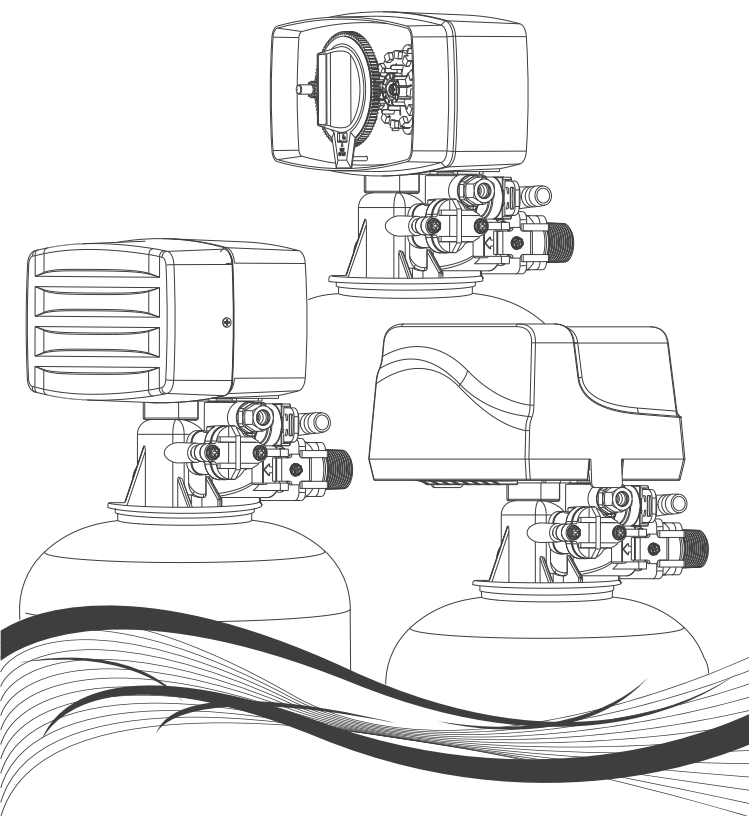


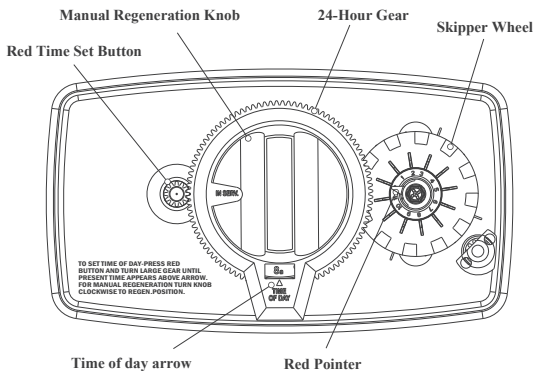
MODEL MZ1/MZ4/MZ5

MECHANICALLY CONTROL VALVE



Service Manual

Timer Installation and Start-up Procedures

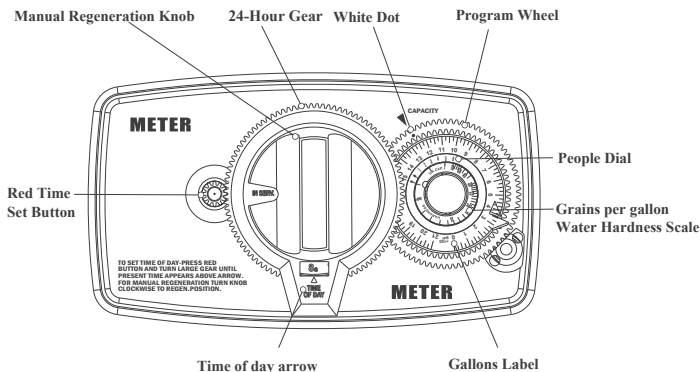


●Model MZ1/MZ4/MZ5 Timer Control

1. Manually index the softener control into the In Service position and let water flow into the resin tank. When the water flow stops, open a softened water tap until all air is released from the lines. Then close tap.
NOTE: Manually dial the various regeneration positions by turning the knob on the front of the control until the indicator shows that the softener is in the desired position.
2. Manually index the control to the Backwash position and allow water to flow at the drain for 3 or 4 minutes.
3. Remove back cover plate.
4. Make sure that the salt dosage is set as recommended by the manufacturer. If necessary, set salt according to the setting instruction sheet. Manually index the control to the Brine Fill position and allow the brine tank to fill to the top of the air check.
5. Manually index the control to the Brine Draw position and allow the control to draw water from the brine tank until it stops.
6. Plug in the electrical cord and look in the sight hole in the back of the motor to see that it is running. Set the days that regeneration is to occur by sliding tabs on skipper wheel outward to expose trip fingers.
 - Each tab is one day.
 - Finger at red pointer is tonight.
 - Moving clockwise from red pointer, extend or retract fingers to obtain the desired regeneration schedule.
7. Manually advance the control to the beginning of the Brine Fill position and allow the control to return to the In Service position automatically.
8. Fill the brine tank with salt.
9. Replace back cover on the control.
10. Make sure that any bypass valving is left in the normal In Service position.

NOTE: Install the water softener with the inlet, outlet and drain connections made according to manufacturer's recommendations and to meet applicable plumbing codes.

