



## DRY SEALS

# Powder and sludge handling seals product range

Tamar sealing systems specializes in the development and production of reliable and cost effective rotary shaft sealing systems.

With over 20 years of experience in the sealing industry, we have managed to successfully install thousands of seals on various applications worldwide.

Our patented sealing technology is the best available technology for powder application.



# Dry Seal range

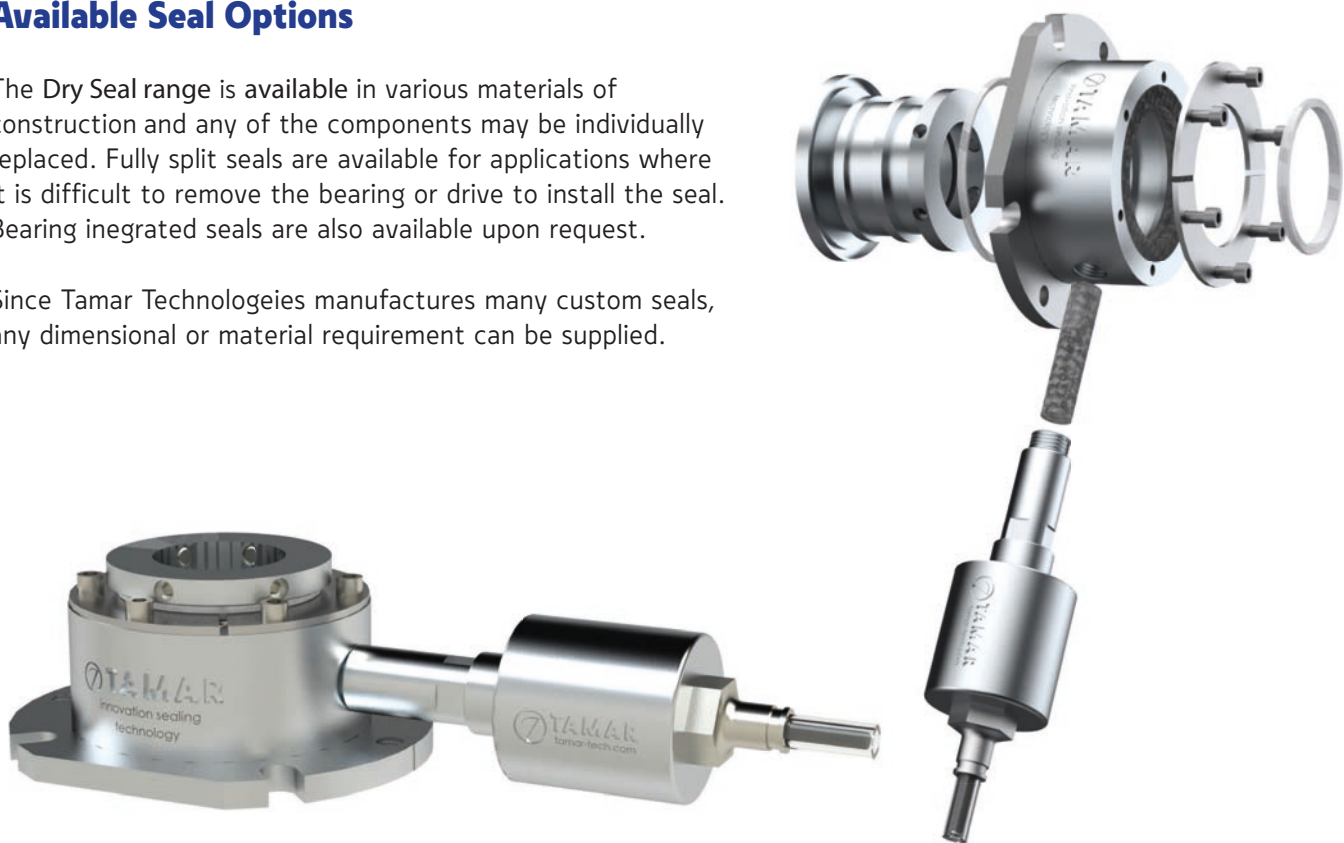
## How does it work?

