

Tank Components



Improve Your Tank's Process and Operation

In addition to spray devices and supply tubes to make sure your tank is easily cleaned through automated CIP, Sani-Matic can help improve operation of your tank with varying sanitary processing accessories.

Ensure adequate tank venting with options like our mushroom or gooseneck vents, and prevent CIP spray overflow through those vents with our patented Hygienic Spray Deflector.

Achieve better visibility within your tank with 3-A authorized sight glasses and process lighting with our long lasting VessaLite® sanitary process light.

Looking for quick heating of fluids within your process tanks? Steam spargers and regulators can achieve fast heating of process liquids through means of direct steam injection.



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Hygienic Spray Deflector

The Solution To Spray Overflow

Sani-Matic's patented Hygienic Spray Deflector features a tri-clamp connected vent housing with an interior reversed dish designed to deflect spray solution and keep it from exiting a tank.

The Hygienic Spray Deflector is designed for vessels where spray devices are used to clean the interior. These vessels include CIP and process tanks.

It redirects sprayed solution back into the process tank, without inhibiting tank port cleaning. When following a recommended spray device's operating requirements, the Hygienic Spray Deflector's design reduces solution from exiting open-to-atmosphere tanks.





QUICK TIPS

How much water will this save?

Vent water loss will vary depending on installation and operating conditions, but a typical CIP operation for a single process tank in 1 year can lead to upwards of 1,000 gallons of water and 20 gallons of chemical being lost out of a leaking tank vent.

What are the benefits?

Sani-Matic's patented Hygienic Spray Deflector reduces solution spray out of vent ports during CIP process, helping to minimize wasted CIP solution and improve plant floor safety.

GOOD TO KNOW

- **Material:** 316Lss
- **Sanitary ID Finish:** 32 µin Ra
- **Cleaning:** Easily removable for inspection and COP cleaning
- Common applications include process tanks, mixing tanks and CIP tanks



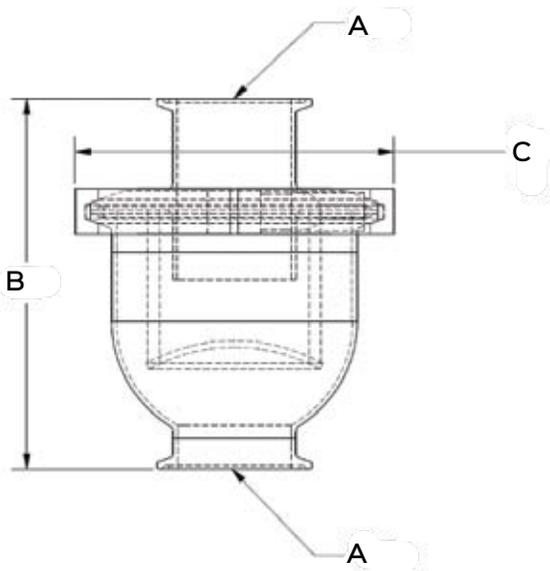
Watch the Hygienic Spray Deflector in Action!



Hygienic Spray Deflector Model Number Key

Example Model #: HSDFB-TC20-E-3232MP

| 1-5 | Component | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | |
|--------|---------------------------------|-------------------------|---|---|---|---|---|---|---|---|----|----|----|----|----|----|----|--|
| | HSDFB Hygienic Spray Deflector | [] - [] [] - [] [] | | | | | | | | | | | | | | | | |
| 6, 7 | Connection Type | [] | | | | | | | | | | | | | | | | |
| | TC Tri-Clamp (Standard) | | | | | | | | | | | | | | | | | |
| 8, 9 | Connection Size | | | | | | | | | | | | | | | | | |
| | 20 2.0" | | | | | | | | | | | | | | | | | |
| | 30 3.0" | | | | | | | | | | | | | | | | | |
| | 40 4.0" | | | | | | | | | | | | | | | | | |
| 10 | Gasket Material | | | | | | | | | | | | | | | | | |
| | E EPDM (Standard) | | | | | | | | | | | | | | | | | |
| | V Viton | | | | | | | | | | | | | | | | | |
| 11, 12 | ID Finish | | | | | | | | | | | | | | | | | |
| | 32 32 µin Ra (Standard) | | | | | | | | | | | | | | | | | |
| 13, 14 | OD Finish | | | | | | | | | | | | | | | | | |
| | 32 32 µin Ra (Standard) | | | | | | | | | | | | | | | | | |
| 15, 16 | Polish | | | | | | | | | | | | | | | | | |
| | MP Mechanical Polish (Standard) | | | | | | | | | | | | | | | | | |



| Connection Size "A" | Height "B" | Max. Clamp Width (REF) "C" |
|---------------------|------------|----------------------------|
| 2.0" TC | 6 1/32" | 5 3/16" |
| 3.0" TC | 7 1/32" | 7 1/4" |
| 4.0" TC | 7 3/16" | 9 1/4" |

