

AquaSoft, Inc

Lakeland, Florida


F11 & E Service Manual



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General Residential Installation Checklist

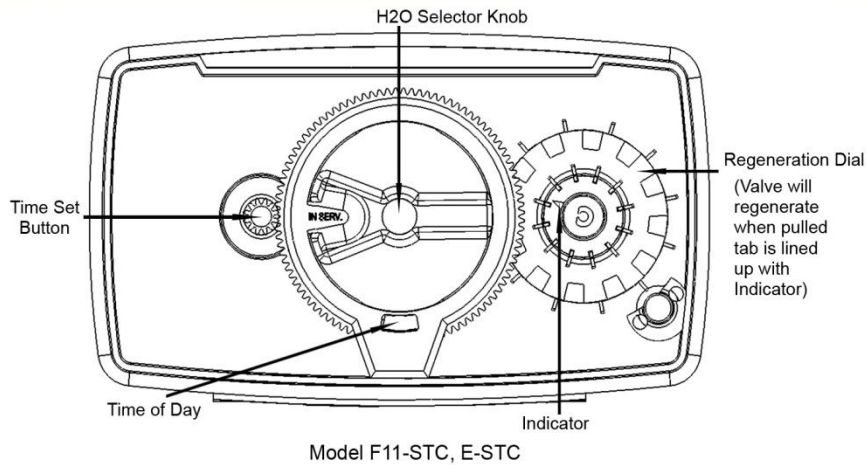
	CAUTION
	⌘ Water pressure should not exceed 120psi
	⌘ Water temperature should not exceed 110°F (40°C)
	⌘ Do not operate unit in freezing conditions
Softener	Locate close to drain and connect according to plumbing codes
Bypass Valves	Always provide for bypass valve if not equipped
Water Pressure	Minimum 25 PSI
Electrical Supply	Uninterrupted AC. Check voltage compatibility
Plumbing	Free of any deposits or build-ups inside pipes

General Valve Installation Procedure

Note: Install the water softener with the inlet, outlet and drain connections according to manufacturer recommendations meeting all applicable plumbing codes.

1. Install the softener tank as close as possible to a drain while maintaining convenience. The installation location should be on a stable and level surface.
2. All plumbing functions must adhere to local, state, and federal plumbing codes. A 1/2" minimum drain pipe should be used. A 3/4" drain pipe should be used in applications where backwash flow rates exceed 7gpm or length exceeds 20 feet. There must be an air gap between the drain line and the drain to prevent siphoning of contaminated water back into the resin tank. (Figure 1-1)
3. The 1" distributor tube should be cut so it is flush with top of tank.
4. Pre-lubricate the distributor o-ring seal and tank o-ring seal. Twist the valve on to the tank. Silicone lubricant is the only lubrication recommended.
5. Teflon tape should be used for the drain fitting. Solder joints should be completed prior to connecting piping to the valve. 6" of clearance (152mm) minimum between the valve and solder joints are required while soldering pipes that are connected to the valve. The valve manufacturer is not responsible for damage incurred during installation.
6. When placing the brine tank, the surface must be stable and level.
7. Fill brine tank until the water is 1" (25mm) above the grid plate. If a grid plate is not used, fill with water until it is above the air check. Do not add salt at this time.
8. If the unit is installed with a bypass, switch to bypass function. Open the main water supply. Turn on a downstream cold water faucet nearby and run water for a few minutes or until the water runs clean.
9. Turn the bypass valve to the "In Service" position and allow water to flow into the mineral tank. After the water stops flowing into the tank; air should be purged from the system. Open a cold water faucet and let water run until air is purged, then turn it off.
10. Connect unit to an approved power source only. Preferably a GFI and grounded outlet.

F11,E Timer Control Startup



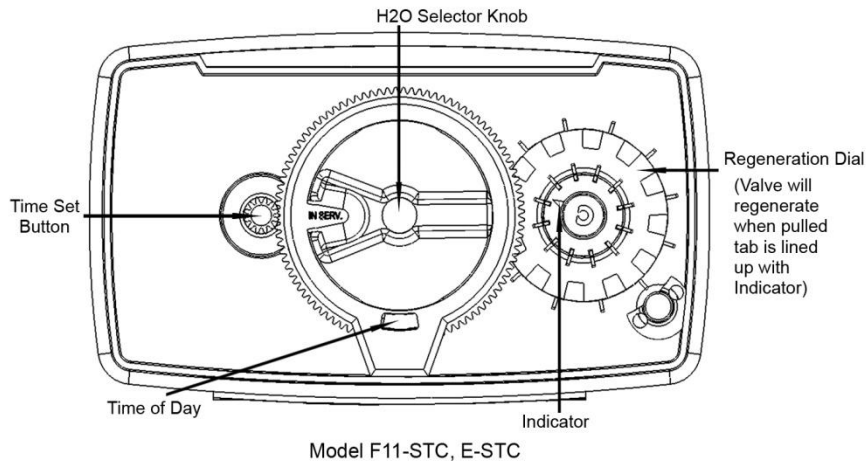
Before Plugging in the Unit

1. Set the *H2O Selector Knob* to the “In Service” position, and bring water into the mineral tank by rotating the *H2O Selector Knob* on the front of the unit clockwise until the desired position appears. When water flow stops, open a downstream faucet until all air is released. Then close the faucet.
2. Set the *H2O Selector Knob* to the “Backwash” position by turning it clockwise and allow water to flow to the drain for a few minutes.
3. Remove the back cover plate to access the salt settings. Make any adjustments as necessary according to the Softener Timer Regeneration Reference Chart below.
4. Set the *H2O Selector Knob* to the “Brine Fill” position by turning it clockwise and allow the brine tank to fill to the top of the air check.
5. Set the *H2O Selector Knob* to the “Brine Draw” position by turning it clockwise to draw the water from the brine tank until it stops.
6. Connect unit to approved power source (make sure the motor is running by looking in the sight hole on the back of the motor).
7. Set the days that regeneration is to occur by pulling regeneration tabs up. Each tab represents a single day. The tab at the Indicator is the next scheduled regeneration.
8. Moving clockwise from the Indicator, pull the appropriate tabs to gain the desired regeneration schedule.
9. Set the *H2O Selector Knob* to the “Brine Fill” position by turning it clockwise and allow the unit to return to the “In Service” position on its own.
10. Add salt into brine tank until full.
11. Reattach control valve back cover.
12. Double check that the bypass valve is in the normal open position.

Softeners	Hardness PPM (GPG)	Calendar Clock Regenerations Frequency - No. Of Tab Pull Upwards															
		17-85 (1-5)	86-170 (6-10)	171-256 (11-15)	257-342 (16-20)	343-427 (21-25)	428-513 (26-30)	514-598 (31-35)	599-684 (36-40)	685-769 (41-45)	770-855 (46-50)	856-940 (51-55)	941-1026 (56-60)	1027-1111 (61-65)	1112-1197 (66-70)	1198-1282 (71-75)	1283-1368 (76-80)
2		1	1	1	1	1	2	2	2	2	2	3	3	3	3	3	3
3		1	1	2	2	3	3	3	3	3	3	4	4	4	4	4	4
4		1	2	2	2	3	3	3	4	4	4	6	6	6	6	6	6
5		2	2	3	3	4	4	4	4	6	6	6	6	12	12	12	12
6		2	2	3	3	4	4	4	6	6	6	6	12	12	12	12	12
7		2	3	3	4	4	6	6	6	12	12	12	12	12	12	12	12
8		2	3	3	4	6	6	6	6	12	12	12	12	12	12	12	12
9		3	3	4	4	6	6	6	12	12	12	12	12	12	12	12	12
10		3	4	4	6	6	12	12	12	12	12	12	12	12	12	12	12

Softener Timer Regeneration Reference Chart

F11,E Backwash Filter Valve Startup



Before Plugging in the Unit

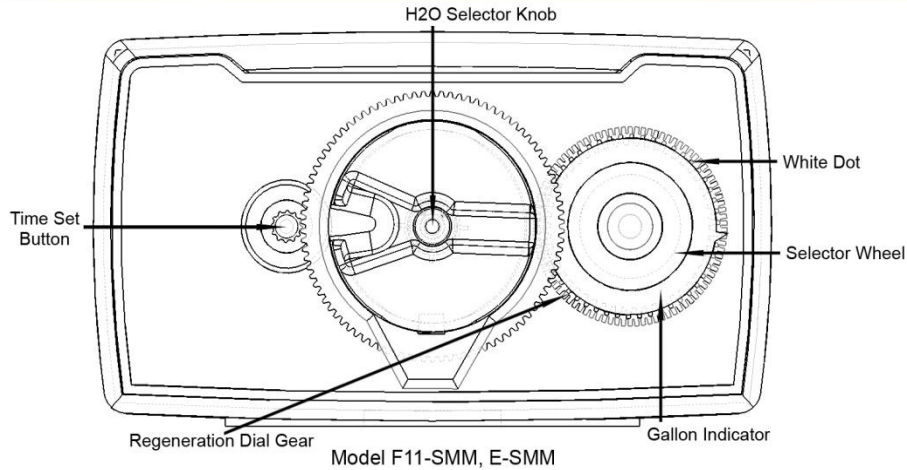
1. Open an in-line faucet downstream from the unit.
2. Set the *H2O Selector Knob* to the "In Service" position and carefully fill the mineral tank by slowly opening the main water supply line. Any bypass should also be in the "In Service" position.

