A

Micro-Mist Lubricators

- Pipe Sizes 1/4 thru 3/4 Inch
- Flows to 500 SCFM
- Pressures to 250 PSIG

Micro-Mist Air Lubricators are designed to provide optimum and uniform lubrication with fine micro-mist particles of 2 micron or smaller, to pneumatic components even through complex piping arrangements.

- Economy 15L Series, 1/4 and 3/8 Inch
- Compact 16L Series, 1/4, 3/8 and 1/2 Inch
- Standard 17L Series, 3/8, 1/2 and 3/4 Inch

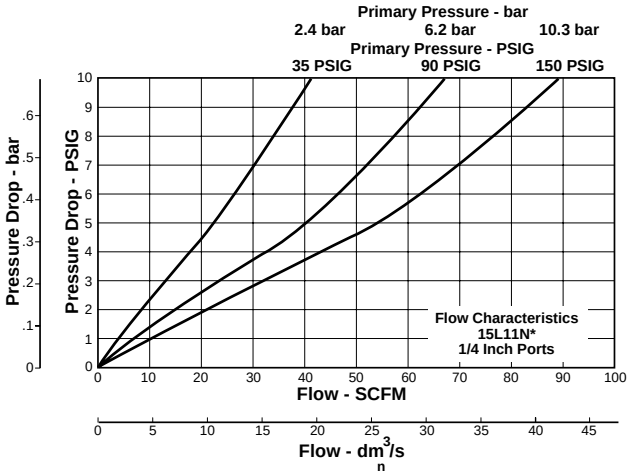
Lubricator Selection

1. Determine maximum system flow requirements.
2. Determine maximum allowable pressure drop at rated flow in SCFM.
3. Refer to flow chart and select lubricator by choosing the curve that offers minimum pressure drop at desired flow in SCFM.

F442 Oil

Quantity	Part Numbers
1 Gallon	F442002
12 Quart Case	F442003
4 Gallon Case	F442005

Reading Flow Charts to Size Micro-Mist Lubricators



Once the required flow is determined for a pneumatic application the lubricator can be selected by using the flow chart. To read the lubricator flow chart, first determine the inlet pressure that will be used. Find the appropriate pressure curve on the graph. Each graph will contain three pressure curves. If the required inlet pressure is not on the graph, interpolate a similar curve for the required pressure. Next, determine the acceptable pressure drop across the lubricator and locate it on the vertical axis. Find the intersection point of the acceptable pressure drop and the inlet pressure curve. At this point follow a vertical path downward to view the flow in SCFM. If the flow is too low, select a larger port size or body size to give the required flow. If the flow is higher than necessary, select a smaller port size or body size to give the required flow.

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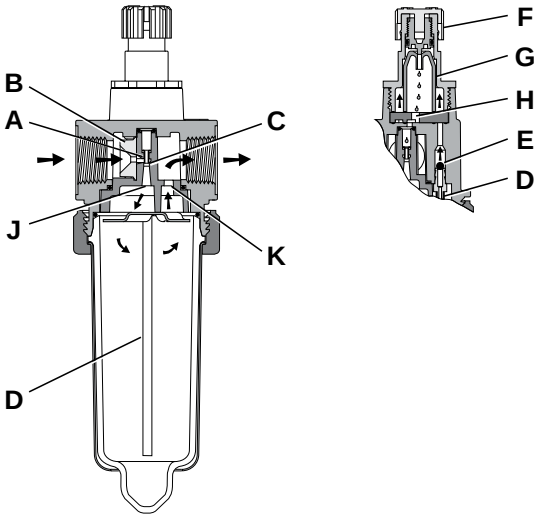
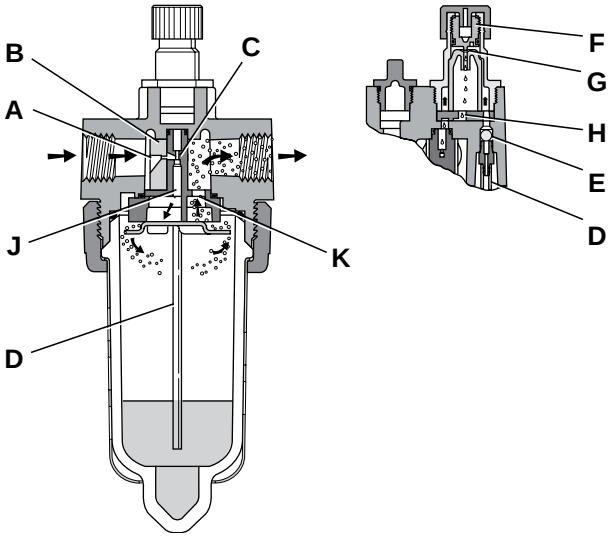


15L



16L / 17L

Air flowing through the unit goes through two paths. At low air flow rates, the majority of the air flows through venturi section **(A)**. The rest of the air slightly deflects and flows by the flapper **(B)**. The velocity of the air flowing through venturi section **(A)** creates a pressure drop at throat section **(C)**. This lower pressure allows oil to be forced from the reservoir through the pickup tube **(D)** past the check ball **(E)**, to the dome assembly where the rate of oil flow is controlled by metering screw **(F)**. Rotation of the metering screw **(F)** in the counterclockwise direction increases the oil flow rate; in the clockwise direction decreases the oil flow rate.

Oil then flows through the clearance between the inner and outer sight domes **(G)** where drops are formed and drip into the nozzle tube **(H)**. Here it is then broken into fine particles as it expands into the low pressure venturi. From there, the atomized oil flows through the precision orifice **(J)**. This action causes the larger particles of oil to fall back into the reservoir where it can recirculate through the system. The remaining mist of fine particles (5 micron or smaller – about 3% of which passed through the sight dome) is then carried through opening **(K)** where it joins and mixes with air that bypassed the flapper **(B)**. As air flow rate increases, the flapper **(B)** deflects, allowing most of the inlet air to bypass the venturi section **(A)**. However, a proportion of the inlet air passes through the venturi, assuring that oil delivery increases linearly with increased air flow rate. This proportioning method is advantageous at low inlet flows because the venturi design remains efficient.

The check ball **(E)** prevents reverse oil flow down the pickup tube when air flow stops. Thus, oil delivery can resume immediately when air flow restarts. **Micro-Mist Lubricators can only be filled when the air supply is shut off.**

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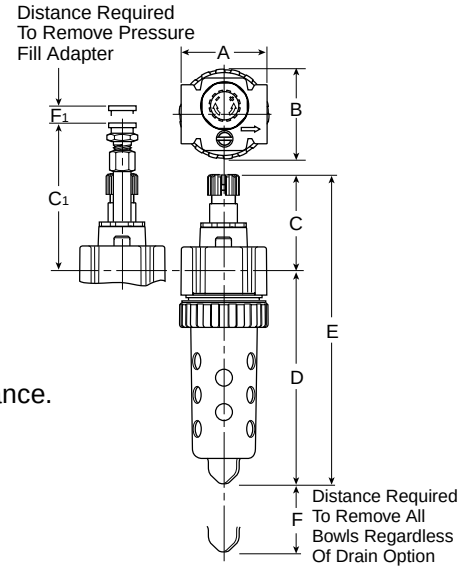
15L Micro-Mist Lubricators – Economy

Features

- Proportional oil delivery over a wide range of air flows.
- Generates oil particles of 5 micron or smaller downstream to lubricate systems having complex piping arrangements.
- 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.
- Removable drip control knob for tamper resistance.
- High Flow: 1/4" – 40 SCFM§
  3/8" – 40 SCFM§



Port Size	NPT	
	Twist Drain	No Drain
Poly Bowl‡ / Metal Guard		
1/4"	—	**15L12N***
3/8"	—	**15L22N***
Metal Bowl / Sight Gauge		
1/4"	**15L14N***	—
3/8"	**15L24N***	—

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

‡ For polycarbonate bowl and sight dome, see Caution on page A2.

§ SCFM = Standard cubic feet per minute at 90 PSIG inlet and 5 PSIG pressure drop.

15L Lubricator Dimensions			
A 2.00 (51)	**B** 2.06 (52)	**C** 2.26 (57)	**C1** 3.35 (85)
D 5.12 (130)	**D†** 5.35 (136)	**E** 7.38 (187)	**E†** 7.61 (193)
F 1.77 (45)	**F†** .39 (10)		

Inches (mm)

† With Twist Drain.

Ordering Information

15L	1	2	N	*	—	—

Port Size
- **1 1/4 Inch**
- **2 3/8 Inch**

Bowl Options

Polycarbonate Bowl
- 1 No Drain
- **2 Metal Bowl Guard / No Drain**
- 5 Pressure Fill
- 6 Metal Bowl Guard / Pressure Fill

Metal Bowl
- **4 Sight Gauge / Twist Drain**
- 8 Sight Gauge / Pressure Fill

Fill Options
- B With Fill Plug
- F With Body Pressure Fill
- **N No Fill Plug**

Engineering Level
- * Will be Entered at Factory

Port Type
- **Blank NPT**
- 1 BSPP
- 2 BSPT

Options
- **Blank No Options**

NOTE: BOLD OPTIONS ARE STANDARD.

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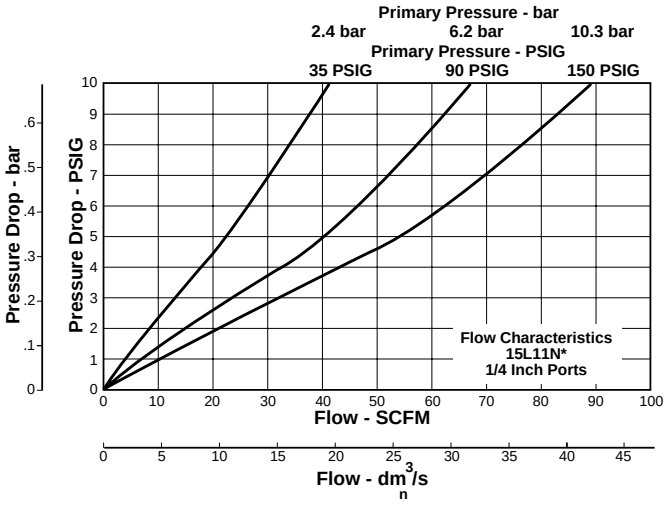
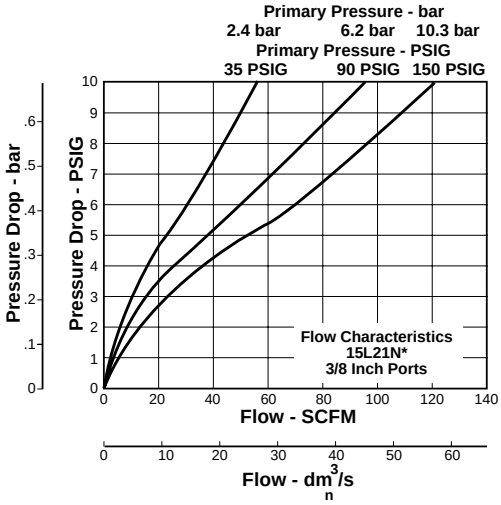
A

Technical Information





15L Micro-Mist Lubricator Kits & Accessories

Adjustment Knob P04121
Bowl Guard Kit PS905P
Bowl Kits –
Poly Bowl – No Drain PS946P
Metal Bowl – Sight Gauge / Twist Drain PS929P
Drain Kit – Twist Drain PS512P
Liquid Level Sensor Kit PS797
Mounting Bracket Kit PS943P
Oil – 1 Gal. F442002
12 Quart Case F442003
4 Gallon Case F442005
Pressure Fill Adapter Kit PS916P
Service Kit PS948P
Sight Dome Kit PS740P
Sight Gauge Kit PS914P

Specifications

Bowl Capacity ..... 2.0 Ounces
Minimum Flow for Lubrication ..... 2 SCFM at 100 PSIG
Port Threads ..... 1/4, 3/8 Inch
Pressure & Temperature Ratings –
Polycarbonate Bowl – 0 to 150 PSIG (0 to 10.3 bar)
32°F to 125°F (0°C to 52°C)
Metal Bowl – 0 to 250 PSIG (0 to 17.2 bar)
32°F to 175°F (0°C to 80°C)
Suggested Lubricant ..... F442 Oil
Petroleum based oil of 100 to 200 SSU viscosity at 100°F and an aniline point greater than 200°F
(DO NOT USE OILS WITH ADDITIVES, COMPOUNDED OILS CONTAINING SOLVENTS, GRAPHITE, DETERGENTS, OR SYNTHETIC OILS.)
Weight ..... 1 lb. (0.45 kg)

Materials of Construction

Body ..... Zinc
Bowls – Transparent ..... Polycarbonate
Metal (With Sight Gauge) ..... Zinc
Bowl Guard ..... Steel
Collar ..... Plastic
Drains – Twist – Body & Nut ..... Plastic
Injector Meter Block & Base Assembly ..... Plastic
Seals ..... Nitrile
Sight Dome ..... Polycarbonate
Sight Gauge ..... Polyamide (Nylon)

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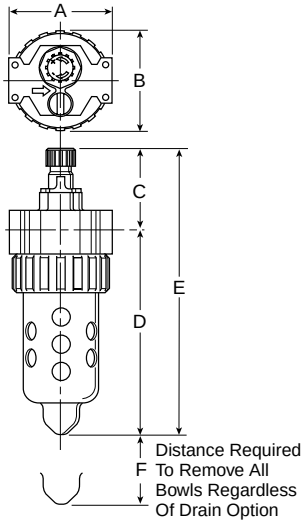
16L Micro-Mist Lubricators – Compact

Features

- Proportional oil delivery over a wide range of air flows.
- Generates oil particles of 5 micron or smaller downstream to lubricate systems having complex piping arrangements.
- 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.
- Yellow fill cap identifies Micro-Mist Lubricator.
- High Flow: 1/4" – 40 SCFM§
  3/8" – 60 SCFM§
  1/2" – 90 SCFM§



Port Size	NPT	
	Twist Drain	No Drain
Poly Bowl‡ / Metal Guard		
1/4"	—	**16L12B***
3/8"	—	**16L22B***
1/2"	—	**16L32B***
Metal Bowl / Sight Gauge		
1/4"	**16L14B***	—
3/8"	**16L24B***	—
1/2"	**16L34B***	—

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

‡ For polycarbonate bowl and sight dome, see Caution on page A2.

§ SCFM = Standard cubic feet per minute at 90 PSIG inlet and 5 PSIG pressure drop.

16L Lubricator Dimensions		
A 2.81 (71)	**B** 2.74 (70)	**C** 2.24 (57)
D 5.58 (142)	**D†** 5.69 (145)	**E** 7.82 (199)
E† 7.93 (201)	**F** 2.25 (57)	

Inches (mm)

† With Twist Drain.

Ordering Information

16L	1	2	B	*	—

Port Size

1	**1/4 Inch**
2	**3/8 Inch**
3	**1/2 Inch**

Bowl Options

Polycarbonate Bowl		Metal Bowl	
1	No Drain	**4**	**Sight Gauge / Twist Drain**
2	**Metal Bowl Guard / No Drain**	8	Sight Gauge / Pressure Fill
5	Pressure Fill	D	Sight Gauge / Liquid Level Sensor
6	Metal Bowl Guard / Pressure Fill	M	Sight Gauge / Auto Fill Device
A	Liquid Level Sensor		
B	Metal Bowl Guard / Liquid Level Sensor		
J	Auto Fill Device		
K	Metal Bowl Guard / Auto Fill Device		
R	Twist Drain		
N	Metal Bowl Guard / Twist Drain		

Options

B	**With Fill Plug**
C	With Fill Plug/Nylon Sight Dome
F	With Body Pressure Fill
G	With Body Pressure Fill / Nylon Sight Dome

Engineering Level

*	Will be Entered at Factory

Port Type

Blank	**NPT**
1	BSPP
2	BSPT

NOTE: BOLD OPTIONS ARE STANDARD.

