

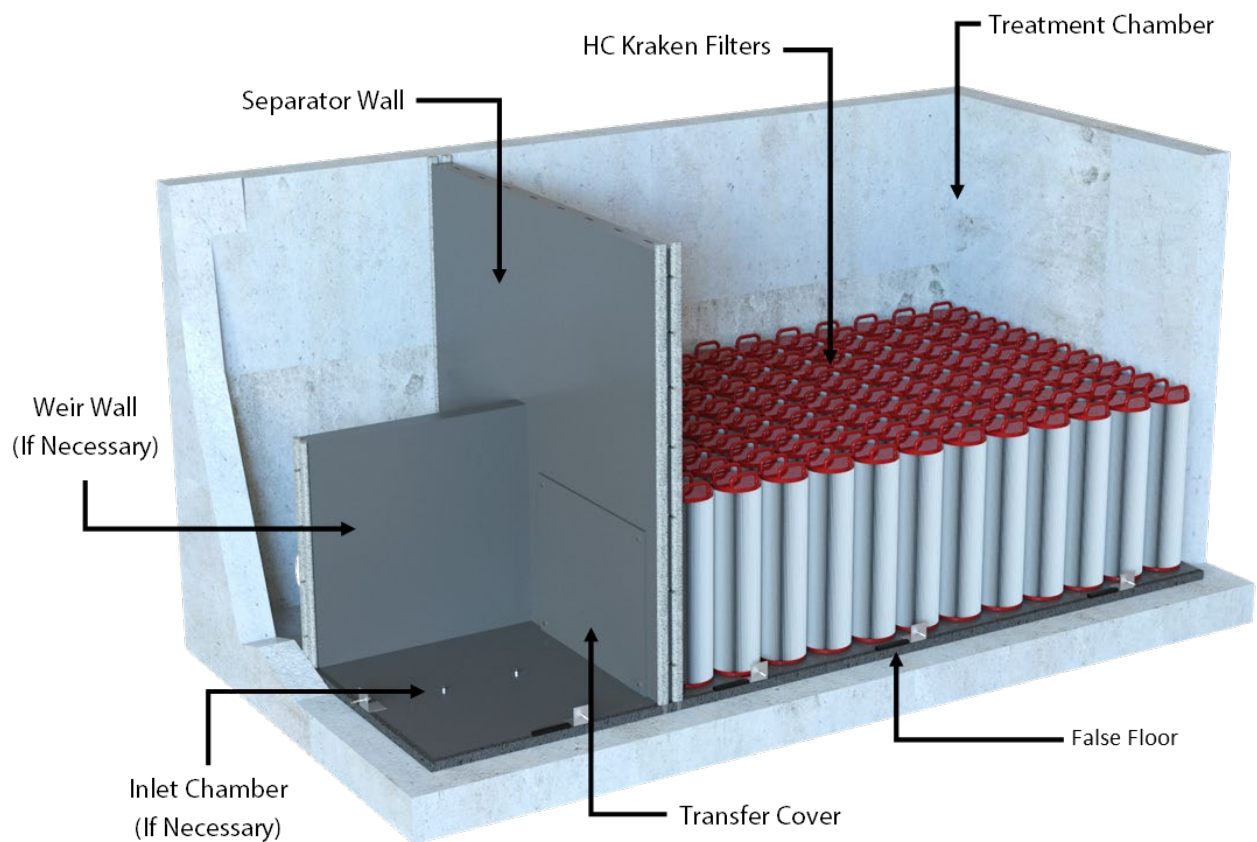
High Capacity (HC) Kraken[®] Filter Internals Installation Manual



OVERVIEW

This installation guide is for the HC Kraken internals in a concrete vault. A supplemental guide is available for internals installed in a concrete manhole. The internals consist of various polypropylene copolymer (PPC) plastic false floor sections, a PPC weir wall (if required per project plans), a PPC separator wall (some units come split into a top and bottom section, refer to project plans for details), a PPC transfer cover, PVC plug covers, and pleated paper membrane Kraken filters.

Before starting, make sure that there is enough room for installing and assembling the product. Inspect all materials for defects and gather the recommended tools listed below.



WARNING

All HC Kraken internals are to be handled with care to avoid damage prior to installation.



TOOLS AND SUPPLIES CHECKLIST

The following tools are recommended for this installation. Other tools may be necessary based on product configuration or site conditions. The installer is responsible for supplying all tools and supplies on this checklist. Always wear appropriate PPE such as gloves and safety glasses during installation.



PPE



Tape Measure



Broom



Level



Sledgehammer



Roto Hammer



Impact Gun



Drill



Drill Bits
(5/16")



Box Wrench
(3/8")



Ratchet
(3/8" Socket)

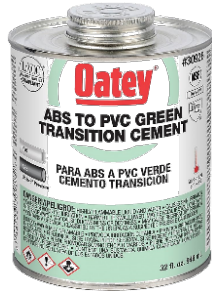


Caulk Gun

TOOLS AND SUPPLIES CHECKLIST (CONT.)