NOTE: Allow the water flowing from the downstream faucet to run until it appears clean and free of air.
3. When a steady flow of clean water appears, close the faucet and the main water supply line and wait 15–20 minutes for media to settle.
4. Set the *H2O Selector Knob* by turning it clockwise to the "Backwash" position.
5. Partially open the main water supply line so that the drain flow of the unit is approximately 1 gpm (3.7 Lpm). This should prevent a sudden surge of air and water. Allow drain water from the unit to flow until it appears clean and free of air.
6. Continue to slowly open the water supply line until it is completely open. Again, allow drain water from the unit to flow until free of all media particles.
7. Set the *H2O Selector Knob* by turning it clockwise to the "In Service" position, and reopen the downstream faucet. Allow water to flow until water is clean and clear of all media. If tap is aerator equipped, make sure aerator is not plugged.
8. Connect unit to approved power source (make sure the motor is running by looking in the sight hole on the back of the motor).
9. Set the days that regeneration is to occur by pulling regeneration tabs up. Each tab represents a single day. The tab at the Indicator is the next scheduled regeneration. Refer to the Filter Timer Regeneration Reference Chart below.
10. Moving clockwise from the Indicator, pull the appropriate tabs to gain the desired regeneration schedule.
11. Set time of day by pressing and holding in Time Set Button and turning the *H2O Selector Knob's* outer gear clockwise until the current time of day is shown above the time of day arrow.

Sand Filter	Sediment Turbidity	Mild					Average					Extreme					
Activated Carbon Filters	Taste Odor	Mild					Average					Extreme					
Iron Filters	PPM IronX1 PPM ManganeseX1 PPM SulphurX1	0.5	1	1.5	2	2.5	3	3.5	4	4.5	5	5.5	6	6.5	7	7.5	8
	No. Of Persons	Calendar Clock Regenerations Frequency - No. Of Tab Pull Upwards															
	2	1	1	1	1	1	2	2	2	2	2	3	3	3	3	3	3
	3	1	1	2	2	3	3	3	3	3	3	4	4	4	4	4	4
	4	1	2	2	2	3	3	3	4	4	4	6	6	6	6	6	6
	5	2	2	3	3	4	4	4	4	4	6	6	6	6	12	12	12
	6	2	2	3	3	4	4	4	4	6	6	6	6	12	12	12	12
	7	2	3	3	4	4	6	6	6	6	12	12	12	12	12	12	12
	8	2	3	3	4	6	6	6	6	6	12	12	12	12	12	12	12
	9	3	3	4	4	6	6	6	6	12	12	12	12	12	12	12	12
	10	3	4	4	6	6	12	12	12	12	12	12	12	12	12	12	12

Filter Timer Regeneration Reference Chart

F11,E Meter Control Valve Startup



Before Plugging in the Unit

1. Set the *H2O Selector Knob* to the “In Service” position, and bring water into the mineral tank by rotating the *H2O Selector Knob* clockwise until the desired position appears.
2. To set the water usage and to calculate the proper setting, you must know the following.
 - a. Your water hardness and iron level.
 - b. Capacity of your mineral tank. Ex. (9x48) holds one cubic foot for a max. capacity of 32,000 grains removal. (The system should be sized to work at 75% capacity).
3. Calculate the gallon setting which is the grains removal multiplied by 75%; then divided by the hardness in grains. Then subtract 75 gallons for each person in the residence. Finally divide by 100 to get the proper setting.

Example: 32,000 grains removal x .75 = 24,000 / 20 grains hardness = 1200 gal. – 150 (two people) = 1050. 1050/100=10. Pull the Selector Wheel out and turn it to 10 which would be the proper setting.
4. Continue holding the Selector Wheel out and advance the Regeneration Dial gear counterclockwise until it stops at the regeneration position.
5. Set the *H2O Selector Knob* to the “Backwash” position by turning it clockwise and allow water to flow to the drain for a few minutes.
6. Remove the back cover plate to access the salt settings. Make any adjustments as necessary. Refer to the Softener Meter Capacity Reference Chart below.
7. Set the *H2O Selector Knob* to the “Brine Fill” position by turning it clockwise and allow the brine tank to fill to the top of the air check.

Capacity 18,000		Hardness PPM (GPG)						
		85(5)	171(10)	256(15)	342(20)	513(30)	684(40)	855(50)
No. Of Persons	1	2,100	1,725	1,125	825	525	375	285
	2	2,100	1,650	1,050	750	450	300	210
	3	2,100	1,575	975	675	375	225	135
	4	2,100	1,500	900	600	300	150	60
	5	2,100	1,425	825	525	225	75	0
	6	2,100	1,350	750	450	150	0	0

Capacity 24,000		Hardness PPM (GPG)						
		85(5)	171(10)	256(15)	342(20)	513(30)	684(40)	855(50)
No. Of Persons	1	2,100	2,100	1,525	1,125	725	525	405
	2	2,100	2,100	1,450	1,050	650	450	330
	3	2,100	2,100	1,375	975	575	375	255
	4	2,100	2,100	1,300	900	500	300	180
	5	2,100	2,025	1,225	825	425	225	105
	6	2,100	1,950	1,150	750	350	150	30

Capacity 30,000		Hardness PPM (GPG)						
		85(5)	171(10)	256(15)	342(20)	513(30)	684(40)	855(50)
No. Of Persons	1	2,100	2,100	1,925	1,425	925	675	525
	2	2,100	2,100	1,850	1,350	850	600	450
	3	2,100	2,100	1,775	1,275	775	525	375
	4	2,100	2,100	1,700	1,200	700	450	300
	5	2,100	2,100	1,625	1,125	625	375	225
	6	2,100	2,100	1,550	1,050	550	300	150

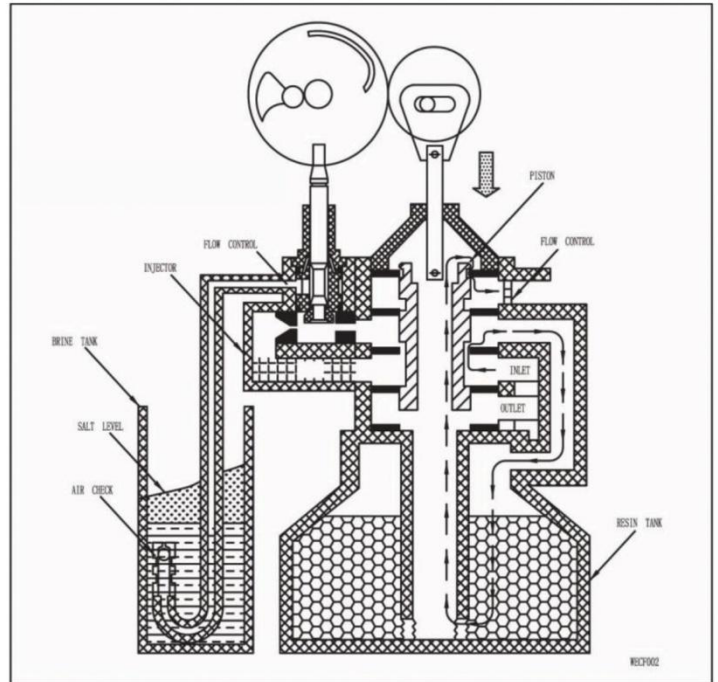
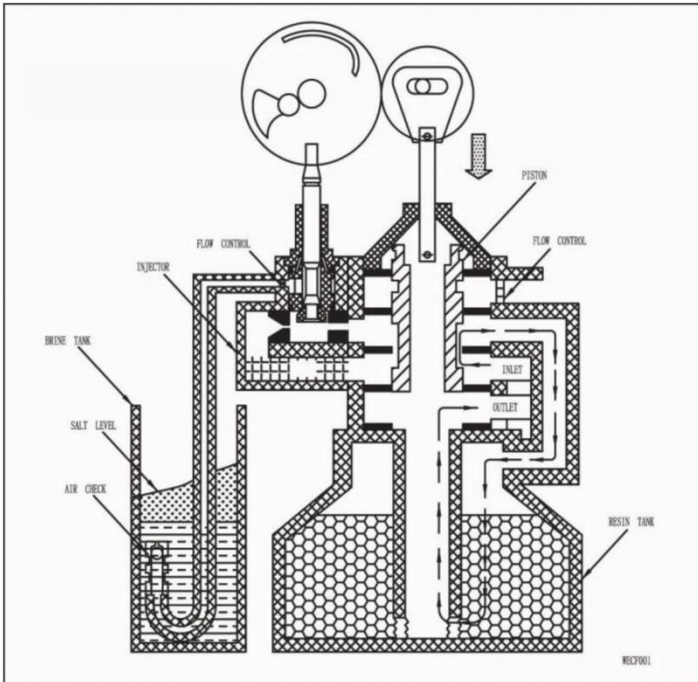
Capacity 36,000		Hardness PPM (GPG)						
		85(5)	171(10)	256(15)	342(20)	513(30)	684(40)	855(50)
No. Of Persons	1	2,100	2,100	2,100	1,725	1,125	825	645
	2	2,100	2,100	2,100	1,650	1,050	750	570
	3	2,100	2,100	2,100	1,575	975	675	495
	4	2,100	2,100	2,100	1,500	900	600	420
	5	2,100	2,100	2,025	1,425	825	525	345
	6	2,100	2,100	1,950	1,350	750	450	270

Softener Meter Capacity Reference Chart

F11,E Meter Control Valve Startup Continued

8. Set the *H2O Selector Knob* to the “Brine Draw” position by turning it clockwise to draw the water from the brine tank until it stops.
9. Connect unit to approved power source (make sure the motor is running by looking in the sight hole on the back of the motor).
10. Set the *H2O Selector Knob* to the “Brine Fill” position by turning it clockwise and allow the unit to return to the “In Service” position on its own.
11. Add salt into brine tank until full.
12. Reattach control valve back cover.
13. Double check that the bypass valve is in the normal open position.

