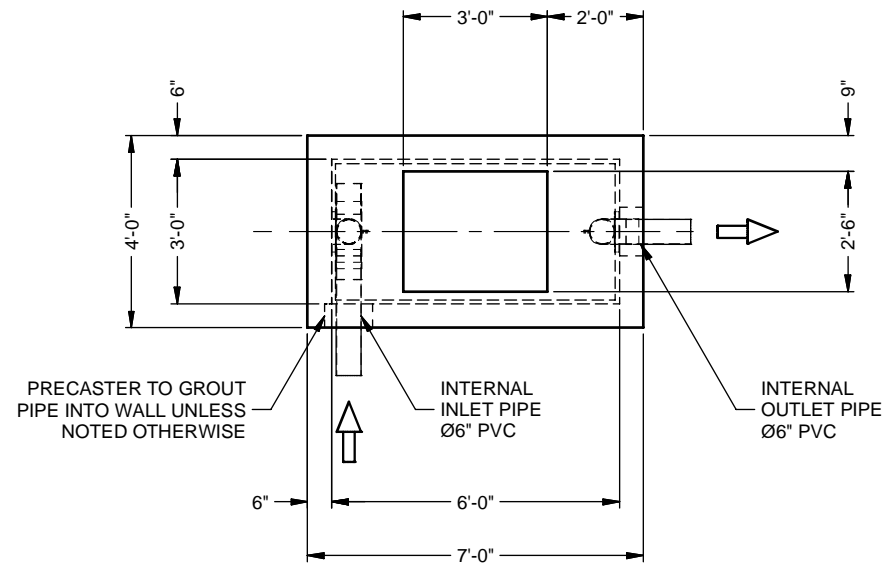
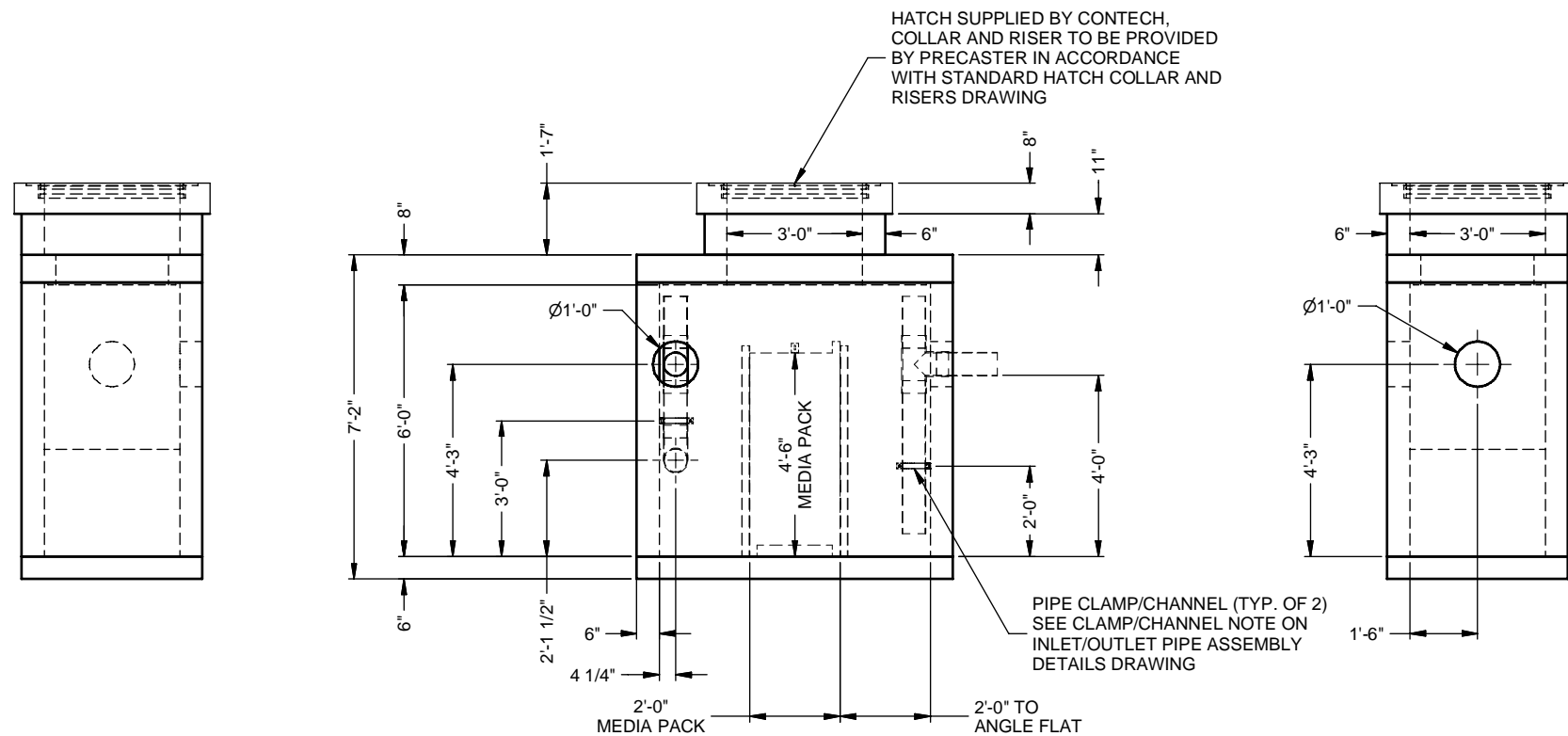


25-3595 -836163 AMEREN AUDRAUB CTG DUALFUEL



PLAN VIEW

CASTINGS AND RISERS NOT SHOWN UNLESS CAST-IN TO TOP SLAB



LEFT SIDE VIEW

ELEVATION VIEW

RIGHT SIDE VIEW

MATERIAL LIST - PROVIDED BY CONTECH

COUNT	DESCRIPTION	PROVIDED BY	INSTALLED BY
1 EA	INLET/OUTLET PIPE ASSEMBLIES	CONTECH	PRECASTER
2	STAINLESS STEEL STRUT TYPE PIPE CLAMPS	CONTECH	PRECASTER
2	STAINLESS STEEL CHANNEL STRUT	CONTECH	PRECASTER
1 ROW(S)	51" H x 36" W x 0.5" SPACING, MEDIA PACK	CONTECH	PRECASTER
1	SEALANT FOR JOINTS	PRECASTER	CONTRACTOR
1 PLACE	36" x 36" HATCH RISER W/ COLLAR	PRECASTER	CONTRACTOR
1	36" x 36" HATCH, EJ #00821721B01	CONTECH	CONTRACTOR

