

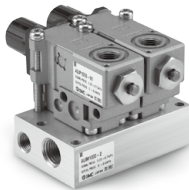
# Impulse Lubricator

# ALIP1000/1100 Series

- Intermittent discharge of small, constant amounts to the sliding parts
- Directly supplies a constant amount of oil just before the lubrication point



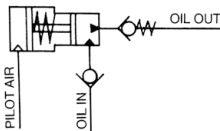
ALIP1000-01



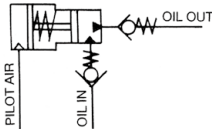
ALIM1000-2

## Symbol

ALIP1000-01



ALIP1100-01



## Standard Specifications

Model	ALIP1000-01	ALIP1100-01
Port size Rc (Nominal size)	1/8 (6A)	
Proof pressure	1.0 MPa	
Operating pressure range for signal pressure	0.25 to 0.7 MPa	
Pressure range for oil <sup>Note 1)</sup>	0 to 0.4 MPa	0.15 to 0.4 MPa
Oil viscosity <sup>Note 1)</sup>	2 to 460 cst (40°C)	
Ambient and fluid temperature	5 to 50°C	
Oil feeding volume (1 shot) <sup>Note 2)</sup>	0 to 0.04 cm <sup>3</sup>	
Weight (kg)	0.22	
Mounting orientation	OIL OUT upward	No restriction

Note 1) Determine the oil pressure and port size based on the piping length and oil viscosity, referring to the operation manual.

Note 2) The oil feeding volume adjustment range is 0.003 to 0.04 cm<sup>3</sup>. The set oil feeding volume at the time of shipment is 0.02 cm<sup>3</sup>.

## Oil Tank (Option)/Part No.

Part no.	Operating pressure range	Tank capacity	Float switch	Max. operating voltage	Max. contact point capacity
<b>ALT10</b>	0 to 0.4 MPa	160 cm <sup>3</sup>	—	—	—
<b>ALT10-S1</b>			Bottom limit ON	200 VAC	50 VA AC
<b>ALT10-S2</b>			Bottom limit OFF	200 VDC	50 W DC
<b>ALT20</b>	0 to 0.4 MPa	1000 cm <sup>3</sup>	—	—	—
<b>ALT20-S1</b>			Bottom limit ON	200 VAC	50 VA AC
<b>ALT20-S2</b>			Bottom limit OFF	200 VDC	50 W DC

## How to Order

**ALIP 1000 - 01**

Impulse lubricator

Port size

01 Rc 1/8

Applicable oil and oil supply pressure

Symbol	Applicable oil	Oil supply pressure
<b>1000</b>	Oil	No pressurized, Pressurized
<b>1100</b>	Oil	Pressurized

**ALIM 1000 - 2**

Impulse lubricator manifold

No. of stations

<b>2</b>	2 stations
<b>3</b>	3 stations
<b>4</b>	4 stations
<b>5</b>	5 stations
<b>6</b>	6 stations
<b>7</b>	7 stations
<b>8</b>	8 stations
<b>9</b>	9 stations
<b>10</b>	10 stations

Built-in impulse lubricator model

<b>1000</b>	ALIP1000-01
<b>1100</b>	ALIP1100-01

Note 1) If an odd number of stations are used, a base for even number of stations is used with a blanking plate installed on one of the stations. (Refer to dimensions on page 1338.)

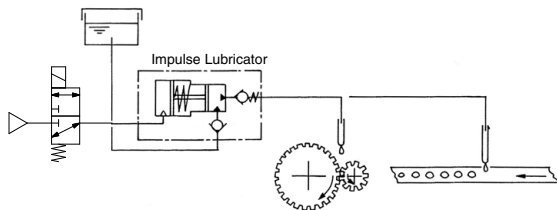
Note 2) When "ALIM1000-2" is selected, 2 ALIP1000-01 models will be built in.

# ALIP1000/1100 Series

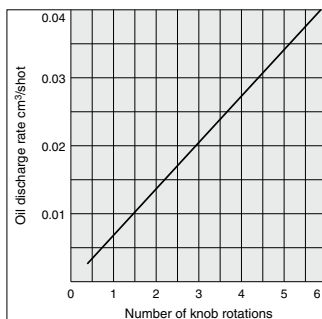
## Piping Example

Intermittent lubrication and constant amount of oil dropping to the friction part of machines, such as gears.

