

## 'MAT' Series Softener Systems



### Overview

The Marlo 'MAT' softener is a meter initiated twin-alternating softener that effectively reduces hard-water scale. This results in lower energy costs and longer equipment life.

The twin alternating design provides a continuous supply of softened water for critical applications, such as boiler feed, with a fully recharged tank always in standby.

### Standard Features

- Top-mounted, twin-tank control valve with integral brine injector
- High capacity, sodium form cation resin
- Water meter initiated regeneration
- Inlet/Outlet Sizes - 3/4", 1" or 1-1/2"
- NSF certified corrosion resistant pressure vessels
- Brine tank assembly with salt shelf and safety overflow valve
- Hardness test kit

### Materials of Construction

- Control Valve Body:
  - Glass-filled Noryl - Fleck 9100, (3/4" and 1")
  - Bronze - Fleck 9500, (1-1/2")
- Meter: Glass-filled Noryl, Stainless Steel or Brass
- Resin Tanks: FRP
- Internal Distributor: PVC/ABS
- Brine Tank: Corrosion resistant polyethylene

### Instrumentation / Controls

- Fleck SXT digital display electronic timer
- Meter initiated with override option
- Blue backlit LCD display
- Adjustable cycle times
- Service and diagnostic indicators

### Operating Parameters

- Flow Range: 2 gpm - 62 gpm
- Inlet Pressure: 30-125 psig
- Temperature: 40-100°F
- Electrical: 120VAC, 1-Ph, 60 Hz

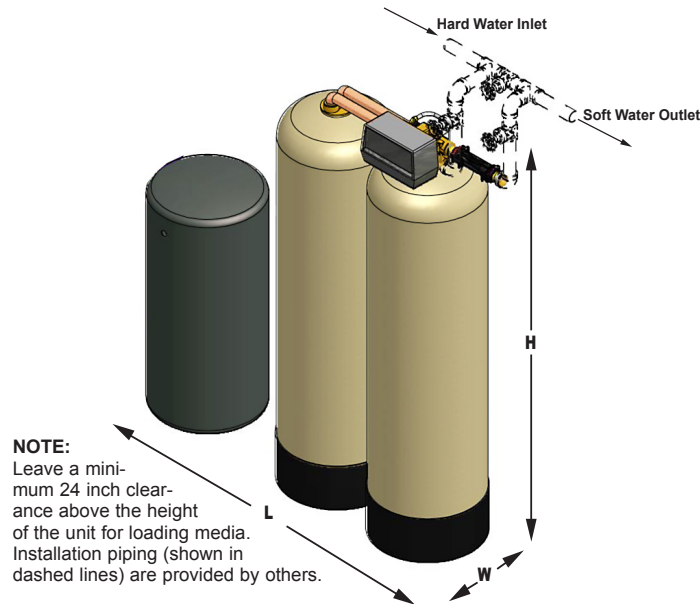
### Options Available

- Skid mounted, pre-piped, pre-loaded system
- Electromechanical controller
- XT electronic controller with resettable totalizer
- 220 VAC/50Hz electrical power
- Application specific resin
- Larger brine bank

