

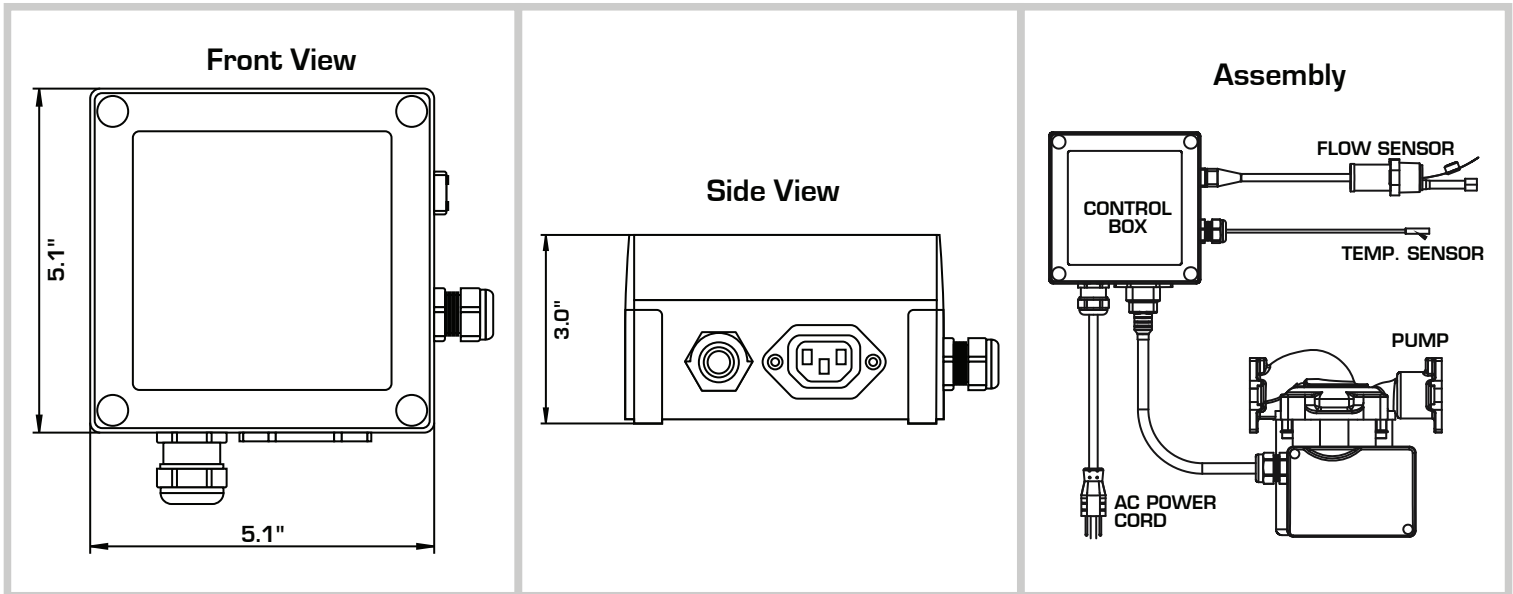


Enovative® AutoHot

JOB or CUSTOMER:			
ENGINEER:			
CONTRACTOR:			
SUBMITTED BY:	APPROVED BY:	ORDER NO:	
Date:	Date:	Date:	

SUBMITTAL | SPECIFICATIONS

The Enovative AutoHot System is designed to control the hot water recirculation pumps used on a domestic hot water system for almost any building that uses hot water. The controller will operate the pump on-demand using a sensor for detecting demand (multiple options exist but the standard sensor for demand is a flow sensor) and then the pump is turned off after the return line is hot. The controller can also be used to operate a pump that is installed under the sink at the far end of a hot water system in situations where there is no return line. By operating on-demand, the system will achieve the optimal balance between water savings and energy efficiency. The systems can come with various 3-speed pumps or standalone.