The seals use flexible sealant as the sealing media. The sealant is maintained at a pressure slightly above stuffing box pressure by a gas operated piston. Close-fitting bushings at either end of the seal retain the flexible sealant. The pressurized sealant does not rotate with the shaft. The sealant remains stationary, operating as a flexible stationary seat. The shaft sleeve design is machined in a way to allow square vertical edge landings perpendicular to the shaft as rotating heads. Standard seals do not require any air consumption.

## Available Seal Options

The Dry Seal range is available in various materials of construction and any of the components may be individually replaced. Fully split seals are available for applications where it is difficult to remove the bearing or drive to install the seal. Bearing integrated seals are also available upon request.

Since Tamar Technologies manufactures many custom seals, any dimensional or material requirement can be supplied.



## Standard Construction Materials

Housing	Elastomers	Sealant
1020 cast steel 316 stainless steel Hastelloy® C	Viton® (FDA Compliant) EPDM (FDA Compliant) FDA silicone (FDA Compliant)	Graphite based Synthetic (fibers) PTFE (FDA Compliant)

Customer nonstandard parameters that exceed the ranges can be accommodated.

Please consult our team of experts in order to meet your requirements.

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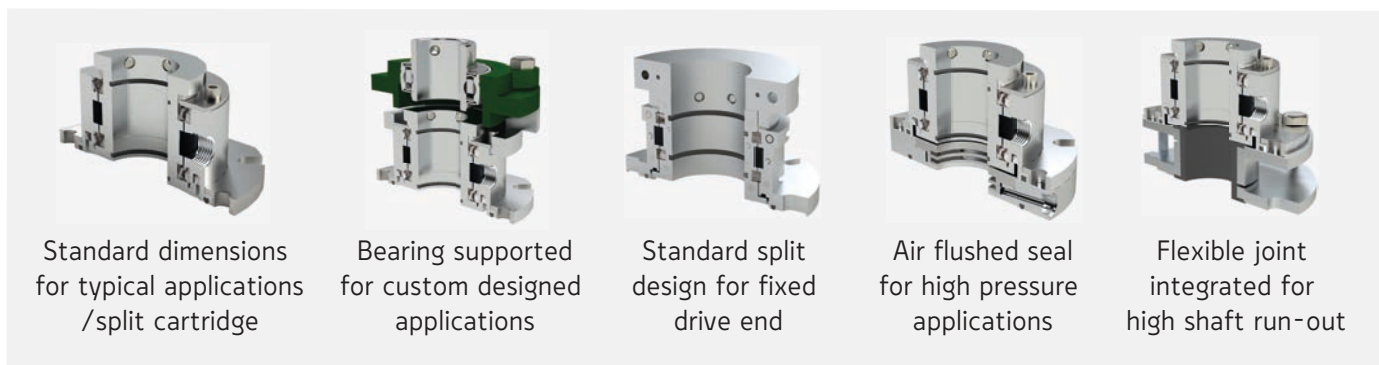
**ATEX zone 1 and 2 seals can be certified upon request for selective models.**

## 410-SF / For screw conveyors and feeders

**MTZ 410-SF** is specially designed for screw conveyors and feeders. The MTZ 41 OSF easily fits any screw feeder designs, This seal design can provide 3-4 weeks notification before maintenance.

- 1.Optional Split cartridge type for simple and easy installations.
- 2.Can be serviced while the equipment is running, no downtime.
- 3.Acts as a third bearing to support the shaft and reduces run outs.
- 4.Average life before servicing-2 years.

### Seal options



Standard dimensions for typical applications /split cartridge

Bearing supported for custom designed applications

Standard split design for fixed drive end

Air flushed seal for high pressure applications

Flexible joint integrated for high shaft run-out

### Max. sealing pressure

0.5 bar (7 psi)

### Max.shaft speed

3 m/s (10 ft/s)

PH 0-14

Max Temperatur 200°C (392°F)

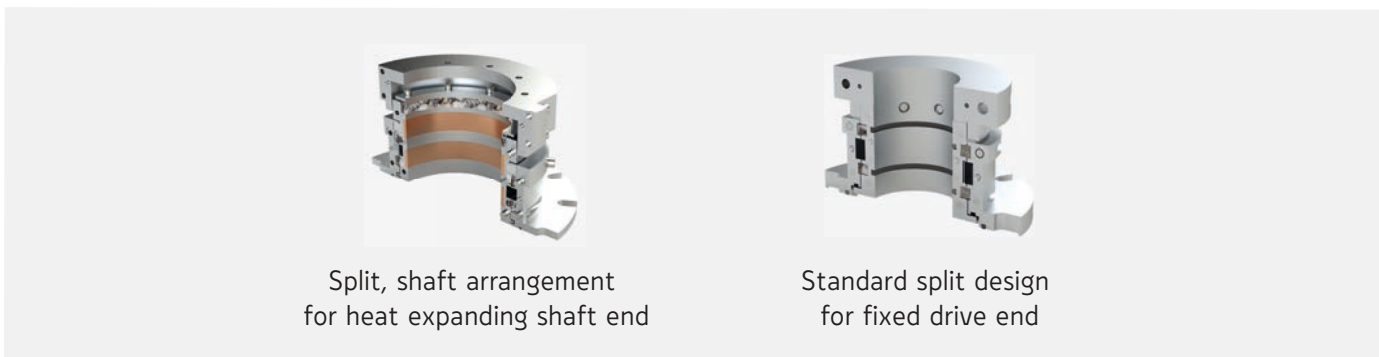
Max radial runout 1.5 mm (0.06")

## 420-VD / For vacuum dryers

**MTZ 420-VD** provides the best split sealing solution for vacuum dryers. The MTZ 420VD is ideal for large thermal motion, changing pressures and shaft runout.

- 1.Split cartridge type-simple and easy installation.
- 2.Can be serviced while the equipment is running, no downtime.
- 3.Simple to maintain and repair.
- 4.Average life before servicing-2 years.

### Seal options



Split, shaft arrangement for heat expanding shaft end

Standard split design for fixed drive end

### Max. sealing pressure

Vacuum 0,15

0.5 bar (7 psi)

### Max.shaft speed

3 m/s (10 ft/s)

PH 0-14

Max Temperatur 200°C (392°F)

Max radial runout 1.5 mm ( 0.06")

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## 430-RV / for rotary valves and air locks

**MTZ 430-RV** provides a solution for rotary valves and air locks. The MTZ 430RV easily fits tight compact designs and provides 3-4 weeks notification before maintenance.

- 1.Can be serviced while the equipment is running, no downtime.
- 2.Simple to install and maintain.
- 3.Average life before servicing-3 years.

### Seal options



#### Max. sealing pressure

1 bar (15 psi)

#### Max.shaft speed

3 m/s (10ft/s)

PH 0-14

Max Temperatur 200°C (392°F)

Max radial runout 1 mm (0.04")

## 510-RM / for horizontal mixers

**MTZ510-RM** provides a solution for wet or dry process horizontal ribbon mixers.

The MTZ 51 ORM can handle any process and provides 3-4 weeks notification before maintenance.

- 1.Optional split cartridge type-simple and easy installations.
- 2.Can be serviced while the equipment is running, no downtime.
- 3.Simple to install and maintain.
- 4.Average life before servicing-2 years.

### Seal options



#### Max. sealing pressure

1 bar (15 psi)

#### Max.shaft speed

3 m/s (10ft/s)

PH 0-14

Max Temperatur 200°C (392°F)

Max radial runout 1 mm (0.04")

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**ATEX zone 1 and 2 seals can be certified upon request for selective models.**

## 610-AG / For agitators and vertical mixers

**MTZ 610-AG** provides a solution for vertical agitators and mixers.

- 1.Can be serviced while the equipment is running, no downtime.
- 2.Acts as a third bearing to support the shaft.
- 3.Average life before servicing-3 years.

