# Saint-Gobain Omniseal Product Brochure

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24.1 OmniSeal® Spring-Energized Seals

24.2 OmniSeal® Rotary Lip Seals

**Saint-Gobain** Performance Plastics produces various polymer products like ptfe bearing, ptfe slide bearings, turcite seals etc. namely Rulon®, Meldin®, HyComp, OmniSeal® and HKO. These high performance products are served to a number of industries like Steel, Chemical, Food and Beverages, Aerospace, Automotive etc. The advantage of these performance plastics is that they can be used to produce required products like bushings, liners, etc. with required dimensions.

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# 24.1 OmniSeal® Spring-Energized Seals

The OmniSeal Spring energized seals are composed of two parts, a polymer jacket and an energizer spring. These are used in cryogenic environment.

## 24.1.1 RACO® SPRING-ENERGIZED

**Selection Parameters**

| Parameters | Max |
|---|---|
| Temperature | 350 °C |
| Pressure | 100 MPa |
| Diameter | 3000 mm |
| Cross Section | 12.7 mm |

RACO® Spring-Energized Seals are composed of polymer jacket which is energized by anti-corrosive high load RACO® Spring. These seals are used where extreme sealing conditions are required. RACO® Seals can be used in conditions like cryogenic fluids and high vaccum.

### Industries it caters to

- Oil, Gas Exploration & Refinery
- Aerospace
- Medical Industry
- Electronic Part Manufacturer

### Product application

- Swivel for Marine LNG Loading Arms
- Subsea Valves
- Anti-icing Seal in Flight Actuator
- Rocket Engine Check Valve
- Autoclave Pump
- Micro-E Packaging Pump

## 24.1.2 103 SPRING-ENERGIZED SEALS

**Selection Parameters**

| Parameters | Min | Max |
|---|---|---|
| Temperature | -250 °C | 250 °C |
| Pressure | Ultra High Vaccum | 100 MPa |
| Face Diameter | 10 mm | 3000 mm |
| Radial Diameter | 6 mm | 3000 mm |
| Cross Section | 1.4 mm | 12.7 mm |

103 Spring-Energized Seals are composed of Polymer jacket with a Round ribbon spring. These seals are used in low speed or static applications and provide excellent leakage control.

### Industries it caters to

- Oil, Gas Exploration & Refinery
- Aerospace
- Medical Industry
- Electronic Part Manufacturer

### Product application

- Swivel for Marine LNG Loading Arms
- Subsea Valves
- Anti-icing Seal in Flight Actuator
- Rocket Engine Check Valve
- Autoclave Pump
- Micro-E Packaging Pump

# 24.1 OmniSeal® Spring-Energized Seals (continued)

## 24.1.3 400 SPRING-ENERGIZED SEALS

### Selection Parameters

| Parameters | Min | Max |
|---|---|---|
| Temperature | -50 °C | 350 °C |
| Pressure | Ultra High Vaccum | 100 MPa |
| Face Diameter | 15 mm | 3000 mm |
| Radial Diameter | 15 mm | 3000 mm |
| Cross Section | 1.4 mm | 12.7 mm |

400 Spring-Energized Seals are composed of Polymer jacket with a Cantilever spring. These seals are used for moderate pressures and temperatures and good friction and leakage control.

### Industries it caters to

- Oil, Gas Exploration & Refinery
- Aerospace
- Medical Industry
- Electronic Part Manufacturer

### Product application

- Swivel for Marine LNG Loading Arms
- Subsea Valves
- Anti-icing Seal in Flight Actuator
- Rocket Engine Check Valve
- Autoclave Pump
- Micro-E Packaging Pump

## 24.1.4 APS SPRING-ENERGIZED SEALS

### Selection Parameters

| Parameters | Min | Max |
|---|---|---|
| Temperature | -50 °C | 150 °C |
| Pressure | Ultra High Vaccum | 100 MPa |
| Face Diameter | 8 mm | 3000 mm |
| Radial Diameter | 5 mm | 3000 mm |
| Cross Section | 0.8 mm | 6.1 mm |

APS Spring-Energized Seals are composed of Polymer jacket with a Pitch spring. These seals have concise cross section and diameter. These are used for minimizing friction in dynamic applications.