Meter Installation and Start-up Procedures

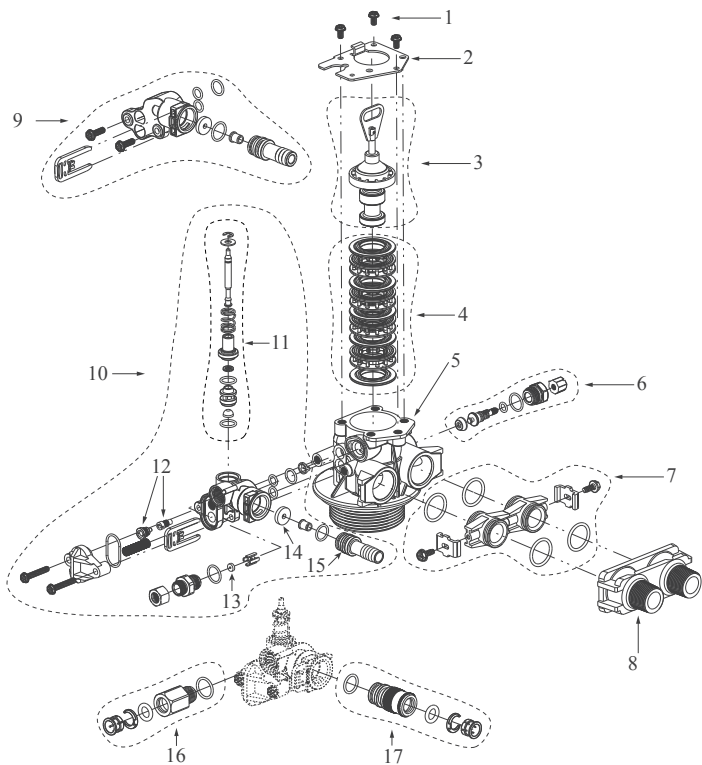


●Model MZ1/MZ4/MZ5 Meter Softener Control

1. Manually index the softener control to the In Service position and let water flow into the resin tank. When the water flow stops, open a softened water tap until all air is released from the lines. Then close tap.
NOTE: The various regeneration positions may be dialed manually by turning the knob on the front of the control until the indicator shows that the softener is in the desired position.
2. Set water usage program wheel using any one of the following procedures:
 - Typical Residential Application
To program, just set the time, set the hardness and it automatically monitors system needs and regenerates only when necessary. To set time of day press red time set button and turn 24-hour gear until present time of day is at “time of day.” Set program wheel by lifting the “people” dial and rotating it so that the number of people in the household is aligned with the household grains per gallon water hardness. Release the dial and check for firm engagement at setting.
 - Optional Programming Procedures
Calculate the gallon capacity of the system, subtract the necessary reserve requirement and set the gallons available at the small white dot on program wheel gear. Note, drawing shows 850 gallon setting. The capacity (gallons) arrow denotes remaining gallons exclusive of fixed reserve.
3. Rotate program wheel counterclockwise until it stops at Regeneration position.
4. Manually index the control to the Backwash position and allow water to flow at the drain for 3 or 4 minutes.
5. Remove back cover plate.
