



Vulcan Seals Type VR3

Technical Data Sheet



Product Description

The **Vulcan Seals Type VR3** is a braided gland packing manufactured from **high-purity expanded graphite yarn**, reinforced with **fibreglass carrier yarns** to provide improved structural integrity and extrusion resistance under pressure.

The expanded graphite construction offers excellent thermal conductivity, chemical resistance, and inherent lubricity, allowing the packing to conform effectively within the stuffing box while maintaining low friction against shafts and stems. The fibreglass reinforcement enhances dimensional stability, making VR3 suitable for high-temperature and high-pressure sealing duties where conventional braided packings may deform or extrude.

Under gland compression, the expanded graphite structure consolidates and conforms closely to the shaft or stem, enhancing sealing performance in a manner comparable to die-formed graphite packings.

The **Vulcan Seals Type VR3** is designed for use in demanding industrial sealing applications involving aggressive media, elevated temperatures, and wide pH ranges.

Suitable Industries

The Vulcan Seals Type VR3 is suitable for use in:

- ✓ Power generation
- ✓ Oil & gas
- ✓ Petrochemical processing
- ✓ Chemical processing
- ✓ Refineries
- ✓ Utilities and steam systems
- ✓ Metals and heavy industry

The Vulcan Seals Type VR3 is not suitable for use in:

- ✗ Highly abrasive or slurry-laden media, Applications requiring FDA / food-grade compliance, Applications requiring zero graphite content.

Chemical Properties

- Base fibre: High-purity expanded graphite yarn
- Reinforcement: Fibreglass carrier yarns for improved mechanical strength
- Graphite structure provides inherent lubricity without additional impregnants
- High thermal conductivity reduces localised heat build-up at the sealing interface
- Reinforced construction improves dimensional stability and extrusion resistance
- Maintains integrity under high temperature and pressure conditions
- Excellent resistance to most acids, alkalis, solvents, gases, and steam
- Suitable for saturated and superheated steam services
- Stable chemical performance across a wide pH range (0-14)
- Not recommended for strong oxidising agents

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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.

Why Choose the Vulcan Seals Type VR3?

- High-purity expanded graphite construction for excellent thermal and chemical resistance
- Fibreglass reinforcement improves mechanical strength and pressure capability
- Naturally lubricating graphite minimises friction and shaft wear
- Maintains sealing performance across wide temperature and pH ranges
- Suitable for both dynamic and static sealing duties in severe service conditions



Valves - Operating Limits

Max Operating Pressure	Linear Speed	Min Operating Temperature	pH Range
200 bar	Static Only	-250°C / -418°F	0 - 14



Centrifugal Pumps - Operating Limits

Max Operating Pressure	Linear Speed	pH Range
30 bar	10 m/s	0 - 14



Reciprocating Pumps - Operating Limits

Max Operating Pressure	Linear Speed	Min Operating Temperature	pH Range
100 bar	≤1 m/s	-250°C / -418°F	0 - 14



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"	0.09	0.198	1	30	VR3.1/8X30MTR	VR3.1/8.1LB
3/16"	0.26	0.573	1	30	VR3.3/16 X30MTR	VR3.3/16.1LB
1/4"	0.37	0.816	2	8	VR3.1/4	VR3.1/4.2LB
5/16"	0.66	1.455	2	8	VR3.5/16	VR3.5/16.2LB
3/8"	1.00	2.205	2	8	VR3.3/8	VR3.3/8.2LB
7/16"	1.21	2.668	5	8	VR3.7/16	VR3.7/16.5LB
1/2"	1.44	3.175	5	8	VR3.1/2	VR3.1/2.5LB
9/16"	1.88	4.145	5	8	VR3.9/16	VR3.9/16.5LB
5/8"	2.46	5.424	5	8	VR3.5/8	VR3.5/8.5LB
3/4"	3.32	7.321	10	8	VR3.3/4	VR3.3/4.10LB
7/8"	4.45	9.812	10	8	VR3.7/8	VR3.7/8.10LB
1"	5.50	12.128	10	8	VR3.1/0	VR3.1/0.10LB

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 VR3 is a dimensional replacement for the following gland packing ranges:

- AESSEAL® | 350
- Burgmann® | 4000
- Crane® | G58
- Garlock® | 1300-E
- Klinger® | 3222
- Palmetto® | 1030
- Palmetto® | 5080
- Sepco® | ML 2001
- Texpack® | 4168
- Teadit® | 2001IC
- Universal® | 7110G1
- Utex® | 631
- Utex® | 688
- American Branding® | 5000
- Crane® | 1336
- Chesterton® | 1400
- Garlock® | 1304
- Klinger® | 46
- Palmetto® | 1550
- Palmetto® | Pinnacle flexibraid
- Sepco® | ML 4444
- Teadit® | 2202
- Teadit® | 4090
- Utex® | 226
- Utex® | 632
- Burgmann® | Pitograph
- Crane® | G57
- Garlock® | 1300
- Garlock® | 1333-G
- Latty® | Lattygraf TSP
- Palmetto® | 5000
- Pillar® | 6610
- Sepco® | ML 6402
- Teadit® | 2000
- Universal® | 74490
- Utex® | 610
- Utex® | 686

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