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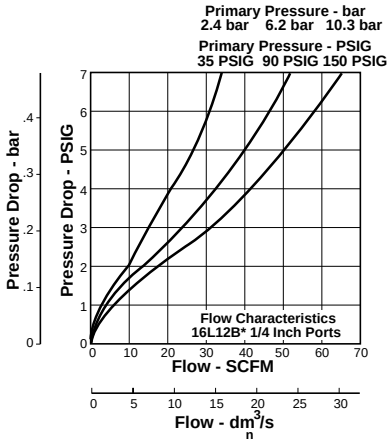
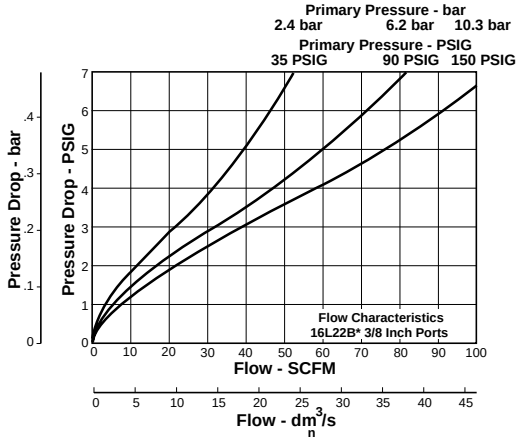
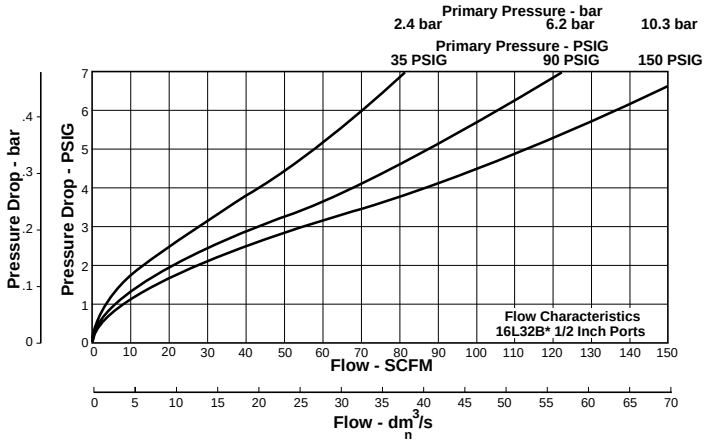
Technical Information







16L Micro-Mist Lubricator Kits & Accessories

Adjustment Knob P04121
Bowl Guard Kit PS705P
Bowl Kits –
Poly Bowl – No Drain PS746P
Twist Drain PS717P
Pressure Fill PS719P
Remote Fill PS728P
Metal Bowl – Sight Gauge / Twist Drain PS729P
Sight Gauge / Pressure Fill PS720P
Drain Kit – Twist Drain PS512P
Fill Cap Kit PS742P
Liquid Level Sensor Kit PS797
Lubricator Service Kit PS748P
Mounting Bracket Kit PS743P
Oil – 1 Gal F442002
12 Quart Case F442003
4 Gallon Case F442005
Pressure Fill Adapter Kit PS716P
Pressure Fill Button P11912
Remote Auto-Fill Device PS505CP
Sight Dome / Fill Cap Kit PS739P
Sight Dome Kit PS740P
Nylon Sight Dome Kit PS740N

Specifications

Bowl Capacity ..... 2.60 Ounces
Minimum Flow for Lubrication ..... 1 SCFM At 100 PSIG
Port Threads ..... 1/4, 3/8, 1/2 Inch
Pressure & Temperature Rating –
Polycarbonate Bowl – 0 to 150 PSIG (0 to 10.3 bar)
32°F to 125°F (0°C to 52°C)
Metal Bowl – 0 to 250 PSIG (0 to 17.2 bar)
32°F to 175°F (0°C to 80°C)
Suggested Lubricant ..... F442 Oil
Petroleum based oil of 100 to 200 SSU viscosity at 100°F and an aniline point greater than 200°F (DO NOT USE OILS WITH ADDITIVES, COMPOUNDED OILS CONTAINING SOLVENTS, GRAPHITE, DETERGENTS, OR SYNTHETIC OILS.)
Weight ..... 1.2 lb. (.5 kg)

Materials of Construction

Body ..... Zinc
Bowls – Transparent ..... Polycarbonate
Metal (With Sight Gauge) ..... Zinc
Bowl Guard ..... Steel
Collar ..... Plastic
Drain – Twist – Body & Nut ..... Plastic
Injector Meter Block & Base Assembly ..... Plastic
Seals ..... Nitrile
Sight Dome ..... Polycarbonate
Sight Gauge ..... Polyamide (Nylon)

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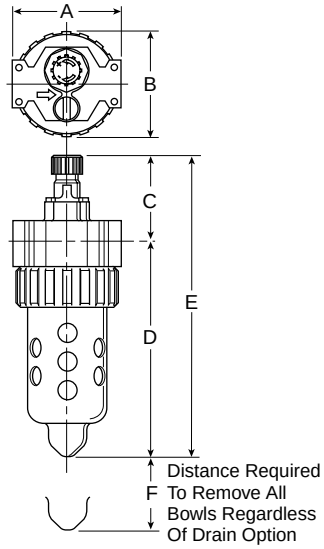
17L Micro-Mist Lubricators – Standard

Features

- Proportional oil delivery over a wide range of air flows.
- Generates oil particles of 5 micron or smaller downstream to lubricate systems having complex piping arrangements.
- 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.
- Yellow fill cap identifies Micro-Mist Lubricator.
- High Flow: 3/8" – 60 SCFM§
  1/2" – 90 SCFM§
  3/4" – 90 SCFM§



Port Size	NPT	
	Twist Drain	No Drain
Poly Bowl‡ / Metal Guard		
3/8"	—	**17L22B***
1/2"	—	**17L32B***
3/4"	—	**17L42B***
Metal Bowl / Sight Gauge		
3/8"	**17L24B***	—
1/2"	**17L34B***	—
3/4"	**17L44B***	—

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

‡ For polycarbonate bowl and sight dome, see Caution on page A2.

§ SCFM = Standard cubic feet per minute at 90 PSIG inlet and 5 PSIG pressure drop.

17L Lubricator Dimensions		
A 3.24 (82)	**B** 3.25 (83)	**C** 2.41 (61)
D 6.86 (174)	**D†** 6.95 (177)	**E** 9.09 (231)
E† 9.35 (237)	**F** 2.75 (70)	

Inches (mm)

† With Twist Drain.

Ordering Information

17L	2	2	B	*	—

Port Size

2	**3/8 Inch**
3	**1/2 Inch**
4	**3/4 Inch**

Bowl Options

Polycarbonate Bowl		Metal Bowl	
1	No Drain	**4**	**Sight Gauge / Twist Drain**
2	**Metal Bowl Guard / No Drain**	8	Sight Gauge / Pressure Fill
5	Pressure Fill	D	Sight Gauge / Liquid Level Sensor
6	Metal Bowl Guard / Pressure Fill	M	Sight Gauge / Auto Fill Device
A	Liquid Level Sensor		
B	Metal Bowl Guard / Liquid Level Sensor		
J	Auto Fill Device		
K	Metal Bowl Guard / Auto Fill Device		
R	Twist Drain		
N	Metal Bowl Guard / Twist Drain		

Options

B	**With Fill Plug**
C	With Fill Plug/Nylon Sight Dome
F	With Body Pressure Fill
G	With Body Pressure Fill / Nylon Sight Dome

Engineering Level

*	Will be Entered at Factory

Port Type

Blank	**NPT**
1	BSPP
2	BSPT

NOTE: BOLD OPTIONS ARE STANDARD.

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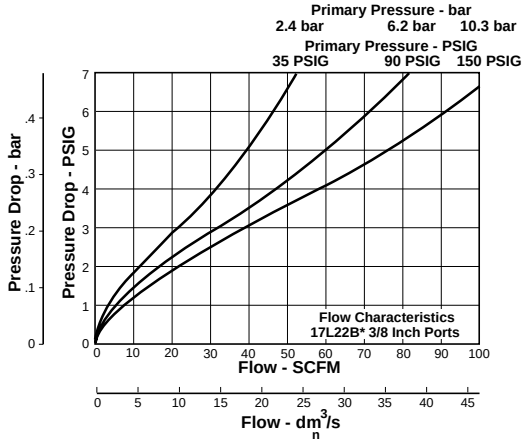
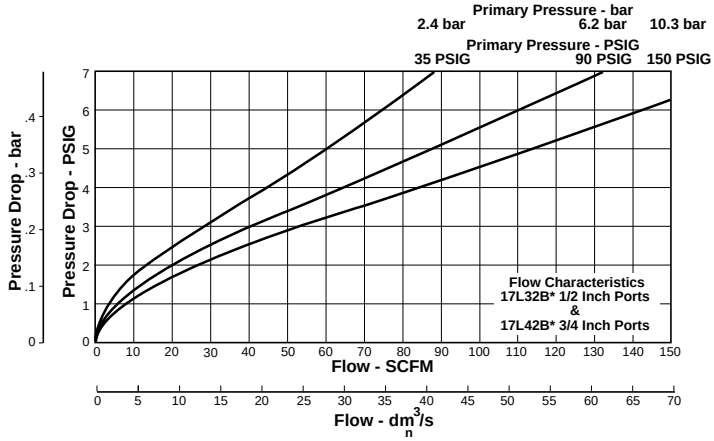
Technical Information





17L Micro-Mist Lubricator Kits & Accessories

Adjustment Knob P04121
Bowl Guard Kit PS805P
Bowl Kits –
Poly Bowl – No Drain PS846P
Twist Drain PS817P
Pressure Fill PS819P
Remote Fill PS828P
Metal Bowl – Sight Gauge / Twist Drain PS829P
Sight Gauge / Pressure Fill PS820P
Drain Kit – Twist Drain PS512P
Fill Cap Kit PS742P
Liquid Level Sensor Kit PS797
Lubricator Service Kit PS748P
Mounting Bracket Kit PS843P
Oil – 1 Gal. F442002
12 Quart Case F442003
4 Gallon Case F442005
Pressure Fill Adapter Kit PS716P
Pressure Fill Button P11912
Remote Auto-Fill Device PS505CP
Sight Dome / Fill Cap Kit PS739P
Sight Dome Kit PS740P
Nylon Sight Dome Kit PS740N

Specifications

Bowl Capacity ..... 4.9 Ounces
Minimum Flow for Lubrication ..... 1 SCFM At 100 PSIG
Port Threads ..... 3/8, 1/2, 3/4 Inch
Pressure & Temperature Rating –
Polycarbonate Bowl – 0 to 150 PSIG (0 to 10.3 bar)
32°F to 125°F (0°C to 52°C)
Metal Bowl –0 to 250 PSIG (0 to 17.2 bar)
32°F to 175°F (0°C to 80°C)
Suggested Lubricant ..... F442 Oil
Petroleum based oil of 100 to 200 SSU viscosity at 100°F and an aniline point greater than 200°F (DO NOT USE OILS WITH ADDITIVES, COMPOUNDED OILS CONTAINING SOLVENTS, GRAPHITE, DETERGENTS, OR SYNTHETIC OILS.)
Weight ..... 1.9 lb. (.9 kg)

Materials of Construction

Body ..... Zinc
Bowls – Transparent ..... Polycarbonate
Metal (With Sight Gauge) ..... Zinc
Bowl Guard ..... Steel
Collar ..... Plastic or Metal
Drain – Twist – Body & Nut ..... Plastic
Injector Meter Block & Base Assembly ..... Plastic
Seals ..... Nitrile
Sight Dome ..... Polycarbonate
Sight Gauge ..... Polyamide (Nylon)

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A

Mist Lubricators

- Pipe Sizes 1/8 thru 2 Inch
- Flows to 1000 SCFM
- Pressures to 250 PSIG

Mist Air Lubricators are designed to provide lubrication for most general applications in a pneumatic system. Units should be installed close to the application ensuring effective distribution of oil to pneumatic components.

- Miniature 02L Series, 1/4 and 3/8 Inch
- Miniature 04L Series, 1/8 and 1/4 Inch
- Miniature P3A-LA Series, 1/8 and 1/4 Inch
- Compact 06L Series, 1/4, 3/8 and 1/2 Inch
- Standard 07L Series, 3/8, 1/2 and 3/4 Inch
- Hi-Flow P3NL Series, 3/4, 1 and 1-1/2 Inch
- Hi-Flow L606 Series, 1, 1-1/4 and 1-1/2 Inch
- Hi-Flow 09L Series, 2 Inch

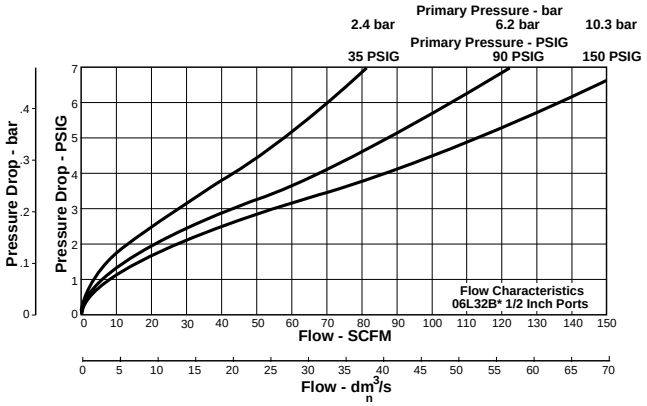
Lubricator Selection

1. Determine maximum system flow requirements.
2. Determine maximum allowable pressure drop at rated flow in SCFM.
3. Refer to flow chart and select lubricator by choosing the curve that offers minimum pressure drop at desired flow in SCFM.

F442 Oil

Quantity	Part Numbers
1 Gallon	F442002
12 Quart Case	F442003
4 Gallon Case	F442005

Reading Flow Charts to Size Mist Lubricators



Once the required flow is determined for a pneumatic application the lubricator can be selected by using the flow chart. To read the lubricator flow chart, first determine the inlet pressure that will be used. Find the appropriate pressure curve on the graph. Each graph will contain three pressure curves. If the required inlet pressure is not on the graph, interpolate a similar curve for the required pressure. Next, determine the acceptable pressure drop across the lubricator and locate it on the vertical axis. Find the intersection point of the acceptable pressure drop and the inlet pressure curve. At this point follow a vertical path downward to view the flow in SCFM. If the flow is too low, select a larger port size or body size to give the required flow. If the flow is higher than necessary, select a smaller port size or body size to give the required flow.

