

Vortech®
MID-VORTECH® TECHNOLOGY

GOING GREEN JUST GOT EASIER



WHAT IS THE MID-VORTECH?[®]

ENPRESS' patented **Vortech[®]** and **Mid-Vortech[®]** technologies revolutionize water treatment performance—delivering smarter backwash, higher efficiency, and more effective media utilization in both softening and filtration systems.

Mid-Vortech[®] is a unique vessel design that physically separates multiple filtration medias within a single tank, creating an ideal solution for systems requiring layered or redundant filtration. By eliminating the need for additional tanks and valves, it simplifies system design, reduces plumbing, saves space, and significantly cuts down on backwash and regeneration water waste.

Available in 10" and 13" diameters, Mid-Vortech[®] vessels feature ENPRESS' industry-exclusive mid-plate internal distributor and patented full-plate bottom distributor. Together, these components eliminate gravel underbedding, reduce backwash rates by up to 30%, and improve softening efficiencies by up to 35%.

In third-party tests of a 1 cu. ft. softener, Vortech[®] vessels delivered 25% higher capacity at 4.5 lbs of salt, 42% fewer gallons to drain, and lower pressure drop at the same flow. The result? Greater fluidity of the media bed, extended contaminant removal capacity, and less frequent regenerations. Vortech[®] and Mid-Vortech[®] vessels are available in sizes ranging from 7" to 16", and all models are compatible with ENPRESS' 1¼" dome hole openings and dual-inlet configurations for maximum system flexibility.

Vortech[®]
MID-VORTECH[®] TECHNOLOGY

FEATURES & BENEFITS



MEDIA SEPARATION

Medias are kept separated by having a bottom Vortech® installed in the vessel and a Mid-Vortech® centrally located in the vessel, replacing standard cone- and gravel-style inefficient systems.



ONE SYSTEM, ONE CONTROL

Two tank and control valve systems backwash individually and waste water. Mid-Vortech® tanks consolidate these systems into a single vessel with one control valve, with most efficient service and backwash characteristics available.



WATER EFFICIENCY

Increase, by greater than 40%, the overall softening and filtration capacity of a system in upflow or downflow service applications.



CUSTOM SYSTEM ARRANGEMENT

Customers can design systems that meet their specific requirements, as the plate can be located anywhere inside the tank. Each location is assigned a letter from "A" to "V" (13") or "W" (10"), with a 2" length separating the locations.



IMPROVED PERFORMANCE

Physical separation of filtration medias in one vessel allows for proper contaminant removal and efficiency gains in system performance.

SELF-CLEANING

Patented "airplane wing" nozzle design eliminates potential clogging and build-up

