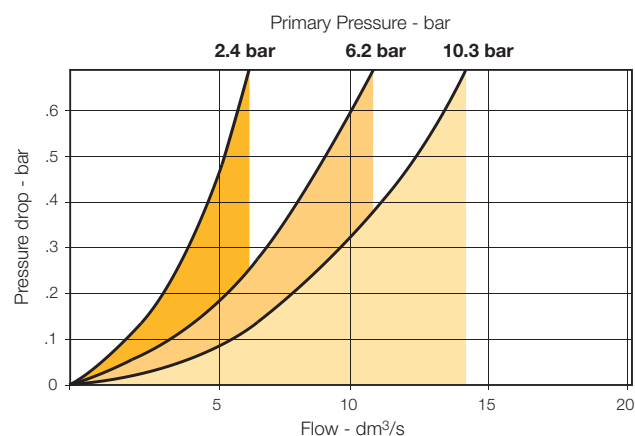
Flow Charts

Grade 6

Flow Characteristics - 1/8 Inch Ports 10F01E*



Flow Characteristics - 1/4 Inch Ports 10F11E*

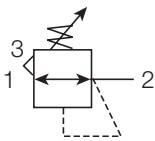


Accessories

Bowl kits, Poly bowl	Automatic pulse drain	PS408P
	Twist drain	PS404P
Filter element kits 0.01 micron		PS446P
Mounting bracket kit		PS417BP

14R Regulators

Symbol



- Unbalanced poppet standard.
- Solid control piston with lip seal for extended life.
- Non-rising adjusting knob.
- Compact, 73,2mm high by 42mm wide.
- High Flow: 1/8" – 6 l/s[§]
1/4" – 7 l/s[§]

Options:

1

4

R

1

13

F

C

1

Port size	
1/8" pipe	0
1/8" gauge port	
1/4" pipe	1
1/8" gauge port	

Pressure range	
Without gauge - Yellow knob	
2 bar	10
4 bar	11
8 bar	13

Relief	
Relieving	F
Non-relieving	G

Port type	
NPT	Blank
BSPP	1

Note: Bold options are standard

Port size	Description	Order code	Max bar	Height mm	Width mm	Depth mm
G1/8	8 bar - BSPP - without gauge	14R013FC1	20.7	73	42	40
G1/4	8 bar - BSPP - without gauge	14R113FC1	20.7	73	42	40

Note: 31mm dia. hole required for panel mounting.
[§] L/s = 6.9 bar inlet, 6.2 bar no flow secondary setting and 0.7 bar pressure drop.

Specifications

Gauge ports		G1/8
Port size		G1/8 / G1/4
Operating temperature		0°C to 52°C
Max supply pressure		0 to 20.7 bar
Secondary pressure range	Standard pressure	0 to 8 bar
	Medium pressure	0 to 4 bar
	Medium pressure	0 to 2 bar
Weight		140 gm

Materials of Construction

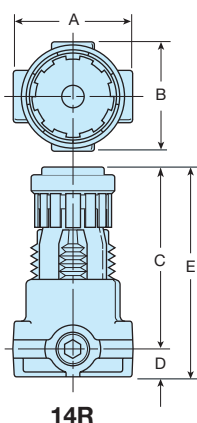
Adjusting nut	Brass
Adjusting stem & spring	Steel
Body	Zinc
Bonnet, Seat, Piston & Valve poppet	Plastic
Seals	Nitrile

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.

