

Plumbing Board  
 c/o Department of Labor and Industry  
 443 Lafayette Road North  
 St. Paul, MN 55155-4344  
 www.dli.mn.gov

# Plumbing Board Request for Action

PRINT IN INK or TYPE

<b>NAME OF SUBMITTER</b> Arthur Schwidder	<b>PURPOSE OF REQUEST</b> (check all that apply): <input type="checkbox"/> New Code <input checked="" type="checkbox"/> Code Amendment <input type="checkbox"/> Repeal of an existing Rule
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The Minnesota Plumbing Code (MN Rules, Chapter 4714) is available at <http://www.dli.mn.gov/CCLD/PlumbingCode.asp>.

**Specify the purpose of the proposal:** (If recommendation for code change for fixture, appurtenance, material, or method, check all that apply)

- Appurtenance (e.g., water conditioning equipment)  Test Method  
 Other (describe) \_\_\_\_\_

**Does your submission contain a Trade Secret?**  Yes  No

If Yes, mark “**TRADE SECRET**” prominently on each page of your submission that you believe contains trade secret information. Minnesota Statutes, section 13.37, subdivision 1(b), defines “trade secret” as follows:

“Trade secret information” means government data, including a formula, pattern, compilation, program, device, method, technique or process (1) that was supplied by the affected individual or organization, (2) that is the subject of efforts by the individual or organization that are reasonable under the circumstances to maintain its secrecy, and (3) that derives independent economic value, actual or potential, from not being generally known to, and not being readily ascertainable by proper means by, other persons who can obtain economic value from its disclosure or use.

Note that, although “trade secret” information is generally not public, the Board and its committees may disclose “trade secret” information at a public meeting of the Board or committee if reasonably necessary for the Board or committee to conduct the business or agenda item before it (such as your request.) The record of the meeting will be public.

**Describe the proposed change.** The Minnesota Plumbing Code (Minnesota Rules Chapter 4714) is available via the World Wide Web at <http://www.revisor.leg.state.mn.us/arule/4714/>

**NOTE:**

- Please review the Minnesota Plumbing Code and include all parts of the Code that require revision to accomplish your purpose.
- The proposed change, including suggested rule language, should be *specific*. If modifying existing rule language, underline new words and ~~strike through deleted words~~. Please list all areas of the Minnesota Plumbing Code that would be affected.

*Add the following new section 1106.5:*

*1106.5 Sump Manhole/Catch Basin with Vertical Baffle*

*“Sumped manholes and catch basins using vertical baffles, either solid or perforated, shall maintain a minimum horizontal distance of 18 inches between the nearest inlet pipe and a vertical baffle. “*

**Office Use Only**

RFA File No. <b>PB0132</b>	Date Received by DLI	Dated Received by Committee	Date Forwarded to Board
Title of RFA	By:		
Committee Recommendation to the Board: <input type="checkbox"/> Accept <input type="checkbox"/> Reject <input type="checkbox"/> Abstain			
Board approved as submitted: <input type="checkbox"/> Yes <input type="checkbox"/> No		Board approved as modified: <input type="checkbox"/> Yes <input type="checkbox"/> No	

This material can be made available in different forms, such as large print, Braille or audio. To request, call 1-800-342-5354.

**Need and Reasons For the Change.** Thoroughly explain the need and why you believe it is reasonable to make this change. During a rulemaking process, the need and reasonableness of all proposed rule changes must be justified; therefore, a detailed explanation is necessary to ensure the Board thoroughly considers all aspects of the proposal.

*The first proprietary baffle systems for removing sediment in storm drains was introduced in 2011, with others introduced in 2014 and 2018. Because these systems are relatively new and therefore unfamiliar to many installers, some have been improperly installed, resulting in clogging and backup of water into a street or parking lot. The issue causing this problem is installation of a vertical baffle too close to an inlet pipe. This causes sticks, plastic bottles, bags, and other floatable debris to build up between the baffle and the inlet pipe, eventually creating a permanent barrier to flow requiring emergency maintenance to resolve. When a vertical baffle is 18" or further from the inlet pipe, there is room for the water to flow around any accumulated debris.*

