

CIRCULATORS LS Condensate Removal Pump

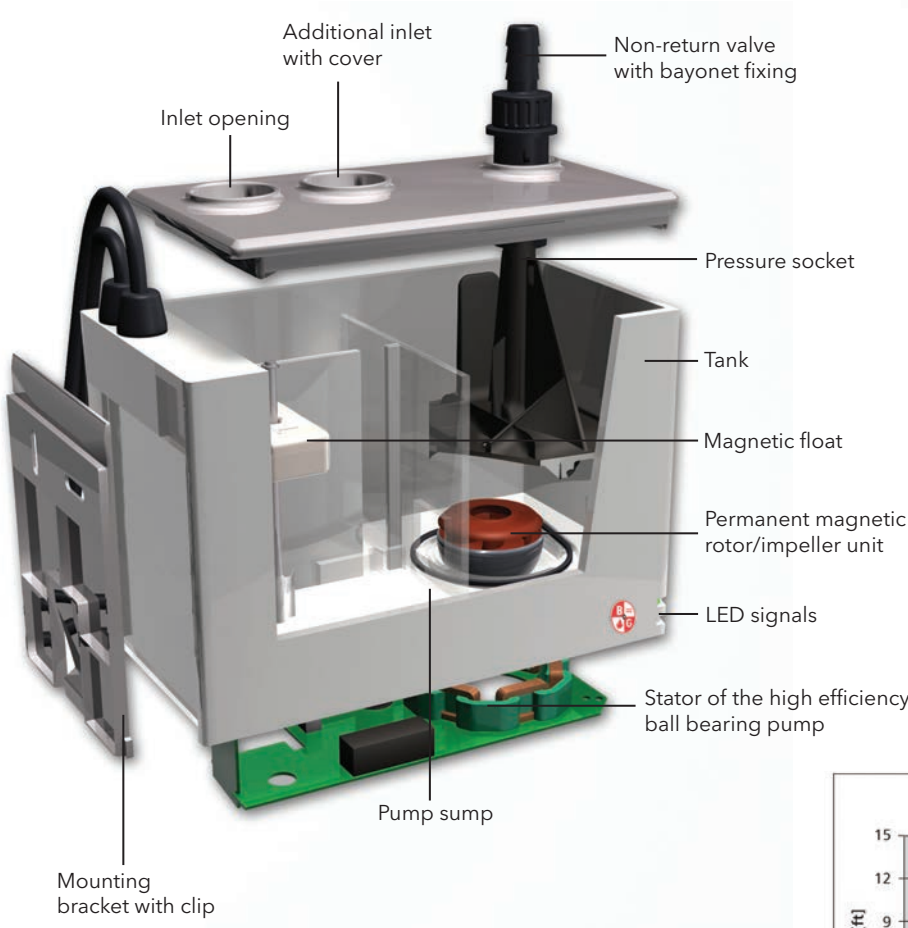
For Condensing Boilers and Air Conditioning /Cooling Systems

Description

The LS condensate removal pumps are energy efficient lifting stations that use permanent magnet, ECM (electronically commutated motor) technology. The LS condensate removal pumps are designed specifically for use in applications where the removal of condensate fluid is not possible by gravity.

Materials of Construction

Pump Housing: ABS Material
 O-Ring: EPDM or Viton
 Bearing: Carbon/Alumina Ceramic
 Impeller: Nylon/PPO
 Motor: High Efficiency ECM
 All Other Wetted Parts: Type 316 Stainless Steel,
 Shaft-less and Seal-less Construction



Standard Features

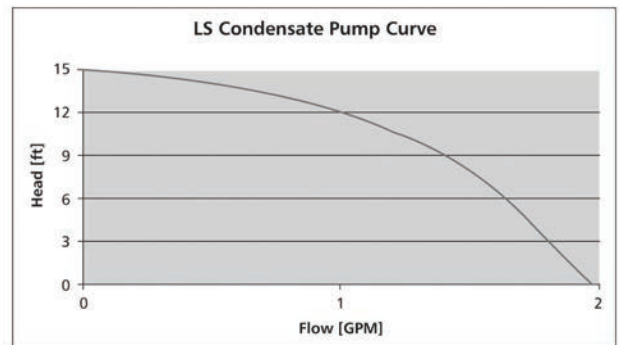
Motors are designed with a shaft-less spherical motor with permanent magnet technology for improved efficiency.

