

Lubricators

Compressed air tool lubricators are available in modular or inline models in port sizes from 1/8" to 2". Machine bearing lubricators are available in 8 to 32 inch ratings.

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L07



L72M/C



L73M/C



L74M/C



L64M/C



L68



L17



10-028



10-076



10-015



1.1 GENERAL OVERVIEW

Norgren manufactures two main types of lubricators: Oil-Fog and Micro-Fog. These units are mounted directly into the pipe and add small amounts of oil to the air flowing through them.

Oil Fog-Lubricators:

All the oil droplets seen in the sight dome are added directly into the air flow. This results in relatively large oil droplets passing downstream, suitable for heavy lubrication applications eg single cylinders and tools. Most competitive in line lubricators are of the Oil-Fog type.

Micro-Fog Lubricators:

The oil droplets seen in the sight dome are atomized and collected in the area above the oil in the bowl. The smaller lighter particles are drawn into the air flow and pass downstream.

As a result typically only 10% of the oil seen as drops in the sight dome is passed downstream. The remainder falls back into the oil reservoir. Consequently, drip rate settings are somewhat higher than their Oil-Fog equivalent. This makes setting much easier, particularly in low flow applications.

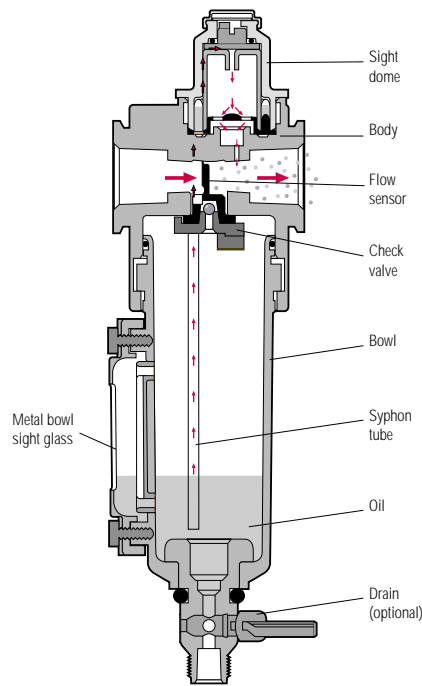
The fine Micro-Fog oil particles can travel long distances through complex pipe work making Micro-Fog lubricators suitable for multiple valve and cylinder circuits.

1.2 WHAT ARE THE DIFFERENCES BETWEEN MICRO-FOG AND OIL-FOG?

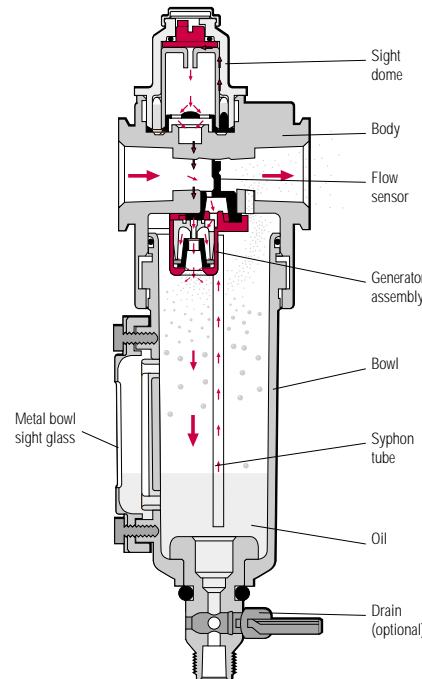
1.2.1 Oil-Fog:

- Large oil particles not as fine as micro-fog.
- All oil drips seen in sight domes are delivered downstream.
- For applications over short distances.
- Should be mounted at same level or higher than device being lubricated.
- Standard bowls can be filled under pressure. (Not on rapid cycle units).
- Suitable for heavy lubrication applications eg single large cylinders and tools.
- Has a flow sensor which provides constant oil output density for varying flows.

OIL-FOG LUBRICATOR



MICRO-FOG LUBRICATOR



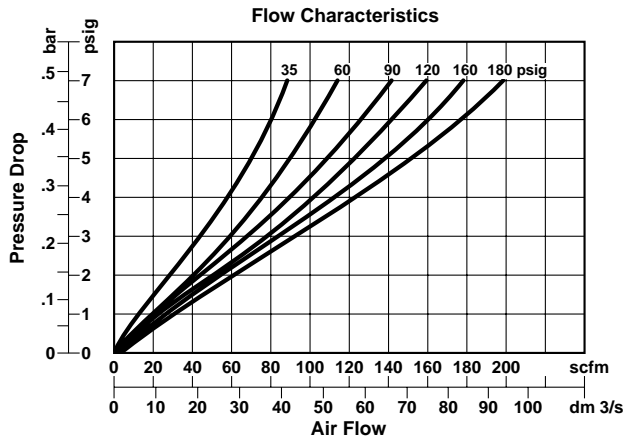
1.2.2 Micro-Fog:

- Small oil particles; less than 2 micron.
- Only 10% of 'drip rate' is delivered downstream as active lubricant (remainder is returned to main oil reservoir).
- High drip rates make drip setting easier in low flow applications.
- Can be mounted above or below the point of application.
- Cannot be filled without shutting off upstream air (unless a quick fill cap or remote fill device is used).
- For use with lengthy air lines, multiple valve and cylinder circuits.
- Has a flow sensor to provide an almost constant oil output density for varying flows.

1.2.3 Can Oil-Fog and Micro-Fog Units be Converted?

Generally not, simply changing a green (Oil-Fog) sight dome for a red (Micro-Fog) sight dome does not change the function.

Some lubricators are designed around a cartridge insert. In this case it may be possible to swap the cartridge and sight domes to change the function.



1.3 LUBRICATOR SIZING

Lubricators are sized by downstream flow requirements. An analysis of air flow use must be made. After determining how much air flow is needed, a lubricator can be chosen. Manufacturers' curves will be like the one shown. For example, 50 scfm of 90 psig lubricated air is required. Enter the curve on the horizontal axis at the required flow. Read up to intersect the 90 psig line. Read the pressure drop on left, vertical axis as approximately 2.3 psid. Pressure drop should be less than 5 psid. If pressure drop is more than 5 psid, choose a larger lubricator.

Always be sure that the lubricants in your system are compatible with the materials in the lubricator you choose. This is especially important for plastic lubricator reservoirs. If in doubt, check with the factory or use a metal reservoir.

1.4 SETTING LUBRICATOR DRIP RATES

1.4.1 What is the Correct Drip Rate Setting?

The drip rate will depend on the application, the amount of lubrication required, the flow through the lubricator and the lubricator type. In Micro-Fog lubricators only 10% of the droplets in the sight dome are carried downstream. The drip rate in Micro-Fog lubricators therefore tends to be much higher.

The following table can be used to estimate drip rate for required flow. This is very much a rule of thumb. In practice it is necessary to fine tune the oil drip rate in each application.

Typical Drip Rate per Minute Micro-Fog	Typical Drip Rate per Minute Oil-Fog	Approx Flow scfm (dm ³ /s)
20	2	10 (5)
40	4	20 (10)
60	6	30 (15)
80	8	40 (20)
100	10	50 (25)
120	12	60 (30)

1.3.2 Can the Drip Rate be Shut Off?

In lubricators with needle valve type sight dome, yes.

Some Norgren sight domes use a felt pad which is soaked in oil at the point where the drops are formed. With this type of sight dome the oil droplets cease once the felt pad dries out.

With the new style dome (L72/73/74 and L07) complete shut off is not possible. Minimum adjustment for the drip rate is around 1 drop per minute.

1.5 FILLING METHODS

1.5.1 Oil-Fog and Micro-Fog Lubricators:

The standard Oil-Fog lubricators can be filled under pressure ie without switching off the upstream air. When a fill plug is removed a check valve in the lubricator body isolates the inlet pressure from the bowl and the reservoir will depressurize. The lubricator can then be filled with oil. When the fill plug is replaced, the reservoir will re-pressurize.

The standard Micro-Fog unit can only be filled without isolating the upstream pressure if a remote fill or quick fill nipple accessory is fitted. To remove the fill plug of a Micro-Fog lubricator whilst under pressure can be dangerous. If in doubt shut off the upstream air!

1.5.2 Remote Fill Devices:

The remote oil fill system provides a means of filling from a remote fill point, a single lubricator or a bank of lubricators manifolded together. The remote fill point may be connected to a portable reservoir or to a centralized, permanent reservoir. A portable reservoir permits the use of different lubricants in different groups of lubricators to suit the requirements of the machinery being lubricated. The lubrication oil must be fed in at a higher pressure than exists in the bowl.

The devices are NOT intended for connection to an oil feed line which is under constant pressure from a pump or pressurized reservoir. The device cannot reset until the pressure is removed. Such lines are a potential safety hazard if they should leak or become broken.

1.5.3 Quick Fill Nipples:

The quick fill system is an alternative which allows ease of filling a single Micro-Fog or Oil-Fog lubricator without switching off the mains air (on some units the quick fill nipple replaces the filler plug).

To fill the lubricator, a quick fill connector piped to a portable oil reservoir is snapped in place over the quick fill nipple. The main oil reservoir can now be pumped (or pressurized) to a pressure greater than the lubricator bowl and the lubricator filled.



1.6 OPTIONS AND ACCESSORIES

1.6.1 Where can Liquid Level Switches be Fitted?

Liquid level detection methods can be attached to the 1 quart bowl and 2 & 5 gallon tanks.

1.6.2 Where can Remote Fill and Liquid Level Switches be Fitted?

The smaller bowls, L73 and up, are all capable of either remote fill or liquid level detection (but not both at the same time!). The 2 quart and 2 & 5 gallon tanks only can have the liquid level switches fitted.

1.6.3 How do Liquid Level Switches Work?

Liquid level switches are bipolar reed switches which change state when the float rises and falls.

Liquid level switches are normally connected to give an electrical signal when the float falls (ie when the liquid level is too low). In critical applications the logic could be reversed. Maximum and minimum settings are possible too.

1.7 LARGE TANKS/RESERVOIRS

1.7.1 Which Units have Large Tanks/Reservoirs?

All units in basic 1/2" and above have optional larger bowls/tanks.

Olympian Plus and Excelon 74 are limited to 1 quart as standard. For 2 and 5 gallon capacity use 15/17 Series, or the 10-028/-076 (2") lubricators.

1.8 APPLICATION SPECIFIC UNITS

1.8.1 Do we Make Bearing Lubricators?

These are aerosol type lubricators. These lubricators use air to get the oil to the point of lubrication, however the tool or application is not powered by the air. Although produced by Norgren, systems for their application are designed and sold by Engineering and General Lubrication Systems.

1.8.2 What is a Fixed Venturi (Bi-Directional) Lubricator?

Standard Norgren lubricators use a flow sensor to achieve constant oil density with varying flows. In some applications high flow is more important than constant density and a fixed venturi can be used instead of a flow sensor. It may also be useful in systems with rapid cycling. Consult Air Line for more details.