Flow Diagram



Service (In Use) Mode

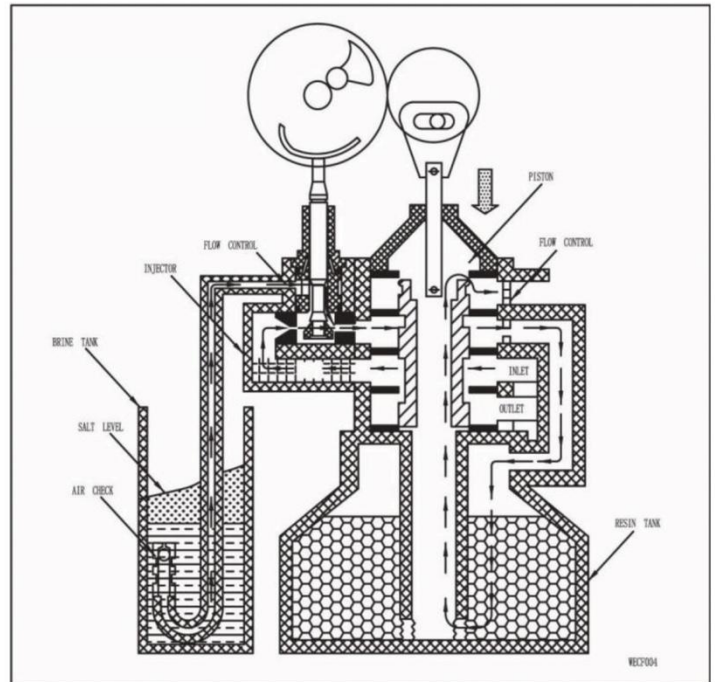
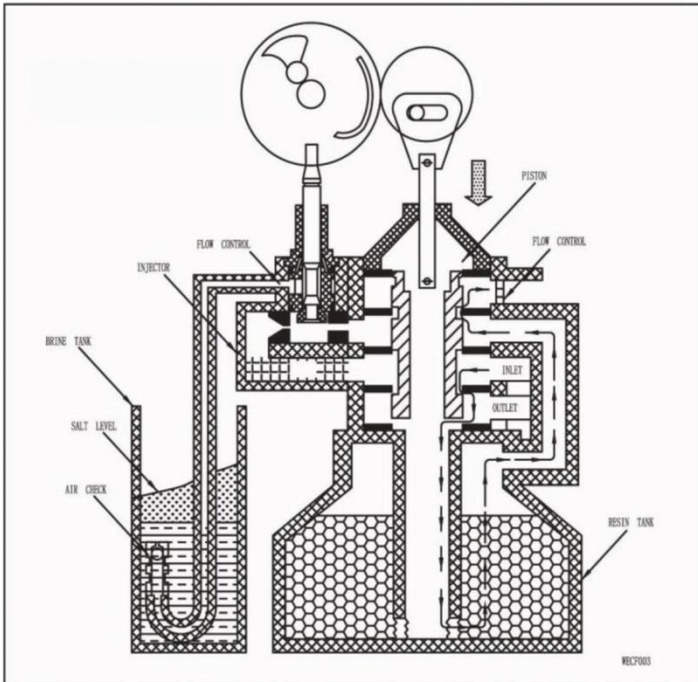
Hard water enters unit through the valve inlet and flows down into the media in the mineral tank.

Conditioned water enters the distributor connected to the center tube at the bottom. Water then flows up through the center tube, around the piston, and exits the outlet valve.

Pre Rinse Mode

During slow rinse of the resin bed. Water flows down through the media, up through the distributor and out to the drain.

Flow Diagram Continued



Backwash Rinse Mode

Hard water enters unit through the valve inlet, flows through piston, down center tube, through the distributor at the bottom, then up through the media and out the drain line.

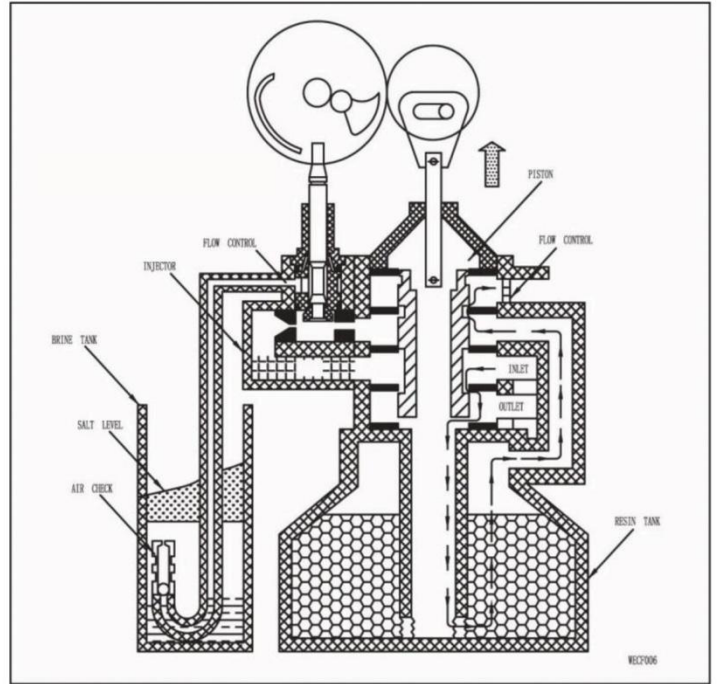
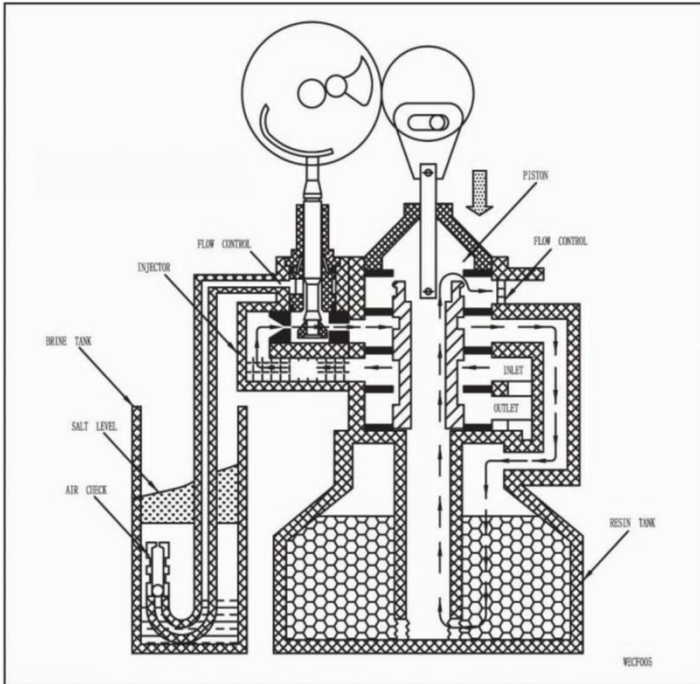
This is opposite of normal flow to flush suspended deposits out of the resin tank. A secondary purpose is to loosen the resin bed which will become compacted during service.

Brine Rinse Mode (Softeners Only)

Hard water enters the unit through the valve inlet. It then flows up into injector housing and down the nozzle and throat to draw brine from the brine tank.

Brine flows down through the media into the distributor at the bottom and out the drain line. This cleans the resin bed of deposits by releasing the charge held by them to attract the mineral and iron deposits naturally found in the water source.

Flow Diagram Continued



Slow Rinse Mode (Softeners Only)

Once the brine has been drawn out from the brine tank hard water continues to enter through the inlet valve.

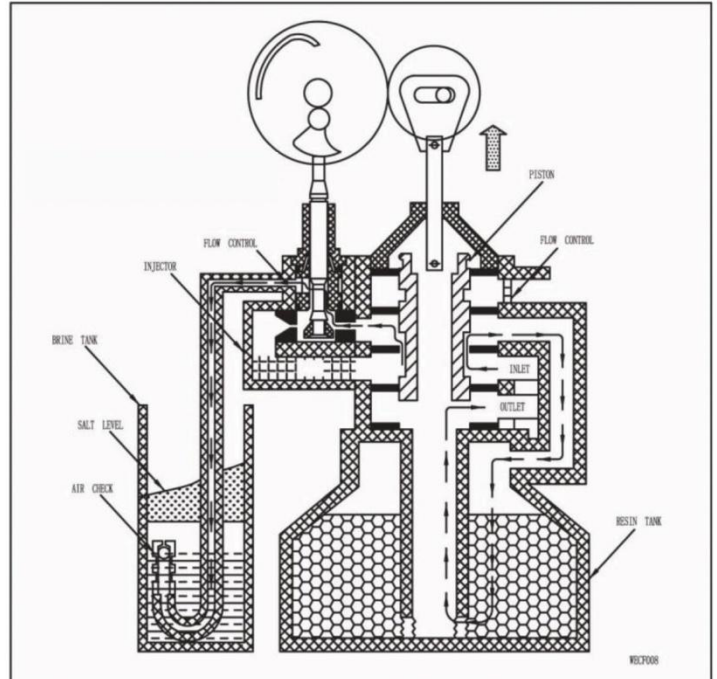
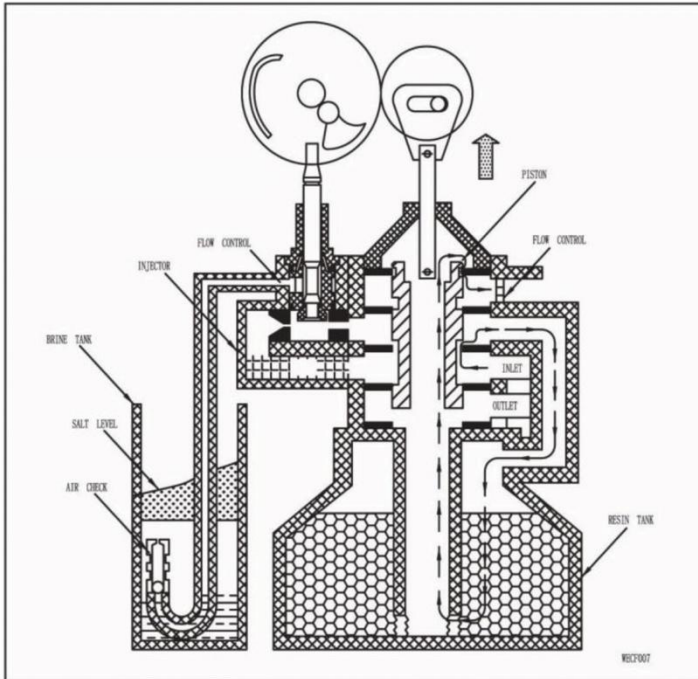
It then flows around the lower piston groove, through the nozzle and throat, down through media. It then enters the distributor and travels through the center hole in the piston and out to the drain line.

