

DUPLEX PUMP UNITS

SPM SERIES

FEATURES

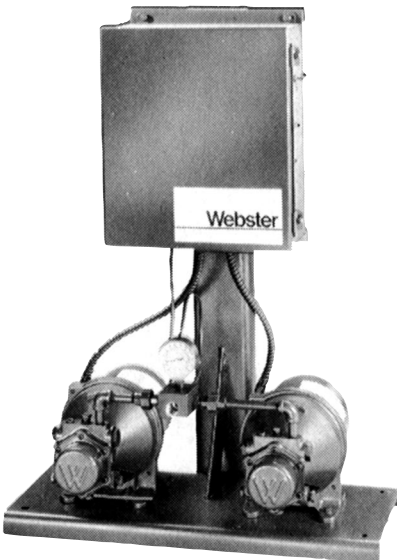
The SPM duplex models consist of two pump/motor assemblies with a pre-piped, common discharge manifold. One pump/motor unit operates continuously, with the second providing backup service if the main pump fails. Either automatic (SPM-DA models) or manual (SPM-DM models) controls are available.

The duplex automatic series are designed specifically for buildings where a constant supply of oil must be assured ... hospitals, apartment buildings, schools and other commercial/industrial buildings

The DA Series is equipped with a pressure sensing device which detects a loss in pressure of the primary pump. If the standby pump is brought into service, an alarm sounds which indicates a malfunction in the primary pump.

The electric control circuit on the duplex automatic pump set is equipped with a lead-lag switch to permit manual alternation of pump to provide even wear on each pump.

The manually operated duplex pump sets offer the same protection as an automatic except the standby pump must be turned on manually which requires that maintenance personnel always be available.



SUPPLY UNIT SPECIFICATIONS

SPM Series Supply Units

Single and Duplex

Capacities:

15, 30, 65, and 135 gph

Pressure:

Maximum operating pressure to 80 psi or 200' of head.

Motors:

All motors are 60 cycle, 1750 rpm, continuous duty, 48N frame, 1/6, 1/4, 1/3 hp: split phase, 115 or 230 volt operation, 1/2 hp: capacitor start/induction run, TEFC, dual 115/230 volt.

Pumps:

SPM 15, 35, and 65: uses Webster "2R" Series pump units.

SPM 135: uses the Webster "2V" Series pump unit.

Webster 2R and 2V are UL listed

Porting:

SPM 15, 30, 65:

1/4" NPTF—2 inlets, outlet port and top and bottom returns

SPM 135:

1/4" NPTF—outlet port

3/8" NPTF—return port, 2 optional inlets.

1/2" NPTF—inlet.

Seal:

All models—double lip type.

Mounting:

All models — four bolt foot mount

Filter:

Rotary self cleaning type, except in SPM 135. Use of external line filter recommended.

Valves:

Pressure regulating assembly in pump maintains set pressure.

Check valve maintains oil in feeder lines for instant starts.

Gauge:

2-1/2" dia., calibrated from 30" vacuum to 100 psi.

Controls:

Two Types for Duplex Units Only Duplex automatic with lead-lag switch and alarm. Manual with selector switch.

Maximum Inlet Vacuum:

All units—15" Hg

National Fire Protection Association compliance requires fuel inlet pressure not to exceed 3 psig.

SELECTION TABLE

Models and Design Data Table 1

Model	Type	Motor Voltage	Motor hp	Max. Head ft*	Valve Adj. Range	Watts @ 80 psi	Max Flow			Pump Model No.
							@ min. psi	Max Flow @ 80 gph	Suction Cap.	
SPM-15-1	Single	115								
SPM-15-2	Single	230								
SPM-15-1-DA	Duplex-Auto.	115	1/6	200'	10 to 100 psi	65	22	15	35	2R181C-5BQ4
SPM-15-2-DA	Duplex-Auto.	230								
SPM-15-1-DM	Duplex-Man	115								
SPM-15-2-DM	Duplex-Man	230								
SPM-30-1	Single	115								
SPM-30-2	Single	230								
SPM-30-1-DA	Duplex-Auto	115	1/4	200'	10 to 100 psi	95	45	30	70	2R283C-5BQ4
SPM-30-2-DA	Duplex-Auto	230								
SPM-30-1-DM	Duplex-Man	115								
SPM-30-2-DM	Duplex-Man	230								
SPM-65-1	Single	115								
SPM-65-2	Single	230								

SPM-65-1-DA	Duplex-Auto.	115	1/3	200'	10 to 100 psi	175	90	65	125	2R686C-5BQ4
SPM-65-2-DA	Duplex-Auto.	230								
SPM-65-1-DM	Duplex-Man	115								
SPM-65-2-DM	Duplex-Man	230								
SPM-135	Single	Dual								
SPM-135-DA	Duplex-Auto.	115	1/2	200'	10 to 100 psi	300	157	135	250	2V086C-5D04
SPM-135-DM	Duplex-Man.	230								

SPM Pumps are set at 20 psi.

