

# WATER SOFTENER PRODUCT GUIDE

## *Model SMR – Simplex Package*

Capacity (Grains)	Pipe Size (in.)	Shipping Wt. (lbs)
150,000	1.5	721
150,000	2	754
210,000	1.5	919
210,000	2	946
300,000	2	1,428
300,000	3	1,533
450,000	2	1,753
450,000	3	1,826
600,000	2	2,460
600,000	3	2,533
750,000	2	2,833
750,000	3	2,970
900,000	2	3,340
900,000	3	3,416
1,050,000	2	3,650
1,050,000	3	3,726
1,200,000	3	5,650
1,200,000	4	5,720
1,500,000	3	6,850
1,500,000	4	6,875

Pressure gauges and test cocks (inlet/outlet) per Tank – Included

Above single system list price includes epoxy lined/painted exterior pressure vessel - non-code construction, stager controller, bypass assembly, brine tank, water softening resin, support gravel, pressure gauges, and sampling valves.

For Temperatures Above 120 degrees F, Consult Cleaver-Brooks.

All units are F.O.B. Racine, WI.

*Model SMR – Twin Alternating Package*

Capacity (Grains)	Pipe Size (in.)	Shipping Wt. (lbs)
150,000	1.5	1,369
150,000	2	1,430
210,000	1.5	1,762
210,000	2	1,814
300,000	2	2,738
300,000	3	2,936
450,000	2	3,351
450,000	3	3,504
600,000	2	4,722
600,000	3	4,863
750,000	2	5,440
750,000	3	5,581
900,000	2	6,429
900,000	3	6,598
1,050,000	2	7,049
1,050,000	3	7,218
1,200,000	3	10,765
1,200,000	4	10,815
1,500,000	3	12,950
1,500,000	4	13,000

Pressure gauges and test cocks (inlet/outlet) per Tank – Included

Above twin system list price includes epoxy lined/painted exterior pressure vessels - non-code construction, metered regeneration, alternator controller, brine tank, water softening resin, support gravel, pressure gauges, and sampling valves.

For Temperatures Above 120 degrees F, Consult Cleaver-Brooks.

All units are F.O.B. Racine, WI.

Model SMR – Accessories

**ASME Pressure Tank Construction – List Price Adders (Per Tank)**

Capacity (GRAINS)	Tank Size DIA x S.S.	PSI Rating
150,000	20 x 54	100
150,000	24 x 54	100
210,000	30 x 54	100
210,000	30 x 60	100
300,000	36 x 60	100
300,000	36 x 72	100
450,000	42 x 60	100
450,000	42 x 72	100
600,000	48 x 72	100
600,000	54 x 72	100

Notes:

- (1) Interior Lining - Polyamide Epoxy applied to a sandblasted surface. Sprayed application to a dry film thickness of 10-12 mils. ANSI/NSF Standard 61 compliance.
- (2) Finish paint is a high solids, polyamide epoxy applied to an exterior lined tank. Application is 6-8 mils sprayed on sandblasted surface. The standard color is safety blue. Consult the factory for special colors and other exterior coatings.
- (3) Contact factory for prices on other tank pressure ratings and/or other tank lining requirements.

***Twin Alternating – Skid Mounted / Pre-Piped / Pre-Wired Packages***

Capacity (GRAINS)	Pipe Size (in.)	Header Size (in.)
150,000	1.5	1.5
150,000	2	2
210,000	1.5	1.5
210,000	2	2
300,000	2	2
300,000	3	3
450,000	2	2
450,000	3	3
600,000	2	2
600,000	3	3
750,000	2	2
750,000	3	3
900,000	2	2
900,000	3	3
1,050,000	2	2
1,050,000	3	3
1,200,000	3	3
1,200,000	4	4
1,500,000	3	3
1,500,000	4	4

Notes:

1. Steel mounting skids painted to match tank color.
2. System interconnecting piping is galvanized steel.
3. Isolation valves provided for the inlet and outlet of each tank and a system bypass valve.
4. Contact factory for alternative header sizes, material of construction etc.

Model FMR – Simplex Package

Capacity (Grains)	Pipe Size (in.)	Time Clock Shipping Wt. (lbs)	Meter Shipping Wt. (lbs)
30,000	0.75	104	---
45,000	0.75	143	---
60,000	1	178	178
60,000	1.5	187	187
90,000	1	287	287
90,000	1.5	296	296
120,000	1	366	366
120,000	1.5	374	374
150,000	1.5	463	463
150,000	2	477	477
210,000	1.5	654	654
210,000	2	667	667
300,000	1.5	929	929
300,000	2	939	939
450,000	1.5	1,365	1,365
450,000	2	1,375	1,375
600,000	2	2,035	2,035
600,000	3	2,097	2,097
900,000	3	3,421	3,421
1,200,000	3	4,395	4,395

Above “single” system list price includes FRP pressure vessel - non-code construction, top-mount control valve with automatic regeneration, hard water bypass assembly, brine tank, water softening resin, and support gravel. Metered systems include water meter and digital control valve display.