# 'MAT' Series Specifications

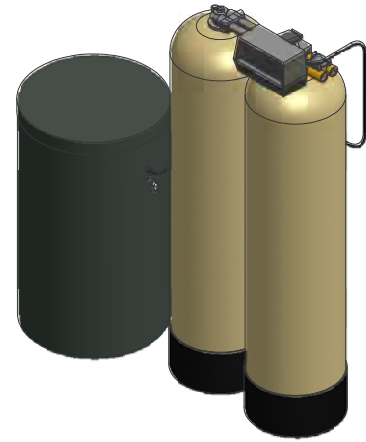
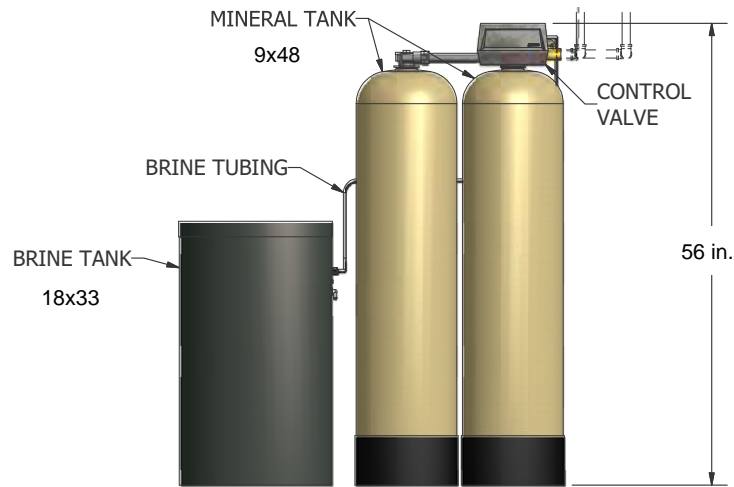
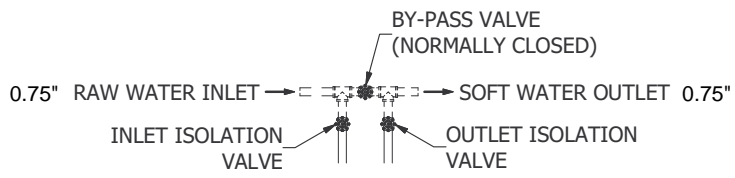
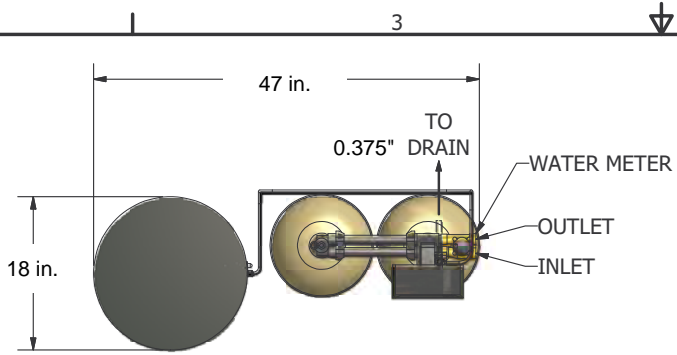
MODEL NUMBER	EXCHANGE CAPACITY (Grains) <sup>①</sup>		FLOW RATES			PIPE SIZE		RESIN PER TANK	TANK SIZES		SALT STORAGE	# OF REGENS PER SALT REFILL	OVERALL DIMENSIONS (INCHES) <sup>④</sup>			APPROX SHIPPING WEIGHT (LBS) <sup>⑤</sup>
			SERVICE		BACK WASH	SERVICE	DRAIN		SOFTENER	BRINE			LENGTH	WIDTH	HEIGHT	
	MAX.	MIN.	CONT. GPM <sup>②</sup>	PEAK GPM <sup>③</sup>				GPM			INCHES	INCHES				CU. FT.
					INCHES	INCHES	SINGLE									
MAT 15M-3/4	15,000	10,000	12	16	1.2	3/4	1/2	1/2	7x44	18x33	290	40	38	18	52	130
MAT 22M-3/4	22,000	15,000	13	17	1.5	3/4	1/2	3/4	8x44	18x33	290	27	40	18	52	165
MAT 30M-3/4	30,000	20,000	14	19	2	3/4	1/2	1	9x48	18x33	290	20	40	18	56	200
MAT-30M-1	30,000	20,000	14	19	2	1	1/2	1	9x48	18x33	290	19	40	18	56	200
MAT 45M-3/4	45,000	30,000	13	18	2.4	3/4	1/2	1-1/2	10x54	18x40	320	17	45	18	62	265
MAT-45M-1	45,000	30,000	15	20	2.4	1	1/2	1-1/2	10x54	18x40	320	14	45	18	62	265
MAT 60M-3/4	60,000	40,000	14	19	3.5	3/4	1/2	2	12x52	18x40	270	11	49	18	60	400
MAT 60M-1	60,000	40,000	16	21	3.5	1	1/2	2	12x52	18x40	270	11	49	18	60	400
MAT 60M-1-1/2	60,000	40,000	28	39	3.5	1-1/2	1	2	13x54	18x40	270	11	52	18	62	425
MAT 90M-1	90,000	60,000	17	22	5	1	1/2	3	14x65	18x40	270	6	54	18	73	625
MAT 90M-1-1/2	90,000	60,000	31	42	5	1-1/2	1	3	14x65	18x40	270	6	56	18	75	650
MAT 120M-1	120,000	80,000	18	23	6	1	1/2	4	16x65	24x40	550	9	64	24	73	825
MAT 120M-1-1/2	120,000	80,000	34	46	6	1-1/2	1	4	16x65	24x40	550	9	68	24	75	850
MAT 150M-1-1/2	150,000	100,000	38	50	8	1-1/2	1	5	18x65	24x50	630	7	72	24	75	1,150
MAT-180M-1-1/2	180,000	120,000	41	54	12	1-1/2	1	6	21x62	24x50	590	6	78	24	75	1250
MAT 210M-1-1/2	210,000	140,000	39	52	12	1-1/2	1	7	21x62	24x50	550	6	78	24	75	1,375
MAT 240M-1-1/2	240,000	160,000	43	57	15	1-1/2	1	8	24x72	24x50	530	4	84	24	83	1,600
MAT-270M-1-1/2	270,000	180,000	42	55	15	1-1/2	1	9	24x72	24x50	460	3	84	24	83	1725
MAT 300M-1-1/2	300,000	200,000	41	55	15	1-1/2	1	10	24x72	24x50	420	3	84	24	83	1,850

