

A HELLENBRAND WATER SOLUTIONS BULLETIN

Product Application Service General news from Hellenbrand, Inc.

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Flow Rates and Soft Water Quality (Hardness Leakage)

Typically Hellenbrand and other manufacturers provide flow rate information at both a 15 psi and 25 psi pressure loss, which for many applications is fine, since the application flow rates are based off of supply fixture units "sfu" charts and the actual flow rates for many applications will be much less than those charts and/or the quality of softened water (allowable hardness leakage in ppm) is not critical. However many applications require very low hardness leakage such boiler feed water and reverse osmosis (RO) pre-treatment. For all applications requiring very low hardness leakage, please refer to the chart below when sizing equipment.

Tank Size (Dia x Ht -In)	Cubic Ft.	Minimum Flow Rate GPM	Superior Flow Rate GPM	High Flow Rate GPM	Utility Flow Rate GPM
10 x 54	1.5	1.5	5	8	11
13 x 54	2	2	6	10	14
14 x 65	3	3	9	15	21
16 x 65	4	4	12	20	28
18 x 65	6	6	18	30	42
21 x 62	7	7	21	35	49
24 x 71	10	10	30	50	70
30 x 60	15	15	45	75	105
30 x 72	15	15	45	75	105
36 x 60	20	20	60	100	140
36 x 72	20	20	60	100	140
42 x 60	30	30	90	150	210
42 x 72	30	30	90	150	210
48 x 60	40	40	120	200	280
48 x 72	40	40	120	200	280
54 x 72	50	50	150	250	350
60 x 72	65	65	195	325	455
66 x 72	80	80	240	400	560
72 x 72	100	100	300	500	700

Flow Rate Definitions (Based on 20 gpg hardness influent, 0 ppm iron and < 500 TDS).

Minimum - Low flow rates can cause channeling, resulting in hardness leakage. Maintaining at least 1.0 gallon per minute per cubic foot of resin 24/7 addresses this concern.

Superior - Flow rates are based on 3 gpm/ft³ and will provide the best quality of softened water with less than 3 ppm of hardness leakage.

High - Flow rates are based on 5 gpm/ft³ and will provide quality softened water with less than 10 ppm hardness leakage.

Utility - Flow rates are based on 7 gpm/ft³ and will provide softened water with less than 1 gpg (17.1 ppm) of hardness leakage.

Sincerely,
Hellenbrand, Inc.



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