

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

NEW FOR
2023!



PRECISION
MACHINE & MANUFACTURING

NFPA Compliant- Next Level
Durability & Functionality!

ROTARY VALVE AIRLOCK with KNIFE

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

 premach.com

"An NFPA Compliant Rotary Valve Airlock with a Knife for Shearing Material? It Doesn't Get Any Better!"



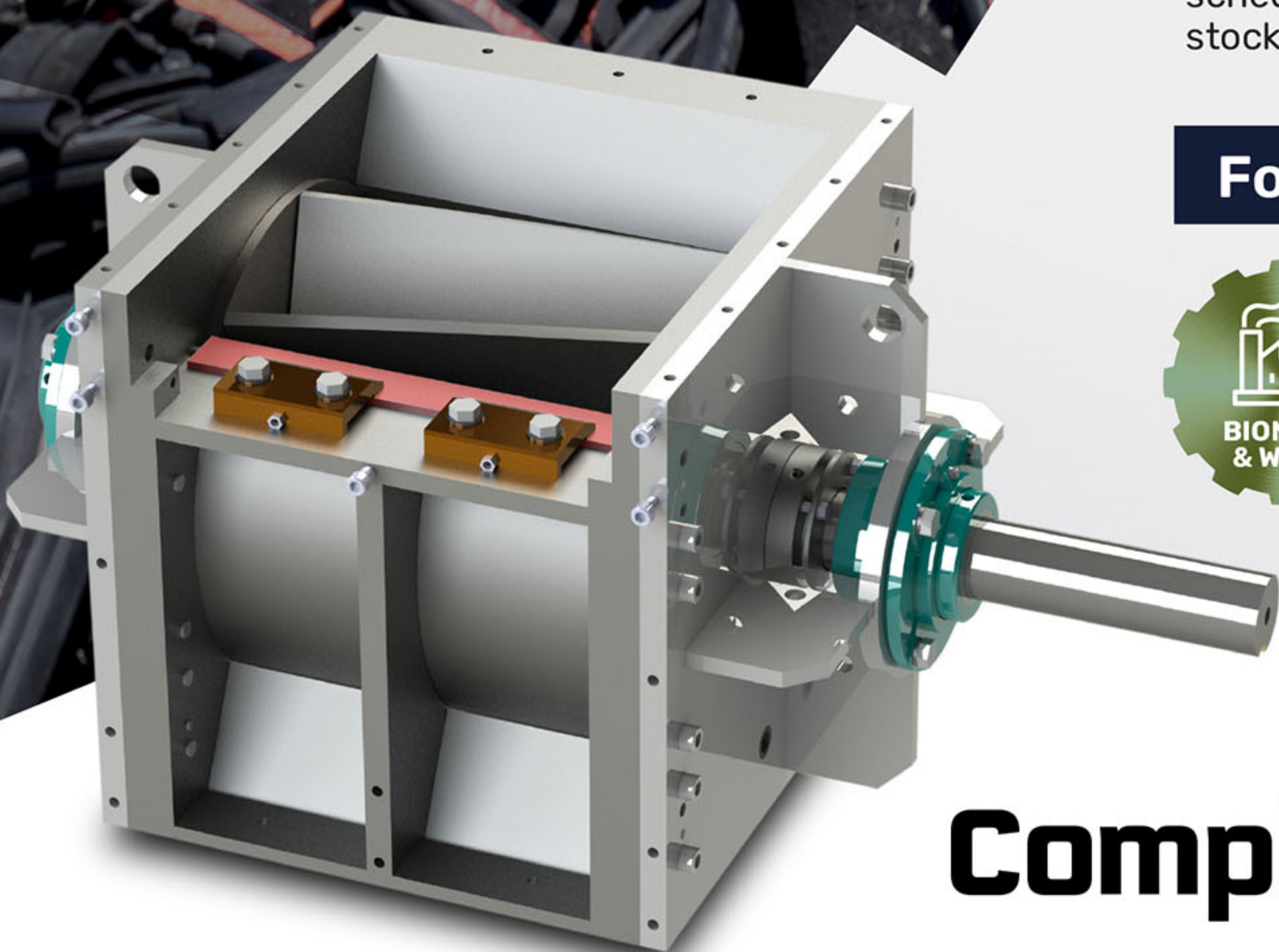
Rotary Feeders • Rotary Valves • Screw Conveyors



