

Extreme Material-Handling Challenges - Require **EXTREME** Components!

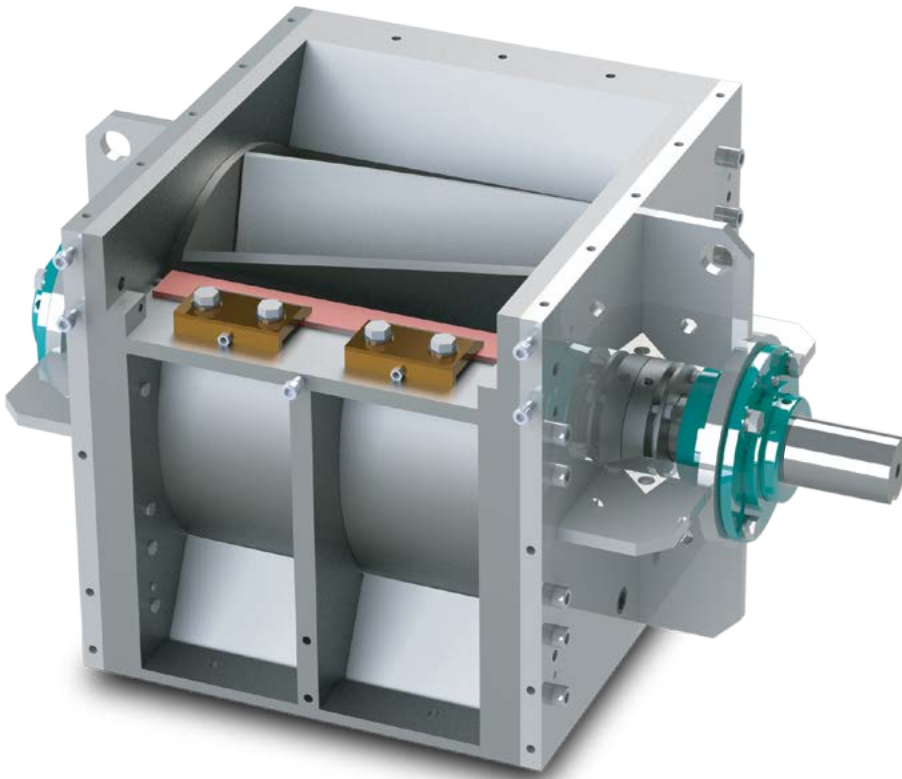


# PRECISION

MACHINE & MANUFACTURING

**Next Level Durability  
& Functionality**

## ROTARY VALVE AIRLOCK with KNIFE



Based on the proven, durable, and functional PMV Rotary Valve chassis, but modified to accept a hardened tool steel knife for the purpose of shearing materials.

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**Rotary Feeders • Rotary Valves • Screw Conveyors**



## Capable of being NFPA Compliant and combined with a proven heavy duty, Rotary Valve Airlock design, which is now equipped with a Hardened Tool Steel Knife. An industry break-through!

With a greater demand being put on material handling systems and ensuring the installed components can restrict fire and eliminate explosion hazards when necessary, Precision Machine & Manufacturing developed a heavy-duty Rotary Valve Airlock and equipped it with a hardened tool steel knife and became the only heavy-duty, modular, and rebuildable rotary valve airlock in the industry that is capable of "shearing" oversized material before it enters the conveying system. Equipped with industry leading rotor to housing clearances and able to become NFPA compliance whenever necessary, the PMK Rotary Valve Airlock will be the last rotary airlock that you ever install!

**BRAND NEW:**  
Rebuildable, Hardened Steel Tool Knife for Material Shearing.

### ROTARY VALVE AIRLOCK WITH KNIFE

## What Makes the Rotary Valve Work

#### Rotor

Manufactured from ½" thick abrasion-resistant steel and equipped with ultra-tight rotor vane to housing clearances, the heavy-duty helical rotor creates a shearing action to reduce oversized material before it enters the pneumatic conveyor system.

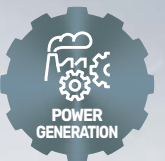
#### HD Bearings

Equipped with high load, heavy duty, outboard tapered roller bearings to ensure proper shaft alignment and reduce maintenance issues.

