

SINGLE STAGE CENTRIFUGAL PUMPS



**QUARTZ
SERIES**



SUBMERSIBLE DRAINAGE PUMP

Compact design, high performance and exceptional durability

EVOL TECHNOLOGIES has developed the Mercury (MC) series submersible drainage pump with greatly increased maximum submersion depth. To provide long-term durability, the pump body and motor are built of strong cast iron, and a high pressure resistant mechanical seal is used. The semi-open impeller constructed of high chromium alloy, combined with the ductile iron wear plate, adds to the durability.

The discharge channel is cast as part of the motor casing and is positioned strategically by a top outlet, providing good motor cooling. Built-in overheating protection is equipped with the hermetically sealed motor.

Energy Saving



Low Maintenance



Thermal Protection



Superior Durability



Rust-resistant housing



FEATURES



Horizontal Centrifugal Pump

Maximum Capacity	Up to 160 m ³ /h
Maximum Head	Up to 57 meters
Motor Power	1.5 kW (2 HP) to 15 kW (20 HP)
Power Supply *	Three phase 400 V ± 10 %, 50 Hz 380 V ± 10 %, 60 Hz
Insulation Class	F
Protection Class	IP68
Water Temperature	Up to 40 °C
Maximum Immersion Depth	Up to 25 m
Cable Length *	8 m

Customization is available upon request

APPLICATION

Highly effective motor competent for usage in a wide range applications:



Construction works



Mines, quarries, coal ore, slurries



Sewage treatment



General pumping



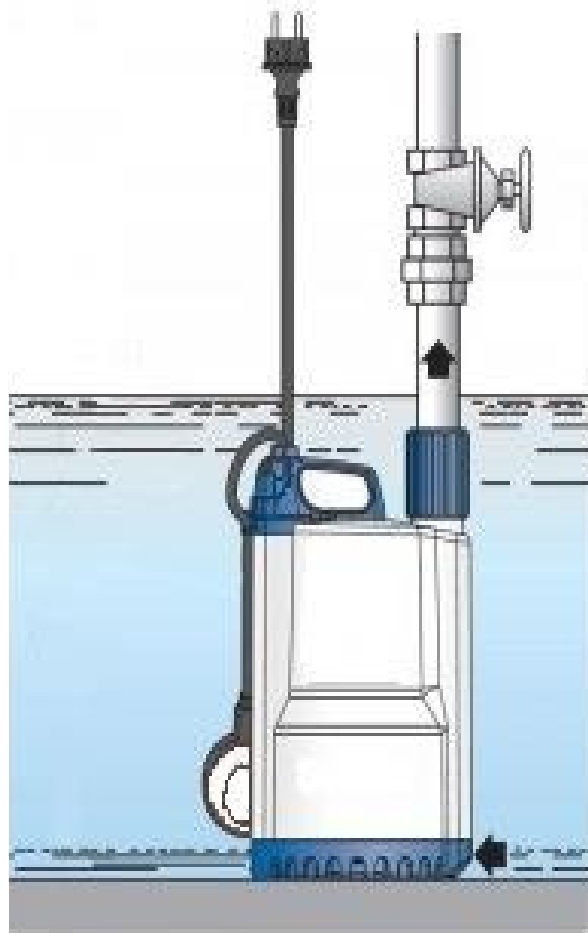
Product Description

INTRODUCTION

The submersible drainage pump is an electrical pump with a hermetically sealed motor closely connected to the body of the pump. The motor of the pump is connected to a cable that provides power to run the motor, and the pump housing extends to a pipe or hose leading to the surface. The pump is placed within fluid during operation. The MC series consists of a broad range of submersible drainage pumps with different dimensions and specifications to be suited for a wide range of applications.

As the pump is submerged, pump priming is not performed and cavitation is prevented as the water flows through the pump. At the same time, the pump can achieve low-noise performance as it operates under water. The submersible drainage pump is also efficient and energy saving as less energy is required to move the fluid into the pump with the help of water pressure.

The compact design of the submersible drainage pump makes it portable and easy to transport.