Dimensions



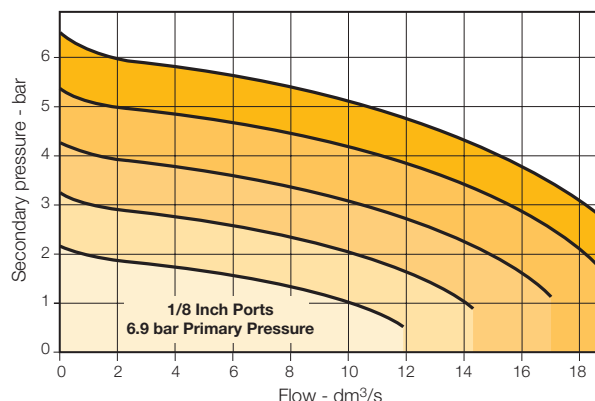
14R

14R Regulator Dimensions

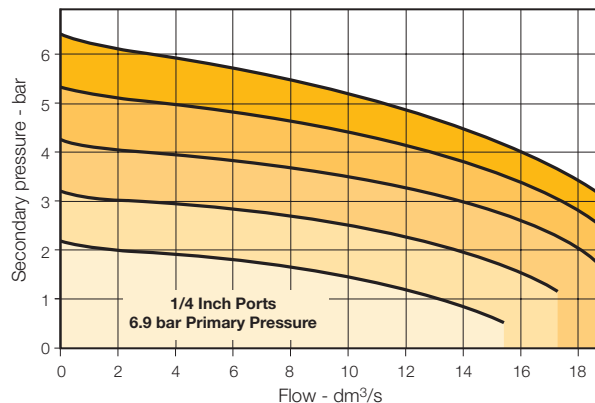
14R	A	B	C	D	E
	42	40	63,5	10	73
14R**L*	A	B	C	D	E
	1.65	1.56	2.28	0.38	2.68
14RM	A	B	C	D	E
	1.50	1.50	2.36	0.50	2.98
	F	G	H	J	
	1.188	0.594	0.325	0.725	

Flow Charts

**Relief and Flow Characteristics
 14R013F***



**Relief and Flow Characteristics
 14R113F***



Accessories

Bonnet assembly kit		L01369
Gauges	0 to 2 bar	P3D-KAB1AYN
	0 to 4 bar	P3D-KAB1ALN
	0 to 10 bar	P3D-KAB1ANN
Mounting bracket kit (Includes panel mount nut)		PS417BP
Panel mounts nuts	Plastic	P78652
	Metal	P01531
Service kits	Non-relieving	PS422P
	Relieving	PS423P

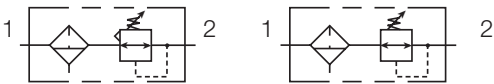
Warning

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

14E Filter / Regulators



Symbols



- Excellent water removal efficiency.
- Unbalanced poppet standard.
- Solid control piston for extended life.
- Space saving package offers both filter and regulator features in one integral unit.
- Non-rising adjustment knob.
- Two full flow 1/8" gauge ports.
- High Flow: 1/8" – 7 l/s[§]
1/4" – 8 l/s[§]

Options:

1

4

E

1

1

B

13

F

C

1

Port size	
1/8	0
1/4	1

Bowl type	
Twist drain	1
Automatic pulse drain	5

Element	
5µ element	E

Relief	
Relieving	F
Non-relieving	G

Port type	
NPT	Blank
BSPP	1

Pressure range	
Without gauge - Yellow knob	
2 bar	10
4 bar	11
8 bar	13

Note: Bold options are standard

Port size	Description	Order code	Max bar	Height mm	Width mm	Depth mm
G1/8	Twist drain with 5µ element - 8 bar BSPP - Poly bowl without gauge	14E01B13FC1	10.3	158	41	40
G1/8	Auto pulse drain - 5µ element - 8 Bar BSPP - Poly bowl without gauge	14E05B13FC1	10.3	158	41	40
G1/4	Twist drain with 5µ element - 8 Bar BSPP - Poly bowl without gauge	14E11B13FC1	10.3	158	41	40
G1/4	Auto pulse drain - 5µ element - 8 Bar BSPP - Poly bowl without gauge	14E15B13FC1	10.3	158	41	40

[§] L/s = 6.9 bar inlet, 6.2 bar no flow secondary setting and 0.7 bar pressure drop.
[‡] For polycarbonate bowl see Caution on page 2.
Note: 31mm hole required for panel mounting.

Specifications

Automatic pulse drain tube barb		4mm ^O /b x 0.75 1/8
Bowl capacity		30 cm ³
Gauge ports (2) (can be used for full flow)		G1/8
Port size		G1/8 / G1/4
Operating temperature		0°C to 52°C
Secondary pressure range	Standard pressure	0 to 8 bar
	Medium pressure	0 to 4 bar
	Medium pressure	0 to 2 bar
Weight		0.180 gm

Materials of Construction

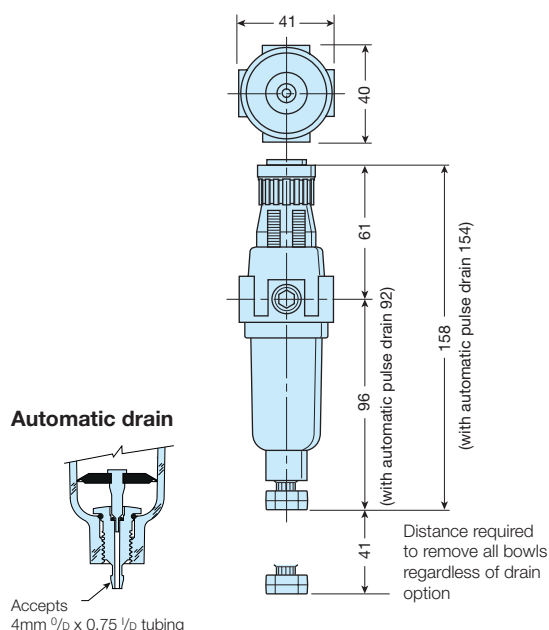
Adjusting nut			Brass
Adjusting stem & spring			Steel
Body			Zinc
Bonnet, Knob, Seat, Piston, Holder & Deflector			Plastic
Bowl - Transparent			Polycarbonate
Drains	Twist drain	Body & Stem	Plastic
		Seals	Nitrile
	Automatic pulse drain	Piston & Seals	Nitrile
		Stem, Seat, Adaptor & Washers	Aluminium
Filter elements - 5 micron (Standard)			Plastic
Seals			Nitrile

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.

