

Constant Level Lubricators

OIL-RITE SERVICE TO DESIGN AND PLANT ENGINEERS

Whether you are seeking the proper lubrication equipment for a machine still in the design stage or for machinery already in use, Oil-Rite can help you. Oil-Rite engineers, with all their accumulated knowledge and skills, will study your lubrication problem and help you select precisely the right equipment for your individual application. There's no obligation.

CAPACITY SELECTOR GUIDE-DROP FEED LUBRICATORS

The selection of reservoir capacity for drop feed lubricators should take into consideration:

1. Number of drops per minute to be dispensed.
2. Desired interval between refill.
3. Number of feed outlets in case of multiple lubricators.
4. Continuous or intermittent operations.

Table 1 serves as a guide and permits selection of a reservoir for individual needs.

Number of drops per minute	Reservoir capacity in fluid oz.*			
	1 hour	8 hours	24 hours	5 days
1	.11	.9	2.8	14
2	.23	1.8	5.5	28
3	.34	2.8	8.3	41
5	.57	4.6	14.0	69
7	.80	6.4	19.0	96
10	1.15	9.2	28.0	138
15	1.72	14.0	41.0	207
20	2.30	18.0	55.0	275
25	2.87	23.0	69.0	344
30	3.44	28.0	83.0	413

*based on liquid drops of 3/16 dia.

Most drop feed lubricators usually deliver drops of approximately 3/16 dia. Smaller or larger drops will, of course, necessitate a decrease or increase of the reservoir capacity given in Table 1. To obtain the proper reservoir capacity for 1/8 dia. or 1/4 dia. drops, simply multiply the ounce capacity shown in Table 1 with the respective multiplier given in Table 2.

Diameter of drops	Number of drops in 1 fluid oz.	Multiplier
1/8	1765	.0296
3/16	523	1.
1/4	221	2.37

TABLE 3-LIQUID MEASURE

1 U.S. gal.	= 128 fluid oz.	= 231 cu. in.
	= 4 quarts	= 8 pints
	= 3.785 liters	= 3785 c.c.
1 Fluid oz.	= 1.805cu. in.	= 29.57c.c.
1 Cubic in.	= 16.39 c.c.	= .554 fluid oz.
1 Liter	= 1000 c.c.	
	= .264 U.S. gal.	= 1.057 quarts
	= 61.023 cu. in.	= 33.814 fluid oz.

CONSTANT LEVEL LUBRICATOR WITH LOW LEVEL SAFETY SWITCHES

will maintain a fixed liquid level within the bearing housing, vital in protecting bearings from failure and preventing possible machine breakdown due to insufficient lubrication. A safeguard against loss of lubricant is provided by a low level safety switch. The low level switch can be used to actuate warning devices or shut off a machine, thus protecting costly machinery.

Operation is based on the liquid seal principle. Whenever the liquid level recedes below the set level because of liquid consumption, the liquid seal on the spout, inside the lubricator, is temporarily broken. This allows air from the air intake to enter the reservoir, releasing the liquid until a seal and proper level are again established.

To refill unit, remove reservoir cap. An automatic shutoff will hold the liquid supply in the reservoir while refilling. After filling, screw cap on tightly and lubricator will resume normal functioning.

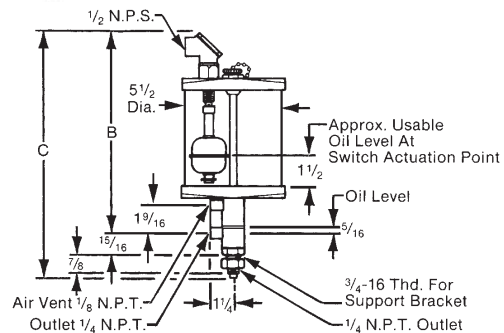


SPECIFICATIONS:

- Pressure Atmospheric Pressure
- Temperature 160° F. Max.
- Reservoir Acrylic
- Seals Buna-N
- Covers Aluminum Alloy
- Body Aluminum Alloy
- Level Switch Stainless Steel

When Ordering Specify:

- Catalog Number
- Refer to Page 36 for Installation Instructions



Catalog Number	Capacity	B	C
* B-2443-1	1/2 GAL.	13 1/8	15 7/16
* B-2443-2	1 GAL.	18 1/8	20 7/16

Reed Switch Magnetically Actuated
Normally Open
Max. Resistance Load
120 Volt A.C. .4A.
240 Volt A.C. .2A.
480 Volt A.C. N/R
24 Volt D.C. .5A.
120 Volt D.C. .2A.
240 Volt D.C. .1A.

* Special - Please Consult Factory

NOTE: For safety, long life, and best performance use this liquid level switch with Oil-Rite relay No. A-3160, A-3138 or A-4621 (see page 92) having a D.P.D.T. switch for 10 AMPS 115 Volts 60 Hertz.

Constant Level Lubricators

CONSTANT LEVEL LUBRICATORS are built to give long, trouble free service. The finest materials and workmanship are incorporated throughout. They will maintain a fixed liquid level in a bearing housing or gear box.

