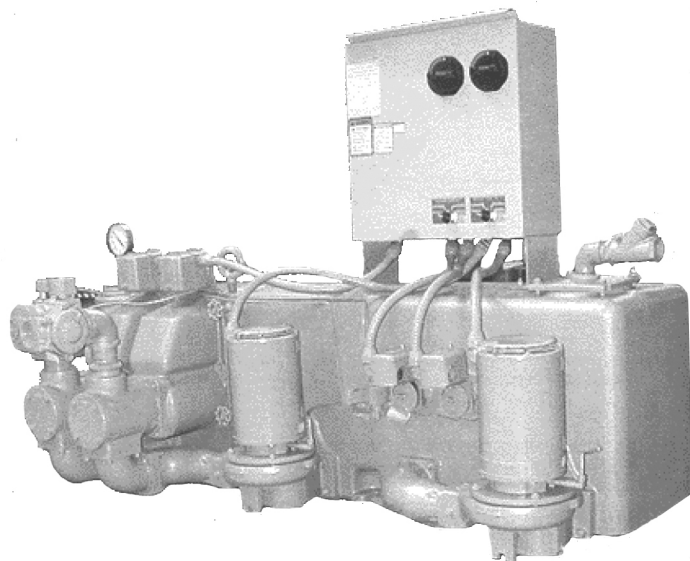


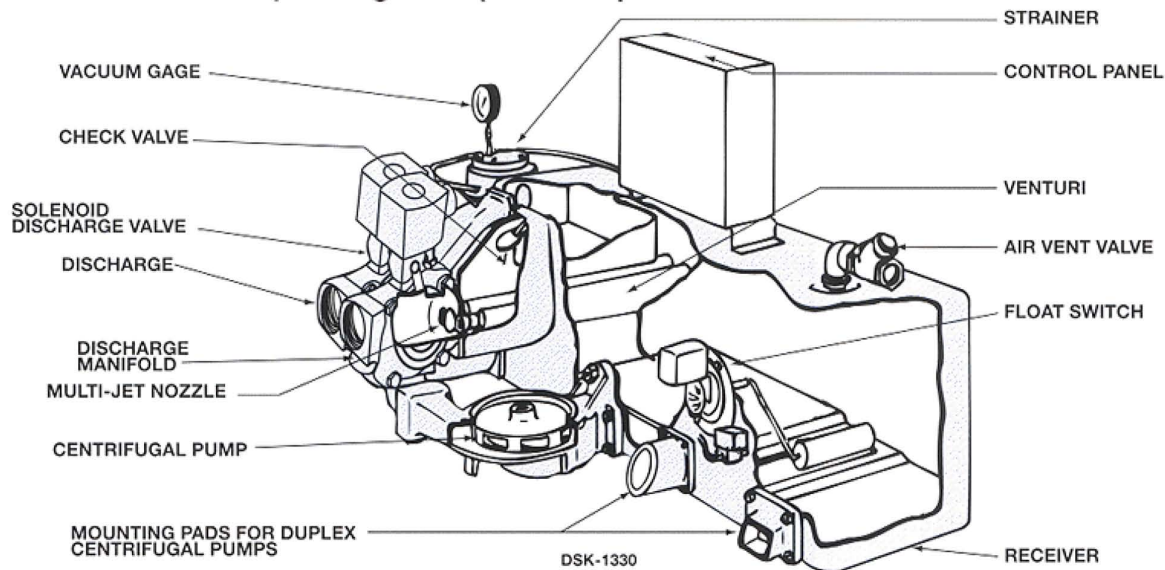
- Complete factory assembly includes integral wiring of control equipment - no hidden extra cost.
- Above atmospheric pressure on centrifugal pump suction with exceptionally low suction passage velocities provides best service for hot condensate.
- Long life at peak effectiveness prevents down-time losses and expensive maintenance.
- Vertical pump mounting protects motors - saves space.
- Domestic Multi-Jet Vacuum Producers are efficient for low or high vacuum systems.
- All vital parts, including the pump assembly, can be readily inspected without disturbing the piping.
- Bronze Fitted Pump - resists corrosion.
- Cast Iron Receiver warranted for 20 yrs. from date of shipment against failure due to corrosion.