1.9 OILS

1.9.1 What Oils are Recommended?

Recommended oils fall into 2 categories:-

- 1 Oils recommended for use with all Norgren units (valves, cylinders, fittings and FRLs).
- 2 Oils which can be used with Norgren lubricators but not necessarily with other Norgren equipment.

Refer to ALE-29-2 for recommended lubricants.

1.9.2 Can Non-Recommended Oils be Used?

Some oils can be tested for suitability, but Norgren cannot be responsible for use of non-recommended lubricants.



1.10 SIMPLE LUBRICATOR TROUBLESHOOTING

Problem	Possible Cause	Remedy
No Drip Rate	Oil adjustment knob fully clockwise.	Readjust knob.
	Low oil level.	Check oil level.
	Airflow through lubricator too low.	Use smaller size lubricator.
		Remove bowl and sight feed adjustment dome and clear syphon tube.
	Blocked oil filter screen.	Remove sight feed adjustment dome and clean or replace screen located in dome assembly.
	Air leaks.	Check bowl, filler plug and sight dome seals. Tighten if necessary.
Oil Foaming	Over aeration.	Check bowl seals for slight leaks.
Oil Emulsified	Water in lubricator.	Fit filter immediately upstream.
Drip Rate changes after setting	Fade.	Readjust drip rate.

**Miniature Series 07 Micro-Fog
Lubricator 1/8" and 1/4" Port Sizes**

- **Compact design**
- **Provides air line lubrication to one or more air driven tools or other devices**
- **Nearly constant oil density output with varying air flow**
- **All around (360°) visibility of the sight-feed dome simplifies installation and adjustment**
- **Screw-on bowl reduces maintenance time**
- **Can be disassembled without the use of tools or removal from the air line**



Ordering Information. Models listed include PTF threads and transparent bowl with manual drain.

Port Size	Model Numbers	Flow scfm (dm ³ /s)*	Weight lbs (kg)
1/8"	L07-100-MPAA	10 (5.0 dm ³ /s)	0.28 (0.13)
1/4"	L07-200-MPAA	14 (6.7 dm ³ /s)	0.28 (0.13)

* Approximate flow at 90 psig (6.3 bar) inlet pressure and 7 psig (0.5 bar) pressure drop.

Alternative Models

L 0 7 - ★ ★ ★ - M P ★ ★

Port Size	Substitute
1/8"	1
1/4"	2

Option	Substitute
Not applicable	0

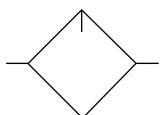
Option	Substitute
Not applicable	0

Threads	Substitute
PTF	A
ISO Rc taper	B
ISO G parallel	G

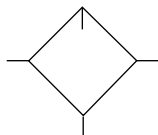
Bowl and Drain	Substitute
Transparent without drain	Q
Metal with drain	M
Transparent with drain	A

Flow	Substitute
Unidirection	P

Lubricator Type	Substitute
Micro-Fog	M

ISO Symbols


No drain



Manual drain

See Section ALE-25 for Accessories



Technical Data

Fluid: Compressed air

Maximum pressure

Transparent bowl: 150 psig (10 bar)

Metal bowl: 250 psig (17 bar)

Operating temperature*

Transparent bowl: 0° to 125°F (-20° to 50°C)

Metal bowl: 0° to 175°F (-20° to 80°C)

* Air supply must be dry enough to avoid ice formation at temperatures below 35°F (2°C)

Start point (i.e. minimum flow required for lubricator operation): 0.5 scfm

(0.24 dm³/s) at 90 psig (6.3 bar) inlet pressure

Typical flow at 90 psig (6.3 bar) inlet pressure at 7 psig (0.5 bar) pressure drop:

1/8" ports: 10 scfm (5 dm³/s)

1/4" ports: 14 scfm (6.7 dm³/s)

Nominal bowl size: 1 fluid ounce (31 ml)

Drain connection: Will fit 1/8-27 and 1/8-28 pipe thread

Recommended lubricants: See Section ALE-29.

Materials

Body: Zinc

Bowl

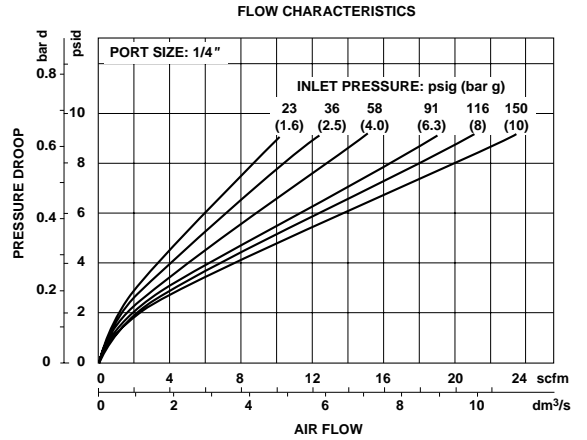
Transparent: Polycarbonate

Metal: Zinc

Sight-feed dome: Transparent nylon

Elastomers: Neoprene & nitrile

Typical Performance Characteristics



Service Kits

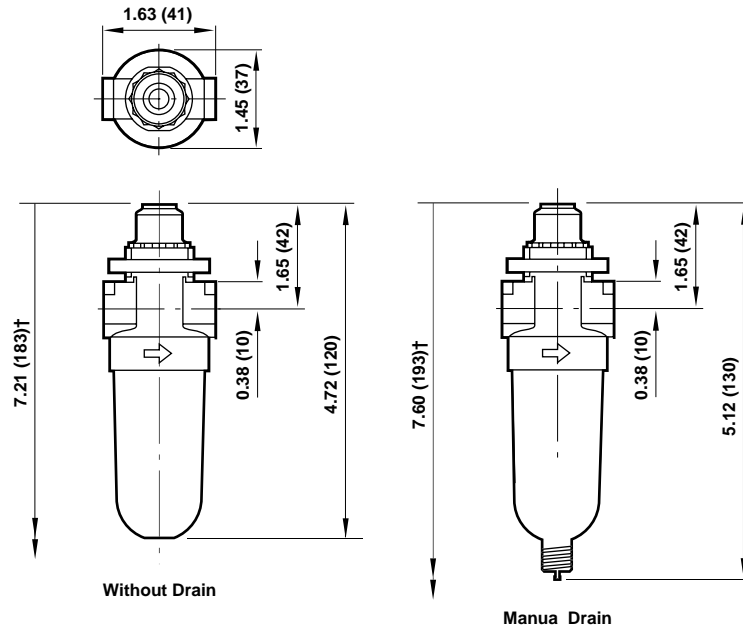
Item	Type	Part number
Service kit	Seal and o-ring	3795-03
Replacement drain	Manual	773-03

Service kit includes o-ring, seal, and bowl o-ring.

All Dimensions in Inches (mm)

Panel mounting hole diameter: 1.9" (30 mm)

Maximum panel thickness: 0.25" (6 mm)



† Minimum clearance to remove bowl.

**Excelon 72 Micro-Fog and Oil-Fog
Lubricator 1/4", 3/8" Port Sizes**

- Excelon design allows in-line or modular installation
- Quick release bayonet bowl
- Flow sensor provides a consistent oil/air ratio over a wide range of flows
- Highly visible, prismatic liquid level indicator lens on metal bowls
- All round (360°) visibility of sight-feed dome for ease of drip rate setting
- Modular installations with Excelon 72, 73, and 74 series can be made to suit particular applications

Use Micro-Fog models in applications with one or more points of lubrication.

Use Oil-Fog models to lubricate a single tool, cylinder or other air driven device.



Ordering Information. Models listed include PTF threads, manual drain, and long transparent bowl without guard.

Type	Main Port Size	Model Number	Flow* scfm (dm ³ /s)	Weight lb (kg) [†]
Micro-Fog	1/4"	L72M-2AP-QLN	51 (24)	1.1 (0.49)
	3/8"	L72M-3AP-QLN	51 (24)	1.1 (0.49)
Oil-Fog	1/4"	L72C-2AP-QLN	51 (24)	1.1 (0.49)
	3/8"	L72C-3AP-QLN	51 (24)	1.1 (0.49)

* Typical flow with 90 psig (6.3 bar) inlet pressure and a pressure drop of 7 psig (0.5 bar).

Alternative Models

L 7 2 ★ - ★ ★ P - ★ ★ ★

Type	Substitute
Oil-Fog	C
Micro-Fog	M

Port Size	Substitute
1/4"	2
3/8"	3

Threads	Substitute
PTF	A
ISO Rc taper	B
ISO G parallel	G

Options	Substitute
None	N
Pyrex dome	P†

Bowl	Substitute
Short metal with plastic liquid level indicator	D
Short metal with Pyrex liquid level indicator	R
Long metal with plastic liquid level indicator	E
Long metal with Pyrex liquid level indicator	U
Short transparent without guard	T
Long transparent without guard	L
Long transparent with guard	W

Drain	Substitute
Closed bottom bowl	E
1/4 turn manual	Q

† For use with metal bowl with Pyrex sight glass

See Section ALE-25 for Accessories



Technical Data

Fluid: Compressed air

Maximum pressure:

Transparent bowl: 150 psig (10 bar)

Metal bowl: 250 psig (17 bar)

Operating temperature*:

Transparent bowl: 0° to 125°F (-20° to 50°C)

Metal bowl: 0° to 150°F (-20° to 65°C)

* Air supply must be dry enough to avoid ice formation at temperatures below 35°F (2°C).

Start point (i.e. minimum flow required for lubricator operation) at 90 psig (6.3 bar)

inlet pressure:

Micro-Fog: 2.0 scfm (0.94 dm³/s)

Oil-Fog: 1.0 scfm (0.47 dm³/s)

Typical flow at 90 psig (6.3 bar) inlet pressure and 7 psig

(0.5 bar) pressure drop: 51 scfm (24 dm³/s)

Nominal reservoir capacity:

Short bowl: 1.9 fluid ounce (56 ml)

Long bowl: 2.2 fluid ounce (65 ml)

Manual drain connection: Will fit 1/8-27 and 1/8-28 pipe thread

Recommended lubricants: See Section ALE-29.

