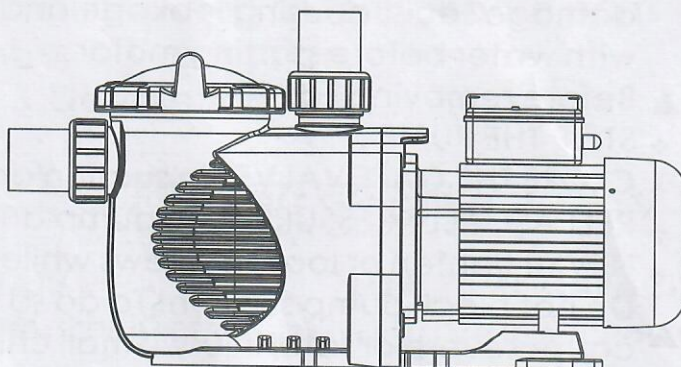




FM Series Centrifugal Pump Installation & Operation Instructions



INSTALLATION

Only qualified, licensed personnel should install pump and wiring.

IMPORTANT ELECTRICAL

Electrical Contractors Please Note: The pumps must be wired to the main power supply through an approved technicians & contactor.

Pump Mount Must:

- ❖ Mounted on solid firm base.
- ❖ Place pump close to the pool. Don't install the pump at more than 3M geometrical height from water level)
- ❖ Allow for gate valves in suction and discharge piping.
- ❖ Have adequate floor drainage to prevent flooding.
- ❖ Be protected from excess moisture.
- ❖ Have adequate access for servicing pump and piping.

⚠ WARNINGS:

- 1) This pump is not intend for use by persons (including children) with reduced physical, sensory or mental capabilities, or lack of experience and knowledge, unless they have been given supervision or instruction concerning use of the pump by a person responsible for their safety. Children should be supervised to ensure that they do not play with the pump.
- 2) If the supply cord is damaged, it must be replaced by the manufacturer, its service agent or similarly qualified persons in order to avoid a hazard.
- 3) The pump is to be connected through a residual current device (RCD) having a rated residual operating current not exceeding 30mA.
- 4) Appliance only for outdoor used. (Pump shelter recommended)

NOTICE:

Pump suction and discharge connections have moulded in thread stops, **DO NOT** try to screw pipe in beyond these stops.



OPERATION



- ▲ **NEVER** dry run the pump! Running pump dry may damage seals, causing leakage and flooding! Fill pump with water before starting motor.
- ▲ Before removing lid:
 - ❖ STOP THE PUMP .
 - ❖ CLOSE THE GATE VALVES in suction and discharge pipes.
 - ❖ RELEASE ALL PRESSURE from pump and piping system.
 - ❖ NEVER tighten or loosen screws while pump is operating. Do not block pump suction! To do so with body may cause severe or fatal injury. Small children using pool must ALWAYS have the adult Supervision!

Priming Pump:

- ❖ Release all air from filter and piping system: see filter owner manual.
- ❖ In a flooded suction system (water source higher than pump), pump will prime itself when suction and discharge valves are opened.
- ❖ If pump is not in a flooded suction system, unscrew and remove the cover; fill water into the pump.
- ❖ Clean and inspect Ring; re-install the cover.
- ❖ Replace the cover; turn clockwise to tighten cover.

NOTICE: Tighten the cover by hand only. Turn the pump on a run until prime is established. Priming time will depend on vertical length of suction lift and horizontal length of suction piping.

ROUTINE MAINTENANCE

The only routine maintenance needed is inspection/cleaning of the basket. Debris or trash that collects in basket, will close off water flow through the pump. Follow instructions below to clean prefilter:

- 1) Stop pump, close gate valve in suction and discharge, and release all pressure from system before proceeding.
- 2) Unscrew prefilter lid (turn counterclockwise).
- 3) Remove strainer basket and clean. Be sure all holes in basket are clear, flush basket with water and replace in prefilter with large opening at pipe connection port (between ribs provided). If basket is replaced backwards cover will not fit on the trap body.
- 4) Clean and inspect lid Ring; reinstall on the cover.
- 5) Clean the nut for lid. To help keep lid from sticking, tighten with hand only.
- 6) Prime pump (see priming instructions above)



SERVICE & REPAIR PARTS

Contact the local dealer for servicing and ordering spare parts. Give the following information when ordering spare parts:

- 1) Product ID Number & Description.
- 2) Part ID Number & Description.

TROUBLE SHOOTING

MOTOR DOES NOT START

- 1) Switch or circuit breaker in off position
- 2) Fuses blown or thermal overload open
- 3) Locked motor shaft
- 4) Motor windings burned out
- 5) Defective starting switch inside single phase motor
- 6) Disconnected or defective wiring
- 7) Low voltage

PUMP DOES NOT REACH FULL SPEED

- 1) Low voltage
- 2) Pump connected for wrong voltage

MOTOR OVERHEATS (protector trips)

- 1) Low voltage
- 2) Motor windings connected for wrong voltage on dual voltage model
- 3) Inadequate ventilation

PUMP DELIVERS NO WATER

- 1) Pump is not primed
- 2) Closed valve in suction or discharge line
- 3) Leakage or air into suction system
- 4) Impeller clogged

