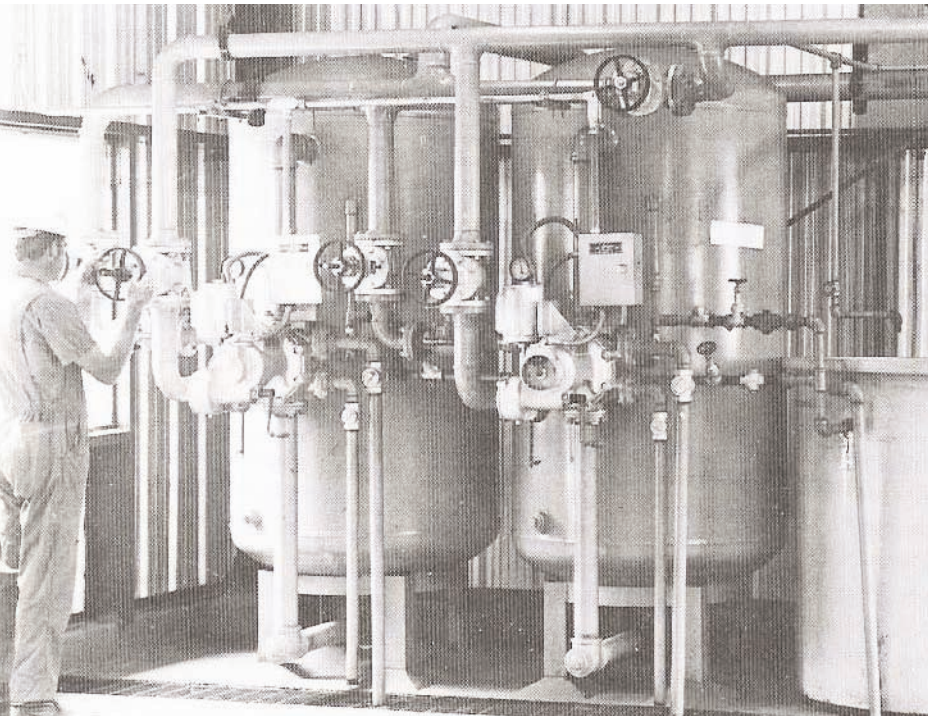


Permutit® CD Series Water Softeners

For Removal of Hardness from Water



Permutit CD Softeners Features and Benefits

Permutit® Model CD Softeners answer market demands for more and more soft water at low cost. Designed to serve a wide variety of industrial, institutional and commercial establishments, CD Softeners are ideal equipment for boiler feed water treatment and for process water systems requiring zero soft water at economy rates. Schools, laundries, hotels, restaurants, institutions, and general industries will find a Permutit CD Softener highly profitable.

CD Softener Features

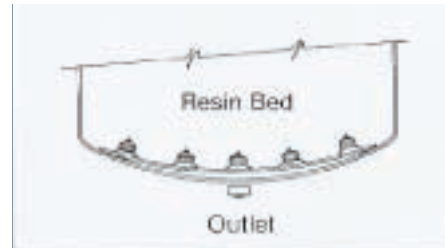
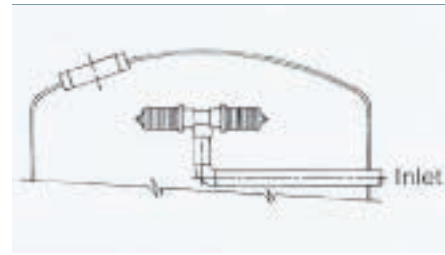
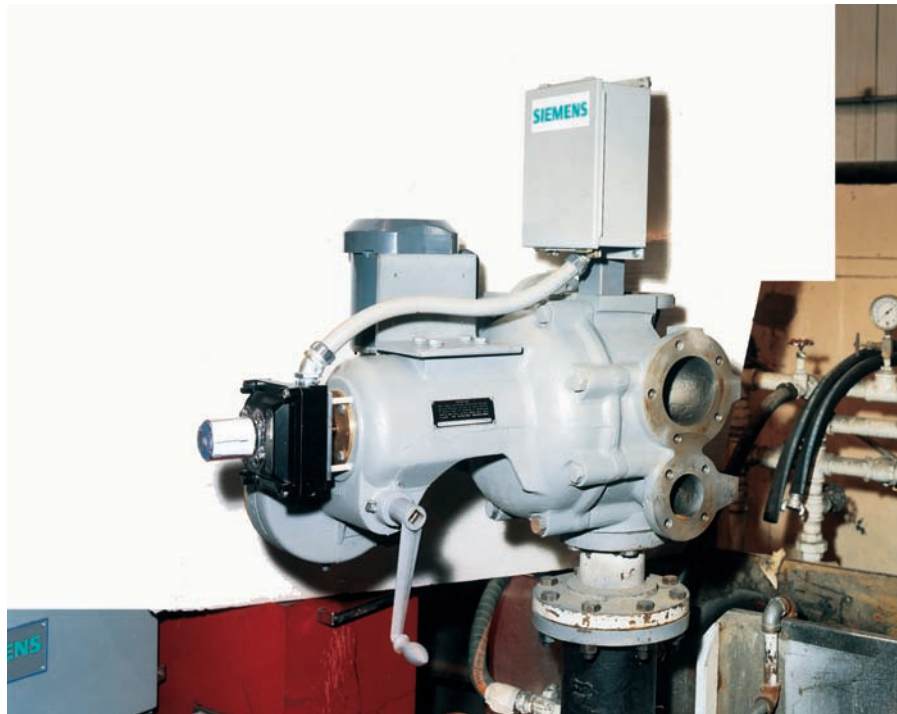
- **Wide Application:** Six basic sizes closely match most industry or commercial requirements for soft water on continuous volume basis.
- **Easy Operation:** One control valve accomplishes all operations. Softening cycle can be completely automatic, semi-automatic, or manual.
- **Easy Installation:** Softener is shipped complete, ready to connect to water, drain, and electric lines.
- **High Capacity:** Ion Exchanger is Permutit Q. In addition to softening, Permutit Q will also remove dissolved iron.