* Equivalent head equals vertical height from supply pump discharge to highest point in system, plus pressure drop for length of piping run, plus additional losses due to fittings.

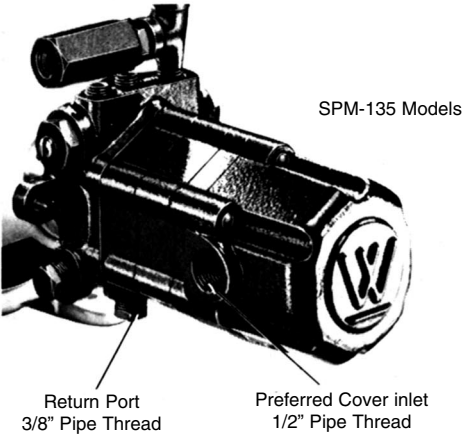
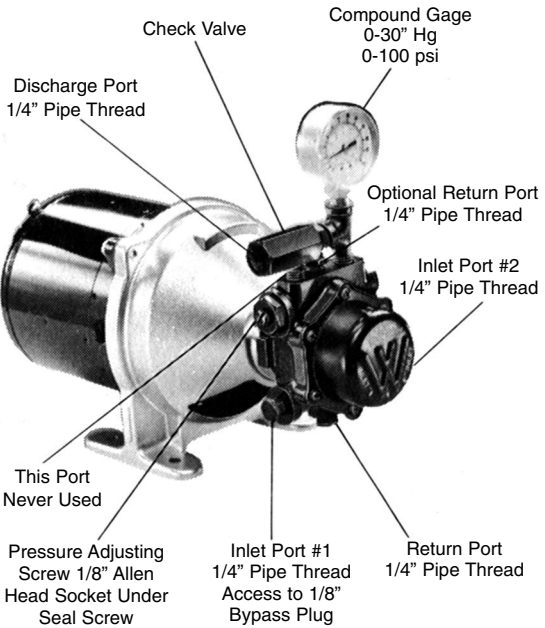
89 ** Pumping #2 oil (34SSUU). .85 Sp. gr.

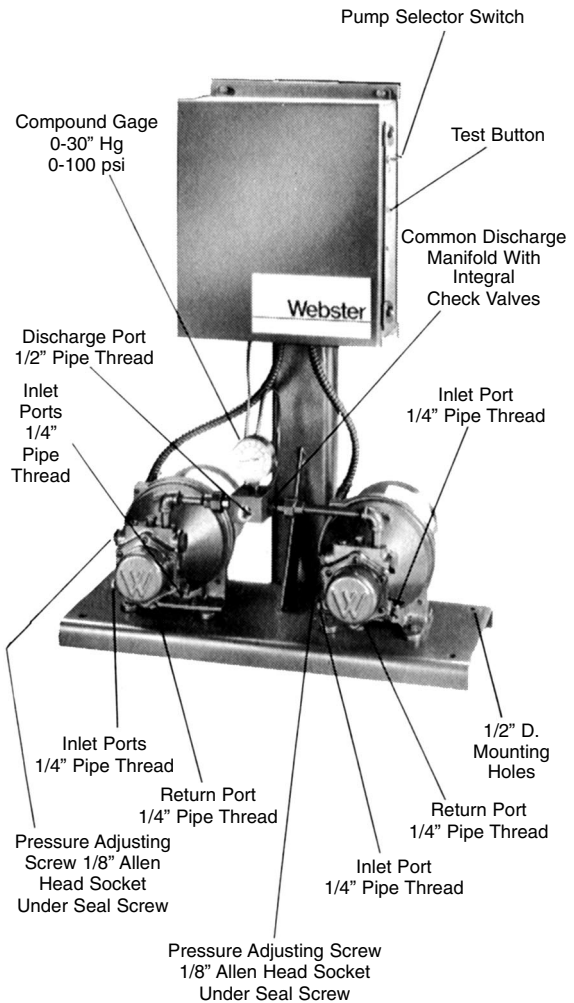
Supply Pump Unit Cross Reference

Webster Model No.	Suntec Model No.
SPM-15-1 (1725 rpm)	—
SPM-30-1 (1725 rpm)	BH-1000M (1725 rpm)
SPM-30-1 (1725 rpm)	BB-1020M (3450 rpm)
SPM-30-1 (1725 rpm)	BH-1030H (3450 rpm)
SPM-65-1 (1725 rpm)	BH-1001M (1725 rpm)
SPM-65-1 (1725 rpm)	BH-1070M (3450 rpm)
SPM-135 (1725 rpm)	