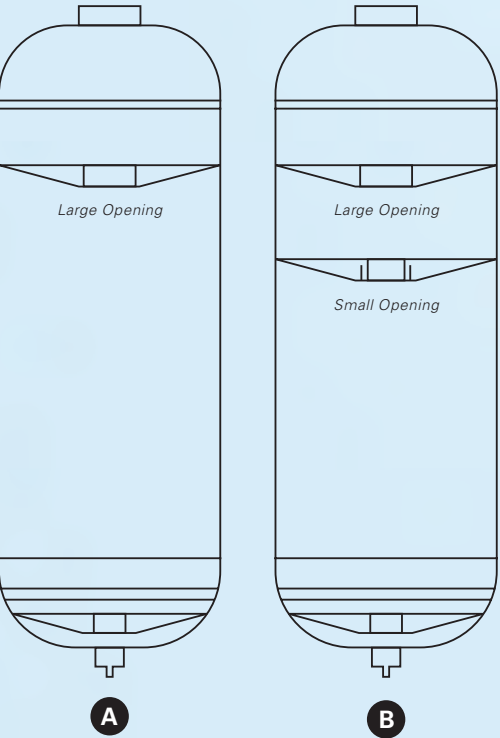


OPTIONS FOR EVERY NEED

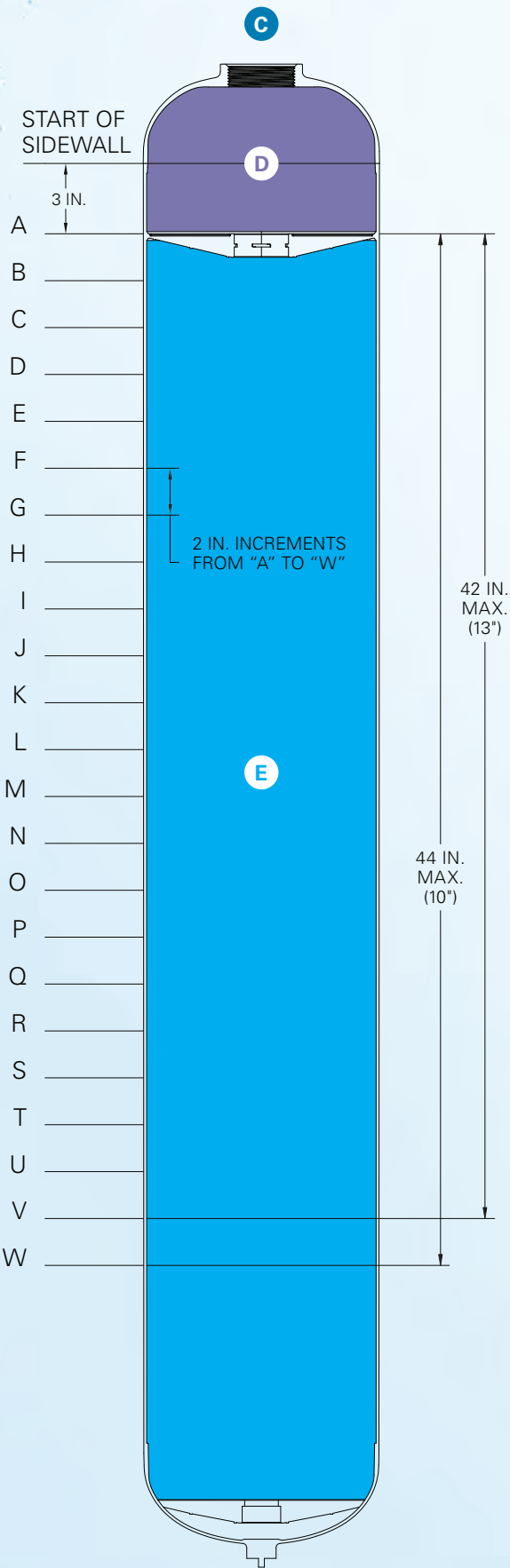
CONFIGURATION EXAMPLES

Note: Diagrams shown are only representative of the most common Mid-Vortech® placements. For all position options, see figure C to the right.

FIG.	# OF PLATES	CONSTRUCTION
A	1	Made with a bottom dome and bottom plate
B	2	Made with a bottom dome and bottom plate



FOR MULTIPLE
MID-VORTECH®
CONFIGURATIONS,
SCAN CODE



TANK VOLUME CALCULATOR

HOW TO DETERMINE TANK VOLUME

1. Choose the size (H) and diameter (Ø) of the tank.
2. Choose the quantity of plates, medias to be used, and chambers desired in the system.
3. If only one plate is desired, reference figure **C** to the left. *(For multiple plates, scan the provided QR code.)*
4. Choose the volume desired between the top inlet opening and upper mid-plate, then use figure **D** (purple chart) to find the corresponding letter location.
5. Select the desired volume between the mid-plate and the bottom plate, then use figure **E** (blue chart) to identify the vessel size required for this application.

NOTES:

- Location letter options are "A" through "V" (13") or "W" (10")
- Spacing for letter indicators is 2 inches between plates
- Starting position "A" is located 3 inches below the start of the sidewall extrusion
- Volume between positions is 151 cu. in. / .09 cu. ft. / .65 gal.
- All volumes are in cubic feet

Performance claims are based on independent lab results and manufacturer's internal test data. Actual performance is dependent on influent water quality, flow rates, system design, and applications. Your results may vary.