Rapid Rinse Mode (Second Backwash)

The media is rinsed to remove excess brine from the tank so the resin beads are once again ready to produce soft water.

Hard water enters the unit through the inlet valve, then flows through the piston, down center tube, through bottom distributor, up through the media, then around the piston and out the drain line.

Flow Diagram Continued



Settling Rinse Mode

Slow rinse of the resin bed. Water flows down through the resin bed up the bottom distributor and out the drain.

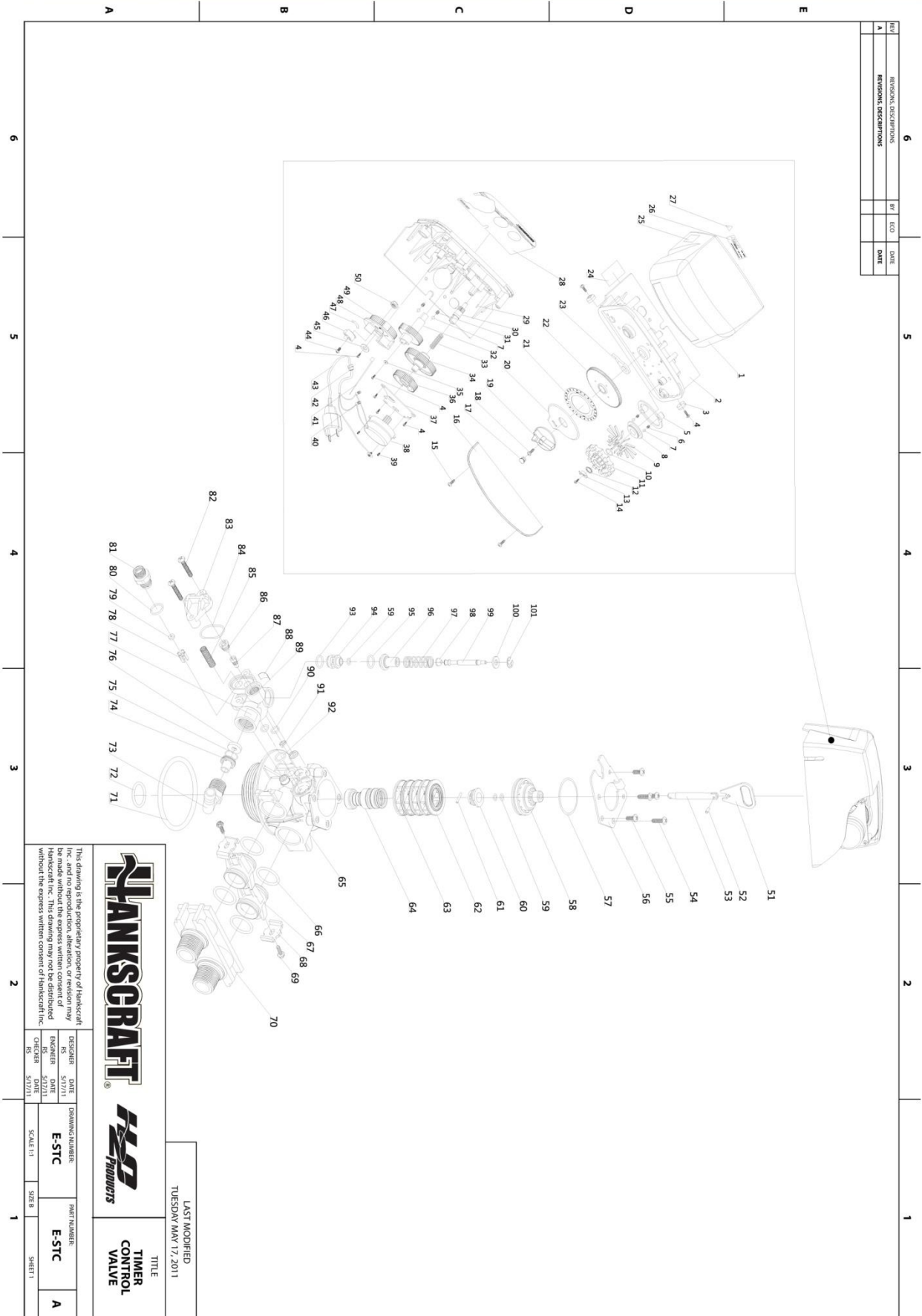
Brine Tank Refill Mode (Softeners Only)

Hard water enters unit through the inlet valve, then flows up through the injector housing, and through the brine valve to refill the brine tank.

The system is now delivering soft water to the home. The brine tank fills with untreated water in preparation for the next regeneration cycle.

NOTE: When the valve is in Regeneration, raw water is being passed to service until rapid rinse is complete.

E-STC Timer Control Valve Assembly



REV	REVISION DESCRIPTIONS	BY	ECO	DATE
A	REVISION DESCRIPTIONS			

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HANKSCRAFT
HYDRA
PRODUCTS

H2Z
PRODUCTS

TITLE
TIMER CONTROL VALVE

LAST MODIFIED
 TUESDAY MAY 17, 2011

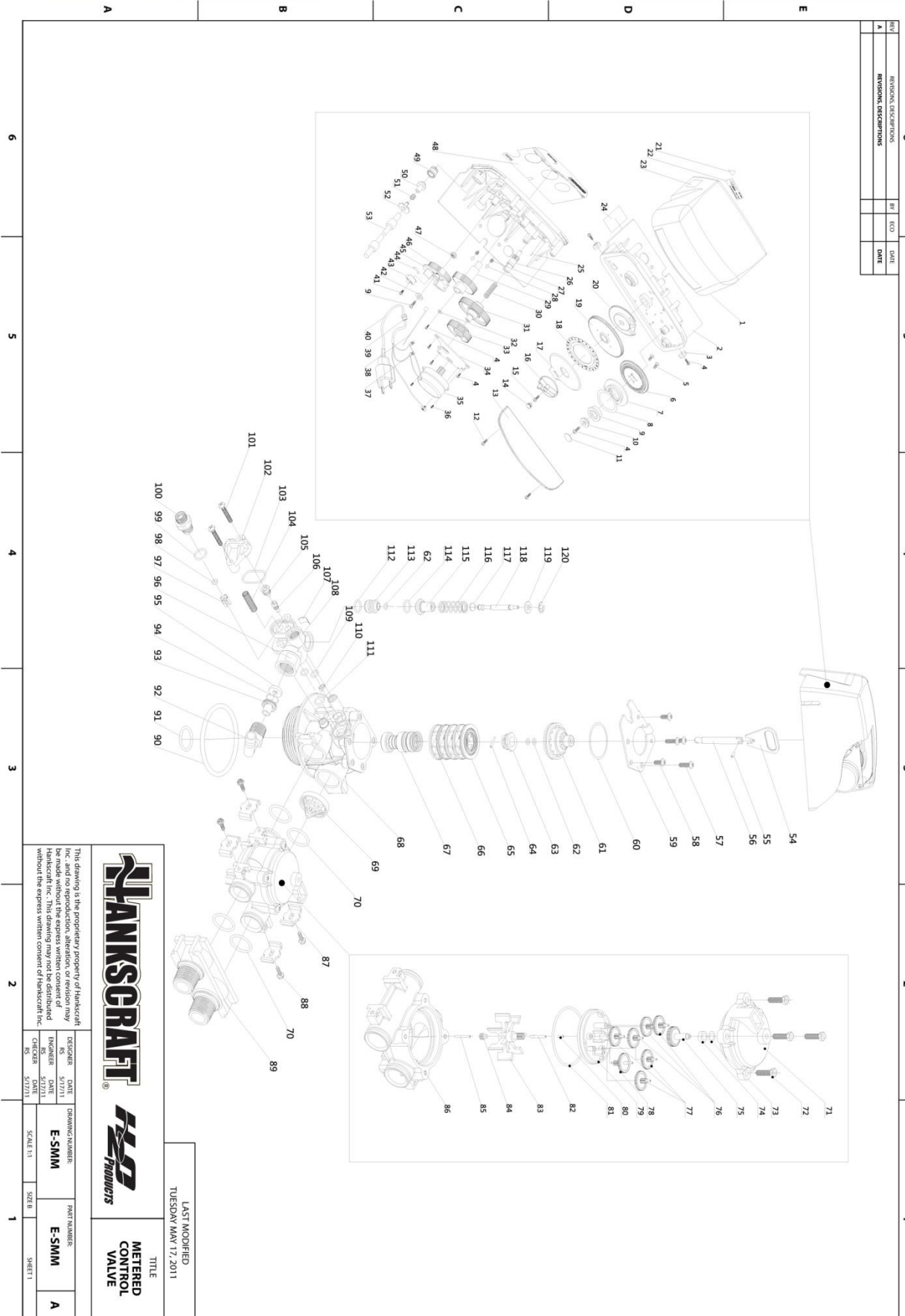
DESIGNER	DATE	DRAWING NUMBER	PART NUMBER
RS	5/17/11	E-STC	E-STC
CHECKER	DATE	SCALE 1:1	SHEET 1
RS	5/17/11		SHEET 1