Materials:

Body: Zinc

Reservoir:

Transparent: Polycarbonate

Guard for transparent reservoir: Zinc

Metal: Zinc

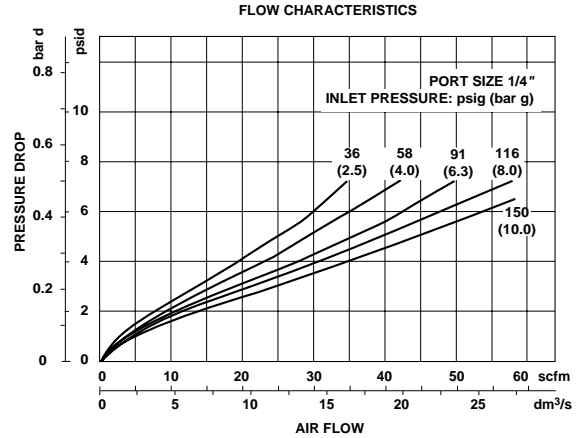
Metal reservoir liquid level indicator lens:

Transparent nylon

Sight-feed dome: Transparent nylon

Elastomers: Neoprene, nitrile, and Geolast®

Typical Performance Characteristics

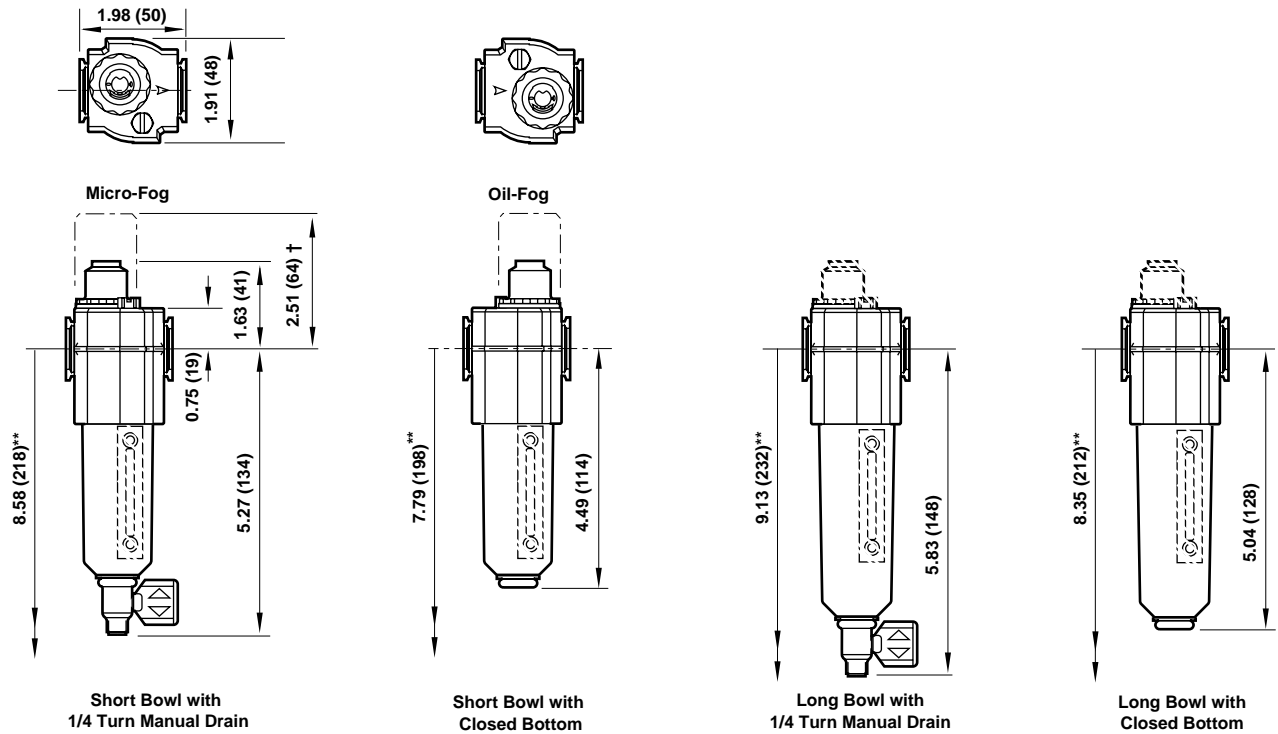


Service Kits

Item	Type	Part Number
Service kit	Seal and gasket	4382-500
Liquid level lens kit	Prismatic	4380-030
Replacement drains	1/4 turn manual	619-50

Service kit includes plug o-ring, sight-feed dome seal, manual drain o-ring and bowl o-ring.

All Dimensions in Inches (mm)



** Minimum clearance required to remove bowl.

† Optional pyrex sight-feed dome.

Excelon 73 Micro-Fog and Oil-Fog Lubricators 1/4", 3/8", 1/2" Port Sizes

- Excelon design allows in-line or modular installation
- Quick release bayonet bowl
- Flow sensor design provides a nearly constant oil/air ratio over a wide range of air flows
- Highly visible, prismatic liquid level indicator lens
- All around (360°) visibility of the sight-feed dome simplifies installation and adjustment
- Modular installations with Excelon 72, 73, and 74 series can be made to suit particular applications

Use Micro-Fog models in applications containing one or more points of lubrication.

Use Oil-Fog models to lubricate a single tool, cylinder, or other air driven device.



Ordering Information. Models listed include PTF threads, manual drain, and metal bowl with plastic liquid level indicator.

Type	Main Port Size	Model Number	Flow* scfm (dm ³ /s)	Weight lb (kg)
Micro-Fog	1/4"	L73M-2AP-QDN	60 (28)	1.1 (0.50)
	3/8"	L73M-3AP-QDN	60 (28)	1.1 (0.50)
	1/2"	L73M-4AP-QDN	60 (28)	1.1 (0.50)
Oil-Fog	1/4"	L73C-2AP-QDN	60 (28)	1.1 (0.50)
	3/8"	L73C-3AP-QDN	60 (28)	1.1 (0.50)
	1/2"	L73C-4AP-QDN	60 (28)	1.1 (0.50)

* Maximum recommended air flow. Higher flows create excessive air velocity, turbulence, and pressure losses.

Alternative Models

L 7 3 ★ - ★ ★ ★ - ★ ★ ★

Type	Substitute
Oil-Fog	C
Micro-Fog	M

Port Size	Substitute
1/4"	2
3/8"	3
1/2"	4

Threads	Substitute
PTF	A
ISO Rc taper	B
ISO G parallel	G

Air Flow Direction	Substitute
Uni-directional	P

Options	Substitute
None	N
Pyrex sight-feed dome †	P
Quick fill nipple	Q

Bowl	Substitute
Metal with plastic liquid level indicator	D
Transparent with guard	P
Metal with Pyrex liquid level indicator †	R
Transparent	T

Drain	Substitute
Closed bottom	E
Manual 1/4 turn	Q

† Order optional Pyrex sight-feed dome when ordering metal bowl with Pyrex liquid level indicator.

See Section ALE-25 for Accessories



Technical Data

Fluid: Compressed air

Maximum pressure

Transparent bowl: 150 psig (10 bar)

Metal bowl: 250 psig (17 bar)

Operating temperature*

Transparent bowl: 0° to 125°F (-20° to 50°C)

Metal bowl: 0° to 175°F (-20° to 80°C)

* Air supply must be dry enough to avoid ice formation at temperatures below 35°F (2°C).

Start point (minimum flow required for lubricator operation): 1.5 scfm (0.71 dm³/s) at 90 psig (6.3 bar) inlet pressure

Typical flow with 90 psig (6.3 bar) inlet pressure and 3.5 psig (0.25 bar) pressure drop: 80 scfm (38 dm³/s)

Maximum recommended flow: 60 scfm (28 dm³/s). Air flows above 60 scfm (28 dm³/s) create excessive air velocity, turbulence, and pressure losses. In addition, the fog produced by the lubricator will wet out on the pipe walls and will not be carried by the compressed air to the point of application.

Nominal bowl size: 3.5 fluid ounce (0.1 liter)

Manual drain connection: Will fit 1/8-27 and 1/8-28 pipe thread

Recommended lubricants: See Section ALE-29.

Materials

Body: Aluminum

Bowl

Transparent: Polycarbonate

Transparent with guard: Polycarbonate, steel guard

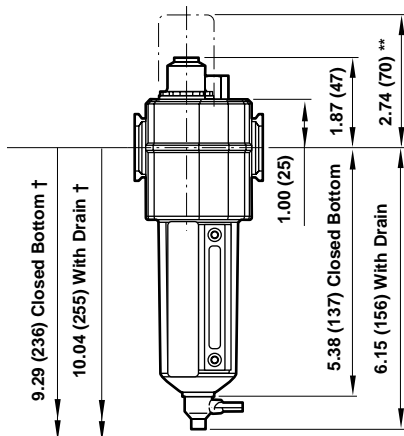
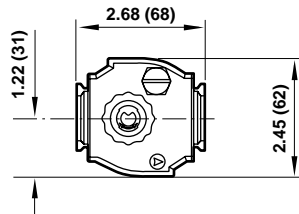
Metal: Aluminum

Metal bowl liquid level indicator lens: Transparent nylon

Sight-Feed dome: Transparent nylon

Elastomers: Neoprene and nitrile

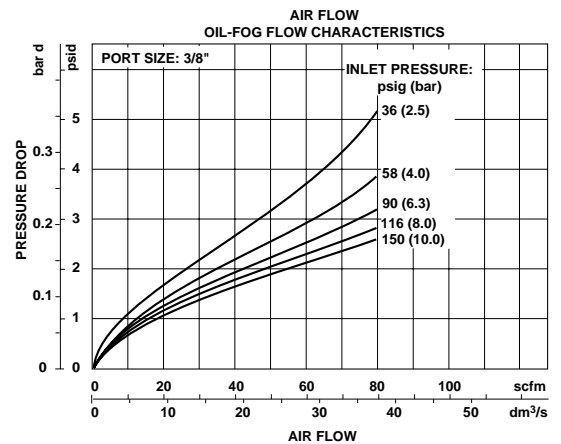
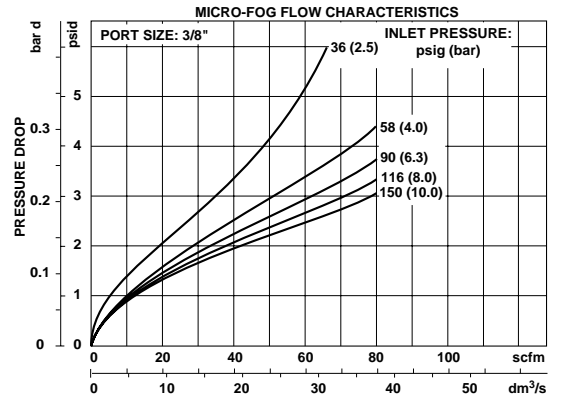
All Dimensions in Inches (mm)



** Optional pyrex sight-feed dome.

† Minimum clearance to remove bowl.

Typical Performance Characteristics



Service Kits

Item	Type	Part Number
Service kit	Seal & Gasket	4382-600
Liquid level lens kit	Prismatic	4380-020
Replacement drain	Manual 1/4 turn	619-50

Service kit includes dome seal, drain seal, bowl seal and fill plug seal.

Excelon 74 Micro-Fog and Oil-Fog Lubricators 3/8", 1/2", 3/4" Port Sizes

- Excelon design allows in-line or modular installation
- Quick release bayonet bowl
- Highly visible, prismatic liquid level indicator lens
- Flow sensor design provides a nearly constant oil/air ratio over a wide range of air flows
- All around (360°) visibility of the sight-feed dome simplifies installation and adjustment
- Modular installations with Excelon 72, 73, and 74 series can be made to suit particular applications



Use Micro-Fog models in applications with one or more points of lubrication.

Use Oil-Fog models to lubricate a single tool, cylinder, or other air driven device.

Ordering Information. Models listed include PTF threads, manual drain, and 7 fluid ounce (0.2 liter) metal bowl with plastic liquid level indicator.