CONTROLLER SPECIFICATIONS

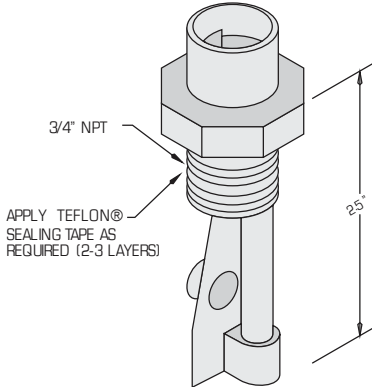
Control	Analog Circuit
Package Weight	2 lb. (907 g)
Dimensions	5.1" H x 5.1" W x 3.0" D (add 1" for strain relief connectors) (130mm x 130mm x 75mm)
Enclosure	Polycarbonate, IP66/67, NEMA 1, 4, 4X, 6
Approvals	IAPMO PS115-2007 Hot Water On-Demand, NSF ANSI 61 and AB1953 Low Lead Compliant, UL Certified
Application	Domestic Hot Water, Residential & Commercial Buildings, with and without return line
Power Supply	120VAC, 60Hz, 2.15A
Pump Relay	16A (limited by fuse)
Fuse	PCB Mounted, 5A, fast-acting
Temperature Sensor	10k Thermistor, copper tip surface mount
Operation Adjustments: Overrides	Override slider switches for turning system to continuous operation, temp only operation, or timed demand only operation
Operation Adjustments: Temperature Control	Adjust temperature lockout up to 127 degrees F (temperature at which system will not allow pump to run, unless overridden). Adjust temperature differential shutoff up to delta T of 15 degrees F (pump can turn off before lockout, based on a temperature differential)
Operation Adjustments: Autoprime	Adjust Autoprime intervals between 14 minutes and ~1hr 45min, some units up to 5 hours
Warranty	Limited 5 Year

FEATURES

- Operates pumps on-demand
- Turns on with demand
- Turns off with either delta T rise in temperature or on a set temperature
- Multiple adjustments options
- Can be applied to most buildings
- Easy overrides for maintenance and troubleshooting
- Compliant with newest green construction, energy, and energy conservation codes
- Quick payback, saves water and energy

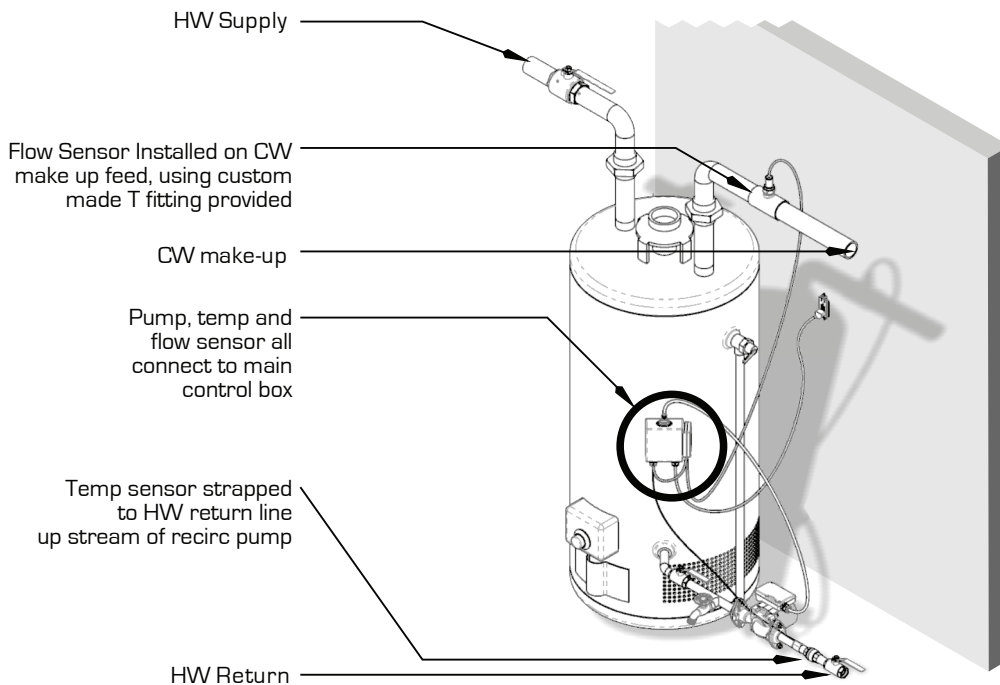
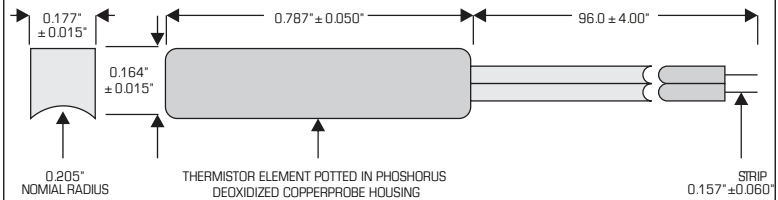
FLOW SENSOR