## 'MAT' Series Dimensions



## Notes

- ① Maximum capacity based on 30,000 grains per cubic foot of resin when regenerated with 15 lbs. salt.  
Minimum capacity based on 20,000 grains per cubic foot of resin when regenerated with 6 lbs. salt.
- ② At pressure loss not exceeding 15 psi.
- ③ At pressure loss not exceeding 25 psi.
- ④ Dimensions are estimate only.
- ⑤ Shipping weights are estimate only. Weights include resin and support gravel.



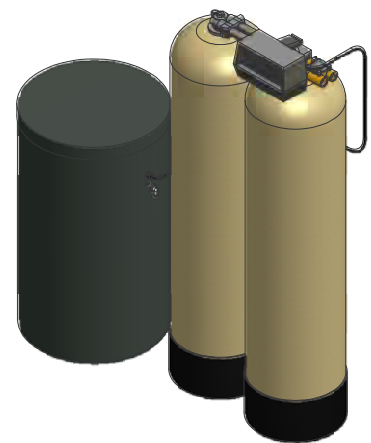
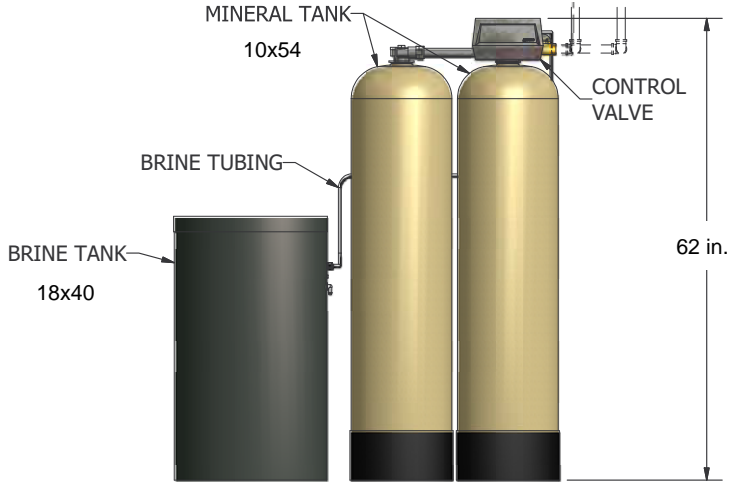
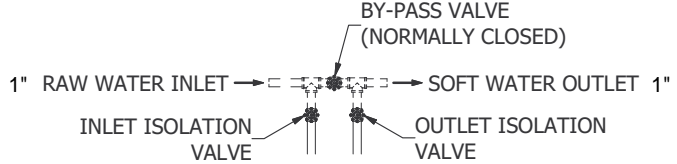
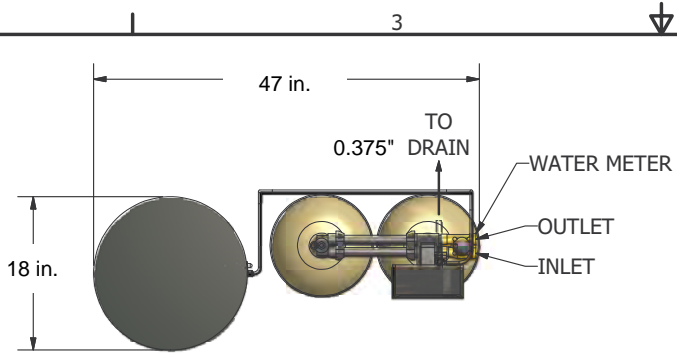
**NOTE:**  
ALL PIPING, FITTINGS, ETC. SHOWN IN  
BROKEN LINES ARE SUPPLIED BY OTHERS.