GENERAL NOTES

- DESIGN LOADING - AASHTO HS-20
- DESIGN SPECIFICATION - ACI 318-14
- ALL PRECAST CONCRETE MANUFACTURED PARTS SHALL CONFORM TO ASTM C-857, WITH CONCRETE MINIMUM STRENGTH - 5,000 PSI AT 28 DAYS
- JOINT SEALANT SHALL CONFORM TO ASTM C-990 OR ASTM C-443
- EARTH COVER VARIES FROM 0'-0" MIN. TO 5'
- GROUND WATER ELEVATION ASSUMED AT INLET PIPE INVERT
- STRUCTURAL REINFORCING DESIGN BY DELTA ENGINEERS. MANUFACTURE IN ACCORDANCE WITH DELTA CLASS 600 STRUCTURAL DRAWINGS
- MEDIA PACK SHALL ARRIVE WITH ALL NECESSARY ATTACHMENT HARDWARE, AND SHALL BE INSTALLED BY THE PRECASTER.
- SOME HIDDEN LINES MAY BE OMITTED FOR CLARITY.

INSTALLATION NOTES

- PRECASTER TO SHIP FRAME AND COVER WITH STRUCTURE.
- REFER TO CONTECH ASSEMBLY INSTRUCTIONS FOR ADDITIONAL INFORMATION.
- PRECASTER TO SUPPLY BUTYL MASTIC JOINT SEALANT.
- PIPE OPENINGS SHALL BE STENCILED "INLET" OR "OUTLET" AS APPROPRIATE.
- APPLYING ALIGNMENT MARKS ON ALL PIECES OF MULTIPLE PIECE ASSEMBLIES IS ENCOURAGED.
- IF STRUCTURE IS DELIVERED IN MULTIPLE SECTIONS, EACH PIECE SHALL BE LABELED WITH THE CONTECH PROJECT NUMBER, SEQUENCE NUMBER AND SITE DESIGNATION.

SITE INFORMATION

RIM ELEV. = 104.5
 TOP OF STRUCTURE = 102.92
 SITE INLET PIPE INVERT ELEV. = 100.25
 SITE INLET PIPE DIAMETER AND MATERIAL = 6" HDPE
 SITE OUTLET PIPE INVERT ELEV. = 100.25
 SITE OUTLET PIPE DIAMETER AND MATERIAL = 6" HDPE
 OUTSIDE BOTTOM OF STRUCTURE ELEV. = 95.75

STRUCTURE WEIGHT

APPROXIMATE HEAVY PICK = 14500 LBS.
 OF 1 PIECES

TOP SLAB = 2500 LBS.
 BASE SECTION = 11500 LBS. (DOES NOT INCLUDE MEDIA)
 MEDIA WEIGHT = 500 LBS.
 BASE SECTION IS DELIVERED WITH MEDIA INSTALLED

PRECASTER TO FABRICATE RISER AND COLLAR FOR HATCH INSTALLATION

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NO.	DATE	REVISION DESCRIPTION	BY

VORTCLAREX VCL30 - 836163-010
 AMEREN AUDRAIN CTG DUALFUEL
 MEXICO, MO
 for SYSTEM: OWS

CONTECH
 ENGINEERED SOLUTIONS LLC
 www.contechES.com
 9100 Centre Pointe Drive, Suite 400, West Chester, OH 45389
 800-338-1122 513-646-7000 513-645-7993 FAX
VortClarex®

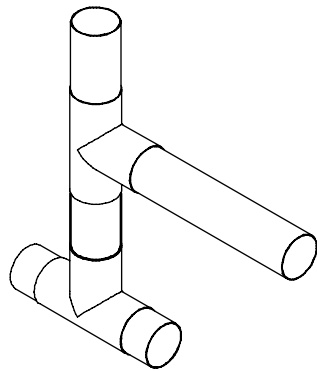
DATE: 09/23/25	SCALE:
DESIGNED: TRC	DRAWN: TNT
CHECKED: MSB	APPROVED: TRC
PROJECT NUMBER: 836163	ICAST CLASS 600 SHEET: 6.51T
1 OF 2	

CONTECH
FABRICATION
 DRAWING

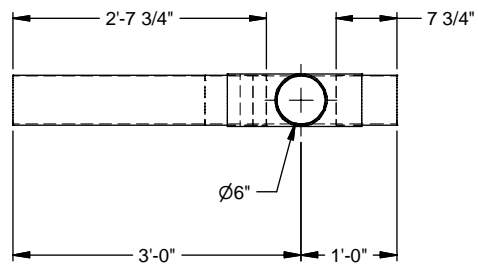
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25-3595 -836163 AMEREN AUDRAUB CTG DUALFUEL

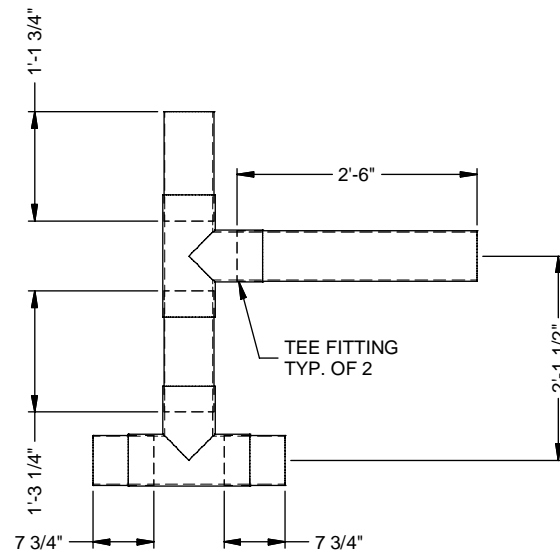
PIPING TO BE CONSTRUCTED FROM SDR35 PVC PIPE



