Introduction
The Single Spring Seals offered by Vulcan are an extremely popular seal. These robust, technically proficient, seals are designed to suit DIN and common, standard housing dimensions.

Applications
The proven efficient design and wide choice of ‘O’-Ring and face materials enable these seals to be utilised in a large variety of applications. Suited for pumps, mixers, agitators, compressors and other rotary shaft equipment.

Standard Components

<table>
<thead>
<tr>
<th>No</th>
<th>Description</th>
<th>Retainer</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Face Ring</td>
<td>4</td>
</tr>
<tr>
<td>2</td>
<td>‘O’- Ring</td>
<td>5</td>
</tr>
</tbody>
</table>

Types 8/8DIN
Types 8b & 12/12 DIN
Types 13/13 DIN
Types 8/8DIN

Vulcan Conical Spring Type Seals PV Chart

Single Spring Seals
Standard Vulcan Single Spring Types

Type 8, Type 8DIN and Type 82
Inserted rotary faced, ‘O’-Ring mounted, conical spring seals, to suit standard common or DIN fitting dimensions. The Type 82 is a balanced version of Type 8 DIN, suitable for stepped shafts.

Type 9 and Type 9L
Conical spring ‘O’-Ring mounted seal, with a monolithic seal head and a choice of 8 standard or long DIN seat.

Type 13 and Type 13DIN
‘O’-Ring mounted, conical spring seals with pressed in, ‘O’-Ring mounted, rotary face, enabling face material interchangeability, to suit common standard or DIN dimensions.

Type 8B
‘O’-Ring mounted, conical spring seals seal of similar design to the standard Type 8 but with a solid stainless steel head and carbon stationary.

Type 12 and Type 12DIN
‘O’-Ring mounted, conical spring seals, available with solid stainless head as standard, or inserted SIC/TC ring face. Suitable for standard or DIN housings.

Type 13DIN
As above Type 13 DIN but with a machined, rather than pressed seal head retainer. Designed to suit DIN 24960 (EN12756) standard.
**Type 7D Description**
Resilient, conical spring, ‘O’-Ring mounted DIN standard seal. With the advantage of being able to replace the faces. The seal is very versatile and is suitable for a large variety of general and arduous duty applications, through a choice of face material combinations.

**Positive Drive**
Seal is shaft driven, via the coil, providing a positive drive at its base and eliminating common drive pin failures.

**Design**
Single conical spring, stainless steel, face retainer provides a strong and effective seal, suitable for many duties, including clogging media and hygienic applications.

**Self-Aligning**
The combination of a resilient ‘O’-Ring and single spring design results in a technically efficient and versatile design, that accommodates both misalignment and vibrations.

**Materials**
Suitable for a large variety of applications, through a wide choice of ‘O’-Ring and face materials.

**‘O’-Ring Housing**
The ‘O’-Ring is held within a completely recessed groove providing performance benefits, compared to competitor designs that use a separate drive ring.

**Seal Compatibility**
(European Based manufacturers)
Vulcan Type 7 = Roten 5 & 45
Vulcan Type 7B = Roten® 5H2
Vulcan Type 7 = Uniten® 5 & 45

**Cross Sectional Line Drawing**
Reliable
Robust, non-clogging, self-adjusting and durable, giving highly effective performance.

**Customisable**
Can be specially produced to any working length and seat housing dimensions.
Type 8B Description
Conical spring, ‘O’-Ring mounted seal and seat of similar design to the Type 8 but with a solid stainless seal head and ‘O’-Ring mounted Carbon Seat. This standard face combination is suitable for general and medium duty applications.

Positive Drive
Seal is shaft driven, via the coil, providing a positive drive at its base and eliminating common drive pin failures.

Materials
Suitable for a large variety of applications, through a wide choice of ‘O’-Ring and face materials.

Design
Single conical spring, stainless steel, face retainer provides a strong and effective seal, suitable for many duties, including clogging media and hygienic applications.

Self-Aligning
The combination of a resilient ‘O’-Ring and single spring design results in a technically efficient and versatile design, that accommodates both misalignment and vibrations.

‘O’-Ring Housing
The ‘O’-Ring is held within a completely recessed groove providing performance benefits, compared to competitor designs that use a separate drive ring.

Customisable
Can be specially produced to any working length and seat housing dimensions.

Reliable
Robust, non-clogging, self-adjusting and durable, giving highly effective performance.

Seal Compatibility
(European Based manufacturers)
Burgmann® Type M3
M.T.U® Europa 4

Cross Sectional Line Drawing
**Type 8 Description**
Conical spring, ‘O’-Ring mounted seal with a wide choice of elastomers and face materials. Suitable for a large variety of general duties and arduous duty applications, including those needing high pV value face combinations.

**Positive Drive**
Seal is shaft driven, via the coil, providing a positive drive at its base and eliminating common drive pin failures.