For higher capacities, consult factory

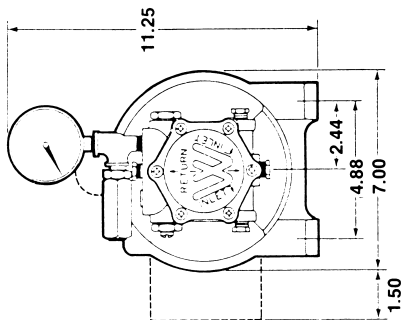
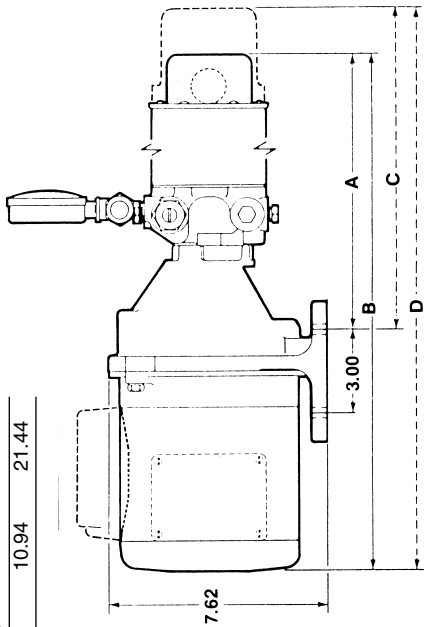
INSTALLATION DATA





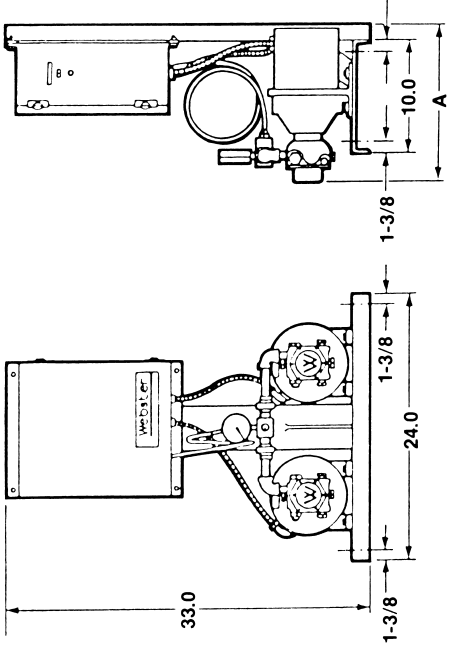
Dimensions

Model	A	B	C	D
SPM-15	6.88	15.50	—	—
SPM-30	7.44	16.13	—	—
SPM-65	8.96	19.50	—	—
SPM-135	—	—	10.94	21.44



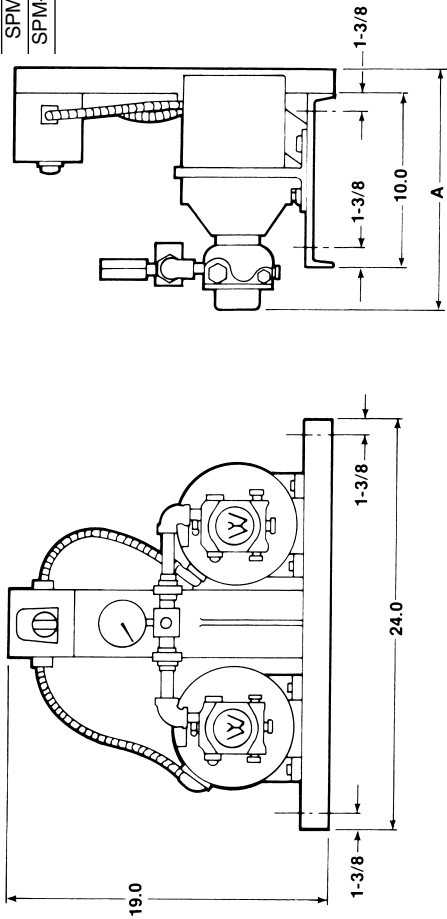
**Dimensions
Duplex Automatic**

Model	A	Pipe Tap
SPM-15-DA	14.94	1/4
SPM-30-DA	16.53	1/4
SPM-65-DA	16.90	1/4
SPM-135-DA	21.37	3/8