- Positive stop essentially eliminates fatigue effect of turbulence, vibration, and flow surge on flow detecting element
- Very low pressure drop-typically less than 1.0 psi at normal flow rate
- Line pressure to 250 psig
- Temperature to 200°F continuous
- Flow Range Water Calibrated @ 70°F**
- Nominal Working Temperature/Pressure**
- 200°F @ ambient pressure
- 250 PSI @ PSI room temperature



TEMPERATURE SENSOR

- RESISTANCE @ +25°C = 10,000 Ω +/- 1%
- RESISTANCE/TEMPERATURE CURVE = "J"
- TEMPERATURE COEFFICIENT @+25°C = -4.4%/°C NOMINAL
- BETA "β" (0 TO +55°C) = 3,892°K NOMINAL
- MAXIMUM TEMPERATURE RATING = +105°C
- LEAD WIRE: 24 AWG, STRANDED CONDUCTOR, TWO CONDUCTOR, PVC INSULATED ZIPCORD



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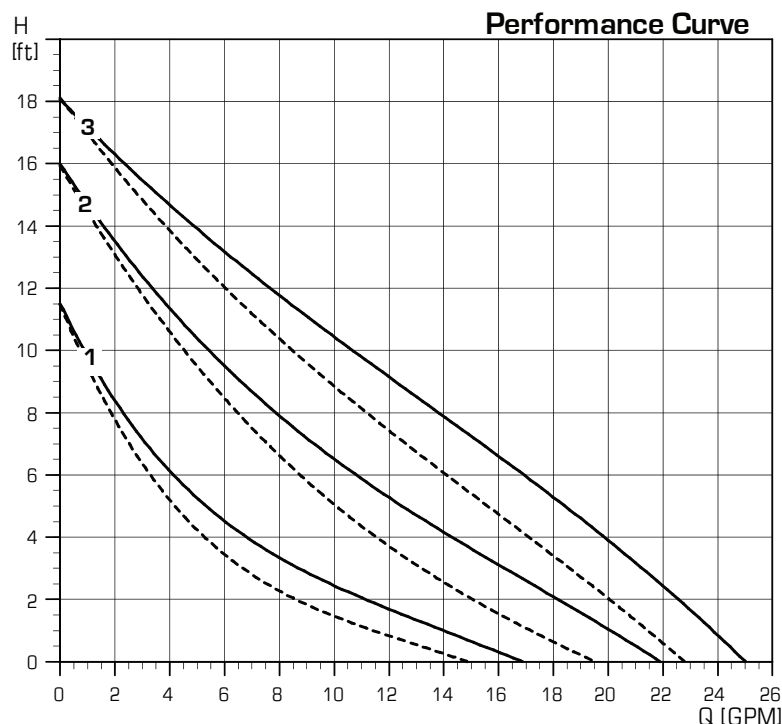
55-SERIES PUMP SPECIFICATIONS

TECHNICAL & ELECTRICAL DATA

Flow range:	0-25 gpm
Head range:	0-18 feet
Motors:	2-pole, single-phase
Max. liquid temperature:	230°F (110°C)
Min. liquid temperature:	36°F (2°C)
Max. system pressure:	145 psi (10 bar)

