



September 18, 2013

DIAMOND WATER CONDITIONING  
JOHN GRIESBACH / DAN SCHLENZ  
N1022 QUALITY DRIVE  
PO BOX 170  
GREENVILLE WI 54942

Re: Description: WATER TREATMENT DEVICE - POE SOFTENER  
Manufacturer: DIAMOND WATER CONDITIONING  
Product Name: FREEDOM SERIES TWIN ALTERNATING WATER SOFTENERS  
Model Number(s): DCS7-15-100, DCS7-24-100, DCS7-30-100, DCS7-45-100, DCS7-60-100, DCS7-75-100,  
DCS7-90-100, DCS7-120-100, DCS7-150-100, DCS7-180-100 AND DCS7-210-100  
Product File No: 20130284

The specifications and/or plans for this plumbing product have been reviewed and determined to be in compliance with chapters SPS 382 through 384, Wisconsin Administrative Code, and Chapters 145 and 160, Wisconsin Statutes.

The Department hereby issues an approval based on the Wisconsin Statutes and the Wisconsin Administrative Code. This approval is valid until the end of September 2018.

This approval is contingent upon compliance with the following stipulation(s):

- This product has undergone sufficient testing to document the product's ability to reduce only those contaminants and/or substances as specified in this approval letter when the product is installed and maintained in strict accordance with the manufacturer's published instructions.
- Where the Department of Natural Resources (DNR) has jurisdiction, a written approval may be required prior to installation of this product in a water supply system to reduce the concentration of a contaminant that exceeds the primary drinking water standards contained in ch. NR 809, Wis. Admin. Code, the enforcement standards contained in ch. NR 140, Wis. Admin. Code, or for a water supply system that is subject to a written advisory opinion by the DNR. For more information contact the DNR Section of Private Water Systems, P.O. Box 7921, Madison, WI 53707, telephone (608) 267-9787.
- If these approved devices are modified or additional assertions of function or performance are made, then this approval shall be considered null and void, unless the change is submitted to the department for review and the approval is reaffirmed.
- These cation exchange water softeners shall be sized, installed, programmed and maintained such that wastewater volumes, total dissolved solids and chloride discharges are minimized.
- Operation of these devices at flow rates above the rated service flow rates specified within this approval letter are not supported or acknowledged by this approval. The rated service flow rates are the flow rates at which these devices were tested.

Because the level of treatment obtained is, in part, a function of how long the water is in contact with the treatment media within these devices, arbitrary increases in the flow rates above the rated service flow rates may compromise the quality of the treated water.

- A properly sized electrical bonding jumper must be installed across the inlet and outlet piping when these devices are installed on metallic piping systems.
- This approval does not include the use of either fine mesh or "Rustmaster" resin options.

Based on testing data submitted to and reviewed by the department, this approval recognizes that these plumbing products will reduce the concentration of contaminants as specified on pages 1 through 2 of this letter.

**WATER SOFTENING CAPABILITIES  
 PRODUCT FILE NUMBER 20130284  
 TABLE 1 OF 1**

Model Numbers	Capacity*				Flow Rate vs. Pressure Loss
	Max. Rating		Min. Rating 2		
Demand Initiated	Grains	Pounds	Grains	Pounds	gpm @ psig
DCS7-15-100	15,000	7.5	12,500	5.0	13.0 @ 15.0
DCS7-24-100	24,000	12.0	20,000	8.0	11.0 @ 15.0
DCS7-30-100	30,000	15.0	25,000	10.0	13.0 @ 15.0
DCS7-45-100	45,000	23.0	37,500	15.0	13.0 @ 15.0
DCS7-60-100	60,000	30.0	50,000	20.0	16.0 @ 15.0
DCS7-75-100	75,000	38.0	62,500	25.0	17.0 @ 15.0
DCS7-90-100	90,000	45.0	75,000	30.0	18.0 @ 15.0
DCS7-120-100	120,000	60.0	100,000	40.0	18.0 @ 15.0
DCS7-150-100	150,000	75.0	125,000	50.0	19.0 @ 15.0
DCS7-180-100	180,000	90.0	150,000	60.0	20.0 @ 15.0
DCS7-210-100	210,000	105	175,000	70.0	18.0 @ 15.0

\* The softener capacity rating is based on grains of hardness, due to calcium and magnesium cations, removed (as calcium carbonate) while producing soft water between successive regenerations and is related to the pounds of salt required for each regeneration. The tests run to generate the data for table 1 were conducted in accordance with NSF Standard 44 by TG Analytical Laboratories, a subsidiary of Griesbach Company/Diamond Water.

This device was tested under controlled laboratory, or field, conditions. The actual performance of this device for a specific end use installation will vary from the tested conditions based on local factors such as water pressure, water temperature and water chemistry.

The department is in no way endorsing this product or any advertising, and is not responsible for any situation which may result from its use.

Sincerely,

Glen W. Schlueter  
 Environmental Engineer - Plumbing Product Reviewer  
 Department of Safety and Professional Services  
 Division of Industry Services  
 Bureau of Technical Services  
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