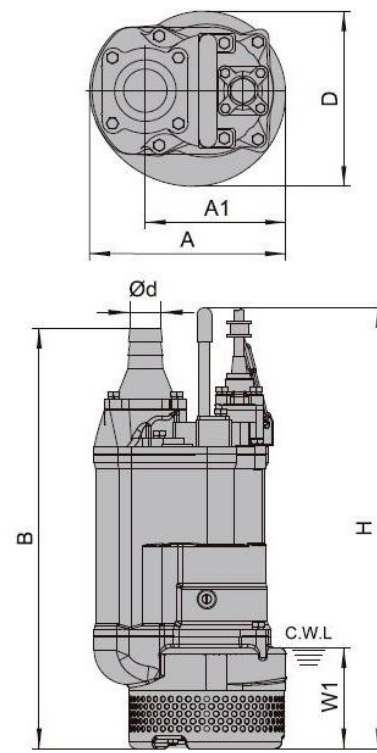
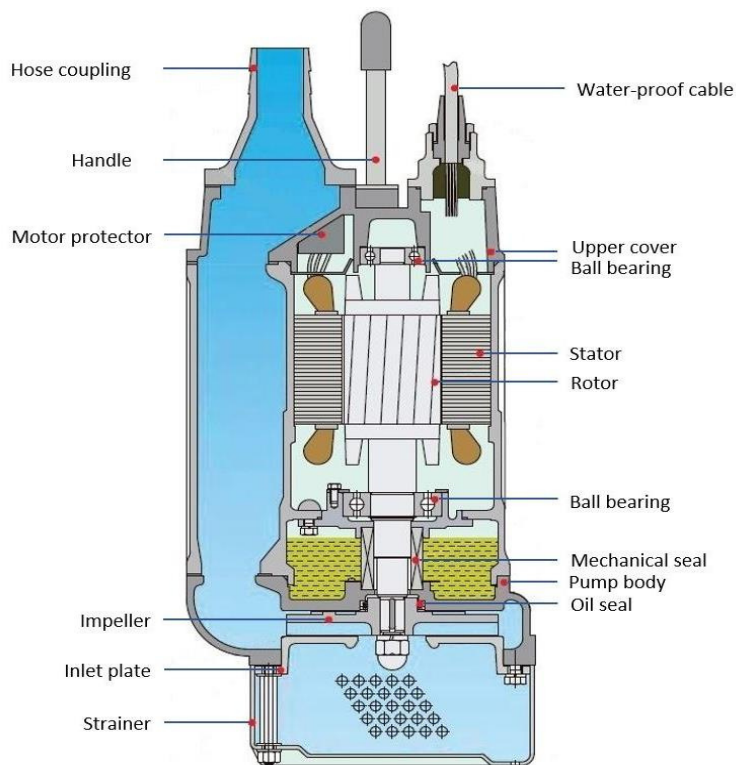


WORKING PRINCIPLE

The submersible pump transfers water to the surface by converting rotary energy into kinetic energy and finally into pressure energy.

During operation of the pump, the electric motor powers the rotation of the impeller, which is enclosed in the pump housing. Fluid enters the pump through the impeller axis. As the fluid flows out through the impeller vanes into the pump body, the rapidly turning impeller increases the fluid's velocity and pressure, which drives the fluid towards the pump discharge outlet at the surface.

Product Design and Specifications



W1 represents the continuous running water level.

Component Materials

Part Name	Material of Construction
Upper cover	Cast iron
Pump body	
Motor body	
Hose coupling	
Handle	Rubber and steel
Inlet plate	Ductile iron

Part Name	Material of Construction
Strainer	Steel
Impeller	High chrome alloy
Rotor	Shaft: AISI420SS
Mechanical seal	SiC-SiC/Carbon-SiC (≤ 2.2 kW) SiC-SiC/SiC-SiC (≥ 3.7 kW)

* Other special materials available upon request.