Hygienic Spray Deflector Replacement Parts

| HSD Connection Size (Body Size) | Part | Material | Part # |
|---------------------------------|--------|----------|----------------|
| 2.0" (4.0" Body Size) | Gasket | EPDM | 021031 |
| | Gasket | Viton | 020474 |
| | Clamp | -- | 020225 |
| 3.0" (6.0" Body Size) | Gasket | EPDM | 022975 |
| | Gasket | Viton | 023847 |
| | Clamp | -- | 020976 |
| 4.0" (8.0" Body Size) | Gasket | EPDM | 027764* |
| | Gasket | Viton | 038233* |
| | Clamp | -- | 027655* |



- 1 TC Clamp
- 2 TC Gasket

**Non-stock product option. Longer lead times apply.*

NOTE: Gasket and clamp parts are for listed body size.

Cv Values for Hygienic Spray Deflectors

Cv values are provided for both airflow out of the tank (Venting Out) and for airflow into tank (Venting In). Values are valid for air at sub-critical flow velocities.

| Connection Size | Cv (Venting Out) | Cv (Venting In) |
|-----------------|------------------|-----------------|
| 2.0" | 53 | 60 |
| 3.0" | 102 | 223 |
| 4.0" | 188 | 212 |

Sub-Critical Flow when $P_1 < 2 \times P_2$

$$Q_G = 962 \times C_v \sqrt{\frac{(P_1^2 - P_2^2)}{(S.G. \times T)}}$$

Q_G = Gas Flow in Standard Cubic Feet per Hour

T = Absolute temperature in °R (°F + 460)

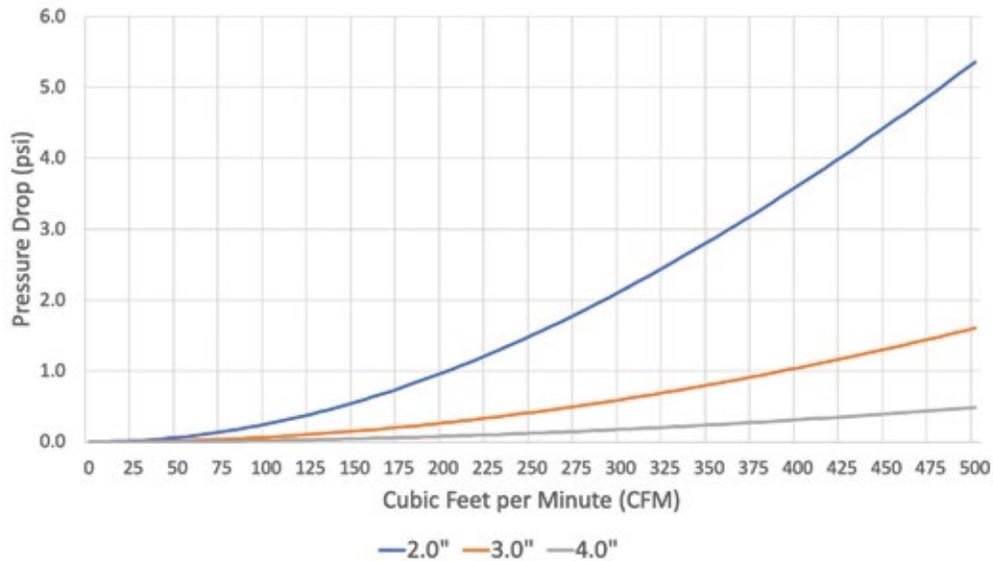
P₁ = Upstream (Inlet) pressure in psia

P₂ = Downstream (Outlet) pressure in psia

psia = Absolute pressure. This is *psig* (gauge pressure) plus 14.7 (atmospheric pressure)

S.G. = Specific Gravity of medium where air at 70 °F and 14.7 psia = 1.0

Hygienic Spray Deflector - Venting Out



Hygienic Spray Deflector - Venting In