Sikaflex 1A-Polyurethane
Sealant



ABS to PVC Cement



Shims



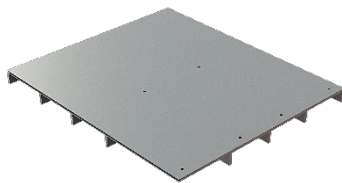
Backer Rod

PARTS AND HARDWARE CHECKLIST

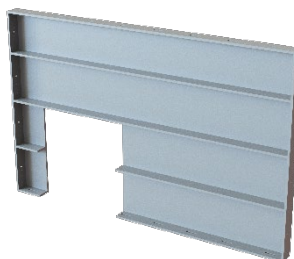
The following parts and hardware are required for this installation. Ensure all pieces are present and free from damage or defects before beginning assembly. Check the Project Drawings for any project-specific configuration notes.



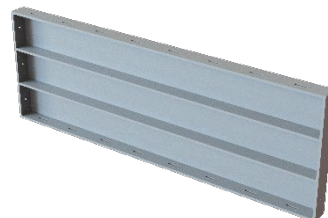
False Floor Treatment Bay
Sections (See Project
Drawings for Details)



False Floor Inlet Bay
(If Needed, See Project
Drawings for Details)



Separator Wall – Bottom
Section



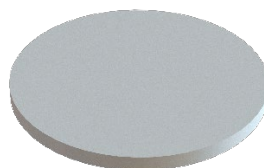
Separator Wall – Top Section
(If Needed, See Project
Drawings for Details)



Weir Wall
(If Needed, See Project
Drawings for Details)



Transfer Cover



PVC Plug Covers
(If Needed, See Project
Drawings for Details)



Floor Clips



Wedge Anchors
(3/8" x 3" Long)
(3/8" x 5" Long)



Hex Head Bolts
(3/8"-16 x 2-1/2" Long)



Flat Washers
(3/8")



Nylon Insert Locknut
(3/8"-16)

PARTS AND HARDWARE CHECKLIST (CONT.)



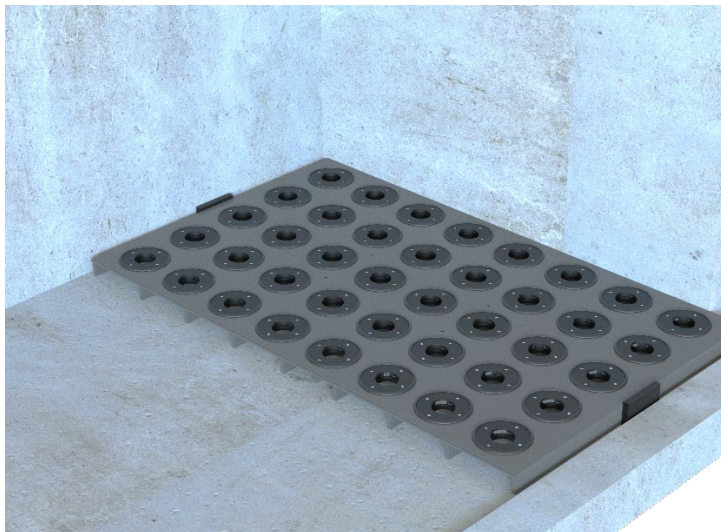
Kraken Filter

INTERNALS INSTALLATION INSTRUCTIONS



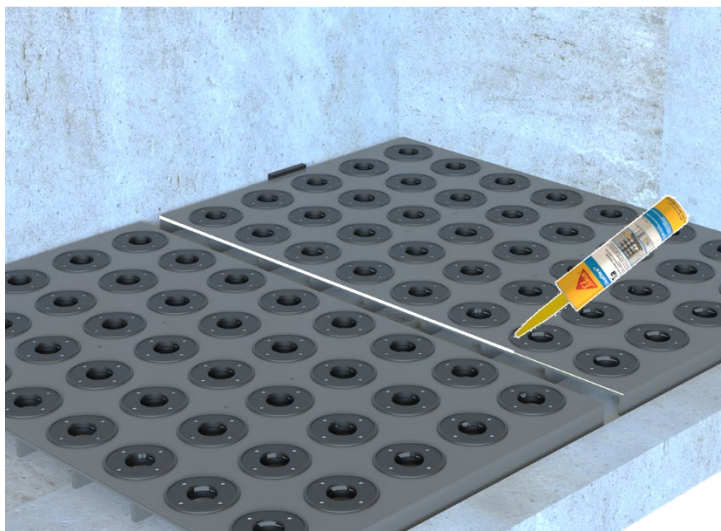
1. INSPECTION AND SETUP

Using the Parts and Hardware Checklist in coordination with the project drawings, inspect delivery of all parts, ensuring nothing is missing or broken. Locate the inlet and outlet pipe openings to orient the HC Kraken internals accordingly. Refer to project drawings for pipe invert and vault dimensions. Prepare the vault for installation of internals by ensuring it is clean and free of any debris. Check to make sure the precast lifting points in the vault do not conflict with any of the internals being installed. Contech recommends lifting points be located on the outside of the vault. If a conflict with lift points exists, the conflict must be resolved before installation of internal components.