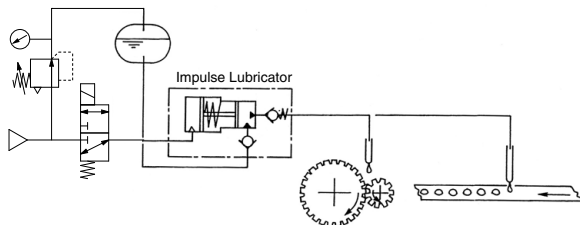
- No pressurized tank



## Oil Discharge Rate (Representative Value)

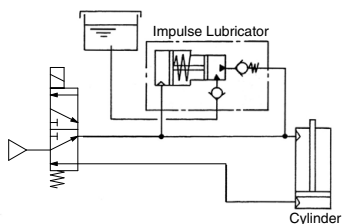


- Pressurized tank

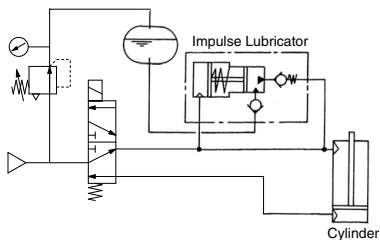


Lubrication to pneumatic equipment such as air cylinders

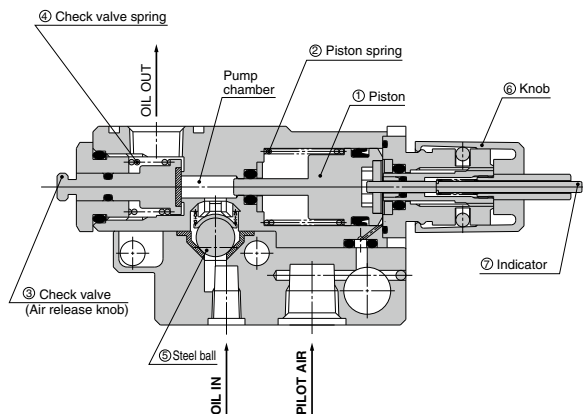
- No pressurized tank



- Pressurized tank



## Working Principle

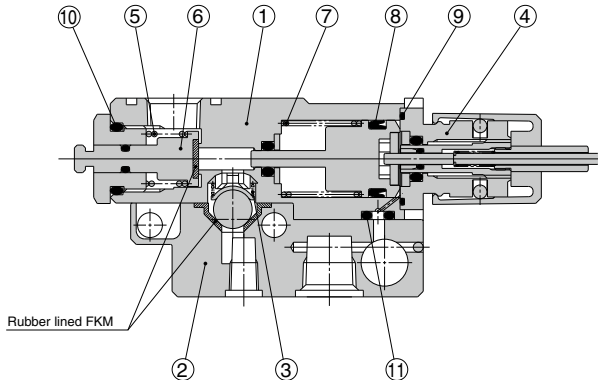


In the figure to the left, when pilot air enters the inlet side of the piston (1), the piston (1) overcomes the piston spring (2) and pushes oil into the pump chamber. At this time the steel ball (5) is pushed downward and closes the oil entry passage. The volume of oil in the pump chamber, equivalent to (the cross sectional area of the pump chamber intrusion piston) x (the piston stroke), pushes open the check valve (3) and is discharged from the outlet side. After the oil discharge finishes, the check valve (3) closes the outlet side passage using the check valve spring (4).

After the pilot air is released, the piston (1) recovers by using the piston spring (2), the steel ball (5) is pulled upward, and new oil flows into the pump chamber from the oil entry passage.

Rotate the knob (6) and change the stroke of the piston (1) to adjust the volume of oil discharged. Turning the knob left will increase the discharge volume, while turning to the right will decrease it. The movement of the piston can be confirmed visually by using the indicator (7).