**Dimensions
Duplex Manual**

Model	A	Pipe Tap
SPM-15-DM	14.94	1/4
SPM-30-DM	16.53	1/4
SPM-65-DM	16.90	1/4
SPM-135-DM	21.37	3/8



INSTALLATION DATA

SPM Single and Duplex Manual Models

SPM Single and Duplex Manual units are capable of supplying fuel oil to heating units or tanks located up to 200 feet above the supply pumps. They are designed for use in maintained pressure or open loop systems. Pump pressures can be set at a range from 20 psi to 85 psi See Correct Supply Line Size charts, for maximum discharge head.

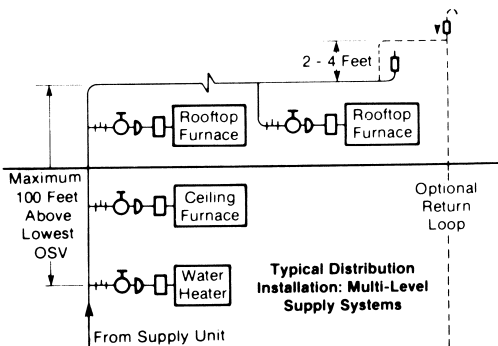
Tank to Pump Connections

Connect suction line from the tank to preferred supply pump inlet port. Connect return line from pump return port to tank. Internal 1/8" bypass plug (factory installed) must be in position for recommended two-pipe operation. *Be certain all plugs and connections are secure and leak tight.*

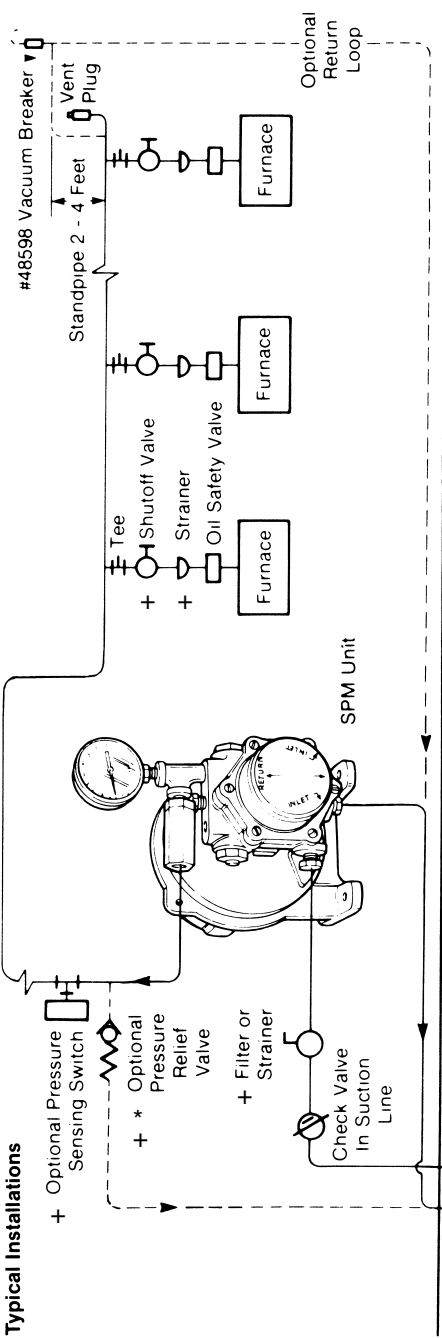
The correct suction line size can be determined by referring to the charts. Generally, the return line should be sized the same as the suction line. Check valves in the suction lines between the tank and SPM units assure that pumps are full of oil, ready for service. Check valves must be oil tight. Low pressure drop swing type are recommended to minimize friction loss.

For SPM Duplex Manual models, preferred installation calls for a separate suction line from tank to pump for each pump/motor unit. If system failure occurs because of a gross leak in the suction line of the primary unit, the second unit can still provide backup service. Check valves can be installed in return lines to allow removal of inactive pump for servicing, while primary pump continues to run.

These typical installation diagrams, illustrating a maintained pressure supply system or optional open loop system, for continuous pump operation, are shown for reference only. Compliance to all applicable codes where installed is the sole responsibility of the installer.