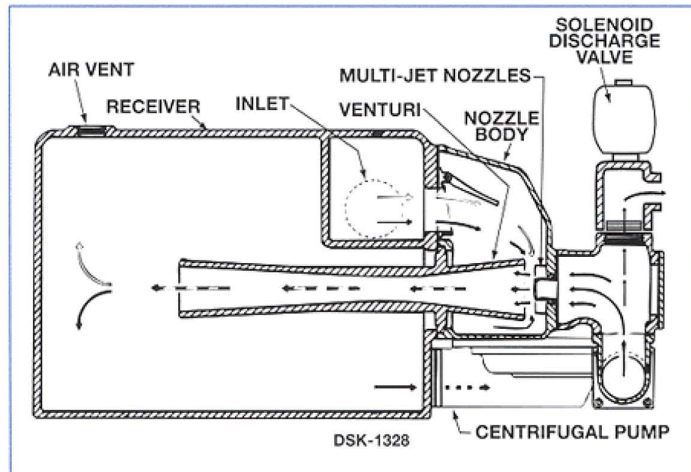
Domestic[®] Pump Series VL[™] Vacuum Heating Units

SIMPLEX OR DUPLEX 25,000 THRU 65,000 SQ. FT. EDR
6,250 THRU 16,250 IB./HR.

Operating Principle is Simple Effective and Reliable



For initial starting the receiver must be half-filled with water as indicated in the water level gauge glass. With the line disconnect switch closed, and the selector switches in their normal position, the pump motor operates in response to the float and vacuum switches, while the upper compartment float switch and the solenoid operated discharge valve controls the discharge of condensate.



Condensate and air entering the receiver thru the strainer actuates either the float switch or vacuum switch or both to start the pump motor. When the pump is operating, water flows into the pump suction from the receiver which is at atmospheric pressure. It is then pumped into the discharge manifold where part of the flow may be released thru the discharge valve and the remainder (or all if the discharge valve is closed) forced thru the multi-jet nozzle and venturi and returned to the receiver. Multiple jet streams moving at high velocity across the gap between the nozzles and venturi entrain and pull air, gasses and condensate from the system creating a vacuum. This mixture passes thru the venturi into the receiver where the air and gasses are separated from the condensate and vented.

As the condensate level rises in the receiver, it causes the float switch to energize and open the solenoid operated discharge valve allowing condensate to flow out of the discharge. The centrifugal pump then pumps condensate thru the discharge valve as well as thru the multi-jet nozzles. The unit continues to remove air at the normal rate while discharging condensate. When the water level drops to a predetermined level, the float switch breaks contact. This deenergizes and closes the solenoid operated discharge valve. This configuration retains a

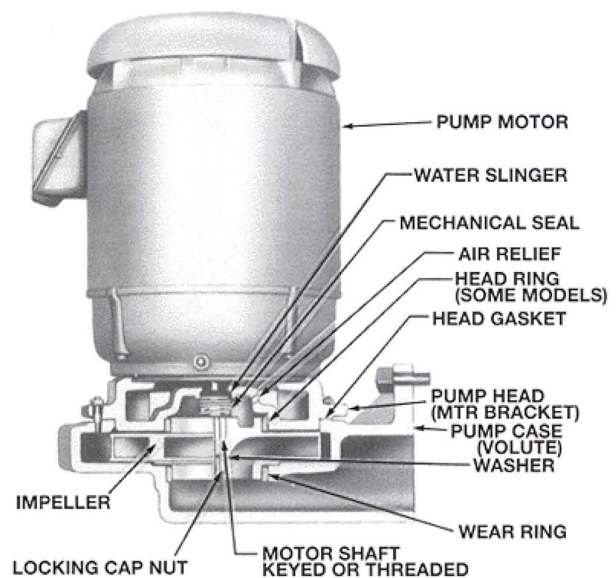
volume of "hurling water" in the receiver so that the pump may continue operating as an air pump.

When the desired vacuum has been produced in the system and the receiver emptied of condensate to the predetermined level, the pump stops. The air vent valve closes automatically, preventing the return of air to the system. During the period when the pump is idle, condensate flows by gravity and/or vacuum into the receiver.

Duplex units have check valves within the nozzle bodies to prevent bypassing through the inactive venturi. An equalizing orifice prevents there being a higher vacuum in the system than in the pump receiver.

Water flows into the centrifugal pump suction under a positive head. This enables the pumps to handle hotter water than designs which operate with vacuum on the pump suction.

VERTICAL MOUNTING PUTS MOTOR ABOVE DIRT AND WATER



ALL PUMPS BRONZE FITTED TO RESIST CORROSION

SELECTION DATA DOMESTIC VL MULTI-JET VACUUM /CONDENSATE UNITS SIMPLEX AND DUPLEX ARRANGEMENTS

STANDARD CAPACITY — Recommended for normal heating systems.

