

Auto Feed Lube, Auto Feed Tank

ALF400 to 900, ALT-5/-9

Standard Specifications

Model	Auto feed lube						Auto feed tank			
	ALF400	ALF400-06	ALF500	ALF600	ALF800	ALF900	ALT-5	ALT-5-IS-1 2	ALT-9	ALT-9-IS-1 2
Port size	1/4 3/8 1/2	3/4	3/4 1	1	1 1/4 1 1/2	2	AIR: 1/4 OIL: 3/8			
Fluid	Air									
Proof pressure	1.5 MPa									
Max. operating pressure	0.7 MPa						1.0 MPa			
Operating pressure differential range (Difference between tank pressure and line pressure)	0.1 to 0.6 MPa						—			
Vibration resistance (Pressure differential 0.3 MPa)	1 G (9.81 m/sec ²) or less						—			
Min. operating flow (L/min (ANR))	1/4: 65 3/8: 100 1/2: 120	120	190	220	1 1/4: 460 1 1/2: 650	1800	—			
Bowl capacity (cm ³) (Capacity between levels)	—						5000 (4400)	5000 (3400)	9000 (7800)	9000 (6000)
Recommended lubricant	Turbine oil Class 1 (With no additives), ISO VG32									
Ambient and fluid temperature	-5 to 60°C (No freezing)									
Bowl material	Polycarbonate						Metal (Steel tubing for machine construction)			
Weight (kg)	0.85	0.88	1	1.15	1.85	1.9	12.6	13.2	26.0	26.6
Accessory (Standard)	Bowl guard									
	●	●	●	●	●	●	—			

Note 1) Tank pressure is the pressure of Auto Feed Tank and line pressure is the pressure of Auto Feed Lube.

Note 2) Conditions: Inlet pressure 0.5 MPa, 5 drops/min, Turbine oil class 1 (with no additives) ISO VG32, Temperature 20°C, Needle fully open. Use air consumption rate for minimum operating flow.

Note 3) Capacity between levels: in the case of float switch equipped model, the capacity is measured in levels between the level gauge upper limit and the lower limit of the float switch detective range.

The problem of running out of oil is prevented because the oil is fed automatically.

This system makes lubrication work unnecessary, thus significantly reducing the amount of maintenance labor.

Accessory (Option) Part No.

Description	Part no.					
	ALF400	ALF400-06	ALF500	ALF600	ALF800	ALF900
Bracket	B44P	B44-1P	3/4: B45-1P 1: B45-2P	B46P	—	—

Note) A float switch can not be mounted on "ALT-5" or "ALT-9" afterwards.



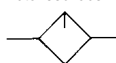
ALF400



ALT-5

Symbol

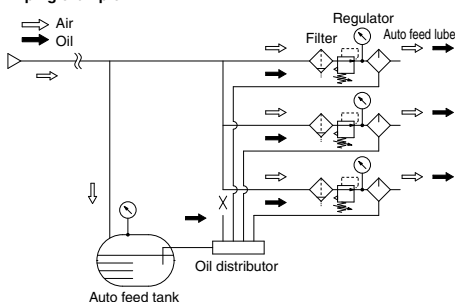
Auto feed lube



Auto feed tank



Piping example



ALF400 to 900, ALT-5/-9 Series

How to Order

<Auto Feed Lube>

ALF **40** 0 - **02** -

Auto Feed Lube

Body size

40	1/2
50	3/4
60	1
80	1 1/2
90	2

Port size

02	1/4
03	3/8
04	1/2
06	3/4
10	1
12	1 1/4
14	1 1/2
20	2

Thread type

Nil	Rc
N	NPT
F	G

Option

Nil	—
R	Flow direction: Right to left

Option

Symbol	Description	Applicable model
Nil	—	—
B	With bracket	ALF400 to 600
X208	Metal case with a level gauge	ALF400 to 900

<Auto Feed Tank>

ALT - **5** - **IS-1** -

Auto Feed Tank

Thread Type

Nil	Rc
N	NPT
E	G

Tank capacity

5	5000 cm ³ tank
9	9000 cm ³ tank

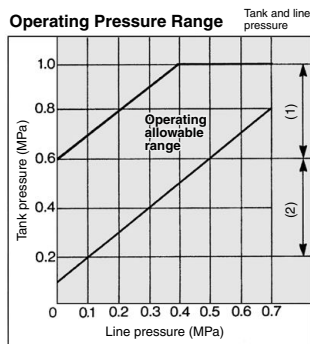
Option

Nil	—
R	Flow direction: Left to right

Option

IS-1	W/float switch (Bottom limit ON)
IS-2	W/float switch (Bottom limit OFF)

Operating Pressure Range



Note 1) Tank pressure is removed when line pressure is stopped.

