RUSSELL PUMP

Russell Pump and Engineering Inc.
102 W. Chicago Street
Albion, IA 50005
641-488-2319

Model RVP

Vacuum Pump

Unit Features

The Tank—A Cylindrical tank utilizing 304 stainless steel will give maximum strength and excellent corrosion resistance. The inner accumulator tank shall utilize dished heads for maximum strength. The mounting feet will allow for an air gap beneath the unit for evaporation of spilled or condensed liquids. All connections and fittings which are welded to the tank shall be of a 300 series stainless steel.

The Centrifugal Pump—The investment cast 304 stainless steel close coupled pumps utilize an enclosed impeller for maximum efficiency and durability. These vertically mounted pumps are bolted directly to the tank or an isolation valve to minimize space and air/steam binding.

Control Panel—The metal enclosure is rated for NEMA 4/12. Each pump has a motor starter with overload protection. A lockout rated main through the door disconnect allows for safe entry to the controls. Each pump has an accompanying green illuminated HOA/TOA three position switch. The primary and secondary controls shall be protected by circuit breakers. A step down transformer is also optional. The standard wired and assembled control panel shall be UL approved.

Exhauster Assembly—the orifice housing is investment cast 304 stainless steel. The orifice plate and end cap are machined from 304 stainless steel. The exhauster is designed for maximum cfm to evacuate air quickly from the steam system to allow for quicker and more cost effective heating.

Typical application

The vacuum pump serves a couple main functions in a steam heating system. The first function is to remove air from the steam lines thus allowing faster heat transfer throughout the system. The second function is to remove condensate which also allows the system to function quickly

The Russell model RVP vacuum pump is available in simplex and duplex configurations. Capacities range from 5000EDR to 65000EDR with pressures available in 20, 30 and 40 psi ranges.

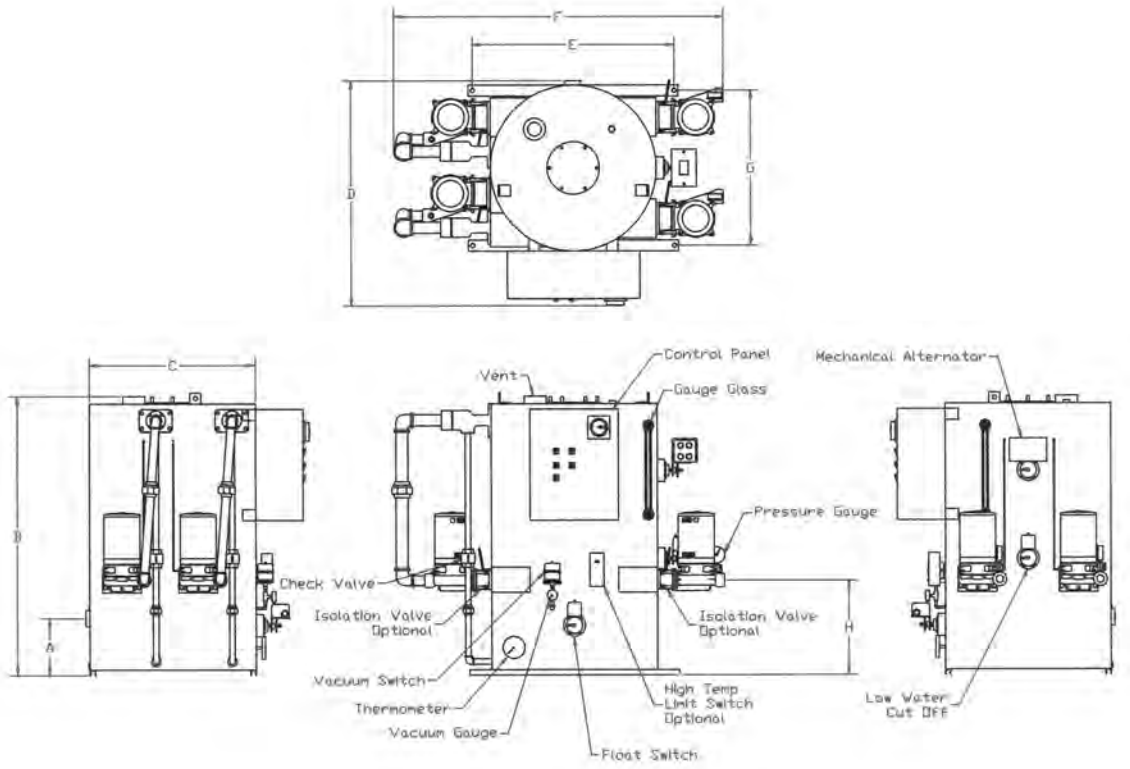
As condensate loads increase or there is a call for vacuum, the RVP will automatically begin its service. If the liquid level in the accumulator tank rises high enough to trip the float switch, the air pumps will activate thus removing the condensate from the accumulator tank and dumping the condensate into the hurling tank. The same process happens if the vacuum switch is activated.

