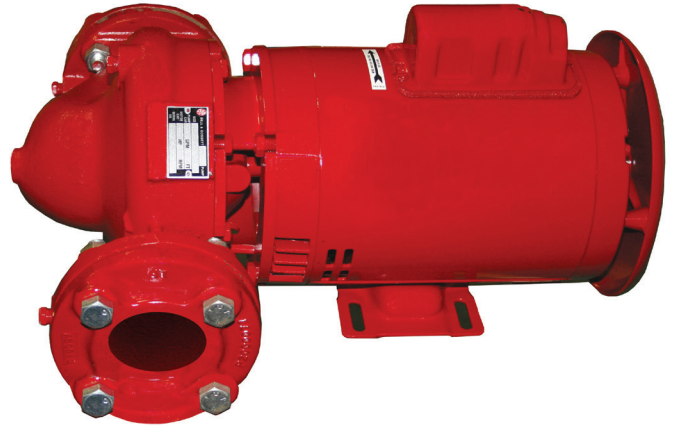


Now
available
with ECM motor



Shown with optional ECM motor

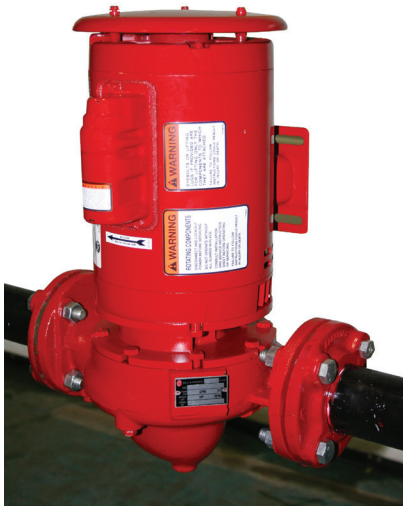
Series e-90

Close Coupled In-Line Centrifugal Pumps

B-117C

e-90 Series

Close Coupled Centrifugal Pumps



The e-90 pump is a versatile in-line pump that offers wide hydraulic coverage well suited for the small commercial HVAC market. This pump is designed for heating and cooling applications with a temperature range of -10° to 250°F (-23 to 121°C) with a maximum pressure limit of 175 psi. The e-90 has eight models with connection sizes from 1"x 1" through 3"x 3". The hydraulic coverage is from 20 GPM to 250 GPM with a motor offering from 1/4 through 5 HP.

- Close-coupled, horizontal or vertical installation
- Space saving back-pull-out design, low maintenance, long life, quick shipment
- Wide range of applications; hydronic heating and cooling, pressure boosting, refrigeration and heat exchanger circulation
- Premium efficiency motors 1-5 HP, 3 phase (optional for Series e-90)
- Seven standard e-90 models available with ECM Permanent Magnet smart motors (1/2 HP & 1 HP, single phase)

Features and Benefits:

Ease of Selections

The e-90 is available in 116 standard pre-configured designs or built-to-order in bronze fitted or all bronze construction to meet a wide range of pump needs. This pump is also available as a header pump, (less-volute) that will mount directly onto boilers for recirculation.

Ease of Installation

The in-line mounted, close coupled pump is compact and versatile. The pump is designed to be mounted in the piping and can be installed either horizontally or vertically.

High Hydraulic Efficiency

The e-90 pump offers proven hydraulic performance which provides an efficiency improvement of 2%-18% at BEP.

Robust Design

The e-90 pump is designed on the close-coupled platform eliminating a bearing frame and coupler. The pump design eliminates the need for a stub-shaft or shaft sleeve. This pump incorporates an EPR/Carbon/Silicon-Carbide mechanical seal for long service life. The motor has a 303 stainless steel shaft for corrosion resistance, double sealed ball bearings for greater water resistance, and longer bearing life.

Motors

Series e-90 motors utilize NEMA standard 56J in ODP enclosures with vertical drip covers.

Single phase motors are 115/230 volt with optional ECM Permanent Magnet Variable Speed motors with motor mounted user interface available in 1/2-1 HP. ECM motors adjust motor speed to match flow and head requirements thus substantially reducing power consumption. The user interface allows for manual adjustment or remote control via 10 VDC input/output.

Three phase motors are 208-230/460 volt with optional premium efficiency design motors available in 1-5 HP.

