D5 Series
basic. vario. strong. solar.

Applications

- D5 pumps (basic, vario, strong and solar) can be used in a wide variety of DC applications where a highly efficient circulation pump is required.
- D5 pumps are used in a wide variety of applications such as medical devices, electronics cooling, chillers, laser cooling, RV hot water systems, battery cooling, and fuel cells.

Design

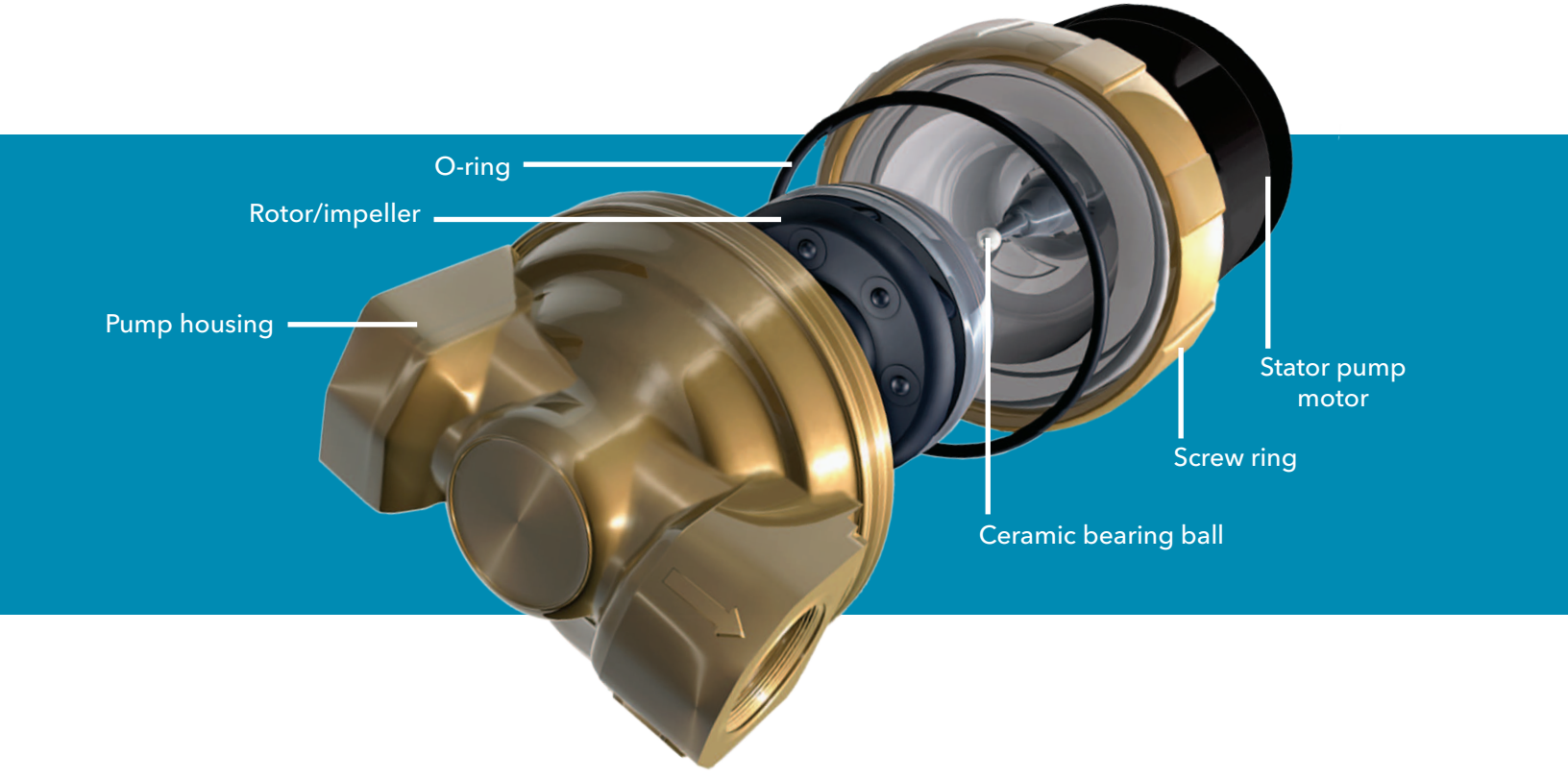
- The single moving part in a spherical motor is a hemispherical rotor/impeller unit. The rotor/impeller rides on an ultra-hard, wear-resistant ceramic ball.
- There are no conventional shaft bearings or seals. Eliminating the possibility of bearing-play and a potential leak path.
- Provide an exceptionally long service life in excess of 50,000 hours.
- Maintenance is not necessary under normal conditions. Even after lengthy shut down periods a reliable start-up is virtually guaranteed.
- Parts exposed to the fluid are completely corrosion resistant even with aggressive fluids.

