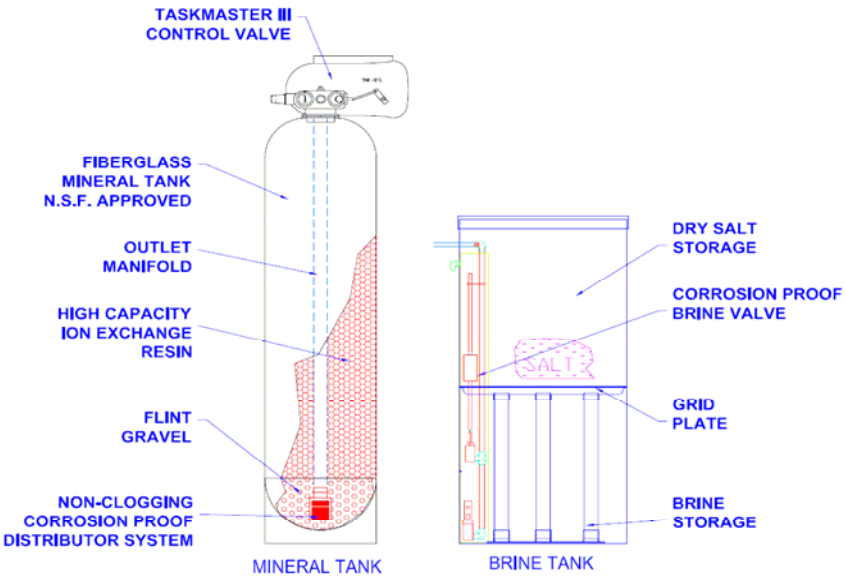
DRF Dealkalizers



Standard Features

Task Master III Stainless Steel Valve

Polyglass Mineral Tanks

Accumatic™ Brine System.

Resin WK 300 Anion Resin

Single point ABS distributor

Optional Features

ERCd Electronic Demand Controller

Operating Conditions

25 to 125 psi ♦ 120°F

Notes on Part Numbers:

Add

"-5"	for metered or demand regenerated system
"-T"	for twin system
"-11"	for twin alternating
"-11A"	for twin alternating skid mounted
"-TP"	for twin parallel

Example: For a metered DRF-300" simplex order 941300-5.

CAT803.2

DRF Model No	100	120	150	240	300	450	600	750
Part No	**941100**	**941120**	**941150**	**941240**	**941300**	**941450**	**941600**	**941750**
Mineral Tank Size	**14x65**	**16x65**	**21x62**	**24X71**	**30X72**	**36X72**	**42X72**	**48x72**
Resin Vol (ft3)	3 1/4	4	5	8	10	15	20	25
Preset Capacity (Kgr)[1]	44	48	67	82	118	169	262	287
Preset Capacity w/ 0.25 lbs/ft3 of NaOH (Kgr) [1]					138	199	302	337
Cont Flow @ 2.5 gpm/ft3	8	10	12.5	20	25	37.5	50	62.5
Peak Flow @ 5 gpm/ft3	16	20	25	40	50	75	100	125
Back Wash (gpm)	3	3	5	6	10	15	20	25
Brine Draw (lbs)	28	28	42	42	68	94	162	162
Brine Tank Dia. (in)	18x40	18x40	24x40	24x40	24x40	24x50	30x50	30x50
Caustic Added (lbs per regen)[7]					2.5	3.75	5	6.25
Height[5] (in)	72	72	73	80	86	90	90	101
Depth (in)	24	24	24	24	30	36	42	48
Width (in)	44	46	51	54	60	72	87	93
Twin Width[6] (in)	64	68	78	84	96	114	135	147
Single Weight (lbs)	420	495	665	925	1095	1395	1645	2500
Twin Weight[6] (lbs)	705	845	1185	1380	2115	2625	2825	5000

Notes for Dealkalizer Sizing Information

1. Per Thermax A32 product information resin capacity is 9 kgr/ ft^3 at 4 lbs salt/ ft^3 and 13 kgr/ ft^3 at 9 lbs salt/ft^3. Calculated capacity assumes linear increase of capacity between 4 and 8 lbs salt/ft^3.
2. Increase capacity by 2 kgr/ ft^3 if 0.25 lbs caustic / ft^3 of resin is added during regeneration.
3. Allow 15% alkalinity leakage over inlet water alkalinity.
4. Capacity calculation assumes salt dose as listed in table and that all (100%) of the anions are alkalinity. If alkalinity as a percent of total anions is 80% reduce capacity by 27%; if 60% reduce by 53%; and if 40% reduce by 69%.
5. Dimensions listed are actual unit height. Add at least one foot for loading mineral tanks.
6. A twin unit includes two mineral tanks and one brine tank.
7. Caustic pump not supplied on vessels 24" diameter and smaller. Caustic pump standard on units with 30" diameter and larger.

RAW WATER LIMITATIONS

The water treated by WK300 must not exceed 0.05 ppm of free chlorine, 5 A.P.H.A. turbidity units, 0.1 ppm of iron or 0.1 ppm heavy metals.

CAT803.4
DRF Series Specification

Mineral Tank. The mineral tank shall be "polyglass" consisting of an inner shell of virgin polyethylene and an external shell of continuous fiberglass roving. Tanks shall be rated at 150 psi operating pressure, 120ºF operating temperature with 2½"-8 UN threaded top opening.

Internals. The distributor shall be a 2½" Ø single point molded distributor head with 1½" of slotted length and a ¾" female socket welded connection. The slots shall be 0.012" - 0.016" wide to retain mineral and the total slot area shall be equal to or larger than the unit pipe size. The distributor pipe shall be ¾" schedule 40 white PVC.

Media. The anion exchange resin used in Water King dealkalizers is WK300. This resin is a premium grade strong base anion exchange resin based on a polystyrene matrix containing quaternary ammonium Type-II groups with superior matrix porosity. It is supplied in the hydroxide form but in dealkalyzer applications is regenerated to the chloride form.

Underbedding. The bottom of this mineral tank shall be filled above the distributor with #20 graded washed flint gravel sieved between 1/8" and 1/16".

Brine System. The brine system shall use timed brine refill with a gravel bed in the bottom of the brine tank. The brine tank shall be blow molded or rotationally molded HDPE, including a cover. The system shall include a float operated brine valve to prevent overflow during refill. Brine draw is to be timer controlled by the ERCt or ERCd controllers.

Control Valve. The control valve(s) shall be Task Master III™ 5-Cycle, multi-port control valve(s) with machined passivated CF8M Type 316 Stainless Steel body, Type 316 Stainless Steel piston assembly, and EPDM (NSF61 and WRAS Approved) inserts and seals with electronic controller and drive motor assembly in a NEMA 4/IP65 Style Enclosure. The valve shall be of a single piston design and shall not use multiple plungers or diaphragm valves. Maximum rated power shall be 125 watts with available current options of 115 VAC, 230 VAC, 100 VAC, 200 VAC, in 50 or 60 Hertz. Ambient operating temperature range shall be 34°F (1°C) to 150°F (65°C). Fluid temperature range shall be 34°F (1°C) to 180°F (82°C). Operating pressure range shall be 20-125 psi (1.38 - 8.6 bar). The valve shall have UL, CSA, TÜV and CE certifications. ANSI/NSF 61 certification is pending.

Controller. The ERCt shall be 7-day or up to 99-day regeneration frequency. Both the ERCt and ERCd Controllers shall have a calculated brine time when salt and resin quantities are entered.

Demand Regeneration. (optional) The DRF series can be demand regenerated by using the ERCd Controller and the PW 150 Paddle Wheel Flow Meter.