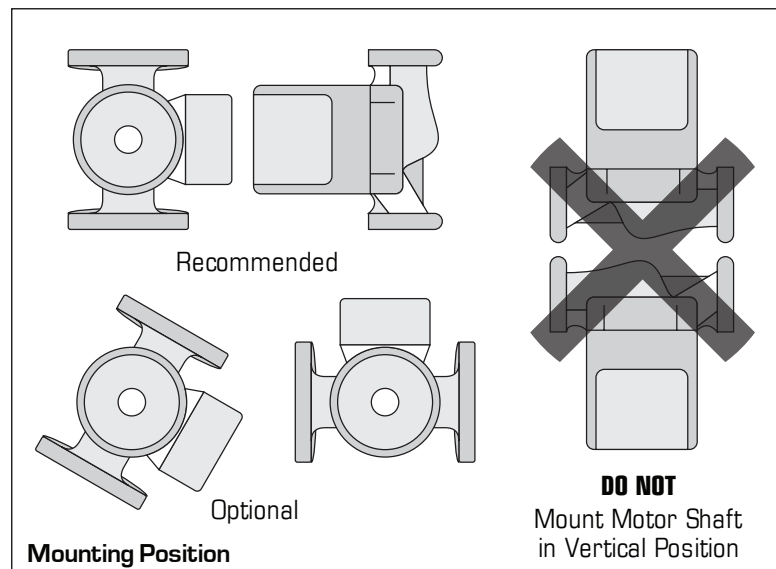
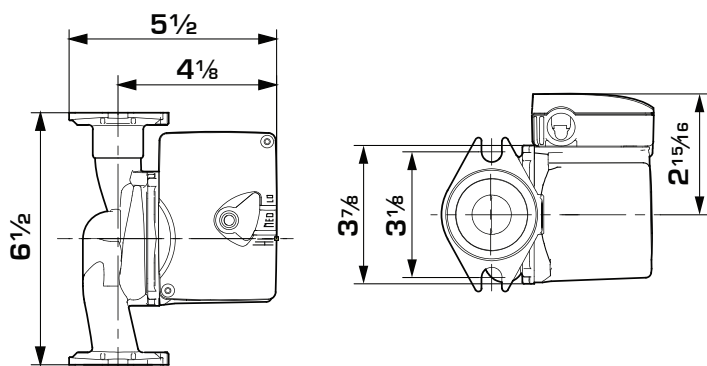
Model	Spd	Volts	Amps	Watts	Hp	Capacitor
55-Series	3	115	0.75	87	0.12	10 µF/180 V
	2		0.69	77	0.10	10 µF/180 V
	1		0.53	58	0.08	10 µF/180 V

Part No.	Name	Description
55-11	AutoHot™	55-Series Pump and Controls/No T fitting
125C55-11		55-Series Pump and Controls/1.25" Copper T fitting
15C55-11		55-Series Pump and Controls/1.5" Copper T fitting
2C55-11		55-Series Pump and Controls/2" Copper T fitting
25C55-11		55-Series Pump and Controls/2.5" Copper T fitting



SIZE & WEIGHT

Model	Type and Size	Wt. (lbs)
UPS 15-55 SFC	GF 15/26	6



MATERIALS OF CONSTRUCTION

DESCRIPTION	MATERIAL	DESCRIPTION	MATERIAL
Inlet Cone, Bearing Plate, Bearing Retainers, Rotor Can, Rotor Cladding Shaft Retainer	304 Stainless Steel	Pump Housing (Volute)	Silicon bronze C875 or Stainless steel 300 series
Stator Housing	Aluminum	O'Ring & Gaskets	EP (Ethylene Propylene Rubber)
Shaft, Upper & Lower Radial Bearings	Aluminum Oxide Ceramic	Impeller	PES Composite (30% Glass Filled)
Thrust Bearing	Carbon bearing and EPDM retainer	Terminal Box	Noryl®
Check Valve	ACETAL with 302 Stainless Steel Spring & Nitrile Rubber Seats		