LEAKAGE OF WATER AT SHAFT

- 1) Shaft seal requires replacement

LOW PUMP CAPACITY

- 1) Valve in suction or discharge line partly closed
- 2) Suction or discharge line partly plugged
- 3) Suction or discharge line too small
- 4) Dirty basket in skimmer
- 5) Dirty sand filter
- 6) Impeller clogged

HIGH PUMP PRESSURE

- 1) Discharge valve or inlet fittings closed too much
- 2) Return lines too small
- 3) Filters need backwashing

NOISY PUMP AND MOTOR

- 1) Dirty basket in skimmer or prefilter
- 2) Worn motor bearings
- 3) Dirt around the impeller and impeller cover
- 4) Valve in suction line partly closed
- 5) Suction line partly plugged
- 6) Vacuum hose plugged or too small
- 7) Pump not supported properly

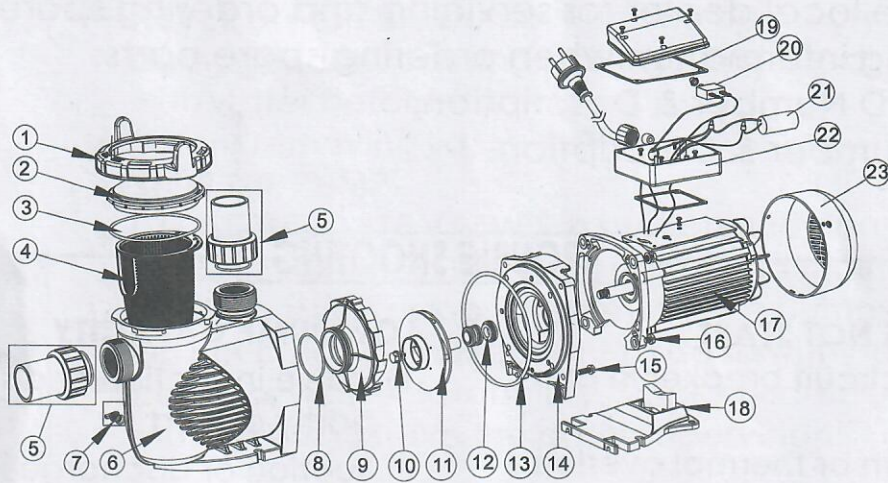
AIR BUBBLES AT INLET FITTINGS

- 1) Leakage of air into suction line at connections or valve stem
- 2) Lid O-ring needs replacing
- 3) Low water level in pool

NOTE: If the recommendations in the trouble shooting portion of this manual do not solve your particular problem(s), please contact your local dealer for servicing.



PUMP PARTS



Key No.	Part No.	Description	Qty	Key No.	Part No.	Description	Qty
1	01021143	Nut For Lid	1	14	01021145	Flange	1
2	01041057	Transparent Lid	1	15	89020720	M8*35 Screw with Washer For Motor	4
3	02010253	O-Ring for Lid	1	16	03011075	M8*30 Screw	4
4	01112080	Basket	1	17	04020116	Motor YYD-8022E For FM075 220V 50Hz/60Hz	1
5	89023801	1.5"Union	2	17	04020117	Motor YYD-8032E For FM100 220V 50Hz/60Hz	1
6	01021144	Pump body	1	17	04020118	Motor YYD-8042E For FM150 220V 50Hz/60Hz	1
7	89021307	Drain Plug With O-ring	2	17	04020119	Motor YYD-8052E For FM200 220V 50Hz	1
8	02010245	O-Ring For Diffuser	1	17	04020120	Motor YYD-8062E For FM300 220V 50Hz	1
9	01112081	Diffuser	1	17	04021123	Motor YYD-8052EE For FM200 220V 60Hz	1
10	89020719	Screw for impeller with O-ring	1	17	04021124	Motor YYD-8062EE For FM300 220V 60Hz	1
11	01311057	Impeller For FM075 (50Hz)	1	18	01112082	Base	1
11	01311047	Impeller For FM100 (50Hz)	1	18	02010211	Arch Cushion for Base	1
11	01400103	Impeller For FM150 (50Hz)	1	19	02011073	Arch Cushion for Cable Box	1
11	01400100	Impeller For FM200 (50Hz)	1	20	04015015	Overload Switch PE77-8A/250VAC for FM150	1
11	01400101	Impeller For FM300 (50Hz)	1	20	04015012	Overload Switch PE77-10A/250VAC for FM200	1
11	01311059	Impeller For FM075 (60Hz)	1	20	04016037	Overload Switch PE77-13A/250VAC for FM300	1
11	01311057	Impeller For FM100 (60Hz)	1	21	04016012	Capacitor for SS/SD/SQ/SP/ST100-120 & SC075 & FM075 Pump	1
11	01311058	Impeller For FM150 (60Hz)	1	21	04016014	Capacitor for SB/SR10,SB15 & SC100-150 & FM100-150 Pump	1
11	01311047	Impeller For FM200 (60Hz)	1	21	04016015	Capacitor for SB/SR20 & SC/EPH200 & FM200 Pump	1
11	01400103	Impeller For FM300 (60Hz)	1	21	04016016	Capacitor for SB/SR30 EPH300,EPH400 & FM300 Pump	1
12	04015065	3/4" Mechanical seal	1	22	89022112	Cable Box	1
13	02010246	O-Ring for Flange	1	23	01321031	Fan Cover	1