6. Make sure than the salt dosage is set as recommended by the manufacturer. Manually index the control to the Brine Fill position and allow the brine tank to fill to the top of the air check.
7. Manually index the control to the Brine Rinse position and allow the control to draw water from the brine tank until it stops.
8. Plug in the electrical cord and look in the sight hole in the back of the monitor to see that it is running.
9. Manually advance the control to the beginning of the Brine Fill position and allow the control to return to the In Service position automatically.
10. Fill the brine tank with salt.
11. Replace back cover on the control. Be sure cable is not pinched between cover and housing.
12. Make sure that any bypass valving is left in the normal In Service position.

NOTE: Install the water softener with the inlet, outlet and drain connections made according to manufacturer’s recommendations and to meet applicable plumbing codes.

Control Valve Assembly

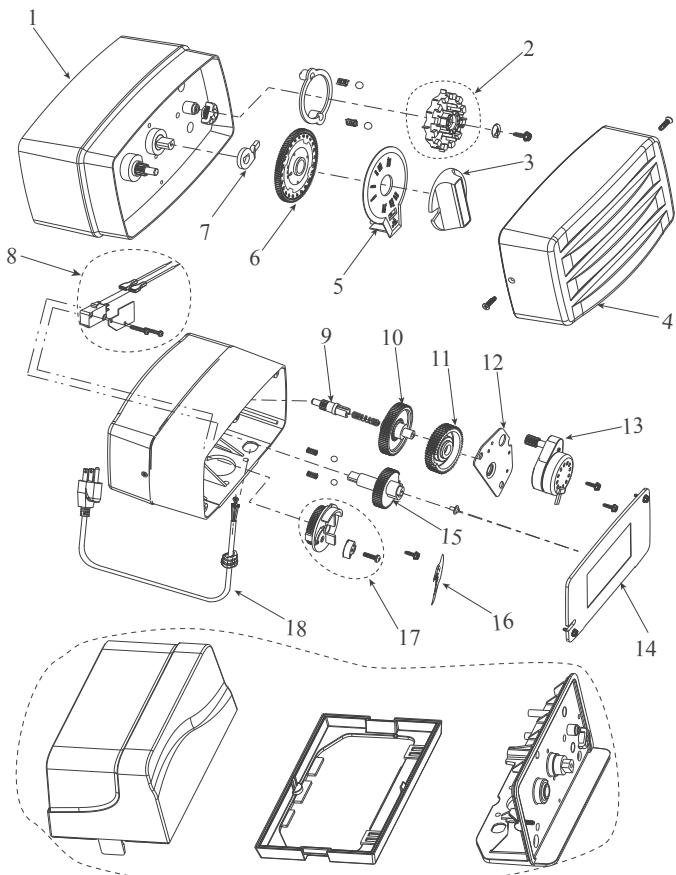


Item No.	Part No.	Description
1.....	24257012.....	Screw
2.....	16257003.....	End Plug Retainer
3.....	23560001.....	Piston Assembly
4.....	23560006.....	Seal & Spacer Kit Assembly
5.....	23558021.....	Valve Body,Assembly
●5-1.....	23558025.....	Mixing Valve Body,Assembly
●6.....	23558026.....	Mixing ,Assembly
7.....	23558024.....	Coupling, Adapter Assembly,for SD
※8.....		Yoke
9.....	23558008.....	Filter Injector Assembly,for FT
10.....	23558003.....	Injector and Drain Housing Assembly
11.....	23558004.....	Brine Stem Assembly
※12.....		Nozzle & Throat Assembly
※13.....		B.L.F.C Button
※14.....		D.L.F.C Button
※15.....		Drain Fitting
●16.....	23557010.....	Brine Quick Fitting Kits
●17.....	23557011.....	Drain Line Quick Fitting Assembly