Type	Main Port Size	Model Number *	Flow** scfm (dm ³ /s)	Weight lb (kg) [†]
Micro-Fog	3/8"	L74M-3AP-QDN	114 (54)	1.70 (0.77)
	1/2"	L74M-4AP-QDN	154 (73)	1.61 (0.73)
	3/4"	L74M-6AP-QDN	142 (67)	1.55 (0.71)
Oil-Fog	3/8"	L74C-3AP-QDN	118 (56)	1.70 (0.77)
	1/2"	L74C-4AP-QDN	192 (91)	1.61 (0.73)
	3/4"	L74C-6AP-QDN	186 (88)	1.55 (0.71)

* Models listed in the order table must not be located downstream of frequently cycling directional control valves. Order the optional bi-directional Oil-Fog Lubricator for use under such conditions.

** Typical flow with 90 psig (6.3 bar) inlet pressure and a pressure drop of 7 psig (0.5 bar).

† Lubricators with 1 quart (1 litre) metal bowl: Add 2.01 lbs (0.91 kg).

Alternative Models

L 7 4 ★ - ★ ★ ★ - ★ ★ ★

Type	Substitute
Oil-Fog	C
Micro-Fog	M

Port Size	Substitute
3/8"	3
1/2"	4
3/4"	6

Threads	Substitute
PTF	A
ISO Rc taper	B
ISO G parallel	G

Air Flow Direction	Substitute
Bi-directional (Oil-Fog only)	E
Uni-directional	P

Options	Substitute
Low oil level switch ***	L
None	N
Pyrex dome *†	P
Quick fill nipple	Q

Bowl	Substitute
1 quart US (1 liter) metal with Pyrex liquid level indicator ††	A
7 fluid oz. (0.2 liter) metal with plastic liquid level indicator	D
7 fluid oz. (0.2 liter) transparent with guard	P
7 fluid oz. (0.2 liter) metal with Pyrex liquid level indicator††	R

Drain	Substitute
Closed bottom	E
Manual 1/4 turn	Q
Remote fill device - Use only with 7 fluid oz. (0.2 liter) bowl.	R

*** Low oil level switch requires 1 litre bowl, type 'A' at 9th digit.

*† Pyrex dome used only with bowl type 'A' or 'R' at 9th digit.

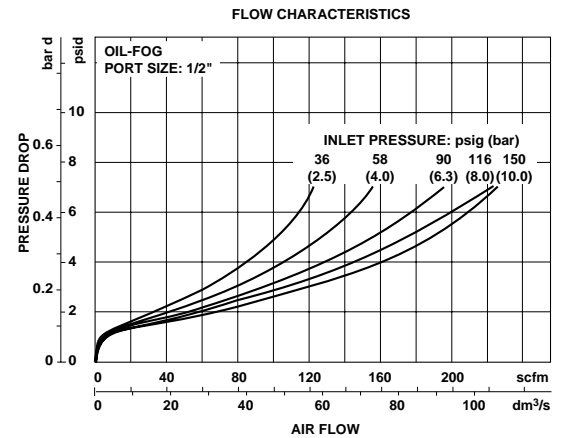
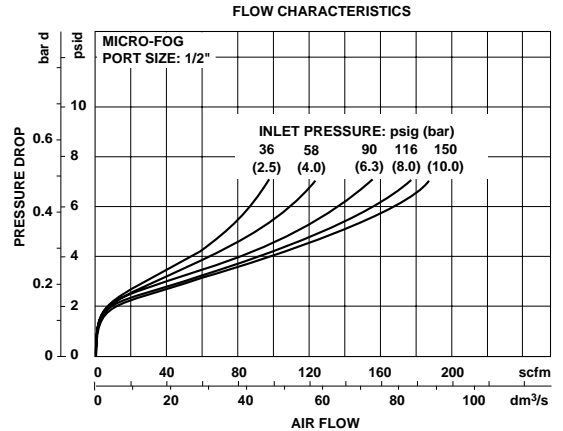
†† Pyrex liquid level indicator used only with option 'P' at 10th digit.



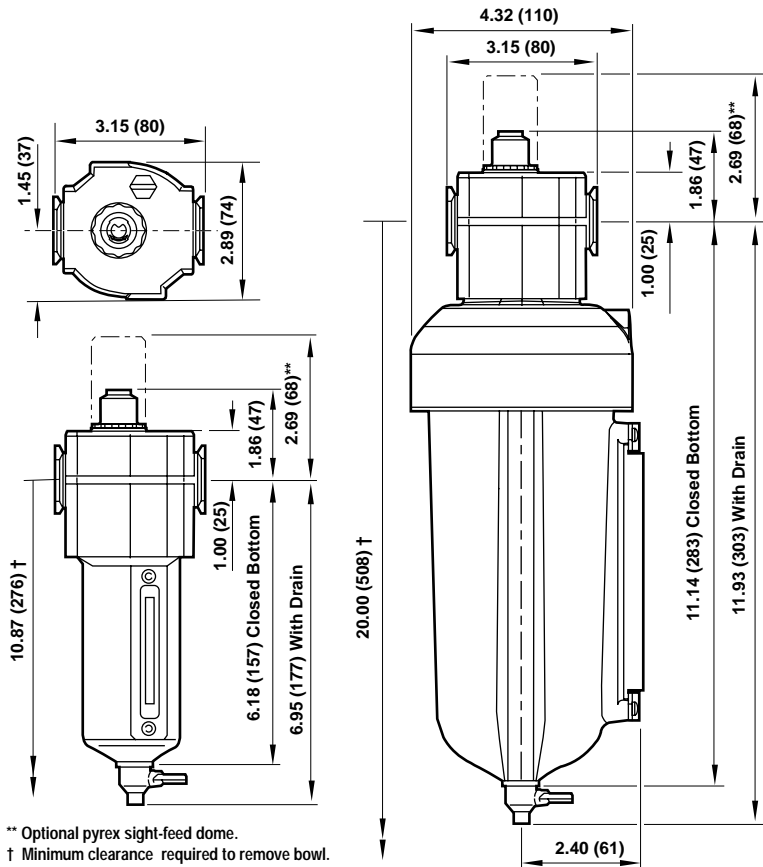
Technical Data

Fluid: Compressed air
 Maximum pressure:
 Transparent bowl: 150 psig (10 bar)
 Metal bowl: 250 psig (17 bar)
 Operating temperature*:
 Transparent bowl: 0° to 125°F (-20° to 50°C)
 Metal bowl: 0° to 175°F (-20° to 80°C)
 * Air supply must be dry enough to avoid ice formation at temperatures below 35°F (2°C).
 Start point (i.e. minimum flow required for lubricator operation): 2.5 scfm (0.94 dm³/s) at 90 psig (6.3 bar) inlet pressure
 Typical flow with 90 psig (6.3 bar) inlet pressure and 7 psig (0.5 bar) pressure drop
 Micro-fog: 154 scfm (73 dm³/s)
 Oil-fog: 192 scfm (91 dm³/s)
 Nominal bowl size:
 Standard: 7 fluid ounce (0.2 liter)
 Optional: 1 quart US (1 liter)
 Manual drain connection: Will fit 1/8-27 and 1/8-28 pipe thread
 Recommended lubricants: See Section ALE-29.
 Materials
 Body: Aluminum
 Bowl
 Transparent: Polycarbonate with steel bowl guard
 Metal: Aluminum
 Metal bowl liquid level indicator lens:
 7 fluid ounce (0.2 liter): Transparent nylon
 1 quart US (1 liter): Pyrex
 Sight-feed dome: Transparent nylon
 Elastomers: Neoprene and Nitrile

Typical Performance Characteristics



All Dimensions in Inches (mm)



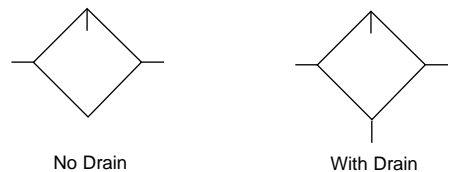
** Optional pyrex sight-feed dome.
 † Minimum clearance required to remove bowl.

Service Kits

Item	Type	Part Number
Service kit	Seal & Gasket	4382-700
Liquid level lens kit	7 fluid ounce (0.2 liter) bowl	4380-050
	1 quart US (1 liter) bowl	2273-22
Replacement drain	Manual 1/4 turn	619-50

Service kit includes dome seal, drain seal, bowl seal and fill plug seal

ISO Symbols



See Section ALE-25 for Accessories

Olympian Plus Micro-Fog and Oil-Fog Lubricators 1/4", 3/8", 1/2", 3/4" Port Sizes

- Olympian Plus plug in design
- Constant oil density output with varying flow
- Easy fill with quick release bayonet bowl
- High visibility prismatic sight glass

Use Micro-Fog models in applications with one or more points of lubrication.

Use Oil-Fog models to lubricate a single tool, cylinder or other air driven device.



Ordering Information. Models listed include PTF threads and 7 fluid ounce (0.2 liter) metal reservoir with drain.

Type	Port Size	Model	Weight lb (kg)
Micro-Fog	1/4"	L64M-2AP-QDN	3.13 (1.42)
	3/8"	L64M-3AP-QDN	3.09 (1.40)
	1/2"	L64M-4AP-QDN	3.02 (1.37)
	3/4"	L64M-6AP-QDN	3.81 (1.73)

Alternative Models

L 6 4 ★ - ★ ★ P - ★ ★ ★

Type	Substitute
Oil-Fog	C
Micro-Fog	M

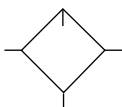
Port Size	Substitute
1/4"	2
3/8"	3
1/2"	4
3/4"	6
No yoke	N

Threads	Substitute
PTF	A
ISO Rc taper	B
ISO G parallel	G
No yoke	N

Options	Substitute
None	N
Quick fill device	Q

Bowl	Substitute
7 oz. Metal with liquid level indicator	D
7 oz. Transparent with guard	P
1 qt. metal with pyrex liquid level indicator	A

Drain	Substitute
Closed bottom bowl	E
Manual 1/4 turn	Q
Remote fill device Use only with 7 oz. (0.2 liter) bowl.	R

ISO Symbol


See Section ALE-25 for Accessories



Technical Data

Fluid: Compressed air

Maximum pressure:

Guarded transparent bowl: 150 psig (10 bar)

Metal bowl: 250 psig (17 bar)

Operating temperature*

Guarded transparent bowl: 0° to 125°F (-20° to 50°C)

Metal bowl: 0° to 175°F (-20° to 80°C)

* Air supply must be dry enough to avoid ice formation at temperatures below 35°F (2°C).

Start point (i.e. minimum flow required for lubricator operation) at 90 psig (6.3 bar) inlet pressure

Micro-Fog: 3.2 scfm (1.5 dm³/s)

Oil-Fog: 3.2 scfm (1.5 dm³/s)

Typical flow at 90 psig (6.3 bar) inlet pressure and 7 psig (0.5 bar) pressure drop: 153 scfm (72 dm³/s)

Nominal bowl capacity

Transparent bowl without guard: 7 fluid ounce (0.2 liter)

Metal bowl: 7 fluid ounce (0.2 liter) standard, 1 quart US (1 liter) optional

Manual drain connection: Will fit 1/8-27 and 1/8-28 pipe thread

Recommended lubricants: See Section ALE-29.

