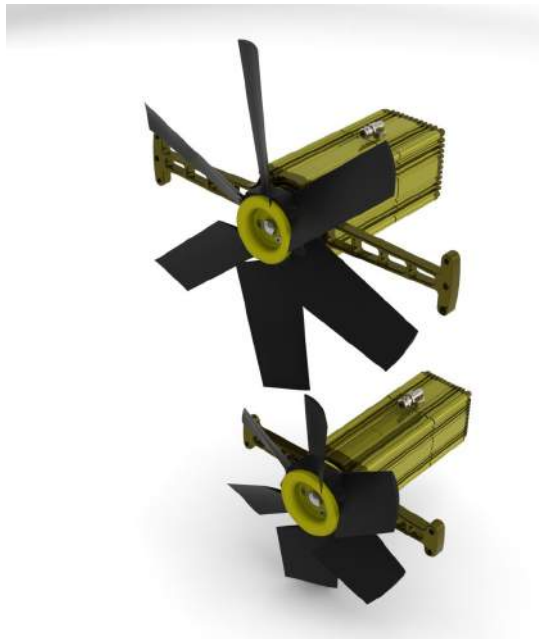


Installation, Operation and Maintenance

JEC MFx-BL model Marine Ventilation Fans



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Description

The JEC MFx-BL –series ventilation fans are a fully sealed, corrosion-resistant brushless DC fan specifically designed to run with 24V electrical systems in a salt-water marine environment.

Designed for engine room ventilation, the MFx-BL fans can be used for many other ventilation requirements around your vessel.

The MFx-BL fans are available in three variants – fixed speed, internally adjustable speed and with remotely adjustable speed.

Technical Specifications

	MF1-BL	MF3-BL
Standard Diameter	300mm	400mm
Available Diameters	300mm	400mm, 500mm
Number of Blades	6	6
Blade Pitch	30°, 35°, 40° (standard), 45°, 50°	
Maximum Speed	2800rpm	2700rpm
Maximum Flow	1.1m ³ /s	2.7m ³ /s
Maximum Power	450W @ 28V	1.25kW @ 28V
Operating Voltage	18-30V	18-30V
Minimum Current	5A	20A
Maximum Current	18A	55A

Assembly and Installation

Fan Impeller Assembly:

The fan impeller is secured to the shaft by a stainless steel screw and a double taper device (Ringfeder). The fan impeller will only fit to the shaft in one orientation. If the impeller can rotate freely on the shaft, the orientation is correct.

Two mounting styles exist. Depending on the supplied hardware, the double taper shaft locking device fits to either the front of the fan hub (see Figure 1) or the rear of the hub (see Figure 2)

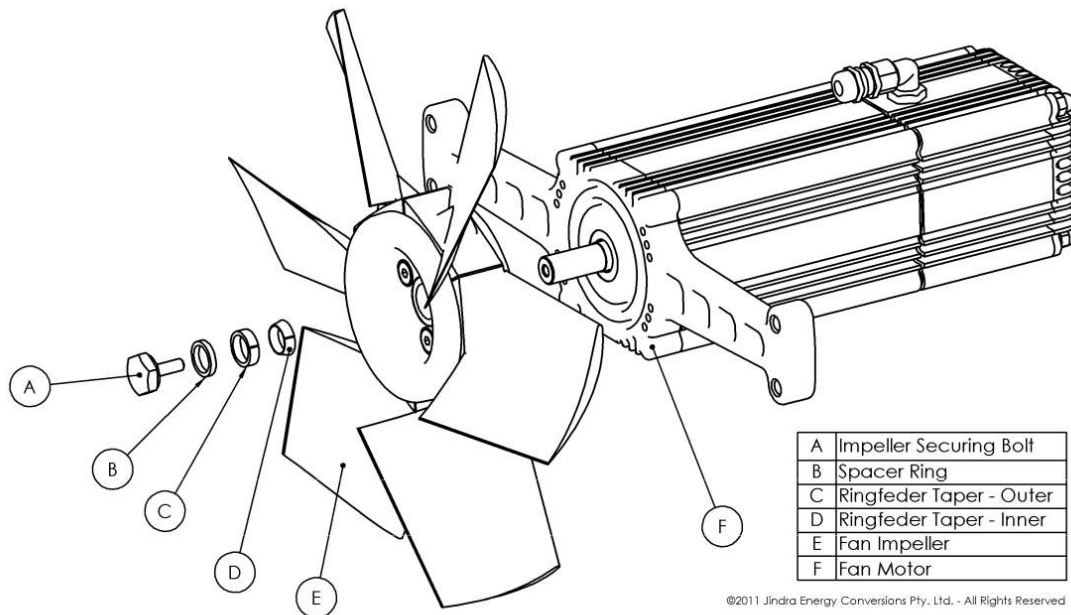
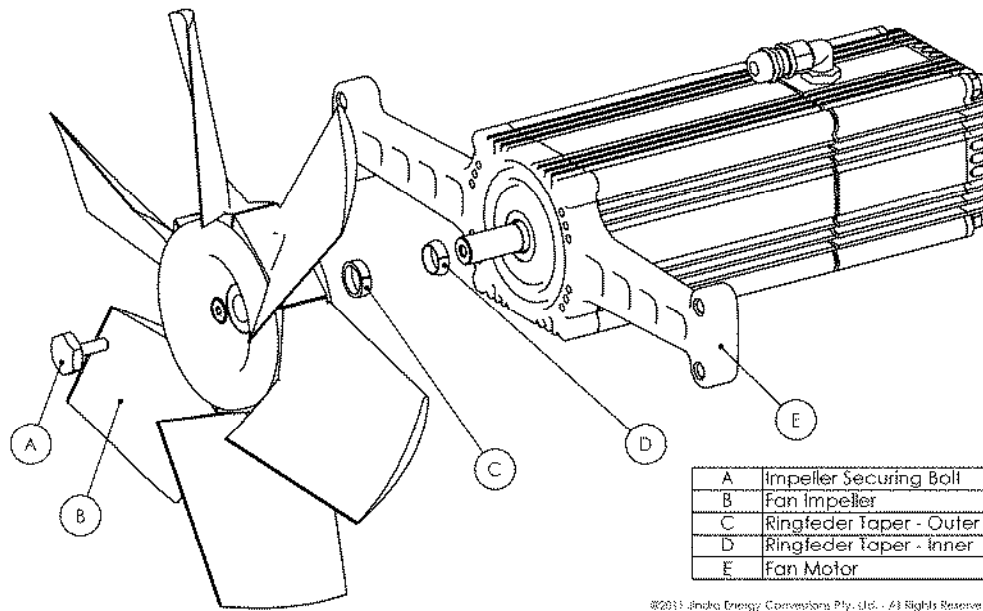