● Components for Option

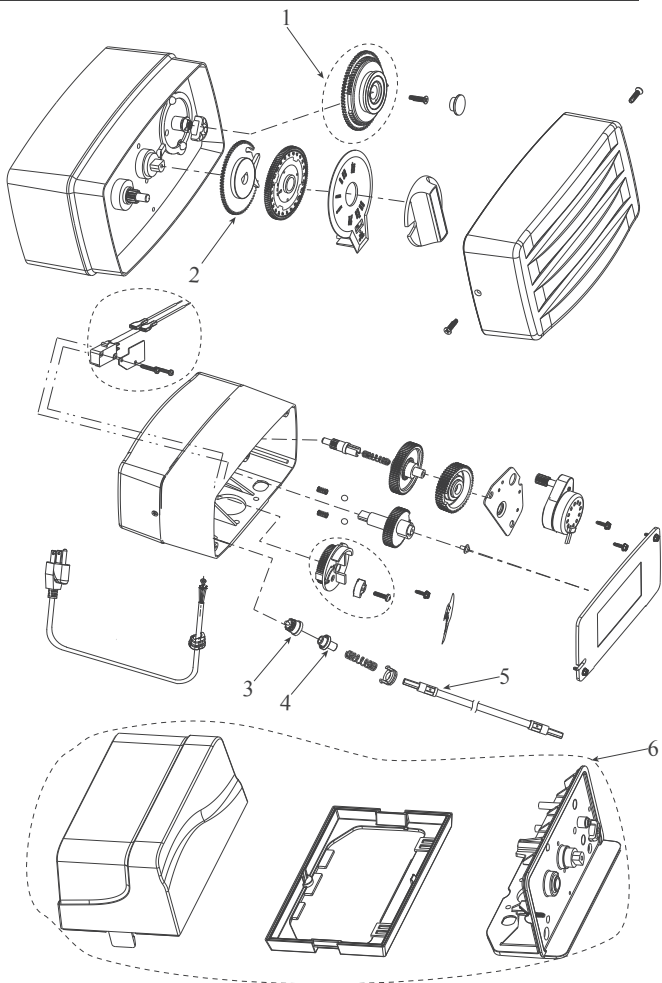
※ For Customized Specification Numbers, See the Back of this Manual