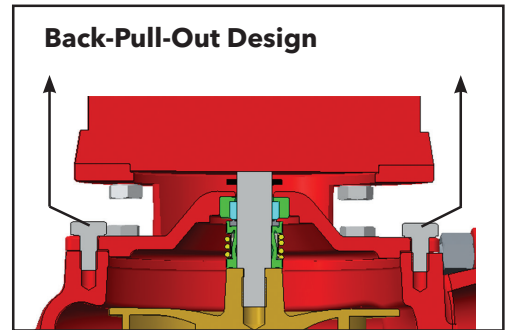
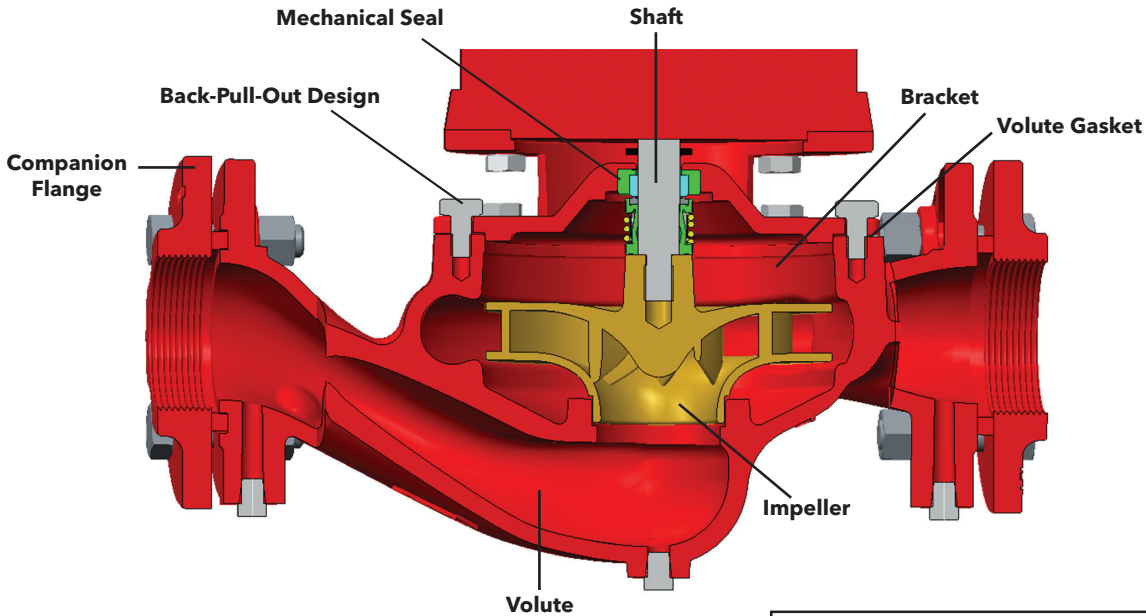
TEFC enclosures are optional for non-ECM motors in both single and three phase.



Series e-90 with ECM motor

Construction Material For Parts In Contact With Fluid

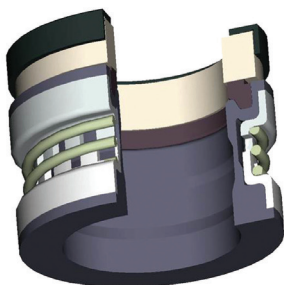
Pump Series e-90	Volute	Impeller	Volute Gasket	Shaft	Bracket	Companion Flange
Bronze Fitted Pump	Cast Iron ASTM #A159	ASTM #B584	Cellu-Fiber	Stainless Steel	Cast Iron ASTM #A159	1", 1 1/4", 1 1/2" - Steel SAE1006 2", 3" - Cast Iron ASTM #A159
All Bronze Pump	Cast Bronze ASTM #B584	ASTM #B584	Cellu-Fiber	Stainless Steel	CF8 Stainless ASTM #A351	1", 1 1/4", 1 1/2" - Bronze ASTM #36 2", 3" - Cast Bronze ASTM #B584



Ease of Maintenance

Back-pull-out design allows the pump to be serviced without disturbing the piping. Motors include sealed for life bearings. This pump design requires no coupler or stub-shaft to install. The one-piece unitized mechanical seal simplifies seal removal and replacement.