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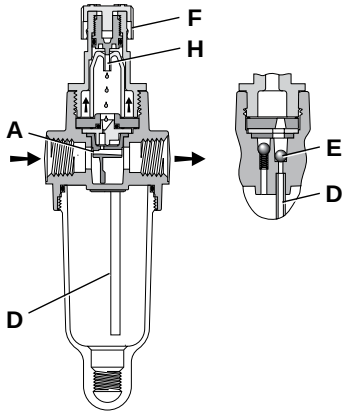
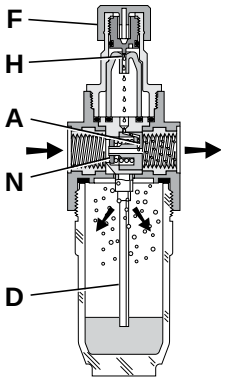
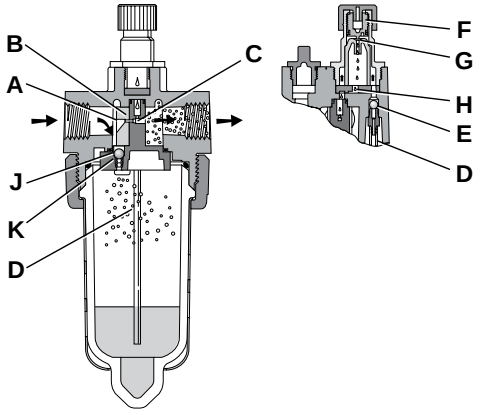


04L



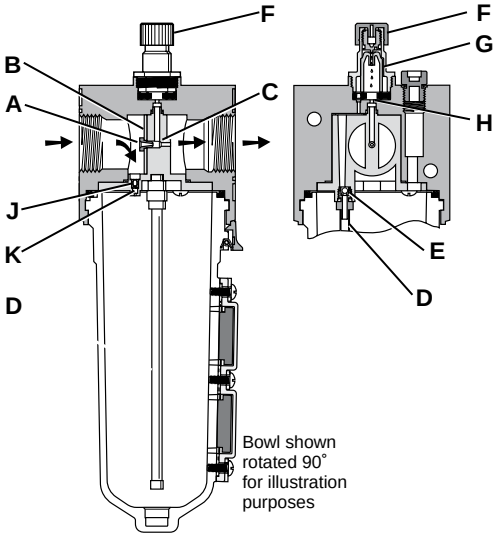
P3A-LA



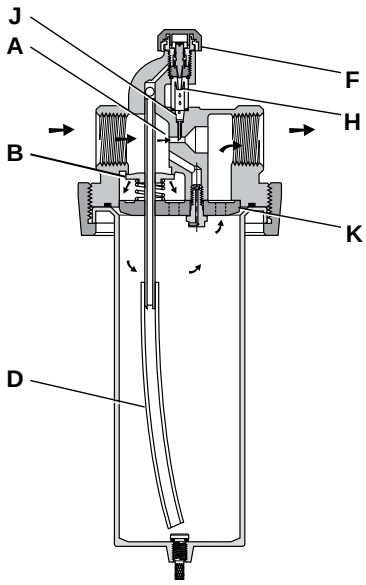
06L / 07L

Air flowing through the unit goes through two paths. At low air flow rates, the majority of the air flows through venturi section **(A)**. The rest of the air slightly deflects and flows by the flapper **(B)**, restrictor disc **(M)** on the 09L. The velocity of the air flowing through venturi section **(A)** creates a pressure drop at throat section **(C)**. This lower pressure allows oil to be forced from the reservoir through the pickup tube **(D)** past the check ball **(E)**, to the dome assembly where the rate of oil flow is controlled by metering screw **(F)**. Rotation of the metering screw **(F)** in the counterclockwise direction increases the oil flow rate; in the clockwise direction decreases the oil flow rate. Oil then flows through the clearance between inner and outer sight domes **(G)** where drops are formed and drip into the nozzle tube **(H)**. On the 09L, oil flows through the drip tube **(F)** where drops are formed and drip into the throat section **(C)**. Here it is then broken into fine particles and mixed with the swirling air to be carried to the venturi outlet where it joins the air by passing the flapper **(B)**, **(M)**. As air flow rate increases, the flapper **(B)**, **(M)** deflects, allowing a greater part of the additional air to bypass the venturi section **(A)**. This assures the oil delivery rate increases linearly with increased air flow rate. The check ball **(E)** assures that when there is no oil flow the oil in the pickup tube does not return to the reservoir.

The bowl can be filled under pressure due to the action of the check ball **(J)**. When the fill cap is removed, air in the bowl escapes and pressure forces the check ball **(J)** to nearly seal at **(K)**. When the fill cap is replaced, the small amount of air flow past check ball **(J)** builds up pressure and together with the spring forces the check ball **(J)** off seat **(K)**, letting full line pressure into the bowl.



P3NL



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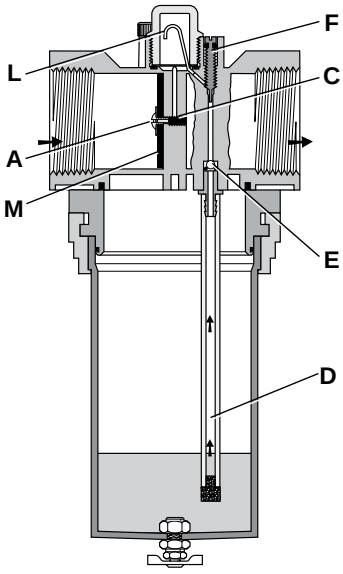

09L

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A

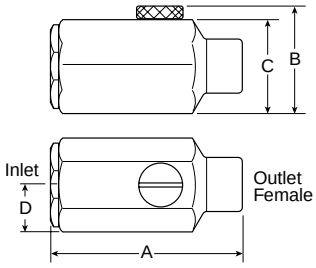
02L Lubricator – Miniature

Features

- Extends the service life of air operated hand tools.
- Reduces downtime of air operated equipment, saves money.
- Small / lightweight.
- Automatic lubrication with air tool operation.
- Adjustable oil flow.
- Corrosion resistant.
- Full swivel outlet port.

Application

In-Line Lubricators assure proper lubrication for small pneumatic hand tools. These in-line lubricators put the oil source right at the tool. Oil capacity is 1/4 oz. (1 ml), enough to last through an average 8-hour shift. This lubricator requires cyclical or intermittent airflow for proper operation, and consequently works best when installed at the tool inlet or on a short hose near the tool. The 02L cannot be filled under pressure.



Dimensions

Part Number	A	B	C	D
02LFB	2.65 (67)	1.305 (33)	1.125 (28.5)	.65 (16.5)
02L1B	2.93 (74)	1.305 (33)	1.125 (28.5)	.65 (16.5)
02L2B	3.19 (81)	1.305 (33)	1.125 (28.5)	.65 (16.5)

Inches (mm)

Ordering Information

Port Size	Female Threads Inlet / Female Threads Outlet	Female Threads Inlet / Male Threads Outlet
1/4"	**02LFB**	**02L1B**
3/8"	**N/A**	**02L2B**

Specifications

Flow Capacity* (1/4) ..... 29 SCFM (13.6 dm^3/s)
(3/8) ..... 30 SCFM (14.2 dm^3/s)
Operating Temperature.....32° to 150°F (0° to 65.5°C)
Maximum Supply Pressure.....200 PSIG (13.8 bar)
Oil Capacity ..... 0.25 oz. (7.4 cm^3)
Port Size.....1/4, 3/8 NPT / BSPT
Weight ..... 0.2 lb. (0.1 kg)

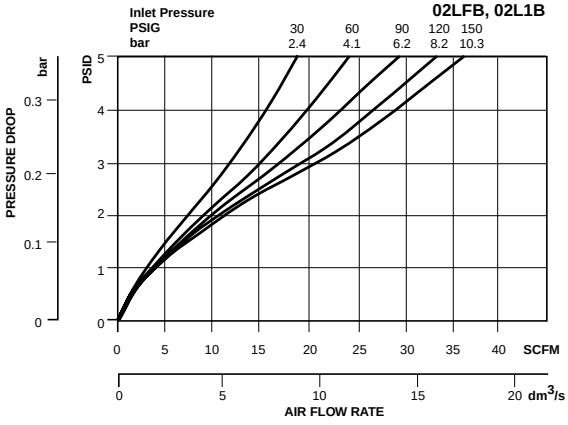
* Inlet pressure 90 PSIG (6.2 bar). Pressure drop 5 PSID (0.3 bar).

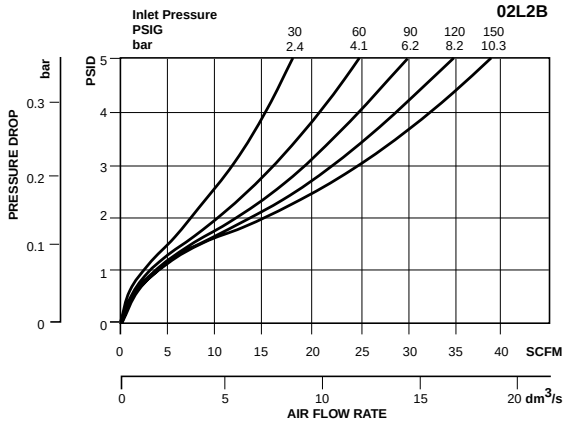
Materials of Construction

Body .....Aluminum
Seals.....Nitrile
Suggested Lubricant F442 Oil
Petroleum based oil of 100 to 200 SSU viscosity at 100°F and an aniline point greater than 200°F(DO NOT USE OILS WITH ADDITIVES,COMPOUNDED OILS CONTAINING SOLVENTS, GRAPHITE, DETERGENTS, OR SYNTHETIC OILS.)
Oil –1 Gal.....F442002
Quart Case.....F442003
Gallon Case F442005

Replacement Kits

Fill Plug Kit – Brass Fill Plug and O-ring PS434
O-ring Repair Kit..... PS435





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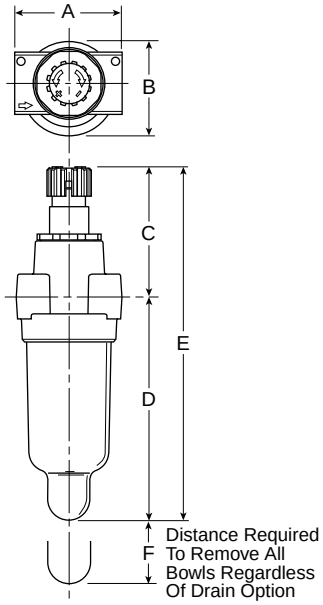
04L Mist Lubricators – Miniature

Features

- 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" – 20 SCFM §
  1/4" – 20 SCFM §



Port Size	NPT	
	Twist Drain	No Drain
Poly Bowl ‡		
1/8"	—	**04L00G***
1/4"	—	**04L10G***
Metal Bowl without Sight Gauge		
1/8"	**04L03G***	—
1/4"	**04L13G***	—

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

‡ For polycarbonate bowl and sight dome, see Caution on page A2.

§ SCFM = Standard cubic feet per minute at 90 PSIG inlet and 5 PSIG pressure drop.

04L Lubricator Dimensions		
A 1.73 (44)	**B** 1.56 (40)	**C** 2.16 (55)
D 3.64 (92)	**D†** 3.78 (96)	**E** 5.80 (147)
E† 5.94 (151)	**F** 1.60 (41)	

Inches (mm)

† With Twist Drain.

Ordering Information

04L	1	0	G	*	—

Port Size
0 1/8 Inch
1 1/4 Inch

Bowl Options	
Polycarbonate Bowl	Metal Bowl
0 Without Drain	**3 Twist Drain**
1 Twist Drain	

Body
G Without Tamperproof Cap. No Fill Plug

Engineering Level
* Will be Entered at Factory

Port Type	
Blank	**NPT**
1	BSPP
2	BSPT

NOTE: BOLD OPTIONS ARE STANDARD.

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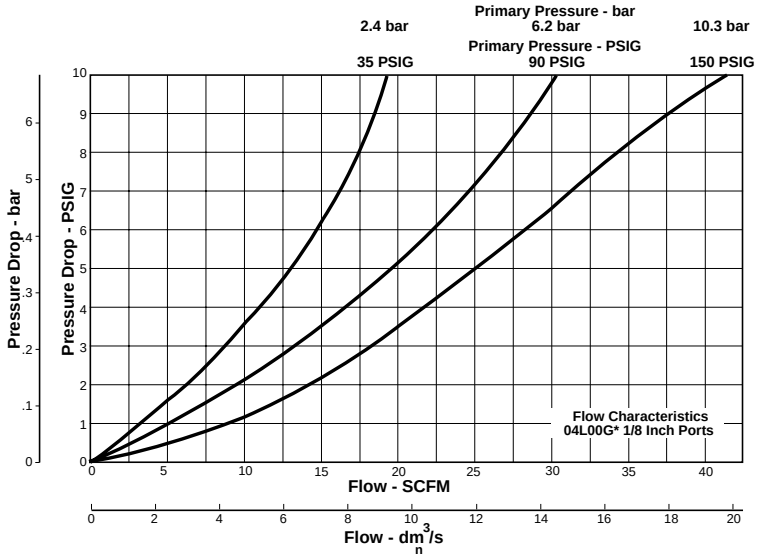

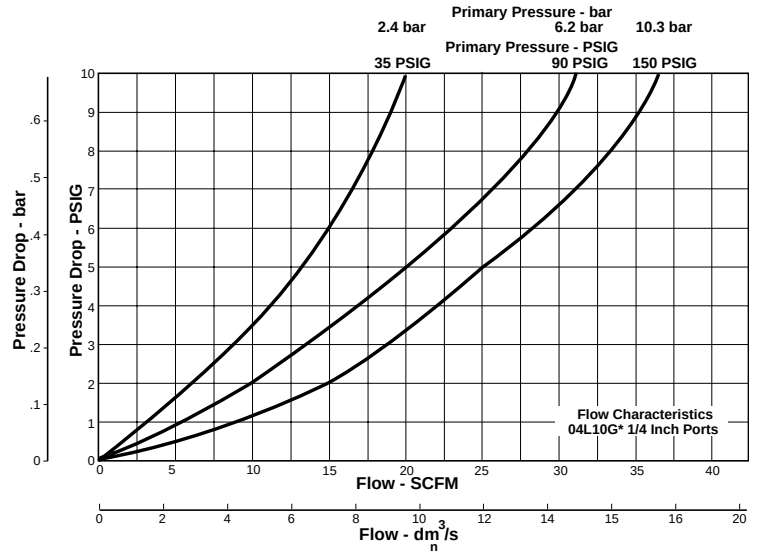

04L Mist Lubricator Kits & Accessories

Bowl Kits –

Poly Bowl – No Drain PS421P
Twist Drain PS420P

Metal Bowl – Twist Drain (No Sight Gauge) PS447BP

Mounting Bracket Kit PS419

Oil – 1 Gal. F442002
12 Quart Case F442003
4 Gallon Case F442005

Specifications

Bowl Capacity ..... 1 Ounce

Minimum Flow for Lubrication ..... 0.5 SCFM at 100 PSIG

Port Threads ..... 1/8, 1/4 Inch

Pressure & Temperature Ratings –

Polycarbonate Bowl – 0 to 150 PSIG (0 to 10.3 bar)
32°F to 125°F (0°C to 52°C)

Metal Bowl – 0 to 250 PSIG (0 to 17.2 bar)
32°F to 175°F (0°C to 80°C)

Suggested Lubricant – ..... F442 Oil

Petroleum based oil of 100 to 200 SSU viscosity at 100°F and an aniline point greater than 200°F

(DO NOT USE OILS WITH ADDITIVES, COMPOUNDED OILS CONTAINING SOLVENTS, GRAPHITE, DETERGENTS, OR SYNTHETIC OILS.)

