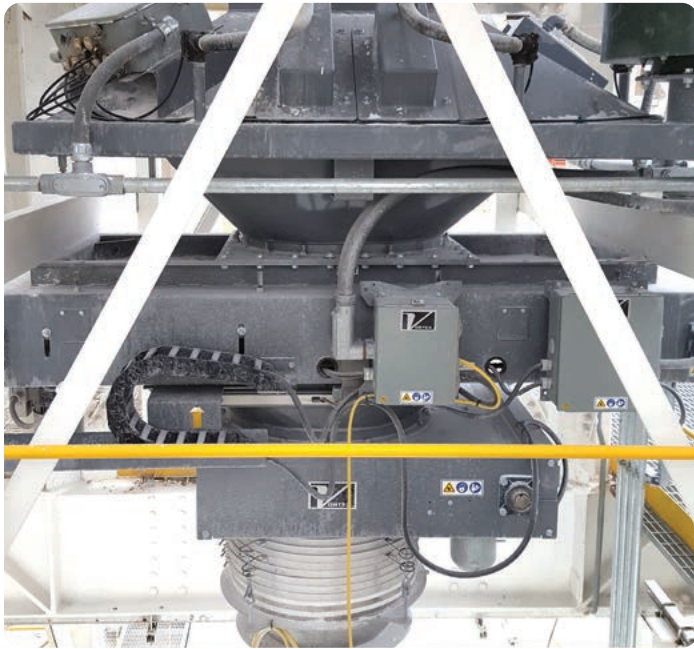
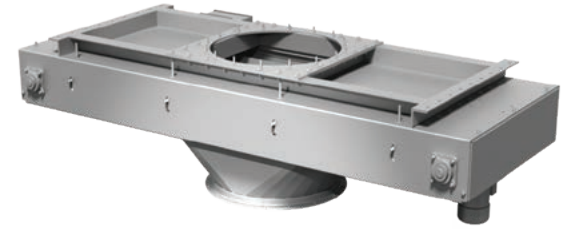


CONE-IN-CONE

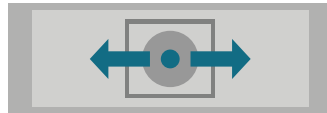
SPOUT POSITIONERS

Vortex® Spout Positioners are designed so that materials pass through a fixed inlet. Below, a traversing hopper slides across a fixed support pan. A loading spout is attached beneath the traversing hopper to allow exact positioning of the spout above a truck or railcar waiting below.



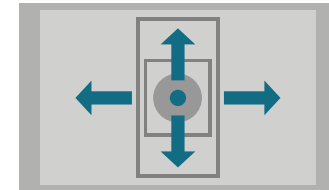
Single-Axis Positioner

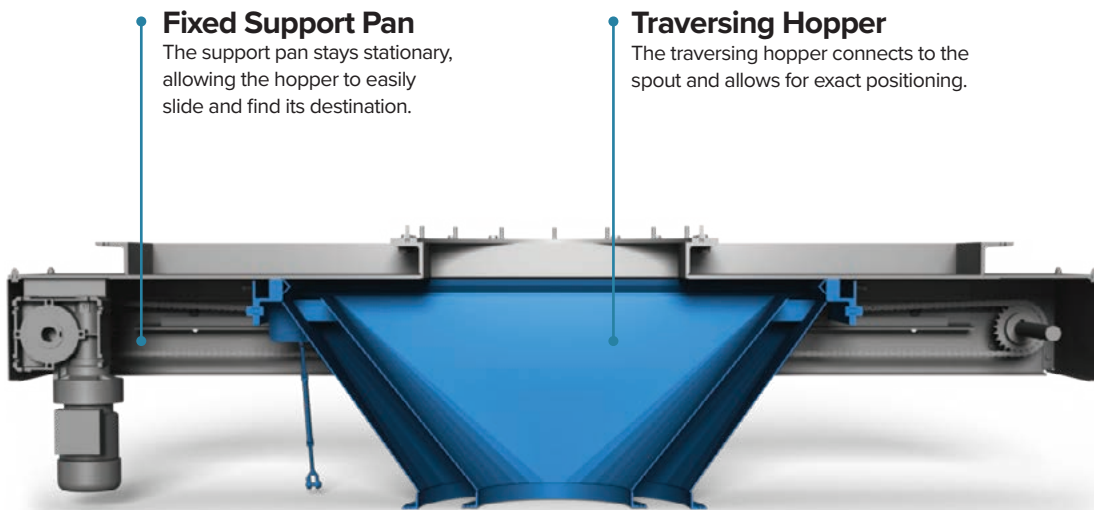
The Vortex Single-Axis Positioner allows spout movement along either an X-axis or a Y-axis. Depending on orientation, a Single-Axis Positioner can either be moved from front-to-back or side-to-side above a loading vessel.