Timer Powerhead Assembly



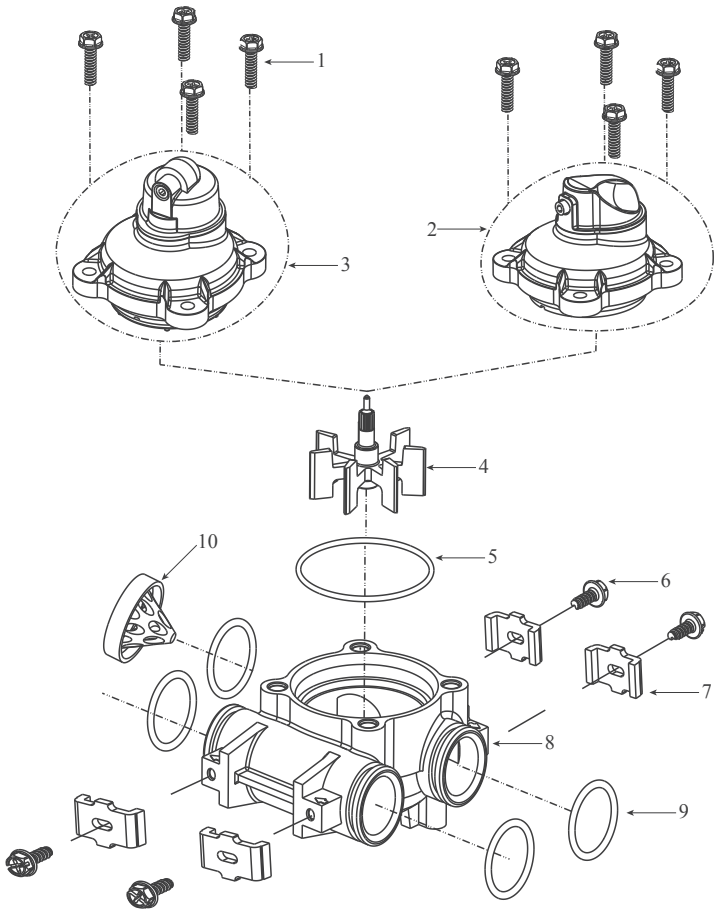
Item No.	Part No.	Description
1.	23558001	Mounting Plate Assembly, for MZ1/MZ4
2.	23558018	Skipper Wheel Assembly
3.	15257002	Knob
● 4.	15257297	Dust Cover
● 5.	15257003-1	Valve Position Dial, for SD
	15257003-2	Valve Position Dial, for FT
6.	23558017	24 Hour Gear Assembly
7.	15257005	Regeneration Shifter Lever
● 8.	23560002	Switch, Micro Assembly
● 9.	15257011	Idler Pinion, Red
	15257011-1	Idler Pinion, white
10.	15257015	Idler Gear
11.	15257014	Drive Gear
12.	16257002	Motor Mounting Plate
※ 13.		Motor
14.	15257010	Back Plate
15.	15257013	Main Driver Gear & Shaft
※ 16.		Salt Label
17.	23558019	Brine Cam Assembly
※ 18.		Electrical Cord

Meter Powerhead Assembly



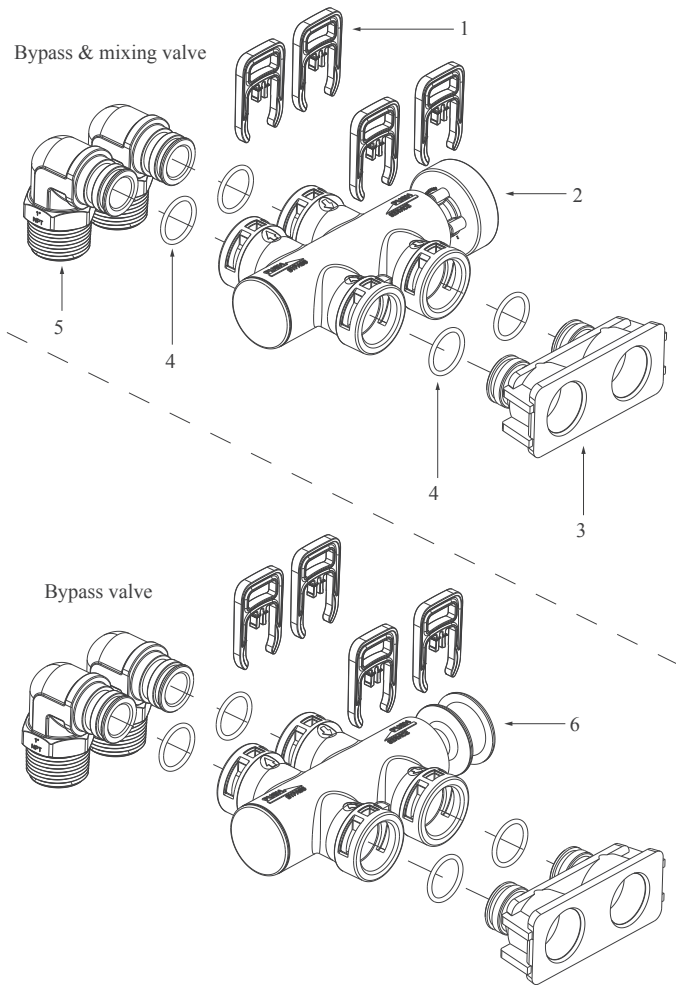
Item No.	Part No.	Description
1.....	23558020	Flow Gear Assembly
2.....	15257062.....	Reduction Gear
3.....	15257057	Meter Drive Pinion
4.....	15257056.....	Clutch
5.....	24257250.....	Flow Meter Flexible Shaft
6.....	23558033.....	Bracket,Assembly MZ5/MZ6

