

novapress®

Elastomer-bonded fibre gaskets.



GASKETS

TECHNICAL TEXTILES

EXPANSION JOINTS

INSULATION

NEW MATERIALS

 **Frenzelit**

creating hightech solutions



novapress® – production and quality

Quality monitored and maintained by using a process control system for the entire manufacturing process.

novapress® products represent the latest state of the art for gasket boards manufactured by the calendering process. The blends consist exclusively of high-quality raw materials obtained from well-known suppliers. All the batches delivered are not merely in line with precise specifications; they are also subjected to strict incoming goods testing. This means that only correct raw materials reach production.

A process control system monitors and controls preparation of the formulations, the blending operation and, finally, the calendering process itself. Consistently high quality is always guaranteed as a result. Every board that is produced is provided with a unique batch number that is the basis for uninterrupted traceability.



novapress® – the right choice for numerous applications

novapress® 850

provides a higher degree of adaptability to unevenness than has been achieved in the past even at minimum surface pressure level, so that it is the ideal option for use in low-rigidity structures or when low bolting forces are involved. novapress® 850 solves problems in drives, transmissions, covers etc. and can be used in the food industry too.



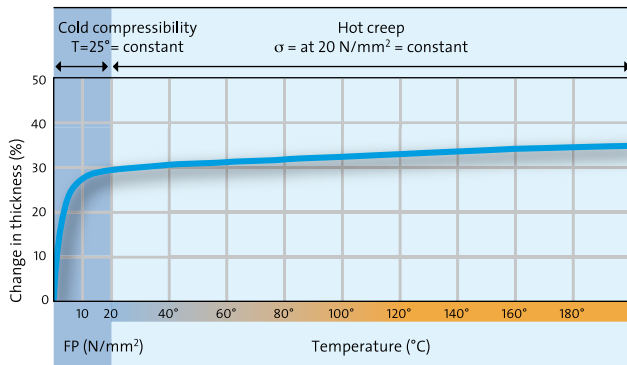
novapress® BASIC

combines performance and cost effectiveness for a wide range of different applications, from machine manufacturing to shipbuilding and from gas / water supply to the food industry.



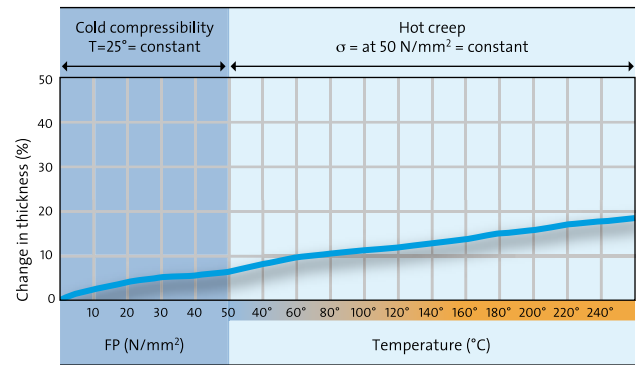
Temp-Test

at 20 MPa – sample thickness 1.0 mm



Temp-Test

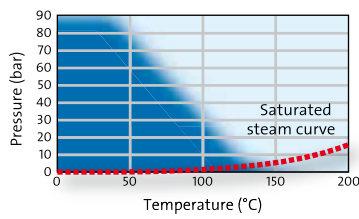
at 50 MPa – sample thickness 2.0 mm



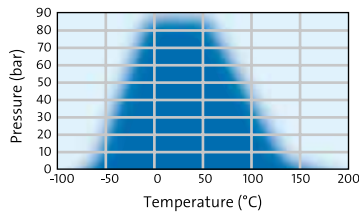
Recommendations for use

Depending on pressure and temperature levels

Water/ water vapour



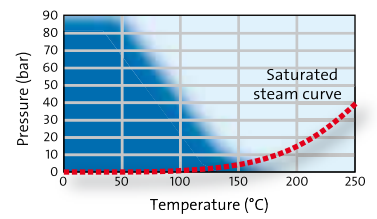
Other media*



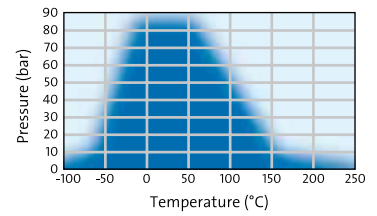
Recommendations for use

Depending on pressure and temperature levels

Water/ water vapour



Other media*



Explanatory notes about the temperature test:

The purpose of the temperature test is to determine how the gasket deforms under certain conditions. It is a special Frenzell development that represents what is effectively a "fingerprint" of major gasket properties. The compression set of the gasket at room temperature is determined in the first part of the test. This curve indicates the adaptability of the gasket during installation.