*Including in the code a minimum horizontal distance requirement between a vertical baffle and an inlet pipe will provide clarity to installers and inspectors and prevent the clogging problems. The distance of 18 inches is currently required by the City of Savage, for these baffle systems. This distance has been shown to prevent clogging.*

*Baffle systems currently on the market include:*

*SAFL Baffle ([www.upstreamtechnologies.us](http://www.upstreamtechnologies.us) )*

*Preserver ([www.momentumenv.com](http://www.momentumenv.com) )*

*SciClone (<https://biocleanenvironmental.com/sciclone-separator/>)*

*The SAFL Baffle is mounted across the center of the structure, midway between the inlet and outlet pipe. It is typically installed in a 4-foot diameter structure or larger – which leaves more than 18 inches between the inlet pipe and the SAFL Baffle. A typical installation detail is attached.*

*Installation instructions for the Preserver (attached) were revised on April 1, 2019 to show a minimum distance of 18 inches between the inlet pipe and the Preserver dissipator.*

If your product/method standard(s) is not currently listed in both national codes, your Request For Action will not be considered by the Board or its committees, however, you are welcome to present at any Board meeting during the Open Forum section of the Agenda.

The proposal must be accompanied by copies of any published standards, the results of testing, and copies of any product listings, as documentation of the health, sanitation and safety performance of any materials, methods, fixtures, and/or appurtenances. If none are available, please explain:

*Documentation for each of the vertical baffle systems is in the websites listed above.*

*Here is a photo of an improperly installed baffle:*



Please attach electronic scanned copies of any literature, standards and product approvals or listings. Printed or copyrighted materials, **along with written permission from the publisher to distribute the materials at meetings,**

should be sent to the Plumbing Board, c/o Department of Labor and Industry, 443 Lafayette Road No., St. Paul, MN 55155-4344.

**Primary reason for change:** (check only one)

- |   |  |
|---|--|
| <input type="checkbox"/> Protect public, health, safety, welfare, or security | <input type="checkbox"/> Mandated by legislature       |
| <input type="checkbox"/> Lower construction costs                             | <input type="checkbox"/> Provide uniform application   |
| <input type="checkbox"/> Encourage new methods and materials                  | <input checked="" type="checkbox"/> Clarify provisions |
| <input type="checkbox"/> Change made at national level                        | <input type="checkbox"/> Situation unique to Minnesota |
| <input type="checkbox"/> Other (describe) _____                               |  |

**Anticipated benefits:** (check all that apply)

- |   |   |
|---|---|
| <input type="checkbox"/> Save lives/reduce injuries             | <input type="checkbox"/> Provide more affordable construction |
| <input checked="" type="checkbox"/> Improve uniform application | <input type="checkbox"/> Provide building property            |
| <input type="checkbox"/> Improve health of indoor environment   | <input type="checkbox"/> Drinking water quality protection    |
| <input type="checkbox"/> Provide more construction alternatives | <input type="checkbox"/> Decrease cost of enforcement         |
| <input type="checkbox"/> Reduce regulation                      | <input type="checkbox"/> Other (describe) _____               |

**Economic impact:** (explain all answers marked "yes")

1. Does the proposed change increase or decrease the cost of enforcement?  Yes  No If yes, explain

2. Does the proposed change increase or decrease the cost of compliance?  Yes  No If yes, explain  
Include the estimated cost increase or decrease, and who will bear the cost increase or experience the cost decrease:

3. Are there less costly or intrusive methods to achieve the proposed change?  Yes  No If yes, explain

4. Were alternative methods considered?  Yes  No If no, why not? If yes, explain what alternative methods were considered and why they were rejected.

The proposed change merely provides clarity to installers of proprietary baffle systems and to those inspecting the installation of such systems. These systems are relatively new to the market, and instances of improper installation have resulted in clogging/backups in the storm drain system. The alternative is to continue without guidance from the code.

5. If there is a fiscal impact, try to explain any benefit that will offset the cost of the change. If there is no impact, mark "N/A." N/A

6. Provide a description of the classes of persons affected by a proposed change, who will bear the cost, and who will benefit. Property owners will benefit because a properly installed baffle system will not clog and cause water to back up into a parking lot/driveway. Installers and inspectors will benefit from greater clarity/guidance on how these systems are to be installed. The proposed change adds no additional cost.