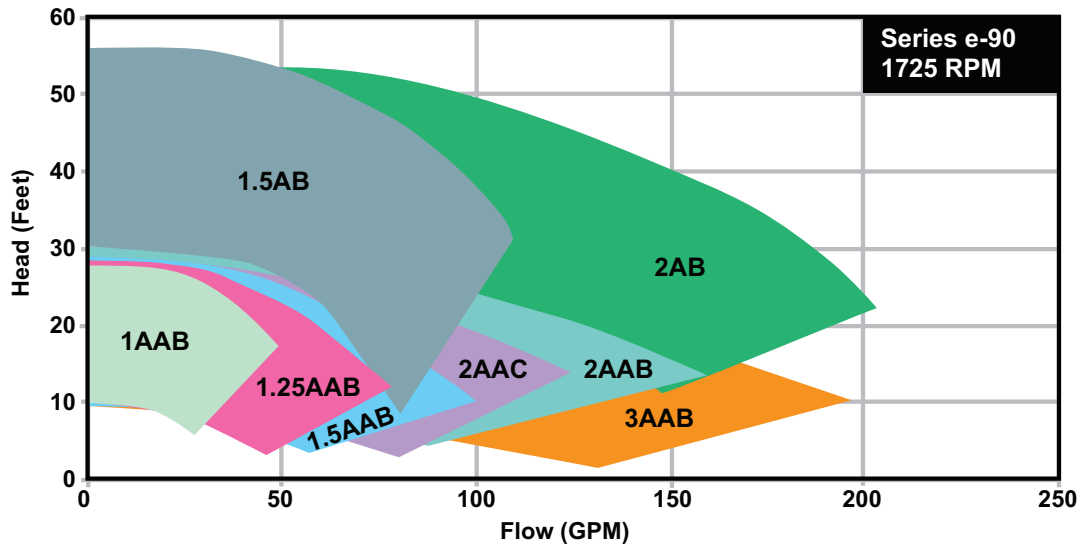
Pump Series e-90	Mechanical Seal					
	Seal Housing	Seal Elastomer	Seal Ring	Spring	Seat Insert	Maximum Temperature
Standard	Stainless Steel	EPR	Carbon	Stainless Steel	Silicon-Carbide	250°F
Optional	Stainless Steel	FKM	Carbon	Stainless Steel	Silicon-Carbide	225°F
Optional	Stainless Steel	EPR	Graphite Silicon-Carbide	Stainless Steel	Graphite Silicon-Carbide	250°F



Mechanical Seal

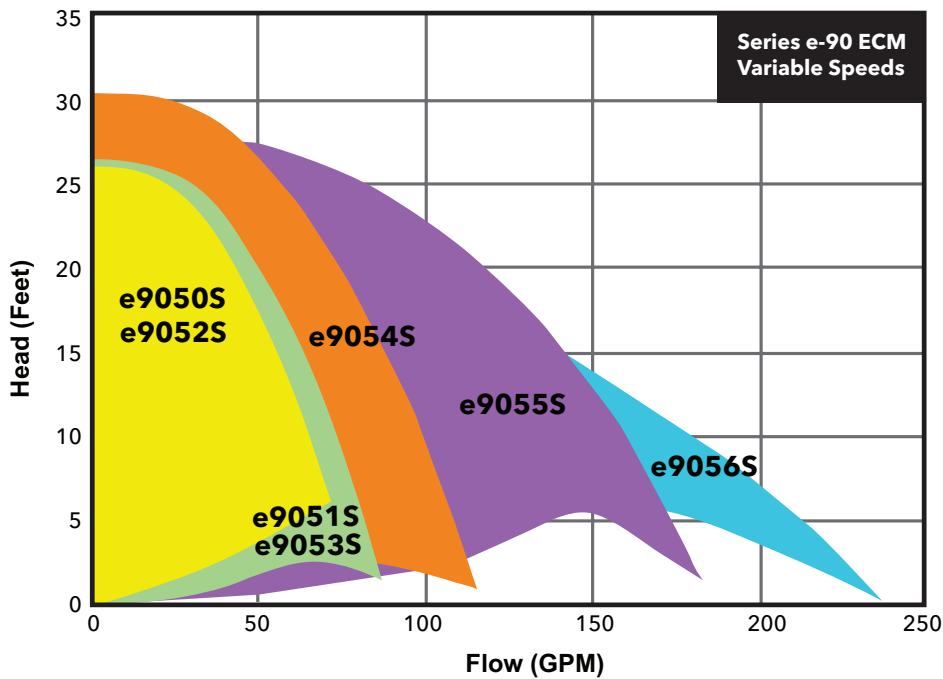
The e-90 pump uses a modern unitized mechanical seal with a stainless steel drive mechanism that puts less torsional stress on the seal bellows, allowing for longer mechanical seal life.

Standard Performance Curves



ECM Performance Curves

Hydraulic Curve Performance Range Series e-90 with ECM



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