Note 2) Tank pressure is kept same when line pressure is stopped possible to use.

⚠ Precautions

Be sure to read this before handling the products. Refer to back page 50 for Safety Instructions and pages 387 to 391 for Precautions on every series.

Mounting

⚠ Warning

If the pressure is discharged, the oil could flow back if the operating pressure differential range (the differential between the tank and line pressures) exceeds 0.6 MPa. Therefore, make sure to also discharge the tank pressure.

⚠ Caution

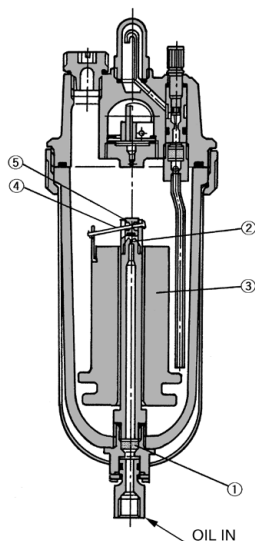
Install the float vertically inside the bowl so that it will not come into contact with the siphon tube, preventing the oil from dripping poorly.

Maintenance

⚠ Caution

Oil cannot be fed into Auto Feed Lube under being pressurized. We recommend oil is supplied from cam handle (plug for oil supply) of an auto feed tank.

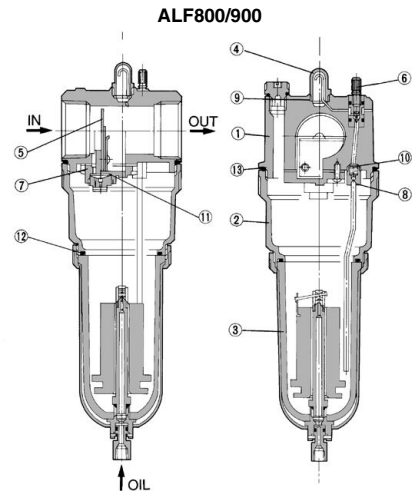
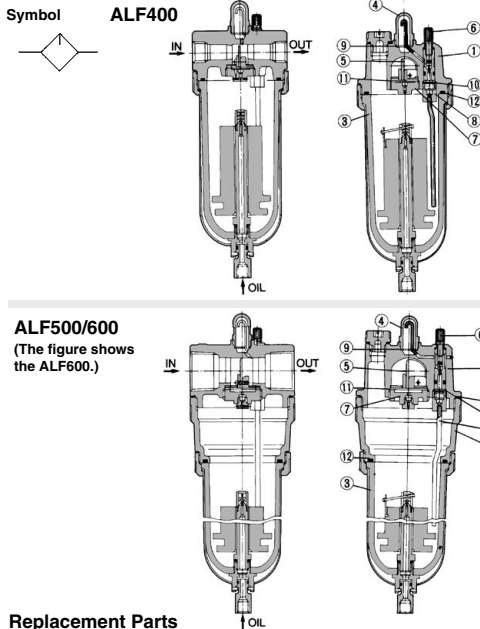
Working Principle/Auto Feed Lube



The oil that has been pumped from the tank passes through felt ① where it is filtered, and is fed into the case through nozzle ②. When the volume of oil reaches a certain level, float ③ ascends, valve ⑤ descends via lever ④, nozzle ② closes, and the feeding of oil stops, thus completing the oil feeding process. When the oil inside the case is consumed, float ③ descends, valve ⑤ ascends via lever ④, allowing oil to be fed from nozzle ②.