Materials

Body: Zinc

Yoke: Zinc

Metal bowl: Aluminium

Standard metal bowl prismatic liquid level indicator lens: Grilamid

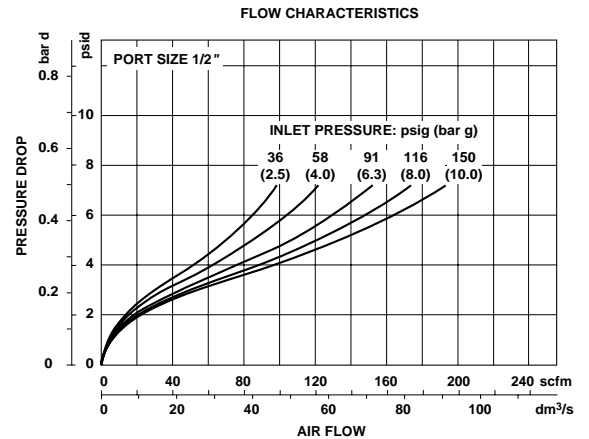
Optional metal bowl sight glass [standard on 1 quart (1 liter bowl)]: Pyrex

Optional transparent bowl: Polycarbonate

Sight-feed dome: Polycarbonate

Elastomeric materials: Synthetic rubber

Typical Performance Characteristics

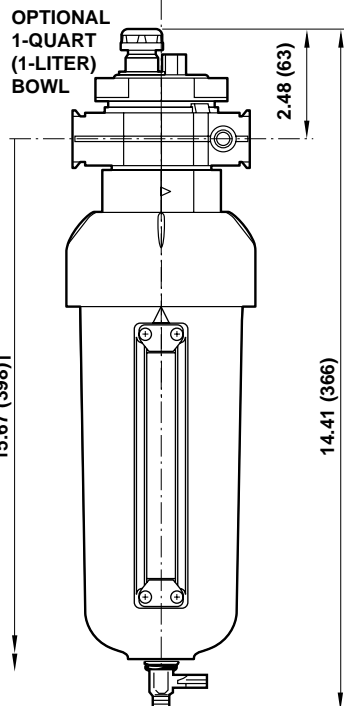
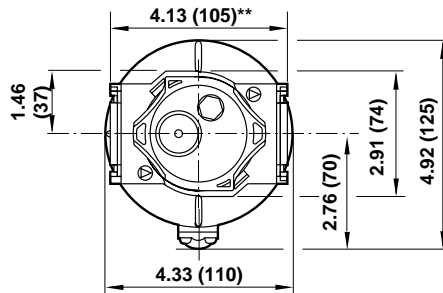


Service Kits

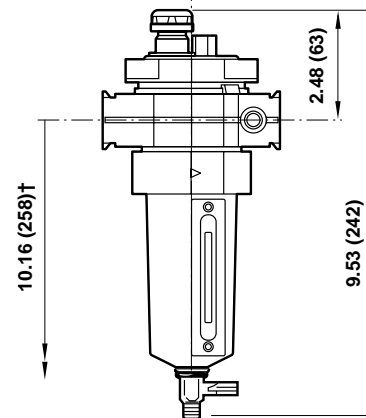
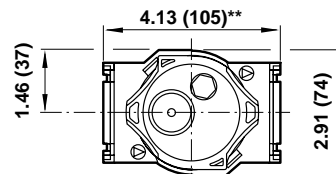
Item	Type	Part Number
Service kit	All models	4382-200
Replacement sight glass 7 fluid oz. (0.2 liter bowl)	Prismatic (standard)	4380-042
	Pyrex (optional)	4380-041
Replacement sight glass 1 quart US (1 liter)	Pyrex	2273-22

Service kit includes all seals, flow sensor, eyelet, dome screen, ball and spring.

Optional 1 quart US (1 liter) bowl



Standard 7 fluid ounce (0.2 liter) bowl



**6.18" (157) for models with 3/4" ports.

† Minimum clearance required to remove unit.

- Olympian plug-in design
- Built in flow sensor gives almost constant oil/air ratio over a wide range of flows
- 1 pint and 1 quart US (0.5 and 1 liter) models can be filled under pressure
- Simple and accurate drip rate adjustment, snap action lock
- Ideal for general lubrication applications

Use Micro-Fog models in applications with one or more points of lubrication.

Use Oil-Fog models to lubricate a single tool, cylinder or other air driven device.

Use Fixed Venturi for high flow general purpose applications.



Ordering Information. Models listed include yoke with PTF threads, 1/4 turn manual drain, and 1 quart bowl with sight glass.

Type	Main Port Size	Model Number	Flow* scfm (dm ³ /s)	Weight lb (kg)
Micro-Fog	3/4	L68M-6AP-QUN	424 (200)	4.63 (2.10)
	1	L68M-8AP-QUN	424 (200)	4.49 (2.04)
	1-1/4	L68M-AAP-QUN	424 (200)	4.59 (2.08)
	1-1/2	L68M-BAP-QUN	424 (200)	4.67 (2.12)
Oil-Fog	3/4	L68C-6AP-QUN	396 (187)	4.63 (2.10)
	1	L68C-8AP-QUN	396 (187)	4.49 (2.04)
	1-1/4	L68C-AAP-QUN	396 (187)	4.59 (2.08)
	1-1/2	L68C-BAP-QUN	396 (187)	4.67 (2.12)

* Typical flow with 90 psig (6.3 bar) inlet pressure and a pressure drop of 7 psig (0.5 bar).

Alternative Models

L 6 8 ★ - ★ ★ ★ - ★ ★ ★

Type	Substitute
Oil-Fog	C
Micro-Fog	M

Port Size	Substitute
3/4"	6
1"	8
1-1/4"	A
1-1/2"	B
None	N

Threads	Substitute
PTF	A
ISO Rc taper	B
ISO G parallel	G
None	N

Type	Substitute
Uni directional	P
Fixed venturi (Oil-Fog)	E

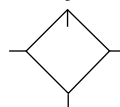
Options	Substitute
None	N
Quick fill device	Q

Bowl	Substitute
1 quart US (1 liter), without sight glass	C*
2 gallons US (8 liter)	X
5 gallons US (20 liter)	Y
1 pint US (0.5 liter), without sight glass	M*
1 pint US (0.5 liter) with sight glass	R*
1 quart US (1 liter) with sight glass	U*

Drain	Substitute
Closed bottom bowl	E
Manual	M
No drain	N
Manual, 1/4 turn	Q
Remote fill	R*

* Remote fill only available with 1 pint and 1 quart US (1/2 and 1 liter bowls)

ISO Symbol



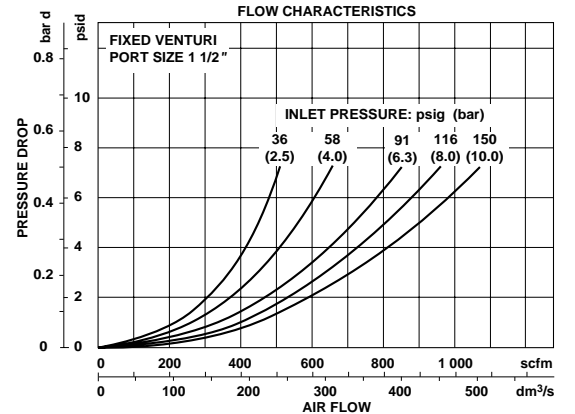
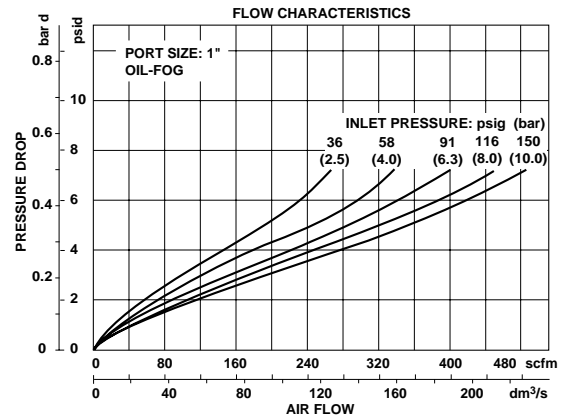
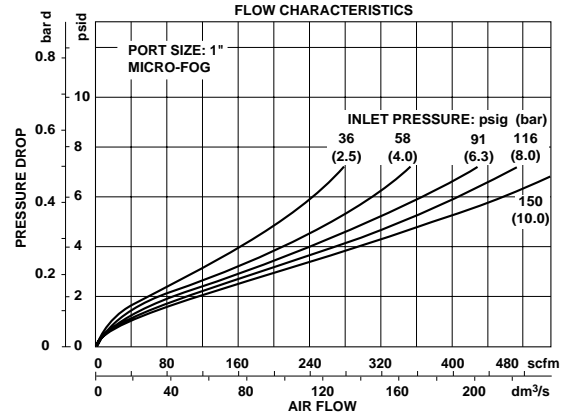
See Section ALE-25 for Accessories



L68M/C Lubricators

All Dimensions in Inches (mm)

Typical Performance Characteristics



Technical Data

Fluid: Compressed air
 Maximum pressure: 250 psig (17 bar)
 Operating temperature*: 0° to +175°F (-20° to +80°C)

* Air supply must be dry enough to avoid ice formation at temperatures below +35°F (+2°C).

Start point (i.e. minimum flow required for lubricator operation) at

90 psig (6.3 bar) inlet pressure:

Micro-Fog: 13 scfm (6 dm³/s)

Oil-Fog: 13 scfm (6 dm³/s)

Fixed venturi: 110 scfm (52 dm³/s)

Typical flow at 90 psig (6.3 bar) inlet pressure and 7 psig (0.5 bar) pressure drop:

Micro-Fog: 424 scfm (200 dm³/s)

Oil-Fog: 396 scfm (187 dm³/s)

Fixed venturi: 848 scfm (400 dm³/s)

Nominal bowl sizes:

1 pint US (0.5 liter)

1 quart US (1 liter)

2 gallons US (8 liter)

5 gallons US (20 liter)

Recommended lubricants: See page ALE-29-2

Materials:

