



Condensate Return and Boiler Feed Pumps "V" Series

Description

Condensate pumps are used in low pressure heating systems to collect and quickly return condensate to the boiler feed unit. Their pumping action is controlled by the water level in the receiver. Simplex units consist of an electric motor close-coupled to a centrifugal pump mounted on a cast iron or welded steel storage receiver with a float operated pump control. Multiple pump units are used when greater pumping capacity or back-up pump protection is required.

Boiler feed pumps are used to pump and precisely control the condensate and makeup water required by the boiler(s) in low pressure steam applications. Pumping action is controlled by the fluid level in the boiler. They consist of a cast iron or welded steel storage receiver equipped with a makeup valve and one or more close-coupled centrifugal pumps.

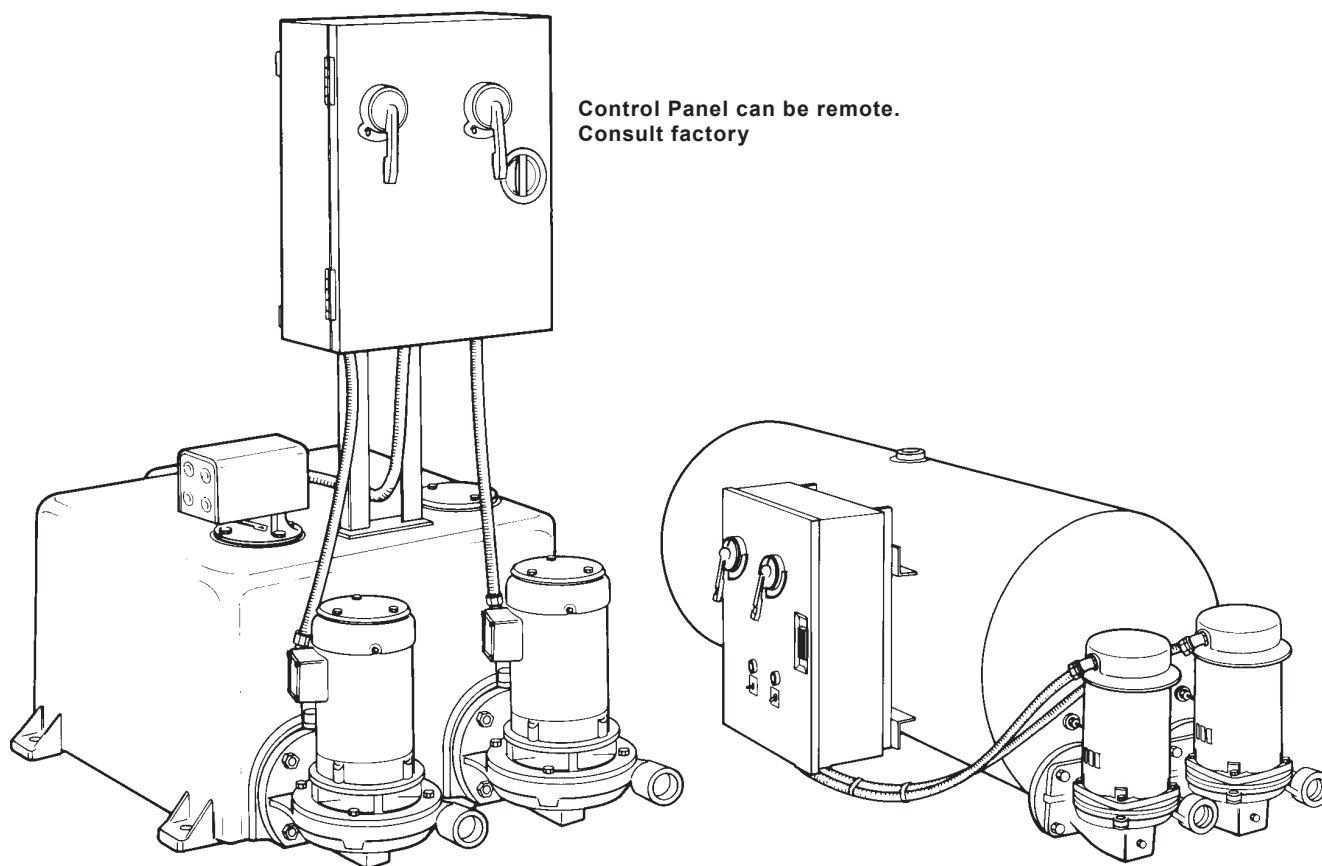
Spirax Sarco V series pumping systems are available in simplex, duplex, triplex or quadruplex configurations from 1,000 to 100,000 sq. ft. (93 to 9290 sq. m.).

EDR capacities. Discharge pressures from 10-40 psi (0.69 - 2.76 bar) are available on units equipped with 1750 rpm motors; 20-75 psi (1.4 - 5.17 bar) on 3500 rpm units. True 2 ft. (0.61 m) net positive suction head pumps are available.

Receivers

Cast iron, rectangular receivers are available with 15 to 110 gallon (57 to 416 liter) capacities.

Heavy duty, welded, rust resistant, copper bearing steel receivers are available in rectangular or cylindrical configurations with capacities ranging from 21 to 1,000 gallons (79 to 3785 liters).



Spirax Sarco centrifugal pumps

Four centrifugal models are available in a large selection of sizes to meet your specific application requirements: VC, VJ, VE, VA and VN.