Figure 1 - Original Impeller Mounting



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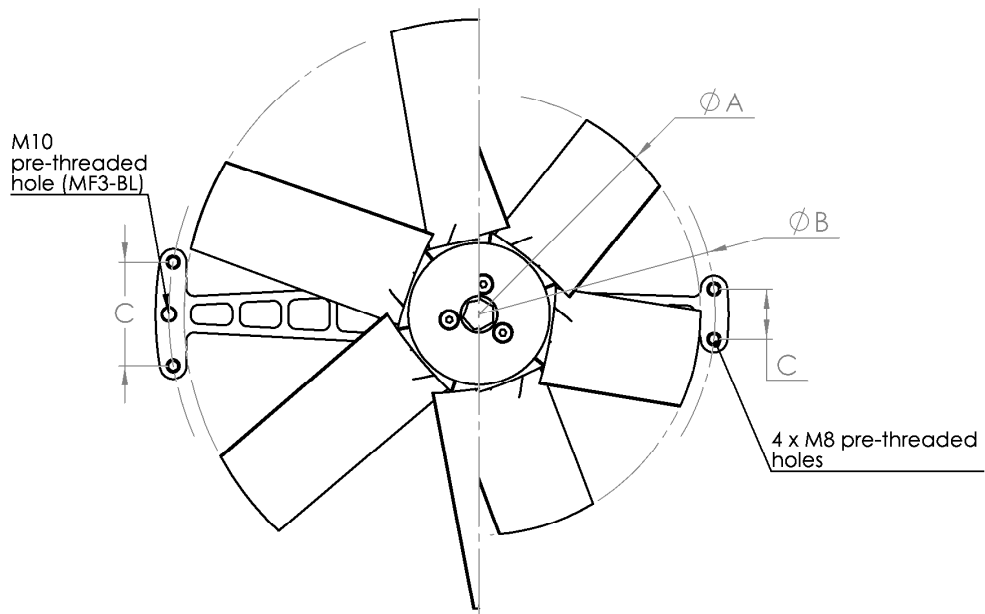
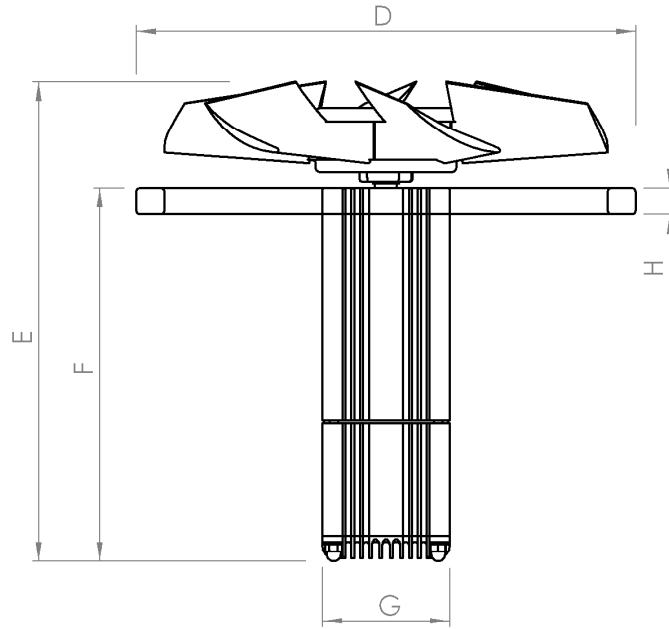
Figure 2 - Revised Impellor Mounting