**Materials**
Suitable for a large variety of applications, through a wide choice of ‘O’-Ring and face materials.

**Design**
Single conical spring, stainless steel, face retainer provides a strong and effective seal, suitable for many duties, including clogging media and hygienic applications.

**Self-Aligning**
The combination of a resilient ‘O’-Ring and single spring design results in a technically efficient and versatile design, that accommodates both misalignment and vibrations.

**‘O’-Ring Housing**
The ‘O’-Ring is held within a completely recessed groove providing performance benefits, compared to competitor designs that use a separate drive ring.

**Seal Compatibility**
(European Based manufacturers)
Burgmann® Type M32
Burgmann® Type M37
Burgmann® Type M37G

**Cross Sectional Line Drawing**

**Customisable**
Can be specially produced to any working length and seat housing dimensions.

**Reliable**
Robust, non-clogging, self-adjusting and durable, giving highly effective performance.
Type 82 Description
Conical Spring, ‘O’-Ring mounted, balanced DIN Standard seal for stepped shafts, with reduced shaft size Type 8 DIN Long seat. This balanced seal arrangement is suitable for a large variety of general and high duty applications, with a wide choice of face material and elastomer combinations.

Positive Drive
Seal is shaft driven, via the coil, providing a positive drive at its base and eliminating common drive pin failures.

Materials
Suitable for a large variety of applications, through a wide choice of ‘O’-Ring and face materials.

Design
Single conical spring, stainless steel, face retainer provides a strong and effective seal, suitable for many duties, including clogging media and hygienic applications.

Self-Aligning
The combination of a resilient ‘O’-Ring and single spring design results in a technically efficient and versatile design, that accommodates both misalignment and vibrations.

‘O’-Ring Housing
The ‘O’-Ring is held within a completely recessed groove providing performance benefits, compared to competitor designs that use a separate drive ring.

Seal Compatibility
(European Based manufacturers)
Burgmann® Type H12N
Burgmann® Type H17GN

Cross Sectional Line Drawing

Customisable
Can be specially produced to any working length and seat housing dimensions.

Reliable
Robust, non-clogging, self-adjusting and durable, giving highly effective performance.
Type 8 DIN Description
Conical spring, ‘O’-Ring mounted, DIN standard seal and DIN long seat with drive slot. Suitable for a large variety of general and high duty applications through a ready choice of face material and elastomer materials.

Positive Drive
Seal is shaft driven, via the coil, providing a positive drive at its base and eliminating common drive pin failures.

Design
Single conical spring, stainless steel, face retainer provides a strong and effective seal, suitable for many duties, including clogging media and hygienic applications.

Self-Aligning
The combination of a resilient ‘O’-Ring and single spring design results in a technically efficient and versatile design, that accommodates both misalignment and vibrations.

‘O’-Ring Housing
The ‘O’-Ring is held within a completely recessed groove providing performance benefits, compared to competitor designs that use a separate drive ring.

Materials
Suitable for a large variety of applications, through a wide choice of ‘O’-Ring and face materials.

Seal Compatibility
(European Based manufacturers)
Burgmann® Type M3N
Burgmann® Type M32N
Burgmann® Type M37N
Burgmann® Type M37GN

Customisable
Can be specially produced to any working length and seat housing dimensions.

Reliable
Robust, non-clogging, self-adjusting and durable, giving highly effective performance.

Cross Sectional Line Drawing
**Type 9/9L Description**
Conical spring, ‘O’-Ring mounted seal, with a monolithic rotary face, available as Type 9L with Type 8 DIN Long or Type 9 with Type 19/8 ‘O’-Ring mounted seat. Also available with Type 8 DIN short ‘O’-Ring mounted seat (see Vulcan seat page) as Type 9S.

**Positive Drive**
Seal is shaft driven, via the coil, providing a positive drive at its base and eliminating common drive pin failures.

**Design**
Single conical spring, stainless steel, face retainer provides a strong and effective seal, suitable for many duties, including clogging media and hygienic applications.

**Self-Aligning**
The combination of a resilient ‘O’-Ring and single spring design results in a technically efficient and versatile design, that accommodates both misalignment and vibrations.

**‘O’-Ring Housing**
The ‘O’-Ring is held within a completely recessed groove providing performance benefits, compared to competitor designs that use a separate drive ring.

**Materials**
Suitable for a large variety of applications, through a wide choice of ‘O’-Ring and face materials.

**Cross Sectional Line Drawing**

**Seal Compatibility**
(European Based manufacturers)
Vulcan Type 9 = Burgmann® M2
Vulcan Type 9 = Goetze® 76.12
Vulcan Type 9L = Burgmann® M2N
Vulcan Type 9S = Burgmann® M2N4

**Customisable**
Can be specially produced to any working length and seat housing dimensions.

**Reliable**
Robust, non-clogging, self-adjusting and durable, giving highly effective performance.
Type 12 DIN Description
A range of highly proficient, widely utilised, ‘O’-Ring mounted, conical spring seals with solid, stainless steel head and carbon seat. To suit standard housings. Suitable for a wide variety of duties. For photo and line drawing see Type 12 DIN page.