Key Benefits

- Stops Hard Water Scale in heating and plumbing systems.
- Eliminates Hard Water Deposits from finished products, process reactions, rinsing, and cleaning operations.
- Boiler and Water Heaters cost less to run, heat more efficiently, have less down time.
- Plumbing Systems operate at full flow, get fewer leaks, and have longer life.
- Air Conditioners and Cooling Towers work more efficiently, don't plug up with hard water deposits.

Optional Accessories

- **Meter and Meter Switch:** Automatically initiate regeneration when needed.
- **Time Clock:** Automatically initiate regeneration at preset time periods.
- **Meter and Alarm Register:** Shows volume of water softened, signals when to regenerate.
- **Interlock:** For multiple automatic installations to prevent more than one unit from regenerating at a time.



Permutit CD Series Water Softeners Suggested Specifications

General Requirements

Furnish a vertical pressure type sodium cation exchange water softening system certified by the manufacturer to be a product of his own engineering. The system will be complete with all required components, including accessories necessary for proper operation of the equipment even though not itemized herein.

The system will conform to the following design specifications:

Tank

The softener tank(s) will be designed for 100 psig non-code or 100 psig ASME Code requirement and will be carbon steel of welded construction with dished heads. Each tank will have an 11" x 15" manhole in the top head, a cleanout connection in the side shell, and structural steel legs. Code tanks will bear the ASME Stamp.

Underdrain System

The underdrain system will be the Permutit Double Dish design with the inner dish radius slightly greater than the outer dish. The inner dish will be welded to the outer dish so as to minimize the space between the two, thereby reducing the rinse requirements of the resin. Corrosion resistant strainers will be fastened to opening in the inner dish to retain the ion exchange resin with or without the use of supporting beds. A coarse subfill will be included to fill the volume in the Double Dish plus one inch straight height, when minimum resin bed is specified.

Ion Exchange Resin

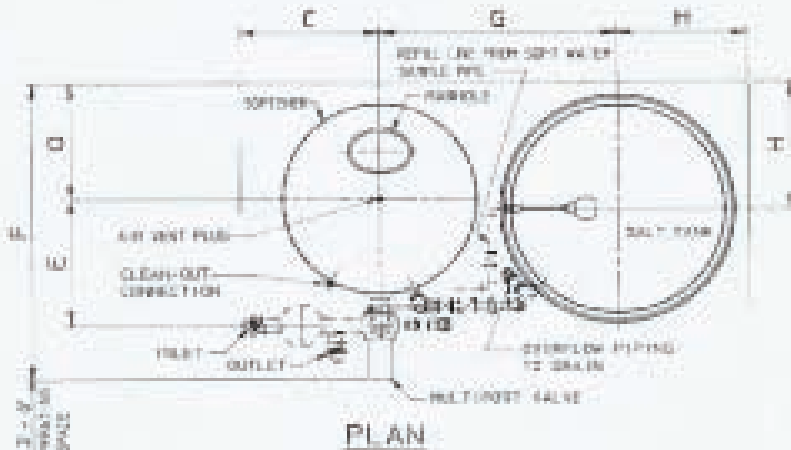
The ion exchange material will be sulfurated styrene type, Permutit "Q" having a capacity rating of 30 kilograms per cubic foot at 15 pounds per cubic foot salt dosage.

Main Operating Valve and Piping

All internal and external valve and piping, ejector, and set cocks will be furnished fully assembled. All external piping will be galvanized steel. The main operating multiport valve will have a rotating disc and stationary port plate. The valve gear reduction will be such as to permit easy manual operation of the valve with a single, simple crank. For automatic operation, the valve rotating disc will be driven through the gear train by a fractional horsepower motor.

Regenerant Equipment

A combination polyethylene brine measuring and salt storage tank equipped with a float valve will be provided. Regeneration will be initiated by switch, meter with automatic reset register, or time clock.