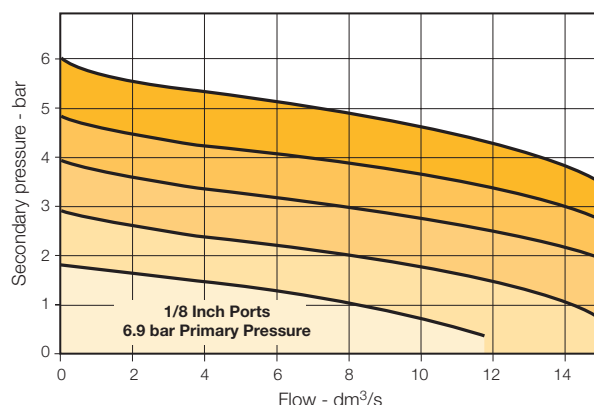
For best performance, regulated pressure should always be set by increasing the pressure up to the desired setting.

Dimensions

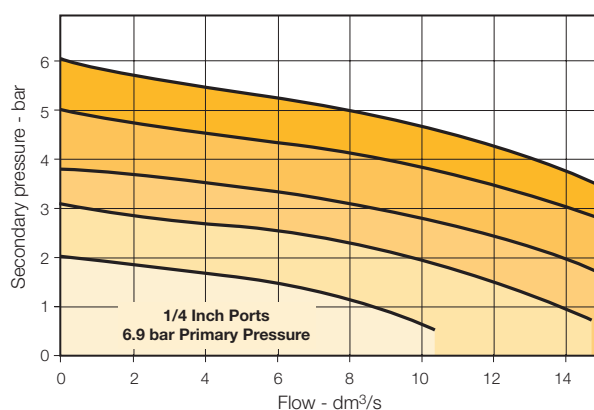


Flow Charts

**Relief and Flow Characteristics
 14E01B13F***



**Relief and Flow Characteristics
 14E11B13F***



Accessories

Bowl kits, Poly bowl	Automatic pulse drain	PS408P
	Twist drain	PS404P
Gauges - 1/8	0 to 2 bar	P3D-KAB1AYN
	0 to 4 bar	P3D-KAB1ALN
	0 to 10 bar	P3D-KAB1ANN
Mounting bracket kit (Includes panel mount nut)		PS417BP
Panel mounts nuts	Plastic	P78652
Service kits	Non-relieving	PS422P
	Relieving	PS423P

Warning

**Product rupture can cause serious injury.
 Do not exceed maximum primary pressure rating.**

04L Mist Lubricators

Symbol



- Proportional oil delivery over a wide range of air flows.
- Precision needle valve assures repeatable oil delivery and provides simple adjustment of delivery rate.
- Ideal for low and high flow applications with changing air flow.
- Transparent sight dome for 360° visibility.
- High Flow: 1/8" – 9 l/s[§]
1/4" – 10 l/s[§]

Options:

04L

1

0

G

B

1

Port size	
1/8	0
1/4	1

Thread type	
NPT	Blank
BSPP	1

Note: Bold options are standard

Port size	Description	Order code	Max bar	Height mm	Width mm	Depth mm
G1/8	BSPP no drain - Poly bowl	04L00GB1	10.3	147	44	40
G1/4	BSPP no drain - Poly bowl	04L10GB1	10.3	147	44	40

[§] L/s = 6.2 bar inlet and 0.3 bar pressure drop.
[‡] For polycarbonate bowl see Caution on page 2.

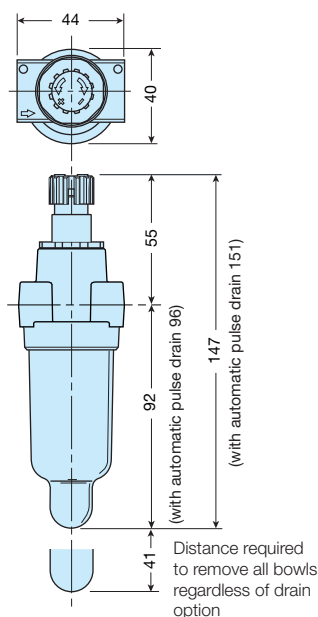
Specifications

Bowl capacity	30 cm ³
Minimum flow for lubrication	0.2 l/s at 6.9 bar
Port size	G1/8 / G1/4
Operating temperature	0°C to 52°C
Max supply pressure	Polycarbonate bowl 0 to 10.3 bar
Weight	0.180 gm