Weight ..... 0.4 lb. (0.18 kg)

Materials of Construction

Body ..... Zinc

Bowls – Transparent ..... Polycarbonate
Metal (Without Sight Gauge) ..... Zinc

Drains – Twist – Body & Nut ..... Plastic

Seals ..... Nitrile

Sight Dome ..... Polycarbonate

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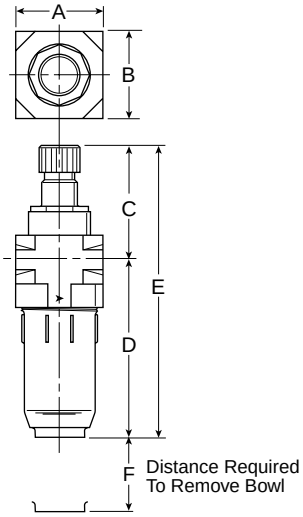
P3A-LA Mist Lubricators – Miniature

Features

- Lightweight Plastic Body
- Proportional oil delivery over a wide range of air flow.
- Precision needle valve assures repeatable oil delivery and provides simple adjustments.
- Transparent sight dome for 360° visibility.



Port Size	NPT
	No Drain
Poly Bowl ‡	
1/8"	**P3A-LA91ANNP**
1/4"	**P3A-LA92ANNP**

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

‡ For polycarbonate bowl and sight dome, see Caution on page A2.

P3A Lubricator Dimensions		
A 1.57 (40)	**B** 1.57 (40)	**C** 2.44 (62)
D 3.50 (89)	**E** 5.51 (140)	**F** 2.75 (70)

Inches (mm)

† With Twist Drain.

Ordering Information

P3A-LA	9	1	A	N	N	P

Port Type	Port Size	Bowl / Drain	Fill Type	Assembly Option	Bowl Material
9 NPT Female	**1 1/8 Inch** **2 1/4 Inch**	Polycarbonate Bowl **A No Drain**	**N No Fill Plug**	**N None**	**P Polycarbonate**

NOTE: BOLD OPTIONS ARE STANDARD.

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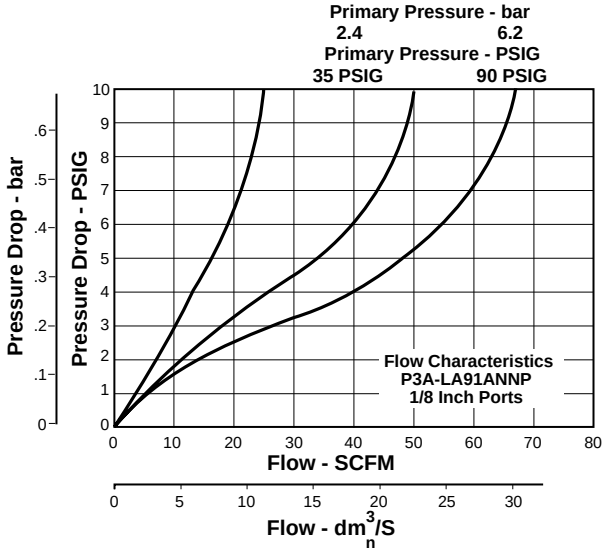
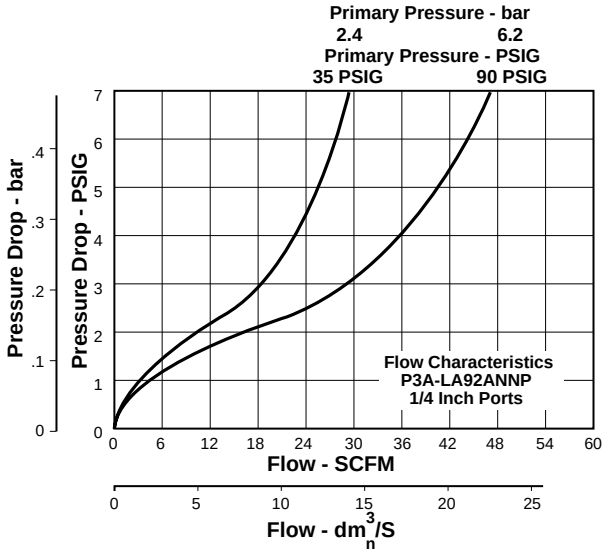
Technical Information





P3A Lubricator Kits and Accessories

Oil – 1 Gal. F442002
12 Quart Case F442003
4 Gallon Case F442005

Plastic Bowl – No Drain P3A-KA00BAP

Service Kit P3A-KA00RLN

Specifications

Bowl Capacity ..... 0.9 Ounces

Minimum Flow for Lubrication ..... 0.4 SCFM at 100 PSIG

Operating Pressure Range	**PSIG**	**bar**
Maximum	120	8.3

Operating Temperature Range ..... 32°F to 125°F (0°C to 52°C)

Port Threads ..... 1/8, 1/4 Inch

Suggested Lubricant ..... F442 Oil
Petroleum based oil of 100 to 200 SSU viscosity at 100°F and an aniline point greater than 200°F.
(DO NOT USE OILS WITH ADDITIVES, COMPOUNDED OILS CONTAINING SOLVENTS, GRAPHITE, DETERGENTS, OR SYNTHETIC OILS).

Weight ..... 0.18 lb. (0.08 kg)

Materials of Construction

Body ..... Plastic

Bowl ..... Transparent Polycarbonate

Metering Screw ..... Plastic

Port Inserts ..... Brass

Seals ..... Nitrile

Sight Dome ..... Transparent Polycarbonate

Venturi & Check Valve Assembly ..... Plastic

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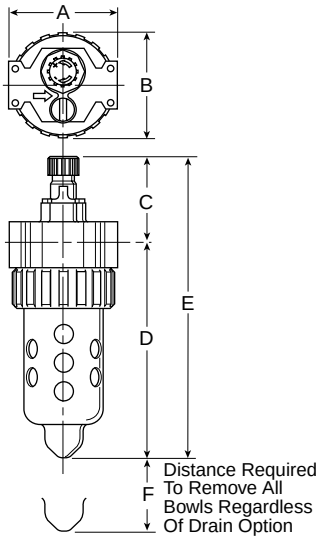
06L Mist Lubricators – Compact

Features

- Proportional oil delivery over a wide range of air flows.
- Precision needle valve assures repeatable oil delivery and provides simple adjustment of delivery rate.
- Bowl can be filled while air line is under pressure.
- Transparent sight dome for 360° visibility.
- High Flow: 1/4" – 40 SCFM§
  3/8" – 60 SCFM§
  1/2" – 90 SCFM§



Port Size	NPT	
	Twist Drain	No Drain
Poly Bowl‡ / Metal Guard		
1/4"	—	**06L12B***
3/8"	—	**06L22B***
1/2"	—	**06L32B***
Metal Bowl / Sight Gauge		
1/4"	**06L14B***	—
3/8"	**06L24B***	—
1/2"	**06L34B***	—

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

‡ For polycarbonate bowl and sight dome, see Caution on page A2.

§ SCFM = Standard cubic feet per minute at 90 PSIG inlet and 5 PSIG pressure drop.

06L Lubricator Dimensions		
A 2.81 (71)	**B** 2.74 (70)	**C** 2.24 (57)
D 5.58 (142)	**D†** 5.69 (145)	**E** 7.82 (199)
E† 7.93 (201)	**F** 2.25 (57)	

Inches (mm)

† With Twist Drain.

Ordering Information

06L	1	2	B	*	—

Port Size
1 1/4 Inch
2 3/8 Inch
3 1/2 Inch

Bowl Options	
Polycarbonate Bowl	Metal Bowl
1 No Drain	**4 Sight Gauge / Twist Drain**
2 Metal Bowl Guard / No Drain	8 Sight Gauge / Pressure Fill
5 Pressure Fill	D Sight Gauge / Liquid Level Sensor
6 Metal Bowl Guard / Pressure Fill	M Sight Gauge / Auto Fill Device
A Liquid Level Sensor	
B Metal Bowl Guard / Liquid Level Sensor	
J Auto Fill Device	
K Metal Bowl Guard / Auto Fill Device	
R Twist Drain	
N Metal Bowl Guard / Twist Drain	

Options
B With Fill Plug
C With Fill Plug/Nylon Sight Dome
F With Body Pressure Fill
G With Body Pressure Fill / Nylon Sight Dome

Engineering Level
* Will be Entered at Factory

Port Type	
Blank	**NPT**
1	BSPP
2	BSPT

NOTE: BOLD OPTIONS ARE STANDARD.

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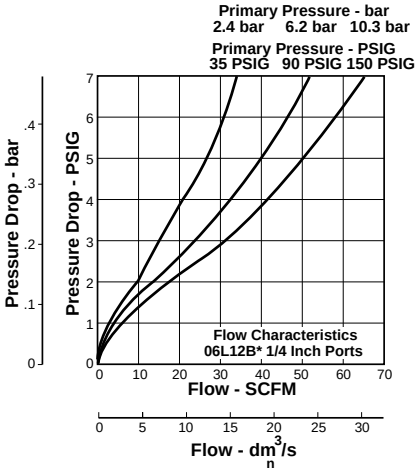
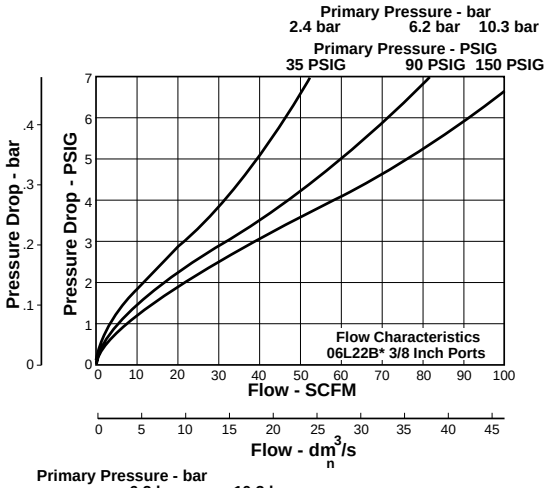
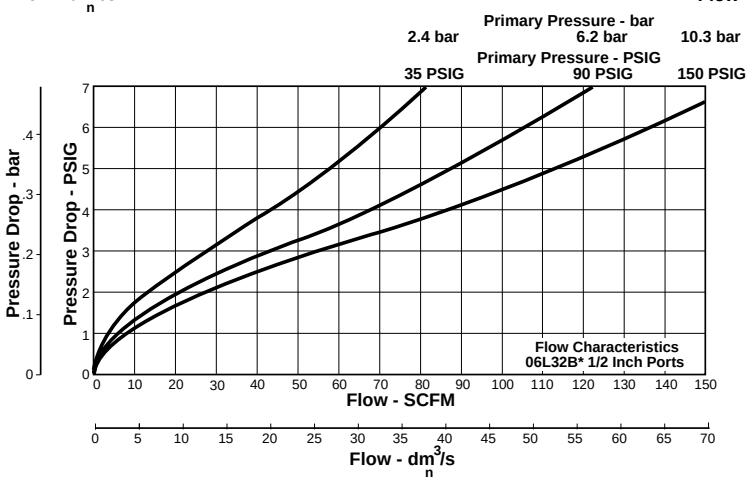
Technical Information







06L Mist Lubricator Kits & Accessories

Adjustment Knob P04121
Bowl Guard Kit PS705P
Bowl Kits –
Poly Bowl – No Drain PS746P
Twist Drain PS717P
Pressure Fill PS719P
Remote Fill PS728P
Metal Bowl – Sight Gauge / Twist Drain PS729P
Sight Gauge / Pressure Fill PS720P
Drain Kit – Twist Drain PS512P
Fill Cap Kit PS741P
Liquid Level Sensor Kit PS797
Lubricator Service Kit PS718P
Mounting Bracket Kit PS743P
Oil – 1 Gal. F442002
12 Quart Case F442003
4 Gallon Case F442005
Pressure Fill Adapter Kit PS716P
Pressure Fill Button P11912
Remote Auto-Fill Device PS505CP
Sight Dome / Fill Cap Kit PS738P
Sight Dome Kit PS740P
Nylon Sight Dome Kit PS740N

Specifications

Bowl Capacity ..... 2.9 Ounces
Minimum Flow for Lubrication ..... .5 SCFM At 100 PSIG
Port Threads ..... 1/4, 3/8, 1/2 Inch
Pressure & Temperature Rating –
Polycarbonate Bowl – 0 to 150 PSIG (0 to 10.3 bar)
32°F to 125°F (0°C to 52°C)
Metal Bowl – 0 to 250 PSIG (0 to 17.2 bar)
32°F to 175°F (0°C to 80°C)
Suggested Lubricant ..... F442 Oil
Petroleum based oil of 100 to 200 SUS viscosity
at 100°F and an aniline point greater than 200°F
(DO NOT USE OILS WITH ADDITIVES,
COMPOUNDED OILS CONTAINING SOLVENTS,
GRAPHITE, DETERGENTS, OR SYNTHETIC OILS.)
Weight ..... 1.2 lb. (0.5 kg)

Materials of Construction

Body ..... Zinc
Bowls – Transparent ..... Polycarbonate
Metal (With Sight Gauge) ..... Zinc
Bowl Guard ..... Steel
Collar ..... Plastic
Drain – Twist – Body & Nut ..... Plastic
Injector Meter Block & Base Assembly ..... Plastic
Seals ..... Nitrile
Sight Dome ..... Polycarbonate
Sight Gauge ..... Polyamide (Nylon)

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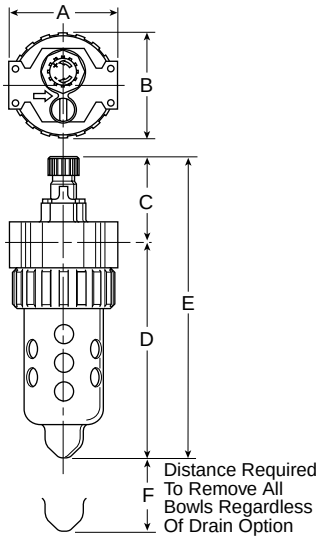
07L Mist Lubricators – Standard

Features

- Proportional oil delivery over a wide range of air flows.
- Precision needle valve assures repeatable oil delivery and provides simple adjustment of delivery rate.
- Bowl can be filled while air line is under pressure.
- Transparent sight dome for 360° visibility.
- High Flow: 3/8" – 60 SCFM§
  1/2" – 90 SCFM§
  3/4" – 90 SCFM§



Port Size	NPT	
	Twist Drain	No Drain
Poly Bowl‡ / Metal Guard		
3/8"	—	**07L22B***
1/2"	—	**07L32B***
3/4"	—	**07L42B***
Metal Bowl / Sight Gauge		
3/8"	**07L24B***	—
1/2"	**07L34B***	—
3/4"	**07L44B***	—

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

‡ For polycarbonate bowl and sight dome, see Caution on page A2.

§ SCFM = Standard cubic feet per minute at 90 PSIG inlet and 5 PSIG pressure drop.

07L Lubricator Dimensions		
A 3.24 (82)	**B** 3.25 (83)	**C** 2.41 (61)
D 6.86 (174)	**D†** 6.95 (177)	**E** 9.09 (231)
E† 9.35 (237)	**F** 2.75 (70)	

Inches (mm)

† With Twist Drain.

Ordering Information

07L	2	2	B	*	—

Port Size

2	**3/8 Inch**
3	**1/2 Inch**
4	**3/4 Inch**

Bowl Options

Polycarbonate Bowl		Metal Bowl	
1	No Drain	**4**	**Sight Gauge / Twist Drain**
2	**Metal Bowl Guard / No Drain**	8	Sight Gauge / Pressure Fill
5	Pressure Fill	D	Sight Gauge / Liquid Level Sensor
6	Metal Bowl Guard / Pressure Fill	M	Sight Gauge / Auto Fill Device
A	Liquid Level Sensor		
B	Metal Bowl Guard / Liquid Level Sensor		
J	Auto Fill Device		
K	Metal Bowl Guard / Auto Fill Device		
R	Twist Drain		
N	Metal Bowl Guard / Twist Drain		

Options

B	**With Fill Plug**
C	With Fill Plug/Nylon Sight Dome
F	With Body Pressure Fill
G	With Body Pressure Fill / Nylon Sight Dome

Engineering Level

*	Will be Entered at Factory

Port Type

Blank	**NPT**
1	BSPP
2	BSPT

NOTE: BOLD OPTIONS ARE STANDARD.

