

JOB:

REPRESENTATIVE:

UNIT TAG:

ORDER NO.

DATE:

ENGINEER:

SUBMITTED BY:

DATE:

CONTRACTOR:

APPROVED BY:

DATE:



ecocirc® 19-16 Circulators

for Heating/Cooling and Potable Water Systems Energy Efficient, Permanent Magnet Motor Electronically Commutated

Description

ecocirc® 19-16 is a true variable speed circulator which modulates across the entire performance curve. Designed with highly efficient electronically commutated permanent magnet motor (ECM technology) for hydronic and potable water systems.

Control Modes

The ecocirc®19-16 has three standard modes of operation:

1. Proportional pressure (factory default mode)

Sensorless control mode that automatically adjusts the pump performance continuously to the requirements of heating/cooling or potable water systems based on the curve that is set with the adjustable dial. This mode is recommended for use in systems with high pressure losses. Proportional Pressure mode is identified by blue LED lit behind the adjustment dial.

2. Constant Pressure

Sensorless control mode that automatically maintains constant differential pressure at any flow rate, based on the curve that is set with the adjustable dial. This mode of operation is preferred in distribution systems with relatively small pressure losses. Constant Pressure mode is identified by the green LED lit behind the adjustment dial.

3. Constant Speed

The pump maintains a fixed speed at any flow demand, based on the curve that is set with the adjustable dial. Constant Speed mode of operation is identified by the white light lit behind the speed adjustment dial.

Auxiliary Modes:

1. Automatic Air Purge

Air trapped in the pump housing can be purged using this function.

2. Standby

This helps to keep the power consumption low (<1W) when pump operation is not required.

Motor

Designed with shaft-less spherical motor using permanent magnet technology for improved efficiency.

Operating Data

Maximum Working Pressure: 150 psi (10 Bar)
Maximum Fluid Temperature: 203°F (110°C)
Minimum Fluid temperature: 14°F (-10°C)

Motor:

ECM Spherical Motor
115 Volts, 60 HZ, 1 Phase
4- 60 Watts Variable Power Consumption
Automatic Overload Protection
Low in-rush current

Piping Connection

Flanged, 2-Bolt
For use with ¾, 1, 1¼, or 1½ inch pipe

Materials of Construction

Pump Body: Cast Iron or Stainless Steel
O-Ring: EPDM
Bearing: Carbon/Alumina Ceramic
Impeller: Nylon/PPO
All Other Wetted Parts: Stainless Steel

Check Valve

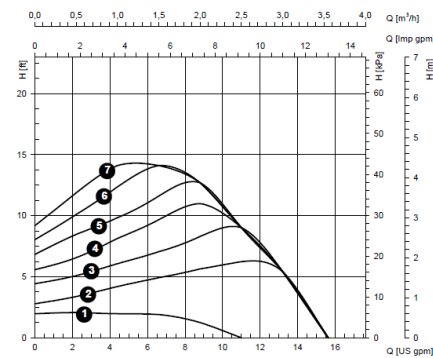
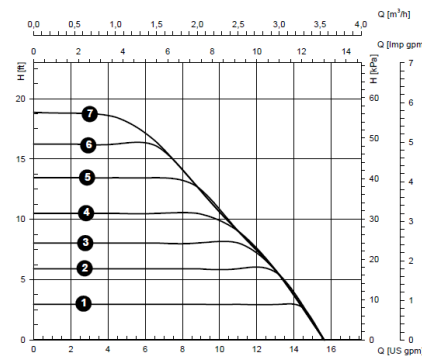
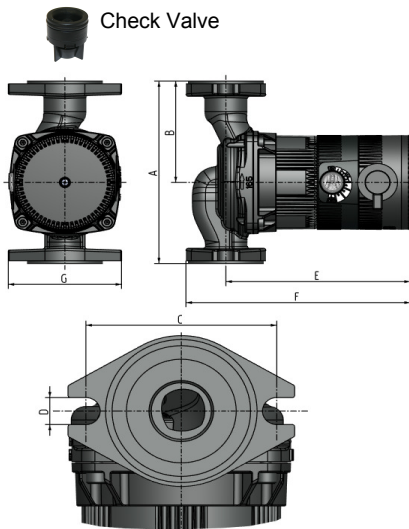
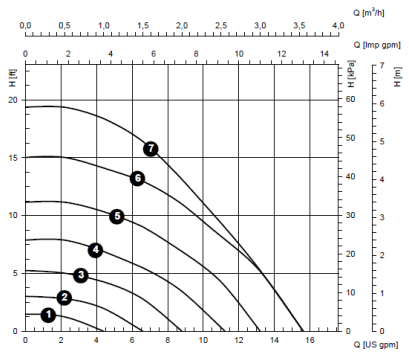
1" Noryl Check Valve
shipped loose for field installation



Specification:

The contractor shall furnish and install in-line water pumps as illustrated on the plans and in accordance with the following specifications:

1. The pumps shall be of the high efficiency type specifically designed for quiet operation.
2. Pump shall have sensorless control to automatically adjust pump performance as required.
3. Pump to be suitable for 203°F (110°C) operation at 150 psi (10 Bar) working pressure.
4. The pumps shall have a shaft-less, wet rotor design with a ceramic ball bearing lubricated by the system fluid.
5. Pump to have three standard operating modes; Proportional Pressure, Constant Pressure and Constant Speed and two auxiliary modes; the Automatic Air Purge and Standby.
6. Pump shall be supplied with an integral check valve.
7. Motor shall be spherical electronically commutated motor, permanent magnet (ECM/PM).
8. Motor shall be non-overloading at any point on the entire pump curve.
9. Motor shall be protected from contaminants to prevent clogging
10. Pumps shall be capable of speed modulation across the full speed range.
11. Pumps to have a capacity of ____ GPM at ____ foot of head.
12. All pumps to be supplied by Bell & Gossett Model _____.

Performance Curves**Proportional Pressure (default Mode)****Constant Pressure****Constant Speed**

Part Number	Model	Pump Body	Shipping Wt (Lb)
6050B2003	ecocirc® 19-16	Cast Iron	7.25
6050B2004LF	ecocirc® 19-16	Stainless Steel	7.00

Dimensions	
A	6,38" (162mm)
B	3,54" (90mm)
C	3,15" (80mm)
D	0,47" (12mm)
E	6,09" (154mm)
F	7,4" (188mm)
G	3,74" (95mm)



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