E-STC Timer Control Valve Assembly Continued

E-STC				
Item #	P/N	Part Name	QTY	Color
1	16205	"E" Housing	1	Black
2	16204	"E" Bracket	1	Black
3	16229	Rubber Pad	2	Black
4		Self-tapping Screw	7	Black Zinc Plated
5		Wheel Ring	1	Black
6		Spring	2	Natural
7		Ball	4	Natural
8		Wheel Back Cover	1	Black
9		Wheel Picks	12	White Zinc Plated
10		O-Ring	1	Black
11		Wheel	1	Black
12		Wheel Label	1	Black
13		Pointer	1	Red
14		Self-tapping Screw	1	White Zinc Plated
15		Screw	2	White Zinc Plated
16	16216	Dustproof Plate	1	Black
17	11610	Knob Plug	1	Black
18		Self-tapping Screw	1	White Zinc Plated
19	11604	Knob	1	Black
20	11605-1	Indicator Plate	1	Black
21	16084	24-Hour Time Gear Label	1	Black
22		24-Hour Time Gear	1	Black
23		Reset Lever	1	Natural
24	16084	Test Label	1	White
25		Serial Number Label	1	White
26	16290	Label	1	White
27	16088	Voltage Warning Label	1	Yellow
28	16281	Front Label	1	Transparent
29		Rolling Pin	1	Natural
30		Button Gear	1	White
31		Positioning Spring	2	Natural
32	11601	Main Gear & Shaft	1	Black
33		Reset Spring	1	Natural
34		Passive Gear	1	Black
35		Washer	1	Natural
36		Transmission Gear	1	Black
37	11650	Motor Mounting Plate	1	White Zinc Plated
38		Motor,120V/60Hz	1	
39		Screw, Motor	3	White Zinc Plated
40		Wire Connector	2	
41		Nylon Cable Ties	1	Natural
42		Strain Relief	1	
43		Electrical Cord-US	1	
44		Washer	1	Natural
45		Screw	1	White Zinc Plated
46	11603	Eccentric Wheel	1	Natural
47	16285	Salt Tags	1	White
48	11683	Description Label	1	White
49	11602	Brine Cam	1	Black
50		Hex Nuts	1	White Zinc Plated
51	16052	Connecting Link	1	Natural
52		Bolt	1	Natural
53	16055-1	Piston Rod	1	Teflon Coating
54		Screw	2	Natural

Item #	P/N	Part Name	QTY	Color
55		Screw	3	Natural
56	16055	Black Plate	1	Natural
57		Ring	1	Black
58	16005	End Plug	1	Natural
59		O-Ring	3	Black
60	16006	Piston Retainer	1	Natural
61		Piston Pin	1	Natural
62	16033	Seal	5	Black
63	16004	Spacer	4	Black
64	16053-1	Piston-Softener	1	Teflon Coating
65	16001-1	Valve Body	1	Black
66		O-Ring	4	Black
67	16017	Adapter Coupling	2	Black
68	16051	Adapter Clip	2	Natural
69		Screw	2	Natural
70	16018	Yoke-Plastic 3/4" NPT	1	Black
71		O-Ring	1	Black
72		O-Ring	1	Black
73	16011	Drain Hose Barb	1	Natural
74	16012	DLFC Button Retainer	1	Natural
75		O-Ring	1	Black
76	16080	DLFC Label	1	White
77	16041	DLFC Button-.0GPM	1	Black
78	16015	BLFC Button Retainer	1	Natural
79	16042	BLFC Button-.25GPM	1	Blue
80		O-Ring	1	Black
81	16056	Brine Valve Connector	1	Natural
82		Screw	2	Natural
83	16003	Injector Cover	1	Black
84		O-Ring	1	Black
85	16059	Injector Filter	1	Natural
86	16070	Injector Nozzle-#0	1	Red
	16028	Injector Nozzle-#1	1	Natural
	16026	Injector Nozzle-#2	1	Blue
	16022	Injector Nozzle-#3	1	Yellow
	16009	Injector Nozzle-#4	1	Green
87	16071	Injector Throat-#0	1	Red
	16027	Injector Throat-#1	1	Natural
	16025	Injector Throat-#2	1	Blue
	16021	Injector Throat-#3	1	Yellow
	16008	Injector Throat-#4	1	Green
88	16086	Flow Label-.25GPM	1	Pink
89	16002	Injector Body	1	Black
90		O-Ring	2	Black
91	16014	Air Dispenser	1	Natural
92		O-Ring	1	Black
93		O-Ring	1	Black
94	16010	Spacer	1	Natural
95		O-Ring	1	Black
96	16007	Brine Valve Cap	1	Natural
97	16058	Spring-Brine Valve	1	Natural
98	16030	Brine Valve Seat	1	Black
99	16054-1	Brine Valve Stem	1	Teflon Coating
100		Washer	1	Natural
101		Retaining Ring	1	Natural

E-SMM Meter Control Valve Assembly



REV	DESCRIPTION	BY	ECO	DATE
A	REVISION DESCRIPTIONS			




TITLE
 METERED CONTROL VALVE

LAST MODIFIED
 TUESDAY MAY 17, 2011

DESIGNER	DATE	DRAWING NUMBER	PART NUMBER
RS	5/17/11	E-SMM	E-SMM
CHECKER	DATE	SCALE 1:1	SIZE B
RS	5/17/11		

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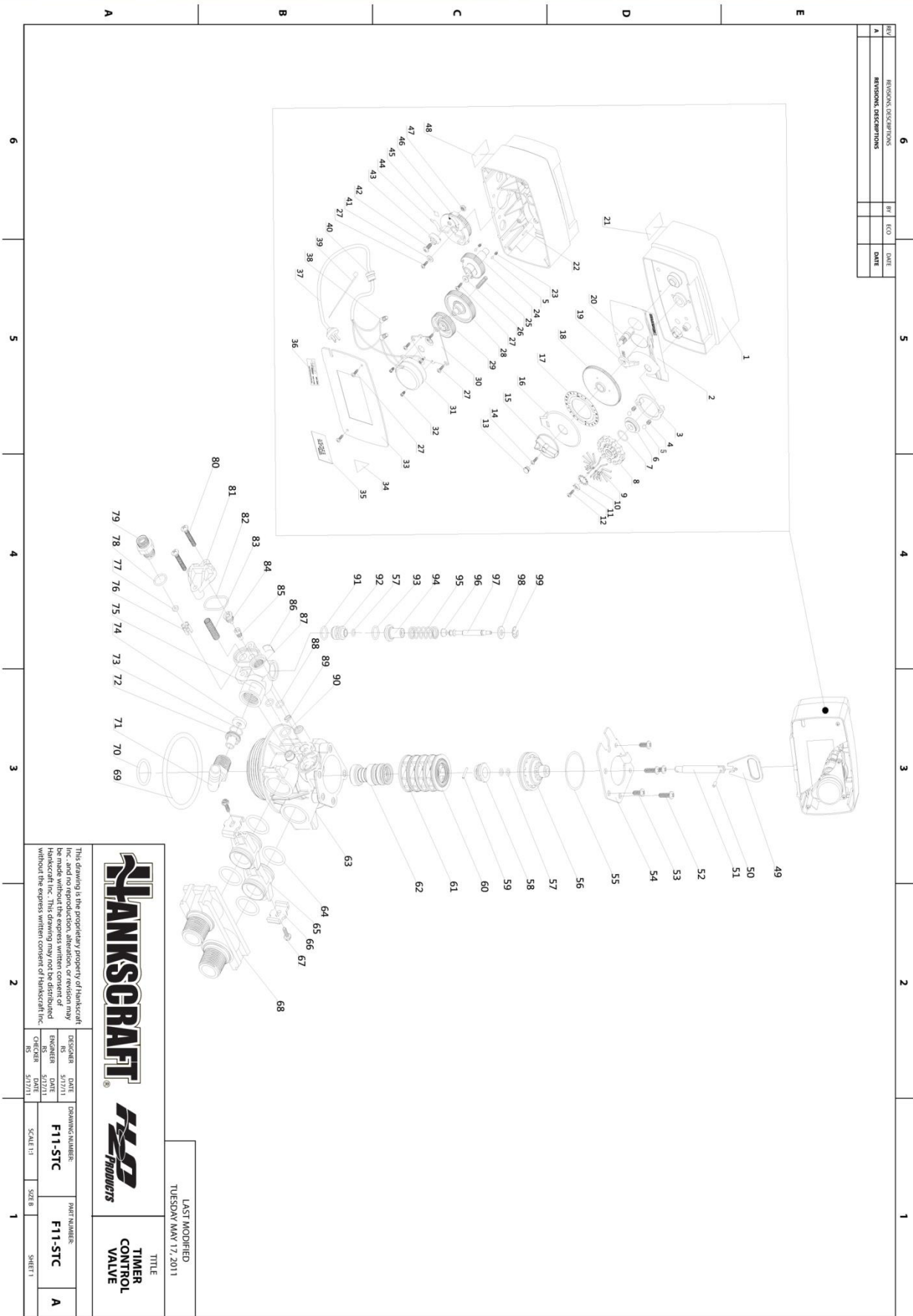
SHEET 1

E-SMM Meter Control Valve Assembly Continued



E-SMM				
Item#	P/N	Part Name	Quantity	Color
1	16205	"E" Housing	1	Black
2	16204	"E" Bracket	1	Black
3	16229	Rubber Pad	2	Black
4		Self-tapping Screw	8	Black Zinc Plated
5		Countersunk Head Screw	2	White Zinc Plated
6		Traffic Gear	1	Black
7		Dial	1	Transparent
8	16286	Flow Label	1	Black
9		Locator	1	Black
10		Cover	1	Black
11		Label	1	Silver
12		Screw	2	White Zinc Plated
13	16216	Dustproof Plate	1	Black
14	11610	Knob Plug	1	Black
15		Self-tapping Screw	1	White Zinc Plated
16	11604	Knob	1	Black
17	11605-1	Indicator Plate	1	Black
18	16084	24-Hour Time Gear Label	1	Black
19		24-Hour Time Gear	1	Black
20	11608	Reset Gear	1	Black
21	16087	Test Label	1	White
22		Serial Number Label	1	White
23	16290	Label	1	White
24	16088	Voltage Warning Label	1	Yellow
25		Rolling Pin	1	Natural
26		Button Gear	1	White
27		Positioning Spring	2	Natural
28		Ball	2	Natural
29	11601	Main Gear & Shaft	1	Black
30		Reset Spring	1	
31		Passive Gear	1	Black
32		Washer	1	Natural
33		Transmission Gear	1	Black
34	11650	Motor Mounting Plate	1	White Zinc Plated
35		Motor,120V/60Hz	1	
36		Screw,Motor	3	White Zinc Plated
37		Wire Connector	2	
38		Nylon Cable Ties	1	
39		Strain Relief	1	Natural
40		Electrical Cord-US	1	
41		Screw	1	White Zinc Plated
42		Washer	1	Natural
43	11603	Eccentric Wheel	1	Natural
44	16285	Salt Tags	1	White
45	11683	Description Label	1	White
46	11602	Brine Cam	1	Black
47		Hex Nuts	1	White Zinc Plated
48	16282	Front Label	1	
49	16206	Pinion	1	Gray
50		Clutch	1	Black
51		Spring	1	Natural
52		Spring Retaining Ring	1	Black
53		Shaft	1	
54	16052	Connecting Link	1	Natural
55		Bolt	1	Natural
56	16055-1	Piston Rod	1	Teflon Coating
57		Screw	2	Natural
58		Screw	3	Natural
59	16055	Black Plate	1	Natural
60		Ring	1	Black
61	16005	End Plug	1	Natural
62		O-Ring	3	Black
63	16006	Piston Retainer	1	Natural

