

**IMPORTANT INFORMATION:**

INSTALLATION: This product is not compatible with fuel blends containing more than 5% biodiesel. This product must be installed, adjusted and started only by a qualified and licensed technician and done so in accordance with all appropriate local and national codes and ordinances, such as National Fire Protection Standard for Liquid Fuel Equipment, NFPA 31, CSA B139-Mg1, etc.

WARNING: Inlet and Return Line Pressures

THESE PRESSURES MUST NOT EXCEED 10 PSI, or seal damage can result! NFPA 31 further limits them to 3 PSI MAX.

WARNING: Check Valves with Fuel Oil Heating Equipment

Do not use a check valve in the inlet line of a 1-pipe system (with or w/o a boost pump), or in the return line of a 2-pipe system. Check valve flow restriction in a return line can elevate pressures and damage fuel unit seals. Dangerous thermal expansion of oil trapped by an inlet line check valve can create extreme pressures that damage fuel unit seals, fittings, filters, gages and other components. A properly installed vacuum safety valve, such as Suntec PRV-38, having accumulator effect and pressure relief to tank is acceptable in the inlet line.

GENERAL INFORMATION:

1. Most Model J units have a pressure regulating valve with cutoff function and may be mounted in any position. Models without cutoff require an external shutoff valve (noted on decal).
2. See the 1-PIPE or 2-PIPE section for line sizing. Lines must be airtight for proper operation. Pipe sealant may be used. DO NOT USE TEFLON TAPE OR COMPRESSION FITTINGS.
3. The unit may be primed with lube oil during start-up.
4. Vacuum check may be made at either 1/4" NPT inlet port.
5. Pressure check may be made at the nozzle or bleed port.

ONE-PIPE SYSTEM - INLET LINE ONLY (NO RETURN LINE):

(See Form 2062 for USED OIL!!)

DO NOT INSTALL THE BYPASS PLUG! See 1-P sketch below. Units are shipped without the bypass plug installed; verify it has not been installed! Line length formulas are:

$$3/8" \text{ line: } L = (6-.75H)/.0086Q \text{ and}$$

$$1/2" \text{ line: } L = (6-.75H)/.00218Q \text{ where}$$

L = line length (ft.) H = head (ft.) Q = firing rate (gph)

NOTE: If tank is above pump, change the "-" to a "+".

NOTE: Elbows, valves & filters will further reduce line length.

