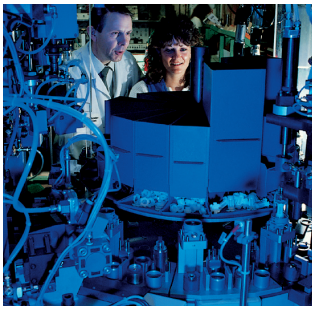

aerospace
climate control
electromechanical
filtration
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hydraulics
pneumatics
process control
sealing & shielding

Prep-Air® II

Miniature FRL Series

Catalogue PDE2591TCUK May 2020

Parker

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.
This document and other information from Parker Hannifin Corporation, its subsidiaries and authorized distributors provide product and/or system options for further investigation by users having technical expertise. It is important that you analyze all aspects of your application and review the information concerning the product or system in the current product catalog. Due to the variety of operating conditions and applications for these products or systems, the user, through its own analysis and testing, is solely responsible for making the final selection of the products and systems and assuring that all performance, safety and warning requirements of the application are met. The products described herein, including without limitation, product features, specifications, designs, availability and pricing, are subject to change by Parker Hannifin Corporation and its subsidiaries at any time without notice.

SALE CONDITIONS

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
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Air Line Regulators
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Air Line Lubricators
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Mounting Bracket Kits 14

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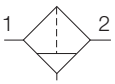
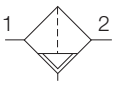
14F Filters

Symbols



Manual drain



Auto drain

- 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.

PDE2591TCUK

Prep-Air® II Miniature FRLs

14F Series

Specifications

Automatic pulse drain tube barb		4mm O/D x 0.75 I/D
Bowl capacity		30 cm³
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

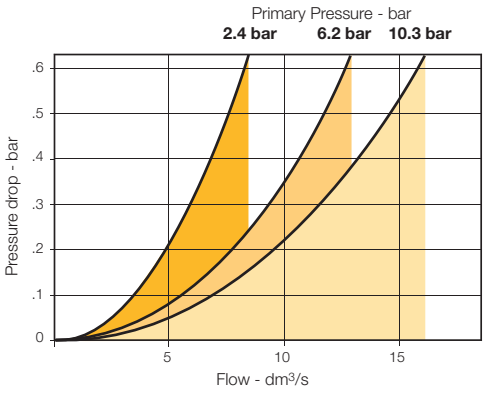
Materials of Construction

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

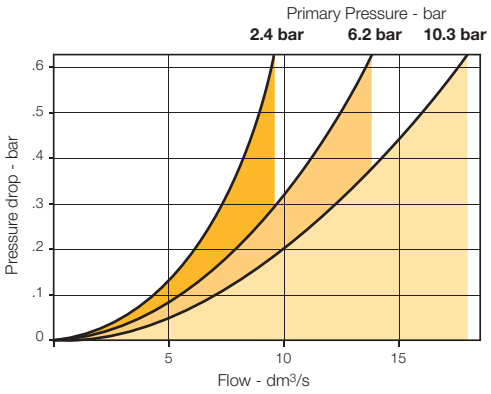
Flow Charts

5µ Filter

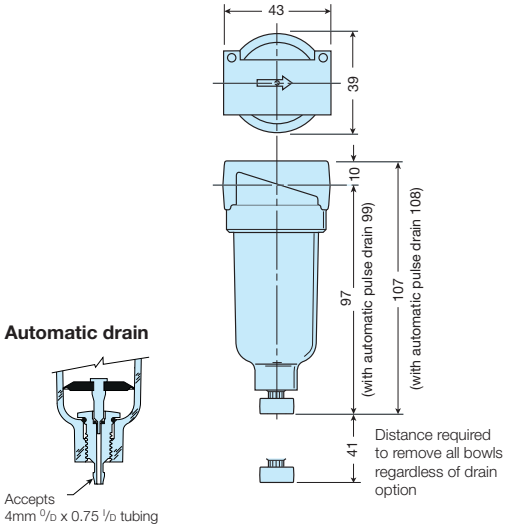
Flow Characteristics - 1/8 Inch Ports
14F01B*



Flow Characteristics - 1/4 Inch Ports
14F11B*



Dimensions



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.

