

TWM SAND FILTER SYSTEM

16" (520-1610) • 19" (520-1910) • 22" (520-1700)

SAVE THESE INSTRUCTIONS • Read all instructions prior to installation • **IMPORTANT:** Follow all national and local building and safety codes

WARNING: A GFCI is required. System will require a 110Volt / 20 Amp service. **DO NOT** use extension cords. Use will void warranty on pump motor. The pool equipment should be located between the pool skimmer and return line. The filtration system should not be installed less than 2 ft. and no more than 5 ft. from the pool. The TWM Sand Filter System needs to be on a completely flat / level surface (patio block, cement slab, etc.).

INSTALLATION

1. Position Equipment Base (#19) on a level, secure surface. Using Bolt (#17) and Washer (#16) position Support Mount (#18) between the Equipment Base and Sand Filter Body (#12) and secure the Sand Filter Body. **DO NOT** over-tighten. There is no need to disassemble filter or pump assemblies.
 2. Open box and remove pump and trap assemblies. Open pump trap lid and remove 1 ½" gasket. Position gasket into end of pump trap union nut. Hand tighten union nut onto suction side of pump. **DO NOT** over-tighten.
 3. Place pump on left side of filter. Secure pump to base with 4 screws and washers provided.
 4. Remove Split-Nut assembly (#6 & 7) from top of filter tank. **DO NOT** lose screws.
IMPORTANT: To prevent damage to internal filter lateral components, fill filter tank half-full with water prior to adding sand. With sand fill guide (#10) positioned in filter tank opening, add only recommended #20 grade silica sand (see Fill Chart). Remove sand fill guide.
- IMPORTANT:** Clean and remove all debris from filter tank flange after adding sand.
5. Assure that O-Ring (#9) is positioned onto multi-port throat.
 6. Install Multi-Port Valve with inlet and outlet ports facing pool. Top of internal stand pipe seats directly into Multi-Port Valve. Push Multi-Port Valve evenly onto tank flange. **NOTE:** Make sure tank flange is clear of any sand debris.
 7. Install Split-Nut assembly (#6 & 7) by threading Split-Nut clockwise until hand tight. Then use collar wrench to tighten further.
 8. To use collar wrench (#5) place on collar assembly use both hands to turn wrench ½ to ¾ of a turn to secure Multi-Port Valve to filter body.
 9. Apply Teflon tape (4 wraps ideal) to Pressure Gauge (#1). Thread into Multi-Port Valve.
 10. Install Waste Adapter Fitting (#3) with O-Ring for Waste Adapter (#2).

SYSTEM START-UP

1. Fill pool until water is halfway up length of skimmer throat.
2. Make sure pump trap is full of water. Slightly loosen trap lid to relieve pressure and allow water to fill trap. Re-tighten lid.
3. Make sure Multi-Port Valve handle is in Filter position.
4. Plug pump into GFCI outlet and turn pump on. Turn two (2) speed pumps to high.
5. Make note of start-up pressure on gauge.

WINTERIZATION

1. Backwash filter system completely. See Cleaning Instructions.
2. Run a filter cleaning chemical through filter system as per cleaner instructions.
3. Turn pump off. Disconnect hoses from skimmer and return fitting.
4. Remove Drain Cap (#15) from bottom of filter tank. Do not remove Self-Threading Drain Screen (#13). To Remove Drain Screen (#13), use Drain Cap (#14) turn it around and use as tool to remove.
5. Unscrew drain plugs located at bottom of pump trap and front of pump housing. Let water drain completely.
6. Disconnect filter to pump connection. Loosen union connection on discharge of pump and remove from pump. **DO NOT** lose 2" union gasket. Lift and remove pump and pump base from filter base. Store inside.

CLEANING INSTRUCTIONS

NOTE: When pressure gauge reading is 5 PSI or higher than original starting pressure, the filter needs to be cleaned. The TWM Sand Filter System features our exclusive 7-Position Multi-Port Valve, which ensures safe and simple filter maintenance.

! **Pressurized vessel. Never attempt to loosen or open Split-Nut Assembly (#6 & 7) while system is running. It could cause severe injury or harm to user.**

1. Turn off pump.
2. Attach **Backwash** hose (optional) to waste port adapter.
3. Rotate Multi-Port Valve handle to **Backwash** position. **Turn pump on** and run for 90 second intervals or until discharge water is clear. **Turn pump off.**
4. Rotate Multi-Port Valve handle to **Rinse** position. **Turn pump on** for 30 seconds.
5. Repeat steps 3 & 4 until all discharge water is clear while pump is turned on.
6. **Turn pump off.** Rotate Multi-Port Valve handle to **Filter** position. **Turn pump on.** Valve is now in normal operating position.

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TROUBLESHOOTING

MOTOR DOES NOT START:

- Make sure motor is plugged in
- Circuit breaker in OFF position
- Thermal Overload in tripped position
- Wiring installation incorrect
- Incorrect line voltage
- Defective wiring

NO WATER FLOW:

- Obstruction of suction or return line
- Clogged impeller
- Clogged basket
- Dirty sand

INADEQUATE FILTERING:

- Pump incorrectly mounted
- Hose fitting partially closed
- Clogged trap basket
- Sand level too low
- Inadequately cleaned system
- Chemical imbalance
- Inadequate system pressure

EXCESSIVE PUMP NOISE:

- Worn bearings
- Suction line clogged

THERMAL OVERLOAD TRIPS:

- Low voltage
- Wiring Installation incorrect
- Dual voltage pumps mis-wired
- Inadequate ventilation

Sand Fill Chart:	
16" Model	- 50 lbs.
19" Model	- 100 lbs.
22" Model	- 150 lbs.
26" Model	- 200 lbs.

REPLACEMENT PARTS

Item	Part No.	Description
1	830-3000	0-60 PSI Gauge
2	805-0224	O-Ring for Waste Adapter
3	425-1928	Waste Adapter Fitting
4	WVS003	Multi-Port Valve Assembly
5	505-1970	Collar Wrench
6	718-1960	Split Nut - Sand Filter
7	819-0015	1/4" Screw - 20 PPH x 2"
8	820-0013	Serrated Hex Nut - 1/4" - 20
9	805-0435	O-Ring
10	502-2011	Sand Fill Guide
11	505-1960	Threaded Sleeve for Split Nut
12	515-1601	16" Sand Filter Body
	515-1901	19" Sand Filter Body
	515-2001	22" Sand Filter Body
	515-2061	26" Sand Filter Body
13	602-5310	Self-Threading Drain Screen
14	805-0224	Fitting O-Ring
15	602-5301	Drain Cap & Removal Tool
16	820-9001	Washer for Support Bolt (1)
17	819-0020	3/8" Support Bolt - 16 x 1 1/4" Hex (1)
18	218-6680	Support Mount
19	672-1000	Equipment Base
20	820-9001	Pump Washer (4)
21	819-9001	Screw No.12 x 3/4" Hex Washer (4)
22	3410310-15	Center Discharge - 3/4 HP - 1-Speed
23	711-4000	1 1/2" Gasket
24	417-4001	1 1/2" Tail Piece Slip
25	415-4001	1 1/2" Union Nut
26	805-0436	O-Ring - Lid
27	319-2160	6" Pump Trap Body
28	319-3230	6" Basket Assembly (not shown)
29	319-3260	6" Trap Lid
30	417-4161	1 1/2" Buttress x 1 1/2" MPT
--	810-0092H	Instruction Sheet

Multi-Port Valve Ports