For Temperatures Above 120 degrees F, Consult Cleaver-Brooks.

All units are F.O.B. Racine, WI.

*Model FMR – Twin Alternating Package*

Capacity (Grains)	Pipe Size (in.)	Shipping Wt. (lbs)
30,000	0.75	196
45,000	0.75	269
60,000	1	338
60,000	1.5	356
90,000	1	557
90,000	1.5	573
120,000	1	705
120,000	1.5	723
150,000	1.5	899
150,000	2	925
210,000	1.5	1,280
210,000	2	1,305
300,000	1.5	1,825
300,000	2	1,850
450,000	1.5	2,665
450,000	2	2,690
600,000	2	3,990
600,000	3	4,120
900,000	3	6,740
1,200,000	3	8,700

Above “twin alternating” system list price includes FRP pressure vessels - non-code construction, top-mount control valves, metered regeneration, alternating control, brine tank, water softening resin, and support gravel. Units with 3/4", 1", and 1-1/2" piping use a single control valve serving both resin tanks. Units with 2" and 3" piping have an individual control valve for each resin tank. All control valves are electronic with digital display.

For Temperatures Above 120 degrees F, Consult Cleaver-Brooks.

All units are F.O.B. Racine, WI.

Model FMR – Accessories

**Twin Alternating – Skid Mounted / Pre-Piped / Pre-Wired Packages**

Capacity (GRAINS)	Pipe Size (in.)	Header Size (in.)
30,000	0.75	0.75
45,000	0.75	0.75
60,000	1	1
60,000	1.5	1.5
90,000	1	1
90,000	1.5	1.5
120,000	1	1
120,000	1.5	1.5
150,000	1.5	1.5
150,000	2	2
210,000	1.5	1.5
210,000	2	2
300,000	1.5	1.5
300,000	2	2
450,000	1.5	1.5
450,000	2	2
600,000	2	2
600,000	3	3
900,000	3	3
1,200,000	3	3

Notes:

1. Steel mounting skids are finished with a “Safety Blue” epoxy paint coating.
2. System interconnecting piping is SCH 80 PVC.
3. Isolation valves provided for the inlet and outlet of each tank and a system bypass valve (2” & 3” only).
4. Contact factory for alternative piping header sizes, material of construction etc.

*Model SSE - Simplex Package*

Capacity (Grains)	Pipe Size (in.)	Shipping Wt. (lbs)
30,000	1	150
60,000	1	285
90,000	1	395
90,000	1.5	405
120,000	1.5	560
120,000	2	605
150,000	1.5	640
150,000	2	655
210,000	1.5	980
210,000	2	995
300,000	1.5	1245
300,000	2	1275
450,000	2	1565
450,000	3	1615
600,000	2	1955
600,000	3	2015
900,000	3	2825
1,200,000	3	3660

Controls - Electronic Demand

Pressure gauges and test cocks ( inlet/outlet ) per Tank – Optional

Above “single” system list price includes steel epoxy lined pressure vessel.

Pressure rating 100 psi. – Metered regeneration based on flow volume and inputted water hardness, standard systems will bypass hardwater during regeneration.

For Temperatures Above 120 degrees F, Consult Cleaver-Brooks.

All units are F.O.B. Naperville, IL.



*Model SSE - Twin Alternating Package*

Capacity (Grains)	Pipe Size (in.)	Shipping Wt. (lbs)
30,000	1	300
60,000	1	490
90,000	1	680
90,000	1.5	700
120,000	1.5	970
120,000	2	1,060
150,000	1.5	1,130
150,000	2	1,160
210,000	1.5	1,740
210,000	2	1,770
300,000	1.5	2,270
300,000	2	2,300
450,000	2	2,980
450,000	3	3,060
600,000	2	3,760
600,000	3	3,880
900,000	3	5,670
1,200,000	3	7,340

Controls - Electronic Demand

Pressure gauges and test cocks ( inlet/outlet ) per Tank – Optional

Above “twin” system list price includes steel epoxy lined pressure vessel.

Pressure rating 100 psi. – Metered regeneration based on flow volume and inputted water hardness, one tank in service and the other in standby or regeneration. No hardwater bypass during regeneration.

For Temperatures Above 120 degrees F, Consult Cleaver-Brooks.

All units are F.O.B. Naperville, IL.