D

	10" Ø	13" Ø
A	0.25	0.49
B	0.34	0.64
C	0.43	0.79
D	0.52	0.94
E	0.60	1.09
F	0.69	1.24
G	0.78	1.39
H	0.87	1.54
I	0.96	1.69
J	1.04	1.84
K	1.13	1.99
L	1.22	2.14
M	1.31	2.29
N	1.40	2.44
O	1.48	2.58
P	1.57	2.73
Q	1.66	2.88
R	1.75	3.03
S	1.84	3.18
T	1.92	3.33
U	2.01	3.48
V	2.10	3.63
W	2.19	

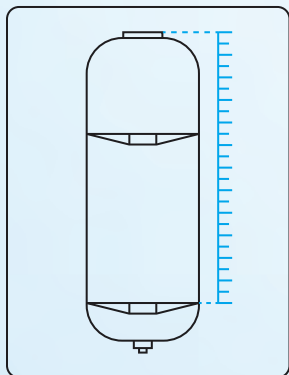
E

Volume Between Top Inlet Opening and Mid-Plate

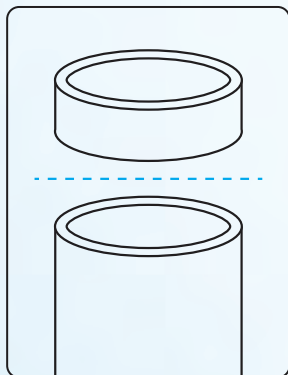
22" H	23" H	24" H	30" H		35" H		40" H	44" H		47" H	48" H	54" H		55" H	56" H	60" H		65" H		
10" Ø	10" Ø	10" Ø	10" Ø	13" Ø	10" Ø	13" Ø	10" Ø	10" Ø	13" Ø	10" Ø	13" Ø	10" Ø	13" Ø	13" Ø	13" Ø	10" Ø	13" Ø	10" Ø	13" Ø	
A	0.54	0.59	0.62	0.90	1.44	1.12	1.83	1.37	1.53	2.52	1.65	2.82	1.98	3.27	3.36	3.42	2.24	3.74	2.40	4.07
B		0.51	0.53	0.81	1.30	1.03	1.68	1.28	1.44	2.37	1.56	2.67	1.89	3.12	3.21	3.27	2.16	3.59	2.31	3.93
C				0.72	1.15	0.94	1.53	1.19	1.35	2.22	1.48	2.52	1.80	2.97	3.06	3.12	2.07	3.44	2.22	3.78
D				0.63	1.00	0.86	1.38	1.10	1.26	2.07	1.39	2.37	1.71	2.82	2.91	2.97	1.98	3.29	2.14	3.63
E				0.55	0.85	0.77	1.23	1.01	1.17	1.92	1.30	2.22	1.62	2.67	2.76	2.82	1.89	3.14	2.05	3.48
F						0.68	1.08	0.92	1.09	1.77	1.21	2.07	1.54	2.52	2.61	2.67	1.80	2.99	1.96	3.33
G						0.59	0.93	0.84	1.00	1.62	1.12	1.92	1.45	2.37	2.46	2.52	1.72	2.84	1.87	3.18
H						0.50		0.75	0.91	1.48	1.04	1.77	1.36	2.22	2.31	2.37	1.63	2.69	1.78	3.03
I								0.66	0.82	1.33	0.95	1.62	1.27	2.07	2.16	2.22	1.54	2.54	1.70	2.88
J								0.57	0.73	1.18	0.86	1.47	1.18	1.92	2.01	2.07	1.45	2.39	1.61	2.73
K								0.48	0.65	1.03	0.77	1.32	1.10	1.77	1.86	1.92	1.36	2.24	1.52	2.58
L									0.56	0.88	0.68	1.17	1.01	1.62	1.71	1.77	1.28	2.10	1.43	2.43
M									0.47		0.60	1.02	0.92	1.48	1.56	1.62	1.19	1.95	1.34	2.28
N											0.51	0.88	0.83	1.33	1.41	1.48	1.10	1.80	1.26	2.13
O												0.27	0.74	1.18	1.27	1.33	1.01	1.65	1.17	1.98
P													0.66	1.03	1.12	1.18	0.92	1.50	1.08	1.83
Q													0.57	0.88	0.97	1.03	0.84	1.35	0.99	1.68
R													0.48			0.88	0.75	1.20	0.90	1.54
S																	0.66	1.05	0.82	1.39
T																	0.57	0.90	0.73	1.24
U																	0.48		0.64	1.09
V																			0.55	0.94
W																				0.46