As condensate levels in the hurling tank increase, eventually a mechanical alternator will activate one condensate pump. Each time the alternator is activated the pumps will automatically alternate. If the condensate load is too much for one pump to handle the second condensate pump will also be activated simultaneously.

Capacities

VACUUM PUMP SIZES		5	10	15	20	25	30	40	65
EDR		5000	10000	15000	20000	25000	30000	40000	65000
SIMULTANEOUS CAPACITY	WATER GPM	7.5	15	22.5	30	37.5	45	60	97.5
	AIR CFM	2.6	6.1	7.1	8.2	12.4	14.4	22	36
MOTOR HP AIR		3/4	1	1	1 1/2	2	3	3	5
WATER PUMP MOTOR HP	20 PSI	1/2	1/2	3/4	3/4	1	1	1 1/2	3
	30 PSI	3/4	3/4	1	1	1 1/2	1 1/2	2	5
	40 PSI	1	1	1 1/2	1 1/2	1 1/2	2	3	5
BTUM		1.2	2.4	3.6	4.8	6.0	7.2	9.6	15.6

RATINGS ARE BASED ON VACUUM HEATING PUMP CODE OF ASHRAE WITH 5.5 IN HG @ 160 DEGREES F.

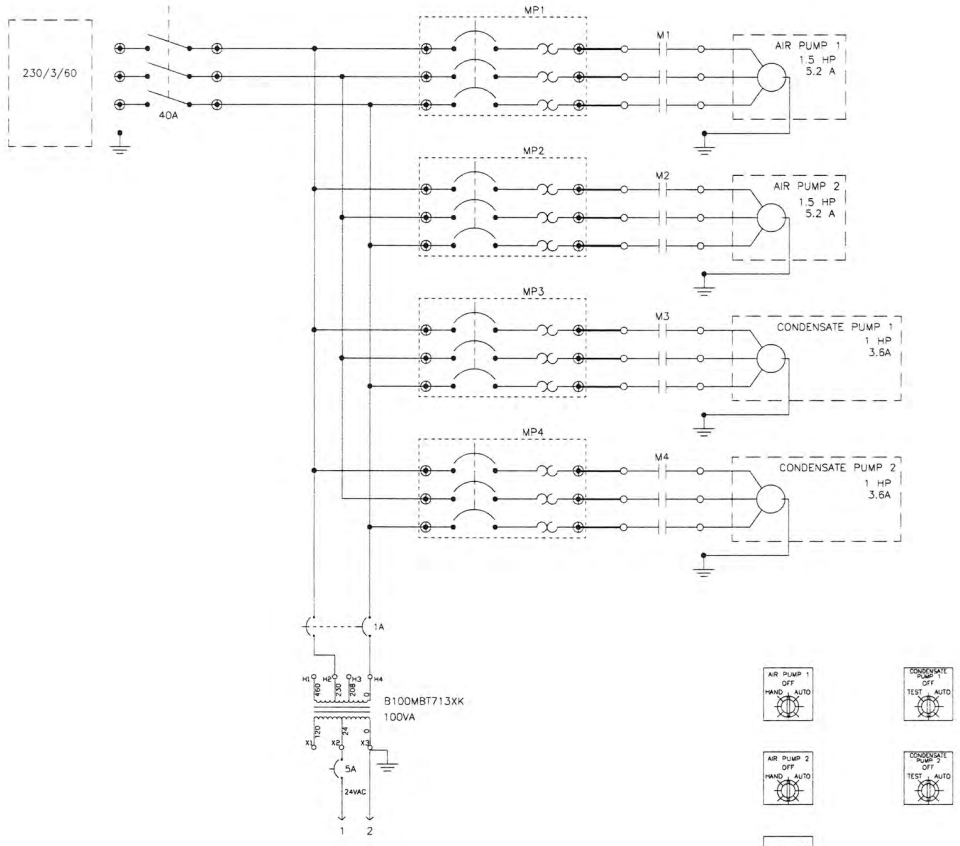


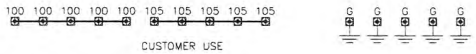
Dimensions

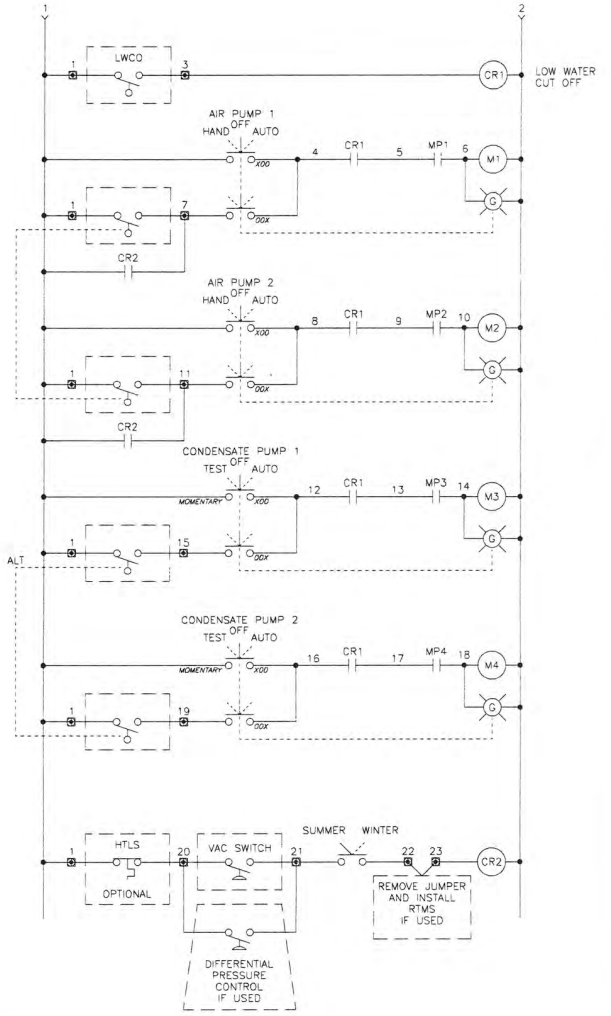
UNIT TAPPINGS			
UNIT EDR	INLET	VENT	DISCHARGE
5 thru 30	2 1/2NPT	2NPT	1 1/4NPT
40 and 65	4NPT	2 1/2NPT	1 1/2NPT

UNIT DIMENSIONS IN INCHES							
A	B	C	D	E	F	G	H
9	51	30	40.5	33	60	28	17.12
12	63	36	46.5	33	76.5	34	19.5

Omission of isolation valves deducts 6.25" from the F dimension.







EXTERNAL FROM THIS PANEL

REV	DATE	DESCRIPTION				
			DESC	VAC PANEL		
			ENG		SHT	1 OF 1
	12-20-13	AS BUILT	JOB	400XXXX	DWG	PR-XXXX

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