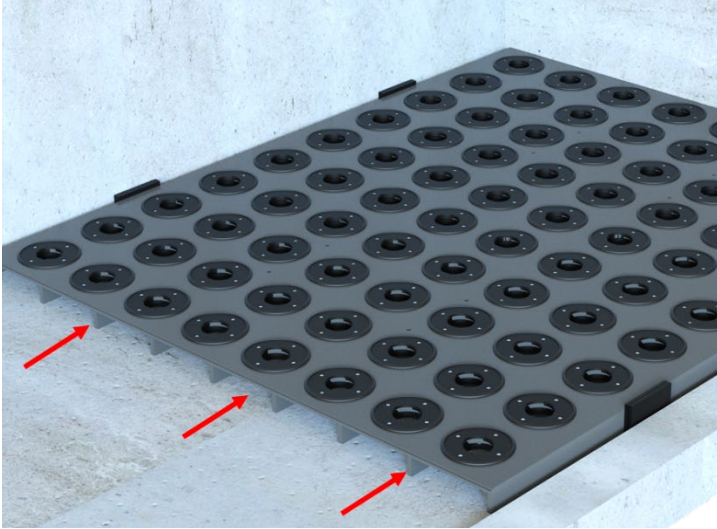
2. SETTING FALSE FLOOR END PIECE

Use the project drawings to locate the false floor end piece. Set this piece on the floor and push the back end up against the back end of the vault, opposite the inlet and outlet pipe openings. The male end of the tongue and groove joint should be exposed. Use shims on both sides of the false floor piece to center it in the vault.



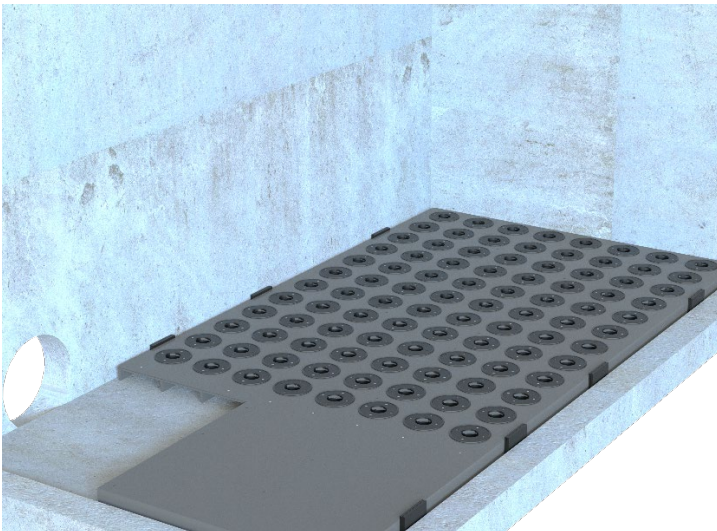
3. PREPARING THE FLOOR JOINT

Apply Sikaflex to the male end of the tongue and groove joint on the false floor end piece. Using the project drawings, locate the next piece of false floor and line up the female end of the new false floor piece with the male end of the false floor end piece.



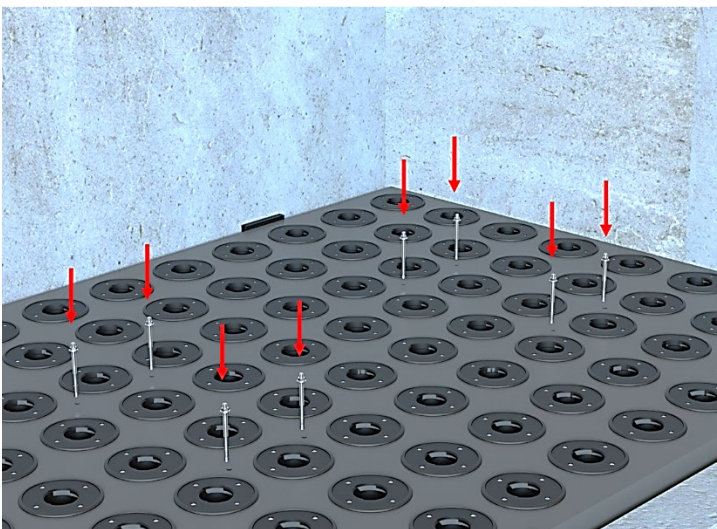
4. SETTING THE NEXT FLOOR PIECE

Insert the male end of the false floor end piece to the female end of the next false floor piece. Align the second false floor piece to the false floor end piece using shims on both sides.