7. Does the proposed rule affect farming operations? (Agricultural buildings are exempt from the Minnesota Building Code under Minnesota Statutes, Section 326B.121.)  Yes  No If yes, explain

Are there any existing Federal Standards?  Yes  No If yes, list:

Are there any differences between the proposed change and existing federal regulations?

Yes  No  Not applicable  Unknown

If yes, describe each difference & explain why each difference is needed & reasonable.

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Minnesota Statutes, section 14.127, requires the Board to determine if the cost of complying with proposed rule changes in the first year after the changes take effect will exceed \$25,000 for any small business or small city. A small business is defined as a business (either for profit or nonprofit) with less than 50 full-time employees and a small city is defined as a city with less than ten full-time employees.

During the first year after the proposed changes go into effect, will it cost more than \$25,000 for any small business or small city of comply with the change?  Yes  No If yes, identify by name the small business(es or small city(ies).

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Will this proposed plumbing code amendment require any local government to adopt or amend an ordinance or other regulation in order to comply with the proposed plumbing code amendment?  Yes  No, If yes, identify by name the government(s) and ordinances(s) that will need to be amended in order to comply with the proposed plumbing code amendment.

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Additional supporting documentation may also be attached to this form. Are there any additional comments you feel the Committee/Board may need to consider? If so, please state them here:

**Information regarding submitting this form:**

- Submissions are received and heard by the Committee on an “as received” basis. **Any missing documentation will delay the process, and your proposal will be listed as the date it was received “Complete.”**
- **Submit any supporting documentation to be considered**, such as manufacturer’s literature, approvals by other states, and engineering data electronically to [DLI.CCLDBOARDS@state.mn.us](mailto:DLI.CCLDBOARDS@state.mn.us). Once your Request For Action form has been received, it will be assigned a file number. Please reference this file number on any correspondence and supplemental submissions.
- **For copyrighted materials that must be purchased from publishers, such as published standards, product approvals or testing data, listings by agencies (IAPMO, ASSE, ASTM, etc.,) you may send just 2 copies, along with written permission from the publisher to distribute the materials at meetings, via U.S. Mail to: Plumbing Board, c/o Department of Labor and Industry, 443 Lafayette Road No., St. Paul, MN 55155-4344.**
- **For materials that must be submitted by U.S. Mail, please include a copy of your “Request For Action” form originally submitted and reference your assigned RFA file number.**

**Information for presentation to the Committee and/or Board:**

- Limit presentations to 5 minutes or less.
- Be prepared to answer questions regarding the proposal and any documentation.

**Information regarding Committee and/or Board function:**

- The Plumbing Board or designated committee.

I understand that any committee action is a recommendation to the Plumbing Board and is not to be considered final action.

SUBMITTED BY NAME Arthur Schwidder	FIRM NAME Upstream Technologies	SUBMITTER'S E-MAIL ADDRESS aj.schwidder@upstreamtechnologies.us
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NAME, PHONE NUMBER & E-MAIL ADDRESS OF PRESENTER TO THE COMMITTEE (if different):

ADDRESS 600 County Road D West, Suite 14	CITY New Brighton	STATE MN	ZIP CODE 55112
PHONE 651-237-5123	SIGNATURE (original or electronic)	DATE February 12, 2019	

For Assistance or questions on completing this form, contact Cathy Tran, Department of Labor and Industry at 651-284-5898.

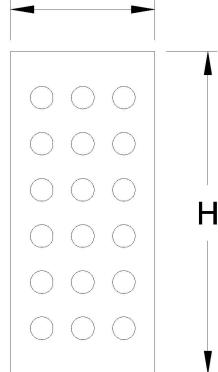
<b>For Office/Committee Use Only</b> Proposal received completed? <input type="checkbox"/> Yes <input type="checkbox"/> No			
Date Proposer notified of gaps:	Mode of notification (e.g., e-mail)	Date returned to Proposer:	Date materials re-received:

d (IN.)	H (IN.)	Θ (DEG.)		y (IN.)	Ys	Yb	Yt	D
		MIN.	MAX.					
12	36	130	230	12	MIN. 4 FT.	MIN. 3 FT.	0" to 6"	VARIES
15	36	130	230	12				
18	36	130	230	12				
21	46	140	220	12				
24	46	140	220	12				
27	46	140	220	12				
30	57	150	210	12				
36	57	150	210	12				