When the liquid in the bearing recedes because of liquid consumption, the liquid seal on the inside of the lubricator is temporarily broken. This allows air from the air intake to enter the lubricator reservoir, releasing the liquid until a seal and proper level are again established.

The Style CS Constant Level Lubricator is identical in design to Style C with two exceptions. A large sight for viewing the liquid level and condition of the liquid is provided, plus there are larger liquid outlets for rugged, heavy duty installations.

For reference, a liquid level line is scribed on the base. Units are easily refilled through a top filler cap. The reservoir need not be removed for refilling. A shutoff valve holds the

liquid in the reservoir when the filler cap is removed. After the cap is screwed down again, the lubricator resumes normal functioning.

An air vent is supplied which can be piped back to the bearing or gear box thereby equalizing any existing pressure or vacuum. The reservoir is crystal clear glass or shatterproof acrylic permitting the liquid supply to be visible at all times.

SPECIFICATIONS:

- Pressure Atmospheric Pressure
- Temperature 160° F. Maximum Acrylic
225° F. Maximum Pyrex
- Reservoir Acrylic or Pyrex
- Seals Buna-N
- Sight Glass
- Covers Aluminum Alloy
- Body Aluminum Alloy

When Ordering Specify:

- Catalog Number
- Refer to Page 36 for Installation Instructions

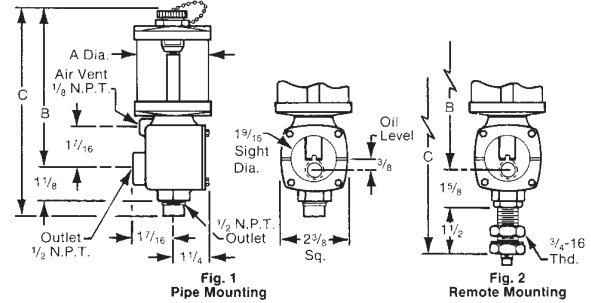
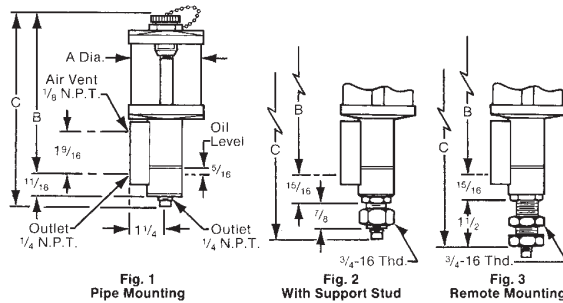


Fig.	Catalog Number		Capacity	A	B	C
	Acrylic	Pyrex				
1	B-518-1	B-518-11	2 1/2 OZ.	2	5 3/16	6 3/8
	B-518-2	B-518-12	5 OZ.	2 1/2	5 11/16	6 7/8
	B-518-3	B-518-13	9 OZ.	3	6 1/2	7 11/16
	B-518-4	B-518-14	1 PT.	3 1/2	7 1/2	8 11/16
2	B-518-5	B-518-15	1 QT.	4 1/4	8 3/4	11 1/16
	B-518-6	B-518-16	1/2 GAL.	5 1/2	10 3/4	13 1/16
	B-518-7	—	1 GAL.	5 1/2	15 3/4	18 1/16
3	B-543-1	B-543-11	2 1/2 OZ.	2	5 3/16	7 5/8
	B-543-2	B-543-12	5 OZ.	2 1/2	5 11/16	8 7/8
	B-543-3	B-543-13	9 OZ.	3	6 1/2	8 15/16
	B-543-4	B-543-14	1 PT.	3 1/2	7 1/2	9 15/16
	B-543-5	B-543-15	1 QT.	4 1/4	8 3/4	11 3/16
	B-543-6	B-543-16	1/2 GAL.	5 1/2	10 3/4	13 3/16
	B-543-7	—	1 GAL.	5 1/2	15 3/4	18 3/16

Fig.	Catalog Number		Capacity	A	B	C
	Acrylic	Pyrex				
1	B-576-1	B-576-11	2 1/2 OZ.	2	5 1/4	7 1/16
	B-576-2	B-576-12	5 OZ.	2 1/2	5 3/4	7 9/16
	B-576-3	B-576-13	9 OZ.	3	6 9/16	8 3/8
	B-576-4	B-576-14	1 PT.	3 1/2	7 9/16	9 3/8
	B-576-5	B-576-15	1 QT.	4 1/4	8 13/16	10 5/8
	B-576-6	B-576-16	1/2 GAL.	5 1/2	10 13/16	12 5/8
	B-576-7	—	1 GAL.	5 1/2	15 13/16	17 5/8
2	B-737-1	B-737-11	2 1/2 OZ.	2	5 1/4	8 3/8
	B-737-2	B-737-12	5 OZ.	2 1/2	5 3/4	8 7/8
	B-737-3	B-737-13	9 OZ.	3	6 9/16	9 11/16
	B-737-4	B-737-14	1 PT.	3 1/2	7 9/16	10 11/16
	B-737-5	B-737-15	1 QT.	4 1/4	8 13/16	11 15/16
	B-737-6	B-737-16	1/2 GAL.	5 1/2	10 13/16	13 15/16
	B-737-7	—	1 GAL.	5 1/2	15 13/16	18 15/16

