



**Johnson  
Screens**

A brand of  
Aqseptence Group



# Inlet Diffuser Basket





# Johnson Screens' Inlet Diffuser Basket

Johnson Screens' Inlet Diffuser Basket is designed to control the velocities of the initial gas or liquid distribution over media in a process vessel, providing improved performance over traditional plate disk type distributor designs.

The Inlet Diffuser Basket is installed in the top nozzle of the vessel, and is designed for new vessel construction and retrofitting existing vessels. The Inlet Diffuser Basket elements are built with proven technology and Vee-Wire® screens, allowing for controlled velocity of incoming flows to create even distribution and minimal scouring at the top of the bed.

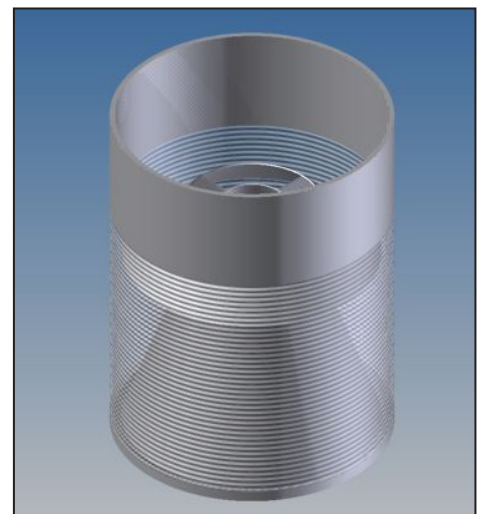
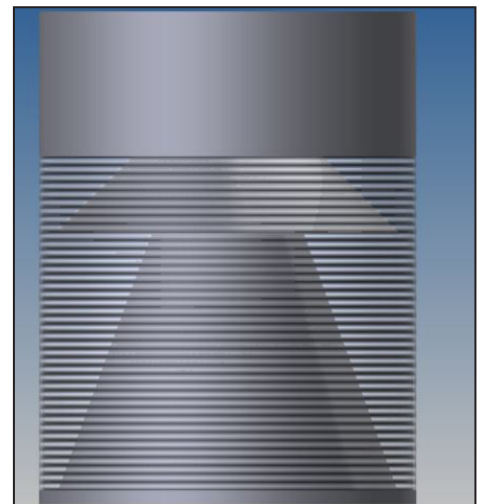
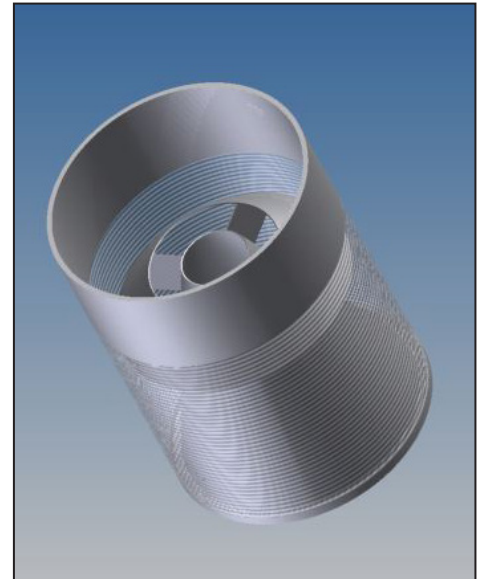
The Inlet Diffuser basket will evenly distribute and control gas and liquid velocities across the media. This improved flow control will help in eliminating channelling in the media and other symptoms of poor liquid and gas distribution. By diffusing the incoming gas or liquid into the vessel, migration of the media during the upflow regeneration process is prevented.