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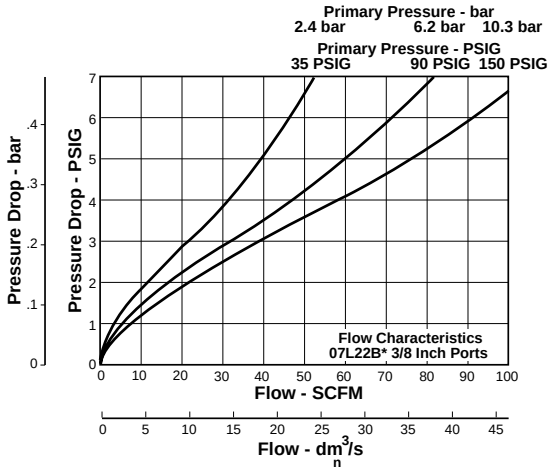
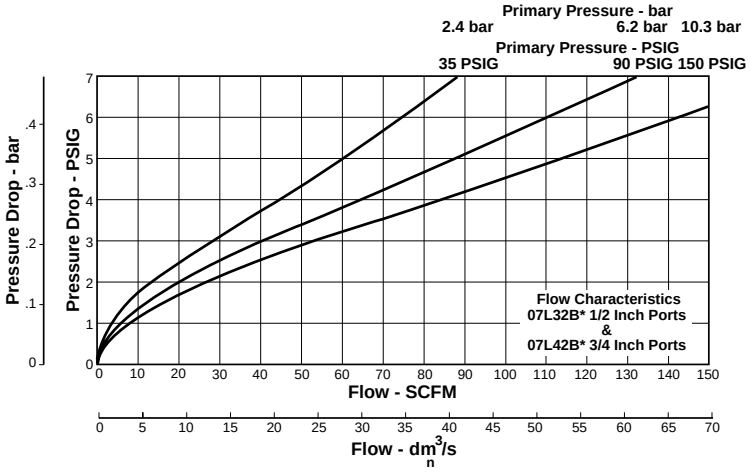
Technical Information





07L Mist Lubricator Kits & Accessories

Adjustment Knob P04121
Bowl Guard Kit PS805P
Bowl Kits –
Poly Bowl – No Drain PS846P
Twist Drain PS817P
Pressure Fill PS819P
Remote Fill PS828P
Metal Bowl – Sight Gauge / Twist Drain PS829P
Sight Gauge / Pressure Fill PS820P
Drain Kit – Twist Drain PS512P
Fill Cap Kit PS741P
Liquid Level Sensor Kit PS797
Lubricator Service Kit PS718P
Mounting Bracket Kit PS843P
Oil – 1 Gal. F442002
12 Quart Case F442003
4 Gallon Case F442005
Pressure Fill Adapter Kit PS716P
Pressure Fill Button P11912
Remote Auto-Fill Device PS505CP
Sight Dome / Fill Cap Kit PS738P
Sight Dome Kit PS740P
Nylon Sight Dome Kit PS740N

Specifications

Bowl Capacity ..... 6.0 Ounces
Minimum Flow for Lubrication ..... .5 SCFM At 100 PSIG
Port Threads ..... 3/8, 1/2, 3/4 Inch
Pressure & Temperature Rating –
Polycarbonate Bowl – 0 to 150 PSIG (0 to 10.3 bar)
32°F to 125°F (0°C to 52°C)
Metal Bowl – 0 to 250 PSIG (0 to 17.2 bar)
32°F to 175°F (0°C to 80°C)
Suggested Lubricant ..... F442 Oil
Petroleum based oil of 100 to 200 SUS viscosity
at 100°F and an aniline point greater than 200°F
(DO NOT USE OILS WITH ADDITIVES,
COMPOUNDED OILS CONTAINING SOLVENTS,
GRAPHITE, DETERGENTS, OR SYNTHETIC OILS.)
Weight ..... 1.9 lb. (0.9 kg)

Materials of Construction

Body ..... Zinc
Bowls – Transparent ..... Polycarbonate
Metal (With Sight Gauge) ..... Zinc
Bowl Guard ..... Steel
Collar ..... Plastic or Metal
Drain – Twist – Body & Nut ..... Plastic
Injector Meter Block & Base Assembly ..... Plastic
Seals ..... Nitrile
Sight Dome ..... Polycarbonate
Sight Gauge ..... Polyamide (Nylon)

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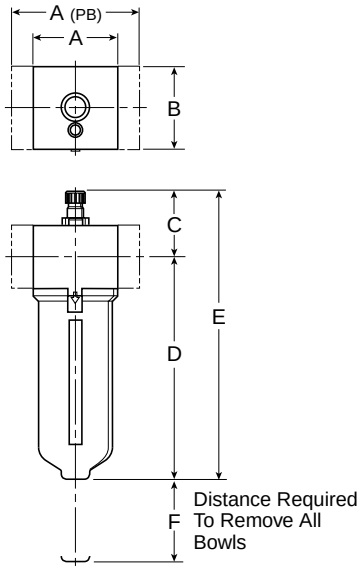
P3NL Mist Lubricators – Hi-Flow

Features

- Port blocks (PB) available to provide 1-1/2" port extension to 1" ported bodies.
- Proportional oil delivery over a wide range of air flows.
- Bowl can be filled while air line is under pressure.
- Transparent sight dome for 360° visibility.
- High Flow: 3/4" – 240 SCFM §
  1" – 250 SCFM §
  1-1/2" – 260 SCFM §



Port Size	NPT
	No Drain
Metal Bowl / Sight Gauge	
3/4"	**P3NLA96LSN**
1"	**P3NLA98LSN**
1-1/2" #	**P3NLA9PLSN**

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

1" Port Body with 1-1/2" Port Block.

§ SCFM = Standard cubic feet per minute at 90 PSIG inlet and 5 PSIG pressure drop.

P3NL Lubricator Dimensions		
A 3.62 (92)	**APB** 5.91 (150)	**B** 3.62 (92)
C 2.81 (71)	**D** 9.00 (229)	**E** 11.81 (300)
F 4.92 (125)		

Inches (mm)

Ordering Information

P3N	L	A	9	8	L	S	N

Design Level

Port Type
- 1 G Thread (BSPP) Female
- 2 Rc Thread (BSPT) Female
- **9 NPT Female**

Port Size
- **6 3/4" (w/o Port Blocks)**
- **8 1" (w/o Port Blocks)**
- **P 1-1/2" Port Blocks (w/ 1" Ported Body)**

Type

Oil Mist
- **L w/ Polycarbonate Sight Dome**
- A w/ Nylon Sight Dome

Bowl
- **S Metal Bowl w/ Sight Gauge**

Drain / Fill Device
- A Auto Fill / Fill Plug
- **N No Drain, Solid Bowl / Fill Plug**
- M Twist Drain / Fill Plug
- H No Drain / Body Pressure Fill
- J Twist Drain / Body Pressure Fill

NOTE: BOLD OPTIONS ARE STANDARD.

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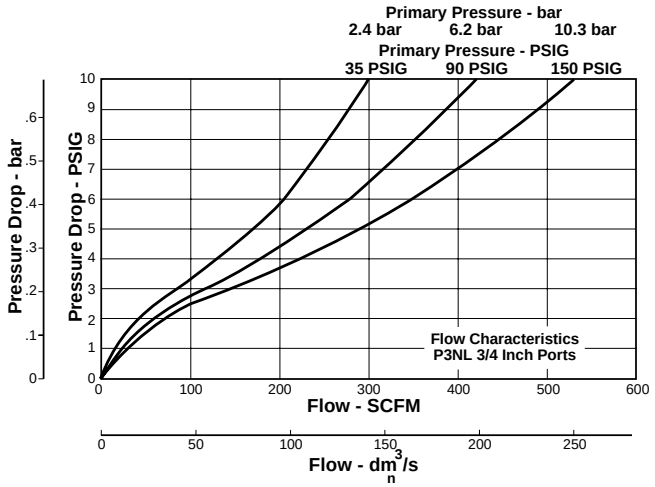
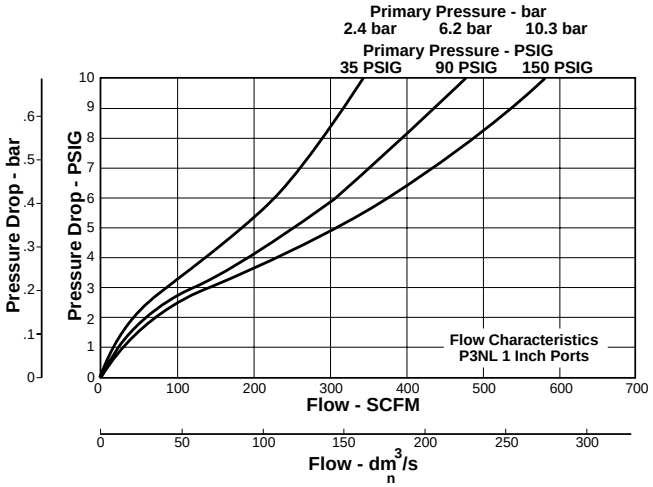
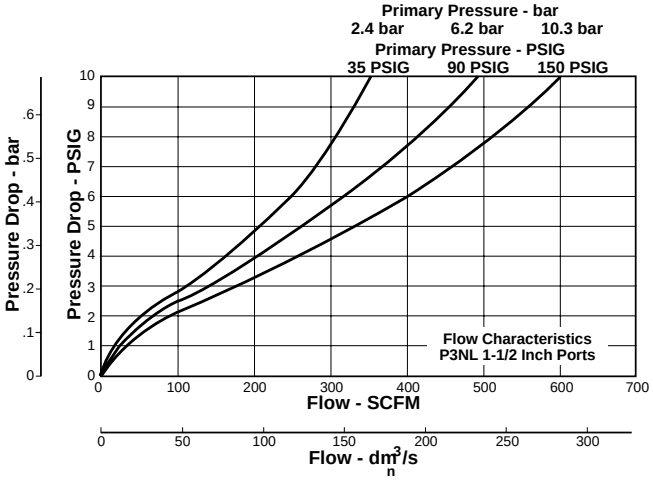
A

Technical Information







P3NL Lubricator Kits & Accessories

Adjustment Knob P04121

Bowl Kits –
Metal Bowl – Sight Gauge / Twist Drain..... P3NKA00BSM
Metal Bowl – Sight Gauge / No Drain P3NKA00BSN

Bowl Latch Kit C11A33

Drain Kit – Twist Drain PS512P

Fill Cap Kit P3NKA00PL

Sight Dome Kit – Polycarbonate PS740P
Nylon PS740N

Sight Gauge Kit P3NKA00PE

Pressure Fill Adapter Kit P3NKA00PK

Service Kit P3NKA00RL

Mounting Bracket Kit* P3NKA00MW

Oil – 1 Gal. F442002
12 Quart Case F442003
4 Gallon Case..... F442005

* If 1-1/2 BSPP E02 fittings are required, use P3NKA0BMW.

Specifications

Bowl Capacity ..... 18.0 Ounces

Minimum Flow for Lubrication ..... 6.6 SCFM at 100 PSIG

Pressure & Temperature Rating ..... 0 to 250 PSIG (0 to 17.2 bar)
32°F to 175°F (0°C to 80°C)

Suggested Lubricant ..... F442 Oil

Petroleum based oil of 100 to 200 SSU viscosity at 100°F and an aniline point greater than 200°F

(DO NOT USE OILS WITH ADDITIVES, COMPOUNDED OILS CONTAINING SOLVENTS, GRAPHITE, DETERGENTS, OR SYNTHETIC OILS.)

Weight – 3/4 Inch ..... 3.5 lb. (1.6 kg)
1 Inch ..... 3.5 lb. (1.6 kg)
1-1/2 Inch† ..... 4.6 lb. (2.1 kg)

Materials of Construction

Body, Bowl ..... Aluminum

Drains: Twist Drain (Optional) ..... Plastic

Injector Meter Block & Base Assembly ..... Plastic

Seals ..... Nitrile

Sight Dome ..... Polycarbonate

Sight Gauge ..... Polyamide (Nylon)

† 1" Port Body with 1-1/2" Port Block.

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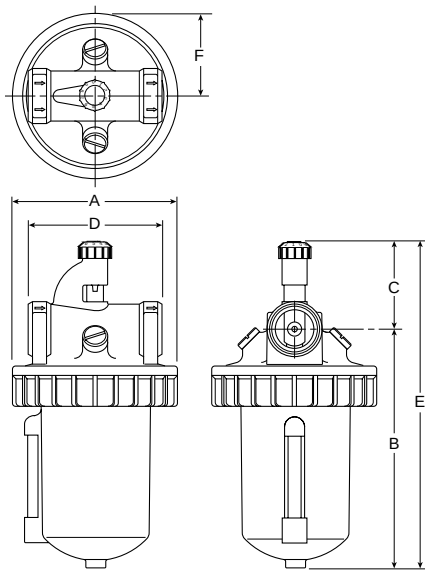
A

L606 Standard Lubricators – Hi-Flow

Features

- Metal bowl with sight gauge - standard.
- Polycarbonate sight dome.
- Bowl can be filled while air line is under pressure.
- Proportional oil delivery over a wide range of air flows.
- Large capacity bowl.
- Optional high capacity bowl(s) available.
- Precision needle valve assures repeatable oil delivery and provides simple adjustment of delivery rate.
- Automatic fill optional (requires external pressurized oil supply).
- High Flow: 3/4" – 325 SCFM §
  1" – 350 SCFM §



Port Size	NPT
	No Drain
Metal Bowl / Sight Gauge	
3/4"	**L606-06W**
1"	**L606-08W**
Metal Bowl 32 oz. without Sight Gauge	
3/4"	**L606-06E**
1"	**L606-08E**
Metal Bowl 64 oz. with Sight Gauge	
3/4"	L606-06G
1"	L606-08G

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

§ SCFM = Standard Cubic Feet Per Minute at 100 PSIG Inlet, and 5 PSIG Pressure Drop.

L606 Lubricator Dimensions					
A	**B**	**C**	**D**	**E**	**F**
L606-06W, L606-08W					
4.97 (126)	7.25 (184)	2.63 (66.7)	4.06 (103)	9.88 (251)	2.48 (63.1)
L606-06E, L606-08E					
4.97 (126)	10.75 (273)	2.63 (66.7)	4.06 (103)	13.38 (340)	2.48 (63.1)
L606-06G, L606-08G					
5.00 (127)	9.40 (239)	2.62 (66)	4.06 (103)	12.02 (305)	2.50 (64)

inches (mm)

Ordering Information

L	606	—	06	W	—	/**

Port Threads
- **— NPT**
- G BSPP

Port Size
- **06 3/4 Inch**
- **08 1 Inch**

Bowl
- **E 32 oz. Large Capacity without Sight Gauge**
- G 64 oz.Large Capacity with Sight Gauge
- **W 16 oz. Metal with Sight Gauge**

Options
- **Blank None**
- H Button Head Fill Fitting
- J Automatic Fill Device
- X9 Manual Twist Drain (Increases Product Length by 9/16 Inch)

Engineering Level
- * Will be Entered at Factory

NOTE: BOLD OPTIONS ARE STANDARD.