Motor

ECM Spherical Motor
 Phase: Single 60 Hz
 Voltage: 100-140 volts
 Power Consumption: 20 watts
 Current draw: 0.1 - 0.2A
 Automatic Overload Protection
 Low in-rush current

Acid Resistant

All LS condensate removal pumps are made from acid resistant ABS material



Model	Part Number	Housing Material	Motor	Weight
LS Condensate Pump	6098B0000	ABS	ECM	3.5 lbs

CIRCULATORS ecocirc® SC Solar Pump

Spherical Motor Pump

Application

- The ecocirc solar pump can be used for most circulation pump applications without connection to the power grid with direct connection to a photovoltaic panel.
- This pump is perfect for single family home thermal solar systems or any circulation pump application where conventional power is not available, on closed loop systems

Design

- The only moving part is a hemispherical rotor/impeller unit which sits on an ultra-hard, wear-resistant ceramic ball.
- There are no conventional shaft bearings or seals eliminating bearing noise and seal leaks.
- This pump is robust and has an estimated service life in excess of 50,000 hours.
- All parts exposed to the fluid are completely corrosion resistant.

Soft Start-up

- When the photovoltaic panel provides sufficient power, the pump goes through the alignment phase by turning the rotor into the position required for start-up.
- The processor then waits until the capacitor is sufficiently charged.
- This enables a start-up with minimal power (less than one watt).

Over-temperature Safety Device

- The ecocirc solar pump comes with an integrated over-temperature safety device which shuts off the pump electronics when reaching temperatures over 230°F.
- After reaching a critical temperature 203°F the pump will lower its speed automatically in order to avoid a total shutdown.

Materials of Construction

Pump Body: Lead-Free* Brass
 O-Ring: EPDM
 Bearing: Carbon/Alumina Ceramic
 Impeller: PPO
 Motor: High Efficiency ECM
 All Other Wetted Parts: Type 316 Stainless Steel
 Shaft-less, Seal-less Construction

Technical Data

Motor Design: Electronically commutated spherical motor with permanent magnet rotor/impeller
 Voltage: 12 - 24 Volt
 Maximum System Temperature: 203°F (95°C)
 Maximum Pressure: 150 PSI
 Power Consumption*: Min. start-up power consumption less than 1 Watt, max. power consumption 22 Watts
 Current Draw: 0.25 - 1.46 A
 Acceptable Media: Potable hot water recirculation, heating water, water/glycol mixtures, other media on request**
 Environment: IP 42
 Insulation Class: Class F

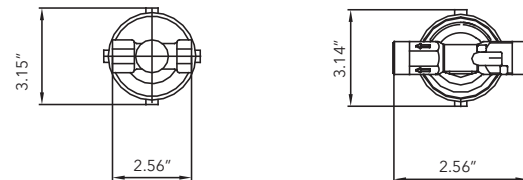
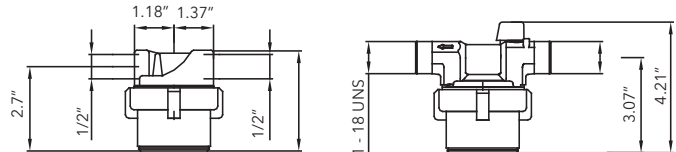
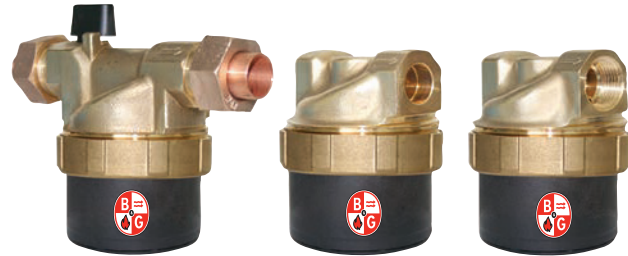
* Power consumption and start may vary in different installations. **Please check pump performance with more than 20% glycol.

Available Models

Model	Part Number	Description	Weight
e ³ -SC6S	6055B2000	Lead-Free Brass* Solar Circulator 1/2" Sweat	2 lbs.
e ³ -SC6N	6055B2001	Lead-Free Brass* Solar Circulator 1/2" NPT	2 lbs.
e ³ -SC4U	6055B2002	Lead-Free Brass* Solar Circulator 1/2" Union Sweat**	2 lbs.

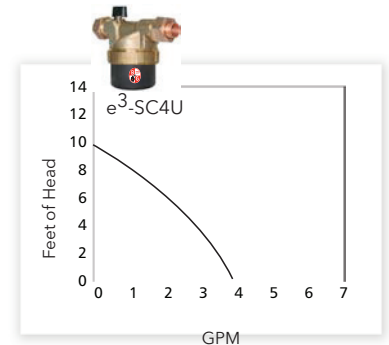
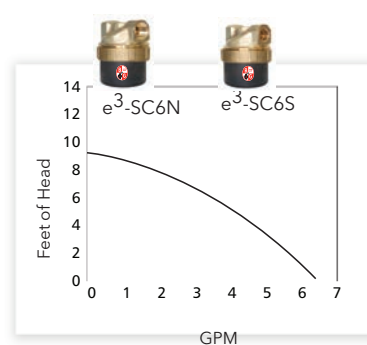
*CSA certified to NSF/ANSI 372 that product contains less than 0.25% lead content by weight on wetted surface.

