Capacity/Selection Data

Performance date for each of the three available Light Oil Supply Unit sizes is shown in Table 1 below. As reflected in the data provided, general usage calls for a pump set capable of delivering twice the maximum rated burner capacity being supplied. This allows for some recirculation and permits BPRV (back pressure relief valve) to do its job of maintaining supply system pressure. It also allows for some future system expansion.

Operation on 50HZ power will result in approximately a 20% drop in flow.

Discharge loop data indicates a range of back pressure relief valve settings over which the normal capacity can be supplied by the pump set. Higher flows are possible at anything less than maximum listed pressure.

"Head" data indicates the maximum pressure obtainable expressed as equivalent feet of oil. The maximum pressure available at a combustion systems is always reduced by the difference in elevation between burner and pump.

Pressure drop data shown in based on an allowance for partial clogging of the suction filter. With proper maintenance, actual drop will be somewhat less. All table data is based on performance with 50 SSU #2 oil of .845 specific gravity.

Table 1: Performance Data (60 Hz operation)

Model No.		LO-90	LO-180	LO-600
Nominal Burner Capacity (Max)	gal/min	.75	1.20	5.00
	gal/hr	45	90	300
	kBTU/hr	6300	12,600	42,000
Discharge Loop	Psig	25-130	45-130	60-130
	Head	350	350	350
ΔP Suction Valve to Pump	Psig	1	1.5	1.5
	Ft of Oil	2.5	4	4.5
Average Velocity (ft/sec) at Connections	Suction	1.6	1.8	2.1
	Discharge	2.5	3.2	3.7
	Return	2.5	3.2	3.7

Pressure drops for various pipe sizes at maximum suggested burner capacity for each Light Oil Supply Unit are shown in Table 2. Data is given in Psi/100 ft run and is based on .845 sp.gr. oil of the viscosity shown.

Table 2: Pipe Sizing Guide (Psi/100 ft)

Max. Capacity (gpm)	Pipe Size (")	Viscosity (SSU)		
		32	50	100
1-1/2	3/8	2.8	4.3	11.9
	1/2	1.1	1.7	4.7
	3/4	0.3	0.6	1.5
3	1/2	3.8	6.3	8.1
	3/4	0.9	0.9	2.8
	1	0.3	0.4	1.0
10	1	2.6	3.8	4.0
	1-1/4	0.7	1.1	1.4
	1-1/2	0.3	0.5	0.7

Conversion factors between various measurement units (based on sea level equivalent of 14.7 psig = 29.92" Hg = 33.9 ft water = 39.89 ft of .845 sp.gr. oil) are given in Table 3. To use, multiply "known" quantity (from left of table) by the factor shown under "desired" units.

Table 3: Conversion Factors

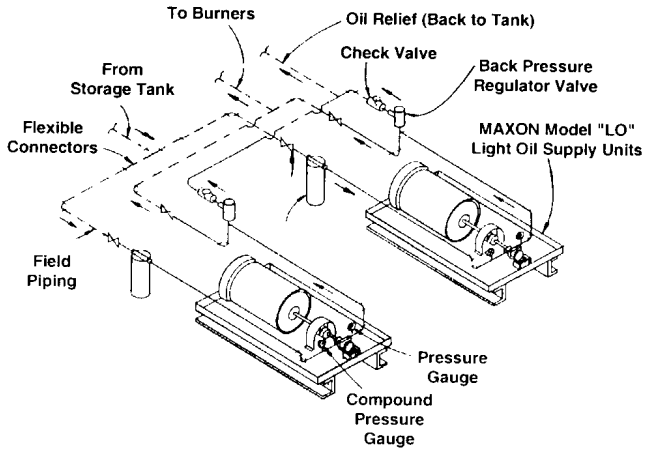
TO / FROM	PSIG	" Hg	Ft. H_2O	FT. OIL
One Psig =	1	2.04	2.31	2.71
One " Hg =	0.49	1	1.13	1.33
One Ft. H_20 =	0.43	0.88	1	1.18
One Ft. Oil =	0.37	0.75	0.85	1

Duplex Arrangement

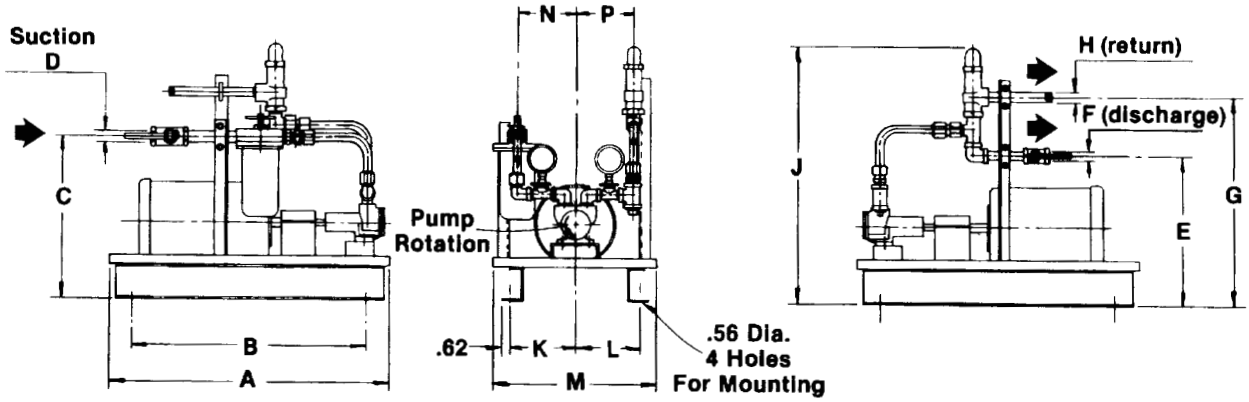
For the ultimate in system dependability, or where shutdown due to pump failure would be serious, two Model "LO" Light Oil Supply Units may be installed in the duplex arrangement shown at right. *Dotted lines indicate field piping.*

Only one supply unit should be in operation at any given time. Changeover may be as simple as manual closing of inlet and discharge ball valves on damaged set, and opening of those valves on the "standby" unit, or the system can be adapted for automatic changeover.

We do recommend that units be used alternatively as main and standby, with the changeover occurring monthly, if not more often.



Dimensions (in inches +- .25)



SIZE	A	S	C	D (size)	E	F (size)	G	H (size)	J	K	L	M	N	P
LO-90	24.00	20.00	16.00	1/2	15.00	3/8	19.00	3/8	23.00	6.38	6.38	14.00	5.00	5.00
LO-180	24.00	20.00	15.38	3/4	13.94	1/2	18.94	1/2	23.44	6.38	6.38	14.00	5.00	5.00
LO-600	29.00	22.75	25.25	1-1/4	15.44	1	22.19	1	28.12	7.88	7.88	20.00	6.25	6.25