Proven NFPA Compliant Design 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 components are able to restrict fire and eliminate explosion hazards, Precision Machine & Manufacturing has come to the rescue! Brand new for 2023 is the new NFPA Compliant PMK, which is based upon our proven and ultra durable PMV Rotary Valve, which has been modified to accept a hardened tool steel knife! Manufactured from specially formulated, abrasion resistant alloys, and machined to precise clearances, the PMK Rotary Valve Airlock with a Knife will be the LAST Rotary Valve that you ever install, which is due to its onsite rebuilding capabilities!

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



ROTARY VALVE AIRLOCK WITH KNIFE

What Makes the Rotary Valve Work

Rotor

NFPA compliant, .005" per side clearances, 1/2" thick abrasion resistant steel combined with an 8-vane helical rotor, creates a shearing/scissors action to ensure consistent materials sizes are introduced to the delivery 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



NFPA Compliance

Rotor end plates have been upgraded to 1" thick, which provides greater durability and NFPA compliance!

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

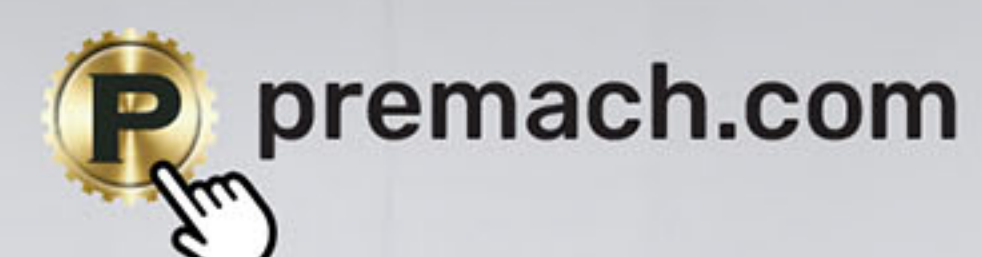
Equipped with a safety locking system, the access door allows for quick change and/or adjustment of the steel knife to ensure optimal clearance.

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°.