Auto Feed Lube **ALF400 to 900 Series** Auto Feed Tank **ALT-5/-9 Series**

Construction: Auto Feed Lube



Component Parts

No.	Description	Material		Note
		ALF400, 400-06	ALF500, 600	ALF800, 900
1	Body	Aluminum die-casted	Aluminum casted	Platinum silver painted
2	Housing	—	Aluminum die-casted	Platinum silver painted

Replacement Parts

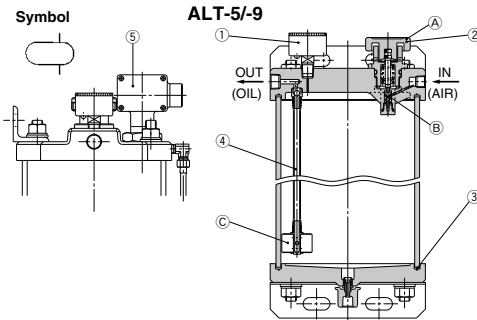
No.	Description	Material	Part no.						Qty.
			ALF400	ALF400-06	ALF500	ALF600	ALF800	ALF900	
3	Auto feed	Standard X208	ALF-3	ALF-3	ALF-3	ALF-3	ALF-3	ALF-3	1
			ALF-3-X208	ALF-3-X208	ALF-3-X208	ALF-3-X208	ALF-3-X208	ALF-3-X208	
4	Sight dome	Polycarbonate	12316	12316	12316	12316	12316	12316	1
5	Bumper assembly	—	123122-3A (04) 123122-2A (03) 123122-1A (02)	123122-3A	123210A	123310A	123417A (12) 123416A (14)	12356A	1
6	Needle stud assembly	—	123128PA	123128PA	123128PA	123128PA	123128PA	123128PA	1
7	Retainer assembly	—	123182	123182	12325	12335A-1	123032	—	1
8	Siphon tube assembly	—	124230A	124230A	124231A	124232A	124232A	124232A	1
9	Sight dome seal	Urethane rubber	12318	12318	12318	12318	12318	12318	1
10	Siphon nut seal	Urethane rubber	123111	123111	123111	123111	123111	123111	1
11	Bumper retainer seal	NBR	123126	123126	123213	123313	123011	—	2 (1)
12	Bowl O-ring	NBR	113136	113136	113136	113136	113136	113136	1
13	Housing O-ring	NBR	—	—	KA00465	KA00466	KA00466	KA00466	1

Note 1) Description: Bumper retainer, Material: POM

Note 2) Description: Bumper retainer, Material: Aluminum alloy

Note 3) (): Qty. for ALF800 only

Construction: Auto Feed Tank



Working principle/Auto Feed Tank

By turning cam handle ② 90° clockwise, valve ① opens, allowing the air that has entered from the IN side to be introduced into the tank. Due to the air pressure, the oil in the tank passes through felt ③ and exits from the OUT side. Turning cam handle ② 90° counterclockwise stops the air from the IN side, thus stopping the feeding of the oil.

Component Parts

No.	Description	Material	Part no.				Qty.
			(N, E) ALT-5	(N, E) ALT-5	(N, E) ALT-5	(N, E) ALT-5	
1	Pressure gauge	—	G46-10-02(Nil, E) G46-P10-N02-X03(N)				1
2	Cam handle assembly	—	12374AP				1
3	Seal	NBR	12377	12384	12384	12384	2
4	Siphon tube assembly	—	123712A				1
5	Float switch	—	IS410-1, 2	—	IS410-1, 2	1	1

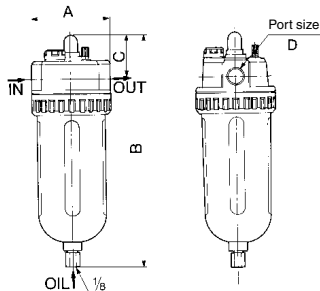
* IS410-1: Bottom limit ON
IS410-2: Bottom limit OFF