NOTES:

- \* Ideal Baffle height = distance from top of the highest Inlet pipe to the bottom of the outlet pipe plus 18" or greater
- \* Minimum acceptable Baffle Height = distance from top of the highest inlet pipe to the bottom of the outlet pipe plus 12"
- \* Heights greater than 57" require 2 Baffles stacked
- \* Contact Upstream Technologies for pipes larger than 48" I.D.
- \* For more information see our [design guide](#)
- \* View the complete list of [Available Baffle Sizes](#)

18" or 24"



FRONT



SIDE

**SAFL BAFFLE PANEL**

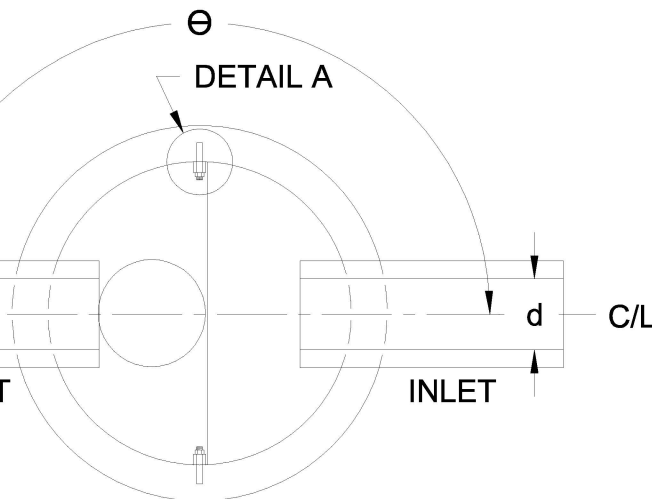
FLOW

C/L

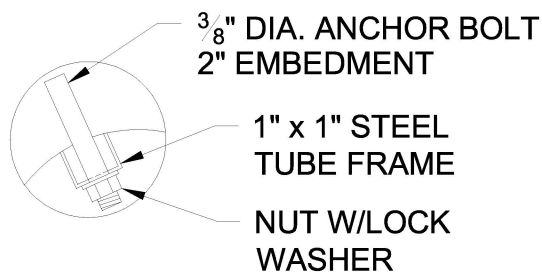
OUTLET

INLET

C/L

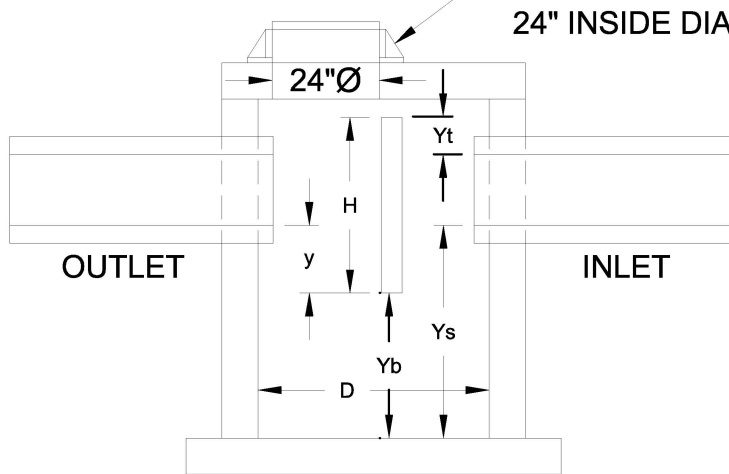


**TOP VIEW OF SUMP**



**DETAIL A**

CASTING  
24" INSIDE DIA.