### Industries it caters to

- Oil, Gas Exploration & Refinery
- Aerospace
- Medical Industry
- Electronic Part Manufacturer

### Product application

- Swivel for Marine LNG Loading Arms
- Subsea Valves
- Anti-icing Seal in Flight Actuator
- Rocket Engine Check Valve
- Autoclave Pump
- Micro-E Packaging Pump

# 24.2 OmniSeal® Rotary Lip Seals

OmniSeal® Rotary Lip Seals are made of metal casing and PTFE or PTFE blended sealing elements. They are used in environments with extreme temperatures, aggressive media, high surface speeds, high pressure or lack of lubrication.

## 24.2.1 10 ROTARY LIP SEALSSEALS

**Selection Parameters**

| Parameters | Min | Max |
|---|---|---|
| Temperature | -50 °C | 200 °C |
| Pressure | 0 MPa | 0.5 MPa |
| Diameter | 10 mm | 200 mm |

The Rotary Lip Seals are made with metal casing and a variety of PTFE or PTFE blended materials. These seals can work efficiently in extreme temperatures, high surface speeds and also in non lubrication environment.

### Industries it caters to

- Aerospace
- Automotive

### Product application

- Turbine Engines
- Ram Air Turbine
- Top-fuel Blower

## 24.2.2 20 ROTARY LIP SEALS

**Selection Parameters**

| Parameters | Min | Max |
|---|---|---|
| Temperature | -50 °C | 200 °C |
| Pressure | 0 MPa | 0.5 MPa |
| Diameter | 10 mm | 200 mm |

The Rotary Lip Seals are made with metal casing and a variety of PTFE or PTFE blended materials. These seals can work efficiently in extreme temperatures, high surface speeds and also in non lubrication environment.

### Industries it caters to

- Aerospace
- Automotive

### Product application

- Turbine Engines
- Ram Air Turbine
- Top-fuel Blower

# 24.2 OmniSeal® Rotary Lip Seals (continued)

## 24.2.3 30/40 ROTARY LIP SEALS

**Selection Parameters**

| Parameters | Min | Max |
|---|---|---|
| Temperature | -50 °C | 200 °C |
| Pressure | 0 MPa | 0.1 MPa |
| Diameter | 10 mm | 200 mm |

The Rotary Lip Seals are made with metal casing and a variety of PTFE or PTFE blended materials. These seals can work efficiently in extreme temperatures, high surface speeds and also in non lubrication environment.

### Industries it caters to

- Aerospace
- Automotive

### Product application

- Turbine Engines
- Ram Air Turbine
- Top-fuel Blower

## 24.2.4 50 ROTARY LIP SEALS

**Selection Parameters**

| Parameters | Min | Max |
|---|---|---|
| Temperature | -50 °C | 200 °C |
| Pressure | 0 MPa | 0.2 MPa |
| Diameter | 10 mm | 200 mm |

The Rotary Lip Seals are made with metal casing and a variety of PTFE or PTFE blended materials. These seals can work efficiently in extreme temperatures, high surface speeds and also in non lubrication environment.

### Industries it caters to

- Aerospace
- Automotive

### Product application

- Turbine Engines
- Ram Air Turbine
- Top-fuel Blower

# 24.2 OmniSeal® Rotary Lip Seals (continued)

## 24.2.5 60 ROTARY LIP SEALS

**Selection Parameters**

| Parameters | Min | Max |
|---|---|---|
| Temperature | -50 °C | 200 °C |
| Pressure | 0 MPa | 0.5 MPa |
| Diameter | 10 mm | 200 mm |

The Rotary Lip Seals are made with metal casing and a variety of PTFE or PTFE blended materials. These seals can work efficiently in extreme temperatures, high surface speeds and also in non lubrication environment.

### Industries it caters to

- Aerospace
- Automotive

### Product application

- Turbine Engines
- Ram Air Turbine
- Top-fuel Blower

## 24.2.6 70 ROTARY LIP SEALS

**Selection Parameters**

| Parameters | Min | Max |
|---|---|---|
| Temperature | -50 °C | 200 °C |
| Pressure | 0 MPa | 28 MPa |
| Diameter | 10 mm | 200 mm |

The Rotary Lip Seals are made with metal casing and a variety of PTFE or PTFE blended materials. These seals can work efficiently in extreme temperatures, high surface speeds and also in non lubrication environment.

### Industries it caters to

- Aerospace
- Automotive

### Product application

- Turbine Engines
- Ram Air Turbine
- Top-fuel Blower