Item#	P/N	Part Name	Quantity	Color
64		Piston Pin	1	Natural
65	16033	Seal	5	Black
66	16004	Spacer	4	Black
67	16053-1	Piston-Softener	1	Teflon Coating
68	16001-1	Valve Body	1	Black
69	16013	Flow Straightener	1	Natural
70		O-Ring	4	Black
71		Cover	1	Black
72		Screw	4	Natural
73		O-Ring	1	Black
74		Seal Plate	1	Black
75		Gear-308	1	Blue
76		Gear-302	3	Blue
77		Gear-202	3	Natural
78		Gear-305	1	Blue
79		Splint	1	Natural
80		Sleeve	1	Brown
81		O-Ring	1	Black
82		Leaf Axle	1	Natural
83		Impeller	1	Natural
84		Bush	1	Brown
85		Axis	1	Natural
86		Meter Body	1	Black
87	16051	Adapter Clip	4	Natural
88		Screw	4	Natural
89	16018	Yoke,Plastic 3/4" NPT	1	Black
90		O-Ring	1	Black
91		O-Ring	1	Black
92	16011	Drain Hose Barb	1	Natural
93	16012	DLFC Button Retainer	1	Natural
94		O-Ring	1	Black
95	16036	DLFC Button-.20GPM	1	Black
96	16080	DLFC Button Flow Label	1	White
97	16015	BLFC Button Retainer	1	Natural
98	16042	BLFC Button-.25GPM	1	Blue
99		O-Ring	1	Black
100	16056	Brine Valve Connector	1	Natural
101		Screw	2	Natural
102	16003	Injector Cover	1	Black
103		O-Ring	1	Black
104	16059	Injector Filter	1	Natural
105	16070	Injector Nozzle-#0	1	Red
	16028	Injector Nozzle-#1	1	Natural
	16026	Injector Nozzle-#2	1	Blue
	16022	Injector Nozzle-#3	1	Yellow
	16009	Injector Nozzle-#4	1	Green
106	16071	Injector Throat-#0	1	Red
	16027	Injector Throat-#1	1	Natural
	16025	Injector Throat-#2	1	Blue
	16021	Injector Throat-#3	1	Yellow
	16008	Injector Throat-#4	1	Green
107	16086	Flow Label-.25GPM	1	Pink
108	16002	Injector Body	1	Black
109		O-Ring	2	Black
110	16014	Air Disperser	1	Natural
111		O-Ring	1	Black
112		O-Ring	1	Black
113	16010	Spacer	1	Natural
114		O-Ring	1	Black
115	16007	Brine Valve Cap	1	Natural
116	16058	Spring-Brine Valve	1	Natural
117	16030	Brine Valve Seat	1	Black
118	16054-1	Brine Valve Stem	1	Teflon Coating
119		Washer	1	Natural
120		Retaining Ring	1	Natural

F11-STC Timer Control Valve Assembly



REV#	REVISION DESCRIPTIONS	BY	ECO	DATE
A				

TITLE
 TIMER CONTROL VALVE

LAST MODIFIED
 TUESDAY MAY 17, 2011

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DESIGNER RS	DATE 5/17/11	DRAWING NUMBER F11-STC	PART NUMBER F11-STC
ENGINEER RS	DATE 5/17/11	SCALE 1:1	SHEET 1

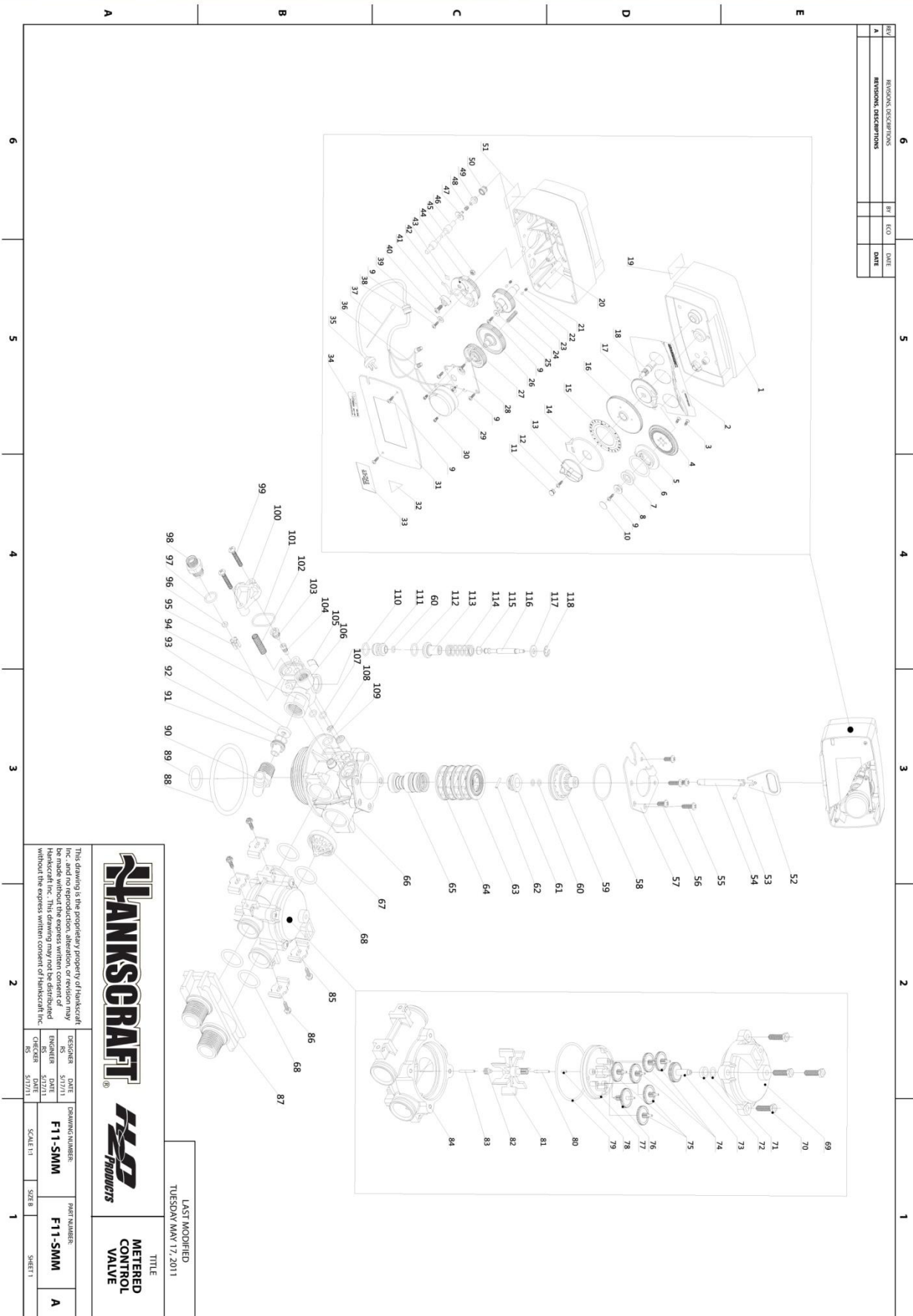
F11-STC Timer Control Valve Assembly Continued

F11-STC				
Item#	P/N	Part Name	Quantity	Color
1	11606	Installation Panel	1	Black
2	11680	Panel Label	1	Transparent
3		Wheel Ring	1	Black
4		Spring	2	Natural
5		Ball	4	Natural
6		Wheel Black Cover	1	Black
7		O-Ring	1	Black
8		Wheel	1	Black
9		Wheel Picks	12	White Zinc Plated
10		Wheel Label	1	Black
11		Pointer	1	Red
12		Self-tapping Screw	1	White Zinc Plated
13	11610	Knob Plug	1	Black
14		Self-tapping Screw	1	White Zinc Plated
15	11604	Knob	1	Black
16	11605-1	Indicator Plate	1	Black
17	16084	24-Hour Time Gear Label	1	Black
18		24-Hour Time Gear	1	Black
19		Reset Lever	1	Natural
20		Button Gear	1	White
21		Serial Number Label	1	White
22		Rolling Pin	1	Natural
23		Positioning Spring	2	Natural
24	11601	Main Gear and Shaft	1	Black
25		Reset Spring	1	Natural
26		Washer	1	Natural
27		Screw	7	Black Zinc Plated
28		Passive Gear	1	Black
29		Transmission Gear	1	Black
30	11650	Motor Mounting Plate	1	White Zinc Plated
31		Motor, 120V/60Hz	1	
32		Screw, Motor	3	White Zinc Plated
33	11607	Back Cover	1	Black
34	16088	Voltage Warning Label	1	Yellow
35	11682	Back Cover Label	1	White
36	16290	Label	1	White
37		Electrical Cord, US	1	
38		Wire Connector	2	
39		Nylon Cable Ties	1	
40		Strain Relief	1	Black
41		Washer	1	Natural
42		Screw	1	White Zinc Plated
43	11603	Eccentric Wheel	1	Natural
44	16285	Salt Tags	1	White
45	11683	Description Label	1	White
46	11602	Brine Cam	1	Black
47		Hex Nuts	1	White Zinc Plated
48	16087	Test Label	1	White
49	16052	Connecting Link	1	Natural
50		Bolt	1	Natural
51	16055-1	Piston Rod	1	Teflon Coating
52		Screw	2	Natural
53		Screw	3	Natural
54	16055	Black Plate	1	Natural