** Built-in ball check valve and purge valve.



e³-SC6N and e³-SC6S

e³-SC4U



CIRCULATORS Bell & Gossett Cast Iron Wet Rotor Circulators / NRF

Description

A residential or light commercial, maintenance free, axial flanged, in-line, cast iron, wet rotor circulation pump for hydronic heating systems. UL and cUL Listed.

Operating Data

Maximum Working Pressure: 150 PSI (10 bar)
 Maximum Operating Temperature:
 NRF-22 & NRF-9F/LW: 240°F (115°C)
 NRF-25, NRF-33, NRF-36 & NRF-45: 225°F (107°C)

Materials of Construction

Pump Body: Cast Iron
 Impeller: Noryl
 Shaft: Ceramic
 Bearings: Double-Sintered Carbon

Warranty

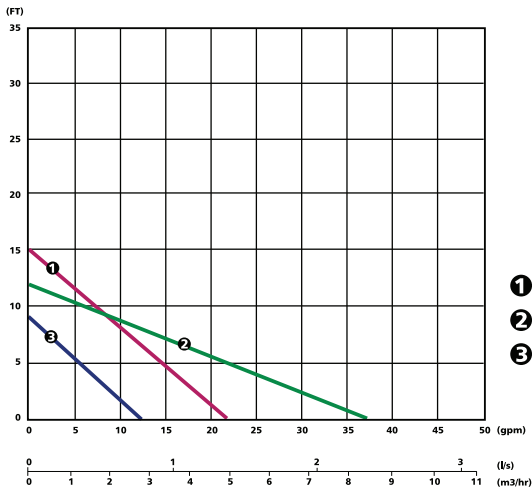
Bell & Gossett offers a warranty of 3 years from date of manufacture or 18 months from date of installation (which ever comes first) against failure as a result of defects in materials and workmanship.

Specifications

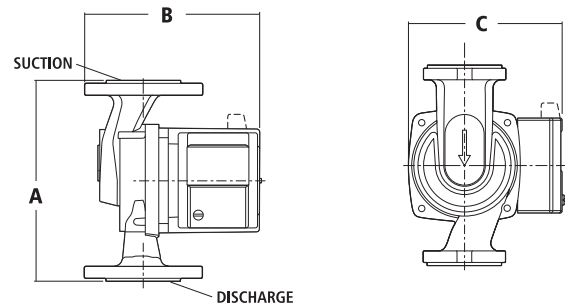
Model Number	Single Speed	Three Speed	Part Number	Flange Sizes Inches - NPT	Dimensions Inches (mm)			Standard 60 Cycle Motor Characteristics*					Shipping Weight lbs. (Kg)
					A	B	C	Watts	ø	Volts	F.L. Amps	RPM	
NRF-9F/LW	●		103267	3/4, 1, 1 1/4, 1 1/2	6 3/8 (162)	6 3/16 (157)	5 1/8 (130)	41	1	115	0.40	2800	9.3 (4.2)
NRF-22	●		103251		6 3/8 (162)	6 3/16 (157)	5 1/8 (130)	92			0.80	2940	9.3 (4.2)
NRF-25		●	103417		6 3/8 (162)	6 3/16 (157)	5 1/8 (130)	125			1.20	2950	10.4 (4.7)
NRF-33	●		103350		6 3/8 (162)	5 9/16 (141)	4 7/8 (124)	125			1.10	2950	10.4 (4.7)
NRF-36		●	103400		6 3/8 (162)	6 7/8 (175)	5 3/4 (146)	270			2.30	3300	13.1 (6.0)
NRF-45		●	103404	1, 1 1/4, 1 1/2	8 1/2 (216)	7 3/8 (187)	5 3/4 (146)	270			2.30	3300	14.5 (6.6)

NRF-9F/LW, NRF-22, NRF-25 and NRF-33 are impedance protected.
 NRF-36 and NRF-45 are thermally protected.
 Dimensions are approximate and subject to change. Contact factory for certified dimensions.

Single Speed NRF Circulator Performance Curves



- ① NRF-22
- ② NRF-33
- ③ NRF-9F/LW



Single Speed NRF Circulators



NRF-9F/LW



NRF-22



NRF-33