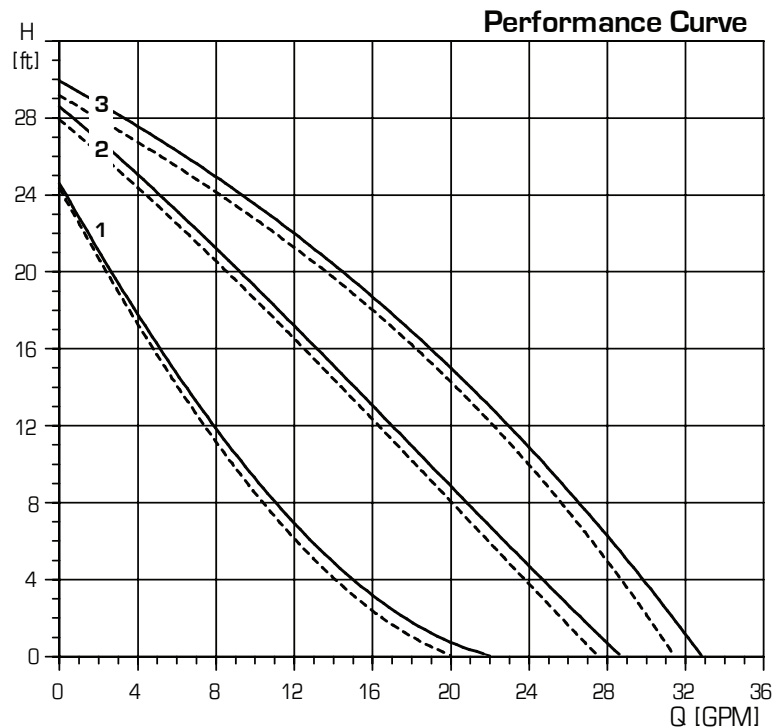
99-SERIES PUMP SPECIFICATIONS

TECHNICAL & ELECTRICAL DATA

Flow range:	0-33 gpm
Head range:	0-29 feet
Motors:	2-pole, single-phase
Max. liquid temperature:	230°F (110°C)
Min. liquid temperature:	36°F (2°C)
Max. system pressure:	145 psi (10 bar)

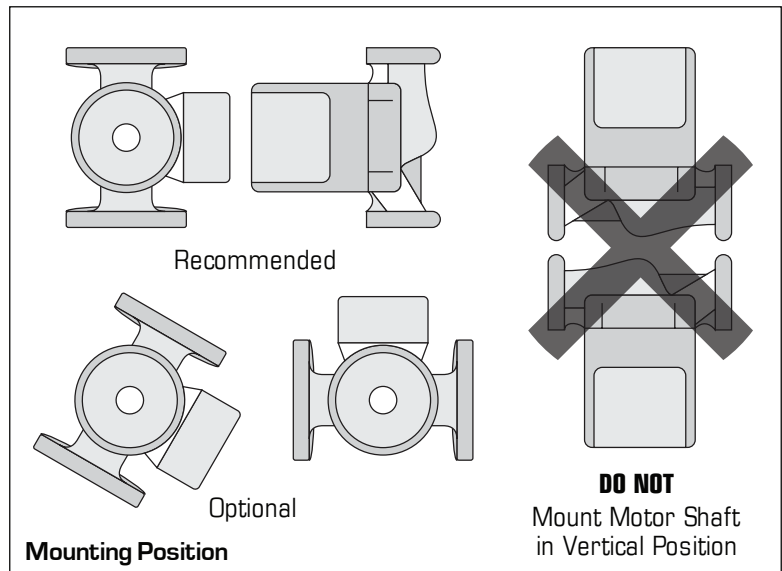
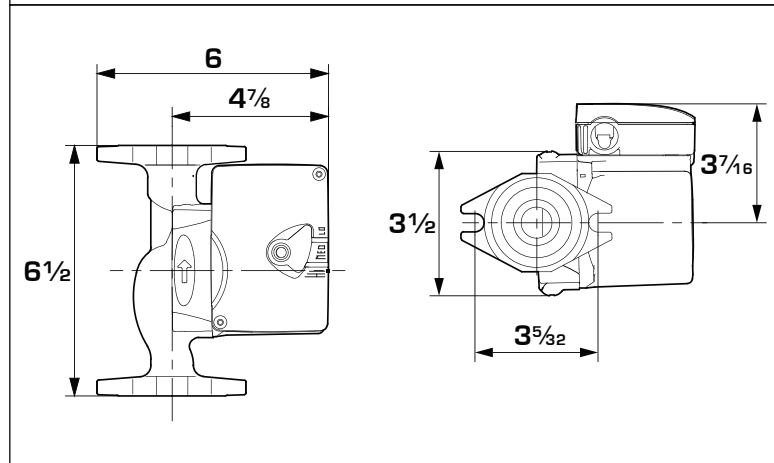
Model	Spd	Volts	Amps	Watts	Hp	Capacitor
99-Series	3	115	1.8	197	1/6	20 µF/180 V
	2		1.5	179	1/6	20 µF/180 V
	1		1.3	150	1/6	20 µF/180 V