Item#	P/N	Part Name	Quantity	Color
55		Ring	1	Black
56	16005	End Plug	1	Natural
57		O-Ring	3	Black
58	16006	Piston Retainer	1	Natural
59		Piston Pin	1	Natural
60	16033	Seal	5	Black
61	16004	Spacer	4	Black
62	16053-1	Piston-softener	1	Teflon Coating
63	16001-1	Valve Body	1	Black
64		O-Ring	4	Black
65	16017	Adapter Coupling	2	Black
66	16051	Adapter Clip	2	Natural
67		Screw	2	Natural
68	16018	Yoke-Plastic 3/4" NPT	1	Black
69		O-Ring	1	Black
70		O-Ring	1	Black
71	16011	Drain Hose Barb	1	Natural
72	16012	DLFC Button Retainer	1	Natural
73		O-Ring	1	Black
74	16036	DLFC Button-2.0GPM	1	Black
75	16080	DLFC Button Flow Label	1	White
76	16015	BLFC Button Retainer	1	Natural
77	16042	BLFC Button-.25GPM	1	Blue
78		O-Ring	1	Black
79	16056	Brine Valve Connector	1	Natural
80		Screw	2	Natural
81	16003	Injector Cover	1	Black
82		O-Ring	1	Black
83	16059	Injector Filter	1	Natural
84	16070	Injector Nozzle-#0	1	Red
	16028	Injector Nozzle-#1	1	Natural
	16026	Injector Nozzle-#2	1	Blue
	16022	Injector Nozzle-#3	1	Yellow
	16009	Injector Nozzle-#4	1	Green
85	16071	Injector Throat-#0	1	Red
	16027	Injector Throat-#1	1	Natural
	16025	Injector Throat-#2	1	Blue
	16021	Injector Throat-#3	1	Yellow
	16008	Injector Throat-#4	1	Green
86	16086	Flow Label-.25GPM	1	Pink
87	16002	Injector Body	1	Black
88		O-Ring	2	Black
89	16014	Air Disperser	1	Natural
90		O-Ring	1	Black
91		O-Ring	1	Black
92	16010	Spacer	1	Natural
93		O-Ring	1	Black
94	16007	Brine Valve Cap	1	Natural
95	16058	Spring-Brine Valve	1	Natural
96	16030	Brine Valve Seat	1	Black
97	16054-1	Brine Valve Stem	1	Teflon Coating
98		Washer	1	Natural
99		Retaining Ring	1	Natural

F11-SMM Meter Control Valve Assembly

REV#	REVISION DESCRIPTIONS	BY	ECO	DATE
A				



TITLE
METERED CONTROL VALVE

LAST MODIFIED
TUESDAY MAY 17, 2011

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DESIGNER	DATE	DRAWING NUMBER	PART NUMBER
RS	5/17/11	F11-SMM	F11-SMM
ENGINEER	DATE	SCALE	SHEET
RS	5/17/11	1:1	1

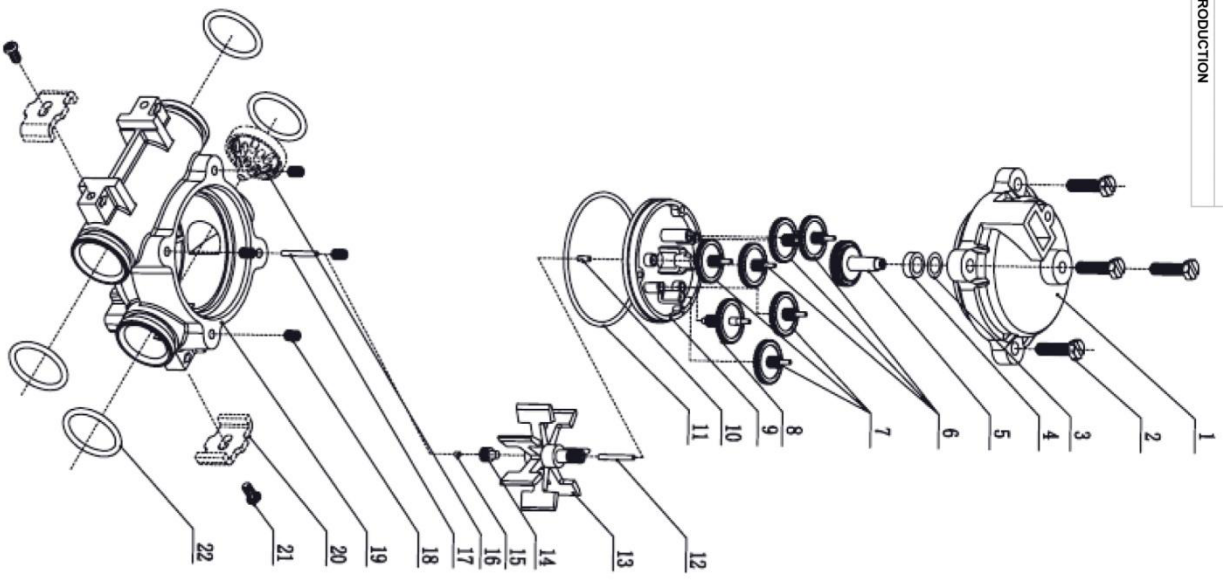
F11-SMM Meter Control Valve Assembly Continued

F11-SMM				
Item#	P/N	Part Name	QTY	Color
1	11606	Insallation Panel	1	Black
2	11688	Panal Label	1	Transparent
3		Screw	2	White Zinc Plated
4		Traffic Gear	1	Black
5		Dial	1	Transparent
6	16286	Flow Label	1	Black
7		Locator	1	Black
8		Cover	1	Black
9		Countersunk Head Screws	8	Black Zinc Plated
10		Label	1	Silver
11	11610	Knob Plug	1	Black
12		Self-tapping Screw	1	White Zinc Plated
13	11604	Knob	1	Black
14	11605-1	Indicator Plate	1	Black
15	16084	24-Hour Time Gear Label	1	Black
16		24-Hour Time Gear	1	Black
17	11608	Reset Gear	1	Black
18		Button Bear	1	White
19		Serial Number Label	1	White
20		Rolling Pin	1	Natural
21		Positioning Spring	2	Natural
22		Ball	2	Natural
23	11601	Main Gear & Shaft	1	Black
24		Reset Spring	1	
25		Washer	1	Natural
26		Passive Gear	1	Black
27		Transmission Gear	1	Black
28	11650	Motor Mounting Plate	1	White Zinc Plated
29		Motor, 120V/60Hz	1	
30		Screw, Motor	3	White Zinc Plated
31	11607	Back Cover	1	Black
32	16088	Voltage Warning Label	1	Yellow
33	11682	Back Cover Label	1	White
34	16290	Label	1	White
35		Electrical Cord, US	1	
36		Wire Connector	2	
37		Nylon Cable Ties	1	Natural
38		Strain Relief	1	
39		Washer	1	Natural
40		Screw	1	White Zinc Plated
41	11603	Eccentric Wheel	1	Natural
42	16285	Salt Tags	1	White
43	11683	Description Label	1	White
44	11602	Brine Cam	1	Black
45		Hex Nuts	1	White Zinc Plated
46		Shaft	1	
47		Spring Retaining Ring	1	Black
48		Spring	1	Natural
49		Clutch	1	Black
50	16206	Pinion	1	Gray
51	16087	Test Label	1	White
52	16052	Connecting Link	1	Natural
53		Bolt	1	Natural
54	16055-1	Piston Rod	1	Teflon Coating
55		Screw	2	Natural
56		Screw	3	Natural
57	16055	Black Plate	1	Natural
58		Ring	1	Black
59	16005	End Plug	1	Natural
60		O-Ring	3	Black
61	16006	Piston Retainer	1	Natural
62		Piston Pin	1	Natural
63	16033	Seal	5	Black

Item#	P/N	Part Name	QTY	Color
64	16004	Spacer	4	Black
65	16053-1	Piston-Softener	1	Teflon Coating
66	16001-1	Valve Body	1	Black
67	16013	Flow Straightener	1	Natural
68		O-Ring	4	Black
69		Cover	1	Black
70		Screw	4	Natural
71		O-Ring	1	Black
72		Seal Plate	1	Black
73		Gear 308	1	Blue
74		Gear 302	3	Blue
75		Gear 202	3	Natural
76		Gear 305	1	Blue
77		Splint	1	Natural
78		Sleeve	1	Brown
79		O-Ring	1	Black
80		Leaf Axle	1	Natural
81		Impeller	1	Natural
82		Bush	1	Brown
83		Axis	1	Natural
84		Meter Body	1	Black
85	16051	Adapter Clip	4	Natural
86		Screw	4	Natural
87	16018	Yoke-Plastic 3/4" NPT	1	Black
88		O-Ring	1	Black
89		O-Ring	1	Black
90	16011	Drain Hose Barb	1	Natural
91	16012	DLFC Button Retainer	1	Natural
92		O-Ring	1	Black
93	16036	DLFC Button-2.0GPM	1	Black
94	16080	DLFC Button Flow Label	1	White
95	16015	BLFC Button Retainer	1	Natural
96	16042	BLFC Button-.25GPM	1	Blue
97		O-Ring	1	Black
98	16056	Brine Valve Connector	1	Natural
99		Screw	2	Natural
100	16003	Injector Cover	1	Black
101		O-Ring	1	Black
102	16059	Injector Filter	1	Natural
103	16070	Injector Nozzle-#0	1	Red
	16028	Injector Nozzle-#1	1	Natural
	16026	Injector Nozzle-#2	1	Blue
	16022	Injector Nozzle-#3	1	Yellow
	16009	Injector Nozzle-#4	1	Green
104	16071	Injector Throat-#0	1	Red
	16027	Injector Throat-#1	1	Natural
	16025	Injector Throat-#2	1	Blue
	16021	Injector Throat-#3	1	Yellow
	16008	Injector Throat-#4	1	Green
105	16086	Flow Label-.25GPM	1	Pink
106	16002	Injector Body	1	Black
107		O-Ring	2	Black
108	16014	Air Dispenser	1	Natural
109		O-Ring	1	Black
110		O-Ring	1	Black
111	16010	Spacer	1	Natural
112		O-Ring	1	Black
113	16007	Brine Valve Cap	1	Natural
114	16058	Spring-Brine Valve	1	Natural
115	16030	Brine Valve Seat	1	Black
116	16054-1	Brine Valve Stem	1	Teflon
117		Washer	1	Natural
118		Retaining Ring	1	Natural

