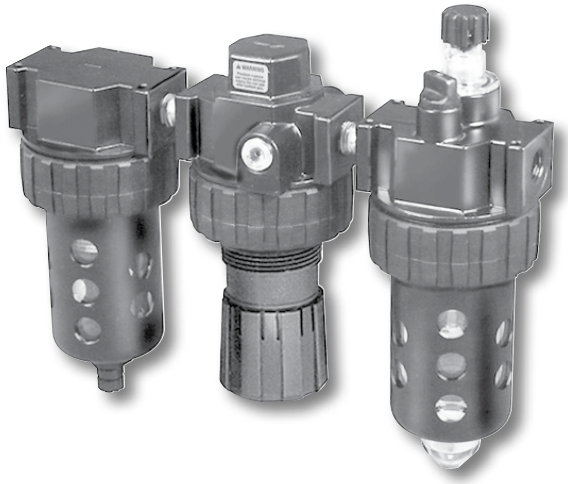

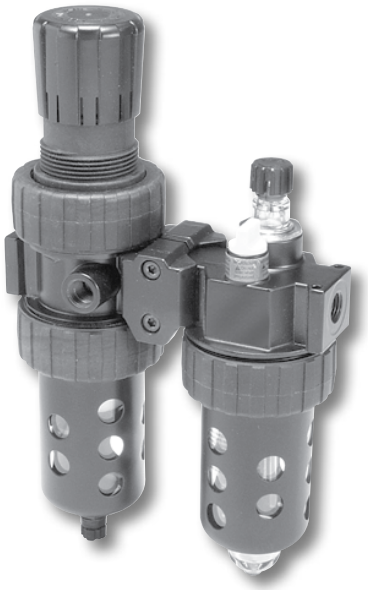

Air Preparation Units

Filters, Regulators, and Lubricators

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

ENGINEERING YOUR SUCCESS.

Micro-Mist Lubricators

- Pipe Sizes 1/4 thru 3/4 Inch
- Flows to 90 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

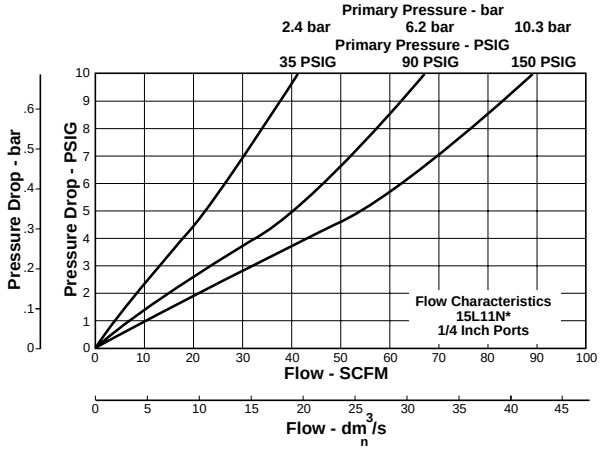
Lubricator Selection

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.

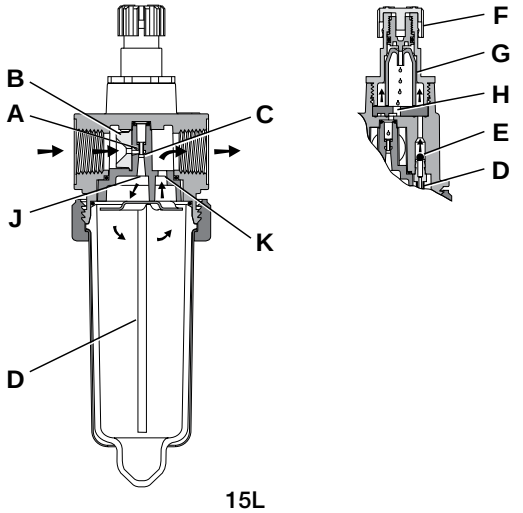
F442 Oil

Quantity	Part Numbers
1 Quart	F442001P
1 Gallon	F442002P
12 Quart Case	F442003P
4 Gallon Case	F442005P