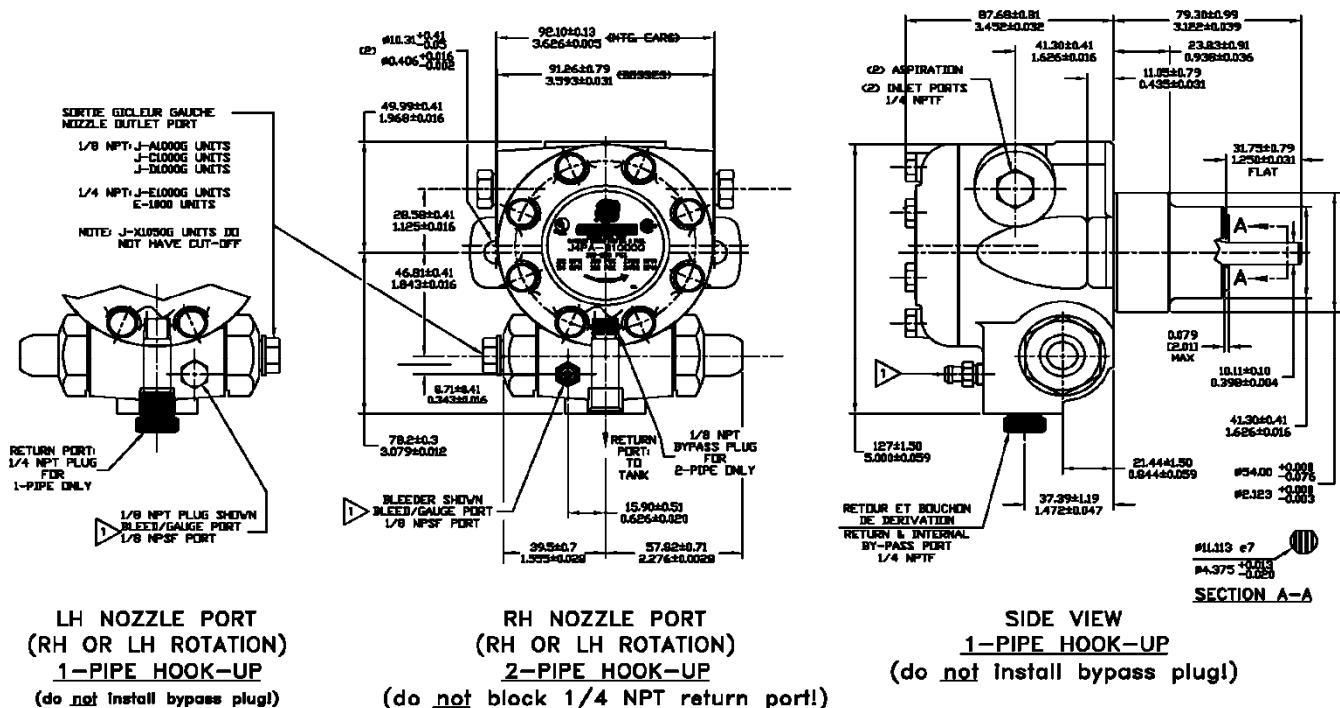
NOTE: It is recommended to avoid 3/8" lines where feasible.

Inlet line joints must be perfectly tight to maintain prime! Max. recommended 1-P lift is 8' from tank bottom to pump. Prime by opening the bleed valve one turn CCW. Bleed the unit until all air bubbles disappear! Securely retighten the bleed valve.

TWO-PIPE SYSTEM - INLET AND RETURN LINE:

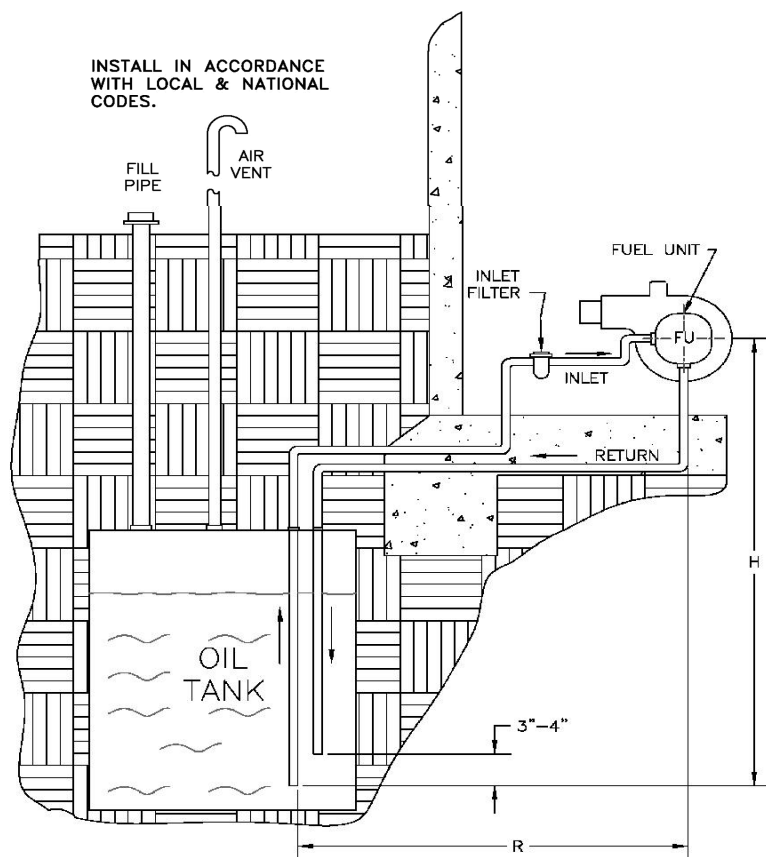
(See Form 2062 for USED OIL!!)