ISOMETRIC VIEW

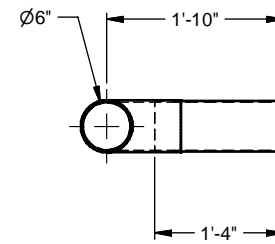


PLAN VIEW

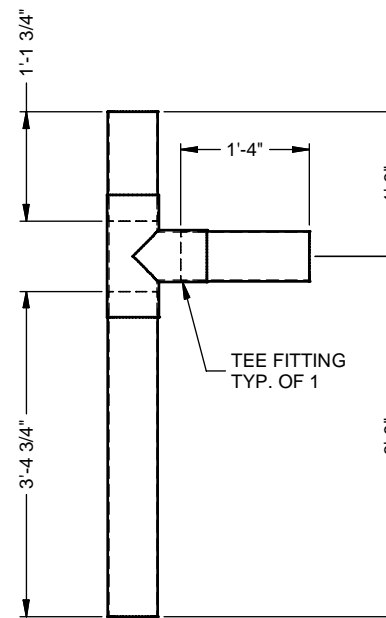


ELEVATION VIEW

INLET PIPE ASSEMBLY

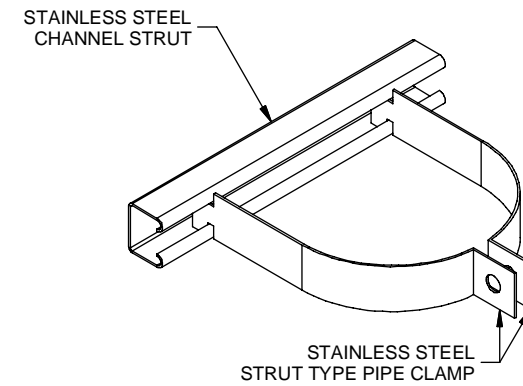


PLAN VIEW



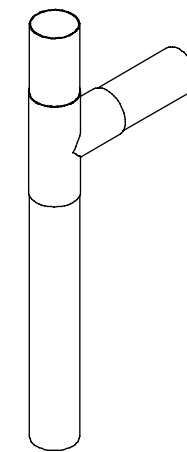
ELEVATION VIEW

OUTLET PIPE ASSEMBLY



STAINLESS STEEL STRUT TYPE PIPE CLAMP AND CHANNEL STRUT ASSEMBLY AS SUPPLIED BY CONTECHENGINEERED SOLUTIONS (TYPICAL OF 2)

ISOMETRIC VIEW
(SCALE: 2 1/2" = 1'-0")



ISOMETRIC VIEW

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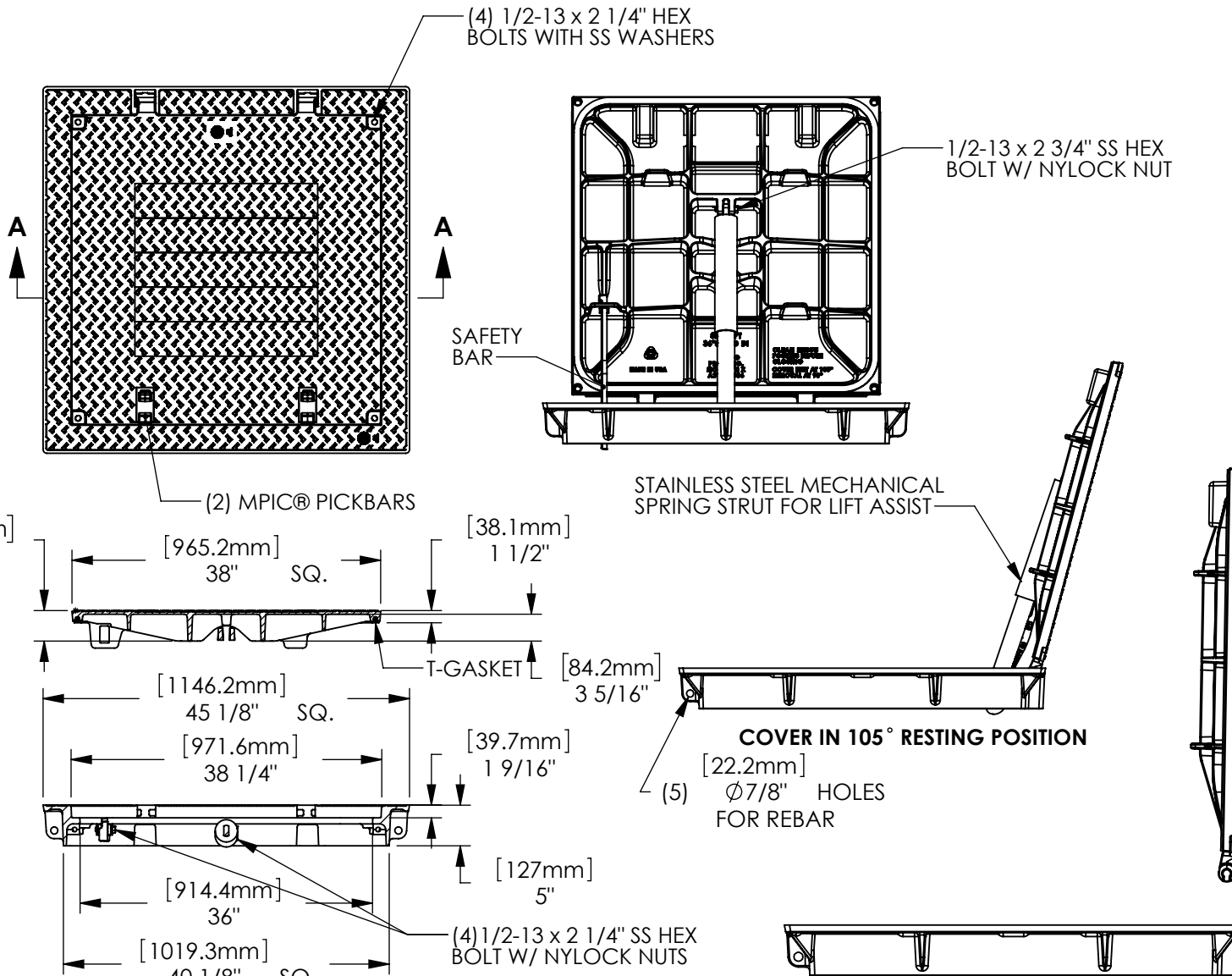
VORTCLAREX VCL30 - 836163-010
AMEREN AUDRAIN CTG DUALFUEL
MEXICO, MO
for SYSTEM: OWS