Part No.	Name	Description
99-11	AutoHot™	99-Series Pump and Controls/No T fitting
125C99-11		99-Series Pump and Controls/1.25" Copper T fitting
15C99-11		99-Series Pump and Controls/1.5" Copper T fitting
2C99-11		99-Series Pump and Controls/2" Copper T fitting
25C99-11		99-Series Pump and Controls/2.5" Copper T fitting



SIZE & WEIGHT

Model	Type and Size	Wt. (lbs)
99-11	Flange - (2) 1/2" Dia. Bolt Holes	10



MATERIALS OF CONSTRUCTION

DESCRIPTION	MATERIAL	DESCRIPTION	MATERIAL
Inlet Cone, Bearing Plate, Bearing Retainers, Rotor Can, Rotor Cladding Shaft Retainer	304 Stainless Steel	Pump Housing (Volute)	Silicon bronze C875 or Stainless steel 300 series
Stator Housing	Aluminum	O'Ring & Gaskets	EP (Ethylene Propylene Rubber)
Shaft, Upper & Lower Radial Bearings	Aluminum Oxide Ceramic	Impeller	PES Composite (30% Glass Filled)
Thrust Bearing	Carbon bearing and EPDM retainer	Terminal Box	Noryl®
Check Valve	ACETAL with 302 Stainless Steel Spring & Nitrile Rubber Seats		

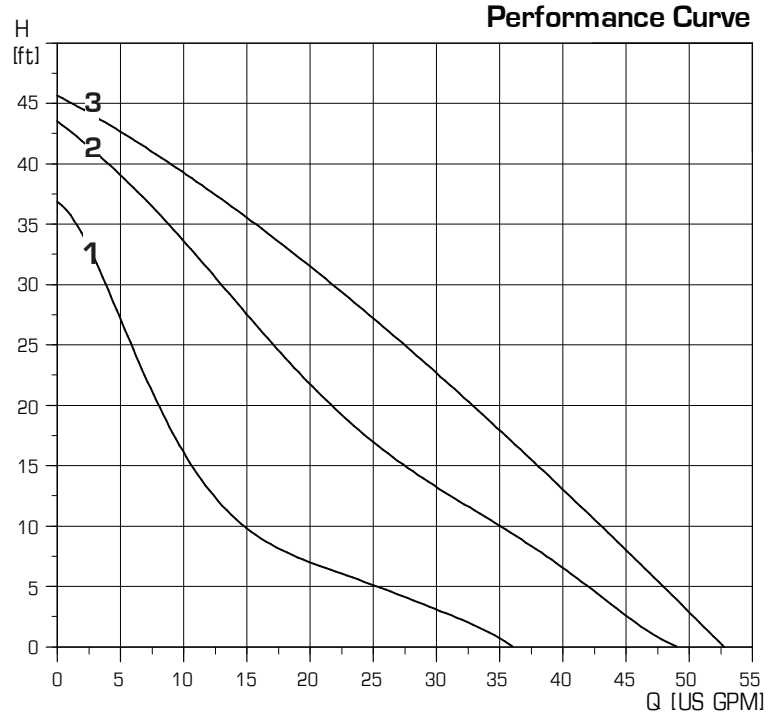
150-SERIES PUMP SPECIFICATIONS

TECHNICAL & ELECTRICAL DATA

Flow range:	0-53 gpm
Head range:	0-46 feet
Motors:	2-pole, single-phase
Max. liquid temperature:	230°F (110°C)
Min. liquid temperature:	36°F (2°C)
Max. system pressure:	145 psi (10 bar)