Body: Aluminum

Yoke: Aluminum

Bowl, 1 pint US (0.5 liter) and 1 quart US (1 liter): Aluminum

Bowl sight glass: Pyrex

Reservoirs, 2 gallons US (8 liter) and 5 gallons US (20 liter): Steel

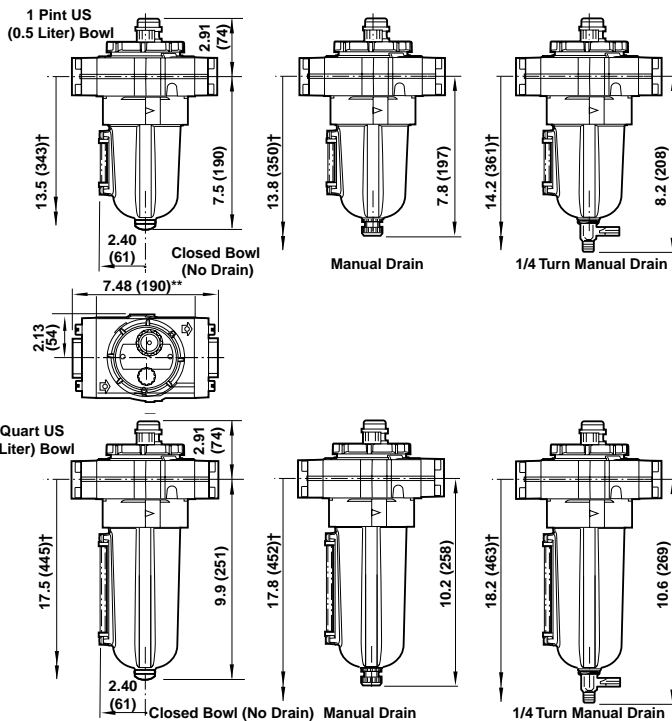
Reservoir sight tube: Polythene

Elastomers: Synthetic rubber

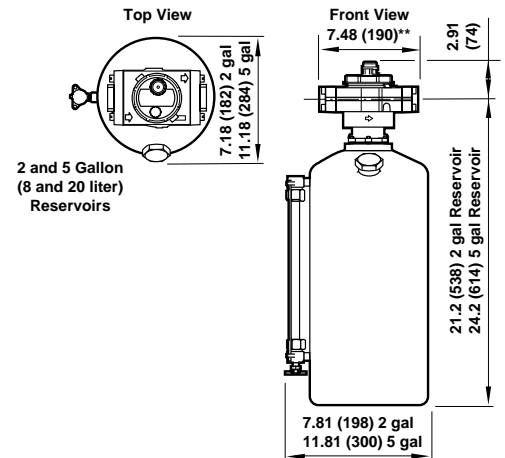
Service Kits

Item	Type	Part Number
Service kit	Micro-Fog	4382-301
	Oil-Fog	4382-300
	Fixed venturi	4382-302
Replacement sight glass	1 pint US (0.5 liter)	4380-060
	1 quart US (1 liter)	4380-061
	2 & 5 gal (8 & 20 liter)	2274-01
Replacement drain	Manual	684-84
	Manual, 1/4 turn	619-50

Service kit includes sight dome, screen, filler plug, seals and o-rings.
 Oil fog service kit also contains check valve spring.



** Add 0.39" (10 mm) for 1-1/4" and 1-1/2" models. † Minimum clearance required to remove bowl.



**17 Series Micro-Fog and Oil-Fog Lubricators
3/4", 1", 1-1/4" and 1-1/2" Port Sizes**

- All around (360°) visibility of the sight-feed dome simplifies installation and adjustment
- Screw-on bowl reduces maintenance time
- Can be serviced without the use of tools or removal from the air line
- Flow sensor design provides a nearly constant oil/air ratio over a wide range of air flows

Use Micro-Fog models in applications containing one or more points of lubrication

Use Oil-Fog models to lubricate a single tool, cylinder, or other air driven device



Ordering Information. Models listed are uni-directional and include a 1 quart US (1 liter) metal bowl with drain, sight glass, and PTF threads.

Port Size	Micro-Fog Models*	Oil-Fog Models*	Flow† scfm (dm ³ /s)	Weight lbs (kg)
3/4"	L17-600-MPDA	L17-600-OPDA	160 (76)	3.73 (1.69)
1"	L17-800-MPDA	L17-800-OPDA	275 (130)	3.56 (1.62)
1-1/4"	L17-A00-MPDA	L17-A00-OPDA	275 (130)	4.65 (2.11)
1-1/2"	L17-B00-MPDA	L17-B00-OPDA	275 (130)	3.67 (1.67)

* Models listed in the order table must not be located downstream of frequently cycling directional control valves. Order the optional bi-directional Oil-Fog Lubricator for use under such conditions.

† Typical flow with 90 psig (6.3 bar) inlet pressure and a pressure drop of 5 psig (0.35 bar).

Alternative Models

L 1 7 - ★ ★ ★ - ★ ★ ★ ★

Port Size	Substitute
3/4"	6
1"	8
1-1/4"	A
1-1/2"	B

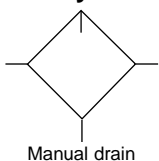
Option	Substitute
Not applicable	00

Lubricator Type	Substitute
Micro-Fog	M
Oil-Fog	O

Flow	Substitute
Bi-directional (Oil-Fog only)	E
Uni-directional	P

Threads	Substitute
PTF	A
ISO Rc taper	B
BSPP (1-1/2" ported units)	C
ISO G parallel (not available with 1-1/2" ported units)	G

Reservoir	Substitute
1 quart US (1 liter) metal, drain, sight glass	D
1 quart US (1 liter) metal, remote fill, sight glass	4
2 quart US (2 liter) metal, drain, sight glass	H
2 gallon US (8 liter) metal, drain, sight glass	J
5 gallon US (20 liter) metal, drain, sight glass	K

ISO Symbol


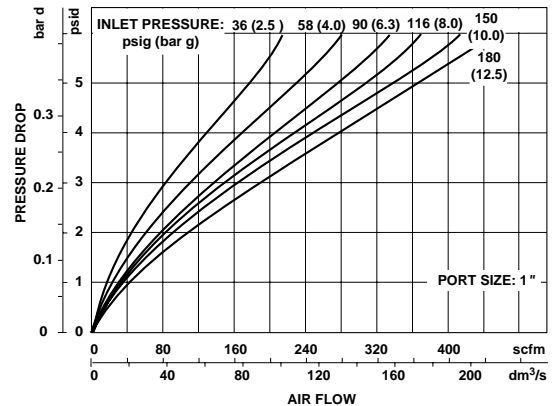
See Section ALE-25 for Accessories



Technical Data

Fluid: Compressed air
 Maximum pressure: 250 psig (17 bar)
 Operating temperature*: 0° to 175°F (-20° to 80°C)
 * Air supply must be dry enough to avoid ice formation at temperatures below 35°F (2°C).
 Start point (minimum flow required for lubricator operation): 8 scfm (3.8 dm³/s) at 90 psig (6.3 bar) inlet pressure
 Typical flow with 90 psig (6.3 bar) inlet pressure and 5 psig (0.35 bar) pressure drop:
 1" ports: 275 scfm (130 dm³/s)
 Nominal reservoir size
 Standard: 1 quart US (1 liter)
 Optional: 2 quart US (2 liter)
 2 gallon US (8 liter)
 5 gallon US (20 liter)
 Manual drain connection on 1 quart reservoir: Will fit 1/8-27 and 1/8-28 pipe thread
 Recommended lubricants: See Section ALE-29.
 Materials
 Body: Aluminum
 Reservoir:
 1 quart US (1 liter): Aluminum
 2 quart US (2 liter) and larger: Steel**
 Reservoir sight glass: Pyrex
 Sight-feed dome
 Standard: Transparent nylon
 Optional: Pyrex and aluminum
 Elastomers: Neoprene and nitrile
 ** The 2 and 5 gallon (8 and 20 liter) steel reservoirs are ASME rated according to the ASME Pressure Vessel Code, Section VIII

Typical Performance Characteristics

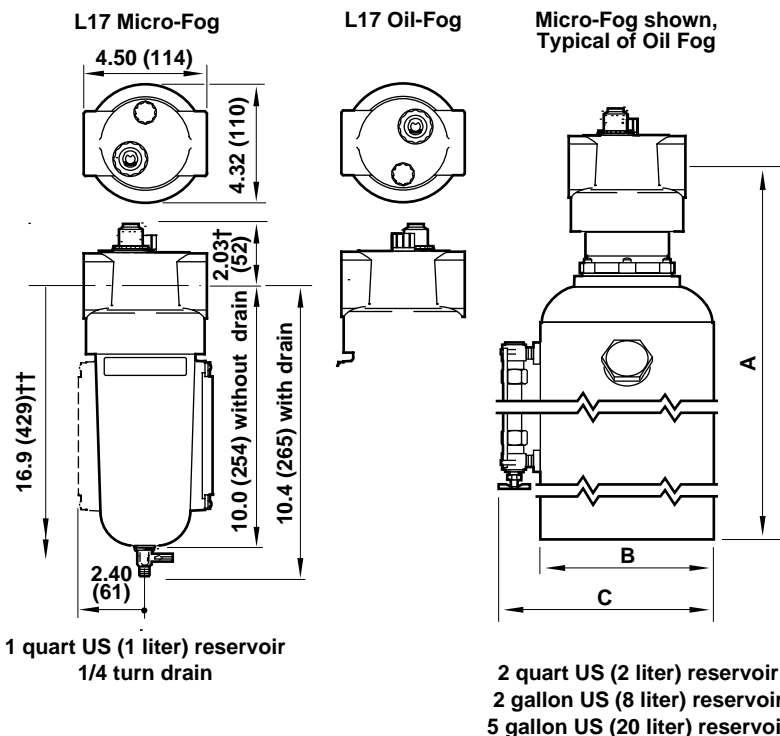


Service Kits

Item	Type	Part Number
Service kit	Oil-Fog and Micro-Fog	5771-02
Reservoir sight glass kit	1 quart US (1 liter)	2273-22
	2 quart US (2 liter)	2273-04
	2/5 gallon US (8/20 liter)	2274-01
Replacement drain	1/4 Turn	619-50

Service kit 5771-02 includes o-rings, seals and gaskets.
 Reservoir sight glass kits, include all o-rings, seals, glass, guard, and sight glass hardware.

All Dimensions in Inches (mm)



Reservoir	A	B Ø	C
2 quart US (2 liter)	13.1 (333)	4.63 (118)	5.38 (137)
2 gallon US (8 liter)	21.2 (538)	6.25 (159)	7.44 (189)
5 gallon US (20 liter)	24.2 (614)	10.3 (260)	11.4 (291)

† Standard dome: 2.03" (52 mm)
 Pyrex dome: 2.72" (69 mm)
 †† Minimum clearance required to remove bowl.

- Designed to lubricate a single tool, valve, cylinder, air motor, or other air driven device.
- One Oil-Fog lubricator should be provided for each device requiring lubrication
- All around (360°) visibility of the sight-feed dome simplifies installation and adjustment
- Lubricators equipped with 1 and 2 quart (1 and 2 liter) reservoirs can be filled under pressure
- The 2 and 5 U.S. gallon (8 and 20 liter) reservoirs are rated to ASME Pressure Vessel Code, Section VIII



Ordering Information. Models listed have 1-1/2" PTF parallel threads.

Model Number	Reservoir Nominal Size	Reservoir Working Capacity Fluid Ounce (Liter)	Recommended Operating Flow Range** scfm (dm ³ /s)	Weight lbs (kg)
10-028-045	1 quart (1 liter) *	19 (0.56)	110 to 590 (52 to 278)	5 (0.91)
10-028-046	2 quart (2 liter) *	45 (1.33)	110 to 590 (52 to 278)	6 (2.72)
10-028-047	2 U.S. gallon (8 liter)	113 (3.34)	110 to 590 (52 to 278)	16 (7.26)
10-028-048	5 U.S. gallon (20 liter)	316 (9.34)	110 to 590 (52 to 278)	28 (12.70)

* Models with 1 and 2 quart reservoirs must not be located downstream of frequently cycling directional control valves. Models with the 2 and 5 gallon reservoirs may be located downstream of frequently cycling directional control valves.