F11,E Meter Assembly

REV	DESCRIPTION
A	RELEASED FOR PRODUCTION



E/F11 Series Meter				
Item #	P/N	Part Name	QTY	Color
1	112202H	Meter Cover Assembly,Standard	1	Black
2	102082H	Screw,Meter Cover Assembly	4	Natural
3	112270H	O-Ring	1	Black
4	112212H	Seal Plate	1	Black
5	112211H	Gear-308	1	Blue
6	112209H	Gear-302	3	Blue
7	112206H	Gear-202	3	Natural
8	112210H	Gear-305	1	Blue
9	112203H	Splint	1	Natural
10	112213H	Sleeve	1	Brown
11	101015H	O-Ring,Meter Cover Assembly	1	Black
12	112251H	Leaf Axle	1	Natural
13	112204H	Impeller	1	Natural
14	112214H	Bush	1	Brown
15	112252H	Bearing	1	
16	116013H	Flow Straightener	1	Natural
17	112253H	Axis	1	Natural
18	112254H	Insert Nut	4	
19	112201H	Meter Body	1	Black
20	116051H	Adapter Clip	4	Natural
21	101105H	Screw,Adapter Clip	4	Natural
22	101013H	O-Ring Meter Body	4	Black

HANKSCRAFT **ISO**
Producers

DESCRIPTION: F11 SERIES METER

PART #: 16 STD M

F11,E Valve Assembly

REV DESCRIPTION
A RELEASED FOR PRODUCTION

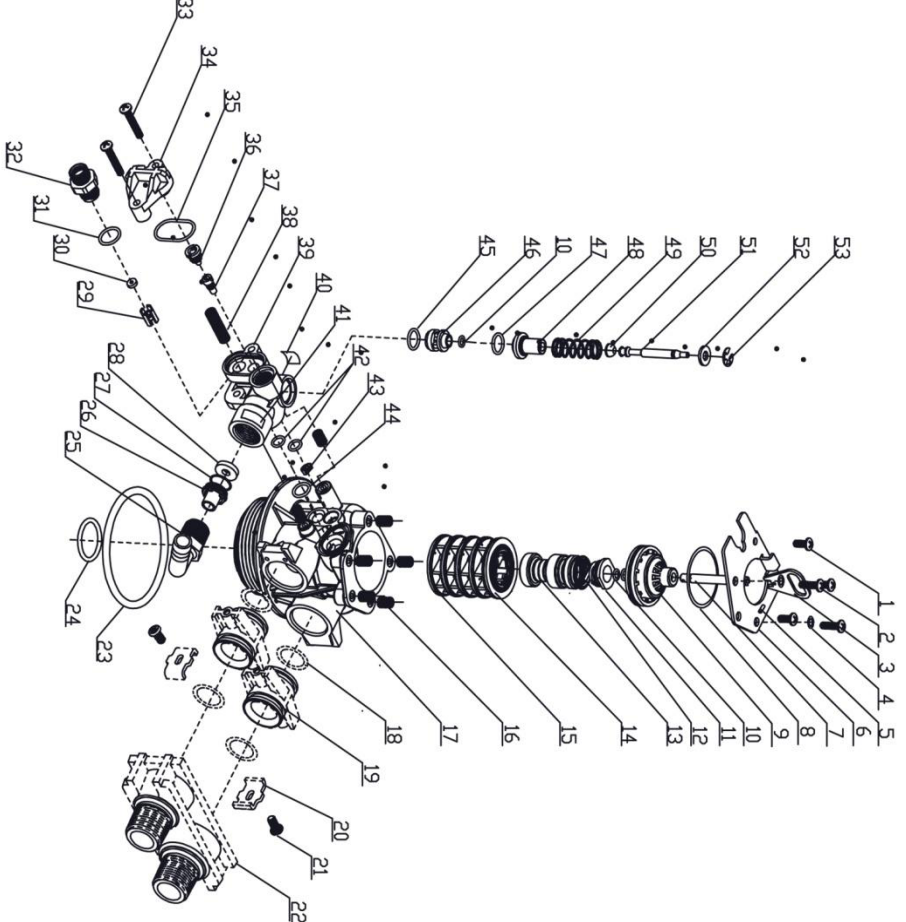
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Item #	P/N	Part Name	QTY	Color
1	102001H	Screw	3	Natural
2	102002H	Washer	1	Natural
3	116052H	Piston Rod Assembly	1	Natural
4	104004H	Washer	2	Natural
5	100106H	Bolt	1	Natural
6	116050H	End Plug Retainer	1	Natural
7	116053H	Piston Rod	1	Teflon Coating
8	101020H	Ring	1	Black
9	116005H	End Plug Assembly-Standard	1	White
10	101001H	End Plug Assembly-Low Water	1	Grey
11	116006H	O-Ring	3	Black
12	100101H	Piston Retainer	1	Natural
13	116053-H	Piston-Standard	1	Natural
		Piston-Low Water	1	Teflon Coating
	116150-H	Piston-Filter	1	Black
14	116033H	Seal	5	Black
15	116004H	Silicone Seal	5	Black
16	116005H	Spacer	4	Black
17	116001-H	Valve Body Assembly-1"	7	Black
18	116003H	Valve Body Assembly-3/4"	1	Black
K1	116001H	Valve Body	1	Black
K2	116016H	Bottom	1	Black
19	116017H	O-Ring-Adapter Coupling	4	Black
20	116051H	Adapter Coupling	2	Black
21	102105H	Adapter Clip	2-4	Natural
		Screw-Adapter Coupling	2-4	Natural
22	116017H	Yoke-Boss 3/4" NPT	1	Black
23	101007H	Yoke-Plastic 1" NPT	1	Black
24	101102H	O-Ring-Top of Tank	1	Black
		O-Ring-Distributor Tube 1"	1	Black
25	116011H	O-Ring-Distributor Tube 13/16"	1	Black
		Drain Hose barb	1	Natural
		BFC Plug	1	
		Brine Valve Plug	1	
26	116012H	D/FC Button Retainer	1	Natural
		Screen-Brine Line	1	
27	101101H	O-Ring-D/FC(Not Shown)	1	Black
	116035H	D/FC Button-1.5GPM	1	Black
	116036H	D/FC Button-2.0GPM	1	Black
	116037H	D/FC Button-2.4GPM	1	Black
	116038H	D/FC Button-3.0GPM	1	Black
	116039H	D/FC Button-3.5GPM	1	Black
	116040H	D/FC Button-4.0GPM	1	Black
	116041H	D/FC Button-5.0GPM	1	Black
29	116015H	B/FC Button Retainer	1	Natural

Item #	P/N	Part Name	QTY	Color
30	116042H	B/FC Button-2.5GPM	1	Black
	116044H	B/FC Button-5.0GPM	1	Black
	116031H	B/FC Button-1.0GPM	1	Black
31	101004H	O-Ring-B/FC	1	Black
	116056H	B/FC Fitting 3/8"	1	Natural
32	102003H	Screw-Injector Mounting	2	Natural
33	101005H	Injector Cover	1	Black
34	116003H	O-Ring-Injector Cover	1	Black
35	116009H	Injector Nozzle-#1	1	Green
	116028H	Injector Nozzle-#2	1	Yellow
	116029H	Injector Nozzle-#3	1	Blue
36	116028H	Injector Nozzle-#1	1	Blue
	116029H	Injector Nozzle-#2	1	Yellow
	116070H	Injector Nozzle-#3	1	Red
	116008H	Injector Throat-#1	1	Green
	116021H	Injector Throat-#2	1	Yellow
	116025H	Injector Throat-#3	1	Blue
37	116021H	Injector Throat-#1	1	Natural
	116027H	Injector Throat-#2	1	Natural
	116071H	Injector Throat-#3	1	Red
38	116059H	Injector Screen	1	Natural
39	116022H	Injector Body	1	Black
40	116086H	Flow Label-25GPM	1	Pink
41	116087H	Flow Label-50GPM	1	Pink
42	101002H	D/FC Button Flow Label	1	White
43	116014H	O-Ring-Injector	2	Black
44	101006H	Air Dispenser	1	Natural
45	101105H	O-Ring-Train	1	Black
46	116010H	O-Ring	1	Black
		Brine Valve Spacer	1	Natural
47	101003H	Quad Ring	1	Black
48	116007H	O-Ring-Brine Spacer	1	Black
49	116058H	Brine Valve Cap	1	Natural
50	116030H	Spring-Brine Valve	1	Natural
51	116039H	Brine Valve Seat	1	Black
52	116054-H	Brine Valve Stem	1	Black
53	104001H	Washer-Brine Valve	1	Teflon Coating
	104053H	Retaining Ring	1	Natural
		B/FC Fitting Nut	1	Natural
		B/FC Ferrule	1	
		B/FC Tube Insert	1	



HANKSCRAFT **WSP**
Producers

DESCRIPTION: CONTROL VALVE ASSEMBLY

PART #: F11XXV

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Contact Information

Thank you again for choosing this Hanksraft H2O PRODUCTS control valve for water treatment systems. Please contact your service professional with questions.