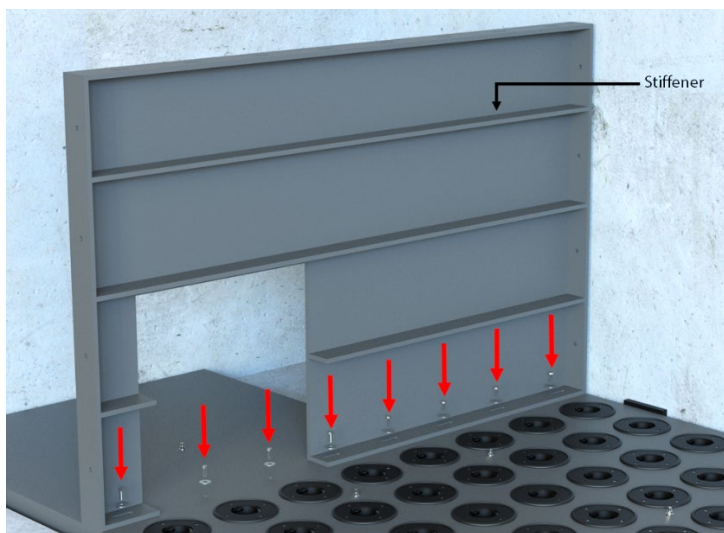
5. INLET BAY FLOOR PIECE

Repeat Steps 1 through 4 above, applying Sikaflex to male joint ends and using shims to align the next floor pieces for the remainder of the treatment bay false floor pieces. If required per plans, place the inlet bay false floor piece, referring to your project drawings to determine which side of the vault it should be placed (left or right). If the unit does not require inlet bay false floor piece per the plans, skip this step and proceed to **Step 6**.



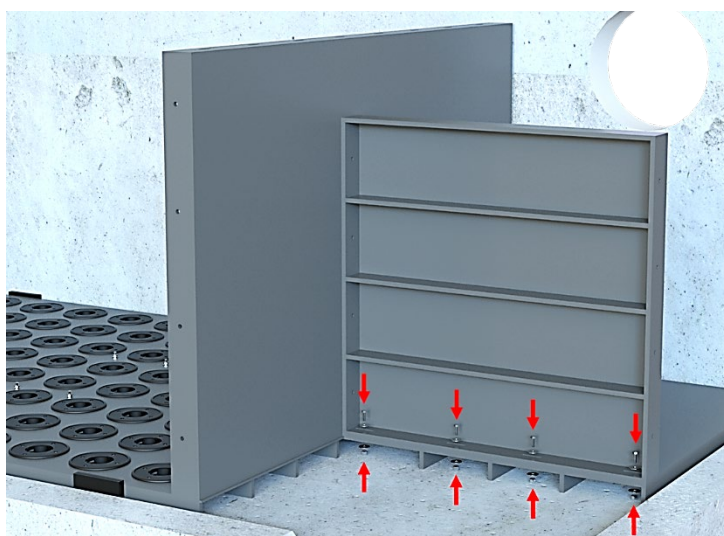
6. ANCHOR THE FLOOR

Once the false floor is set and centered in the vault, anchor the false floor pieces into the vault using the 3/8" x 5" long wedge anchors provided in the hardware kit. These wedge anchors fit into the small 15/32" holes pre-drilled into each false floor piece.



7. SEPARATOR WALL – BOTTOM SECTION

Drop the bottom section of the separator wall onto the last false floor piece of the treatment bay. The transfer window should be at the bottom and align with the inlet bay floor piece (if applicable), with the stiffeners facing the treatment chamber. Align the slots on the bottom flange of the separator wall with the tee nuts pressed into the false floor, using the slots to adjust the separator wall horizontally as needed to keep it centered. Bolt the separator wall into the false floor using the 3/8"-16 x 2-1/2" long hex head bolts and 3/8" washers provided in the hardware kit. Bolts need to be put into the open holes within the transfer opening & sealed using Sikaflex 1A-Polyurethane sealant to keep the unit water-tight.