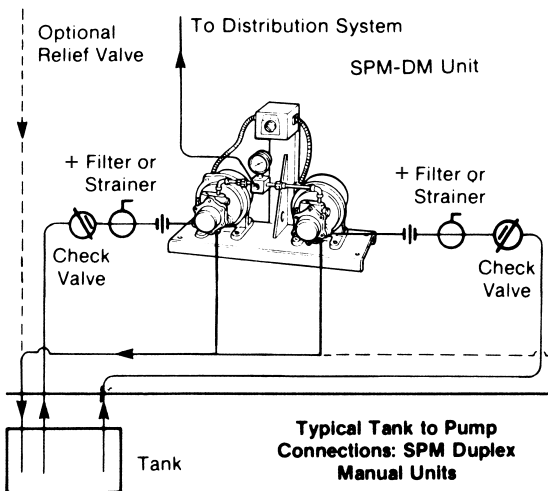


Typical Installations



* Required if optional return loop is not used
 + Not supplied by Webster

**Typical Installation:
 SPM Single Units**



+ Not supplied by Webster

SPM Duplex Automatic Models

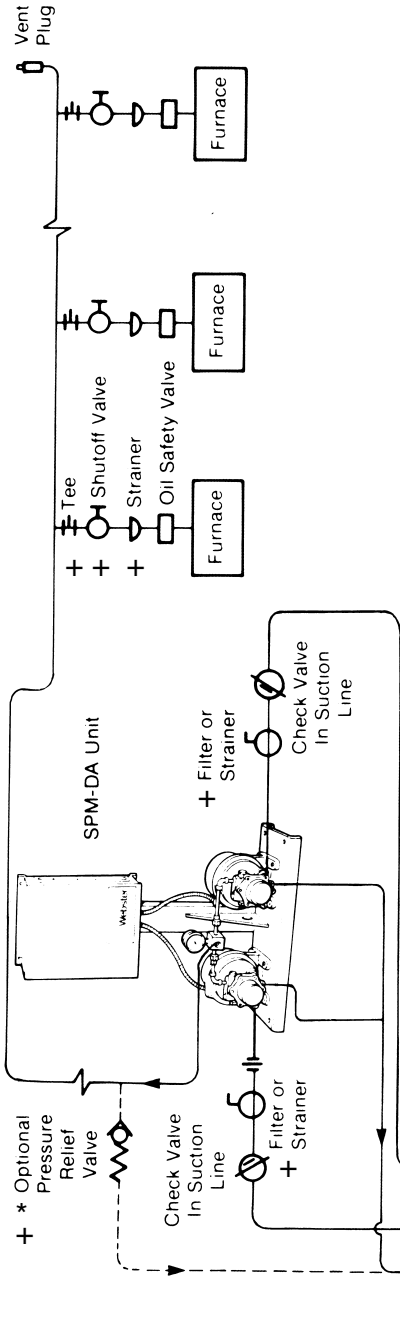
SPM Duplex Automatic units consist of two SPM Series pump/motor assemblies and an electrical control panel. They are designed for use in maintained pressure supply systems *only*. If system pressure falls below a preset level, the control automatically switches from the primary pump/motor unit to the secondary unit. If the backup pump/motor unit also fails to reach or maintain preset system pressure, the control also shuts off the backup unit.

A pump selector switch allows the two pump/motor units to be manually alternated for even wear on each pump. Pump pressures can be set at a range from 20 psi to 85 psi. See Correct Supply Line charts, for maximum discharge head.

Tank to Pump Connections

Units should be set for two-pipe operation. Preferred installation calls for a separate suction line from tank to pump for each pump/motor unit. If system failure occurs because of a gross leak in the suction line of the primary unit, the second unit can still provide backup service.

The correct suction line size can be determined by referring to the charts. Generally, the return line should be sized the same as the suction line. Low pressure drop, swing type check valves can be installed in the suction lines, assuring that pumps are full of oil, ready for service. Check valves in return lines allow removal of inactive pump for servicing. Use of shutoff valves in return lines is not recommended. *Be certain all plugs and connections are secure and leak-tight.*



Typical Installation:
SPM Duplex
Automatic Units

- * Required if optional return loop is not used
- + Not supplied by Webster

Tank May Be Above or Below Ground Level

This typical installation diagram illustrating a maintained pressure supply system for continuous pump operation is shown for reference only. Compliance to all applicable codes where installed is the sole responsibility of the installer.