* Special - Please Consult Factory

Constant Level Lubricator Installation Instructions

INSTALLATION

1. Liquid level is usually marked on the base of lubricator. Mount liquid by using side or bottom outlet at the exact and most desirable level.
2. Correct liquid level is lowest level at which bearing operates perfectly.
3. Lubricator should be level in all directions to function at its best.
4. Keep connections short, rigid, and close to bearing to avoid vibration.
5. Fill bearing well by filling lubricator. Repeated filling may be necessary.
6. The anti-friction bearings should be fitted with breather tubes piped to the outside or to air intake of lubricator.
7. **On lubricators with top filler cap, be sure cap is always screwed down tight. Removing filler cap shuts off oil supply. Loose filler cap causes leakage of liquid from reservoir through vent hole, rendering lubricator ineffective.**

PRINCIPLE

Constant level lubricators automatically maintain the liquid in a bearing reservoir at a constant level. Operation is based on the liquid seal principle. (Figure 1) When the liquid in the bearing recedes because of liquid consumption, the liquid seal on the inside of the lubricator is temporarily broken. This allows air from the air intake to enter the lubricator reservoir, releasing oil until a seal and proper level are again established.

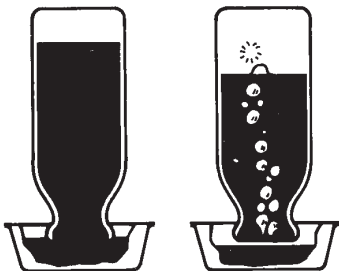


Figure 1

APPLICATIONS

Constant level lubricators are used on sleeve bearing, anti-friction bearings, gear boxes, pump housing, etc. Other uses include moistening pads and any other application demanding the maintenance of a constant liquid level.

LIQUID LEVEL

Oil-Rite has available constant level lubricators with fixed or with adjustable oil level. Original equipment manufacturers usually prefer lubricator with fixed liquid level to make an installation tamperproof.

LIQUID RESERVOIR

Oil-Rite offers constant level lubricators with acrylic, glass, or high temperature plastic reservoirs to suit specific applications. The reservoirs are transparent to permit a visual check of the oil supply at all times. Since the liquid in the reservoir assumes the same color as that in the bearing housing, a visual check of the condition of the liquid is also afforded.

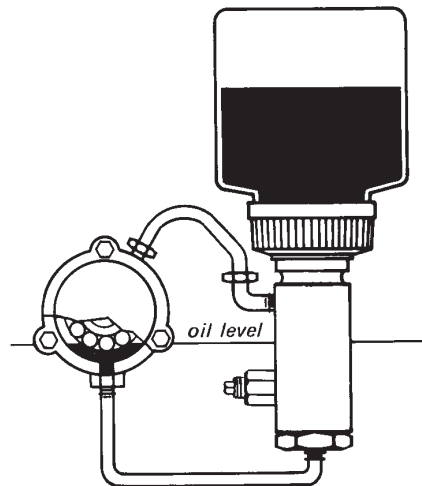


Figure 2

This installation (Figure 2) is especially suitable for bearings having excessive back pressure or vacuum. A constant level is maintained in spite of air pressure or vacuum in bearing, as equalizing tube assures static balance of pressure between bearing and lubricator.

AIR INLET

The air inlet on Oil-Rite's constant level lubricators is provided with a pipe thread to accommodate an air filter for the prevention of dust and dirt getting into the liquid.

For dusty and dirty surroundings, such as those found in cement mills, textile plants, paper mills, coal handling facilities, etc. it is recommended that the air inlet of the lubricator be piped into the top of the bearing housing. Such a closed circuit offers full protection.

Pressure differential between the air intake of the lubricator and the bearing housing, such as is experienced on ventilating fans and blowers, anti-friction bearings, etc., necessitates that the air inlet on the lubricator be piped into the top of the bearing housing to equalize pressure.

SURGE LEVEL

In certain cases, such as in gear boxes, a considerable quantity of liquid is carried by the gears to the upper portion of the gear housing during operation. After shutdown, the liquid surges back to the lubricator and raises the liquid level. Constant level lubricator should therefore be equipped with a sufficient surge level to prevent liquid from overflowing through the air intake.

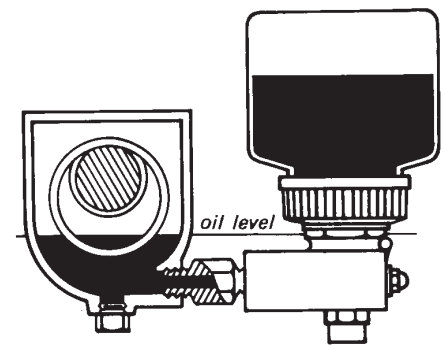


Figure 3

Typical installation (Figure 3) for ring-oiled bearings. Liquid level should be slightly above inside diameter of ring. With the correct liquid level the ring carries liquid to shaft smoothly without splashing and chattering.