#### Rebuildable!

The only rotary valve capable of being completely rebuilt onsite during a scheduled outage. Replacement parts are stocked and ready for immediate delivery!

#### Focused Industries



#### Ultra Durable End Plates

Rotor end plates have been upgraded to 1" thick, which provides greater durability.

#### Hardened Steel Knife

The perfect Rotary Valve just became more... PERFECT! We took the proven Modular Rotary Valve design and equipped it with a USA sourced hardened tool steel knife! Combined with the helical rotor, oversized materials are sheared allowing only uniform material sizes to be discharged into the delivery system.

#### Access Door

Equipped with a safety locking system, the access door allows for quick change and/or adjustment of the steel knife to ensure optimal clearance.

#### Durability!

Manufactured from U.S sourced 500+ Brinell, abrasion resistant steel alloys, and combined with specialized surface treatments to further increase durability by pushing the hardness scale to 55-59 RC, makes the **Rotary Valve Airlock with a Knife (PMK)** the most durable, functional and corrosion resistant Rotary Valve and/or Rotary Feeder on the market today.

#### Application Specific

Perfectly sized to handle the material type and throughput needs of the application, and able to operate in a wide variety of operational environments, with Fahrenheit temperatures ranging from -60° to +1,200°.

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## Heavy-Duty Durability

**Industry Leading Rotor Clearances:** No Rotary Valve, Rotary Feeder, and/or Airlock is 100% airtight. However, we have perfected the manufacturing process to allow for the tightest possible clearance and still allow the rotor to rotate. Standard Rotor to Barrel (housing) clearances are .005" per side, which is significantly tighter than the industry standard. As a result, the **Rotary Valve Airlock with Knife (PMK)** sets the industry standard for rotor to barrel clearances, which minimizes air "blow by" and helps to prevent/ contain potential hazards. Furthermore, all PMK's have the ability to be NFPA-Compliant when necessary.

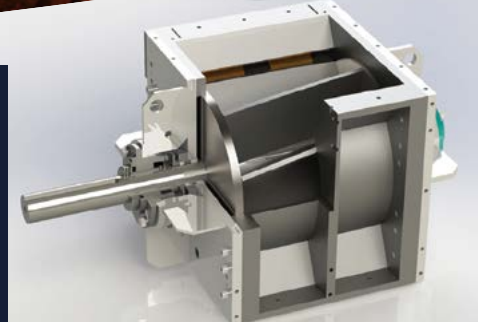
**Perfection Has Arrived!**  
Heavy-Duty, Rebuildable, Abrasion-Resistant, AND Super Tight Clearances. No other Rotary Valve, Rotary Feeder, and/or Airlock can match this level of functionality.

## ROTARY VALVE AIRLOCK WITH KNIFE Key Advantages

- ✓ **Application Specific-All PMK Rotary Valves have the ability to become NFPA 69 & 85 Compliant, which will include:**
  - A heavy-duty, abrasion resistant rotor with at least two diametrically opposed rotor vanes in contact with the barrel (housing) at all times.
  - Upgraded Rotor endplates to 1" thick abrasion-resistant steel.
  - Super tight .005 per side Rotor to Barrel (housing) clearance minimizes air passing through, which contains fire/explosion hazards.
  - HD outboard tapered roller bearings.
  - PMM Rotary Valves have been tested to a maximum of 50 psi with no structure deflection or deformation.
- ✓ **Rebuildable**
  - Service replacements are readily available, allowing onsite rebuilds to occur during a scheduled outage.
  - Rebuilding increases the ROI of the initial purchase.
  - Modular design allows for quick disassembly/reassembly.
- ✓ **Durable**
  - A more durable Rotary Valve, Rotary Feeder, and/or Airlock DOES NOT EXIST in the industry! The specialized PMK is manufactured from a special U.S sourced, abrasion resistant steel with a through hardness rating well over 525 Brinell, which we also surface treat to strengthen the material to nearly 600 Brinell.
  - PMM Rotary Valves oftentimes operate for many years, with very little upkeep and maintenance.
- ✓ **Hardened Tool Steel Knife:**
  - With a hardness of 60/62 HRC, a strong resistance to wear, and holds a razor sharp edge far longer than competitive rotary feeders, the proven PMM Rotary Valve is now equipped to operate in Wood, Biomass and Alternative Fuel Power Generation industries!