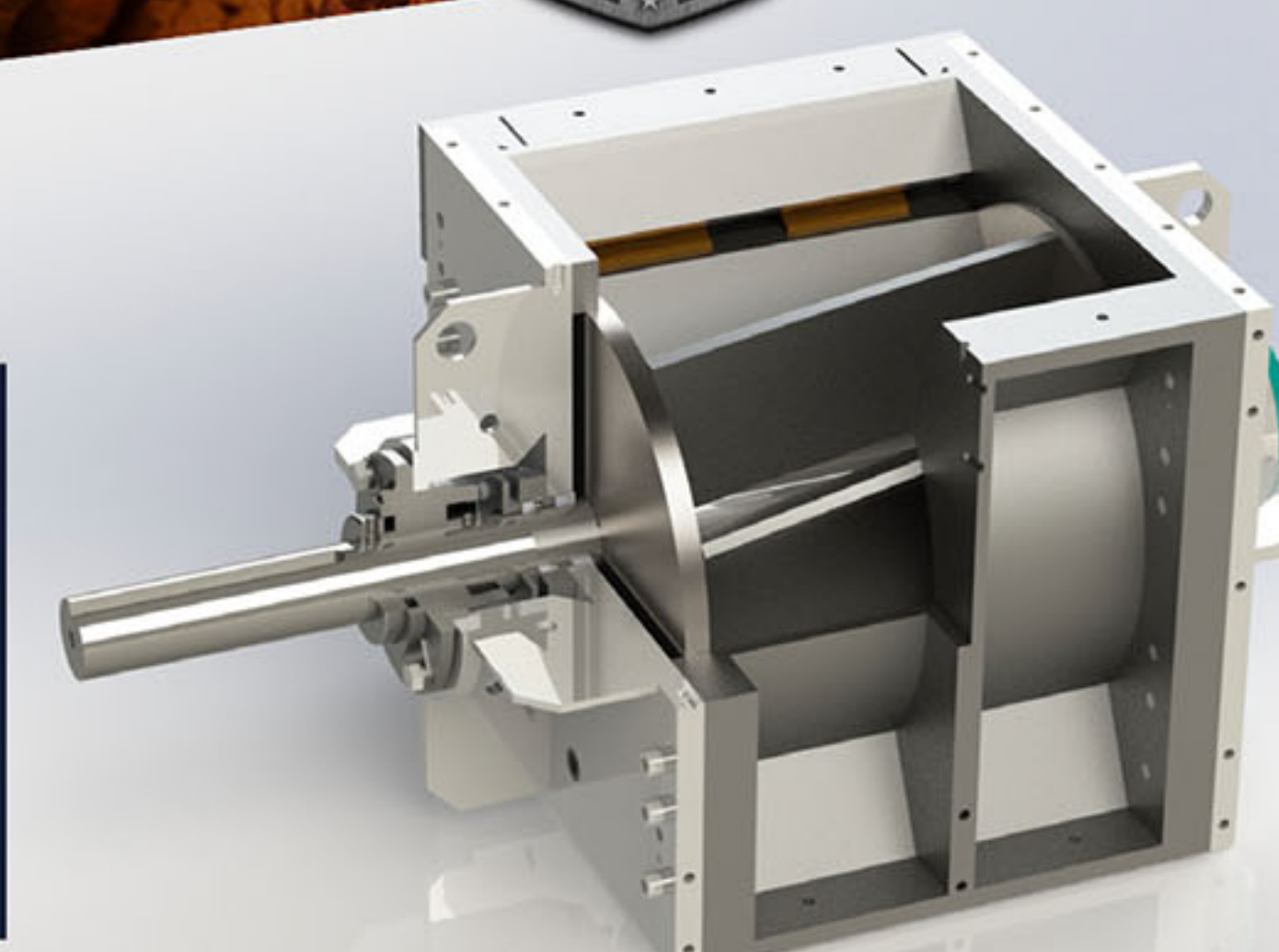


ROTARY VALVE AIRLOCK WITH KNIFE

Key Advantages

- ✓ **NFPA 69 & 85 Compliance!**
 - 8-vane Rotor with 1/2" thick abrasion-resistant steel provides robust strength.
 - 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.
 - At least two rotor vanes are in contact with each side of the barrel (housing) at all times.
 - 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!



NFPA Compliance!

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 NFPA regulation of .0079". 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 such as fire and explosions as specified in the NFPA 69 & 85 regulations.