Mounting:

The MFx-BL fan has pre-threaded mounting holes on the ears of the mounting bracket. The mounting and physical dimensions are shown in Figure 3

The MFx-BL fan may be mounted in any orientation. Note before mounting the flow direction, normally configured with the impeller on the downstream end of the fan.

The mounting bracket may be used in any orientation, however to maximise the rigidity of the installation in a marine environment, JEC recommends mounting the fan with the bracket in the vertical orientation.



	A	B	C	D	E	F	G	H
MF1-BL (300)	300	320	34	338	330	255	86	18
MF3-BL (400)	400	420	70	438	380	305	114	18
MF3-BL (500)	500	520	70	538	380	305	114	18

Figure 3 - Fan Mounting Dimensions (mm)

Electrical Connection

Power Supply:

The power supply cable must be connected to cabling rated for the maximum current draw of the fan. A suitable capacity fuse or circuit breaker must be fitted in the circuit to protect the wiring. Please refer to the technical specifications for maximum current draw.

The polarity of the power supply cable is identified by a marker tag on one core. In the example in photograph Figure 4, the positive core is identified. Please note carefully the polarity sign on the marker tag.

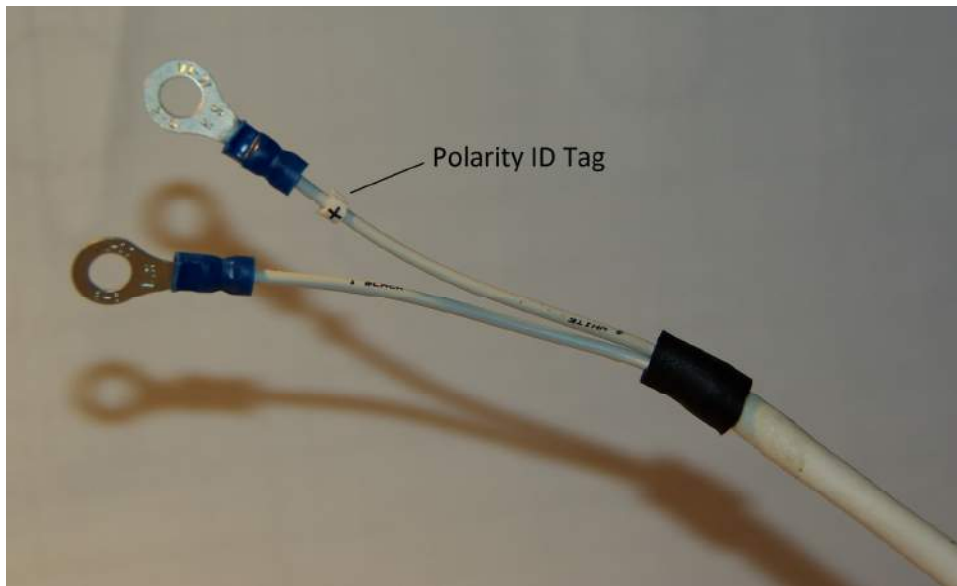


Figure 4 - Power Connection Identification

Speed Control:

The speed control signal cable is a two-core shielded cable. The potentiometer, if supplied is connected as shown in Figure 5.