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DATE: 09/23/25	SCALE:
DESIGNED: TRC	DRAWN: TNT
CHECKED: MSB	APPROVED: TRC
PROJECT NUMBER: 836163	
SHEET: 2 OF 2	

25-3595 -836163 AMEREN AUDRAUB CTG DUALFUEL 8197ZPT 8217APT Assembly



SECTION A-A

**REMOVE COVER AT 90°
(AFTER REMOVING SAFETY BAR
AND MECHANICAL STRUT)**

Product Number

00821721B01

Design Features

- Materials
 - Hatch Frame
Ductile Iron (70-50-05)
 - Hatch Cover
Ductile Iron (80-55-06)

- Load Rating
Heavy Duty
- Open Area
n/a
- Coating
Undipped
- √ Designates Machined Surface
- Slip Resistant Surface
with the LLLL® registered trademark

Certification

- ASTM A536
- H20
- Country of Origin: USA

Major Components

00819711
00821721

Drawing Revision

6/8/2010 Designer: DEF
11/18/2021 Revised By: DAE

Disclaimer

Weights (lbs/kg), dimensions (inches/mm) and drawings provided for your guidance. We reserve the right to modify specifications without prior notice.

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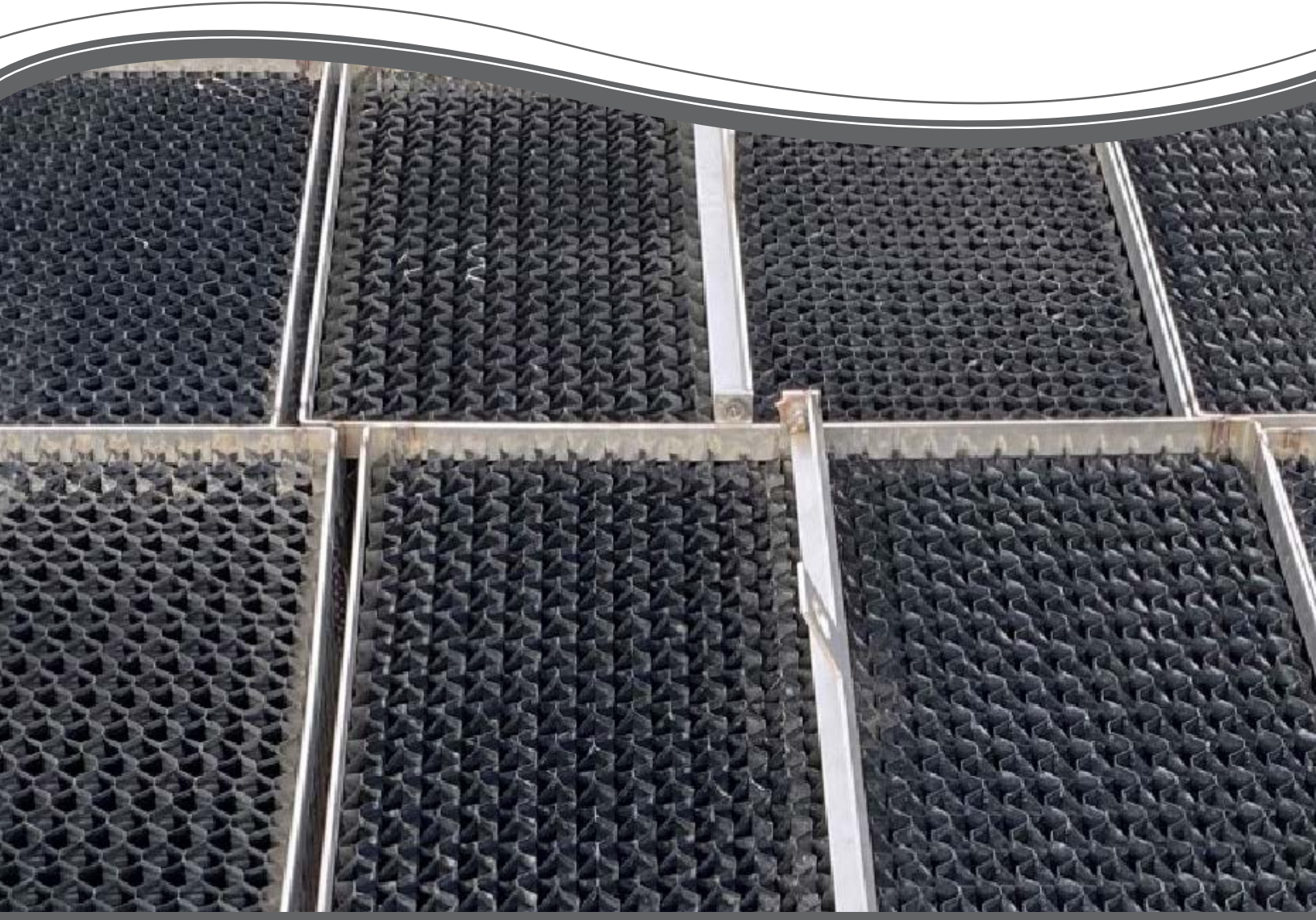
Contact

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ejco.com

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VortClarex® Internals
Installation Manual for Precasters

