



SOLUTION:

PULVERIZED COAL VALVES

Pulverized Coal & Pet Coke

Even with the increasing use of alternative fuels in the cement industry, coal and pet coke continue to be primary fuel sources. Most often, these pulverized fuels are fed to the main burner by a Pfister DRW system that incorporates a weigh scale and a pneumatic conveying line. Control of the feed rate needs to be instantaneous in response to a signal from the burner and the systems are normally operated at a +/- 0.5% accuracy.

A critical component in the feeding system is a rotary valve that is installed in-line and directly above the pre-hopper or load-hopper in the Pfister system. This rotary valve's role is to keep the Pfister system "fully charged" with fuel and to prevent overfeeding of the Pfister system. If the rotary valve isn't functioning properly, it is nearly impossible for the Pfister system to maintain balance. Poor rotary valve performance can complicate the operation of the already temperamental Pfister system.

Rotary valves in this application are always VFD-controlled with a signal to speed up or slow down the rotary valve coming from the logic in the Pfister system. As such, the valves must be always available and the drives must have inverter-duty motors. Since pulverized coal and pet coke both flow so freely, the internal clearances in the rotary valve should be as small as possible to minimize leakage.

Reliable, outage-to-outage operation

Since most cement plants don't have redundant systems for feeding coal or pet coke to the kiln or calciner, the coal or pet coke feeding systems **have to** work. A failure can upset the fuel supply, creating serious issues. Coal and pet coke are quite abrasive and wear out "commodity" rotary valves quickly. Unscheduled outages due to rotary valve failure in the fuel feeding system can be highly disruptive to plant operations

The Precision PMV valves are constructed to run for thousands of hours. PMV valves have been operated for 2-3 years in this application without downtime. Day-to-day reliability and outage-to-outage dependability are built into the PMV.

Consistent, responsive feed rates to the kiln and/or precalciner

Fuel feeding systems have to be able to maintain an equilibrium and respond quickly to changes in feed rate signals from the kiln or the calciner. Rotary valves that are prone to plugging or that lack tight clearance for consistent pocket filling can dull the responsiveness of the system. The Pfister fuel feeding systems are only as good as the rotary valves above them.

Low maintenance and easily rebuilt

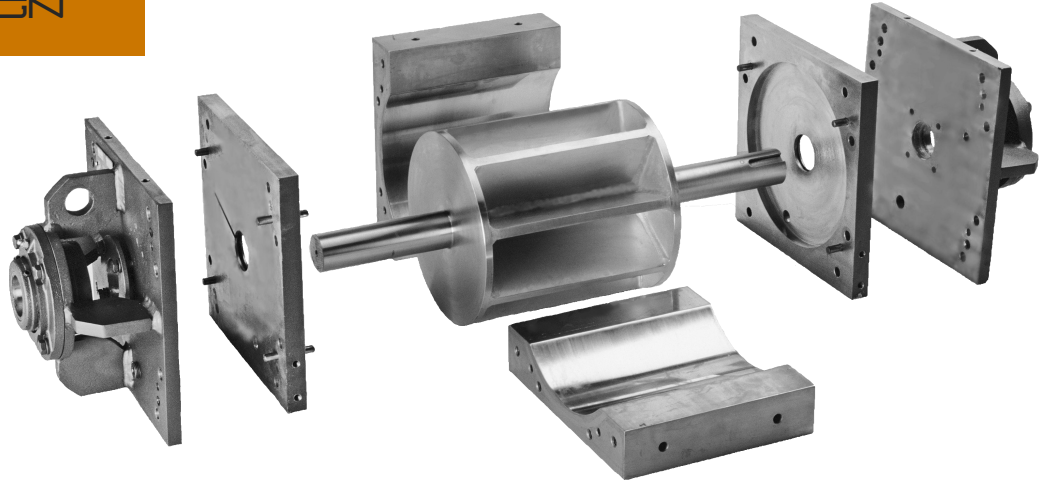
The Precision PMV rotary valve is a unique modular design that is precision-machined to tolerances as small as a ten-thousandth of an inch for accurate alignment of components. The modular design means that the replacement of only the worn-out components can be done – rather than throwing away the whole valve. Modularity makes a valve rebuild at Precision's factory quick and easy.

PULVERIZED COAL & PET COKE FEEDERS

PMV MODULAR ROTARY VALVE

MODULAR DESIGN

The PMV is a bolt-together rotary valve assembled of four components: a pair of wear plates, a pair of endbells and a rotor. Tight-tolerance alignment pins and high-strength bolts hold the components in an exact geometry.



Available options & accessories:

- Zero speed sensors
- MSHA/OSHA guarding packages
- Air purge kits
- Beveled rotor vanes
- Nord shaft-mounted gear-motor drives

Severe Duty	For abrasive applications including coal; rotor and barrel sides manufactured of Tri-Braze with industrial hard chrome plating on the barrel sides and wear plates.
Ultra Duty	For the most abrasive applications including coal and pet coke; rotor and barrel sides manufactured of Tri-Braze; ion-initriding of the barrel sides, wear plates, and rotor for maximum abrasion-resistance.