



# Vulcan Seals Type VR31

## Technical Data Sheet



### Product Description

The **Vulcan Seals Type VR31** is a high-performance braided gland packing manufactured from flexible expanded graphite yarn, reinforced with Inconel wire to enhance pressure resistance and dimensional stability.

The expanded graphite structure provides excellent thermal conductivity, chemical resistance, and self-lubricating properties, while the metallic reinforcement improves resistance to extrusion under high pressure and elevated temperature conditions.

The **Vulcan Seals Type VR31** is designed primarily for static and valve sealing duties in demanding industrial services, where long service life, thermal stability, and controlled leakage are required.

### Suitable Industries

The Vulcan Seals Type VR31 is suitable for use in:

- Power generation
- Oil & gas
- Petrochemical processing
- Chemical processing
- Utilities and general industry
- Steam and thermal systems

The Vulcan Seals Type VR31 is not suitable for use in:

- Highly abrasive or slurry-laden media
- Applications requiring FDA / food-grade compliance
- High-speed rotary pump duties
- Applications requiring zero graphite content

### Chemical Properties

- Base fibre: Flexible expanded graphite
- Reinforcement: Inconel wire
- Carbon content:  $\geq 90\%$
- Low friction coefficient ( $\leq 0.2$ )
- Excellent resistance to acids and alkalis
- Stable across full pH range (0–14)

### Why Choose the Vulcan Seals Type VR31?

- Expanded graphite yarn delivers excellent thermal stability and chemical resistance
- Inconel wire reinforcement improves pressure capability and extrusion resistance
- Self-lubricating structure reduces friction and maintenance requirements
- Suitable for high-temperature and high-pressure static sealing applications
- Stable performance across a wide pH range (0–14)



### Valves - Operating Limits

Max Operating Pressure	Linear Speed	Min Operating Temperature	pH Range
250 bar	Static Only	10°C / 50°F	0 - 14



### Centrifugal Pumps - Operating Limits

Max Operating Pressure	Linear Speed	pH Range
30 bar	8 m/s	0 - 14



### Reciprocating Pumps - Operating Limits

Max Operating Pressure	Linear Speed	Min Operating Temperature	pH Range
100 bar	0,8 m/s	10°C / 50°F	0 - 14

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\*\*All information supplied within, has been given in good faith and in Vulcan Seals' best judgement. It is meant for guidance purposes only. Vulcan Seals reserves the right to amend all statements, dimensions and technical data without prior notice.



**Dimensional Data**

Cross Section. Sq (inch)	Packaged Weight (kg)	Packaged Weight (lb)	Packaged Weight (lb) US ONLY	Length of Coil (m)	Product Code	US Product Code
1/8"	0.34	0.750	1	30	VR31.1/8	VR31.1/8.1LB
3/16"	0.98	2.161	1	30	VR31.3/16	VR31.3/16.1LB
1/4"	0.37	0.816	2	8	VR31.1/4	VR31.1/4.2LB
5/16"	0.66	1.455	2	8	VR31.5/16	VR31.5/16.2LB
3/8"	1.00	2.205	2	8	VR31.3/8	VR31.3/8.2LB
7/16"	1.21	2.668	5	8	VR31.7/16	VR31.7/16.5LB
1/2"	1.44	3.175	5	8	VR31.1/2	VR31.1/2.5LB
9/16"	1.88	4.145	5	8	VR31.9/16	VR31.9/16.5LB
5/8"	2.46	5.424	5	8	VR31.5/8	VR31.5/8.5LB
3/4"	3.32	7.321	10	8	VR31.3/4	VR31.3/4.10LB
7/8"	4.45	9.812	10	8	VR31.7/8	VR31.7/8.10LB
1"	5.50	12.128	10	8	VR31.1/0	VR31.1/0.10LB

Please note that the lengths and weights provided are for informational purposes only and are not contractual.

**Gland Packing Replacement Range**

The Vulcan Seals Type VR31 is a dimensional replacement for the following gland packing ranges:

- AESSEAL® | 4140
- American Branding® | 5000I
- Chesterton® | 1600
- Latty® | 6940
- Texpack® | 4140
- Teadit® | 2235
- Tombo® | 2280
- Utex® | 683
- Utex® | 689
- AESSEAL® | 4169
- Chemstar® | 1100I
- Flexitalic® | 306
- Palmetto® | 5000W
- Texpack® | 4169
- Teadit® | 4090
- Universal® | 7110G2
- Utex® | 684
- Utex® | 691
- AESSEAL® | 4183
- Chemstar® | 1100TCP
- Garlock® | 1303
- Pillar® | 6710
- Texpack® | 4183
- Teadit® | 4090I
- Utex® | 227
- Utex® | 685

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