**SIDE VIEW OF SUMP**

**PATENT PROTECTED**

Patents: US #8663466B2 - US #8715507B2 - US #9506237B2 - CA #2742207

This generic detail does not encompass the sizing, fit, and applicability of the SAFL Baffle for this specific project. It is the ultimate responsibility of the design engineer to assure that the design is in compliance with all applicable laws and regulations. The SAFL Baffle is a patented technology of Upstream Technologies, Inc. and the University of Minnesota. Neither Upstream Technologies nor the University of Minnesota approves plans, sizing, or system designs.

**SAFL BAFFLE STANDARD DETAIL**  
**UPSTREAM TECHNOLOGIES INC.**  
 600 COUNTY ROAD D WEST, STE 14  
 NEW BRIGHTON, MN 55112  
 651.237.5123





Pat. US 9,752,600 B2

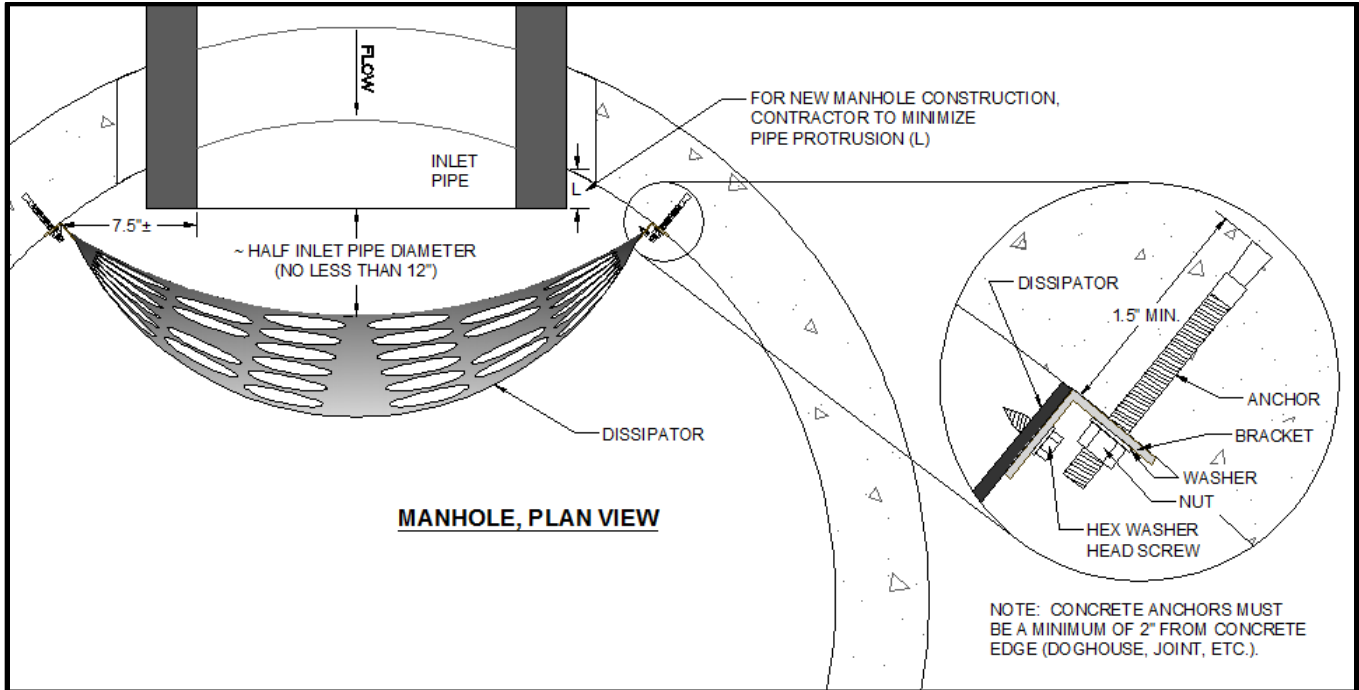


Simple • Effective • Affordable • Environmental Solutions

Part #

# Preserver™ Dissipator Installation Manual

**\*\*\*NOTE: Installer is responsible for safety requirements and safety equipment as necessary for installation of the Preserver™\*\*\***