## Construction/Parts List



### Main Parts List

No.	Description	Material	Note
1	<b>Body</b>	Zinc die-casted	Platinum silver coated
2	<b>Base B</b>	Zinc die-casted	Platinum silver coated

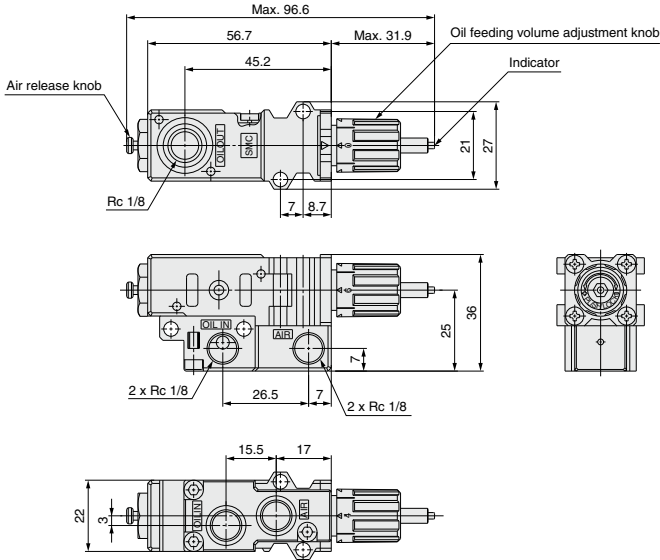
### Spare Parts/Replacement Parts Part No.

No.	Description	Material	Part no.	
			ALIP1000-01	ALIP1100-01
3	<b>Check spring</b>	Stainless steel	—	881128
4	<b>Bonnet assembly</b>	—	88117-1A	88117-3A
5	<b>Check spring</b>	Stainless steel	881118-1	
6	<b>Check valve assembly</b>	—	881115-2A	
7	<b>Piston spring</b>	Stainless steel	881117	
8	<b>DY seal</b>	NBR	KB00207	
9	<b>O-ring</b>	NBR	KA00288	
10	<b>O-ring</b>	NBR	KA00066	
11	<b>O-ring</b>	NBR	KA02133	

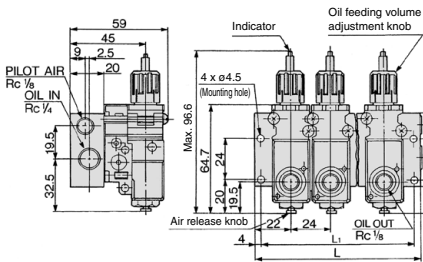
# ALIP1000/1100 Series

## Dimensions

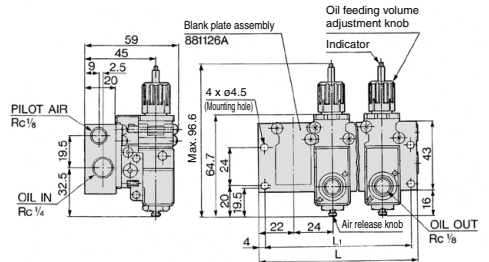
### Impulse lubricator: ALIP1□00-01



### Impulse lubricator manifold: ALIM1□00-2, 4, 6, 8, 10



### Impulse lubricator manifold: ALIM1□00-3, 5, 7, 9



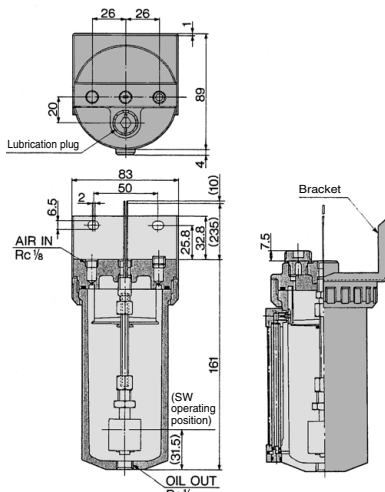
Part no.	Impulse lubricator part no.	Stations	L	L <sub>1</sub>
ALIM1000-2	ALIP1000-01			
ALIM1100-2	ALIP1100-01	2	68	60
ALIM1000-4	ALIP1000-01			
ALIM1100-4	ALIP1100-01	4	116	108
ALIM1000-6	ALIP1000-01			
ALIM1100-6	ALIP1100-01	6	164	156
ALIM1000-8	ALIP1000-01			
ALIM1100-8	ALIP1100-01	8	212	204
ALIM1000-10	ALIP1000-01			
ALIM1100-10	ALIP1100-01	10	260	252

Part no.	Impulse lubricator part no.	Stations	L	L <sub>1</sub>
ALIM1000-3	ALIP1000-01			
ALIM1100-3	ALIP1100-01	3	116	108
ALIM1000-5	ALIP1000-01			
ALIM1100-5	ALIP1100-01	5	164	156
ALIM1000-7	ALIP1000-01			
ALIM1100-7	ALIP1100-01	7	212	204
ALIM1000-9	ALIP1000-01			
ALIM1100-9	ALIP1100-01	9	260	252

Note) Specifications are the same as impulse lubricator specifications.

