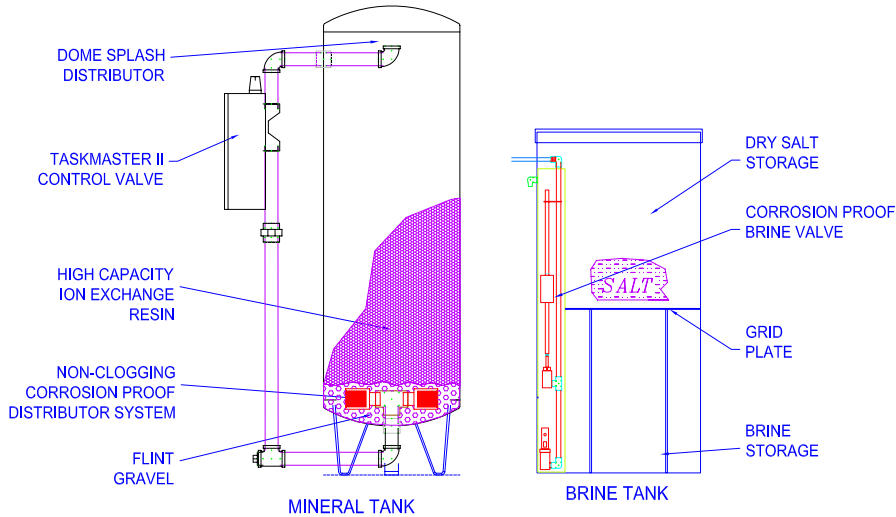


MF Series Water Softeners



STANDARD

TASK MASTER II™ - 1 1/2" VALVE - SIDE MOUNT
 6-DAY TIMER
 100 PSI EPOXY LINED AND COATED CARBON STEEL MINERAL TANKS
 ACCUMATIC™ BRINE SYSTEM.
 RESIN POLYSTYRENE 8% DVB CL
 MULTIPLE POINT ABS DISTRIBUTOR
 110V, 60HZ, 1Ø

MF SERIES APPLICATION TABLE					
Model¹	150	180	240	300	450
Mineral Tank	20x54	20x54	24x54	30x60	30x60
Resin Volume (ft ³)	5	6	8	10	15
Gravel (lbs)	100	100	150	250	250
Brine Tank	24x40	24x40	24x50	24x50	30x50
Salt Storage (lbs)	500	500	580	580	900
Brine Valve (in)	3/8	3/8	3/8	3/8	1/2
Capacity (Kgr)	153	196	245	293	432
Salt per Regen (lbs)	66	106	106	106	145
Continuous Flow ² (gpm)	50	50	61	66	64
Peak Flow ³ (gpm)	75	75	81	84	81
Backwash Rate ⁴ (gpm)	10	10	15	25	25
Height ⁵ (in)	69 1/4	69 1/4	70 1/2	81 1/4	81 1/4
Depth (in)	31 1/4	31 1/4	35 1/4	41 1/4	41 1/4
Width (in)	50	50	54	60	74
Twin Width ⁶ (in)	76	76	84	102	110
Single Weight (lbs)	817	870	1069	1497	1815
Twin Weight ⁶ (lbs)	1577	1683	2081	2937	3520

OPTIONS

ASME CODE TANKS
 HIGH TEMPERATURE
 7-DAY TIMER
 DEMAND INITIATION
 TWIN CONFIGURATION WITH TIMERS
 TWIN ALTERNATING WITH EDRII AND PW SERIES
 METER
 SHUT OFF KIT (SOK) TO PREVENT BYPASS DURING REGENERATION
 PRESSURE GAUGE AND TEST TAP KIT
 SKID MOUNTING
 220V, 50HZ, 1Ø