Dual-Axis Positioner

The Vortex Dual-Axis Positioner allows spout movement along both an X- and Y-axis, allowing it to traverse from front-to-back and side-to-side above a loading vessel.





Fixed Support Pan

The support pan stays stationary, allowing the hopper to easily slide and find its destination.

Traversing Hopper

The traversing hopper connects to the spout and allows for exact positioning.

Materials of Construction

The inlet cone and traversing hopper are constructed from the same metal material(s) as specified for the loading spout's material contact areas (i.e. stacking cones). The fixed support pan is constructed from A36 mild steel.

Options:

- 235 BHN abrasion-resistant steel
- 400 BHN abrasion-resistant steel
- 304 stainless steel
- 316L stainless steel



Motor Specifications

- Single-Axis Positioner: (qty. 1) 1 HP motor with 80:1 gear reducer
- Dual-Axis Positioner: (qty. 2) 1 HP motors with 80:1 gear reducers

Vortex® Spout Positioner motors are three-phase motor/reducer drive units which feature an integral braking system. Single-phase motors are available.

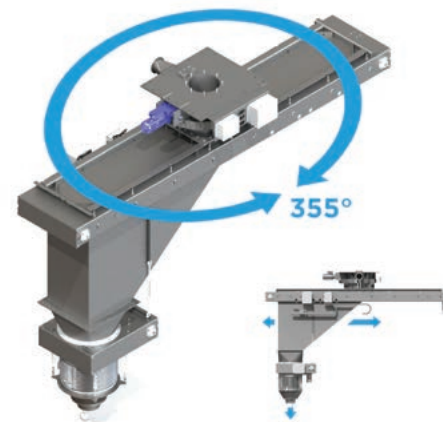
Standard Sizes

- Single-Axis Positioners: 2 – 10 ft | 0.6 – 3 m
- Dual-Axis Positioners: 2x2 – 6x4 ft | 0.6x0.6 – 1.8x1.2 m

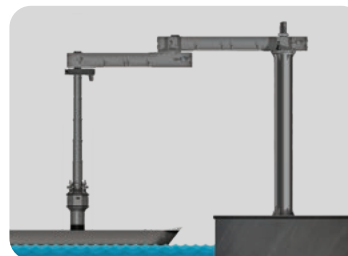
Rotating Positioner

The Vortex Rotating Positioner rotates 355° and travels horizontally, allowing the loading zone to be a diameter. This allows the loading spout to be positioned over a vehicle hatch and eliminates the need for a driver to reposition the vehicle. Compared to a Dual-Axis Positioner with a similar loading zone, the Rotating Positioner may weigh less, which can be critical when replacing current installations.

Vortex Spout Positioners are internally vented, allowing for dust control during the loading process. While the hopper and spout remain attached to the Rotating Positioner, hopper seal replacement can be easily performed.



Articulating Arm Consult a Vortex engineer



Aerial Camera System

For added visibility throughout the loading process, the Vortex Loading Spout can be equipped with an Aerial Camera System. At the main pan housing, a video camera is installed externally to provide an aerial view of the spout's position, relative to the loading vessel below. The live video feeds back to a monitor for real-time observation as the operator moves the spout into position.