Speed controller

- Easily adjusts by turning a dial in the pump end. It can be adjusted to vary the hydraulic performance and/or the electrical power consumption.
- Regardless of the setting, the pump always starts with maximum torque. This ensures a reliable start even at the lowest speed.

Integrated over-temperature protection

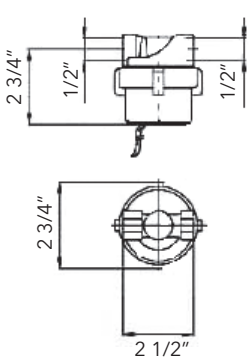
- Each pump has an integrated over-temperature safety device that shuts the pumps electronics off when reaching the temperature limit of +203°F.
- If the over-temperature safety device is activated the pump will restart automatically after the pump has cooled completely.



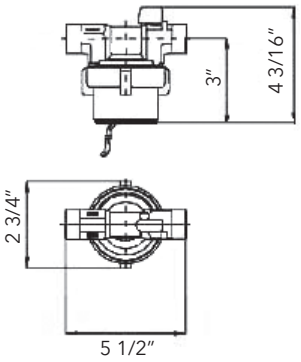
Dimensional Drawings

D5 Bronze

D5 710B/ D5 720B

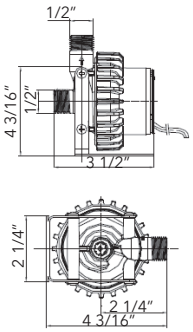


D5 090B

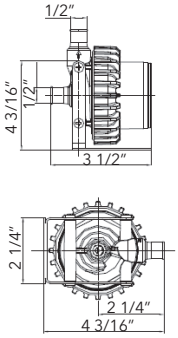


D5 Plastic

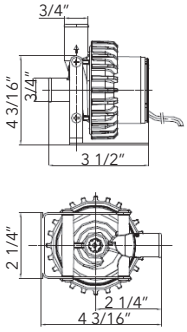
D5 850N



D5 810N



D5 790N



Model	Connection	Power Consumption	Housing Material
D5 710 B	1/2" female thread	8-25 Volt DC 3-35 Watts, 0.30-1.50 Amps D5 strong: 3-55 Watts, 0.13-2.1 Amps	Bronze
D5 720 B	1/2" sweat		
D5 090 B	1/2" sweat union w/check valve		

Model	Connection	Power Consumption	Housing Material
D5 850 N	1/2" MPT	8-24 Volt DC, 3-35 Watts, 0.30-1.50 Amps D5 strong: 3-55 Watts, 0.13-2.1 Amps	Plastic (Noryl)
D5 810 N	1/2" hose barb		
D5 790 N	3/4" hose barb		