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

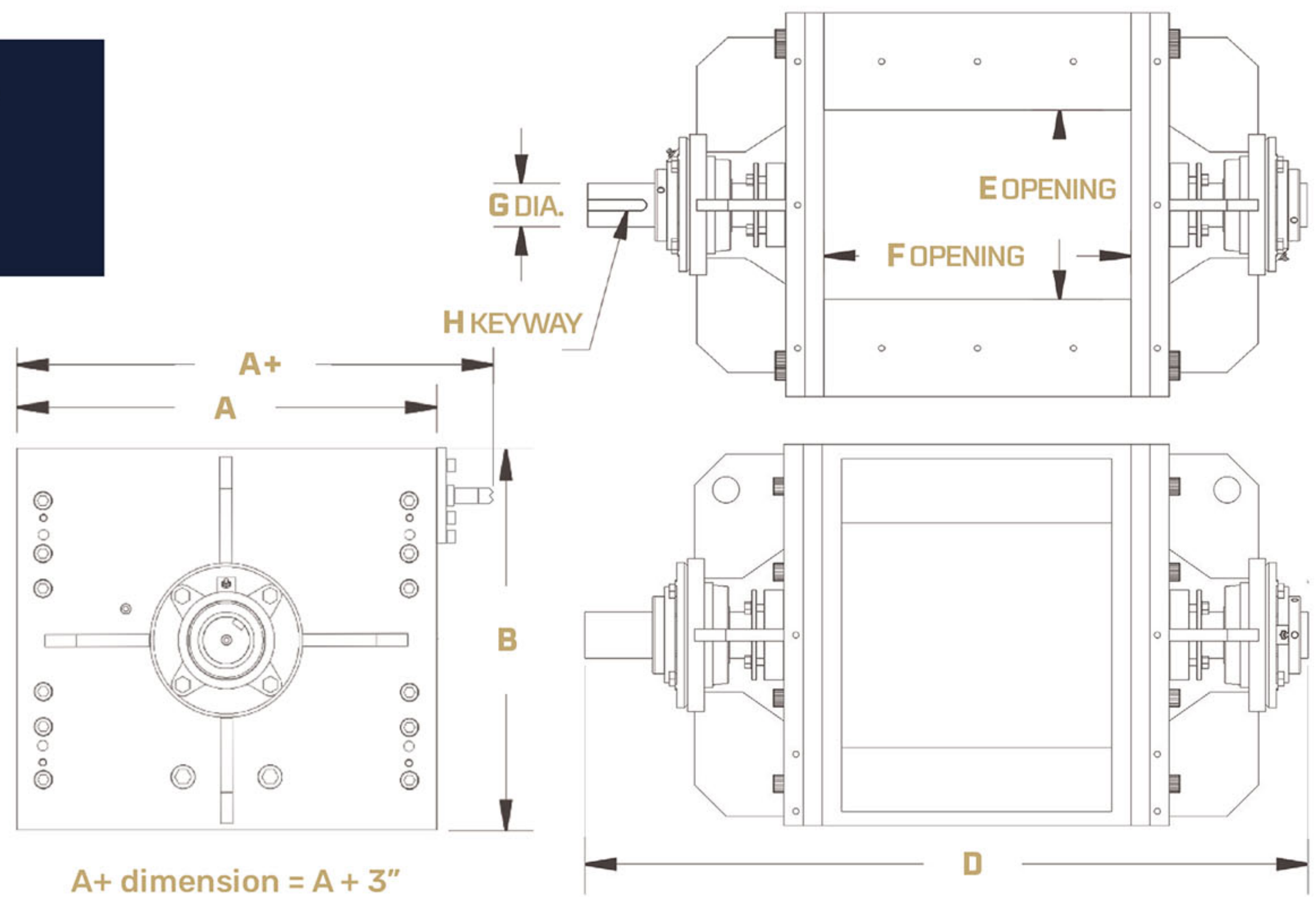
Choose the right size for
your unique material
handling application.

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"

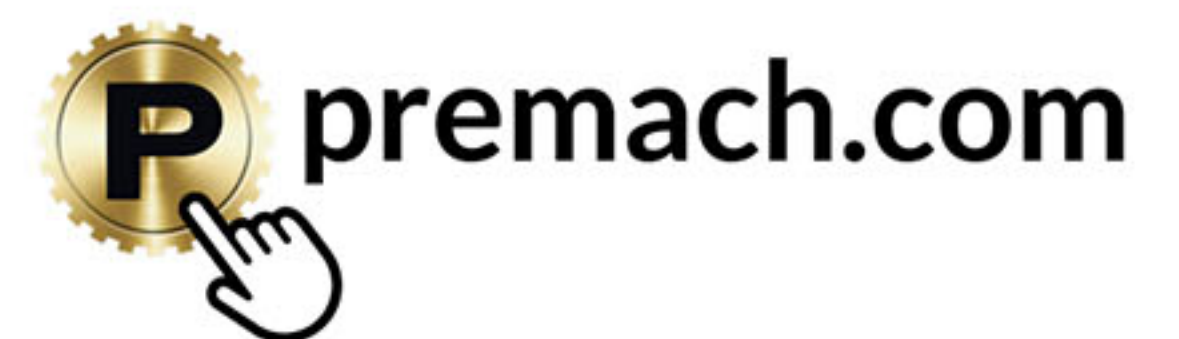
SIZE	CAPACITY		DIMENSIONS [inches]					
	CFR	A	B	C	D	E	F	G
PMK-8	0.17	11.00	10.00	11.40	25.75	6.50	8.00	1.94
PMK-10	0.34	12.00	12.00	13.40	27.75	7.00	10.00	1.94
PMK-12	0.62	15.00	15.00	15.40	29.75	9.00	12.00	1.94
PMK-14	1.00	18.00	17.00	18.00	35.50	9.62	14.00	2.44
PMK-16	1.60	21.75	20.00	20.00	37.50	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.

541-484-9841
sales@premach.com



PRECISION
MACHINE & MANUFACTURING

1290 S. Bertelsen Road, Eugene, OR 97402