Electronically commutated spherical motor, 12 VDC, Centrifugal Pumps

The Laing DDC pump is an ideal 12 VDC solution for liquid cooling of medical equipment, lasers and personal body cooling. Due to its size and output, the Laing DDC can also be used in a large number of other applications.

The Laing DDC is an electronically commutated spherical motor pump, with an expected service life up to 50,000 hours.

The only moving part in a spherical motor pump is a spherically shaped rotor/impeller unit, which is seated on an ultra-hard, wear-resistant ceramic ball. The conventional shaft, shaft bearings and shaft seals have been eliminated, which reduces noise and extends the life of the pump.

The spherical motor design permits economical operation with comparatively high output. Supply voltage variation provides a simple means of controlling the speed of the DDC pump over a large output range. All parts in contact with the medium are 100% corrosion resistant. An optional tachometer output provides feedback to monitor the speed of the pump directly.
**Model Code**

DDC Series
- DDC 3.1: max. 12 Watt
- DDC 3.15: max. 12 Watt
- DDC 3.2: max. 18 Watt
- DDC 3.25: max. 20 Watt

**T: Tach Output**
- Blank: No Tach Output
- Black: No Plug

**P: Plug**
- Blank: No Tach Output
- Black: No Plug

**MP: Mounting Feet Parallel**
- Blank: No Mounting Feet
- Black: No Mounting Feet

**T: 1/4”PT**
- Blank: 3/8” Hosebarb
- Black: Center suction

**DDC series**

**Laing Thermotech**

*a xylem brand*

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**Dimensions**

1/4” R Male Connection

- 1/4" R Male Connection
- 1/2" CS: Center suction

3/8” Hosebarb Connection

- 3/8" Hosebarb Connection
- 1/2" CS: Center suction

(hosebarb only)

**Family Curve**

![Family Curve Diagram](image)

Note: The dashed lines represent power curves

- **DDC - 3.1**
- **DDC - 3.15**
- **DDC - 3.2**
- **DDC - 3.25**

**Technical Data**

**Motor design:** Electronically commutated spherical motor
**Rated voltage:** 12 Volt DC
**Power consumption:**
- DDC 3.1: max. 12 Watt
- DDC 3.15: max. 12 Watt
- DDC 3.2: max. 18 Watt
- DDC 3.25: max. 20 Watt
**Voltage range:** 8 to 13.2 Volts*
**Acceptable media:** Water, Water/Glycol Mixtures**
**Other media on request**
**Max. system pressure:** 21.75 PSI
**Max. system temperature:** 140° F
**Wetted parts:**
- Rotor/impeller material: stainless steel grade 316Ti
- PPS-GF40 is the pump housing material and the impeller,
- EPDM O-ring, aluminum oxide ceramic ball,
- carbon bearing cap
**Electrical wire connection:** PA6.6 GF35

*Minimum startup Voltage 9 Volt
** Check pump performance for mixtures of 20% or more glycol. Please contact us regarding any other media requirements.