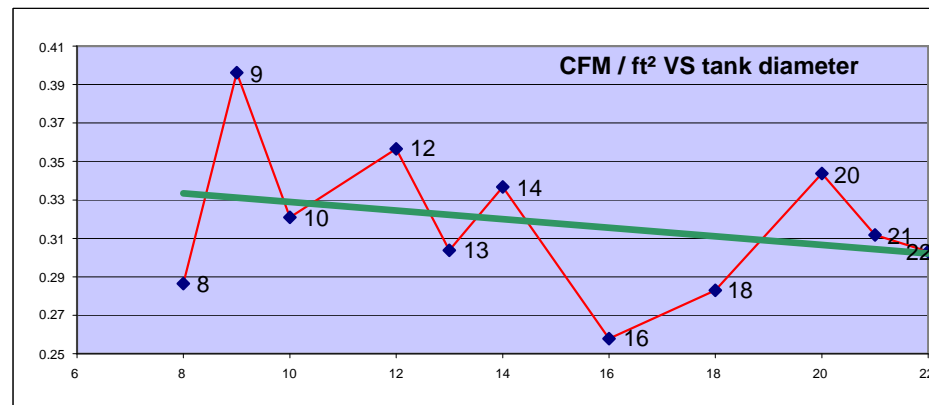


## Study of Fleck 7000STX valve trim specific brine draw flow rates and the missing #3 injector, Dean Smart - Aug 4, 2015

### Recommend by Fleck 2007, 2008

DIA	AREA ft²	Injector	CFM @75 PSI	DIA	CFM/ft²
8	0.34906585	000	0.1	8	0.286479
9	0.441786467	00	0.175	9	0.396119
10	0.545415391	00	0.175	10	0.320856
12	0.785398163	0	0.28	12	0.356507
13	0.921752011	0	0.28	13	0.303769
14	1.069014167	1	0.36	14	0.336759
16	1.396263402	1	0.36	16	0.257831
18	1.767145868	2	0.5	18	0.282942
20	2.181661565	4	0.75	20	0.343775
21	2.405281875	4	0.75	21	0.311814
22	2.639810494	5	0.8	22	0.303052
24	3.141592654	5	0.8	24	0.254648



### Note:

Total flow rates are typically around 3 times the brine draw rates at 75 PSI. Noting that linear regression analysis with suggested changes [22" - 24" omitted] is around .33 CFM/ft², the total flow during regeneration is  $\sim .33 \times 3 = 1$  CFM per square foot of bed area at 75 PSI. This is the regeneration flow rate through the resin bed and the units of **ft³/min / ft²** is feet per minute - velocity. Fleck has #3 injector as a part number and never specified for any tank diameter.

### Suggested injector sizing for 16" and 18" tanks

DIA	AREA ft²	Injector	CFM @75 PSI	DIA	CFM/ft²
8	0.34906585	000	0.1	8	0.286479
9	0.441786467	00	0.175	9	0.396119
10	0.545415391	00	0.175	10	0.320856
12	0.785398163	0	0.28	12	0.356507
13	0.921752011	0	0.28	13	0.303769
14	1.069014167	1	0.36	14	0.336759
16	1.396263402	2	0.5	16	0.358099
18	1.767145868	3	0.6	18	0.339531
20	2.181661565	4	0.75	20	0.343775
21	2.405281875	4	0.75	21	0.311814
22	2.639810494	5	0.8	22	0.303052
24	3.141592654	5	0.8	24	0.254648