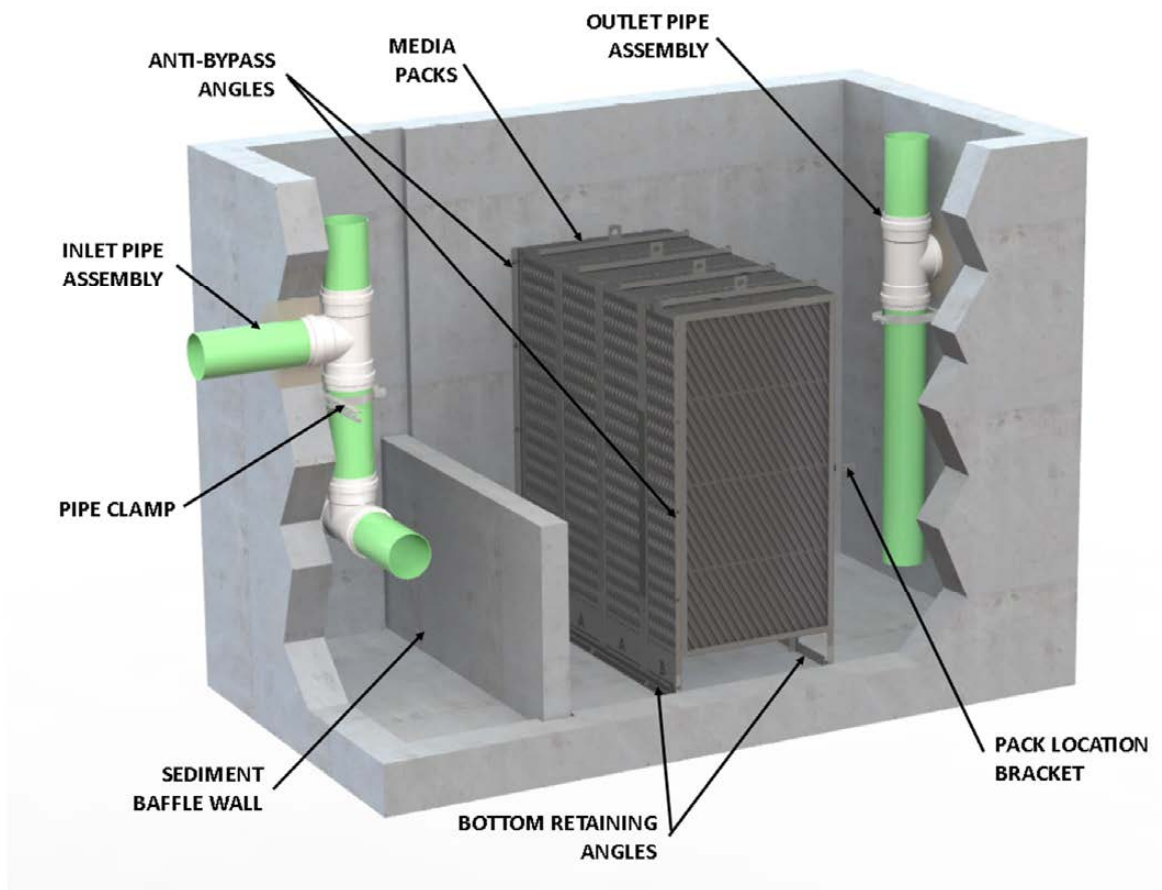


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OVERVIEW

This installation guide is for the VortClarex internals inside a precast concrete vault. The guide will cover installation of the precast sediment baffle wall (if equipped), positioning and securing the Inlet and outlet pipe assemblies, VortClarex media packs, anti-bypass angles, bottom retaining angles, and pack location brackets (refer to project plans for quantities and details).

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 VortClarex internals are to be handled with care to avoid damage prior to installation.



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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 Drill



Ratchet
(9/16" Socket)



Box Wrench
(9/16")



Caulking Gun



Sikaflex 1A-Polyurethane
Sealant



Non-Shrink Grout



Marker

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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.



Inlet Pipe Assembly



Outlet Pipe Assembly



(2) Stainless Steel Pipe Clamps & Strut Channels



Media Pack(s) (A)
(with seam cover strips)



Media Pack(s) (B)
(NO seam cover strips)



(2) Pack Location Brackets



(2) Anti-Bypass Angles



(2) Bottom Retaining Angles



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

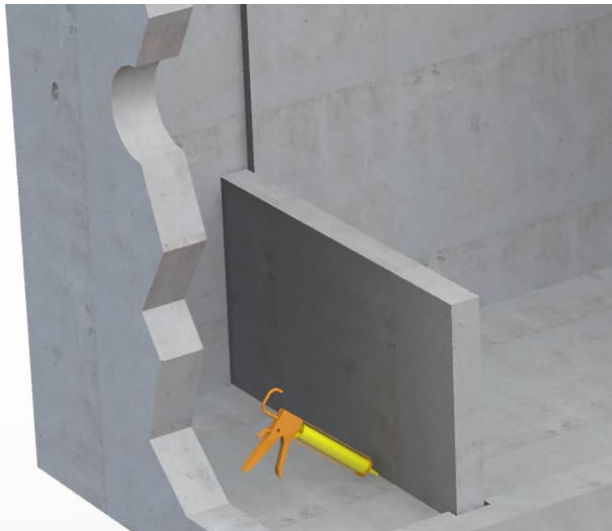
25-3595 -836163 AMEREN AUDRAUB CTG DUALFUEL

INTERNALS INSTALLATION INSTRUCTIONS



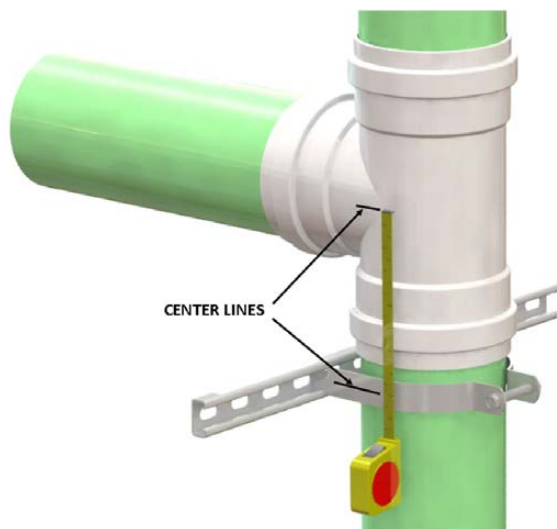
1. INSPECTION AND SETUP

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 VortClarex 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. SEDIMENT BAFFLE WALL (IF EQUIPPED)