**PRELIMINARY  
DIMENSIONS SUBJECT TO CHANGE**

REVISIONS			
NO.	DATE	BY	REMARKS

General Water Systems - Softener

MAT-TWIN ALT. SOFTENER SYS. w/9100 VALVE GENERAL ARRANGEMENT			
FRAC. ±	DEC. ±	FILE ID.	
DRN. KLT	SCALE	SHEET 1	OF 1
APP'D.	DRAWING NO.		REV.
DATE 1/19/2009	MAT-30M-3/4		0



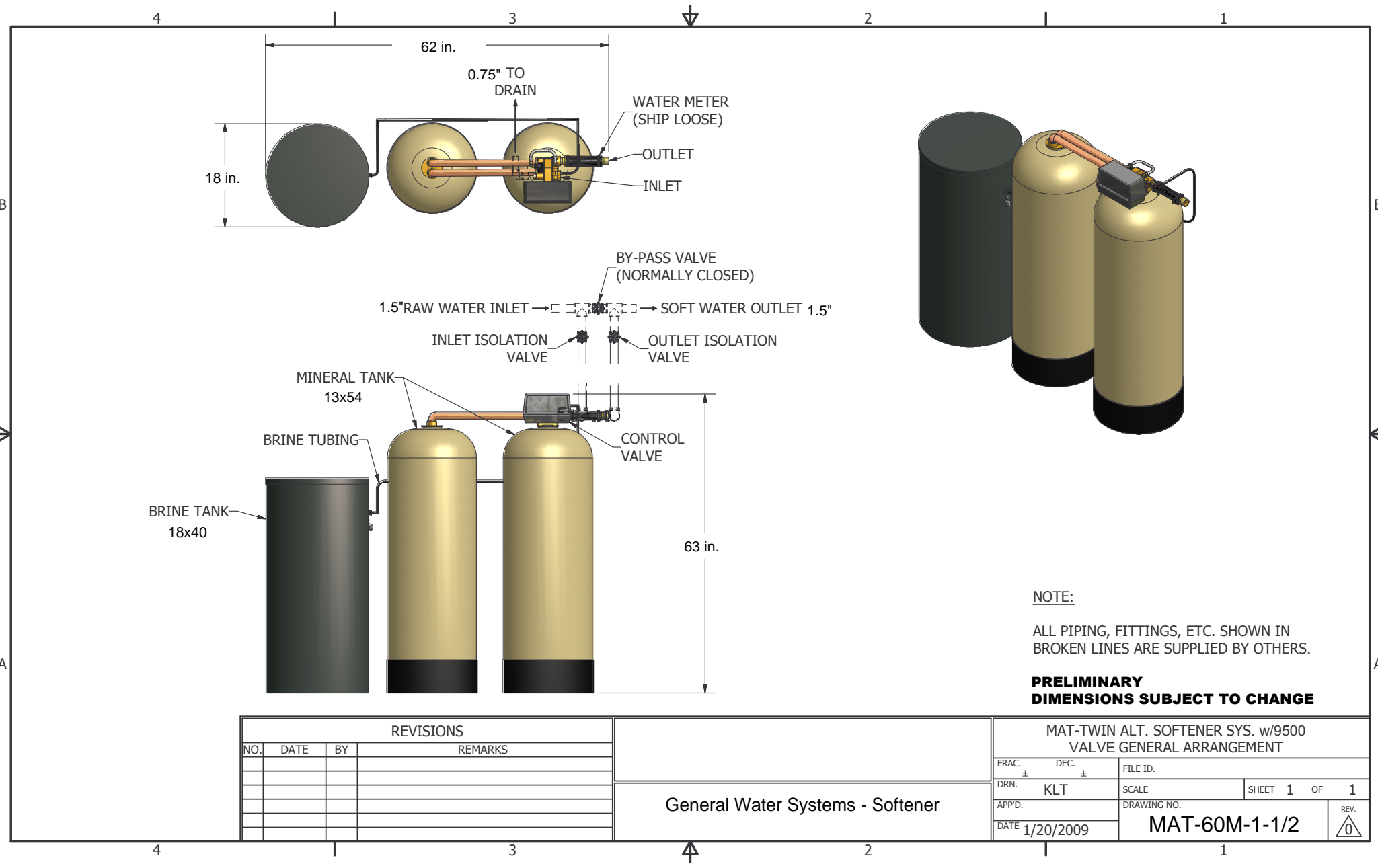
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General Water Systems - Softener

MAT-TWIN ALT. SOFTENER SYS. w/9100 VALVE GENERAL ARRANGEMENT			
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DRN. KLT	SCALE	SHEET 1 OF 1	REV.
APP'D.	DRAWING NO.		0
DATE 1/19/2009	MAT-45M-1		



**NOTE:**

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**PRELIMINARY  
DIMENSIONS SUBJECT TO CHANGE**

REVISIONS			
NO.	DATE	BY	REMARKS

General Water Systems - Softener

MAT-TWIN ALT. SOFTENER SYS. w/9500 VALVE GENERAL ARRANGEMENT			
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