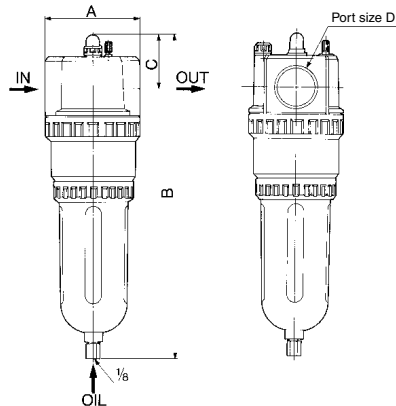
ALF400 to 900, ALT-5/-9 Series

Dimensions: Auto Feed Lube

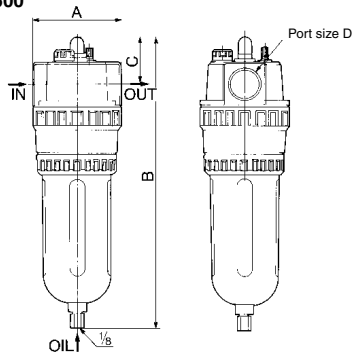
ALF400



ALF800/900

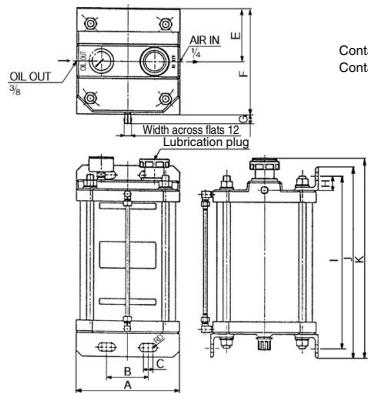


ALF500/600



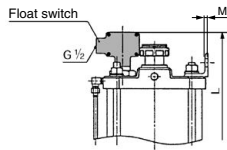
Model	Port size D	A	B	C
ALF400	1/4, 3/8, 1/2	80	239	44
ALF400-06	3/4	85	247	46
ALF500	3/4, 1	90	296	48
ALF600	1	100	320	51
ALF800	1 1/4, 1 1/2	100	339	59
ALF900	2	100	345	63

Dimensions: Auto Feed Tank



Float switch

Contact point capacity: AC: 15 VA, DC: 15 W
Contact point construction: 1a, 1b



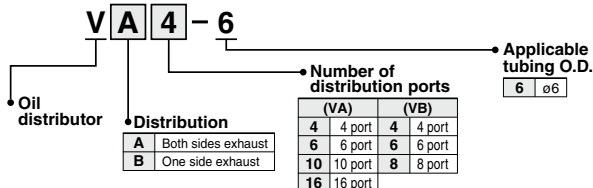
Model	A	B	C	D	E	F	G	H	I	J	K	L	M
ALT-5	174	70	16	7	91	182	15	24	382	414	428	—	5
ALT-5-IS	174	70	16	7	91	182	15	24	382	414	428	449	5
ALT-9	234	108	30	7	121	242	16	40	422	472	—	—	5
ALT-9-IS	234	108	30	7	121	242	16	40	422	472	—	482	5

ALF400 to 900, ALT-5/-9

Related Products:

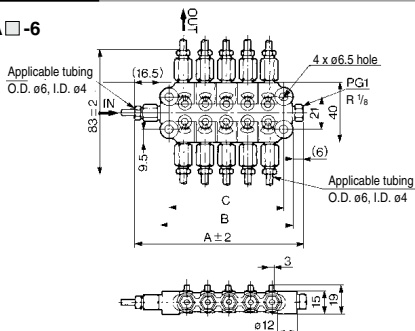
Oil Distributor VA, VB Series

How to Order



Dimensions

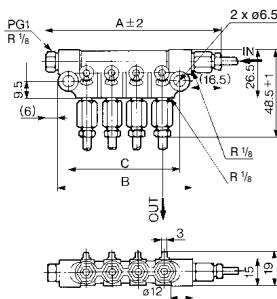
VA □ -6



Model	Number of distribution ports	A	B	C	Applicable tubing
VA4-6	4	—	36.5	—	ø6
VA6-6	6	82.5	60	48	
VA10-6	10	110.5	88	76	
VA16-6	16	152.5	130	118	

Note) Insert seal plug (PG1) into the distribution port which is not used.

VB □ -6



Model	Number of distribution ports	A	B	C	Applicable tubing
VB4-6	4	96.5	74	62	ø6
VB6-6	6	124.5	102	90	
VB8-6	8	152.5	130	118	

Nylon Tubing

Specifications

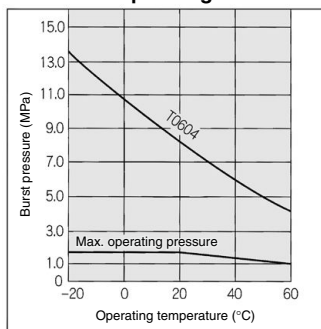
Model	T0604
Max. operating pressure	1.5 MPa
Burst pressure	Refer to the burst pressure characteristics curve.
Min. bending radius (mm) ^{Note)}	24
Operating temperature	-20°C to 60°C
Material	Nylon 12

Note) The value at temp. of 20°C and with O.D. variable rate 10% max.