Cable	Potentiometer	0-10V Signal
A	SUPPLY	SIGNAL
B	GROUND	GROUND
C	SIGNAL	SHIELD

Table 1 – Speed Control Cable ID – Refer to photographs for ID letters

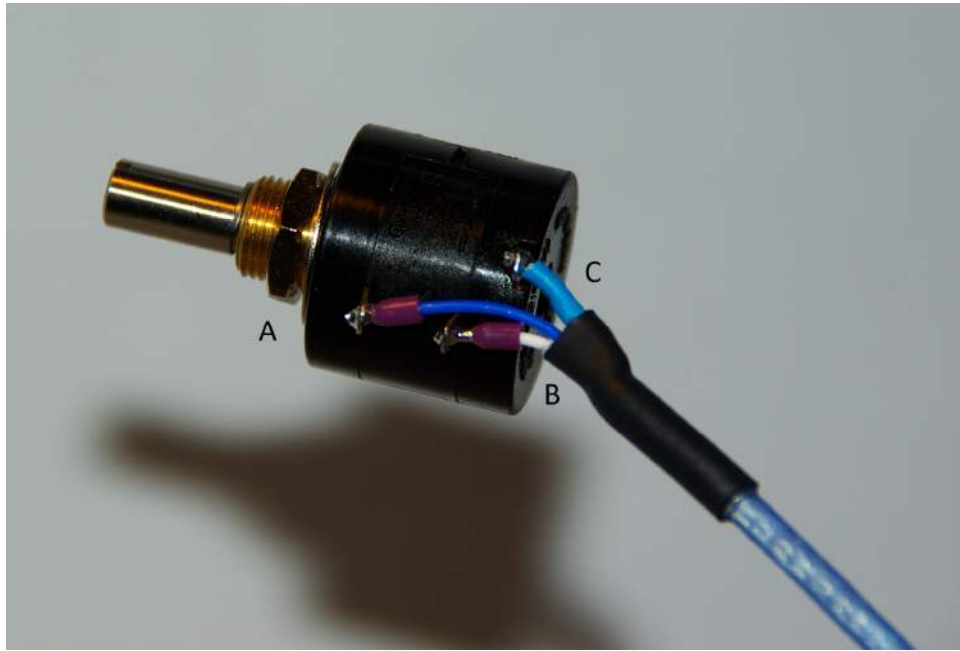


Figure 5 - Speed Control Potentiometer Connections

For speed control using the 0-10V signal option, the cable is connected as shown in Figure 6

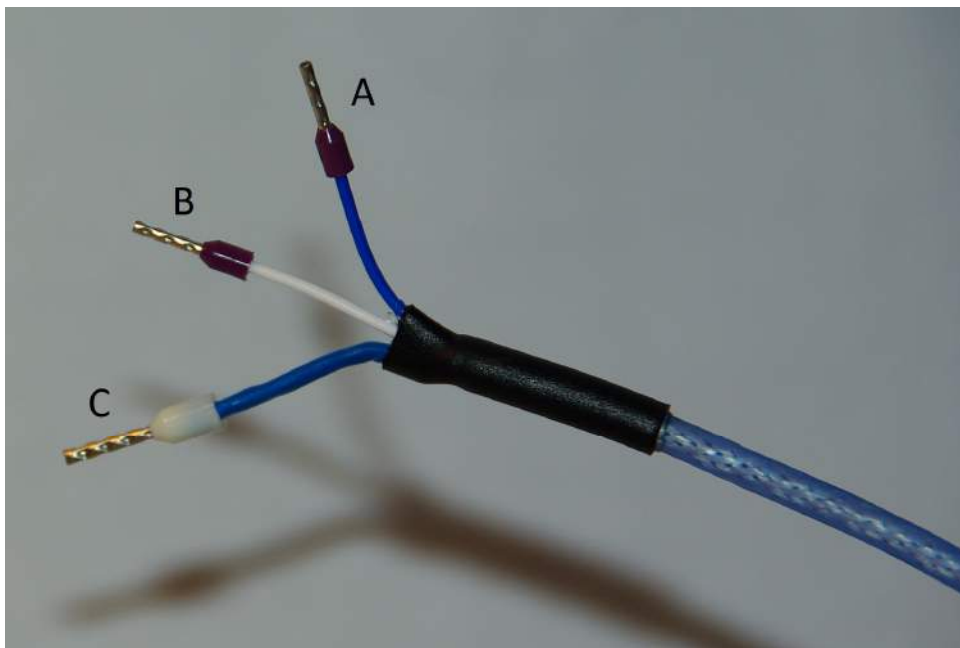


Figure 6 - Speed Control 0-10V Cable Connections

Operation

General

When the fan is powered, there is a small delay before the fan accelerates to operating speed.

Speed Adjustment:

The external speed adjustment can be operated when the fan is running or when switched off.

It is possible for fixed speed fan models to be adjusted for fan speed. Please contact JEC for further information regarding this modification.

Reversal:

Fans are shipped running in the correct direction for the supplied impeller. If necessary it is possible to reverse the fan rotation direction. Please contact JEC for further information regarding this modification.

Maintenance and Repair

The MFx-BL series fans require no periodic maintenance under normal usage conditions, however in an environment with heavy airborne saltwater spray it is advisable to clean the impellers from time to time to ensure best efficiency. One useful method is to carefully jet-wash the fan whilst it is running.

Replacement impellor components for damaged fan impellers are available. Please contact JEC for further details and to place your order

In the case of a non-functional fan, check that the input voltage and polarity are correct. Check also that the fan impeller is free to rotate. If these checks do not rectify the situation, the fan may be returned to JEC for repair. Please contact JEC for further details.

Contacts

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