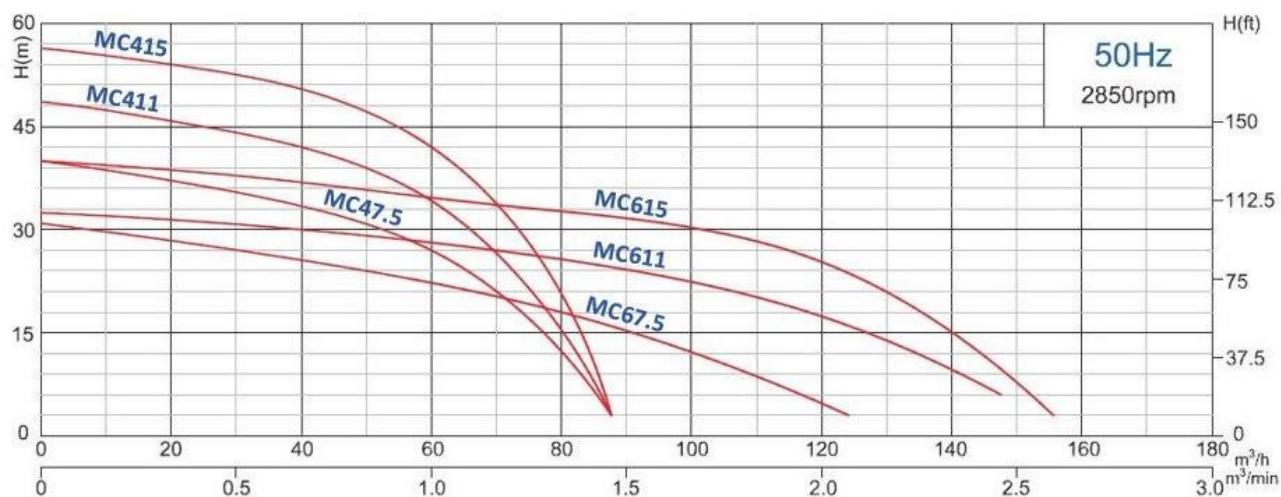
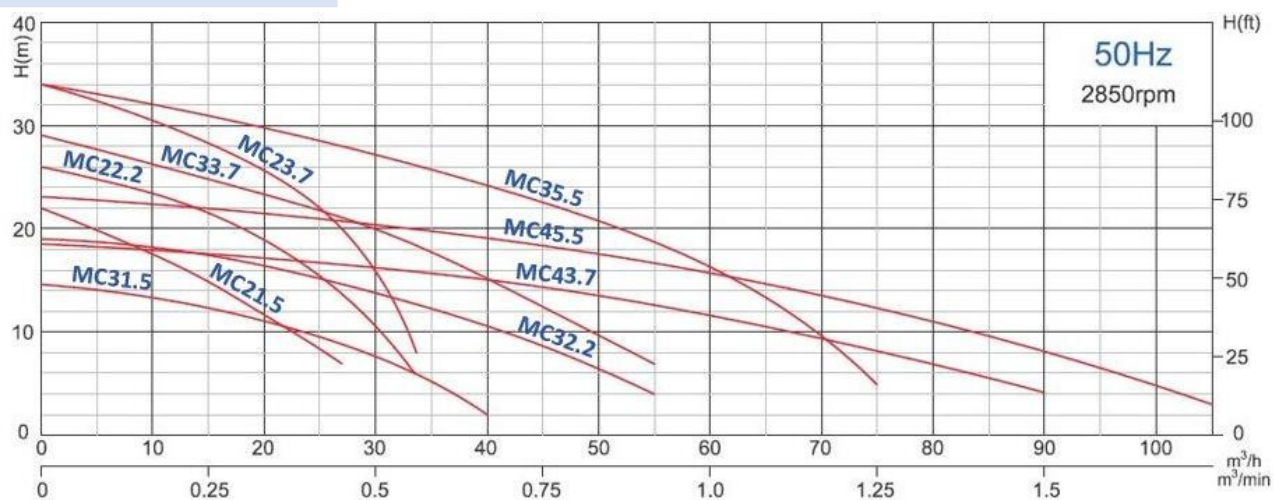
Model Dimensions and Weights