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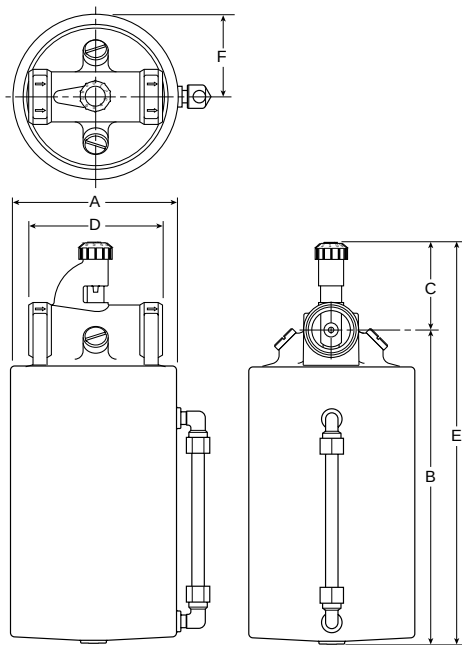
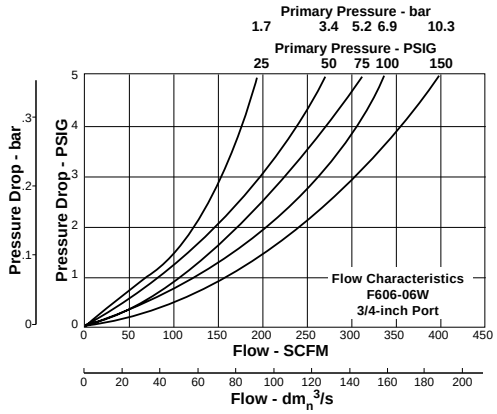
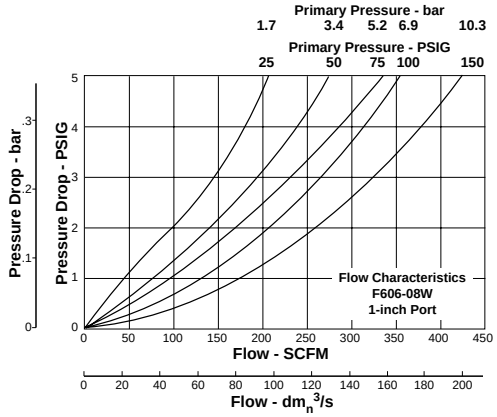
Technical Information



L606-08G





L606 Lubricator Kits & Accessories

Adjusting Knob 606Y72

Bowl Kits –
Aluminum (E) BK603B
Aluminum with Sight Gauge (G) BK606X30B
Zinc with Sight Gauge (W) BK609WB

Button Head Fill Fitting (9/16-24 male thread) SAA606C109

Dip Tube Kit DTK606

Drip Spout Kit RK606SY

Mounting Bracket –
3/4 Inch units (2 required per unit) SA200AW57
1 Inch units (2 required per unit) SA200CW57

Oil – 1 Gal. F442002
12 Quart Case F442003
4 Gallon Case F442005

Repair Kits – Needle Valve Assembly (All) RK606Y
Sight Gauge Bowl Repair Kit (W) RKB605WB
Sight Gauge Bowl Repair Kit (G) RKB606X30B

Specifications

Automatic Fill Option (J) (Only available factory installed)
Requires remote oil supply @ 5 - 10 PSIG above air pressure in bowl.

Bowl Capacity –
Aluminum (E) ..... 32 Ounces
Aluminum with Polycarbonate Sight Gauge (G) ..... 64 Ounces
Zinc with Nylon Sight Gauge (W) ..... 16 Ounces

Port Threads ..... 3/4, 1 Inch

Pressure & Temperature Ratings –
Aluminum Bowl (E) ..... 0 to 300 PSIG (0 to 20.4 bar)
40°F to 150°F (4.4°C to 65.6°C)

Aluminum Bowl with
Polycarbonate Sight Gauge (G) ..... 0 to 150 PSIG (0 to 10.2 bar)
40°F to 125°F (4.4°C to 52°C)

Zinc Bowl with
Nylon Sight Gauge (W)..... 0 to 250 PSIG (0 to 17.2 bar)
40°F to 150°F (4.4°C to 65.6°C)

Suggested Lubricant ..... F442 Oil
Petroleum based oil of 100 to 200 SSU viscosity at 100°F and an aniline point greater than 200°F.

(DO NOT USE OILS WITH ADDITIVES, COMPOUNDED OILS CONTAINING SOLVENTS, GRAPHITE, DETERGENTS, OR SYNTHETIC OILS.)

Weight –
Aluminum Bowl (E) ..... 5.5 lb. (2.49 kg) / Unit
22.3 lb. (10.12 kg) / 4-Unit Master Pack

Aluminum Bowl with
Polycarbonate Sight Gauge (G) ..... 7.2 lb. (3.27 kg) / Unit
28.8 lb. (13.06 kg) / 4-Unit Master Pack

Zinc Bowl with
Nylon Sight Gauge (W)..... 4.2 lb. (1.91 kg) / Unit
16.6 lb. (7.53 kg) / 4-Unit Master Pack

Materials of Construction

Body ..... Zinc

Bowls – (E) ..... Aluminum
(G) ..... Aluminum with Polycarbonate Sight Gauge
(W) ..... Zinc with Nylon Sight Gauge

Seals ..... Buna N

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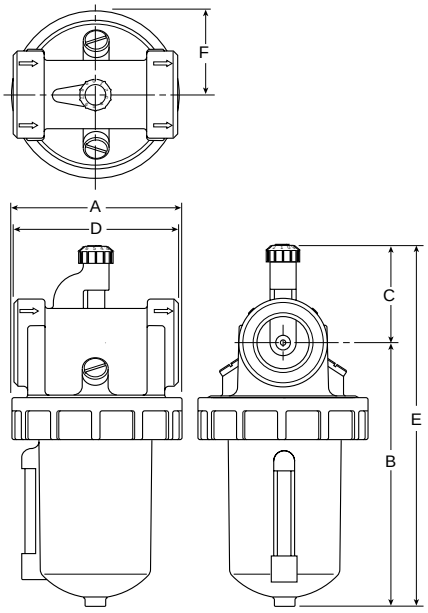
L606 Standard Lubricators – Hi-Flow

Features

- Metal bowl with sight gauge - standard.
- Polycarbonate sight dome.
- Bowl can be filled while air line is under pressure.
- Proportional oil delivery over a wide range of air flows.
- Large capacity bowl.
- Optional high capacity bowl(s) available.
- Precision needle valve assures repeatable oil delivery and provides simple adjustment of delivery rate.
- Automatic fill optional (requires external pressurized oil supply).
- High Flow: 1-1/4" – 325 SCFM §
  1-1/2" – 400 SCFM §



Port Size	NPT
	No Drain
Metal Bowl / Sight Gauge	
1-1/4"	**L606-10W**
1-1/2"	**L606-12W**
Metal Bowl 32 oz. without Sight Gauge	
1-1/4"	**L606-10E**
1-1/2"	**L606-12E**
Metal Bowl 64 oz. with Sight Gauge	
1-1/4"	L606-10G
1-1/2"	L606-12G

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

§ SCFM = Standard Cubic Feet Per Minute at 100 PSIG Inlet, and 5 PSIG Pressure Drop.

L606 Lubricator Dimensions					
A	**B**	**C**	**D**	**E**	**F**
L606-10W, L606-12W					
4.97 (126)	7.63 (194)	2.84 (72)	4.81 (122)	10.47 (266)	2.48 (63)
L606-10E, L606-12E					
4.97 (126)	11.13 (283)	2.84 (72)	4.81 (122)	13.97 (355)	2.48 (63)
L606-10G, L606-12G					
5.00 (127)	7.99 (203)	2.842 (72)	4.81 (122)	12.80 (325)	2.50 (64)

inches (mm)

Ordering Information

L	606	—	10	W	—	/**

Port Threads	
—	**NPT**
G	BSPP

Port Size	
10	**1-1/4 Inch**
12	**1-1/2 Inch**

Bowl	
E	**32 oz. Large Capacity without Sight Gauge**
G	64 oz.Large Capacity with Sight Gauge
W	**16 oz. Metal with Sight Gauge**

Options	
Blank	**None**
H	Button Head Fill Fitting
J	Automatic Fill Device
X9	Manual Twist Drain (Increases Product Length by 9/16 Inch)

Engineering Level	
*	Will be Entered at Factory

NOTE: BOLD OPTIONS ARE STANDARD.

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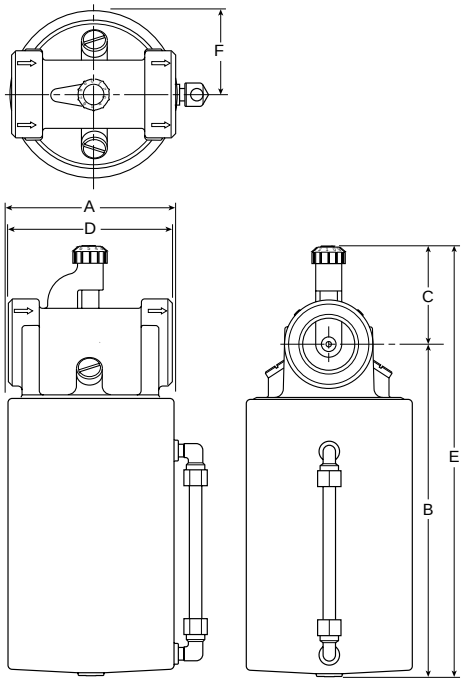
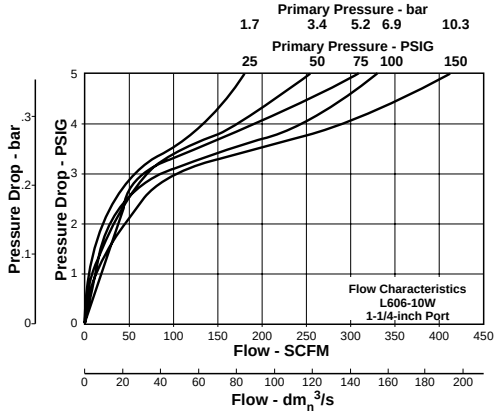
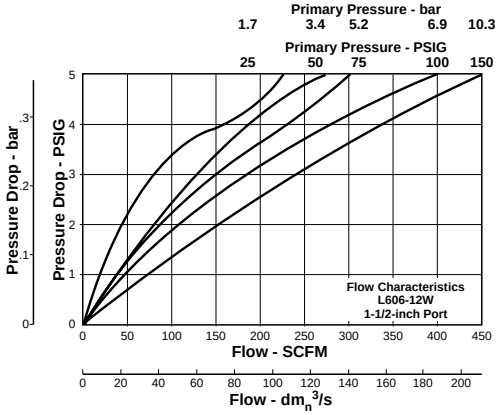
Technical Information



L606-12G





L606 Lubricator Kits & Accessories

Adjusting Knob 606Y72

Bowl Kits –
Aluminum (E) BK603B
Aluminum with Sight Gauge (G) BK606X30B
Zinc with Sight Gauge (W) BK609WB

Button Head Fill Fitting (9/16-24 male thread) SAA606C109

Dip Tube Kit DTK606

Drip Spout Kit RK606SY

Oil – 1 Gal. F442002
12 Quart Case F442003
4 Gallon Case F442005

Repair Kits – Needle Valve Assembly (All) RK606Y
Sight Gauge Bowl Repair Kit (W) RKB605WB
Sight Gauge Bowl Repair Kit (G) RKB606X30B

Specifications

Automatic Fill Option (J) (Only available factory installed)
Requires remote oil supply @ 5 - 10 PSIG above air pressure in bowl.

Bowl Capacity –
Aluminum (E) ..... 32 Ounces
Aluminum with Polycarbonate Sight Gauge (G) ..... 64 Ounces
Zinc with Nylon Sight Gauge (W) ..... 16 Ounces

Port Threads ..... 1-1/4, 1-1/2 Inch

Pressure & Temperature Ratings –
Aluminum Bowl (E) ..... 0 to 300 PSIG (0 to 20.4 bar)
40°F to 150°F (4.4°C to 65.6°C)

Aluminum Bowl with
Polycarbonate Sight Gauge (G) ..... 0 to 150 PSIG (0 to 10.2 bar)
40°F to 125°F (4.4°C to 52°C)

Zinc Bowl with
Nylon Sight Gauge (W)..... 0 to 250 PSIG (0 to 17.2 bar)
40°F to 150°F (4.4°C to 65.6°C)

Suggested Lubricant ..... F442 Oil
Petroleum based oil of 100 to 200 SSU viscosity at 100°F and an aniline point greater than 200°F.

(DO NOT USE OILS WITH ADDITIVES, COMPOUNDED OILS CONTAINING SOLVENTS, GRAPHITE, DETERGENTS, OR SYNTHETIC OILS.)

Weight –
Aluminum Bowl (E) ..... 8.3 lb. (3.76 kg) / Unit
33.2 lb. (15.06 kg) / 4-Unit Master Pack

Aluminum Bowl with
Polycarbonate Sight Gauge (G) ..... 10 lb. (4.54 kg) / Unit
40 lb. (18.14 kg) / 4-Unit Master Pack

Zinc Bowl with
Nylon Sight Gauge (W)..... 7.5 lb. (3.40 kg) / Unit
28.2 lb. (12.79 kg) / 4-Unit Master Pack

Materials of Construction

Body ..... Zinc

Bowls – (E) ..... Aluminum
(G) ..... Aluminum with Polycarbonate Sight Gauge
(W) ..... Zinc with Nylon Sight Gauge

Seals ..... Buna N

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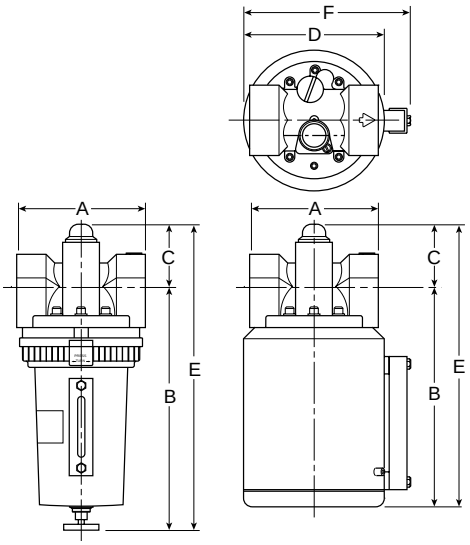
A

09L Mist Lubricators – Hi-Flow

Features

- Metal bowl with sight gauge and manual drain – standard.
- Transparent sight dome for 360° visibility.
- Bowl can be filled while air line is under pressure.
- Proportional oil delivery over a wide range of air flows.
- High Flow: 1000 – SCFM §



Port Size	NPT
Metal Bowl / Sight Gauge – 1 Quart	
2"	**09L84B***
Metal Bowl / Sight Gauge – 3 Quart	
2"	**09L8PB***

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

§ SCFM = Standard Cubic Feet Per Minute at 900 PSIG Inlet, and 5 PSIG Pressure Drop.