OPERATING CONDITIONS

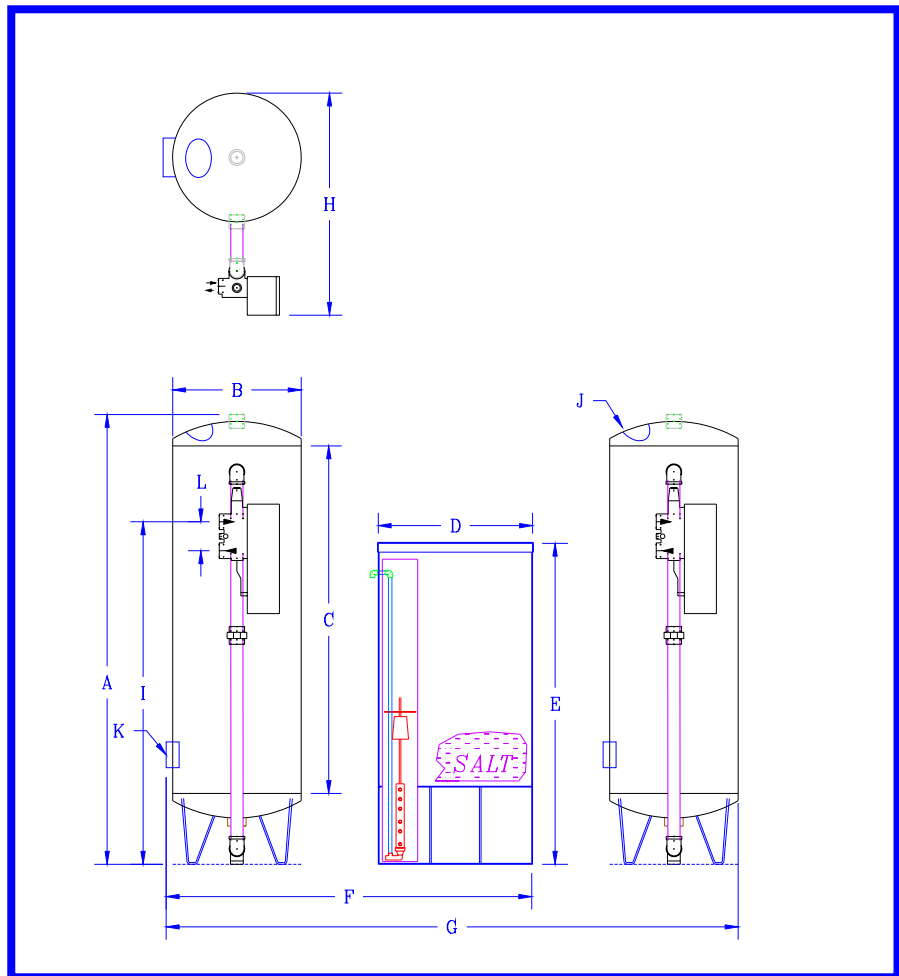
25 TO 100 PSI ♦ 100°F
 MAX TEMP

MF SERIES DIMENSIONS

MF SERIES DIMENSIONS - INCHES												
Model	A	B	C	D	E	F	G	H	I	J	K	L
MF 150	69 ¼	20	54	24	50	50	76	31¼	57	4x6	4x6	4 ½
MF 180	69 ¼	20	54	24	50	50	76	31¼	57	4x6	4x6	4 ½
MF 240	70 ½	24	54	24	50	54	84	35 ¼	58	4x6	4x6	4 ½
MF 300	81 ¼	30	60	24	50	60	102	41 ¼	66	4x6	4x6	4 ½
MF 450	81 ¼	30	60	30	60	74	110	41 ¼	66	4x6	4x6	4 ½

MF SERIES DIMENSIONS - CENTIMETERS												
Model	A	B	C	D	E	F	G	H	I	J	K	L
MF 150	175.9	50.8	137.2	61.0	127.0	127.0	193.0	79.4	144.8	10.2x15.2	10.2x15.2	11.4
MF 180	175.9	50.8	137.2	61.0	127.0	127.0	193.0	79.4	144.8	10.2x15.2	10.2x15.2	11.4
MF 240	179.1	61.0	137.2	61.0	127.0	137.2	213.4	89.5	147.3	10.2x15.2	10.2x15.2	11.4
MF 300	206.4	76.2	152.4	61.0	127.0	167.6	259.1	104.8	167.6	10.2x15.2	10.2x15.2	11.4
MF 450	206.4	76.2	152.4	76.2	152.4	188.0	279.4	104.8	167.6	10.2x15.2	10.2x15.2	11.4

NOTE:
A – HEIGHT⁵,
H – DEPTH,
F – SINGLE
WIDTH,
G – TWIN WIDTH⁶
SPECIFICATIONS
LISTED ARE NOT
SKID MOUNTED
SYSTEMS.
SKID DIMENSIONS
GIVEN UPON
REQUEST.



MF SERIES SPECIFICATION

Mineral Tank (Standard Non Code Vessels). The non-code vessel shall be A36 carbon steel or better rated at 100 psi working pressure designed to a factor of safety of 3.0. The inlet and outlet shall be 3000 psi NPT full couplings. The inlet shall be in the side wall and the outlet shall be in the center of the tank bottom shell. Each tank shall have a top center fitting. Tanks 36" Ø and larger shall have lifting lugs. Tanks 20, 24, and 30" Ø inch tanks shall have a 4" x 6" handhole in the side shell and in the top head. Tanks 36" Ø and larger shall have a 4" x 6" handhole in the top dome and an 11" x 16" or larger manway in the side shell.

Mineral Tank (Optional Code Vessels). ASME code stamped tanks shall be available. Tank shall be clearly specified as code or non-code with a specified working pressure. Tanks "built to ASME code but not stamped" shall not be acceptable as ASME code. An ASME U1 form shall be provided with each ASME code tank.

Coating and lining. Tanks shall be prepared for internal and external coating with a SPCC 11 near white sand blast. Internal and external coating shall be two - 3 to 4 mill coats of white Series 20 Tnemec Epoxy. Paint shall be applied according to manufacturer's recommendations. Paint reports and mill thickness reports shall be provided if requested at the time the tank is ordered.

