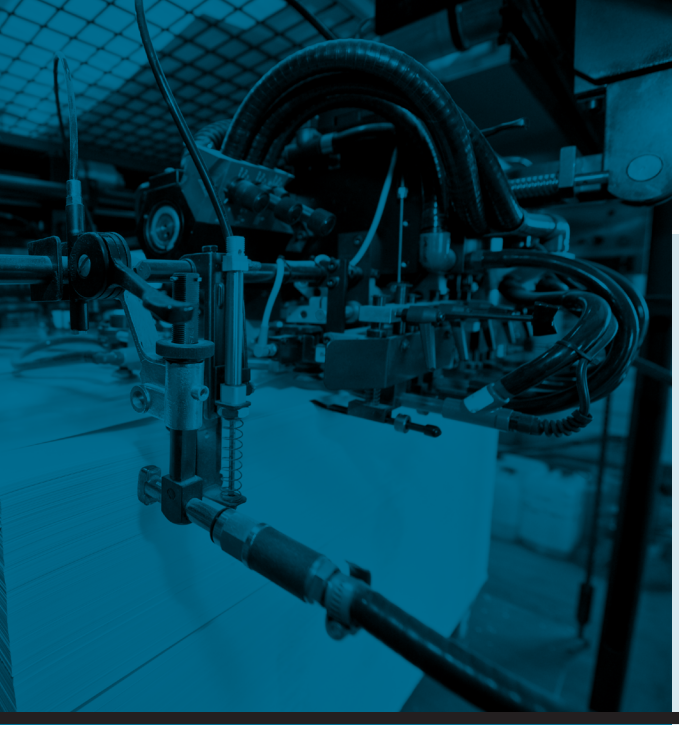

KINNEY®

CASE STUDY

ROTARY VANE VACUUM PUMPS FOR VACUUM HOLDING APPLICATIONS

PROJECT OVERVIEW

Increasing performance for vacuum conveying of paper and paperboard products by replacing old overseas vacuum equipment where no additional local technical and service support was available from the prior supplier.

KVO KEY FEATURES

- Low Noise
- Air Cooled
- Standard Gas Ballast Valve
- Highly Efficient
- Premium Oil Separator System
- NEMA Premium Motor
- Ultimate Vacuum Down to .375 Torr
- Continuous Duty Operation
- Small Footprint
- Easy Maintenance
- Long Life Vanes
- Lifting Eyebolt
- XD Versions Available

BRAND RECOGNITION WITH IN-DEPTH LOCAL DISTRIBUTOR SUPPORT

This success story is about a customer in Ecatepec, Estado de Mexico looking for increased performance for their manufacturing process. This customer uses mid-sized Kinney KVO oil-sealed rotary vane pumps in vacuum holding applications to assist in the production process for print paper and paperboard products. Initially, the customer wanted to replace some old overseas vacuum pumps due to a lack of service capabilities and support from the overseas vacuum equipment supplier.

Our KVO rotary vanes help during the vacuum holding process of paper and paperboard after the production. The customer ended up choosing Kinney due to brand recognition and performance at a great lead time and price. This paired with local support from our distributor partner made Kinney the ideal solution and fit for their production needs.

Kinney KVO pumps have a great ultimate vacuum level. For vacuum holding applications a strong ultimate vacuum means a strong hold-down force. This allows for less movement and tighter clearances for the process.