09L Lubricator Dimensions					
1 Qt.	**A**	**B**	**C**	**D**	**E**
	5.50 (140)	10.40 (264)	2.64 (67)	—	—
3 Qt.	**A**	**B**	**C**	**D**	**E**
	5.50 (140)	9.44 (240)	2.64 (67)	6.00 (152)	7.12 (181)

Inches (mm)

Ordering Information

09L	8	4	B	*	—

Port Size
8 2 Inch

Bowl Options
Metal Bowl
4 1 Quart Sight Gauge / Manual Drain
P 3 Quart Sight Gauge / Manual Drain

Options
B Without Tamperproof Cap

Engineering Level
* Will be Entered at Factory

Port Type
Blank NPT

NOTE: BOLD OPTIONS ARE STANDARD.

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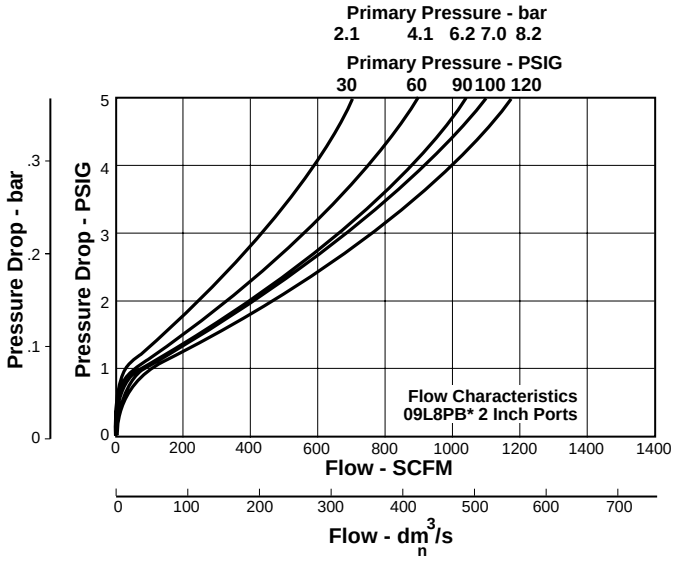
A

Technical Information



09L Lubricator Kits & Accessories

Fill Cap Kit PS610P

Lubricator Service Kit PS607P

Metal Bowl – Sight Gauge / Twist Drain PS612P*

Oil – 1 Gal. F442002
12 Quart Case F442003
4 Gallon Case F442005

Sight Dome Kit PS613P

* 1 Quart Bowl

Specifications

Bowl Capacity ..... 1 Qt. (Standard)
3 Qt. (Optional)

Bowl ..... Metal with Sight Gauge

Drain ..... Manual Twist Drain

Port Threads ..... 2 Inch

Pressure & Temperature Rating ..... 0 to 150 PSIG (0 to 10.3 bar)
32°F to 150°F (0°C to 66°C)

Suggested Lubricant ..... F442 Oil

Petroleum based oil of 100 to 200 SSU viscosity at 100°F and an aniline point greater than 200°F

(DO NOT USE OILS WITH ADDITIVES, COMPOUNDED OILS CONTAINING SOLVENTS, GRAPHITE, DETERGENTS, OR SYNTHETIC OILS.)

Weight –1 Qt. ..... 10.2 lb. (4.6 kg)
3 Qt. ..... 13.7 lb. (6.2 kg)

Materials of Construction

Body ..... Zinc Alloy, Die Cast

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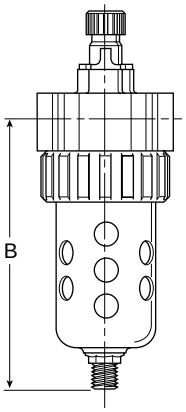
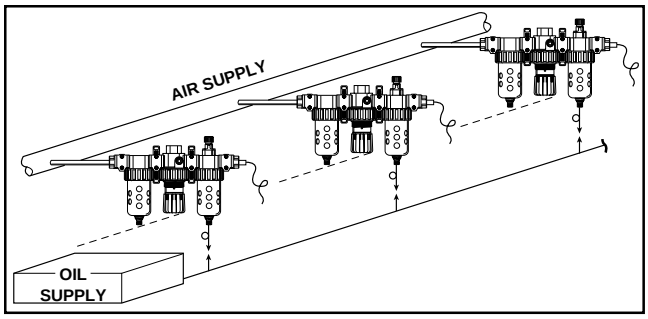
A

Remote Auto-Fill Device

Features

- Wide operating range (oil supply to inlet may be 30 to 270 PSIG; air operating pressure depends on bowl used).
- Rugged polyurethane float design.
- Complete field conversion kit.
- Adaptable on polycarbonate and metal bowls already in service.
- Oil supply strainer standard.
- Fits 06L / 16L and 07L / 17L Series.



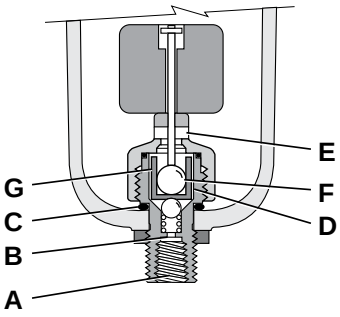


Dimensions

Model	Kit Number	B
06L-16L	**PS505CP**	5.36 (136)
07L-17L	**PS505CP**	6.71 (170)

Inches (mm)

Operation



Oil enters the unit at the pipe thread fitting **(A)** with a supply pressure that is a minimum of 20 PSIG above the lubricator air pressure. With the float lowered, oil flows through metering orifice **(B)** and lifts the check ball **(C)**. Oil continues to flow past the shuttle chamber annulus **(D)** and out the cross drilled hole **(E)**. As the oil level rises, it cause the float to rise to its maximum level in the bowl. During this period the shut-off ball **(F)** remains in chamber **(G)**, out of the flow stream. Near the end of the filling period, shut-off ball **(F)** will enter the flow stream and snap shut against the seat in chamber **(G)**.

The stem assembly will thus block any additional oil passage as long as the oil supply pressure is maintained at **(A)**. When the supply pressure at **(A)** is released, ball **(C)** is held up against the shuttle **(D)** by a spring causing a slight delay in reverse flow shut-off. This permits the higher still present supply pressure in chamber **(G)** to dissipate and bowl pressure to take over. The shuttle then moves down forcing ball **(C)** to close orifice **(B)**. The orifice will remain closed as long as there is air pressure in the bowl.

This delay of reverse flow in chamber **(G)** is necessary to allow shut-off ball **(F)** to fall when the oil level decreases and permit oil to enter the bowl for the next refill. Thus, for the unit to operate properly, it is necessary that the oil supply pressure go to zero after each fill.

Specifications

Bowl Capacity ..... 4.9 Ounces
Minimum Flow for Lubrication ..... 1 SCFM At 100 PSIG
Port Threads ..... 3/8, 1/2, 3/4 Inch
Pressure & Temperature Rating –
Polycarbonate Bowl – 0 to 150 PSIG (0 to 10.3 bar)
32°F to 125°F (0°C to 52°C)
Metal Bowl / Sight Gauge – 0 to 250 PSIG (0 to 17.2 bar)
32°F to 175°F (0°C to 80°C)

Oil inlet pressure must be at least 20 PSIG above system air pressure and may be up to 300 PSIG.

Suggested Lubricant ..... F442 Oil
Petroleum based oil of 100 to 200 SSU viscosity at 100°F and an aniline point greater than 200°F
(DO NOT USE OILS WITH ADDITIVES, COMPOUNDED OILS CONTAINING SOLVENTS, GRAPHITE, DETERGENTS, OR SYNTHETIC OILS.)

Flexible tubing is recommended for oil supply line connection to remote fill inlet. Rigid piping should be avoided to prevent possible damage due to stresses on the lubricator bowl assembly.
Oil supply line should be pressurized for 2 to 15 minutes one or more times per day. Pressurization frequently should be based on maintaining oil in lubricator at its highest level.
Weight ..... 1.9 lb. (0.9 kg)

Materials of Construction

Body, Cap & Stem ..... Aluminum
Float ..... Polyurethane
Mounting Nut ..... Delrin
Seals ..... Nitrile
Spring ..... Stainless

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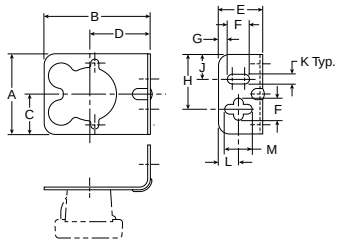
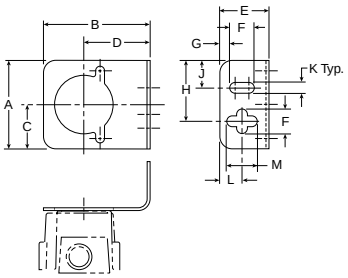
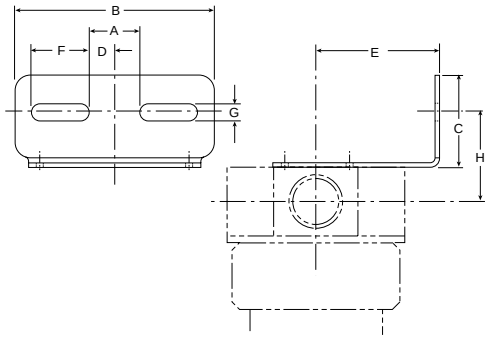
Mounting Bracket Kits



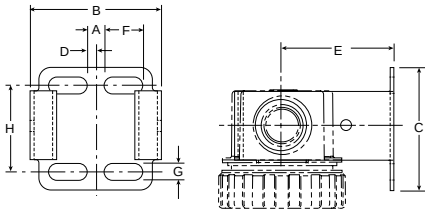
PS417BP
(Includes Panel Mount Nut)



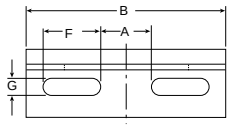
PS419
(Includes Panel Mount Nut)

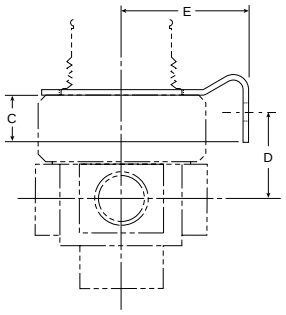


PS743P, PS843P



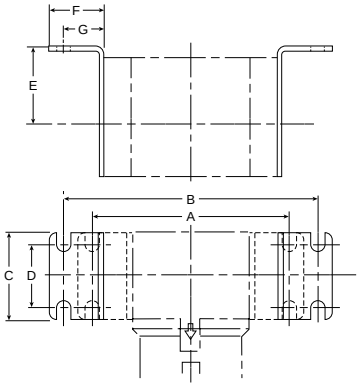
PS943P





PS707P & PS807P
(Includes Panel Mount Nut)

PS963P
(Includes Aluminum Panel Mount Nut)



P3NKA00MW

Dimensions

A	B	C	D	E	F	G	H	J	K	L	M	Kit
1.80 (46)	2.37 (60)	0.90 (23)	1.35 (34)	1.00 (25)	0.50 (13)	0.20 (5)	1.24 (31)	0.56 (14)	0.22 (6)	0.45 (11)	0.62 (16)	**PS417BP** (10F, 14F, P3A, 14R, 14E)
1.80 (46)	2.17 (55)	0.90 (23)	1.35 (34)	1.00 (25)	0.50 (13)	0.20 (5)	1.24 (31)	0.56 (14)	0.22 (6)	0.45 (11)	0.62 (16)	**PS419** (04L)
0.84 (21)	3.25 (83)	1.50 (38)	0.42 (11)	2.00 (51)	0.94 (24)	0.28 (7)	1.44 (37)	—	—	—	—	**PS743P** (06F, 11F, 06L, 16L)
1.00 (25)	3.94 (100)	1.57 (40)	0.50 (13)	2.19 (56)	1.25 (32)	0.28 (7)	1.68 (43)	—	—	—	—	**PS843P** (07F, 12F, 07L, 17L)
0.28 (7)	2.12 (54)	2.00 (51)	0.14 (4)	1.85 (47)	0.63 (16)	0.28 (7)	1.41 (36)	—	—	—	—	**PS943P** (05F, 15F, 15L)
0.84 (21)	2.59 (66)	0.49 (12)	1.02 (26)	1.85 (47)	0.61 (15)	0.28 (7)	—	—	—	—	—	**PS963P** (05R, 10R, 05E, 27E)
0.84 (21)	3.26 (83)	0.77 (20)	1.46 (37)	2.00 (51)	0.94 (24)	0.28 (7)	—	—	—	—	—	**PS707P** (06R, 06E, 11R)
1.00 (25)	3.94 (100)	0.65 (17)	1.68 (43)	2.19 (56)	1.25 (32)	0.28 (7)	—	—	—	—	—	**PS807P** (07R, 07E, 12R)
6.22 (158)	8.19 (208)	2.75 (70)	1.97 (50)	2.36 (60)	1.77 (45)	1.30 (33)	—	—	—	—	—	**P3NKA00MW** (P3NF, P3NR, P3NE, P3NL)

inches (mm)

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Safety Guide For Selecting And Using Pneumatic Division Products And Related Accessories

⚠ WARNING:

FAILURE OR IMPROPER SELECTION OR IMPROPER USE OF PNEUMATIC DIVISION PRODUCTS, ASSEMBLIES OR RELATED ITEMS ("PRODUCTS") CAN CAUSE DEATH, PERSONAL INJURY, AND PROPERTY DAMAGE. POSSIBLE CONSEQUENCES OF FAILURE OR IMPROPER SELECTION OR IMPROPER USE OF THESE PRODUCTS INCLUDE BUT ARE NOT LIMITED TO:

- Unintended or mistimed cycling or motion of machine members or failure to cycle
- Work pieces or component parts being thrown off at high speeds.
- Failure of a device to function properly for example, failure to clamp or unclamp an associated item or device.
- Explosion
- Suddenly moving or falling objects.
- Release of toxic or otherwise injurious liquids or gasses.

Before selecting or using any of these Products, it is important that you read and follow the instructions below.

1. GENERAL INSTRUCTIONS

1.1. Scope: This safety guide is designed to cover general guidelines on the installation, use, and maintenance of Pneumatic Division Valves, FRLs (Filters, Pressure Regulators, and Lubricators), Vacuum products and related accessory components.

1.2. Fail-Safe: Valves, FRLs, Vacuum products and their related components can and do fail without warning for many reasons. Design all systems and equipment in a fail-safe mode, so that failure of associated valves, FRLs or Vacuum products will not endanger persons or property.

1.3 Relevant International Standards: For a good guide to the application of a broad spectrum of pneumatic fluid power devices see: ISO 4414:1998, Pneumatic Fluid Power – General Rules Relating to Systems. See www.iso.org for ordering information.

1.4. Distribution: Provide a copy of this safety guide to each person that is responsible for selection, installation, or use of Valves, FRLs or Vacuum products. Do not select, or use Parker valves, FRLs or vacuum products without thoroughly reading and understanding this safety guide as well as the specific Parker publications for the products considered or selected.

1.5. User Responsibility: Due to the wide variety of operating conditions and applications for valves, FRLs, and vacuum products Parker and its distributors do not represent or warrant that any particular valve, FRL or vacuum product is suitable for any specific end use system. This safety guide does not analyze all technical parameters that must be considered in selecting a product. The user, through its own analysis and testing, is solely responsible for:

- Making the final selection of the appropriate valve, FRL, Vacuum component, or accessory.
- Assuring that all user's performance, endurance, maintenance, safety, and warning requirements are met and that the application presents no health or safety hazards.
- Complying with all existing warning labels and / or providing all appropriate health and safety warnings on the equipment on which the valves, FRLs or Vacuum products are used; and,
- Assuring compliance with all applicable government and industry standards.