Meter Assembly



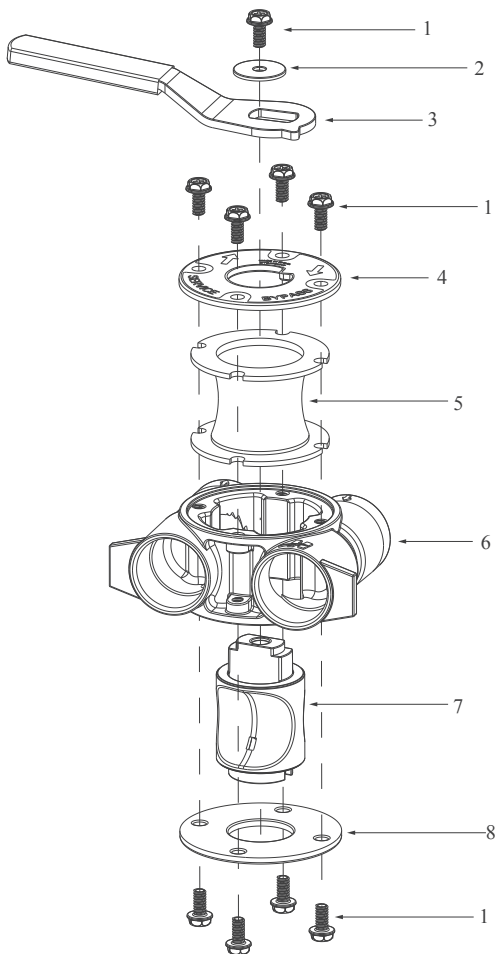
Item No.	Part No.	Description
1	24257013	Screw
● 2	23558012	Meter Cover Assembly,8T
● 3	23558013	Meter Cover Assembly,40T
4	23558015	Impeller Assembly
5	21257014	O-Ring
6	24257014	Screw
7	16257005	Clip
8	23558016	Meter Body Assembly
9	21257005	O-Ring
10	15257054	Flow Straightener

By-Pass Valve Assembly, Plastic



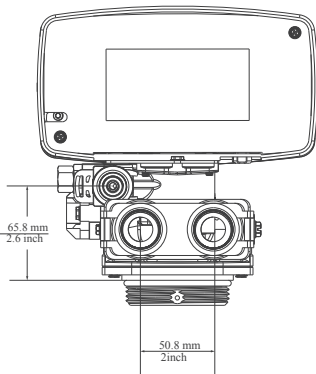
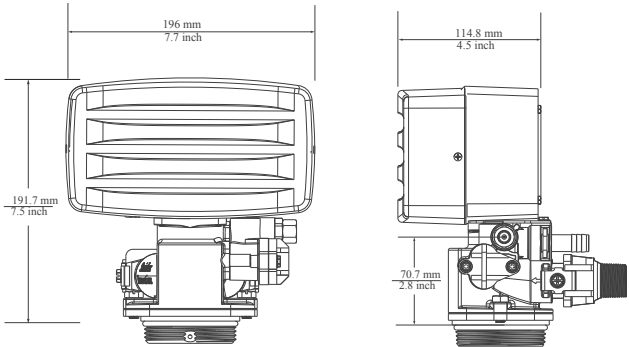
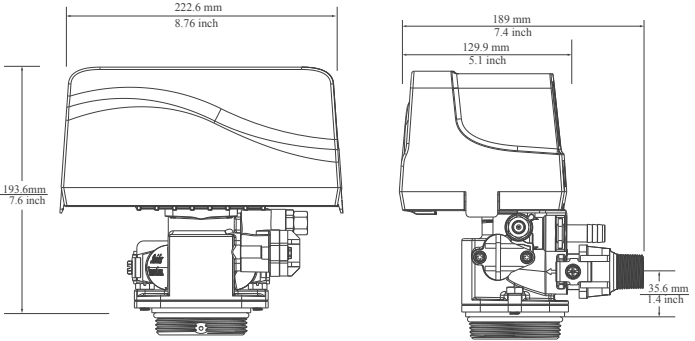
Item No.	Part No.	Description
1.....	15257088	Retainer
2.....	23558006	Bypass & mixing Valve Body Assembly,Plastic
3.....	15257083	Coupling, Adapter
4.....	21257018	O-ring
5.....	15257120	Yoke,1"NPT,90°
	15257121	Yoke,3/4"NPT,90°
	15457102	Yoke,1"BSP,90°
	15457101	Yoke,3/4"BSP,90°
	15257084	Yoke,1"BSP
	15257085	Yoke,3/4"BSP
6.....	23558007	Bypass Valve Body Assembly,Plastic