Performance Specifications

Model	Flow Rate GPM		Backwash Rate	Manifold Pipe Size	Resin Cu. Ft.		Capacity/Salt Dosage		Softener Tank Dimension	Suggested Salt Tank Diameter	Salt Capacity of Brine Tank (Lbs.)
	Sustained	Peak			Min.	Max.	Min. Bed†	Max. Bed			
	*	**					KGr/lb***	KGr/lb***	Dia. x Ht.	Min./Max.	Min./Max.
2CD30	75	100	20	2	10	17	300/150	510/255	30" x 72"	36"/48"	985/1,745
2CD36	90	125	45	2	14	25	420/210	750/375	36" x 72"	42"/52"	1,330/2,200
2CD42	110	150	60	2	19	34	570/285	1,020/510	42" x 72"	48"/66"	1,745/3,260
3CD42	150	200	60	3	19	34	570/285	1,020/510	42" x 72"	48"/66"	1,745/3,260
3CD48	175	240	75	3	25	45	750/375	1,350/675	48" x 72"	52"/72"	2,200/3,920
3CD60	200	265	120	3	39	70	1,170/585	2,100/1,050	60" x 72"	64"/84"	3,260/5,300

Optional Accessories

Meter with Alarm Register:

One ___ inch, ____, (disc), (turbine) type meter with alarm register will be provided for each softener to measure the volume of water passing through the softener and to signal, by light or sound alarm, when regeneration is required.

Meter with Automatic Reset Register:

One ___ inch, ____, (disc), (turbine) type meter with automatic reset register will be provided for each softener to measure the volume of water passing through the softener and to automatically initiate regeneration.

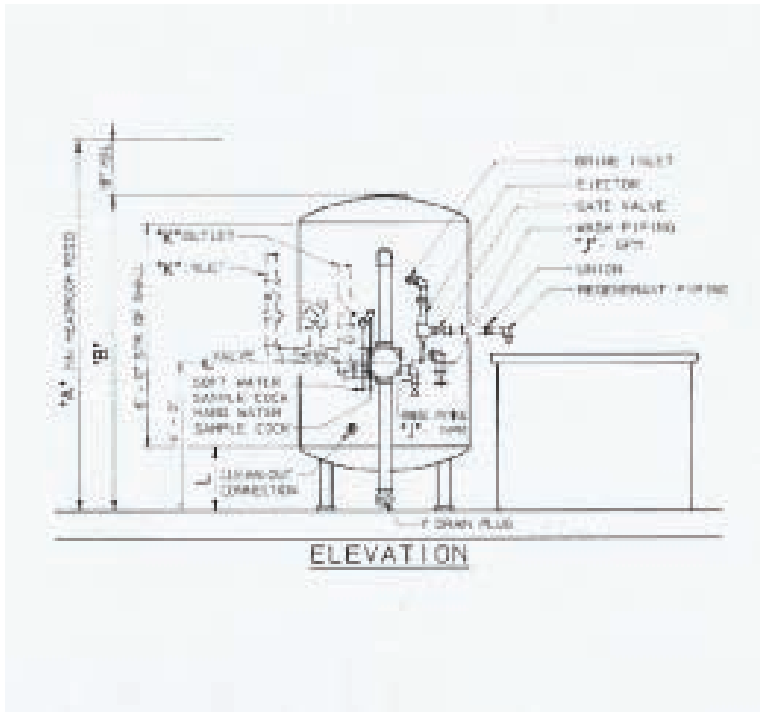
Interlock:

An electric Interlock Device will be

provided to prevent more than one softener from regenerating at one time. (Recommended for meter with automatic reset register only)

Time Clock:

One electric ____, (7-day), (12-day) Time Clock capable of automatically initiating regeneration of softener on preset days and time of day will be provided.



CD Softener Dimensions

Size M.P.V.	2"			3"		
Diameter of Unit	30"	36"	42"	42"	48"	60"
Recommended Diameter of Salt Tank for Min. Bed.	36"	42"	48"	48"	52"	66"
Operating Wt. Lbs/Unit	4,350	6,100	8,100	8,250	8,850	13,100
Operating Wt. Lbs/ Salt Tank	2,000	2,730	3,600	3,600	4,600	6,800
A	9'-3"	9'-5"	9'-7"	9'-7"	9'-9"	10'-2"
B	7'-9"	7'-11"	8'-1"	8'-1"	8'-3"	8'-8"
C	2'-6"	2'-6"	2'-6"	2'-6"	3'-0"	3'-6"
D	21"	24"	2'-3"	2'-3"	2'-6"	3'-0"
E	22"	2'-1"	2'-4"	2'-4"	2'-7"	3'-1"
F	5'-0"	5'-6"	6'-0"	6'-3"	6'-9"	8'-0"
G	3'-6"	4'-0"	4'-6"	4'-6"	5'-0"	6'-0"
H	24"	2'-3"	2'-6"	2'-6"	2'-9"	3'-3"
J	30	45	60	60	75	120
K	2"	2"	2"	3"	3"	3"
L	17"	18"	19"	19"	20 1/4"	22 1/2"

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The information provided in this brochure contains merely general descriptions or characteristics of performance which in actual case of use do not always apply as described or which may change as a result of further development of the products. An obligation to provide the respective characteristics shall only exist if expressly agreed in the terms of contract.

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