Materials of Construction

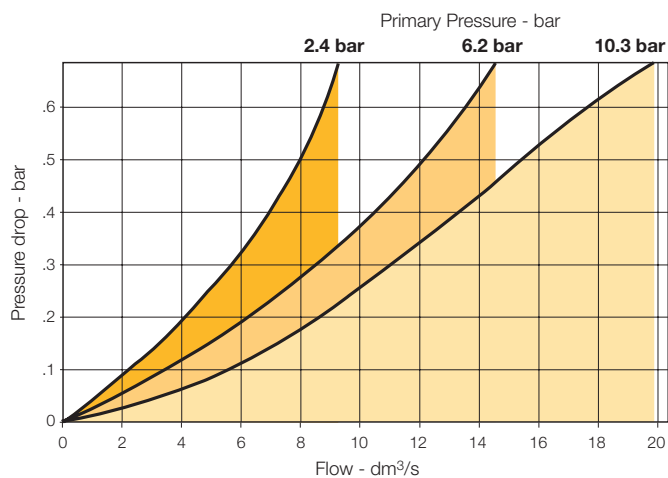
Body	Zinc
Bowl - Transparent	Polycarbonate
Seals	Nitrile
Sight dome	Polycarbonate

Dimensions

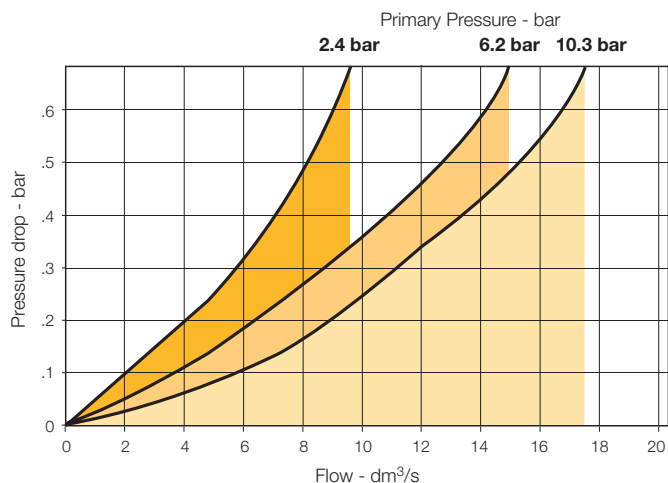


Flow Charts

Flow Characteristics - 1/8 Inch Ports
04L00G*



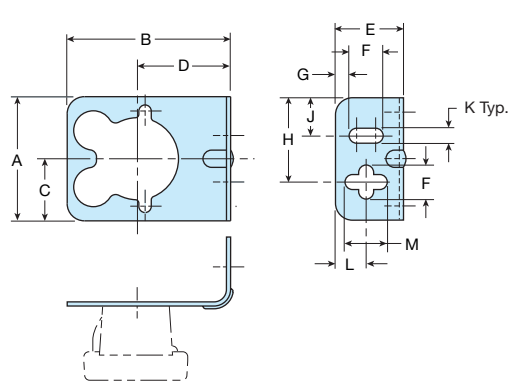
Flow Characteristics - 1/4 Inch Ports
04L10G*



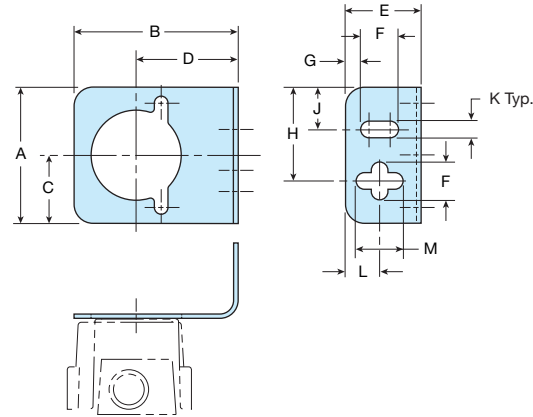
Accessories

Bowl kits, Poly bowl	No drain	PS421P
Mounting bracket kit		PS419

Mounting Bracket Kits



PS417BP
(Includes Panel Mount Nut)



PS419

Dimensions (mm)

A	B	C	D	E	F	G	H	J	K	L	M	Kit
46	60	23	34	25	13	5	31	14	6	11	16	PS417BP (10F, 14F, 14R, 14E)
46	55	23	34	25	13	5	31	14	6	11	16	PS419 (04L)

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