Model (50/60Hz)	d	A	A1	B	D	H	W1	N.W	G.W	Packing dimension mm
	mm	mm	mm	mm	mm	mm	mm	Kg	Kg	
MC21.5	50	235	173	535	216	505	120	36	40	610×265×265
MC31.5	80	235	173	535	216	505	120	36	40	610×265×265
MC22.2	50	235	173	535	216	505	120	39	43	610×265×265
MC32.2	80	235	173	535	216	505	120	39	43	610×265×265
MC23.7	50	283	208	628	252	629	150	63	68	710×320×295
MC23.7	80	283	208	628	252	629	150	63	68	710×320×295
MC43.7	100	283	208	642	252	629	150	63	68	710×320×295
MC35.5	80	283	208	671	252	590	150	77	84	750×350×360
MC45.5	100	283	208	686	252	590	150	77	84	750×350×360
MC47.5	100	330	240	764	314	676	190	106	116	835×365×385
MC67.5	150	330	240	790	314	676	190	108	119	865×365×385
MC411	100	373	255	807	350	695	190	136	148	885×415×435
MC611	150	373	255	807	350	695	190	139	150	885×415×435
MC415	100	373	255	842	350	755	190	144	158	935×415×435
MC615	150	373	255	842	350	755	190	146	160	935×415×435



Performance Curves and Technical Data

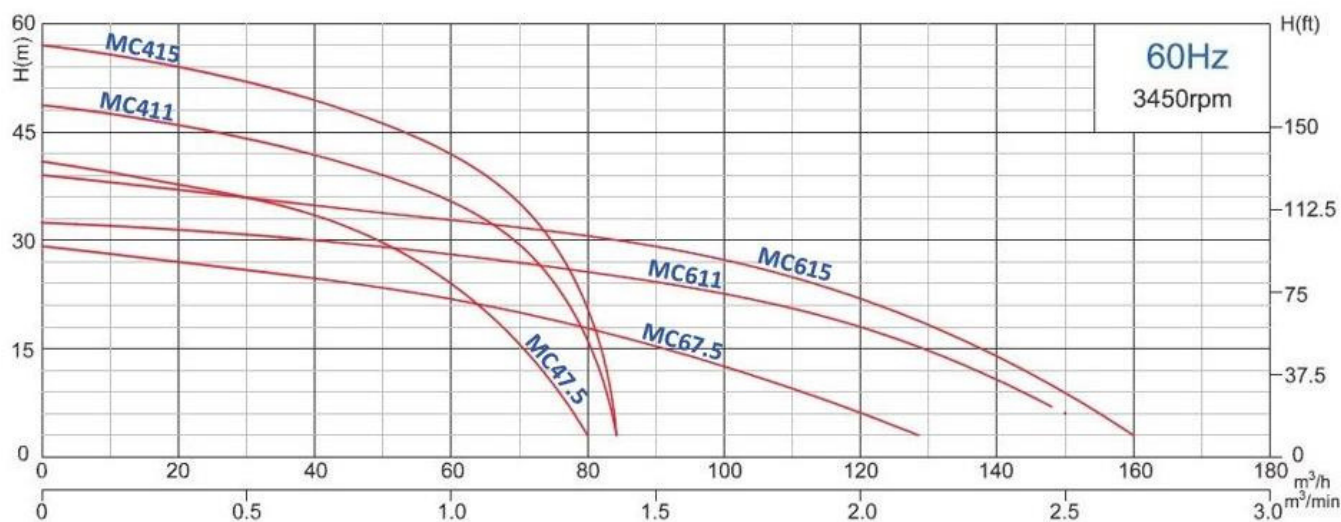
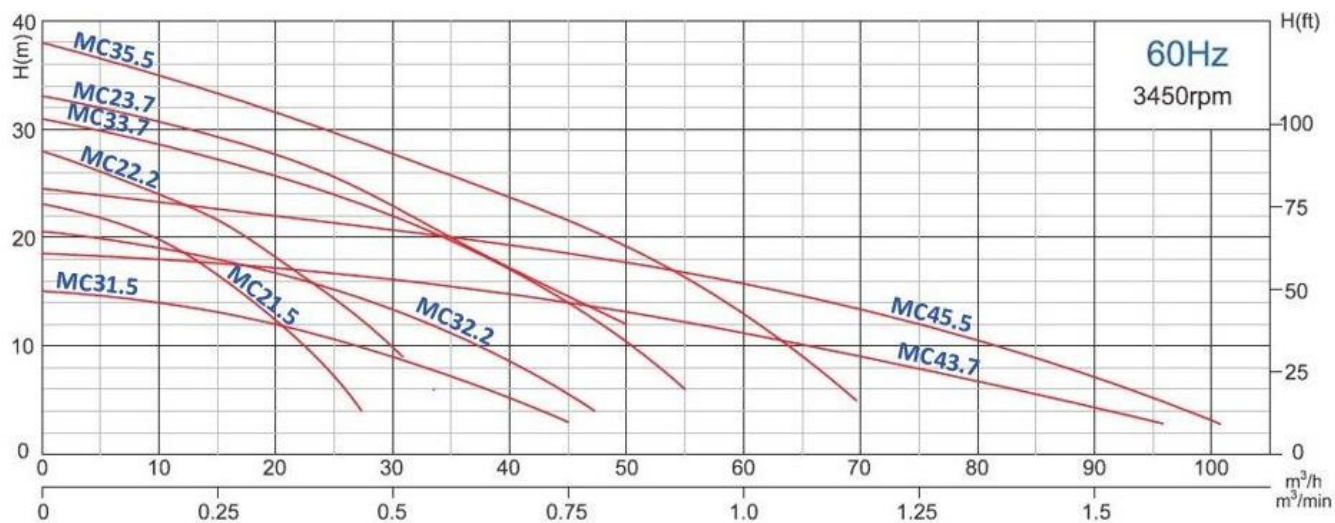
50 Hz Models



