S.I.A.T.A. ASIA PACIFIC PTE LTD

37 Tannery Lane
#06-08 Tannery House
Singapre 347790

Tel: (65) 6741 2994
Fax: (65) 6741 2995

BRINE VALVE

DESCRIPTION

Brine valve performs the following functions:-

- Allows the suction of brine solution during aspiration (suction) phase.
- Stops the suction of air when brine is finished.
- Allows the automatic refill of water from Siata valve into brine tank.
- Stops the refill of water after reaching the level determined by the float position.

REGULATION OF BRINE SOLUTION (for softener)

The volume of brine solution necessary for one regeneration is easily regulated by varying the height of the float in the brine tank. From the dimensions of the brine tank and the volume (litres) of solution necessary for regeneration, one can calculate the distance the float must be from the base of the brine valve.

Therefore:-

VOLUME (litres) PER CENTIMETER HEIGHT OF BRINE TANK = BASE AREA (cm2) OF BRINE TANK ÷ 1000
$= (\pi D2 \div 4) \div 1000$

LEVEL (cm brine) = VOLUME (lit brine per regen) ÷ VOLUME (lit per cm ht of brine tank)

Example:-
Given : Tank diameter 80cm
Brine solution required per regeneration 72 lit

Volume per cm ht of brine tank = $(3.14 \times 80 \times 80 \div 4) \div 1000 = 5.027$lit

Level = $72 \div 5.027 = 14.32$cm

Therefore the level must be at a distance of approx 14cm from the base of the brine valve to the mid-section of float.

Note that the level refers to only the aqueous solution without presence of undissolved salts.

As a precaution, installation of a brine well is recommended to prevent ingress of undissolved salts into to brine valve, thereby compromising its operation.

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