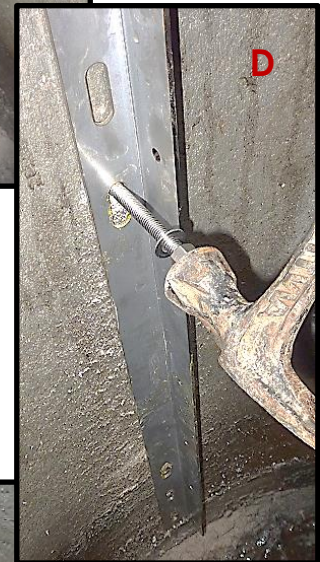
**NOTE: Figure above illustrates an installed Preserver™ Dissipator. Installer is recommended to read and understand installation instructions prior to installation, and contact Momentum with any questions. Dissipators installed incorrectly will void the warranty.**



## 1. Install Mounting Brackets

- A. Determine the bracket locations:
  1. Free of obstructions (pipe grout, doghouse, lift holes, etc.)
  2. Place brackets an equal distance from the pipe (typically  $7.5'' \pm$  from inside).
- B. Center brackets vertically with pipe, plumb, & mark slots.
- C. Drill anchor holes:
  1. One anchor per pair of slots
  2. 2" from any edge (joint, doghouse, lift holes, etc.)
  3. 3" hole depth (1.5" min.)
- D. Clean the holes out of any dust and debris, put the bracket back into position, and install anchors:
  1. Place anchor assemblies into the holes and unscrew the nuts until they are flush with the ends of the anchors.
  2. **Tap** each anchor into the holes, leaving a minimum of 1" of thread exposed.
- E. Tighten anchors:
  1. Adjust the bracket up or down as necessary to center vertically with pipe.
  2. Check that brackets are level with one another.
  3. Tighten the bolts to 25 ft-lbs of torque, or 3-5 turns past the hand tight position.

**NOTE: If an anchor installation is inadequate, it must be replaced or an additional anchor must be installed in adjacent slot.**

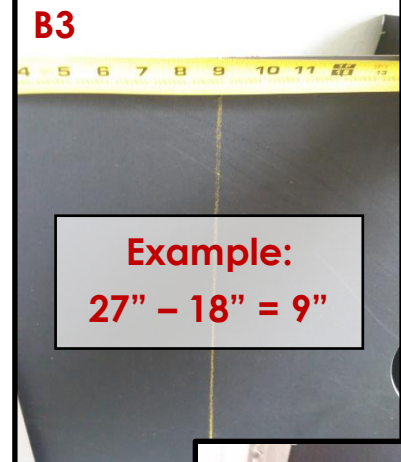
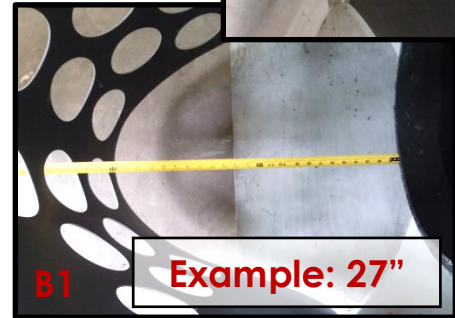