Model (50 Hz)	Outlet	Motor Power		Rated Current (400V)	Rated Capacity		Rated Head	Max capacity		Max Head	Impeller Passage
	mm	kW	HP	A	m3/h	m3/min	m	m3/h	m3/min	m	mm
MC21.5	50	1.5	2	3.5	15	0.25	15	27	0.45	22	8.5
MC31.5	80	1.5	2	3.5	30	0.50	8	40	0.67	14.5	8.5
MC22.2	50	2.2	3	5.0	18	0.30	20	33	0.55	26	8.5
MC32.2	80	2.2	3	5.0	36	0.60	11	55	0.92	19	8.5
MC23.7	50	3.7	5	7.7	12	0.20	30	33	0.55	34	8.5
MC23.7	80	3.7	5	7.7	30	0.50	20	55	0.92	29	8.5
MC43.7	100	3.7	5	7.7	60	1.0	11.5	90	1.50	18.5	8.5
MC35.5	80	5.5	7.5	11.4	36	0.60	25	75	1.25	34	8.5
MC45.5	100	5.5	7.5	11.4	60	1.0	16	105	1.75	23	8.5
MC47.5	100	7.5	10	15	48	0.80	30	84	1.40	40	11.5
MC67.5	150	7.5	10	15	90	1.60	15	124.8	2.08	31	19.5
MC411	100	11	15	22	60	1.0	35	84	1.40	48.5	11.5
MC611	150	11	15	22	102	1.70	22	147	2.45	32	19.5
MC415	100	15	20	29.5	60	1.0	42	84	1.40	56	11.5
MC615	150	15	20	29.5	102	1.70	30	156	2.60	40	19.5

