



## Klinger 3222

**The cost-effective, high performance valve & pump packing. Offering excellent sealing and operational reliability for both Original Equipment Manufacturers and plant users alike.**

*Klinger 3222 is one of the Klinger TopLine range of compression packings.*

*This is an optimised range introduced to provide users with gland sealing products that meet today's demanding services, offering effective and trouble-free sealing during application. To achieve this we have selected the best materials and the best production methods. The result is the Klinger TopLine range.*

*Ongoing test and development in line with the Klinger philosophy will ensure the continued improvement of the TopLine products.*

■ K3222 is manufactured using expanded graphite ribbons, to produce a compression packing of square cross-section that is fully flexible so that minimal gland pressure is required to effect a seal.

■ Fitting is by traditional methods from the roll, since no special tools or forming dies are required Klinger 3222 offers the user a very effective alternative to specialised die-formed graphite rings.

■ It is BAM approved for use in oxygen service (please request further details on service limits from our technical department)

■ The packing has excellent thermal conductivity and resilience and is therefore unaffected by the effects of cycling temperature or pressure.

■ Graphite is very resistant to chemical attack by a variety of media such as acids, alkaline solutions, oils, greases and steam. K3222 can be confidently used in environmentally sensitive applications.

■ This is self-lubricating packing with superior gliding properties. Its soft, conformable nature ensures that there is no abrasion of moving parts and that graphite pick-up on stems and shafts is minimised.



Certificate No FM. 10571

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## Service Capabilities

When used in equipment in good mechanical condition and installed using our product guidelines the undernoted values apply:

■ Minimum operating Temperature	<b>-200°C</b>
■ Maximum operating temperature	<b>430°C</b>
■ Maximum steam temperature	<b>650°C</b>
■ pH	<b>0-14</b>
■ Maximum static pressure	<b>280 bar</b>

K3222 can also be used in pumping applications, please contact Klinger for further advice.

**Note:** The packing should not be subjected to the maximums of temperature, pressure and speed simultaneously, for further advice please contact our technical department.

## Forms of Supply

Klinger packings are offered in a range of standardised packages:

Size:  
**3mm to 25mm**

Length:  
**8 metres per box**

by weight:  
**sizes under 9.5mm 1kg/box**  
**9.5mm to 12.5mm 2kg/box**  
**sizes over 12.5mm 4kg/box**

Alternative lengths and weights can be offered upon request, please contact Klinger for further details.

## Klinger 3222 has been specially designed for use in all high performance pumps & valves as found in:

- Chemical Plant & Chemical Processing
- Gas Plant
- Petrochemical Plants
- Power Stations
- Refineries
- Steel Mills

K3222 is also recommended for cryogenic applications and those services, which require low emission levels. K3222 has BAM approval for oxygen applications.

## Technical Advice

If you require additional technical information or would like Klinger to advise you on a particular application, then contact our Technical Department at the address shown.

It is advantageous to provide the following details:

1. Type of valve or pump
2. Working and test pressure
3. Temperature - steady or cycling
4. Rate of pressure & temperature increase
5. Medium and concentration
6. Operating speed
7. Special requirements
8. Details of stuffing box design