How to Order

T 0604	B	20
Nylon tubing	Color	Length per roll
Symbol	Color	20 20 m
B	Black	100 100 m roll (Black, white only)
W	White	
R	Red	
BU	Blue	
Y	Yellow	
G	Green	
Tube size		
O.D. ø6		
I.D. ø4		

Burst Pressure Characteristics Curve and Operating Pressure



* Maximum operating pressure is 1/3 max. of burst pressure at 60°C, considering the safety ratio.



Lubricator
NALF400Tank
NALT-5

Specifications

Auto Feed Lube NALF	NALF400	NALF400-N06	NALF500	NALF600	NALF800	NALF900
Max. supply pressure psig (MPa)	220 (1.5)					
Max. operating pressure psig (MPa)	100 (0.7)					
Pressure differential operating range* psig (MPa)	15~90 (0.1~0.6)					
Operating temp. range	40° ~140° F					
Recommended lubricant	Turbine Oil #1 (ISO VG32)					
Bowl	Polycarbonate					

Auto Feed Tank NALT	NALT-5	NALT-5-1S-*1	NALT-9	NALT-9-1S-*1
Max. supply pressure psig (MPa)	220 (1.5)			
Max. operating pressure psig (MPa)	150 (1.0)			
Operating temp. range	23° ~140° F (-5° ~60° C)			
Recommended lubricant	Turbine Oil #1 (ISO VG32)			
Body	ADC			

*Between tank and line pressure

Auto Feed Lubricator NALF Series

Model	NALF400			NALF400-N06	NALF500		NALF600	NALF800		NALF900
Pipe size	1/8	3/8	1/2	3/4	3/4	1	1	1-1/4	1-1/2	2
Min. flow for oil drip scfm	2.2	3.5	4.2	4.2	6.6		7.7	16.1	23	63
Weight lbs (kgf)	1.87 (0.85)			1.94 (0.88)	2.21 (1.0)		2.54 (1.15)	4.08 (1.85)		4.19 (1.9)
Bowl guard (standard)	•			•	•		•	•		•
Bracket	B44P			B44-1P	B45-1P	B45-2P	B46P	—		—

*With supply pressure of 73 psig oil drip rate 5 drops/min, use turbine oil #1 VG32, Temperature 68° F

Auto Feed Tank NALT Series

Model	NALT-5	NALT-5-IS-*1~2	NALT-9	NALT-9-IS-*1~2
Pipe size	Air IN: 1/4, OUT: 3/8			
Oil capacity oz (cm3)	169 (5000)	169 (5000)	304 (9000)	304 (9000)
Weight lbs (kgf)	27.8 (12.6)	29.1 (13.2)	57.3 (26.0)	58.7 (26.6)
Float switch specification*	—			
Voltage	—	100V 0.25A	—	100V 0.25A

*Float switch: Both a low level and high level float switch is available. Add Suffix 1 for a low level (Float down ON), 2 for high level switch (Float down OFF).

Auto Feed Lubricators

NALF400, 400-06, 500, 600, 800, 900

How To Order

NALF **4** **00** — **N02** **B**

Body size

- 4 — 1/2
- 5 — 3/4
- 6 — 1
- 8 — 1-1/2
- 9 — 2

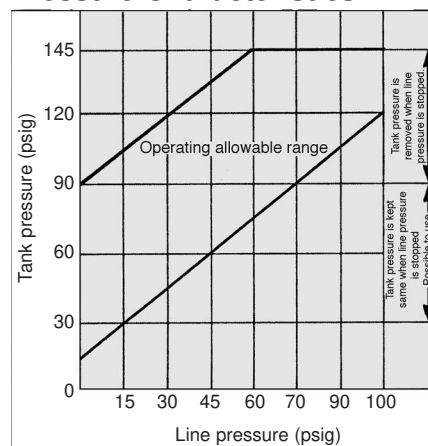
Port size

- 02 — 1/4
- 03 — 3/8
- 04 — 1/2
- 06 — 3/4
- 10 — 1
- 12 — 1-1/4
- 14 — 1-1/2
- 20 — 2