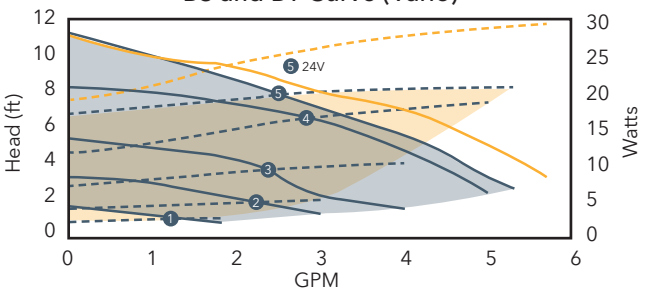
Technical Data

Motor design	Electronically commutated spherical motor with permanent magnet rotor/impeller
Voltage	8 - 25 Volt
Power consumption	See pump curves
Current draw	D5 basic and vario: 0.25 – 1.46 A D5 strong: 0.13 - 2.1 A
Acceptable media	Domestic hot water, water/glycol mixtures, other media on request
Insulation class	IP 42 / Class F
Max. system pressure	150 PSI - 1.0 MPa (10 bar) for pumps with brass housings 50 PSI - 0.35 MPa (3.5 bar) for pumps with plastic housing
Max. system temperature	-10°F to +203°F (-10°C to + 95°C) for pumps with brass housing (non-freezing) +32°F to +140°F (+/- 0°C to + 60°C) for pumps with plastic housing (non-freezing)
Weight	1.54 LBS. (0.7 kg) for pumps with brass housing.77 LBS. (0.35 kg) for pumps with plastic housing when using more than 20 % glycol, check pump performance

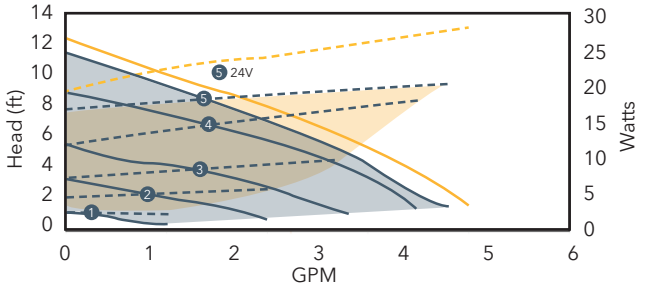
Note: Pump curves vary depending on pump housing, speed control setting and supply voltage.
The **D5 Vario** will vary based on the speed control setting. The curves in blue ❺❹❸❷❶ are for supply voltage range 12-23 volts. For maximum performance for the **D5 Vario** (shown in yellow), the supply voltage must be 24 volts and speed control setting at maximum. The **D5 Basic** have a fixed performance curve for a supply voltage range 12-24 volts, the curve is shown as ❹ setting of the Vario charts. The **D5 Strong** will vary based on the supply voltage. The maximum performance is shown in yellow with 24 volts supply and the 12 volts supply performance curve is shown in blue.

D5 Series Pump Curves - Brass

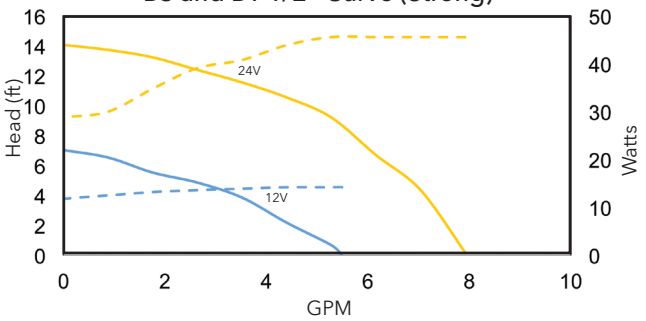
BS and BT Curve (Vario)