CAPACITY SQ. FT. EDR (LB./HR)	RATING 5 1/2" Hg VACUUM AT 160°F			DISCH. PRESS PSI (kPa) AT PUMP	MOTOR HORSEPOWER		SINGLE UNIT MODEL NO.	DOUBLE CAPACITY DUPLEX UNIT MODEL NO.	RECEIVER SIZE GALLONS (L)	INLET SIZE IN. (mm)	DISCH. SIZE IN. (mm)
	WATER ONLY GPM ¹ (L/M)	SIMULTANEOUS			RPM 1750	RPM 3500					
		WATER GPM ² (L/M)	AIR CFM								
25,000 (6,250)	37.5 (142)	12.5 (47)	8.3	20 (138) 20 (138) 30 (207) 30 (207) 40 (276)	2 3 3 5	 2 	25VL1-20-17 -20-35 -30-17 -30-35 -40-35	25VL2-20-17 -20-35 -30-17 -30-35 -40-35	60 (227)	3 (76)	1 1/2 (38)
30,000 (7,500)	45 (170)	15 (57)	9.7	20 (138) 20 (138) 30 (207) 30 (207) 40 (276)	3 5 5 5	 	30VL1-20-17 -20-35 -30-17 -30-35 -40-35	30VL2-20-17 -20-35 -30-17 -30-35 -40-35	60 (227)	3 (76)	2 (51)
40,000 (10,000)	60 (227)	20 (76)	12.6	20 (138) 20 (138) 30 (207) 30 (207) 40 (276)	3 5 5 5	 	40VL1-20-17 -20-35 -30-17 -30-35 -40-35	40VL2-20-17 -20-35 -30-17 -30-35 -40-35	60 (227)	3 (76)	2 (51)
65,000 (16,250)	70 (265)	32.5 (90)	22	20 (138) 30 (207)	5 7 1/2	 	65VL1-20-17 -30-17	65VL2-20-17 -30-17	100 (379)	4 (102)	2 (51)

¹ Approximately three times the equivalent system condensing rate. ²System condensing rate.

SPECIAL CAPACITY — Recommended when greater air capacities and higher vacuum is necessary.

CAPACITY SQ. FT. EDR (LB./HR)	RATING 5 1/2" Hg VACUUM AT 160°F			DISCH. PRESS PSI (kPa) AT PUMP	MOTOR HORSEPOWER		SINGLE UNIT MODEL NO.	DOUBLE CAPACITY DUPLEX UNIT MODEL NO.	RECEIVER SIZE GALLONS (L)	INLET SIZE IN. (mm)	DISCH. SIZE IN. (mm)
	WATER ONLY GPM ¹ (L/M)	SIMULTANEOUS			RPM 1750	RPM 3500					
		WATER GPM ² (L/M)	AIR CFM								
25,000 (6,250)	37.5 (142)	12.5 (47)	14	20 (138) 20 (138) 30 (207) 30 (207) 40 (276)	3 5 5	 3 5 5	25VLS1-20-17 -20-35 -30-17 -30-35 -40-35	25VLS2-20-17 -20-35 -30-17 -30-35 -40-35	60 (227)	3 (76)	1 1/2 (38)
30,000 (7,500)	45 (170)	15 (57)	17	20 (138) 20 (138) 30 (207) 30 (207) 40 (276)	3 5 5	 3 5 5	30VLS1-20-17 -20-35 -30-17 -30-35 -40-35	30VLS2-20-17 -20-35 -30-17 -30-35 -40-35	60 (227)	3 (76)	2 (51)
40,000 (10,000)	60 (227)	20 (26)	21	20 (138) 30 (207)	5 5		40VLS1-20-17 -30-17	40VLS2-20-17 -30-17	100 (379)	4 (102)	2 (51)

¹ Approximately three times the equivalent system condensing rate. ²System condensing rate.

A Complete Line of Vacuum Heating and Condensate Units

Series VLR vacuum units are available for smaller systems. Series VCD and VCMD vacuum units are individually engineered for larger or unusual applications and have separately sized and controlled vacuum and condensation pumps. The VCMD units have water make-up controls for boiler feed service.

Condensate units with cast iron or steel receivers are available thru 150,000 EDR (37,508 lb./hr.) and 90 psi (621 kPa). Highly adaptable Condaflo condensate units for systems thru 12,000 EDR (3,000 lb./hr.) and 20 psi (138 kPa) are available from stock.



NEMA 2 – U.L. Listed Panels are Standard

Consolitol® Control Cabinets are available to comply with other NEMA specifications.

- Magnetic starters must be used on all 3 phase motors and single phase motors 3 HP and larger; **control panels with magnetic starters are furnished mounted and wired on the unit as standard, except for 1 phase up to 1 HP where not required.**
- Selector switches, “OFF – FLOAT & VACUUM – FLOAT ONLY – CONTINUOUS” selector switches are provided on duplex units with magnetic starters. All other units have “FLOAT & VACUUM – FLOAT ONLY – CONTINUOUS” selector levers on vacuum switches.