Model SSE – Accessories

**ASME Pressure Tank Construction – List Price Adders (Per Tank)**

Capacity (GRAINS)	Tank Size DIA	PSI Rating
30,000	10	100
60,000	12	100
90,000	14	100
120,000	18	100
150,000	18	100
210,000	24	100
300,000	24	100
450,000	30	100
600,000	36	100
900,000	42	100
1,200,000	48	100

Notes:

Carbon Steel pressure vessel rated for 100 psi with ASME code construction, a polyamide epoxy lined interior and an epoxy painted exterior

***Twin Alternating – Skid Mounting Package***

Capacity (Grains)	Galvanized Steel Pipe Size (in.)	Shedule 80 PVC Pipe Size (in.)	Max GPM Flow Rate
30,000	1	1	22
60,000	1	1	22
90,000	1	1	22
90,000	1.5	1.5	55
120,000	1.5	1.5	55
120,000	2	2	100
150,000	1.5	1.5	55
150,000	2	2	100
210,000	1.5	1.5	55
210,000	2	2	100
300,000	1.5	1.5	55
300,000	2	2	100
450,000	2	2	100
450,000	3	3	200
600,000	2	2	100
600,000	3	3	200
900,000	3	3	200
1,200,000	3	3	200

Notes:

1. Includes mounting the tanks on a steel skid with interconnecting piping.
2. Interconnecting piping includes inlet header with manual valve for vessel isolation, outlet header and connecting piping to each individual vessel.
3. Drain lines are to be plumbed in the field by others according to the specific site requirements.
4. Brine tanks are not mounted on the skid for greater flexibility at installation site and to reduce corrosion of the steel skid.
5. The interconnecting piping size must be an equal to or larger than the valve size.

*Model FSE - Simplex Package*

Capacity (Grains)	Pipe Size (in.)	Shipping Wt. (lbs )
30,000	1	150
60,000	1	285
90,000	1	395
90,000	1.5	405
120,000	1.5	560
120,000	2	605
150,000	1.5	640
150,000	2	655
210,000	1.5	980
210,000	2	995
300,000	1.5	1245
300,000	2	1275
450,000	2	1565
450,000	3	1615
600,000	2	1955
600,000	3	2015
900,000	3	2825
1,200,000	3	3660

Controls - Electronic Demand

Pressure gauges and test cocks (inlet/outlet ) per Tank – Optional

Above "single" system list price includes fiberglass reinforced pressure vessel

Pressure rating 150 psi. – Metered regeneration based on flow volume and inputted water hardness, standard systems will bypass hardwater during regeneration.

For Temperatures Above 120 degrees F, Consult Cleaver-Brooks.

All units are F.O.B. Naperville, IL.

*Model FSE - Twin Alternating Package*

Capacity (Grains)	Pipe Size (in.)	Shipping Wt. ( lbs )
30,000	1	300
60,000	1	490
90,000	1	680
90,000	1.5	700
120,000	1.5	970
120,000	2	1,060
150,000	1.5	1,130
150,000	2	1,160
210,000	1.5	1,740
210,000	2	1,770
300,000	1.5	2,270
300,000	2	2,300
450,000	2	2,980
450,000	3	3,060
600,000	2	3,760
600,000	3	3,880
900,000	3	5,670
1,200,000	3	7,340

Controls - Electronic Demand

Pressure gauges and test cocks (inlet/outlet) per Tank – Optional

Above "twin" system list price includes fiberglass reinforced pressure vessel.

Pressure rating 150 psi. – Metered regeneration based on flow volume and inputted water hardness, one tank in service and the other in standby or regeneration. No hardwater bypass during regeneration.

For Temperatures Above 120 degrees F, Consult Cleaver-Brooks.

All units are F.O.B. Naperville, IL.

Model FSE – Accessories

**Twin Alternating – Skid Mounting Package**

Capacity (Grains)	Max GPM Flow Rate	Galvanized Steel Pipe Size (in.)	Shedule 80 PVC Pipe Size (in.)
30,000	22	1	1
60,000	22	1	1
90,000	22	1	1
90,000	55	1.5	1.5
120,000	55	1.5	1.5
120,000	100	2	2
150,000	55	1.5	1.5
150,000	100	2	2
210,000	55	1.5	1.5
210,000	100	2	2
300,000	55	1.5	1.5
300,000	100	2	2
450,000	100	2	2
450,000	200	3	3
600,000	100	2	2
600,000	200	3	3
900,000	200	3	3
1,200,000	200	3	3

Notes:

1. Price includes mounting the tanks on a steel skid with interconnecting piping.
2. Interconnecting piping includes inlet header with manual valve for vessel isolation, outlet header and connecting piping to each individual vessel.
3. Drain lines are to be plumbed in the field by others according to the specific site requirements.
4. Brine tanks are not mounted on the skid for greater flexibility at installation site and to reduce corrosion of the steel skid.
5. The interconnecting piping size must be an equal to or larger than the valve size.