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Specifications

Automatic pulse drain tube barb		4mm O/D x 0.75 I/D
Bowl capacity		30 cm³
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

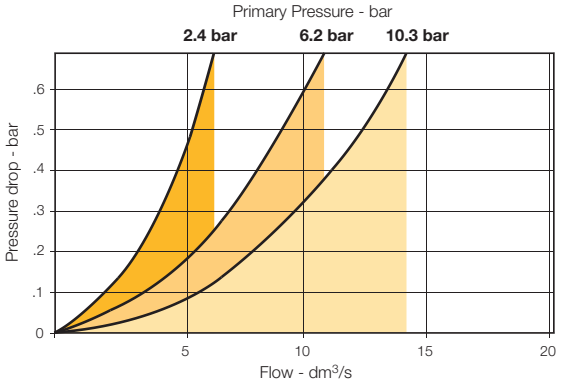
Materials of Construction

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

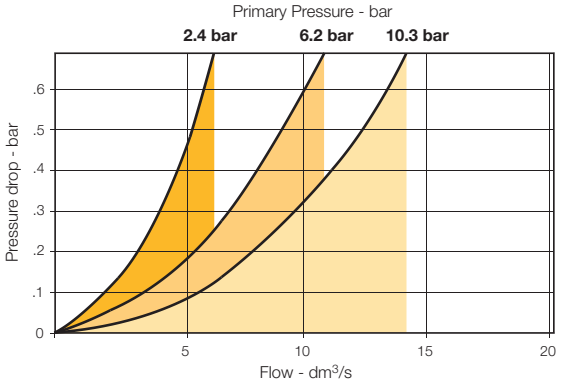
Flow Charts

Grade 6

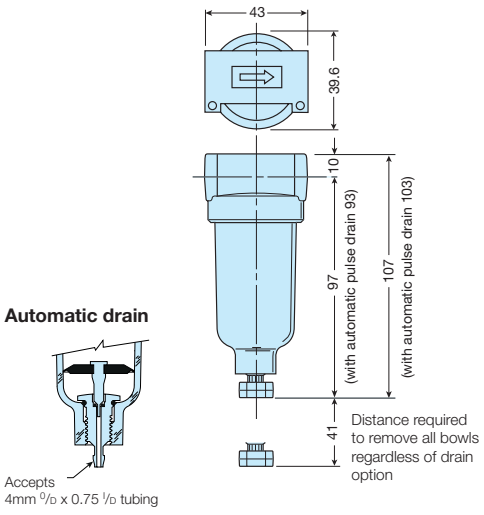
Flow Characteristics - 1/8 Inch Ports
10F01E*



Flow Characteristics - 1/4 Inch Ports
10F11E*



Dimensions



Accessories

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

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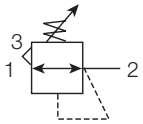
14R Regulators

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 1/8" gauge port	**0**
1/4" pipe 1/8" gauge port	**1**

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.

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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

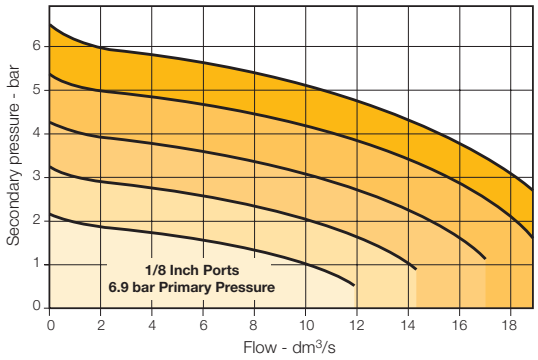
Caution:

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.

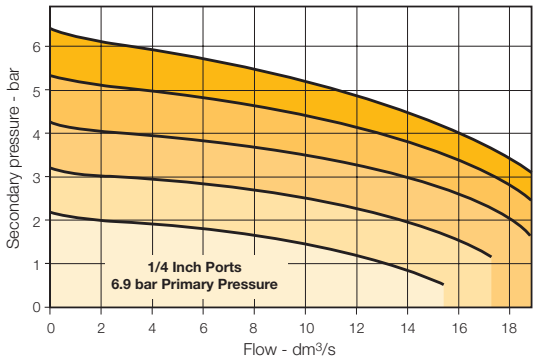
For best performance, regulated pressure should always be set by increasing the pressure up to the desired setting.