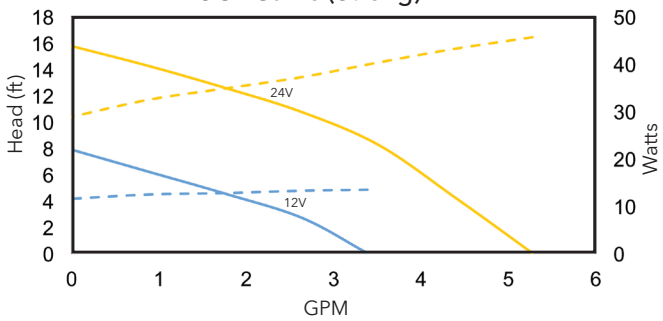
UCT Curve (Vario)



BS and BT 1/2" Curve (Strong)

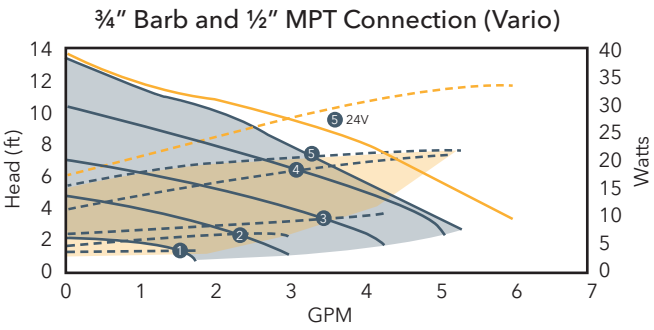


UCT Curve (Strong)

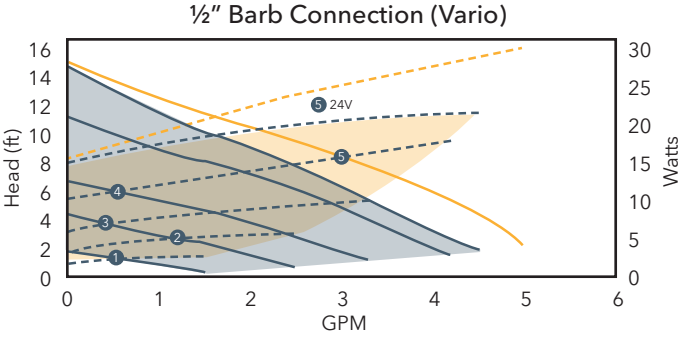


D5 Series Pump Curves - Plastic

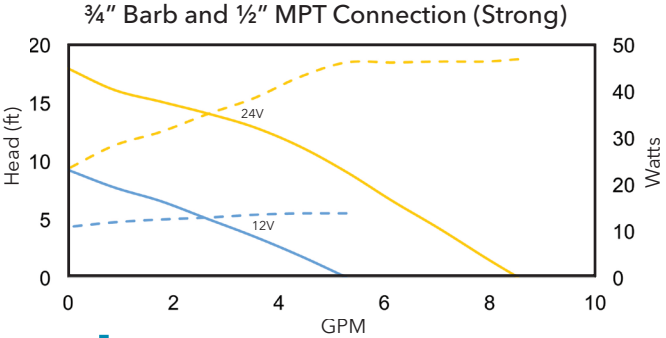
¾" Barb and ½" MPT Connection (Vario)



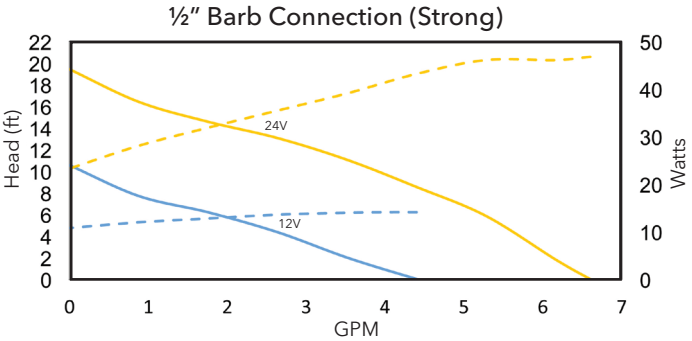
½" Barb Connection (Vario)



¾" Barb and ½" MPT Connection (Strong)



½" Barb Connection (Strong)



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