MID-VORTECH® ASSEMBLY

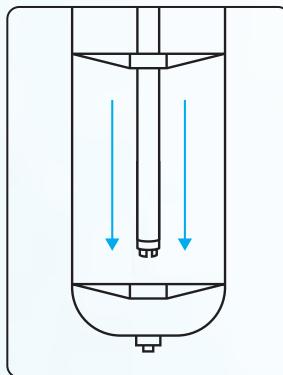
ATTACHMENT OF RISER TUBE TO BOTTOM VORTECH®



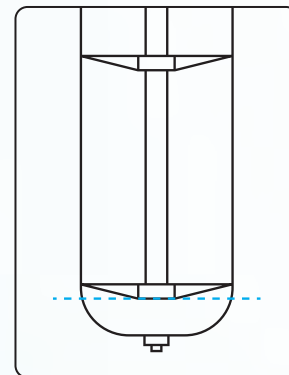
1. Measure from the top of the bottom Vortech® inside the vessel to the top of the inlet.



2. Subtract .25" from the overall measurement and cut riser tube to length.

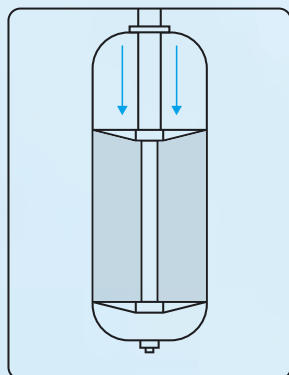


3. Glue the adapter plug to the riser and push the riser assembly into the bottom Vortech®.

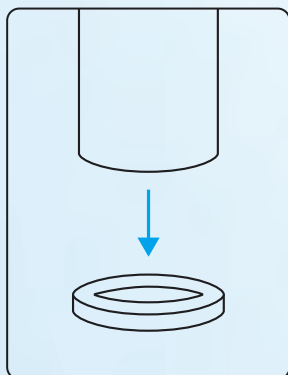


4. There will be a loud click when it is seated, and the riser should be flush.

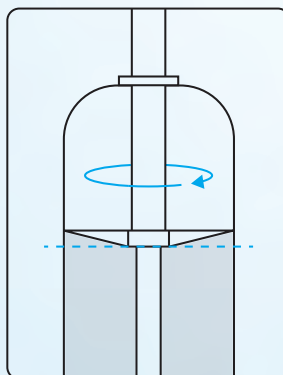
FILL THE BOTTOM CHAMBER BELOW THE MID-VORTECH®



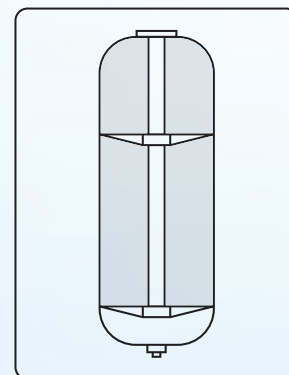
5. Use the fill tube to close off the region above the top Mid-Vortech®. Fill with media or resin below.



6. Remove the fill tube. Attach the adapter to the center adapter installation and removal tool.



7. Insert adapter tool into the Mid-Vortech's® center hole, then rotate 1/4 turn clockwise to lock it in place.



8. Remove the center adapter installation and removal tool and fill the above chamber.



To learn more about Vortech® technology, scan the QR code



For more information, visit enpress.com

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