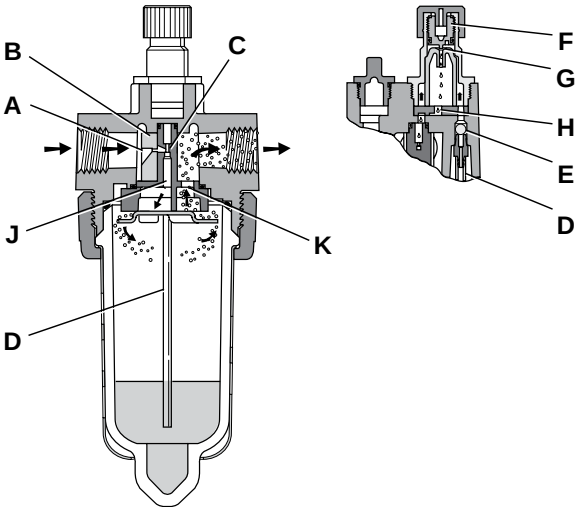
Reading Flow Charts to Size Micro-Mist Lubricators



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.



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.

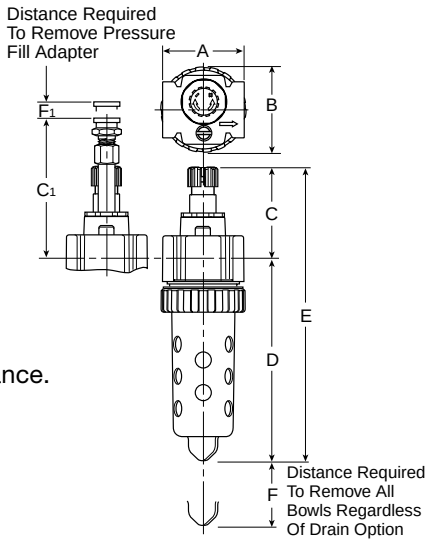
Oil then flows through the clearance between the inner and outer sight domes **(G)** where drops are formed and drip into the nozzle tube **(H)**. Here it is then broken into fine particles as it expands into the low pressure venturi. From there, the atomized oil flows through the precision orifice **(J)**. 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.**

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***	—

‡ For polycarbonate bowl and sight dome, see Caution on page 2.

§ 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	Metal Bowl
2 Metal Bowl Guard / No Drain	4 Sight Gauge / Twist Drain