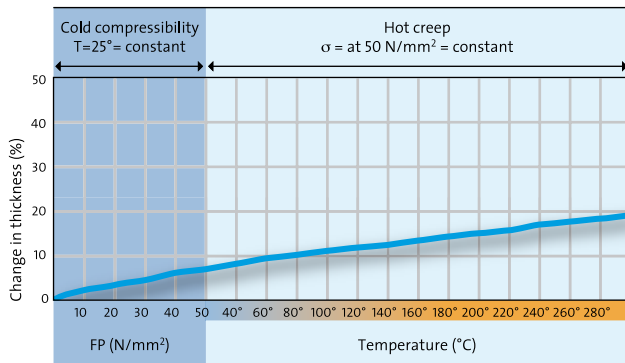
In the second part of the test, the temperature is increased at a specified speed, while the surface pressure level reached in the first part is maintained consistently. I.e. the system is not allowed to "relax" as a result of gasket compression. This is overly critical – the strain on the gasket would be lower in a real sealing situation – but it unsparingly reveals the character of the gasket.

novapress® UNIVERSAL

is one of the mechanically toughest fibre gaskets and is exceptionally resistant to chemicals. It is extremely versatile, can be used as an all-round material and proves to be hard-wearing and reliable at and around the maximum temperature level too.



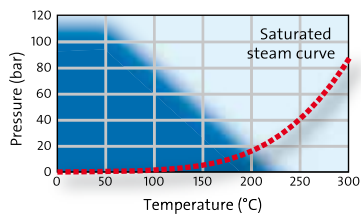
Temp-Test at 50 MPa – sample thickness 2.0 mm



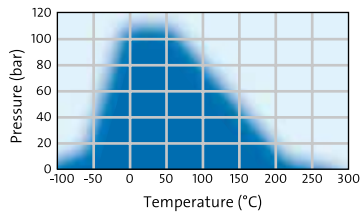
Recommendations for use

Depending on pressure and temperature levels

Water/ water vapour



Other media*



Warranty disclaimer

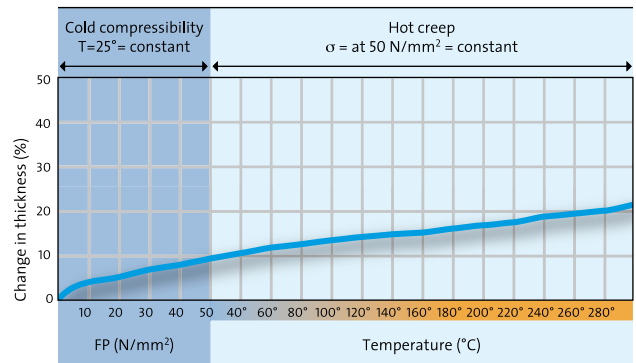
In view of the variety of different installation and operation conditions and applications and processing engineering options, the information given in this prospectus can only provide approximate guidance and cannot be used as the basis for warranty claims.

novapress® MULTI II

is a real classic, which still has an impressively unique performance profile thanks to systematic optimisation. Designed as the first legitimate solution for applications in steam environments, it is still first choice when purely graphite gaskets cannot be used, e.g. due to the torsional stress encountered with screwed connection gaskets in steam or hot oil environments.



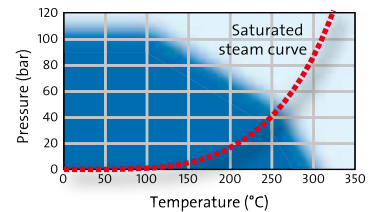
Temp-Test at 50 MPa – sample thickness 2.0 mm



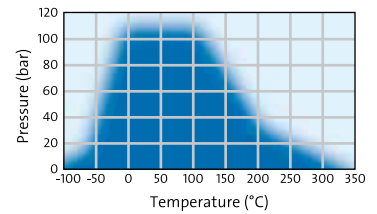
Recommendations for use

Depending on pressure and temperature levels

Water/ water vapour



Other media*



Explanatory notes about the recommendations for use

The temperature and pressure recommendations in the graphs apply to gaskets 2.0 mm thick that are used with smooth flanges. Higher stresses are possible when thinner gaskets are used! The information provided must therefore be considered as estimates that are on the safe side rather than as specific operational limits.

*Example for the most common other media. Exact data about individual cases can be obtained via the Frenzelit novaDISC program or from our application engineering staff.

| Material data | | | novapress® 850 | novapress® BASIC | novapress® UNIVERSAL | novapress® MULTI II |
|--|---------------|------------|--|---|---|--|
| Non-stick coating | | | Optional | A310 as standard | PTFE as standard | A310 as standard |
| Identification colour | | | Brown | Orange | Light green | Blue |
| Thickness tolerance | | | Acc. to DIN 28091-1 | | | |
| Physical properties | Test standard | Unit | Value* 1.0 mm | Value* 2.0 mm | Value* 2.0 mm | Value* 2.0 mm |
| Sample thickness | | | | | | |
| Density | DIN 28 090-2 | [g/cm³] | 1.25 | 1.70 | 1.80 | 1.50 |
| Tensile strength | DIN 52 910 | | | | | |
| Longitudinal | | [N/mm²] | 9 | 14 | 27 | 28 |
| