



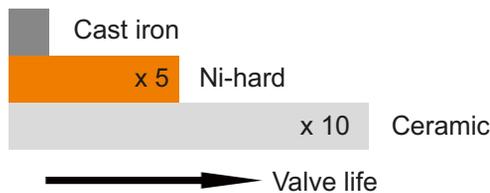
# Rotary Valves TWA extreme duty

*Engineered to last*

## THE ULTIMATE IN VALVE LIFE

The TWA has a proven, enviable track record for use with highly abrasive products that wear normal rotary valves out very quickly and require a high level of maintenance.

Wear parts are made from Ni-hard or alumina ceramic; incredibly long lasting materials that are hard all the way through, not just at the surface.



## ULTRA LOW REFURBISHMENT COSTS

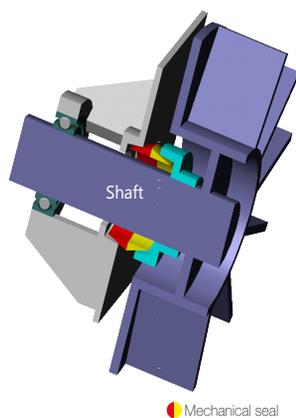
The TWA was designed with economical refurbishment in mind. The only wear parts are the rotor and liner, and subject to their being no damage, we can tell you the refurbishment costs in advance.

Once refurbished, the valve performs as it did when it was brand new.

## MECHANICAL SHAFT SEALS

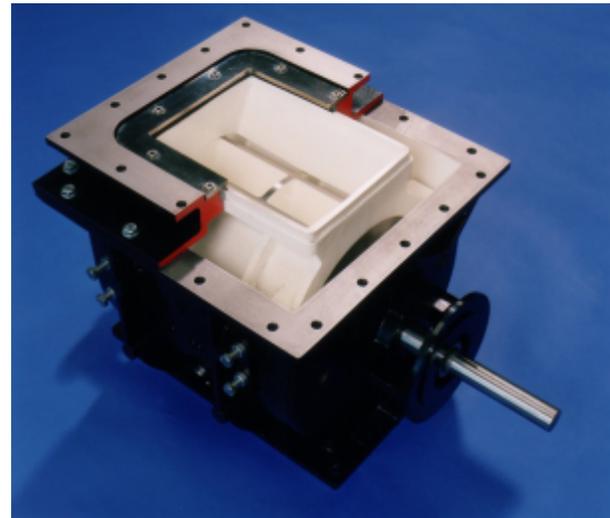
With traditional seals the product pushes past packings and wears the shaft, even the body behind hard facings can wear out. Used for over 25 years, MID's unique mechanical shaft seals are leak tight and maintenance free, dramatically reducing maintenance costs and improving site housekeeping.

## GUARANTEED - NO LEAKAGE



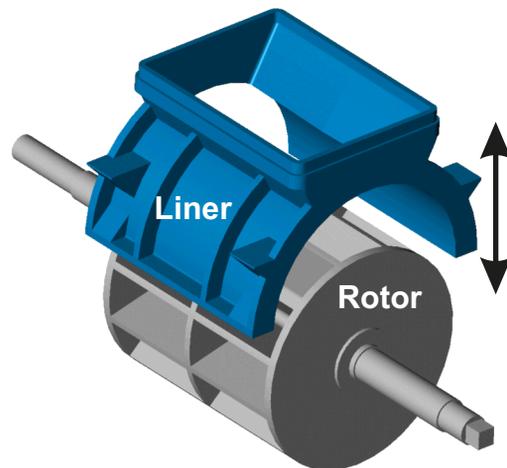
- No maintenance
- Have no loss of product
- Immediately improve housekeeping and health and safety standards
- Eliminate compressed air purge costs
- Extend bearing life

Mechanical seal



## ADJUSTABLE (Patented)

With the valve in-situ, the gap between the rotor and liner can be adjusted to take account of product variation and even wear. (Ni-hard valve only)



## ATEX CERTIFICATION

The TWA range have been certified by Baseefa for use with St2 dusts where an internal zone 20 explosive atmosphere is permanently present.

|           | Internal | External |
|-----------|----------|----------|
| Zone 0/20 | ✓        | ✗        |
| Zone 1/21 | ✓        | ✓        |
| Zone 2/22 | ✓        | ✓        |
| APD       | ✗        | ✗        |



Butterfly



Rotary



Slide



Knifegate



Diverter



Dyris



Ceramic



Specials



Sifter



Seals

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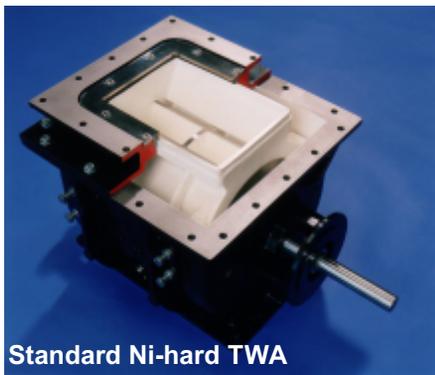


# Rotary Valves Ceramic lined

*Engineered to last*

Abrasion of rotary valves when handling abrasive products has always been a maintenance headache, especially when combined with the age-old problem of leaking shaft seals.

MID has partially solved this problem with the TWA extreme duty rotary valve. A combination of Ni-hard components and mechanical shaft seals increase valve life by a factor of around 5 over standard valves with virtually no maintenance.



**Standard Ni-hard TWA**

However, this still is not enough for customers handling intensely abrasive products where a standard valve lasts a matter of days and a TWA, even with its abrasion resistant components, lasts only a few weeks.



**Worn TWA Ni-hard liner**

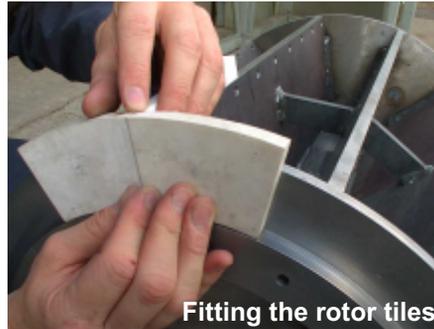
The development of MID's ceramic tiling option for the TWA rotary valve makes the valve last up to 10 times longer than a standard cast iron valve.

We have developed a method of cutting alumina ceramic tiles so they are self-supporting- similar to a Roman arch. To prevent movement, the tiles are bonded to the parent material using a ceramic

**Midland Industrial Designers Limited**

epoxy resin, much harder than a standard epoxy and ideally suited to the job.

The rotor and liner are then ground using diamond wheels to a close tolerance,



**Fitting the rotor tiles**

taking off the high spots naturally found when manually assembling the tiles.

The TWA is then assembled, using the adjustable design to ensure the clearance between the rotor and the liner is tightly controlled.

A high performance polyurethane seal is then used on the top casting to allow the liner to float slightly for adjustment on site as the valve wears.



**A fully assembled rotor**

The result is a valve which can be used on materials traditionally considered too abrasive for rotary valve technology. The valve is also ideally suited where maintenance and downtime is critical and must be kept to a minimum.

The other good news is when the valve is worn beyond its adjustment capability, the tiles can be removed, a new set installed and ground and the valve returned as good as new, all for less than the price of a standard rotary valve of an equivalent size. The advantage is

obvious- the lifetime cost of a ceramic TWA rotary valve is dramatically less than a standard valve, especially when the costs of lost production, maintenance and downtime are also



**A ceramic tiled liner**

added into the equation.

When combined with MID's mechanical shaft seal technology (and we would not sell an abrasion resistant valve without these fitted) the TWA extreme duty ceramic lined rotary valve is the ultimate in rotary valve technology for abrasion resistance.

MID have a policy of continuous development. We strive to design and manufacture equipment to exacting standards and are well known within the industry for taking on challenges other companies shy away from. The



**An assembled ceramic TWA (top casting removed)**

ceramic TWA rotary valve is the latest in a long line of products engineered for longevity and minimum maintenance.