**Positive Drive**
Seal is shaft driven, via the coil, providing a positive drive at its base and eliminating common drive pin failures.

**Design**
Single conical spring, stainless steel, face retainer provides a strong and effective seal, suitable for many duties, including clogging media and hygienic applications.

**Self-Aligning**
The combination of a resilient ‘O’-Ring and single spring design results in a technically efficient and versatile design, that accommodates both misalignment and vibrations.

**‘O’-Ring Housing**
The ‘O’-Ring is held within a completely recessed groove providing performance benefits, compared to competitor designs that use a separate drive ring.

**Materials**
Suitable for a large variety of applications, through a wide choice of ‘O’-Ring and face materials.

**Seal Compatibility**
(European Based manufacturers)
M.T.U® Europa 1
Uniten® Type 4

**Cross Sectional Line Drawing**

**Customisable**
Can be specially produced to any working length and seat housing dimensions.

**Reliable**
Robust, non-clogging, self-adjusting and durable, giving highly effective performance.
Type 12 Description
A range of highly proficient, widely utilised, ‘O’-Ring mounted, conical spring seals with solid, stainless steel head and carbon seat. Available to suit DIN 24960 (EN12756) housings. Suitable for a wide variety of general and medium duties.

Positive Drive
Seal is shaft driven, via the coil, providing a positive drive at its base and eliminating common drive pin failures.

Design
Single conical spring, stainless steel, face retainer provides a strong and effective seal, suitable for many duties, including clogging media and hygienic applications.

Self-Aligning
The combination of a resilient ‘O’-Ring and single spring design results in a technically efficient and versatile design, that accommodates both misalignment and vibrations.

‘O’-Ring Housing
The ‘O’-Ring is held within a completely recessed groove providing performance benefits, compared to competitor designs that use a separate drive ring.

Materials
Suitable for a large variety of applications, through a wide choice of ‘O’-Ring and face materials.

Customisable
Can be specially produced to any working length and seat housing dimensions.

Seal Compatibility
(European Based manufacturers)
M.T.U® Europa 2
Roten® Type 2
Roten® Type 4

Reliable
Robust, non-clogging, self-adjusting and durable, giving highly effective performance.
Positive Drive
Seal is shaft driven, via the coil, providing a positive drive at its base and eliminating common drive pin failures.

Design
Single conical spring, stainless steel, head retainer provides a strong and effective seal, suitable for many duties, including clogging media and hygienic applications.

Self-Aligning
The combination of a resilient ‘O’-Ring and single spring design results in a technically efficient and versatile design, that accommodates both misalignment and vibrations.

Interchangeable Faces
Seal and seat faces can be inter-changed with each other and can be easily replaced.

Materials
Suitable for a large variety of applications, through a wide choice of ‘O’-Ring and face materials.

Cross Sectional Line Drawing

Seal Compatibility
(European Based manufacturers)
Burgmann ® Type BT-FN
M.T.U® Type Simplex
Roten ® Type 3

Customisable
Can be specially produced to any working length and seat housing dimensions.

Reliable
Robust, non-clogging, self-adjusting and durable, giving highly effective performance.

Type 13 Description
‘O’-Ring mounted, conical spring seal with pressed stainless seal head retainer and pressed carbon seat. Highly productionised seal capable of wide ranging service. Seal and seat faces can be inter-changed with each other and can be easily replaced.
Type 13 DIN Description
‘O’-Ring mounted, with pressed seal head and seat, plus conical spring, designed to fit DIN 24960 (EN12756) housings. Cost-effective seal suitable for many duties with the option to replace wear faces and ‘O’-Rings during over-hauls.

Positive Drive
Seal is shaft driven, via the coil, providing a positive drive at its base and eliminating common drive pin failures.

Design
Single conical spring, stainless steel, head retainer provides a strong and effective seal, suitable for many duties, including clogging media and hygienic applications.

Self-Aligning
The combination of a resilient ‘O’-Ring and single spring design results in a technically efficient and versatile design, that accommodates both misalignment and vibrations.

Replaceable faces
Cost-effective seal suitable for many duties with the option to replace wear faces and ‘O’-Rings during over-hauls.

Materials
Suitable for a large variety of applications, through a wide choice of ‘O’-Ring and face materials.

Seal Compatibility
(European Based manufacturers)
M.T.U® Type Simplex DIN
Uniten ® Type 3

Customisable
Can be specially produced to any working length and seat housing dimensions.

Reliable
Robust, non-clogging, self-adjusting and durable, giving highly effective performance.

Cross Sectional Line Drawing