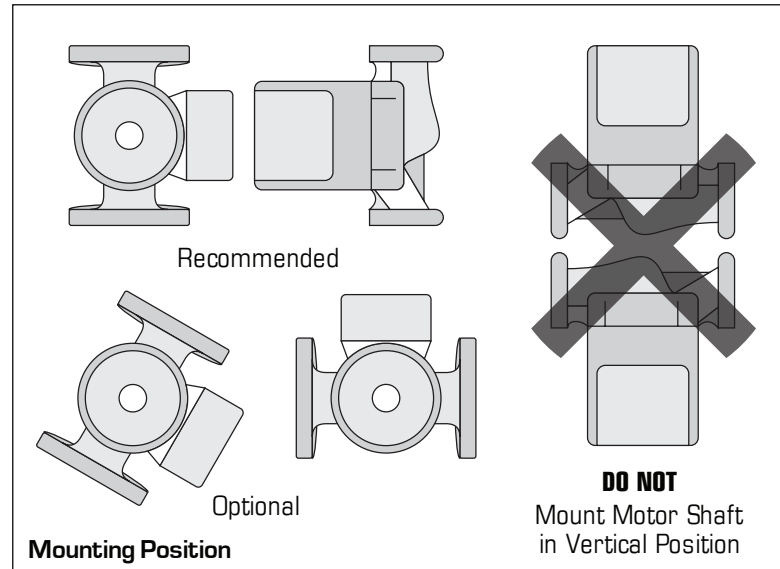
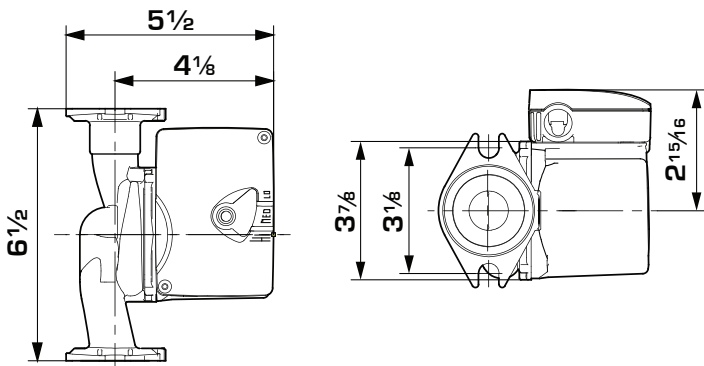
Model	Spd	Volts	Amps	Watts	Hp	Capacitor
150-Series	3	115	3.5	370	1/6	40µF/180 V
	2		3.1	335	1/6	40µF/180 V
	1		2.5	265	1/6	40µF/180 V

Part No.	Name	Description
150-11	AutoHot™	150-Series Pump and Controls/No T fitting
125C150-11		150-Series Pump and Controls/1.25" Copper T fitting
15C150-11		150-Series Pump and Controls/1.5" Copper T fitting
2C150-11		150-Series Pump and Controls/2" Copper T fitting
25C150-11		150-Series Pump and Controls/2.5" Copper T fitting



SIZE & WEIGHT

Model	Type and Size	Wt. (lbs)
UPS 26-150 SF	GF 15/26	6



MATERIALS OF CONSTRUCTION

DESCRIPTION	MATERIAL	DESCRIPTION	MATERIAL
Inlet Cone, Bearing Plate, Bearing Retainers, Rotor Can, Rotor Cladding Shaft Retainer	304 Stainless Steel	Pump Housing (Volute)	Silicon bronze C875 or Stainless steel 300 series
Stator Housing	Aluminum	O'Ring & Gaskets	EP (Ethylene Propylene Rubber)
Shaft, Upper & Lower Radial Bearings	Aluminum Oxide Ceramic	Impeller	PES Composite (30% Glass Filled)
Thrust Bearing	Carbon bearing and EPDM retainer		
Check Valve	ACETAL with 302 Stainless Steel Spring & Nitrile Rubber Seats	Terminal Box	Noryl®