Flow Charts

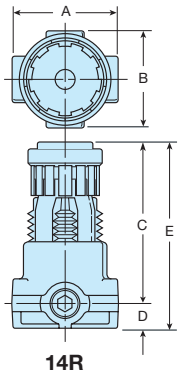
Relief and Flow Characteristics
14R013F*



Relief and Flow Characteristics
14R113F*



Dimensions



14R

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

Accessories

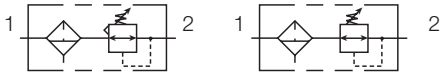
Bonnet assembly kit		**L01369**
Gauges	0 to 2 bar	**P3D-KAB1AYN**
	0 to 4 bar	**P3D-KAB1ALN**
	0 to 10 bar	**P3D-KAB1ANN**
Mounting bracket kit (Includes panel mount nut)		**PS417BP**
Panel mounts nuts	Plastic	**P78652**
	Metal	**P01531**
Service kits	Non-relieving	**PS422P**
	Relieving	**PS423P**

⚠ 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.

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Specifications

Automatic pulse drain tube barb		4mm O/D x 0.75 I/D
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

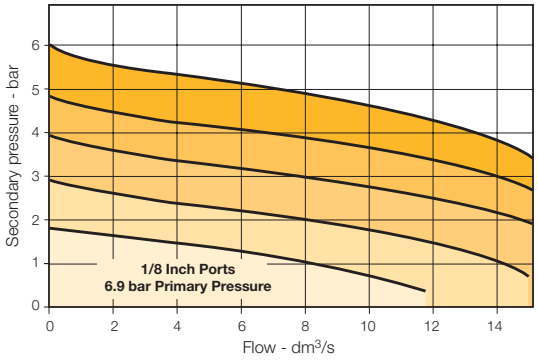
Caution:

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.

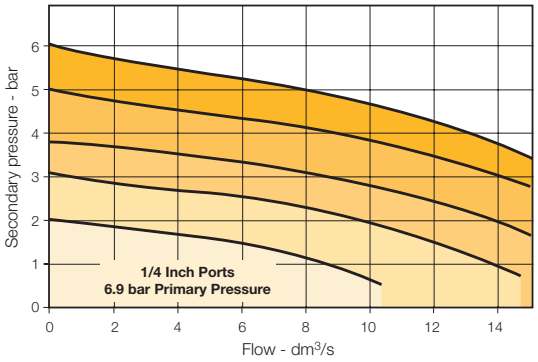
For best performance, regulated pressure should always be set by increasing the pressure up to the desired setting.

Flow Charts

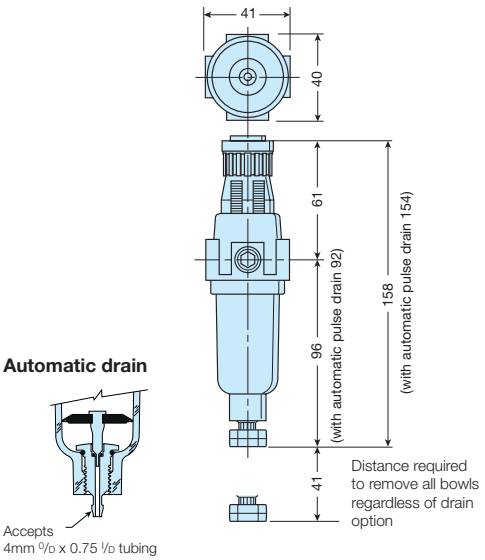
Relief and Flow Characteristics 14E01B13F*



Relief and Flow Characteristics 14E11B13F*



Dimensions



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.

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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:

0	4	L	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.

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PDE2591TCUK

Prep-Air® II Miniature FRLs

04L Series

Specifications

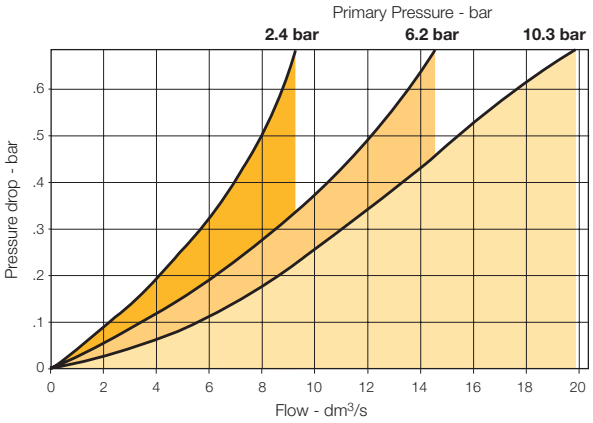
Bowl capacity		30 cm^3
Minimum flow for lubrication		0.2 l/s at 6.9 bar
Port size		G1/8 / G1/4
Operating temperature		0°C to 52°C
Max supply pressure	Polycarbonate bowl	0 to 10.3 bar
Weight		0.180 gm

Materials of Construction

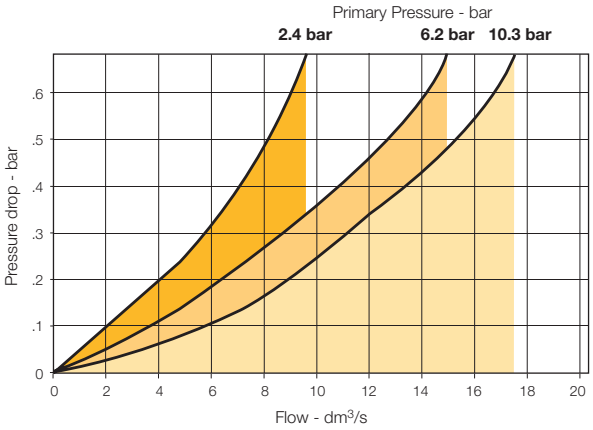
Body	Zinc
Bowl - Transparent	Polycarbonate
Seals	Nitrile
Sight dome	Polycarbonate

Flow Charts

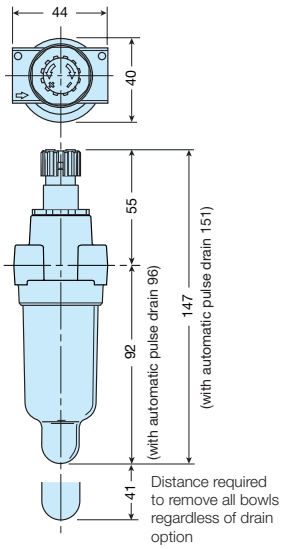
Flow Characteristics - 1/8 Inch Ports
04L00G*



Flow Characteristics - 1/4 Inch Ports
04L10G*



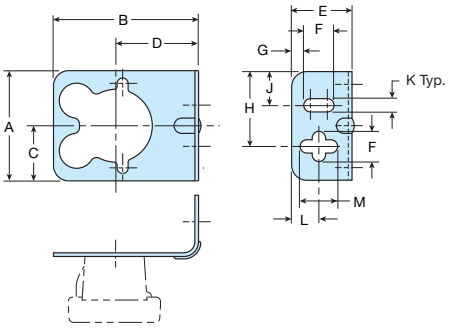
Dimensions



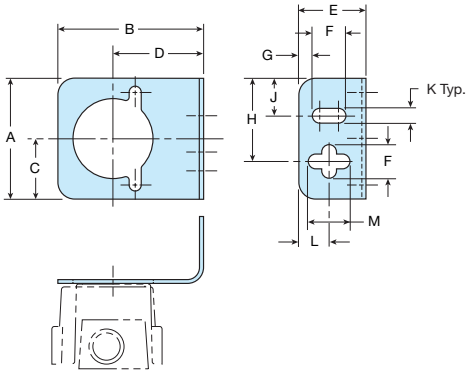
Accessories

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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