1.6. Safety Devices: Safety devices should not be removed, or defeated.

1.7. Warning Labels: Warning labels should not be removed, painted over or otherwise obscured.

1.8. Additional Questions: Call the appropriate Parker technical service department if you have any questions or require any additional information. See the Parker publication for the product being considered or used, or call 1-800-CPARKER, or go to www.parker.com, for telephone numbers of the appropriate technical service department.

2. PRODUCT SELECTION INSTRUCTIONS

2.1. Flow Rate: The flow rate requirements of a system are frequently the primary consideration when designing any pneumatic system. System components need to be able to provide adequate flow and pressure for the desired application.

2.2. Pressure Rating: Never exceed the rated pressure of a product. Consult product labeling, Pneumatic Division catalogs or the instruction sheets supplied for maximum pressure ratings.

2.3. Temperature Rating: Never exceed the temperature rating of a product. Excessive heat can shorten the life expectancy of a product and result in complete product failure.

2.4. Environment: Many environmental conditions can affect the integrity and suitability of a product for a given application. Pneumatic Division products are designed for use in general purpose industrial applications. If these products are to be used in unusual circumstances such as direct sunlight and/or corrosive or caustic environments, such use can shorten the useful life and lead to premature failure of a product.

2.5. Lubrication and Compressor Carryover: Some modern synthetic oils can and will attack nitrile seals. If there is any possibility of synthetic oils or greases migrating into the pneumatic components check for compatibility with the seal materials used. Consult the factory or product literature for materials of construction.

2.6. Polycarbonate Bowls and Sight Glasses: To avoid potential polycarbonate bowl failures:

- Do not locate polycarbonate bowls or sight glasses in areas where they could be subject to direct sunlight, impact blow, or temperatures outside of the rated range.
- Do not expose or clean polycarbonate bowls with detergents, chlorinated hydro-carbons, keytones, esters or certain alcohols.
- Do not use polycarbonate bowls or sight glasses in air systems where compressors are lubricated with fire resistant fluids such as phosphate ester and di-ester lubricants.

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2.7. Chemical Compatibility: For more information on plastic component chemical compatibility see Pneumatic Division technical bulletins Tec-3, Tec-4, and Tec-5

2.8. Product Rupture: Product rupture can cause death, serious personal injury, and property damage.
- Do not connect pressure regulators or other Pneumatic Division products to bottled gas cylinders.
- Do not exceed the maximum primary pressure rating of any pressure regulator or any system component.
- Consult product labeling or product literature for pressure rating limitations.

3. PRODUCT ASSEMBLY AND INSTALLATION INSTRUCTIONS

3.1. Component Inspection: Prior to assembly or installation a careful examination of the valves, FRLs or vacuum products must be performed. All components must be checked for correct style, size, and catalog number. DO NOT use any component that displays any signs of nonconformance.

3.2. Installation Instructions: Parker published Installation Instructions must be followed for installation of Parker valves, FRLs and vacuum components. These instructions are provided with every Parker valve or FRL sold, or by calling 1-800-CPARKER, or at www.parker.com.

3.3. Air Supply: The air supply or control medium supplied to Valves, FRLs and Vacuum components must be moisture-free if ambient temperature can drop below freezing

4. VALVE AND FRL MAINTENANCE AND REPLACEMENT INSTRUCTIONS

4.1. Maintenance: Even with proper selection and installation, valve, FRL and vacuum products service life may be significantly reduced without a continuing maintenance program. The severity of the application, risk potential from a component failure, and experience with any known failures in the application or in similar applications should determine the frequency of inspections and the servicing or replacement of Pneumatic Division products so that products are replaced before any failure occurs. A maintenance program must be established and followed by the user and, at minimum, must include instructions 4.2 through 4.10.

4.2. Installation and Service Instructions: Before attempting to service or replace any worn or damaged parts consult the appropriate Service Bulletin for the valve or FRL in question for the appropriate practices to service the unit in question. These Service and Installation Instructions are provided with every Parker valve and FRL sold, or are available by calling 1-800-CPARKER, or by accessing the Parker web site at www.parker.com.

4.3. Lockout / Tagout Procedures: Be sure to follow all required lockout and tagout procedures when servicing equipment. For more information see: OSHA Standard – 29 CFR, Part 1910.147, Appendix A, The Control of Hazardous Energy – (Lockout / Tagout)

4.4. Visual Inspection: Any of the following conditions requires immediate system shut down and replacement of worn or damaged components:
- Air leakage: Look and listen to see if there are any signs of visual damage to any of the components in the system. Leakage is an indication of worn or damaged components.
- Damaged or degraded components: Look to see if there are any visible signs of wear or component degradation.
- Kinked, crushed, or damaged hoses. Kinked hoses can result in restricted air flow and lead to unpredictable system behavior.
- Any observed improper system or component function: Immediately shut down the system and correct malfunction.
- Excessive dirt build-up: Dirt and clutter can mask potentially hazardous situations.

Caution: Leak detection solutions should be rinsed off after use.

4.5. Routine Maintenance Issues:
- Remove excessive dirt, grime and clutter from work areas.
- Make sure all required guards and shields are in place.

4.6. Functional Test: Before initiating automatic operation, operate the system manually to make sure all required functions operate properly and safely.

4.7. Service or Replacement Intervals: It is the user's responsibility to establish appropriate service intervals. Valves, FRLs and vacuum products contain components that age, harden, wear, and otherwise deteriorate over time. Environmental conditions can significantly accelerate this process. Valves, FRLs and vacuum components need to be serviced or replaced on routine intervals. Service intervals need to be established based on:
- Previous performance experiences.
- Government and / or industrial standards.
- When failures could result in unacceptable down time, equipment damage or personal injury risk.

4.8. Servicing or Replacing of any Worn or Damaged Parts: To avoid unpredictable system behavior that can cause death, personal injury and property damage:
- Follow all government, state and local safety and servicing practices prior to service including but not limited to all OSHA Lockout Tagout procedures (OSHA Standard – 29 CFR, Part 1910.147, Appendix A, The Control of Hazardous Energy – Lockout / Tagout).
- Disconnect electrical supply (when necessary) before installation, servicing, or conversion.
- Disconnect air supply and depressurize all air lines connected to system and Pneumatic Division products before installation, service, or conversion.
- Installation, servicing, and / or conversion of these products must be performed by knowledgeable personnel who understand how pneumatic products are to be applied.
- After installation, servicing, or conversions air and electrical supplies (when necessary) should be connected and the product tested for proper function and leakage. If audible leakage is present, or if the product does not operate properly, do not put product or system into use.
- Warnings and specifications on the product should not be covered or painted over. If masking is not possible, contact your local representative for replacement labels.

4.9. Putting Serviced System Back into Operation: Follow the guidelines above and all relevant Installation and Maintenance Instructions supplied with the valve FRL or vacuum component to insure proper function of the system.

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Offer of Sale

The items described in this document and other documents or descriptions provided by Parker Hannifin Corporation, its subsidiaries and its authorized distributors, are hereby offered for sale at prices to be established by Parker Hannifin Corporation, its subsidiaries and its authorized distributors. This offer and its acceptance by any customer ("Buyer") shall be governed by all of the following Terms and Conditions. Buyer's order for any such item, when communicated to Parker Hannifin Corporation, its subsidiaries or an authorized distributor ("Seller") verbally or in writing, shall constitute acceptance of this offer.

1. Terms and Conditions of Sale: All descriptions, quotations, proposals, offers, acknowledgments, acceptances and sales of Seller's products are subject to and shall be governed exclusively by the terms and conditions stated herein. Buyer's acceptance of any offer to sell is limited to these terms and conditions. Any terms or conditions in addition to, or inconsistent with those stated herein, proposed by Buyer in any acceptance of an offer by Seller, are hereby objected to. No such additional, different or inconsistent terms and conditions shall become part of the contract between Buyer and Seller unless expressly accepted in writing by Seller. Seller's acceptance of any offer to purchase by Buyer is expressly conditional upon Buyer's assent to all the terms and conditions stated herein, including any terms in addition to, or inconsistent with those contained in Buyer's offer. Acceptance of Seller's products shall in all events constitute such assent.

2. Payment: Payment shall be made by Buyer net 30 days from the date of delivery of the items purchased hereunder. Amounts not timely paid shall bear interest at the maximum rate permitted by law for each month or portion thereof that the Buyer is late in making payment. Any claims by Buyer for omissions or shortages in a shipment shall be waived unless Seller receives notice thereof within 30 days after Buyer's receipt of the shipment.

3. Delivery: Unless otherwise provided on the face hereof, delivery shall be made F.O.B. Seller's plant. Regardless of the method of delivery, however, risk of loss shall pass to Buyer upon Seller's delivery to a carrier. Any delivery dates shown are approximate only and Seller shall have no liability for any delays in delivery.

4. Warranty: Seller warrants that the items sold hereunder shall be free from defects in material or workmanship for a period of 18 months from date of shipment from Parker Hannifin Corporation. THIS WARRANTY COMPRISES THE SOLE AND ENTIRE WARRANTY PERTAINING TO ITEMS PROVIDED HEREUNDER. SELLER MAKES NO OTHER WARRANTY, GUARANTEE, OR REPRESENTATION OF ANY KIND WHATSOEVER. ALL OTHER WARRANTIES, INCLUDING BUT NOT LIMITED TO, MERCHANTABILITY AND FITNESS FOR PURPOSE, WHETHER EXPRESS, IMPLIED, OR ARISING BY OPERATION OF LAW, TRADE USAGE, OR COURSE OF DEALING ARE HEREBY DISCLAIMED.

NOTWITHSTANDING THE FOREGOING, THERE ARE NO WARRANTIES WHATSOEVER ON ITEMS BUILT OR ACQUIRED WHOLLY OR PARTIALLY, TO BUYER'S DESIGN OR SPECIFICATIONS.

5. Limitation of Remedy: SELLER'S LIABILITY ARISING FROM OR IN ANY WAY CONNECTED WITH THE ITEMS SOLD OR THIS CONTRACT SHALL BE LIMITED EXCLUSIVELY TO REPAIR OR REPLACEMENT OF THE ITEMS SOLD OR REFUND OF THE PURCHASE PRICE PAID BY BUYER, AT SELLER'S SOLE OPTION. IN NO EVENT SHALL SELLER BE LIABLE FOR ANY INCIDENTAL, CONSEQUENTIAL OR SPECIAL DAMAGES OF ANY KIND OR NATURE WHATSOEVER, INCLUDING BUT NOT LIMITED TO LOST PROFITS ARISING FROM OR IN ANY WAY CONNECTED WITH THIS AGREEMENT OR ITEMS SOLD HEREUNDER, WHETHER ALLEGED TO ARISE FROM BREACH OF CONTRACT, EXPRESS OR IMPLIED WARRANTY, OR IN TORT, INCLUDING WITHOUT LIMITATION, NEGLIGENCE, FAILURE TO WARN OR STRICT LIABILITY.

6. Changes, Reschedules and Cancellations: Buyer may request to modify the designs or specifications for the items sold hereunder as well as the quantities and delivery dates thereof, or may request to cancel all or part of this order, however, no such requested modification or cancellation shall become part of the contract between Buyer and Seller unless accepted by Seller in a written amendment to this Agreement. Acceptance of any such requested modification or cancellation shall be at Seller's discretion, and shall be upon such terms and conditions as Seller may require.

7. Special Tooling: A tooling charge may be imposed for any special tooling, including without limitations, dies, fixtures, molds and patterns, acquired to manufacture items sold pursuant to this contract. Such special tooling shall be and remain Seller's property notwithstanding payment of any charges by Buyer. In no event will Buyer acquire any interest in apparatus belonging to Seller which is utilized in the manufacture of the items sold hereunder, even if such apparatus has been specially converted or adapted for such manufacture and notwithstanding any charges paid by Buyer. Unless otherwise agreed, Seller shall have the right to alter, discard or otherwise dispose of any special tooling or other property in its sole discretion at any time.

8. Buyer's Property: Any designs, tools, patterns, materials, drawings, confidential information or equipment furnished by Buyer, or any other items which become Buyer's property, may be considered obsolete and may be destroyed by Seller after two (2) consecutive years have elapsed without Buyer placing an order for the items which are manufactured using such property. Seller shall not be responsible for any loss or damage to such property while it is in Seller's possession or control.

9. Taxes: Unless otherwise indicated on the face hereof, all prices and charges are exclusive of excise, sales, use, property, occupational or like taxes which may be imposed by any taxing authority upon the manufacture, sale or delivery of the items sold hereunder. If any such taxes must be paid by Seller or if Seller is liable for the collection of such tax, the amount thereof shall be in addition to the amounts for the items sold. Buyer agrees to pay all such taxes or to reimburse Seller therefore upon receipt of its invoice. If Buyer claims exemption from any sales, use or other tax imposed by any taxing authority, Buyer shall save Seller harmless from and against any such tax, together with any interest or penalties thereon which may be assessed if the items are held to be taxable.

10. Indemnity For Infringement of Intellectual Property Rights: Seller shall have no liability for infringement of any patents, trademarks, copyrights, trade dress, trade secrets or similar rights except as provided in this Part 10. Seller will defend and indemnify Buyer against allegations of infringement of U.S. patents, U.S. trademarks, copyrights, trade dress and trade secrets (hereinafter "Intellectual Property Rights"). Seller will defend at its expense and will pay the cost of any settlement or damages awarded in an action brought against Buyer based on an allegation that an item sold pursuant to this contract infringes the Intellectual Property Rights of a third party. Seller's obligation to defend and indemnify Buyer is contingent on Buyer notifying Seller within ten (10) days after Buyer becomes aware of such allegations of infringement, and Seller having sole control over the defense of any allegations or actions including all negotiations for settlement or compromise. If an item sold hereunder is subject to a claim that it infringes the Intellectual Property Rights of a third party, Seller may, at its sole expense and option, procure for Buyer the right to continue using said item, replace or modify said item so as to make it noninfringing, or offer to accept return of said item and return the purchase price less a reasonable allowance for depreciation. Notwithstanding the foregoing, Seller shall have no liability for claims of infringement based on information provided by Buyer, or directed to items delivered hereunder for which the designs are specified in whole or part by Buyer, or infringements resulting from the modification, combination or use in a system of any item sold hereunder. The foregoing provisions of this Part 10 shall constitute Seller's sole and exclusive liability and Buyer's sole and exclusive remedy for infringement of Intellectual Property Rights.

If a claim is based on information provided by Buyer or if the design for an item delivered hereunder is specified in whole or in part by Buyer, Buyer shall defend and indemnify Seller for all costs, expenses or judgements resulting from any claim that such item infringes any patent, trademark, copyright, trade dress, trade secret or any similar right.

11. Force Majeure: Seller does not assume the risk of and shall not be liable for delay or failure to perform any of Seller's obligations by reason of circumstances beyond the reasonable control of Seller (hereinafter "Events of Force Majeure"). Events of Force Majeure shall include without limitation, accidents, acts of God, strikes or labor disputes, acts, laws, rules or regulations of any government or government agency, fires, floods, delays or failures in delivery of carriers or suppliers, shortages of materials and any other cause beyond Seller's control.

12. Entire Agreement/Governing Law: The terms and conditions set forth herein, together with any amendments, modifications and any different terms or conditions expressly accepted by Seller in writing, shall constitute the entire Agreement concerning the items sold, and there are no oral or other representations or agreements which pertain thereto. This Agreement shall be governed in all respects by the law of the State of Ohio. No actions arising out of sale of the items sold hereunder or this Agreement may be brought by either party more than two (2) years after the cause of action accrues.

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⚠ 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 COMPONENTS 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.

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