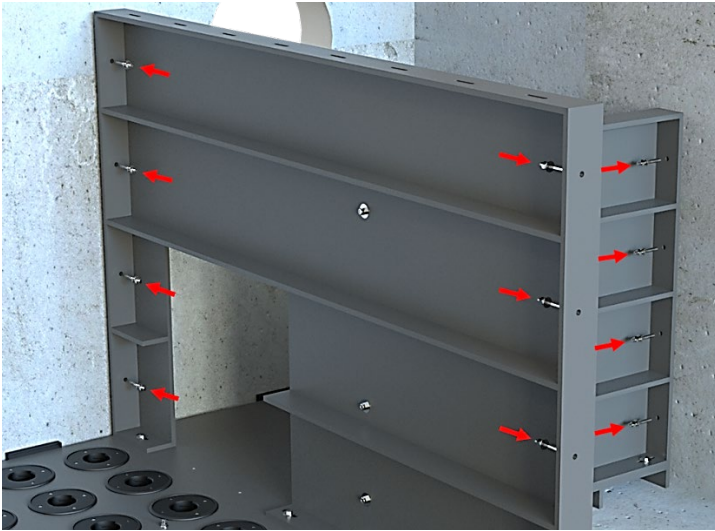
8. WEIR WALL

If required per plans, drop the weir wall onto the inlet bay floor piece, perpendicular to the separator wall with the stiffeners facing the outlet pipe opening. Align the slots in the bottom flange of the weir wall with the holes in the inlet bay floor piece, using the slots to adjust the weir wall horizontally to keep things squared and centered. Bolt the weir wall into the inlet bay floor piece using a 3/8"-16 x 2-1/2" long bolt, two 3/8" washers, and a 3/8"-16 nylon insert locknut provided in the hardware kit. If the unit does not require a weir wall per the plans, skip this step and proceed to **Step 10**.



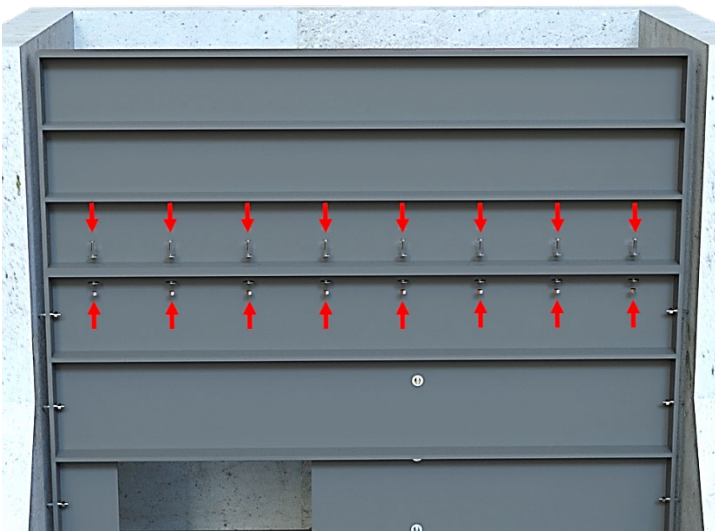
9. ATTACHING WEIR WALL TO SEPARATOR WALL

Once both the separator wall and weir wall are secured to the false floor, use a level to ensure that both walls are plumb and straight. Once walls are plumb and straight, bolt the weir wall into the separator wall. To do this, first drill 5/16" diameter holes into the separator wall at the mounting hole locations indicated in the side flange of the weir wall. Then bolt the weir wall and separator wall together using a 3/8"-16 x 2-1/2" long hex head bolt, two 3/8" washers, and a 3/8"-16 nylon insert locknut provided in the hardware kit.



10. ANCHOR WALLS TO VAULT

Once the separator wall and weir wall are secured to the false floor and each other, use the level again to ensure both walls are plumb and straight. Once walls are plumb and straight, anchor both the separator wall and weir wall into the vault using the 3/8" x 3" long wedge anchors provided in the hardware kit, alternating sides to ensure the walls stay centered. If your project does not require a weir wall, anchor just the separator wall into the vault using this hardware, alternating sides to ensure the wall stays centered.



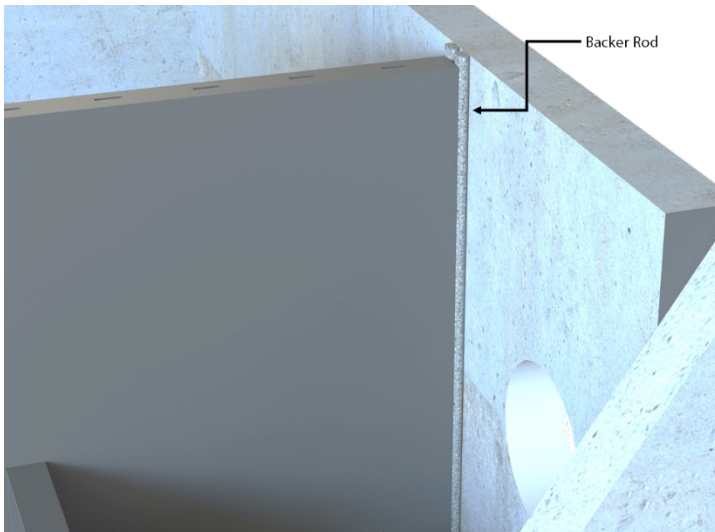
11. SEPARATOR WALL – TOP SECTION

If required per plans, carefully place the top section of the separator wall onto the bottom section, ensuring the stiffeners are facing the same way. Using the slots in the flanges to adjust horizontally, line up the top section of the wall to be centered with the bottom section and secure using a 3/8"-16 x 2-1/2" long hex head bolt, two 3/8" washers, and a 3/8" nylon insert locknut provided in the hardware kit. If the unit does not require a top section per the plans, skip this step and proceed to **Step 13**.