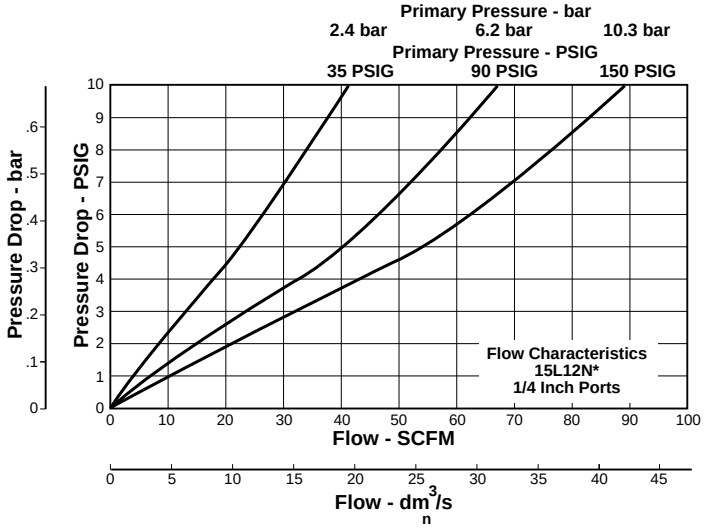
Fill Options
- N No Fill Plug

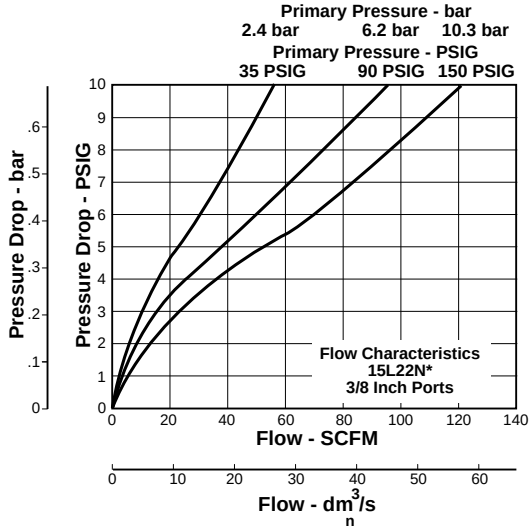
Engineering Level
- * Will be Entered at Factory

Port Type
- Blank NPT

Note: 1/4 & 3/8 inch meet ISO 1179-1 Standard.

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
Mounting Bracket Kit PS943P
Oil – 1 Gal. F442002P
12 Quart Case F442003P
4 Gallon Case F442005P
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)

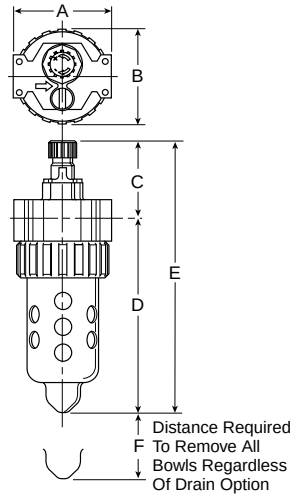
Materials of Construction

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)

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***	—

‡ For polycarbonate bowl and sight dome, see Caution on page 2.
§ 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
2 Metal Bowl Guard / No Drain	4 Sight Gauge / Twist Drain

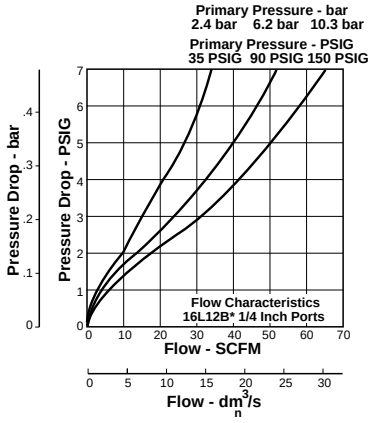
Options
B With Fill Plug

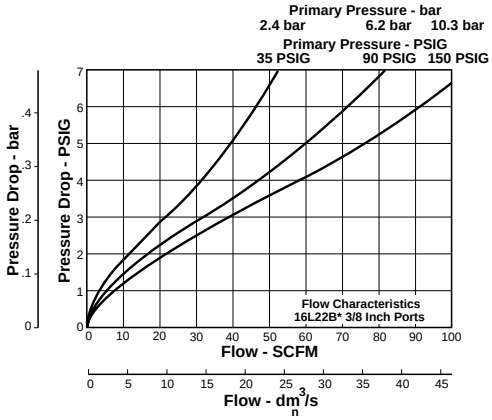
Engineering Level
* Will be Entered at Factory

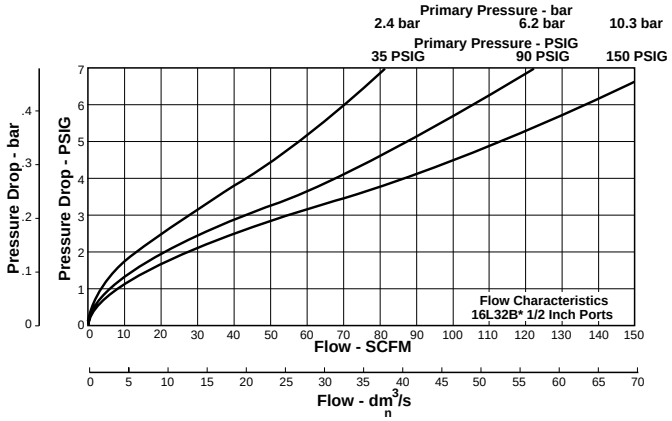
Port Type
Blank NPT

Note: 1/4 & 3/8 inch meet ISO 1179-1 Standard.