By-Pass Valve Assembly, Metal



Item No.	Part No.	Description
1	24257012	Screw
2	24257256	Gasket
3	23558010	Lever, Bypass, Assembly
4	23558022	Plate, Bypass, Top Assembly, White, BSP
	23558023	Plate, Bypass, Top, Assembly, Blue, NPT
5	21257242	Seal, Bypass
6	24257254	Bypass Valve Body, 3/4" NPT
	24257255	Bypass Valve Body, 1" NPT
	24257271	Bypass Valve Body, 3/4" BSP
	24257272	Bypass Valve Body, 1" BSP
7	23558009	Plug, Bypass Assembly
8	16257220	Plate, Bypass, Bottom

Dimensional Drawing



Customized Specification

ELECTRICAL CORD

14357001.....	Three Plug, CN
14357002.....	Two Plug, CN
14357005.....	US
14357003.....	EU
14357004.....	EN

YOKE

15257038.....	Yoke,1"NPT
15257023.....	Yoke,3/4"NPT
15257089.....	Yoke,1"BSP
15257090.....	Yoke,3/4"BSP

NOZZLE & THROAT ASSEMBLY

23558011.....	.000#,Brown
23558027.....	.00#,Violet
23558028.....	.0#,Red
23558029.....	.1#,White
23558030.....	.2#,Blue
23558031.....	.3#,Yellow
23558032.....	.4#,Green

BRINE LINE FLOW CONTROLS (BLFC)

21247006.....	.BLFC,0.125 GPM
21247021.....	.BLFC,0.25 GPM
21247005.....	.BLFC,0.5 GPM
21247022.....	.BLFC,1.0 GPM

DRAIN LINE FLOW CONTROL WASHERS(DLFC)

21257239.....	.DLFC,0.8 GPM
21247013.....	.DLFC,1.5 GPM
21247012.....	.DLFC,2.0 GPM
21247011.....	.DLFC,2.4 GPM
21247010.....	.DLFC,3.0 GPM
21247009.....	.DLFC,3.5 GPM
21247008.....	.DLFC,4.0 GPM
21247014.....	.DLFC,5.0 GPM
21247007.....	.DLFC,7.0 GPM

DRAIN FITTING

15257065.....	.Straight Drain Hose Barb
15257128.....	.Straight Drain Hose Barb,1/2"NPT
15257026.....	.Drain Hose 90° Elbow Barb

MOTOR

18258001.....	.220V,50Hz
18258003.....	.220V,60Hz
18258007.....	.120V,60Hz
18258009.....	.24V,50Hz
18258011.....	.24V,60Hz

SALT LABEL

19257226.....	.2min~17min
19257226-1.....	.3LB~14LB,for 0.25gpm BLFC
19257226-2.....	.4LB~30LB,for 0.5gpm BLFC
19257226-3.....	.2Kg~12Kg,for 0.5gpm BLFC
19257226-4.....	.0.4Kg~2.8Kg,for 0.125gpm BLFC