Internals. The bottom distributor shall be a multipoint system using 2½" Ø single point molded distributor heads with 2½" of slotted length and a 1½ inch NPT female threaded connection. The slots shall be .012" - .016" wide to retain mineral and the total slot area shall be equal to or larger than the unit pipe size. A top dome splash distributor with an opening equal to or larger than the unit pipe size shall be installed in the mineral tank. The internal distributor piping shall be SCH 80 PVC.

Media. The resin shall be sodium form polystyrene 8% divinyl benzene cross linked resin with clear spherical beads. Resin beads shall be 16-50 US Standard Mesh with a particle size range of 0.3 to 1.2 mm. The resin shall be clean and packaged in sealed plastic bags weighing 55 lbs or less. Underbedding shall be #20 graded washed flint gravel sieved between 1/8" and 1/16".

Brine System. The brine system shall be of the Accumatic™ high grid plate design. The brine tank shall be blow molded or rotationally molded HDPE, including a cover. The system shall include a SCH 80 PVC float operated brine valve to control refill shut-off and refill flow rate. Brine volume is to be repeatedly accurate within 10% and not dependent on salt bed void space for brine volume. Brine draw is to volumetrically controlled, not timed.

Control Valve. The main control valve(s) shall be the Task Master II™ controlled by a time clock to actuate the cycles of backwash, brine, slow rinse, fast rinse, and service. The control valve(s) shall be Task Master II™ 5-Cycle, 100 psi, multi-port control valve(s) with machined brass body, stainless steel piston assembly, Noryl® inserts, Buna-N seals, service and regeneration lights, drive motor assembly, and NEMA 3 enclosure (120VAC/60Hz/3Amps). The valve shall operate with a single motor driven, cam positioned, piston. The valve shall be of a single piston design and not use multiple plungers or diaphragm valves. Each control valve shall be equipped with "Service" and "Regeneration" indicator lights. The valve shall be equipped with threaded ¼" FNPT ports for the installation of sample taps and pressure gauges. (Taps and gauges are optional.) Hard water by-pass shall be available during all regeneration cycles at 70 gpm or at the peak flow rate of the unit, at a pressure drop less than 25 psi, whichever is less.

Simplex. Simplex systems shall have regeneration initiated by one (1) 6-day time clock or timer controller (standard) designed to allow up to daily regenerations at a set time of day and also

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control the duration of each of the cycles of regeneration. (Note: Seven-day timer is optional.) Regeneration shall also be manually initiated by advancing the timer knob per operating instructions.

Twin. Twin systems shall consist of two mineral tanks with attached control valves and one brine tank with a brine director. Regeneration initiation shall be by 6 or 7-day timers on each unit. Simultaneous regeneration of twin units shall be prevented by an interconnecting wire between the valves no external relays or other devices required. (This feature is called "Regeneration Lockout".) Twin units shall bypass during regeneration unless optional shut off kits are specified.

Twin Alternating. Twin alternating systems shall consist of two mineral tanks with attached control valves with ARC timers, one brine tank with brine director, one EDRII controller, one PW series flow meter and one shut off kit. Regeneration initiation and meter display shall be provided by the EDRII - Electronic Demand Regeneration.

Operating Conditions. Maximum temperature shall be 100°F. Pressure shall be 25 to 100 psi.

Controller. Twin alternating units operate so that once a predetermined amount of water has passed through the PW series flow meter the EDRII initiates regeneration of the exhausted unit placing its twin in service. The timer shall be an Automatic Regeneration Controller (ARC) Timer, which, controls only the softening cycles. The brine director shall be a SCH 80 PVC shuttle type valve operating so that only one of the twin units shall draw brine at a time. A single brine valve shall service both softeners. The shut off kit shall consist of a diaphragm valve, solenoid, and wiring to prevent hard water bypass during regeneration. For RF systems the valve shall be 1 1/2".

Other items. A standard soft water soap test kit shall be provided. A complete set of instructions, including installation, loading, start-up, adjustments, servicing, and a parts list shall be provided with the equipment.

Qualifications. A company that has continuously manufactured water softeners for at least twenty (20) years shall construct this equipment.

Pressure gauge and test tap kit. A kit containing two liquid filled, stainless steel pressure gauges with 2 1/2" Ø face, two brass ball valve sample taps with hose barb connections and associated brass connection fittings shall be provided for mounting in the 1/4" FNPT predrilled and tapped ports in the inlet and outlet of the Task Master II valve.



NOTES ON APPLICATION TABLE:

1. Capacities listed are based on 20 grains per gallon at intermittent flow rates, and are 95% of lab results
2. Continuous flow rates are listed at 10 gpm/ft³ of resin or 15 psi pressure drop, which ever is less.
3. Peak flow rates are listed at 15 gpm/ft³ of resin or at 25 psi pressure drop, which ever is less.
4. Drains at installation sites must be able to dispose of water at the backwash rate for periods up to 20 minutes.
5. Dimensions listed are actual unit height. At least one additional foot should be allowed for loading mineral tanks.
6. A twin unit includes two mineral tanks and one brine tank.