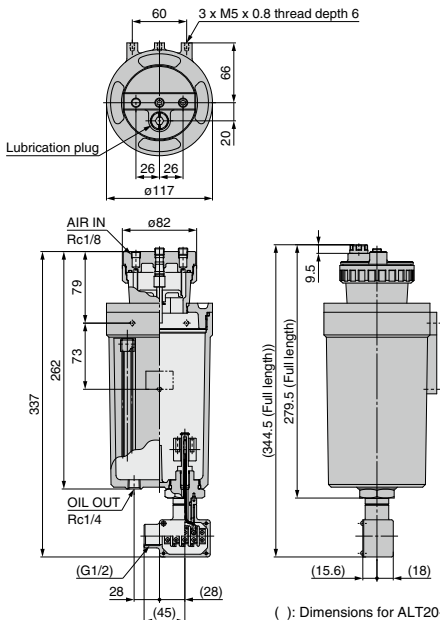
## Option/Dimensions

### Oil tank: ALT10



( ) : Dimensions for ALT10-S<sub>2</sub>

### Oil tank: ALT20



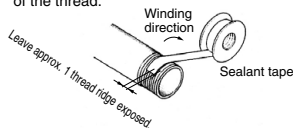
( ) : Dimensions for ALT20-S<sub>2</sub>

## Handling Precautions

### Mounting

<Common>

- Before piping is connected, it should be thoroughly blown out with air (flushing) or washed to remove chips, cutting oil and solid foreign material from inside the pipe. Contamination of piping may cause damage or malfunction.
- When screwing together pipes and fittings, etc., be certain that chips from the pipe threads and sealant do not get inside the piping. Also, if sealant tape is used, leave 1 thread ridge exposed at the end of the thread.



- Connect piping/fittings using the recommended torque while holding the female thread side tightly. Insufficient tightening torque leads to cause of loosening or sealing failure, and excessive tightening torque leads to cause of breakage of screws. Tightening without holding female thread applies an excessive force to the product directly, leading to breakage.

### Recommended tightening torque (N·m)

Connecting thread size	1/8	1/4
Recommended tightening torque	3 to 5	8 to 12

<Impulse lubricator>

- As there are 2 AIR IN ports and 2 OIL IN ports, be sure to plug the ports that are not in use with a hexagon socket head plug. (There are 2 hexagon socket head plugs included with the product.)
- Do not plug the OIL OUT port.
- The screw-in depth of the OIL OUT port fitting should be 6 mm or less. If the fitting is screwed in more than that, damage to the internal parts may result, causing malfunction (lubrication failure).
- Provide enough space around the air release knob for air release.
- Mount the ALIP (ALIM) 1000 series with the OIL OUT side facing upwards.

<Oil Tank>

- When using the oil tank in an unpressurized state (exposed to the outside air), mount it at a position at least 100 mm higher than the impulse lubricator.
- For the ALT10 series, a slight clearance is provided between the product and the brackets.

### Adjustment

<Impulse lubricator>

- The oil feeding volume is set to 0.02 cm<sup>3</sup> at the time of shipment. To adjust the volume, pull on the knob to release the lock, and then turn the knob as needed. Be sure to relock the knob after adjustment.
- Turn the knob to the right (clockwise) to reduce the oil feeding volume, and turn the knob to the left (counterclockwise) to increase the volume. A full rotation of the knob in either direction changes the oil feeding volume by 0.007 cm<sup>3</sup>.

### Lubrication

<Impulse lubricator>

- If air enters the pump chamber, lubrication (oil discharge) will cease. If this happens, be sure to release the air by operating the air release knob.

<Oil Tank>

- When refilling the oil, a large volume of air bubbles will be mixed in with the oil, so either wait for the air bubbles to dissipate or use vacuum suction to remove the bubbles before using the equipment.