** At 100 psig (6.9 bar) inlet pressure and pressure drop of 5 psid (0.35 bar).

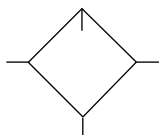
Alternative Models

1 0 - ★ 2 8 - ★ ★ ★ - ★ ★

Threads	Substitute
PTF	0
ISO G parallel	8

Option	Add
Factory installed quick fill nipple	-2J
Factory installed sight feed dome	-8W

ISO Symbol



With Drain

See Section ALE-25 for Accessories



Technical Data

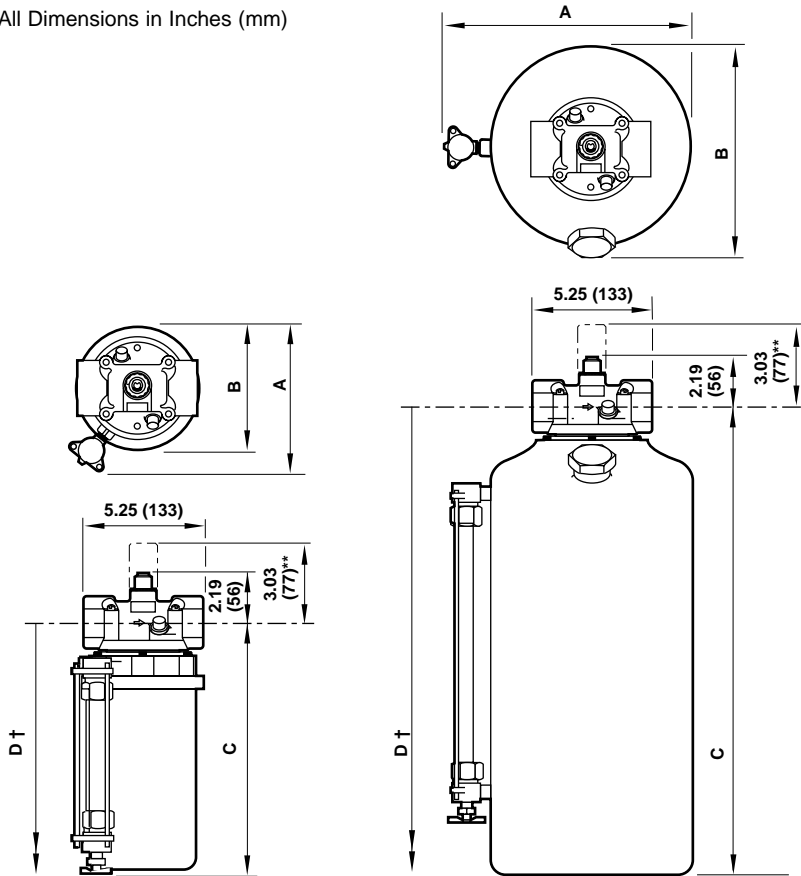
Fluid: Compressed air
 Maximum pressure: 250 psig (17 bar)
 Operating temperature*: 0° to 175°F (-20° to 80°C)
 * Air supply must be dry enough to avoid ice formation at temperatures below 35°F (2°C).
 Start point (minimum flow required for lubricator operation) at 90 psig (6.3 bar)
 inlet pressure: 103 scfm (49 dm³/s)
 Typical flow at 90 psig (6.3 bar) inlet pressure and 5 psig (0.35 bar) pressure drop:
 568 scfm (268 dm³/s)
 Nominal reservoir sizes:
 1 quart (1 liter)
 2 quart (2 liter)
 2 U.S. gallon (8 liter)
 5 U.S. gallon (20 liter)
 Recommended lubricants: See Section ALE-29.

Materials

- Body: Aluminum
- Reservoir: Steel
- Reservoir liquid level indicator lens: Pyrex
- Sight-feed dome
 - Standard: Transparent nylon
 - Optional: Pyrex and aluminum
- Elastomers: Neoprene and Nitrile

Reservoir	A	B	C	D
1 quart (1 liter)	4.72 (120)	4.06 (103)	8.27 (210)	15 (376)
2 quart (2 liter)	5.28 (134)	4.63 (118)	10.52 (267)	19 (477)
2 gallon (8 liter)	7.81 (198)	7.18 (182)	18.34 (466)	32 (813)
5 gallon (20 liter)	11.81 (300)	11.18 (284)	21.59 (548)	37 (940)

All Dimensions in Inches (mm)

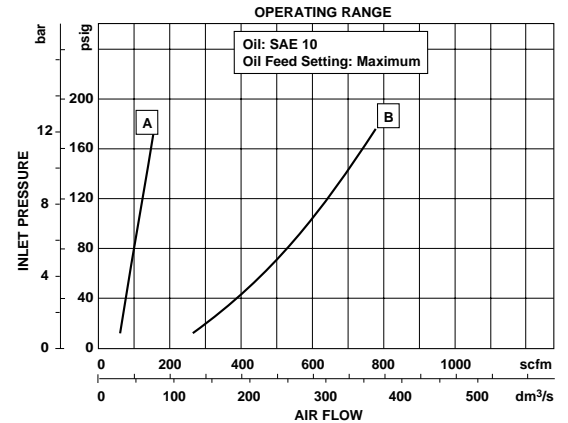


1 and 2 quart (1 and 2 liter) reservoir

2 and 5 gallon (8 and 20 liter) reservoir

** Optional pyrex sight-feed dome.
 † Minimum clearance required to remove bowl.

Typical Performance Characteristics



A: Minimum flow based on oil drip rate of 5 drops per minute.
 B: Maximum flow based on pressure drop of 5 psid (0.35 bar).

Service Kits

Item	Type	Part Number
Liquid level lens kit	1 quart reservoir	2272-02
	2 quart reservoir	2273-04
	2 and 5 gallon reservoir	2274-01
Replacement drain	Manual petcock	684-01

Liquid level lens kit include sight glass, sight glass guards, seals, and hardware.

- Designed to lubricate a single tool, valve, cylinder, air motor, or other air driven device
- One Oil-Fog lubricator should be provided for each device requiring lubrication
- All around (360°) visibility of the sight-feed dome simplifies installation and adjustment
- The 2 and 5 U.S. gallon (8 and 20 liter) reservoirs are rated to ASME Pressure Vessel Code, Section VIII



Ordering Information. Models listed have 2" PTF threads.

Model Number	Reservoir Nominal Size	Reservoir Working Capacity Fluid Ounce (Liter)	Recommended Operating Flow Range* scfm (dm ³ /s)	Weight lbs (kg)
10-076-004	2 U.S. gallon (8 liter)	113 (3.34)	250 to 1000 (118 to 472)	19 (8.6)
10-076-005	5 U.S. gallon (20 liter)	316 (9.34)	250 to 1000 (118 to 472)	32 (14.5)

* At 100 psig (6.9 bar) inlet pressure and pressure drop of 5 psid (0.35 bar).

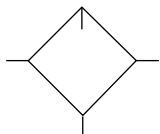
Alternative Models

1 0 - ★ 7 6 - ★ ★ ★ - ★ ★

Threads	Substitute
PTF	0
ISO G parallel	8

Option	Add
Factory installed pyrex sight feed dome	8W

ISO Symbol



With Drain

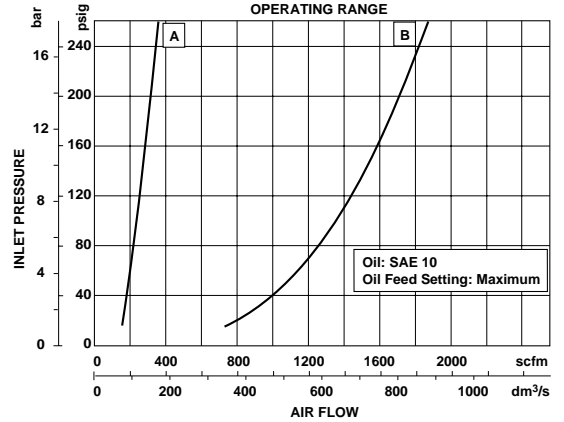
See Section ALE-25 for Accessories



Technical Data

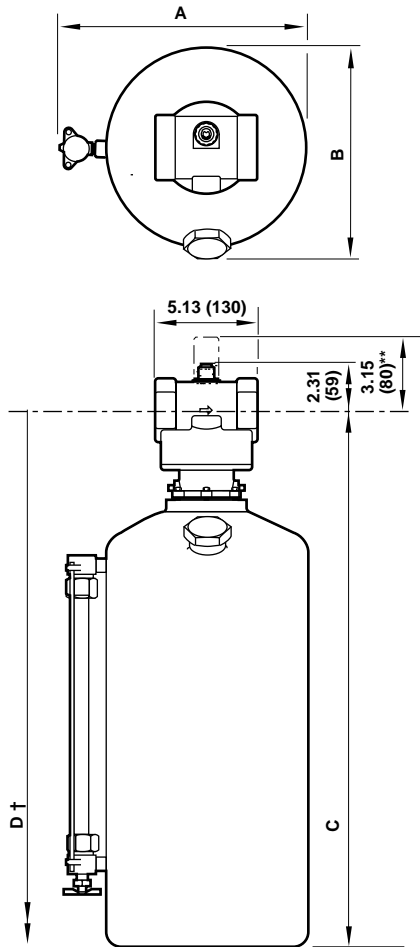
Fluid: Compressed air
 Maximum pressure: 250 psig (17 bar)
 Operating temperature*: 0° to 175°F (-20° to 80°C)
 * Air supply must be dry enough to avoid ice formation at temperatures below 35°F (2°C).
 Start point (minimum flow required for lubricator operation) at 90 psig (6.3 bar)
 inlet pressure: 240 scfm (123 dm³/s)
 Typical flow with 90 psig (6.3 bar) inlet pressure and 5 psig (0.35 bar) pressure drop: 1300 scfm (614 dm³/s)
 Nominal reservoir sizes:
 2 U.S. gallon (8 liter)
 5 U.S. gallon (20 liter)
 Recommended lubricants: See Section ALE-29.
 Materials
 Body and adapter: Aluminum
 Reservoir: Steel
 Reservoir liquid level indicator lens: Pyrex
 Sight-feed dome
 Standard: Transparent nylon
 Optional: Pyrex and aluminum
 Elastomers: Nitrile

Typical Performance Characteristics



A: Minimum flow based on oil drip rate of 5 drops per minute.
 B: Maximum flow based on pressure drop of 5 psid (0.35 bar).

All Dimensions in Inches (mm)



2 and 5 gallon (8 and 20 liter) reservoir

** Optional pyrex sight-feed dome.
 † Minimum clearance required to remove bowl.

Service Kits

Item	Type	Part Number
Liquid level lens kit	8 and 20 liter reservoir	2274-01
Replacement drain	Manual petcock	684-01

Reservoir sight glass kits include sight glass, sight glass guards, seals, and hardware.