Not all VortClarex units are equipped with a sediment baffle wall. If one is required, refer to CONTECH project drawings for baffle wall size, shape, and location. The baffle wall may be formed and cast-in place, or cast separately. If baffle wall is cast separately, keyways to accept the baffle wall will need to be formed when the vault walls are cast. Seal baffle wall to vault with SIKAFLEX 1A-Polyurethane sealant or non-shrink grout. **Note: If baffle wall is cast separately it can be installed at the end to allow more room in vault for installing the media packs and inlet pipe assembly.**

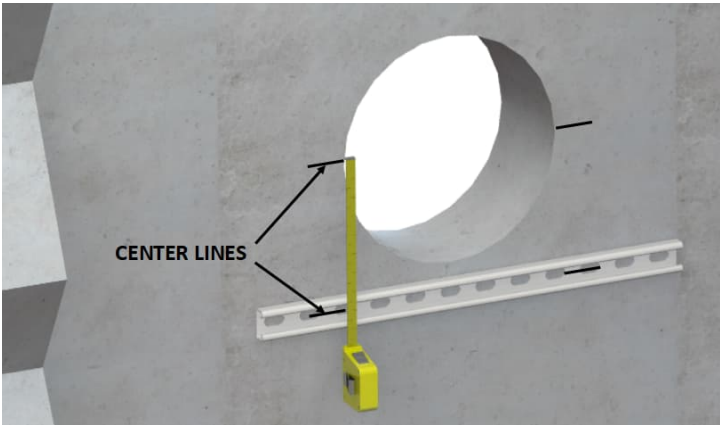


3. POSITIONING & SECURING INLET & OUTLET PIPE ASSEMBLIES

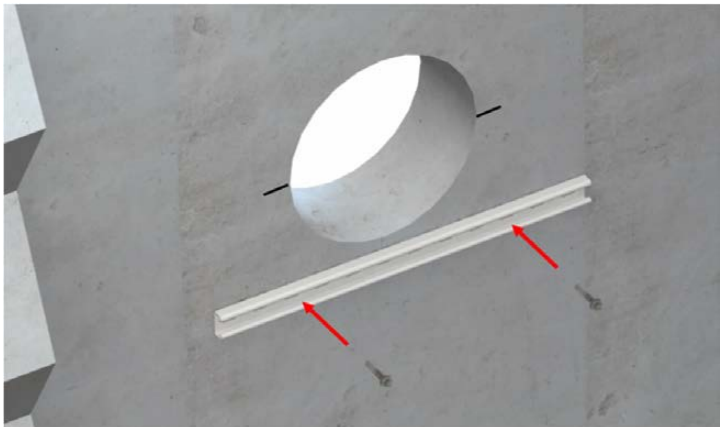
The diameter and length of the Inlet and Outlet Pipe Assemblies will vary depending on the VortClarex system size and configuration. Verify the assemblies you received are fully constructed and match the dimensions in the CONTECH project drawings before moving on.

Place one of the provided pipe clamps with strut channel onto the inlet or outlet pipe assemblies and position it so the strut channel clears the PVC tee fitting. Then using a tape measure find the distance from the center line of the tee to the center line of the clamp. This will be the measurement for locating the strut channel in the vault.

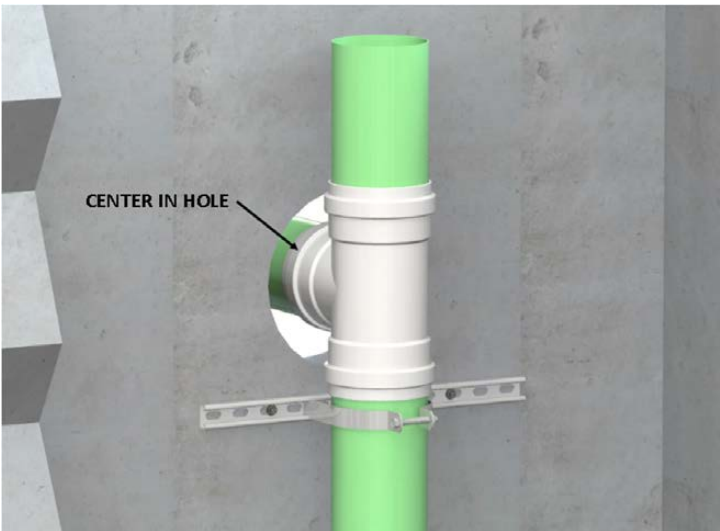
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Measure to determine the center of the inlet hole and mark a line on each side. Then measure down the distance recorded from the last step to find the center point of the strut channel on each side and mark the wall.

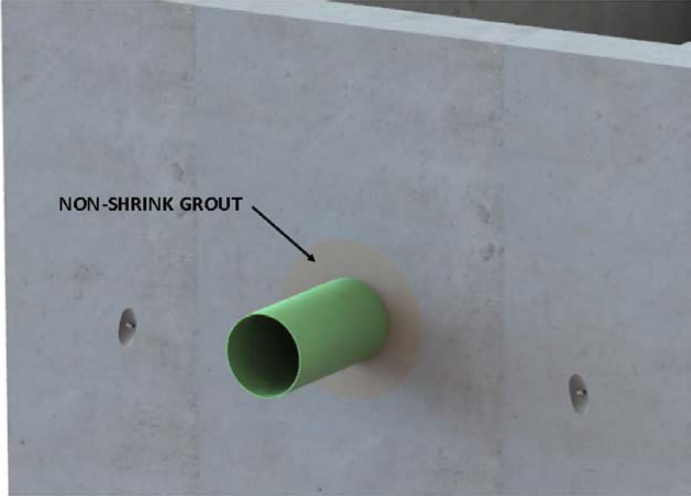


Drill two holes in the concrete vault wall to install the 3/8" wedge anchors. Drill the holes at the location marked for the strut channel center line and at the location of a hole in the channel. Pound in the wedge anchors and tighten nut with wrench to secure the strut channel to the wall.