**Precision Machine & Manufacturing's components** are precisely crafted from raw materials that are made right here in the United States of America!

**Quality you can count on!**



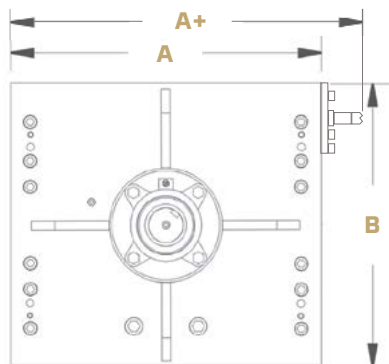
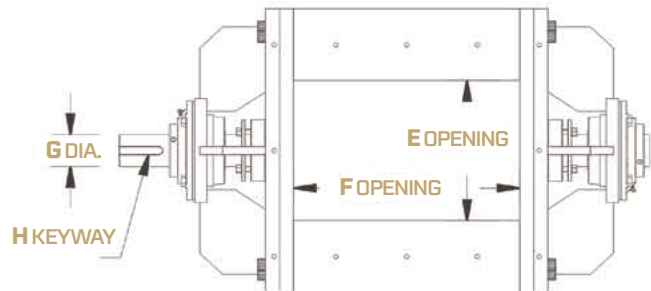
Choose the right size for your unique material handling application.

### SEVERE-DUTY

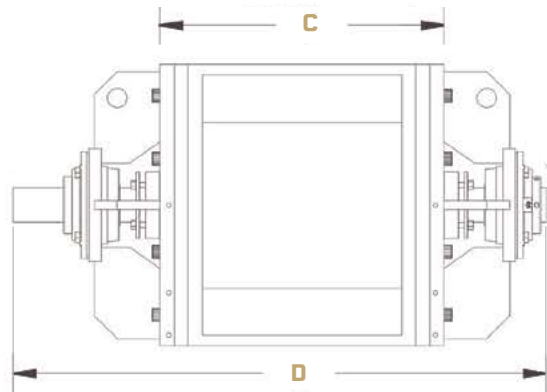
Severe-Duty Rotary Valves are our standard rotary valves and the perfect solution when moving minerals, aggregates and other powdery, abrasive, corrosive, and high-temperature material types.

### ULTRA-DUTY

Ultra-Duty Rotary Valves are for the most challenging material types! Ultra-Duty Rotary Valves are surface treated with ion-nitride to provide greater abrasion resistance and wear protection from the harshest materials.



A+ dimension = A + 3"



SIZE	CAPACITY		DIMENSIONS [inches]					
	CFR	A	B	C	D	E	F	G
PMK-8	0.17	11.00	10.00	11.40	25.75	6.50	8.00	1.94
PMK-10	0.34	12.00	12.00	13.40	27.75	7.00	10.00	1.94
PMK-12	0.62	15.00	15.00	15.40	29.75	9.00	12.00	1.94
PMK-14	1.00	18.00	17.00	18.00	35.50	9.62	14.00	2.44
PMK-16	1.60	21.75	20.00	20.00	37.50	10.75	16.00	2.44
PMK-18	2.25	24.00	22.00	22.00	40.75	18.00	18.00	2.94
PMK-20	3.10	26.00	24.00	24.00	42.75	20.38	20.00	2.94
PMK-22	4.00	28.00	26.00	26.25	47.25	22.00	22.00	2.94
PMK-24	5.14	32.00	29.00	28.25	51.13	23.57	24.00	3.44
PMK-26	6.95	36.00	32.00	30.50	55.00	26.00	26.00	3.44
PMK-28	8.78	38.00	34.00	32.50	57.00	28.00	28.00	3.94



**CONTACT  
PRECISION  
TODAY**

For more information.

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