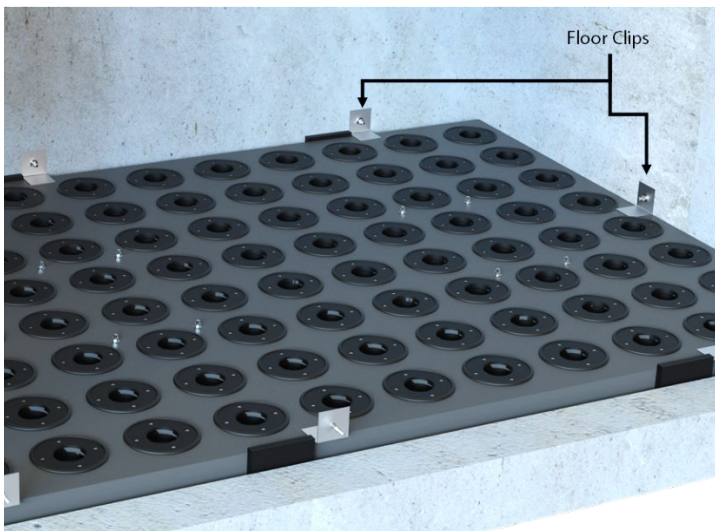
12. ANCHORING THE TOP SECTION

Once the top section is bolted to the bottom section of the separator wall, anchor this section into the vault using the 3/8" x 3" long wedge anchors provided in the hardware kit, alternating sides to ensure the top section stays centered.



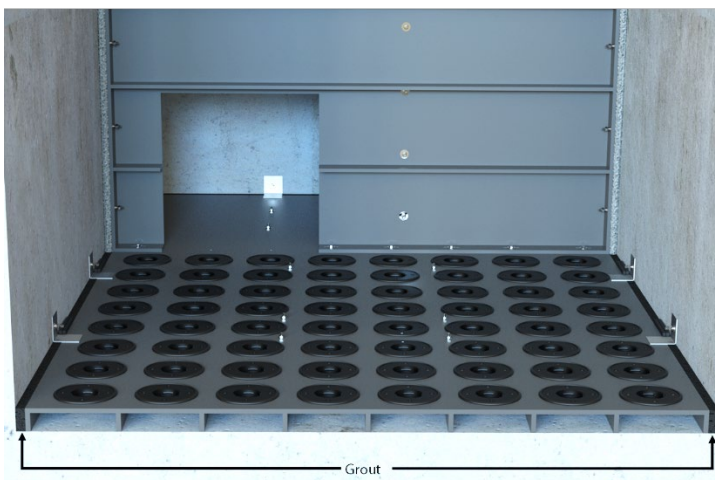
13. BACKER RODS

With everything nicely secured, fill the gaps between the vault and the separator wall and weir wall (if required) using backer rods and Sikaflex. Cut backer rod to length and use a blunt instrument or roller to uniformly install backer rod so that the sealant depth will be $\frac{1}{2}$ of the joint width. Do not puncture, stretch, or overly compress.



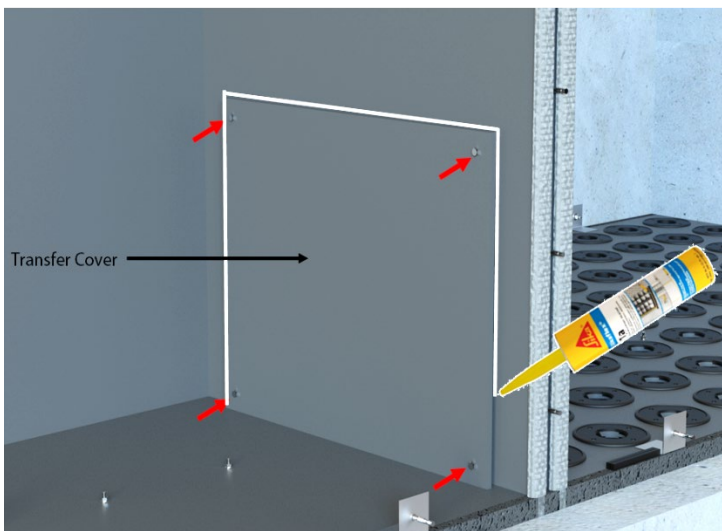
14. FLOOR CLIPS

Place floor clips around the perimeter of the false floor and anchor them into the vault using $\frac{3}{8}$ " x 3" long wedge anchors. There should be one clip at each end of each false floor piece for a total of two clips per floor. One clip should also be placed in the center of the false floor end piece along with two on the inlet bay floor piece (if required).