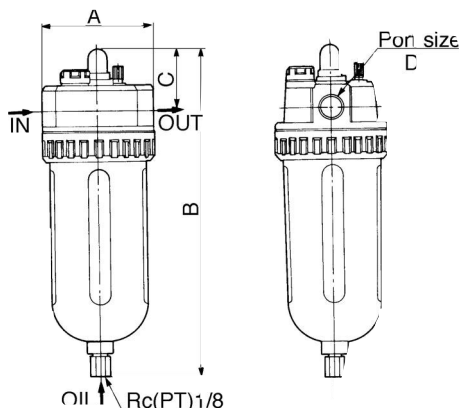
Option

- Nil — None
- B — Bracket

Pressure Characteristics

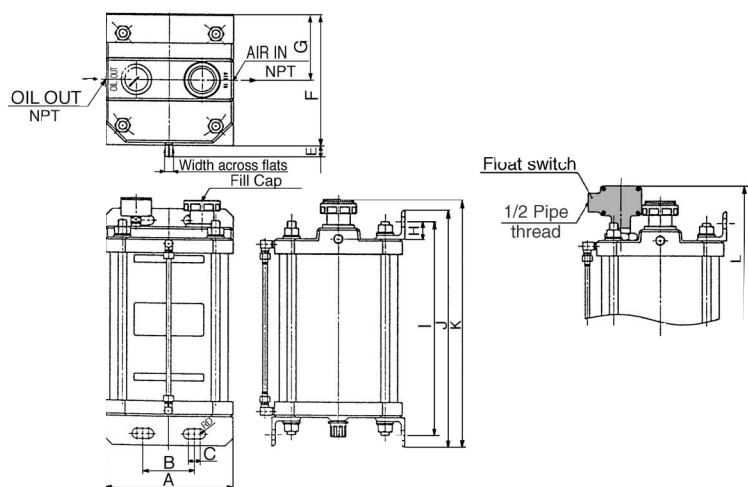


Dimensions/Auto feed lubricator



Model	A	B	C	Port Size D
NALF400	3.15 (80)	9.39 (238.5)	1.73 (44)	1/4 • 3/8 • 1/2
NALF400-N06	3.35 (85)	9.70 (246.5)	1.81 (46)	3/4
NALF500	3.54 (90)	11.63 (295.5)	1.89 (48)	3/4 • 1
NALF600	3.94 (100)	12.58 (319.5)	2.01 (51)	1
NALF800	3.94 (100)	13.33 (338.5)	2.32 (59)	1-1/4 • 1-1/2
NALF900	3.94 (100)	13.56 (344.5)	2.48 (63)	2

Dimensions/Auto feed tank



Oil Distributor

Model	Number of oil outlets	Remark
VA4	4	Both ends
VA6	6	Both ends
VA10	10	Both ends
VA16	16	Both ends
VB4	4	One side
VB6	6	One side
VB8	8	One side

Float Switch Specifications

Description	IS410-1~2
Capacity	AC: 15VA, DC: 15W
Voltage	AC100V, DC250V
Proof Pressure psig (MPa)	220 (1.5)
Max. Oper. Pressure psig (MPa)	150 (1.0)
Media	Water, Oil
Ambient and Fluid Temperature	40~140° F (5~60° C)

Model	A	B	C	D	E	F	G	H	I	J	K	L
ALT-5	6.85 (174)	2.76 (70)	.63 (16)	.28 (7)	3.58 (91)	4.17 (106)	7.76 (197)	.94 (24)	15.04 (382)	16.30 (414)	16.85 (428)	—
ALT-5-IS	6.85 (174)	2.76 (70)	.63 (16)	.28 (7)	3.58 (91)	4.17 (106)	7.76 (197)	.94 (24)	15.04 (382)	16.30 (414)	16.85 (428)	17.68 (449)
ALT-9	9.21 (234)	4.25 (108)	1.18 (30)	.28 (7)	4.76 (121)	5.39 (137)	10.16 (258)	1.57 (40)	16.61 (422)	18.58 (472)	—	—
ALT-9-IS	9.21 (234)	4.25 (108)	1.18 (30)	.28 (7)	4.76 (121)	5.39 (137)	10.16 (258)	1.57 (40)	16.61 (422)	18.58 (472)	—	18.98 (482)