Reservoir	A	B	C	D
2 gallon (8 liter)	7.81 (198)	7.18 (182)	21.53 (547)	35 (887)
5 gallon (20 liter)	11.81 (300)	11.18 (284)	24.78 (629)	40 (1014)

**Micro-Fog® Machine Bearing Lubricator
8 to 32 Bearing Inch Ratings 1/4" Port Size**

- Provides centralized air-borne lubrication for machine bearings, gears, chains, slides, ways, etc
- Controls can be installed to start-up and shut-down the lubricator with the machine
- Delivers a fog of oil to the application points, coating bearing surfaces with a thin oil film and reducing oil consumption
- Air carrying the lubricants passes through the bearing housing, reducing bearing temperature and contamination, providing longer bearing life
- The 2 and 5 U.S. gallon (8 and 20 liter) reservoirs are rated to ASME Pressure Vessel Code, Section VIII
- Refer to Norgren Publication NT-1 for system design, bearing-inch ratings, and reclassifier selection



Ordering Information. Models listed have 1/4" PTF threads and are rated from 8 to 32 bearing inches.

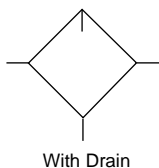
Model Number	Reservoir - Nominal Size	Reservoir - Working Capacity	Weight lbs (kg)
10-015-100 *	1/2 pint (0.25 liter)	—	2 (0.91)
10-015-002	1/2 pint (0.25 liter)	5 fluid ounce (0.15 liter)	2 (0.91)
10-015-504	1 quart (1 liter)	19 fluid ounce (0.56 liter)	4.0 (1.8)
10-015-005	2 quart (2 liter)	45 fluid ounce (1.33 liter)	6 (2.72)
10-065-006	2 U.S. gallon (8 liter)	113 fluid ounce (3.34 liter)	15.4 (7.0)
10-065-007	5 U.S. gallon (20 liter)	316 fluid ounce (9.34 liter)	28 (12.7)

* Equipped with factory installed remote fill device.

Alternative Models

1 0 - 0 ★ ★ - ★ ★ ★ - ★ ★

Option	Add
Wall bracket attached to 10-015 models	-1B
Quick fill	-2H
Pyrex sight feed dome	-7C
Low oil level switch with 10-015-504	-3A
Low oil level switch with 10-015-005	-3A
Low oil level switch with 10-065-006	-3D
Low oil level switch with 10-065-007	-3E
Bowl guard for 0.5 pint reservoir	-2U

ISO Symbol


See Section ALE-25 for Accessories



Technical Data

Fluid: Compressed air

Maximum pressure

Transparent bowl: 150 psig (10 bar)

Metal bowl: 250 psig (17 bar)

Operating temperature*

Transparent bowl: 0° to 125°F (-20° to 50°C)

Metal bowl: 0° to 175°F (-20° to 80°C)

* Air supply must be dry enough to avoid ice formation at temperatures below 35°F (2°C).

Nominal reservoir sizes

10-015-002: 1/2 pint (0.25 liter)

10-015-100: 1/2 pint (0.25 liter)

10-015-504: 1 quart (1 liter)

10-015-005: 2 quart (2 liter)

10-065-006: 2 U.S. gallon (8 liter)

10-065-007: 5 U.S. gallon (20 liter)

Recommended lubricants: See Section ALE-29.

Materials

Body: Zinc

Bowl:

Transparent 1/2 pint (0.25 liter): Polycarbonate

Metal

1 quart (1 liter): Aluminum

2 quart, 2 and 5 gallon (2, 8, 20 liter): Steel

Metal bowl liquid level indicator lens: Pyrex

Sight-feed dome

Standard: Polycarbonate

Optional: Pyrex and brass

Elastomers: Neoprene and nitrile

Service Kits

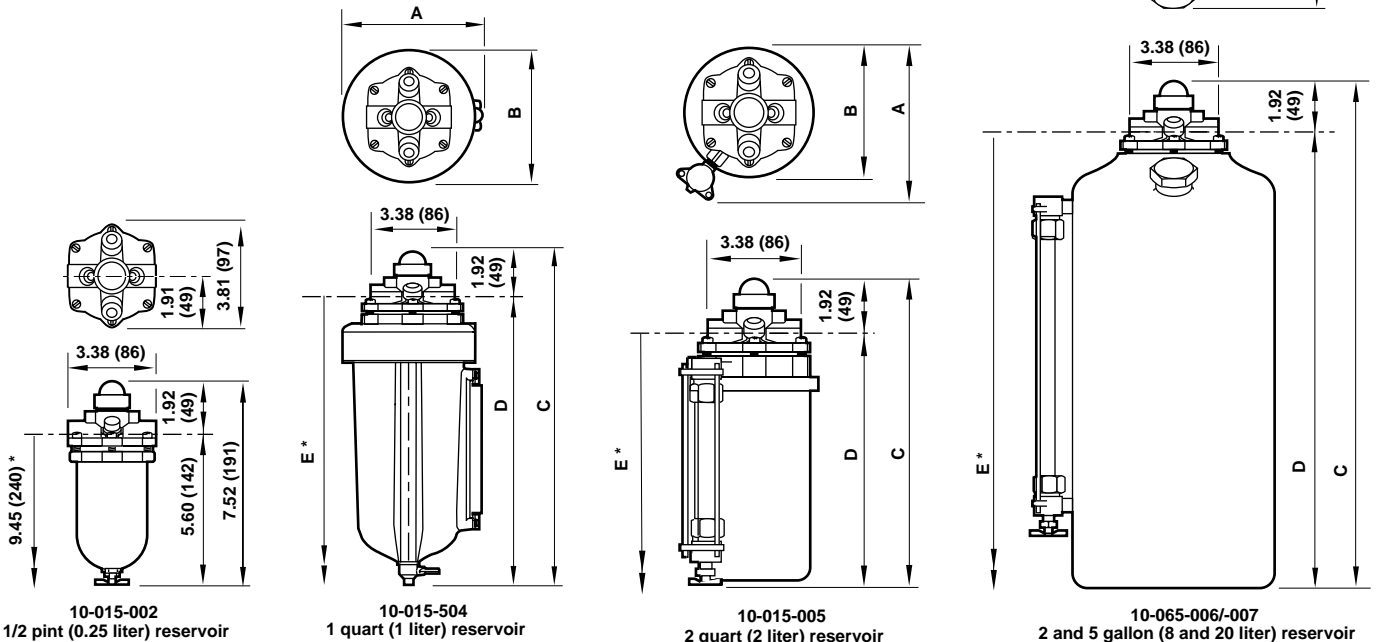
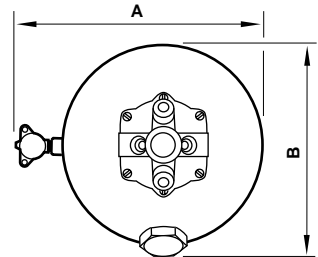
Item	Type	Part Number
Service kit	Seal & Gasket	714-01
Liquid level lens kit	1 quart reservoir	2273-22
	2 quart reservoir	2273-04
	2 and 5 gallon reservoir	2274-01
Replacement drain	Manual petcock	684-01

Service kit 714-01 includes dome, o-rings, gaskets, siphon tube filter, siphon tube check ball.

Reservoir sight glass kits include sight glass, sight glass guards, seals, and hardware.

All Dimensions in Inches (mm)

Reservoir	A	B	C	D	E
1 quart (1 liter)	4.58 (116)	4.36 (111)	12.73 (323)	10.8 (275)	19 (475)
2 quart (2 liter)	5.28 (134)	4.63 (118)	11.69 (297)	9.77 (248)	18 (457)
2 gallon (8 liter)	7.81 (198)	7.18 (182)	19.51 (496)	17.59 (447)	31 (787)
5 gallon (20 liter)	11.81 (300)	11.18 (284)	22.76 (578)	20.84 (529)	36 (914)



* Minimum clearance required to remove bowl.



Machine Bearing Lubricators

Machine bearing lubricators deliver a fog of small oil particles through a manifold system to various machine elements (bearings, gears, chains, etc). At the machine elements a nozzle-like fitting, called a reclassifier, causes the small oil particles to combine into larger particles. The larger particles cover the bearing surfaces with a protective film of clean oil. An air line filter and pressure regulator must be installed immediately upstream of the lubricator.

How to Select

Selection requires a careful analysis of the lubrication requirements of the machine. After the analysis, the proper lubricator, reservoir, and reclassifiers may be ordered. The following is an abbreviated summary of the steps required to analysis lubrication requirements of the machine. See Norgren Publications NT-1, *Design Manual for Machine Lubrication*, for complete details.

1. Determine the bearing inch requirement.
 - a. List and identify the bearing-inch rating of all machine elements requiring lubrication.
 - b. List the reclassifier ratings required at each point of lubrication.
 - c. Total the reclassifier ratings. This is the bearing-inch requirement to use in selecting the lubricator.
2. Determine reservoir capacity required.
 - a. Calculate rate of oil usage based on bearing-inch rating.
 - b. Determine how often the reservoir can be refilled.
 - c. Select reservoir capacity.

3. Determine the air flow required. See the *Operating Ranges and Air Flow Requirements* chart for air flow requirements of the lubricator.
4. Determine any accessories required.

Operating Ranges and Air Flow Requirements

Bearing Inch Requirement	Lubricator Inlet Pressure psig (bar)	Air Flow scfm (dm ³ /s)	Manifold Pressure Inches H ₂ O
16 24 32	8 (0.6) 17 (1.2) 26 (1.8)	1.6 (0.76) 2.4 (1.13) 3.1 (1.46)	8
16 24 32	10 (0.7) 20 (1.4) 31 (2.2)	1.8 (0.85) 2.7 (1.27) 3.6 (1.70)	10
16 24 32	12 (0.8) 23 (1.7) 35 (2.4)	2.0 (0.94) 3.0 (1.42) 4.0 (1.89)	12
8 16 24 32	6 (0.4) 15 (1.0) 26 (1.8) 40 (2.8)	1.1 (0.52) 2.2 (1.04) 3.3 (1.56) 4.5 (2.12)	15

Reclassifiers with Bearing Inch (BI) Ratings - Dimensions in mm (inches)

Straight, compression tube		Elbow, compression tube		Pressure jet, compression tube		Straight, pipe thread*		1/4 OD copper tube, solder	
Model	BI Rating	Model	BI Rating	Model	BI Rating	Model	BI Rating	Model	BI Rating
18-009-003	0 to 1	18-009-008	0 to 1	18-009-030	0 to 1	18-009-001	0 to 1	18-009-029	2 to 4
18-009-010	1 to 2	18-009-011	1 to 2	18-009-031	1 to 2	18-009-002	0 to 1		
18-009-012	2 to 4	18-009-013	2 to 4	18-009-032	2 to 4	18-009-005	2 to 4		
18-009-014	4 to 8	18-009-015	4 to 8			18-009-006	2 to 4		
						18-009-007	4 to 8		

* 1/4 NPT female x 1/8 NPT male threads all models except 18-009-002 and -006, which have 1/4 NPT female and male threads.