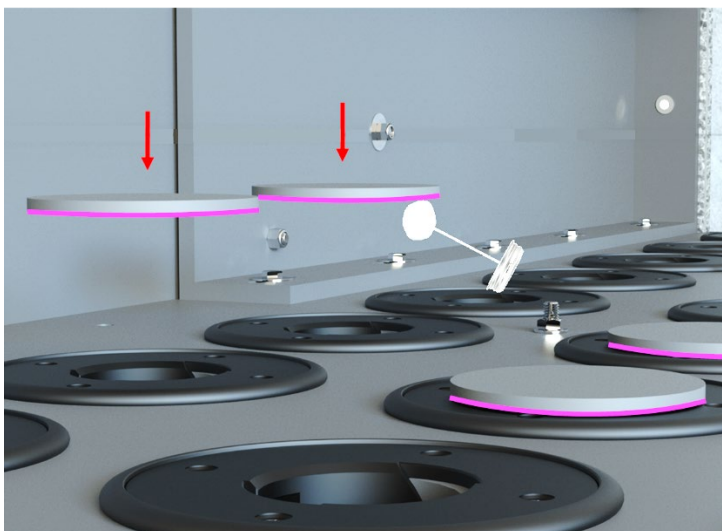
15. FLOOR GROUT

With the clips and backer rods in place, grout any gaps around the perimeter of the unit between the false floor and the vault.



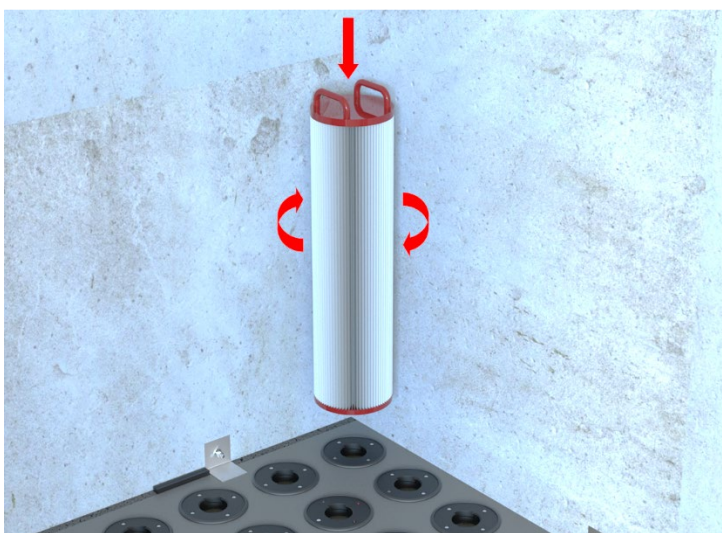
16. TRANSFER COVER

Center the transfer cover over the opening in the separator wall on the inlet bay side. To do so, drill $5/16$ " diameter holes into the separator walls at the mounting locations in the transfer cover. Then bolt the transfer cover to the separator wall using a $3/8$ "-16 x 2-1/2" long hex head bolt, two $3/8$ " washers, and a $3/8$ "-16 nylon insert locknut provided in the hardware kit. Once the transfer cover is bolted, seal the cover watertight using Sikaflex 1A-Polyurethane sealant.



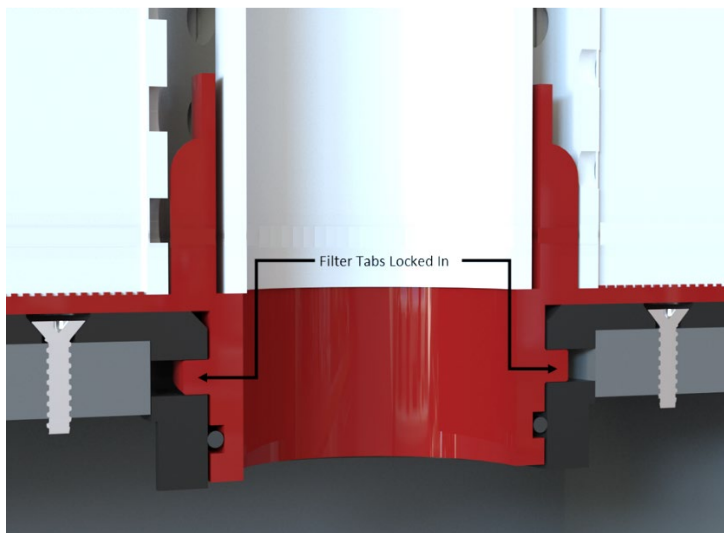
17. PLUG COVERS

The plug covers are flat PVC disks. To install them, center them over the coupler and glue the bottoms of the plug covers to the top of the couplers using ABS to PVC transition cement. Refer to your project drawings for locations and quantities of plug covers.