Description of Optional Panel Components:

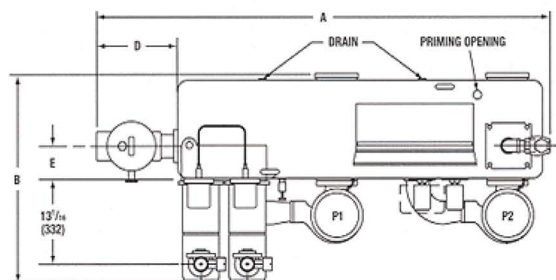
- Disconnect Switches and Circuit Breakers – either fuses or circuit breakers are required ahead of the starters to protect against short circuits. A disconnect switch or circuit breaker also provides a means of shutting off power for service.
- Transformers are required to reduce control voltage when power supply exceeds 230 volts. Transformers are recommended when voltage exceeds 120 volts.
- Control power switching relay should be supplied in Duplex units when individual pump disconnect switches are specified and a control power transformer is required. This relay is recommended in order to maintain control power in the event pump #1's disconnect switch is turned off or pump #1 fails. In this event the control power will be automatically supplied by pump #2.
- Specified optional panel components will be furnished with the unit at extra cost.

Roughing-in Dimensions

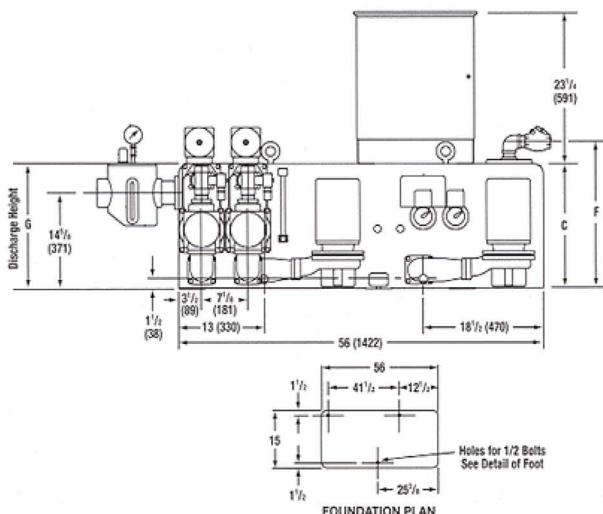
All dimensions in inches (mm).

Not to be used for installation – CERTIFIED DIMENSIONS ON

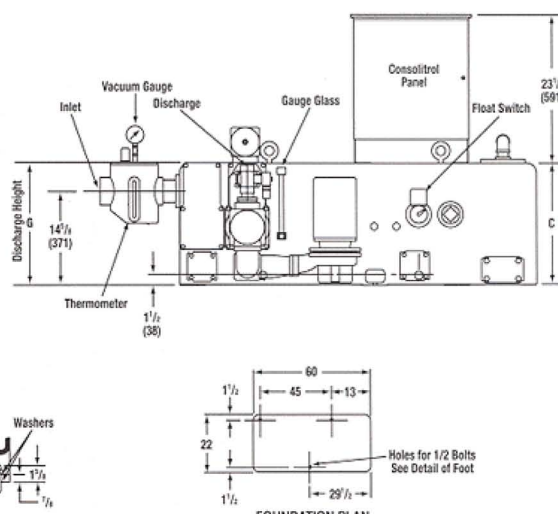
REQUEST. Actual Dimensions shown will vary upon pump selected.



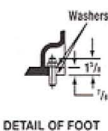
		DIMENSIONS IN INCHES (mm)									
EDR (LB/HR)		GAL (L)	INLET	DIS- CHARGE	A (MAX)	B (MAX)	C (MAX)	D	E	F	G
25,000 (6,250)	Standard	60 (227)	3 (76)	1 1/2 (38)	69 (1,753)	32 (813)	20 (508)	13 (330)	5 (127)	22 7/16 (570)	18 3/4 (476)
30,000 (7,500)	Standard	60 (227)	3 (76)	2 (51)	69 (1,753)	32 (813)	20 (508)	13 (330)	5 (127)	22 7/16 (570)	18 3/4 (476)
40,000 (10,000)	Standard	60 (227)	3 (76)	2 (51)	70 (1,778)	32 (813)	20 (508)	13 (330)	5 (127)	22 7/16 (570)	18 3/4 (476)
40,000 (10,000)	Special	100 (379)	4 (102)	2 (51)	75 (1,905)	39 (991)	21 (533)	15 (381)	8 (203)	22 7/16 (570)	19 5/16 (491)
65,000 (16,250)	Standard	100 (379)	4 (102)	2 (51)	75 (1,905)	39 (991)	21 (533)	15 (381)	8 (203)	23 7/16 (595)	19 5/16 (491)



60 GAL (227L) RCVR



100 GAL (379L) RCVR



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