

## HIGH PRESSURE CIRCULATION PUMP CM95HP



### A MAGNETIC DRIVE SEAL-LESS PUMP WITH BRUSHLESS ELECTRIC MOTOR 25 OR 38 MM PORTS, DESIGNED FOR A NOMINAL FLOW OF 65 LITRES / MIN @ 0.8 BAR

The CM95HP is a high-pressure, magnetically driven (seal-less), circulation pump with a DC motor designed for a 40 000 hour service life. The brushless motor of the CM95HP eliminates brush maintenance and related motor failures.

#### TYPICAL APPLICATIONS

The CM95HP pump generates high flow, at a high pressure, for such demanding applications as cooling of electric circuits and batteries used on hybrid and full-electric buses, trains and other commercial vehicles. The durable design will also provide dependability on physically demanding applications such as agricultural equipment, construction and mining vehicles as well as on and off-road vehicles.

#### DURABILITY

The CM95HP comes with IP6K9K and IP67 ratings to ensure the highest degree of reliability in the most demanding environmental conditions. These IP ratings ensure the pump to be waterproof, dustproof and to withstand high-pressure/steam jet cleaning. The pump is also tested and approved to withstand shock and vibrations. The cast aluminium pump housing is available in 2 port diameters; 25mm (1") and 38mm (1 1/2"). The metal design of the CM95HP also allows us to meet the flammability rating UL 94 Class V0.

#### SPEED CONTROL

The CM95HP is designed for speed control with PWM (Puls Width Modulation) control and offers security features such as; built-in thermal overload protection, built-in temperature limitation function, reversed polarity protection, voltage transients protection, low voltage protection, internal current limitation and dry running protection.

#### TEMPERATURE RANGE

The CM95HP will withstand ambient temperatures from -40° to +85°C (-40° to +185°F).

#### FEATURES & BENEFITS

- Nominal flow @ 0.8 bar
  - 60 l/min (15.9 GPM) with connection Ø25 mm (1")
  - 65 l/min (17.2 GPM) with connection Ø38 mm (1 1/2")
- Designed for ambient temperatures of -40°C to +85°C at liquid temperature +100°C (-40°F to +185°F at liquid temp +212°F)
- Magnetic drive (no shaft seal/ mechanical seal)
- Designed for continuous duty
- Long service life
- Wide temperature range
- Speed control and stand alone applications
- Built-in thermal overload protection
- Derating, automatic speed control at overheating
- Motor running status and fault status out via LIN-bus
- Reversed polarity protection
- Low voltage protection
- Dry run protection
- Current limitation
- Voltage transients protection
- Enclosure; IP6K9K and IP67
- E-mark and CE approval

## CM95HP – High Pressure Centrifugal Pump with Magnetic Transmission powered by a Brushless DC Electromotor

### Technical specifications:

#### Capacity:

25 mm (1") port 60 l/min (15.9GPM) at 0.8 bar (26.75 ftH<sub>2</sub>O)  
 38 mm (1 1/2") port 65 l/min (17.2 GPM) at 0.8 bar (26.75 ftH<sub>2</sub>O)

**System pressure:** -0.2 to +2.5 bar at 100°C (+212°F)

**Liquid:** Water/glycol mixture; max. 60% glycol

**Motor service life:** The motor is designed for a service life of 40.000 hours at nominal voltage and ambient temperature of +40°C (+104°F)

**Motor, voltage:** Nominal 27.2V DC for use between 16-32V DC

**Motor:** Enclosed (as per IP6K9K and IP67) permanent magnet, ball bearing mounted brushless motor, designed for continuous operation

**Input power:** Max. 315 W

**Dry running:** Max. 20 minutes

**Ports:** 25 mm (1") or 38 mm (1 1/2") diameter

**Weight:** 3.2 kg (7 lbs)

**Pump Housing:** Aluminum, black anodized

**Impeller:** PPS GF

**Intermediate part:** PPA GF

**Flammability:** UL94 Class V0 (external polymer materials meet same requirements)

**Degree of protection:** IP6K9K, IP67 (ISO 20653)

#### EMC approved according to:

UN ECE R10 rev. 5, with references to CISPR 12, CISPR 25, ISO 11452-2, -3, -4, -5 and ISO 7637. ISO 14982



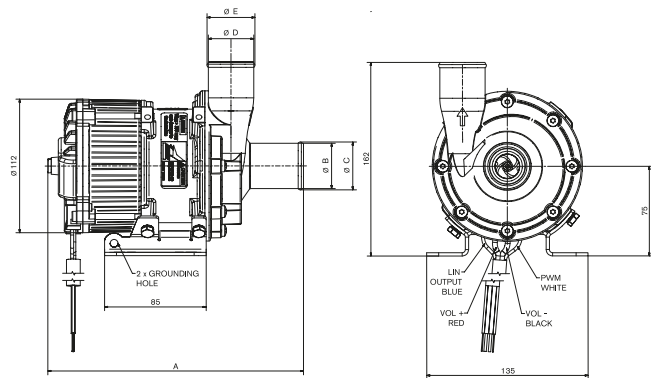
VERSION DEPENDANT PUMP DIMENSIONS					
	A	B	C	D	E
Diameter 25mm	208	25	27	25	27
Diameter 38mm	214	38	40	38	40

### Pressure and capacity data

Based on water at 20°C/68°F (and recommended hose diameter)

HOSE CONNECTION	BACK PRESSURE			FLOW		AMPERAGE
	BAR	kPA	FTH <sub>2</sub> O	L/MIN	USGPM	27.2V
Ø25 mm (1")	0.6	60	20.07	75	19.8	10.5
	0.8	80	26.75	60	15.9	10.2
	1.0	100	33.45	37	9.8	8.6
RECOMMENDED FUSE SIZE						20 – 25A

HOSE CONNECTION	BACK PRESSURE			FLOW		AMPERAGE
	BAR	kPA	FTH <sub>2</sub> O	L/MIN	USGPM	27.2V
Ø38 mm (1 1/2")	0.6	60	20.07	78	20.6	10.8
	0.8	80	26.75	65	17.2	10.3
	1.0	100	33.45	43	11.3	9.3
RECOMMENDED FUSE SIZE						20 – 25A



DESCRIPTION	PART NO.
CM95HP AL-1BL 27.2V D25	10-13606-10
CM95HP AL-1BL 27.2V D38	10-13607-10