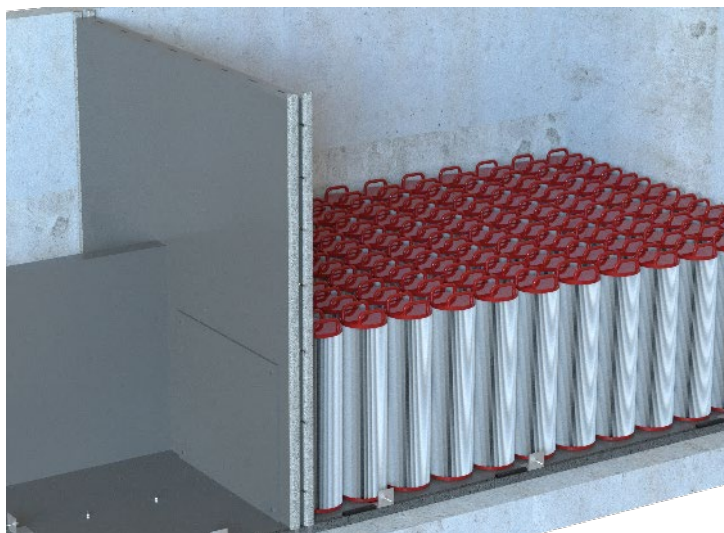
18. INSTALL FILTERS

Lastly, install all your Kraken filters, twisting them onto the quarter-turn couplers in the false floor. An O-ring lubricant can be used on the adapter and cartridge bottom for ease of install. Ensure that all filters are properly locked into the coupler.



19. LOCKING FILTERS IN PLACE

Double check to ensure all filters are properly locked in. You will know the filters are locked in once you feel the tabs completely lock into place. The small tabs in the bottom of the filter will lock into the slots cut into the inner wall of the coupler. Once properly locked in, the bottom of the filter should be flush with the top of the coupler.



20. QC CHECK & FINAL STEPS

Check to see that all couplers have been installed properly. If installed correctly, the handles at the top of the filters will all be facing the same way, perpendicular to the separator wall. If access steps are required and not already in place, add them in now. Add Contech provided activation stencil to the transfer cover, and product stencil to the outside of the vault.



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HC KRAKEN FILTER INTERNALS INSTALLATION MANUAL 08/23

HIGH CAPACITY (HC) KRAKEN POST-INSTALLTION CHECKLIST

Project Name/Number /

Post-Installation Check Point(s)		Comments
False Floor sections securely anchored-in with 3/8" wedge anchors (all floor 15/32" pre-drilled holes are filled)	☐	
Separator Wall (bottom section) securely bolted into the false floor with long hex head bolts	☐	
Separator Wall (Transfer Window) is aligned with the inlet bay floor section	☐	
Floor bolts installed and sealed (w/sika) within the Transfer Bay Opening	☐	
If required, Separator Wall (top section) securely anchored to bottom wall section	☐	
Separator Wall trimmed down to required height, approximately 1-2" below structure height	☐	
If Wall Stiffener was removed during trimming, secure new stiffener section atop the separator wall to accommodate butyl mastic	☐	
Separator Walls securely anchored to structure walls with 3/8" wedge anchors	☐	
Weir Wall securely bolted to inlet bay floor and separator wall	☐	
Weir Wall Stiffeners are facing the outlet bay	☐	
Weir Wall securely anchored to structure wall with 3/8" wedge anchors	☐	
Backer Road & Sika installed in gaps between structure and separator/weir walls	☐	
Floor Clips installed in false floor, as needed	☐	
Grout or Sika applied along gaps about the perimeter of the false floor	☐	
Transfer Cover installed with four (4) hex head bolts	☐	
Transfer Cover & Opening scuffed, sika primed, and sika applied about the perimeter	☐	
Plug Covers (PVC disks) installed over all unutilized cartridge couplers	☐	
Kraken Cartridges installed and locked-in. Correct filter height and count as per Fabrication Drawing	☐	
Kraken Cartridge Handles all facing in same (perpendicular) direction	☐	
Drain Down Cartridges properly labeled, correct count and floor location	☐	
Inlet & Outlet Openings stenciled correctly	☐	
Transfer Cover correct stencil applied (Online/Offline)	☐	
HC Kraken & Contech exterior stenciling applied as per Contech stenciling standards	☐	

Signature

Date