KVO 100 Cutaway
Rotary Vane Vacuum Pump

KVO 100 Premium
Oil Separator System

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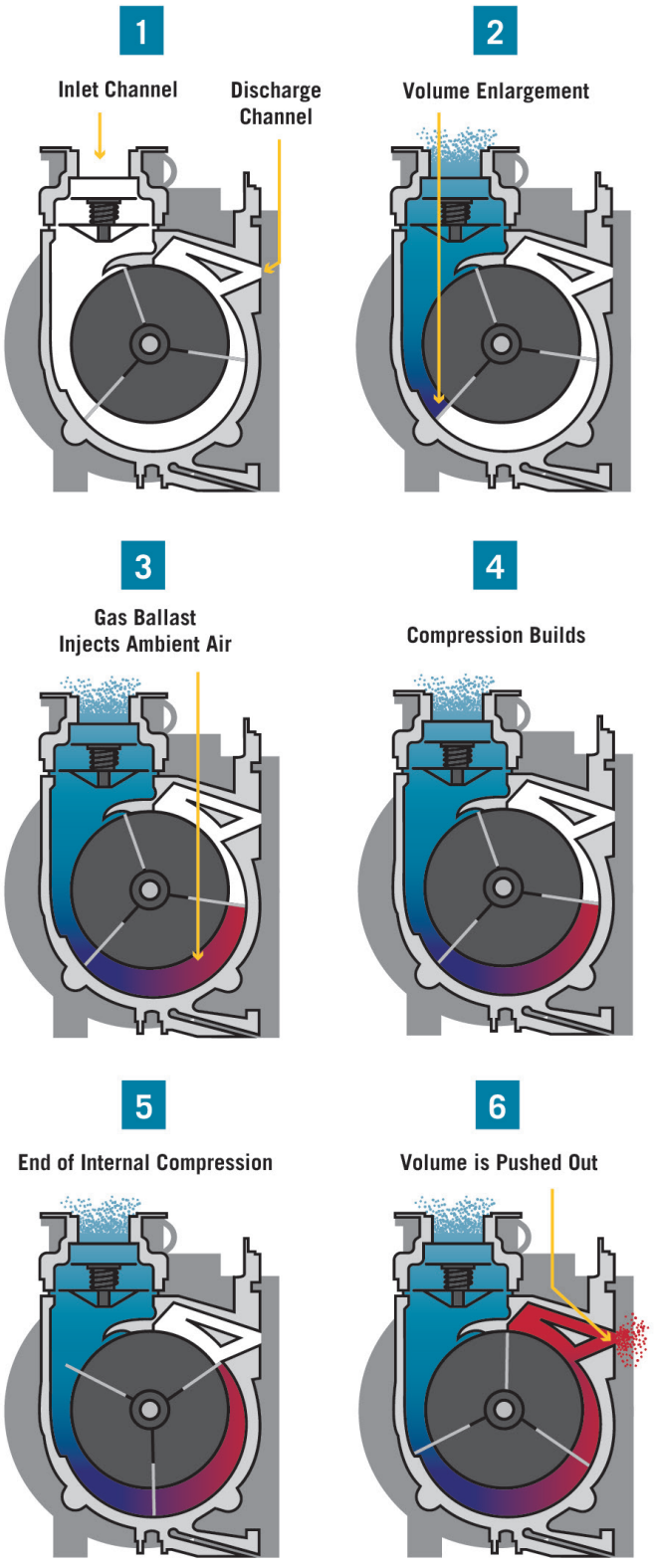

Rotary vane vacuum pump compression chamber process.

RUGGED EFFICIENCY & TROUBLE-FREE MAINTENANCE

The KVO Series is an oil sealed, multi-vane, single-stage, air cooled, and direct-driven vacuum pump. This design is rugged and durable with a heavy-duty construction for continuous duty applications. Oil sealed rotary vane vacuum pumps are simple, quiet, and efficient, offering a very attractive $/CFM ratio when compared to other technologies.

Within the compression chamber, the KVO operates by expanding volume at the inlet and compressing the volume at exhaust. The rotor is placed eccentrically inside of the cylindrical housing with three vanes grooved into the rotor. As the rotor spins centrifugal force causes vanes, sitting within the rotor, to be slung out until the contact the cylinder wall.

As the vanes rotates three chambers are used to capture the gas coming from the inlet. During rotation the volume is reduced, allowing for compression until it is transported out the exhaust. Oil is used between these vanes and the cylinder wall to provide lubrication and aides in sealing. The oil also acts as a heat transfer away from the site of compression.

After exhaust, gas is transferred to the built-in oil separator. This separator removes virtually all of the oil from the air stream. The KVO was designed with the customer in mind, making the product easier to service and maintain. The oil separator elements are easy and quick to access from outside of the pump without the need to disconnect any piping.

K-ACS-KVO-VAC-HOLD 2nd Ed. 3/24