

# DBF Dealkalizers

## STANDARD FEATURES

¾" and 1" Valve - Performa™ Top mount

ERCt ELECTRONIC TIMER

POLYGLASS MINERAL TANKS

ACCUMATIC™ BRINE SYSTEM.

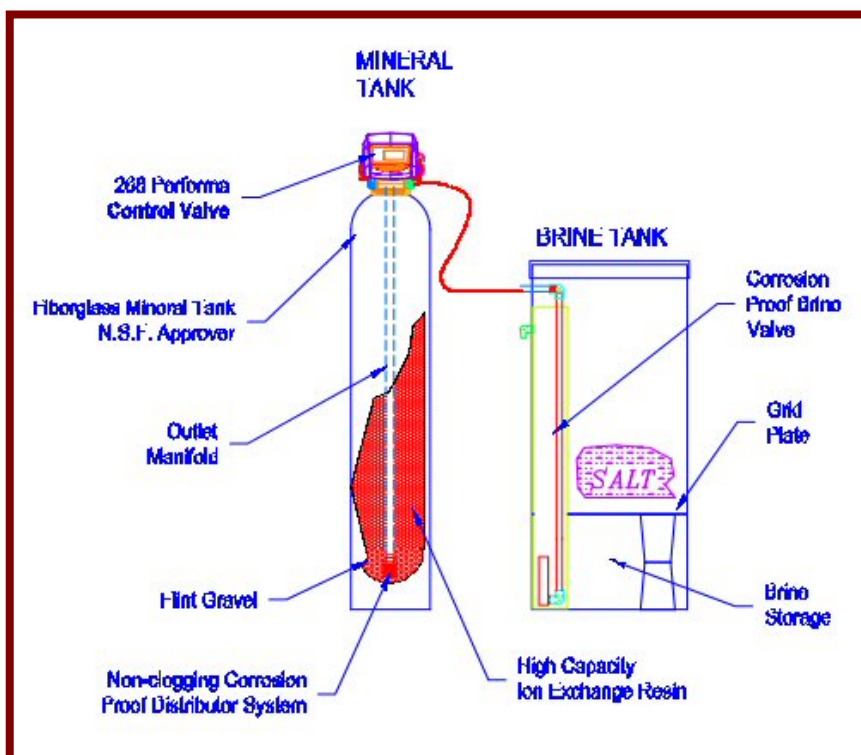
RESIN POLYSTYRENE 8% DVB CL

SINGLE POINT ABS DISTRIBUTOR

## OPTIONAL FEATURES

ERCd ELECTRONIC DEMAND CONTROLLER

COPPER TUBE CONNECTION



### DBF SERIES APPLICATION TABLE

Model <sup>1</sup>	30	50	70
Part Number (for ¾")	930550	930552	930554
Part Number (for 1")	930551	930553	930555
Mineral Tank	9x48	12x52	13x54
Resin Volume (ft <sup>3</sup> )	1	1 ½	2 ¼
Gravel (lbs)	10	15	30
Brine Tank (4)	18x40	18x40	18x40
Salt Storage (lbs)	320	320	320
Brine Valve (in)	¾	¾	¾
Capacity (Kgr) (3)	13	19.5	29.25
Salt per Regen (lbs)	8	12	18
Continuous Flow <sup>2</sup> (gpm)	2.5	3.8	5.6
Peak Flow <sup>3</sup> (gpm)	5.0	7.5	11.3
Backwash Rate <sup>4</sup> (gpm)	1.3	1.7	2.2
Height <sup>5</sup> (in)	56	60	62
Depth (in)	18	18	18
Width (in)	40	42	43
Weight (lbs)	125	160	225
Width Twin (in)	62	66	68
Weight Twin (lbs)	230	300	430

### 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 DBF-50-1" simplex order 930553-5.

### BF 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, 120°F 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 main control valve(s) shall be the Performa™ controlled with electronic controller to actuate the cycles of backwash, brine, slow rinse, fast rinse, and service. The control valve(s) shall be Performa™ 5-Cycle, 100 psi, multi-port control valve(s) with glass filled Noryl-NSF listed material, camshaft, drive motor assembly, and NEMA 3 enclosure (115VAC/60Hz). The valve shall be of a single camshaft design and not use multiple plungers or diaphragm valves. Hard water by-pass shall be available during all regeneration cycles. The drain line connection shall be ¾" NPT, female.

**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 BF series can be demand regenerated by using the ERCd Controller and the internal 1" TM meter. The ERCd Controller (optional) shall be a 28-day variable reserve.

**Operating Conditions.** Maximum temperature shall be 100°F. Pressure shall be 25 to 120 psi.

#### 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.

#### Notes for Dealkalizer Sizing Information

1. For twin units, capacities and flow rates will be doubled. For twin-alternating units, the flow rates are the same as a single unit with the capacity doubled. The twin and twin alternating systems include one brine tank and two mineral tanks.
2. Allow 15% alkalinity leakage over inlet water alkalinity.
3. Capacity calculation assumes 8 lb/ft<sup>3</sup> salt dose and that all 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%.
4. System uses timed brine refill. Place 30 lbs of gravel in bottom of brine tank (included). Drains must be able to dispose of water at the listed rate for up to 20 minutes.
5. Dimensions listed are actual unit height. At least one additional foot should be allowed for loading mineral tanks.
6. Flow rates are based on the Performa™ Series valve with the hard water bypass at a water temperature of 60° F.