Technical Information







16L Micro-Mist Lubricator Kits & Accessories

Adjustment Knob P04121
Bowl Guard Kit PS705P
Bowl Kits –
Poly Bowl – No Drain PS746P
Metal Bowl – Sight Gauge / Twist Drain PS729P

Drain Kit – Twist Drain PS512P
Fill Cap Kit PS742P
Lubricator Service Kit PS748P
Mounting Bracket Kit PS743P
Oil – 1 Gal. F442002P
12 Quart Case F442003P
4 Gallon Case F442005P
Pressure Fill Adapter Kit PS716P
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)

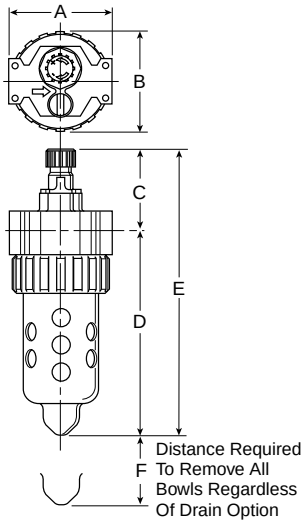
Materials of Construction

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)

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***	—

‡ For polycarbonate bowl and sight dome, see Caution on page 2.
§ 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
2 Metal Bowl Guard / No Drain	4 Sight Gauge / Twist Drain

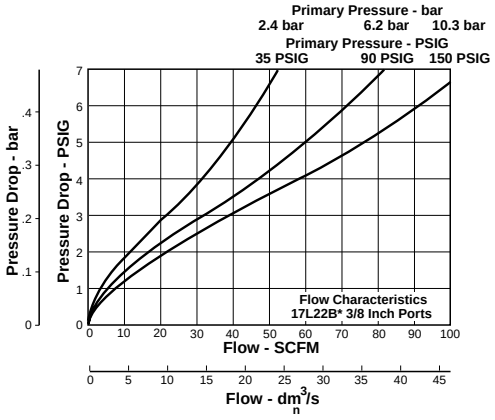
Options
B With Fill Plug

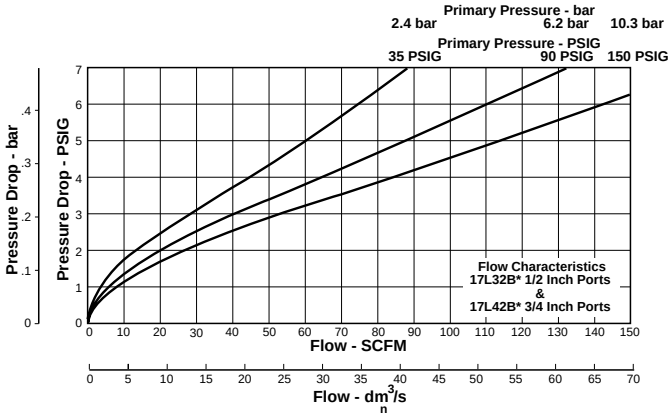
Engineering Level
* Will be Entered at Factory

Port Type
Blank NPT

Note: 3/8 & 1/2 inch meet ISO 1179-1 Standard.

Technical Information





17L Micro-Mist Lubricator Kits & Accessories

Adjustment Knob P04121

Bowl Guard Kit PS805P

Bowl Kits –

Poly Bowl – No Drain PS846P

Metal Bowl – Sight Gauge / Twist Drain PS829P

Drain Kit – Twist Drain PS512P

Fill Cap Kit PS742P

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

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)