The pumps are bolted directly to the receiver to provide a compact efficient design. Their close-coupled, centrifugal design with bronze enclosed type impeller assures smooth, efficient water passage. A mechanical seal, rated to a maximum temperature of 250 °F (121 °C), is vented to the receiver to assure adequate lubrication at all times.

An advanced impeller and volute design make many of the pumps excellent for applications requiring a true 2 ft Net Positive Suction Head (NPSH). These units are identified with shaded areas in the selection tables on TI-P215-03-US. The simple, reliable single stage construction eliminates the need for additional impellers and parts used in other low NPSH pumps.

Designed for long-life, low maintenance and reliable service, the pumps are easily serviceable if necessary. Parts subject to normal wear are readily accessible. Impeller and mechanical seal can be serviced without disturbing piping or electrical connections.

All pumps are close-coupled to heavy duty, ball bearing open drip proof electric motors. Fractional horsepower single phase motors have built-in thermal overload protection.

To help you determine the appropriate pump type for your application, specifications for each of the four types are described in the next paragraphs. Refer to selection tables for additional pumping system performance data.

VC Pumps

1/3 through 15 hp

1750 rpm—discharge pressures are 10, 15 or 20 psi (0.69, 1.0 and 1.4 bar)

3500 rpm—discharge pressures are 30 to 75 psi (2.1 to 5.2 bar)

Motor types available: Open drip proof (ODP)

Totally enclosed fan cooled (TEFC)

Explosion proof

Single phase, 115/230 V, 60 Hz

Three phase, 208 or 230/460 V, 60 Hz

VJ Pumps

1/2 through 2 hp

3500 rpm—discharge pressures are 15, 20, 30, 40 or 50 psi (1.0, 1.4, 2.1, 2.8 or 3.4 bar)

Motor types available: Open drip proof (ODP)

Totally enclosed fan cooled (TEFC)

Single phase, 115/230 V, 60 Hz

Three phase, 200V, 60 Hz

Three phase, 230/460 V, 60 Hz

VE Pumps

3/4 through 2 hp

1750 rpm—discharge pressures are 20, 25 or 30 psi (1.4, 1.7 and 2.1 bar)

Motor types available: Open drip proof (ODP)

Totally enclosed fan cooled (TEFC)

Explosion proof

Single phase, 115/230 V, 60 Hz

Three phase, 200 V, 60 Hz

Three phase, 230/460 V, 60 Hz

VA Pumps

3, 5 or 7 1/2 hp

1750 rpm—discharge pressures are 30 or 40 psi (2.06 or 2.75 bar)

Motor types available: Open drip proof (ODP)

Totally enclosed fan cooled (TEFC)

Explosion proof

Three phase, 200 V, 60 Hz

Three phase, 230/460 V, 60 Hz

VN Pumps

1/2 thru 7 1/2 hp

3450 rpm—discharge pressures are 20 to 60 psi (1.37 or 4.13 bar)

Motor types available: Open drip proof (ODP)

Totally enclosed fan cooled (TEFC)

Explosion proof

Single phase, 115/230 V, 60 Hz

Three phase, 230/460 V, 60 Hz

Accessories and optional equipment

Boiler Feed Pumps—Standard Equipment

- Float operated makeup valve
- Gauge glass and thermometer tappings

Boiler Feed Pumps—Optional Equipment

- Control Panels
 - Thermometer
 - Makeup feeders—external type, or reverse acting float switch and solenoid valve type
 - Magnesium corrosion inhibitor
 - Suction isolation valves—butterfly type
 - Inlet strainers—"Y" or basket type
 - Gauge glass
 - Three valve bypass and inlet strainer assembly for solenoid make-up valve
 - Feedwater preheaters
 - Discharge pressure gauges
 - Discharge check valves
 - Discharge gate valves
 - Corrosion resistant receiver linings
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Accessories and optional equipment

Condensate Pumps—Standard Equipment

- Simplex units have opening blanked-off for addition of a second pump at a later date
- One float switch (simplex units)
- Mechanical alternator (duplex units)—equalizes running time between the two pumps and provides emergency back-up in case of excessive condensate return or a pump failure
- Receiver tapping for gauge glass and thermometer

Condensate Pumps—optional equipment

- Control Panels (standard mounted to receiver, remote option available)
 - Thermometer
 - Two float switches (duplex units)
 - Suction isolation valves—butterfly type
 - Inlet strainers—"Y" or basket type
 - Gauge glass
 - Magnesium corrosion inhibitor
 - Corrosion resistant receiver linings
 - Discharge pressure gauges
 - Discharge check valves
 - Discharge gate valves
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		VE	SS	M	1	7½
Series and pump type	_____					
VC						
VJ						
VE						
VN						
Receiver type	_____					
S = cast iron						
SS = welded steel						
M = boiler feed unit (omit for condensate return unit)				_____		
Capacity, Sq Ft E.D.R.	_____					
1 = 1,000						
2 = 2,000						
4 = 4,000						
6 = 6,000						
8 = 8,000						
10 = 10,000						
15 = 15,000						
20 = 20,000						
25 = 25,000						
30 = 30,000						
40 = 40,000						
50 = 50,000						
65 = 65,000						
80 = 80,000						
100 = 100,000						
Discharge Pressure, psi g	_____					
		1	=	10		
		1½	=	15		
		2	=	20		
		2½	=	25		
		3	=	30		
		4	=	40		
		5	=	50		
		6	=	60		
		7½	=	75		

Ordering codes