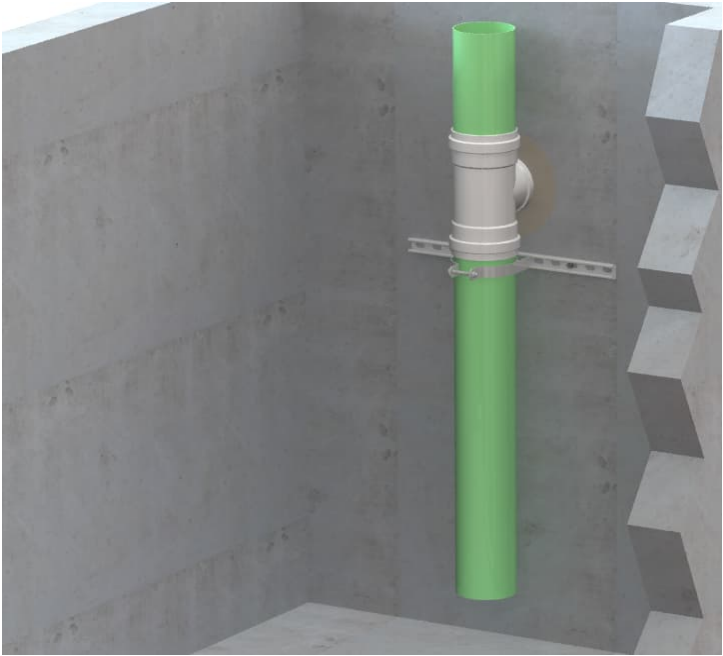


Insert the horizontal inlet pipe of the inlet pipe assembly through the inlet hole in the concrete vault wall. Attach one of the pipe clamps to the inlet pipe assembly and check for proper placement. The crown of the horizontal diffuser pipes should be 28" off the floor of the concrete vault and the inlet pipe centered in inlet hole. Check that the inlet pipe assembly is plum, and level then tighten the clamp bolt to secure. **Note: The pipes will still move a bit until the inlet pipe is grouted.**

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Using non-shrink grout, seal the voids around the inlet pipe and the vault wall. Pack the void with grout to ensure a watertight seal.



Install the outlet pipe assembly following the same steps as the inlet pipe assembly. Center the outlet pipe in the outlet hole and position the bottom of the outlet riser pipe 6" above the floor of the concrete vault. Using non-shrink grout, seal the voids around the outlet pipe and the vault wall. Pack the void with grout to ensure a watertight seal.



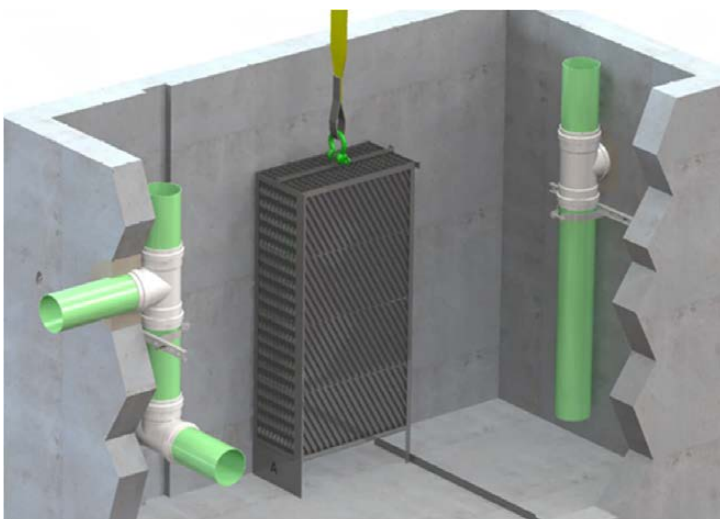
4. PLACING & POSITIONING MEDIA PACKS

The VortClarex media will be provided in multiple sections called media packs. The size and quantity of media packs will vary depending on the VortClarex system size and configuration.

Measure from the outlet wall to the location of the outlet side bottom retaining angle. **This measurement will be provided in the CONTECH project drawings.** Mark the floor with a line and then install the bottom retaining angle by drilling a hole in the concrete floor to install the 3/8" wedge anchors at each hole location on the angle. Pound in the wedge anchors and tighten nut with wrench to secure to the floor.

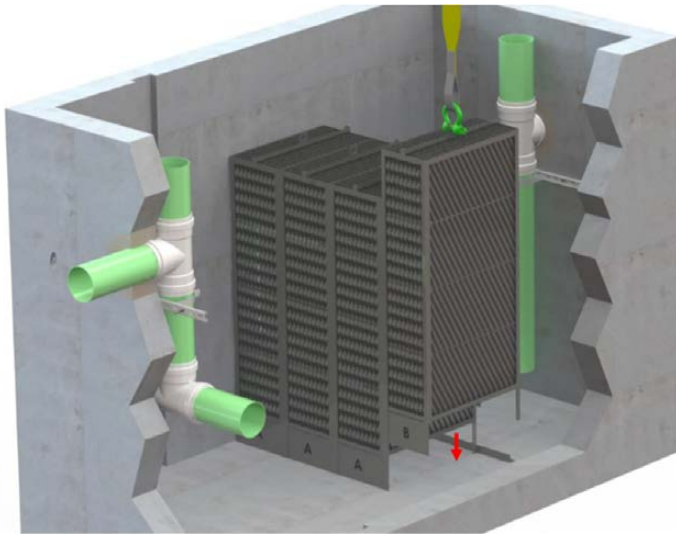


Begin placing media packs into the concrete vault as shown in the CONTECH project drawings. Lift the packs using the supplied lifting point only.