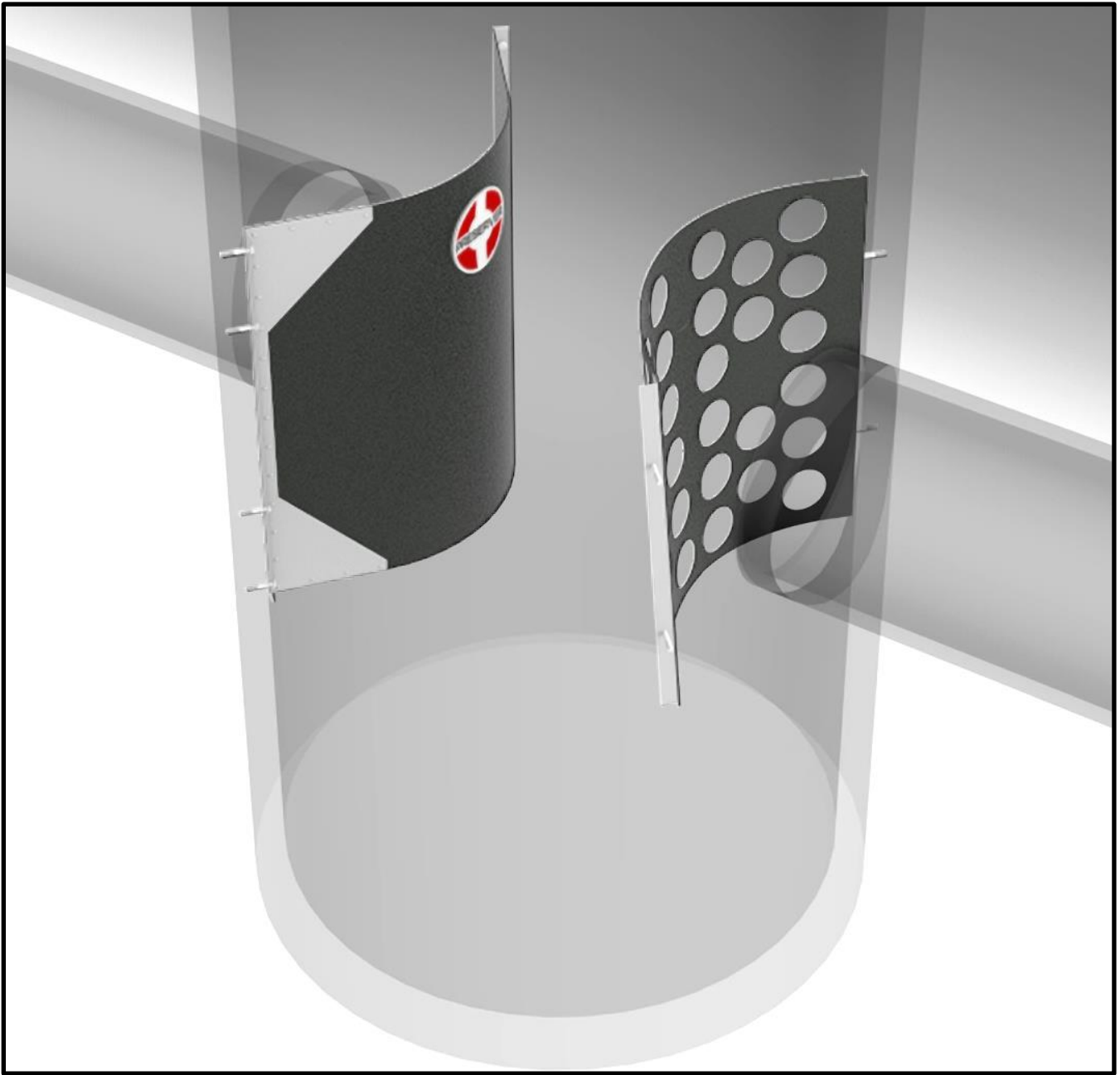


## 2. Install Preserver™ Dissipator

NOTE: The dissipator will be mounted to the brackets using the stainless steel self-tapping screws and a 3/8" hex driver bit. Secure the driver bit into your drill and **set the drill's variable clutch to a low torque setting to prevent stripping.**

- A. Connect top and bottom of the dissipator to both brackets:
  1. Place the dissipator on the pipe-side of the bracket
  2. Connect dissipator to bracket using one screw at the top and bottom of smaller dissipators, or two screws for larger dissipators.
- B. Determine the amount of material to remove:
  1. Measure the distance from the end of the pipe to the end of the dissipator.
  2. From that measurement, subtract the greater of:
    - a. 18"
    - b. Half the pipe diameter
  3. If that value is 3" or greater, mark the distance on the dissipator from the wall, and draw a vertical cut line.
  4. Check that the cut line is no closer to a dissipator opening than 3". Move cut line if necessary.
  5. Repeat at other bracket.
- C. Cut dissipator:
  1. If determined necessary in the previous step, make a **straight cut** along one cut line using a saw with a wood or metal blade (e.g. circular, reciprocating, jig).
  2. Remove scrap from bracket and retain screws.
- D. Attach dissipator to bracket with screws.
- E. Repeat C & D at other bracket.





Installation of your Preserver™ is now complete!

Please don't hesitate to contact us should you have questions regarding installation of the Preserver™.