## Features and Benefits

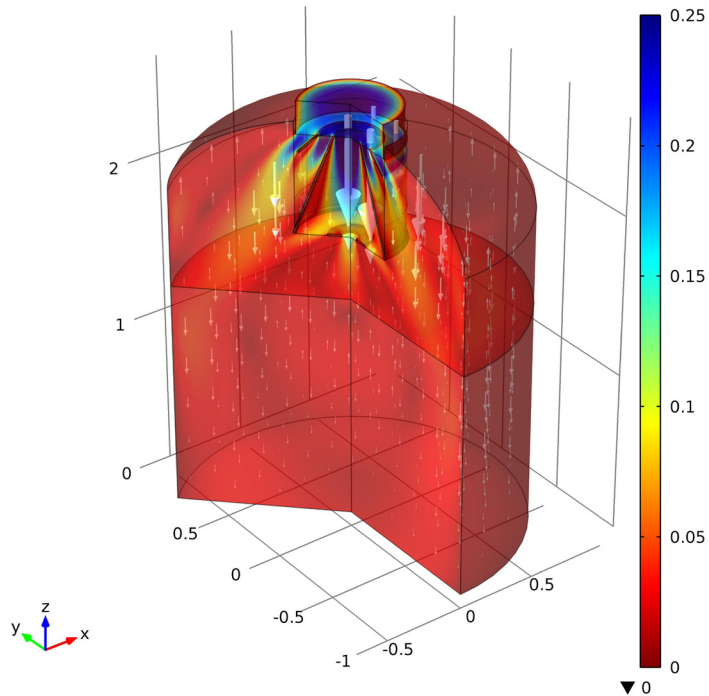
- Can be retrofitted into an existing pipe - welded or flanged
- Available for inlet pipes 6 to 36 in. (152 to 914 mm)
- Manufactured in 300 series stainless steel and is available in exotic alloys
- Controls incoming liquids and gases velocities
- Prevents migration of media during upflow backwash
- Reduced maintenance
- Minimal changes to vessel access
- Minimal implementation and maintenance costs
- Reduced vessel operation costs
- Supports temperatures up to 1200° F (648° C)

## Applications

- Alkylation units
- Dehydrogenation units
- Hydrocracking / Hydrotreating units
- Molecular sieve units
- Claus units

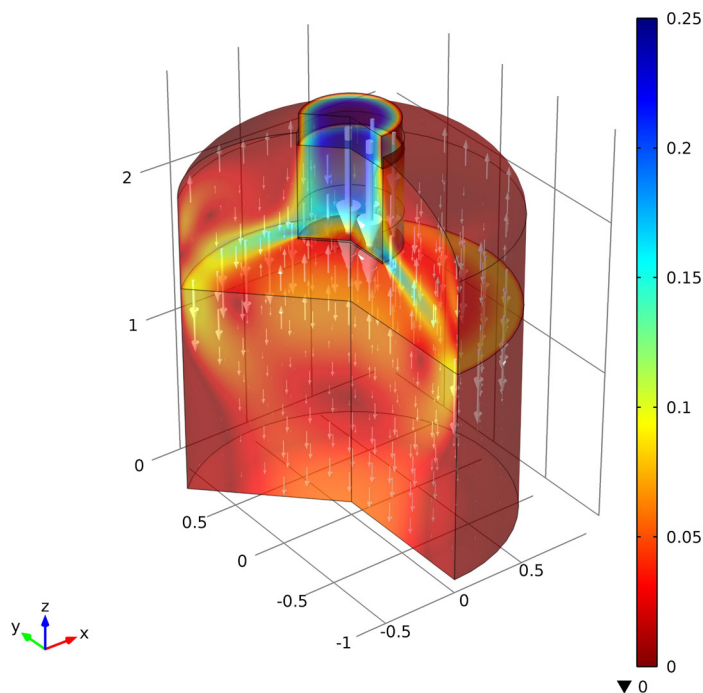


# Comparison of the Inlet Diffuser Basket and traditional diffuser plates



## Johnson Screens Inlet Distributor Basket

- Flow is distributed to multiple locations
- Flow pattern shows better distribution
- Velocity is diffused to reduce effects on lighter media.



## Traditional Plate Inlet Distributor

- High localized velocity
- Much of the flow is forced to the edge of the vessel
- "Hot" and "Cold" spots for incoming gases and liquids
- Circulation of the flow indicates that light media could be subject to movement.

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