REMOVE THE 1/4" NPT PLUG FROM THE RETURN PORT AND DISCARD. Remove the 1/8" NPT bypass plug from the plastic bag attached to the unit and, with a 3/16" Allen wrench, insert it securely into the recessed port inside the return port. Insert the return line fitting into the 1/4" NPT return port and attach the return line. DO NOT BLOCK OR RESTRICT THE 1/4" NPT RETURN PORT OR THE RETURN LINE! The return line must terminate in the supply tank 3-4" above the supply inlet, or air can be introduced and cause loss of prime. Priming is automatic, but may be accelerated by opening the bleed valve. See 2-P sketches below and on p. 2, and see the p. 2 chart for recommended line sizes and lengths.



TWO-PIPE HOOK-UP, INSIDE OR OUTSIDE TANK, FUEL UNIT ABOVE TANK

TWO-PIPE LINE LENGTHS (FT)
(max. total line length $L = H + R$)
(calculated for fuel viscosity 57 SSU)



Inlet Tubing Size	Lift H (FT.)	J4 Models		J6 Models	
		1725 RPM	3450 RPM	1725 RPM	3450 RPM
3/8"	0	57	27	37	18
O.D.	2	51	24	33	16
Copper	4	45	21	29	14
Tubing	6	38	18	25	12
	8	32	15	20	10
(try to avoid)	10	25	12	16	-
	12	19	-	-	-
1/2"	0	100	100	100	70
O.D.	2	100	95	100	62
Copper	4	100	83	100	55
Tubing	6	100	71	97	47
	8	100	60	81	39
	10	100	48	65	31
	12	75	36	48	23
	14	50	24	32	16
	16	25	-	-	-
5/8"	0	100	100	100	100
O.D.	2	100	100	100	100
Copper	4	100	100	100	100
Tubing	6	100	100	100	100
	8	100	100	100	100
	10	100	100	100	87
	12	100	99	100	65
	14	100	66	90	43
	16	70	33	45	22

Pump ID System:

Example: **J4 P A - B 1000G**

J4 - model size

J4 - see performance data

J6 - see performance data

P - strainer type

P - standard

N - used oil to 1500 cSt *

A - rotation/nozzle location **

A - RH/RH

B - RH/LH

C - LH/LH

D - LH/RH

B - pressure range

A - 20-40 psi

B - 100-200 psi

C - 150-300 psi

D - 40-80 psi

E - 10-20 psi

1000G - series number

1000G - standard series

1050G - spec. features, such as no cutoff

* **NOTE:** See Form 2062 for USED OIL line sizing!

** **NOTE:** rotation (RH = CW) & nozzle location determined by looking at the shaft when unit is oriented with shaft horizontal and decal readable (regulator valve on bottom).

PERFORMANCE DATA

J4 Models		J6 Models	
1725 RPM	3450 RPM	1725 RPM	3450 RPM

Max. #2 Nozzle Flow (GPH):

20 PSI
40 PSI
80 PSI
100 PSI
200 PSI
300 PSI

28	60	42	90
26	58	40	86
24	57	38	85
22	54	36	83
12	44	26	73
2	35	17	63

Power (WATTS):

100 PSI
200 PSI
300 PSI

60	135	95	215
100	215	150	330
140	295	205	445

Inlet Flow, 2-Pipe (GPH):

Max. 2-P Vac. (IN. HG.):
Max. 2-P Lift (FT.):
Max. 1-P Vac. (IN. HG.):
Max. 1-P Lift (FT.):

30	60	45	90
13.5	13.5	13.5	13.5
17	17	17	17
6	6	6	6
8	8	8	8