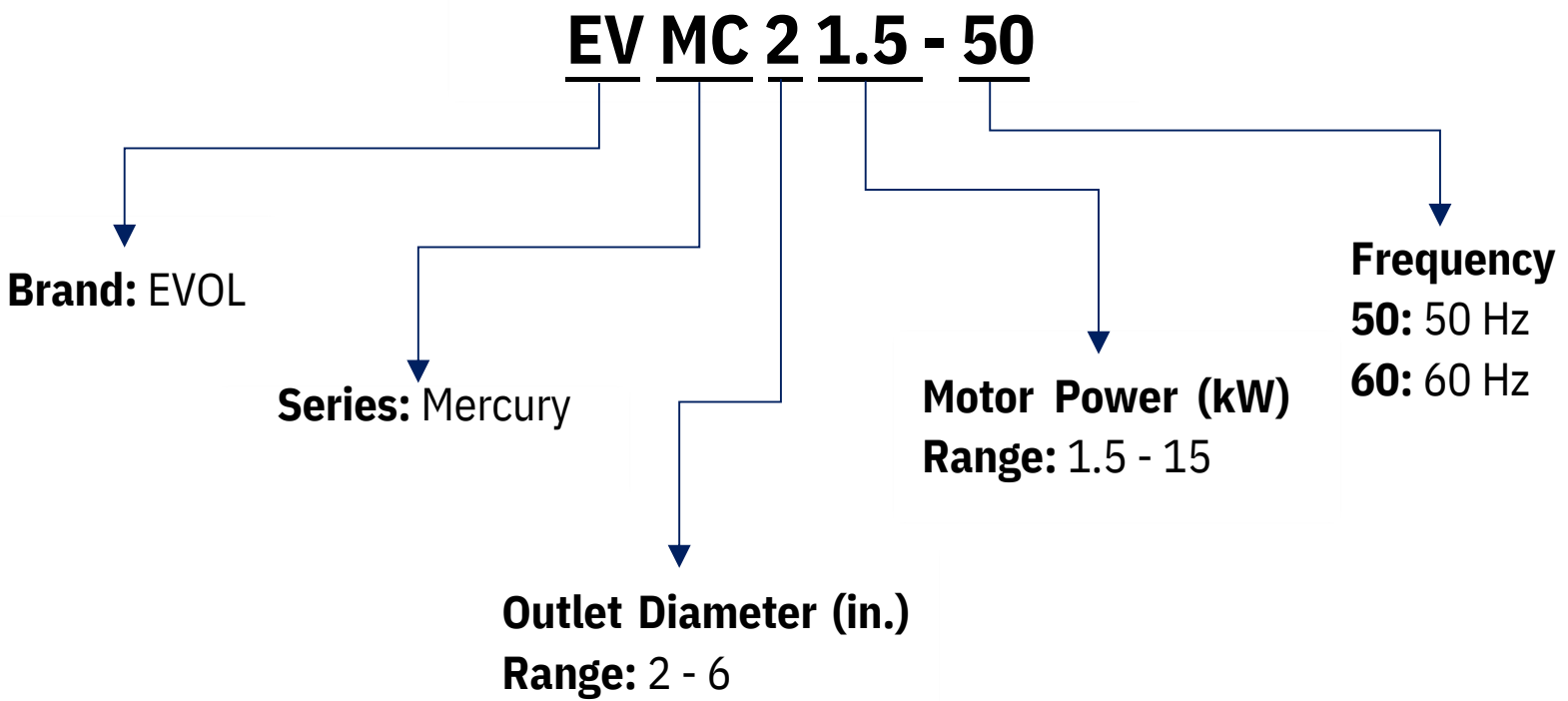
Performance Curves and Technical Data

60 Hz Models



Model (60 Hz)	Outlet	Motor Power		Rated Current (400V)	Rated Capacity		Rated Head	Max capacity		Max Head	Impeller Passage
	mm	kW	HP		A	m ³ /h		m ³ /min	m		
MC21.5	50	1.5	2	3.5	15	0.25	16.5	27	0.45	23	8.5
MC31.5	80	1.5	2	3.5	30	0.50	9	45	0.75	15	8.5
MC22.2	50	2.2	3	5.1	18	0.30	20	31	0.52	28	8.5
MC32.2	80	2.2	3	5.1	36	0.60	13	47	0.78	20.5	8.5
MC23.7	50	3.7	5	8.0	12	0.20	30	50	0.83	33	8.5
MC23.7	80	3.7	5	8.0	30	0.50	22	55	0.92	31	8.5
MC43.7	100	3.7	5	8.0	60	1.0	11.5	96	1.60	18.5	8.5
MC35.5	80	5.5	7.5	11.6	36	0.60	25	69	1.15	38	8.5
MC45.5	100	5.5	7.5	11.6	60	1.0	16	102	1.70	24.4	8.5
MC47.5	100	7.5	10	15.4	48	0.80	30	80	1.33	41	11.5
MC67.5	150	7.5	10	15.4	90	1.60	15	127	2.12	31	19.5
MC411	100	11	15	22.5	60	1.0	35	84	1.40	48.5	11.5
MC611	150	11	15	22.5	102	1.70	22	147	2.45	32	19.5
MC415	100	15	20	30	60	1.0	42	84	1.40	57	11.5
MC615	150	15	20	30	102	1.70	27	160	2.67	39	19.5

Model Number





EVOLTechnologies

www.evol-technologies.com

**Address: Lot 1739, Eastwood Valley Industrial Park,
Block 3, Jalan Miri By-Pass, 98000 Miri, Sarawak,
Malaysia.**

Tel: +085-418832

Fax: +085-433801

Email: enquiry@evol-technologies.com