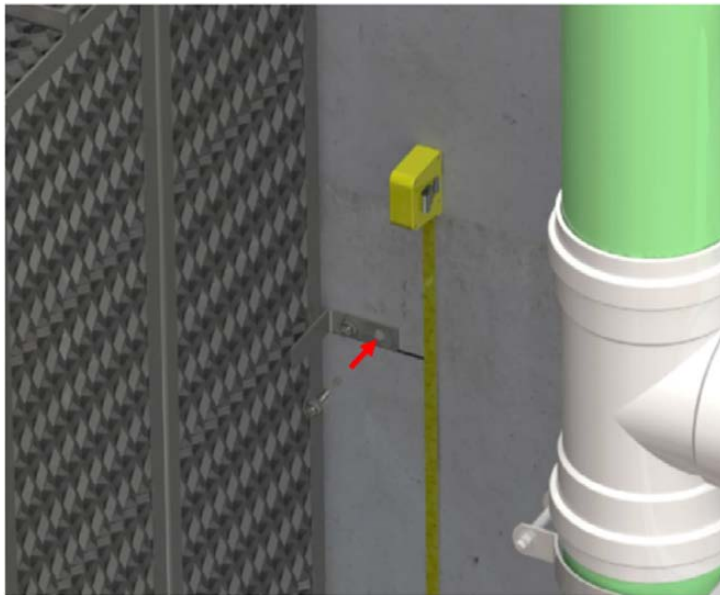
First place one of the media packs labeled (A) with the seam cover strip facing away from the vault wall and the bottom legs up against the bottom retaining angle you just installed. The flow blocking panel should face the inlet side of the vault and away from the bottom retaining angle.

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Continue the media row using media packs (A) until the end and then finish the row with a media pack (B). Media pack frames should be tight to each other and the start and end pack frames should be approximately 1/2" off the side walls.

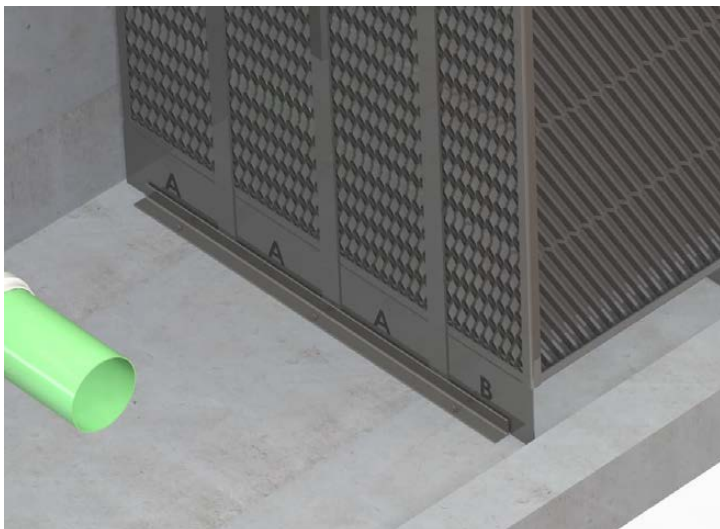
Some larger VortClarex systems may require additional rows of media packs. If required, place the additional rows in the vault in the same manner as the first row. Ensure the flow blocking panels on the additional rows continue to face the inlet side of the vault when placing them.



5. SECURING MEDIA PACKS

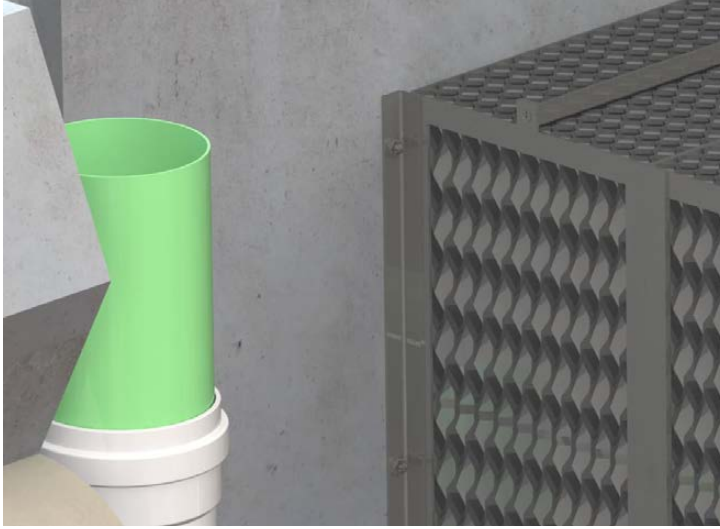
The VortClarex system comes with all required stainless steel angles and brackets required. The angles and brackets are pre-drilled to except the supplied wedge anchors that will be used to secure the media packs in place.

On the outlet side of the media packs begin by installing the two pack location brackets. Measure up from the floor 27" and mark the wall with a line. Hold the bracket at that line and then mark the bracket hole locations. Drill a hole in the concrete wall to install the 3/8" wedge anchors at each hole location on the angle. Pound in the wedge anchors and tighten nut with wrench to secure to the wall.



Moving to the inlet side of the media packs, start by installing the inlet side bottom retaining angle. Position the angle centered between the side walls and up against the media pack seam cover strips leaving a 1/8" gap. Install the bottom retaining angle by drilling a hole in the concrete floor to install the 3/8" wedge anchors at each hole location on the angle. Pound in the wedge anchors and tighten nut with wrench to secure to the floor.

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Next install the two inlet side anti-bypass angles. Hold the angle resting on the floor with the pre-drilled side facing the wall and the other side spaced 1/8" from the media pack frame. The 1/8" gap is needed to facilitate removal of the media packs for cleaning. Drill a hole in the concrete wall to install the 3/8" wedge anchors at each hole location on the angle. Pound in the wedge anchors and tighten nut with wrench to secure to the wall.

VortClarex®

The Stormwater Management

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PRECAST
1-800-638-6884
www.gillespieprecast.com

OUTLET
PIPE MUST BE
CENTERED IN
OPENING

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VortClarex Internals Assembly 05/24