**Max. sealing pressure**

vacuum 0.15 to 1 bar (14 psi)

**Max.shaft speed**

3 m/s (10ft/s)

**PH** 0-14

**Max Temperatur** 200°C (392°F)

**Max radial runout** 1.5 mm (0.06")

### Seal options



Standard dimensions  
for typical applications



Air/Nitrogen Flushed  
seal for "sniffer" monitored  
applications



Bearing supported  
for custom designed  
applications



Jacketed seal for  
extreme temperature  
applications

## 620-BL / For fans and blowers

**MTZ620-BL** provides the best solution for sealing blowers.

The MTZ620BL is easy to maintain, and provides 3-4 weeks notice before maintenance.

- 1.Can be serviced while the equipment is running, no downtime.
- 2.Simple to install and maintain.
- 3.Free of fragile faces.
- 4.Average life before servicing - 3 years.

**Max. sealing pressure**

Up to 0.5 bar (7 psi)

**Max.shaft speed**

3 m/s (10 ft/s)

**PH** 0-14

**Max Temperatur** 200°C (392°F)

**Max radial runout** 1.5 mm (0.06")

### Seal options



Standard dimensions  
for typical applications/split  
cartridge



Air flushed seal  
for high pressure  
applications



Bearing supported  
for custom designed  
applications



Split seal arrangement  
for large shaft  
diameters

Customer nonstandard parameters that exceed the ranges can be accommodated.

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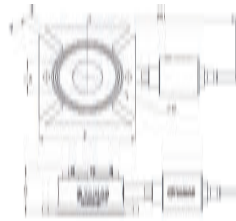
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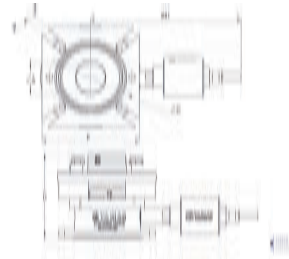
# Standard seal dimensions

The Tamar seal comes in 6 standard Imperial and metric sizes. These seals can be easily converted for other shaft sizes and fit within the complete size range. Dimensions other than the standard stocked seals are available upon request.

## Cartridge seal without integrated bearing



## Cartridge seal with integrated bearing



Standard CEMA* (Millimeters)					
Shaft	Flange	Min	Max	W	H
40/45	137	125	157	16	78
50/55	165	135	167	19	78
60/65	187	145	177	19	78
70/75/80	197	160	185	22	82
85/90	205	170	195	22	82
100/110	215	180	205	22	82

Standard CEMA* (Millimeters) with bearing					
Shaft	Flange	Min	Max	W	H
40/45	137	125	157	16	131
50/55	165	135	167	19	131
60/65	187	145	177	19	147
70/75/80	197	160	185	22	146
85/90	205	170	195	22	176
100/110	215	180	205	22	212

Standard CEMA* (Inches)					
Shaft	Flange	Min	Max	W	H
1.5	5.38	5.65	6.19	5/8	3.07
2.00	6.50	6.19	7.60	3/4	3.07
2.44	7.38	7.25	8.84	3/4	3.07
3	7.75	8.12	9.19	7/8	3.22
3.44	9.25	9.55	11.31	7/8	3.22
4.44	10.88	10.96	12.38	7/8	3.22

Standard CEMA* (Inches) with bearing					
Shaft	Flange	Min	Max	W	H
1.5	5.38	5.65	6.19	5/8	5.14
2.00	6.50	6.19	7.60	3/4	5.14
2.44	7.38	7.25	8.84	3/4	5.81
3	7.75	8.12	9.19	7/8	6.45
3.44	9.25	9.55	11.31	7/8	6.92
4.44	10.88	10.96	12.38	7/8	8.34

\*CEMA Conveyor Equipment Manufacturers Association



## Standard part number decoder

**410SRO** - **M100** - **A-V** - Elastomer V-Viton®; E-EPFM; S-FDA silicone

Construction material A-316; B-1020

Shaft diameter 1-inches; M-millimeters, and integers represents diameter

Model SRO-standard; SRB-bearing integrated seal

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# Dry Seal Gallery



Tamar has numerous success with leading plants worldwide, selected case studies can be found at [www.tamar-tech.com](http://www.tamar-tech.com)





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**Patent No: 8,215, 643 B2**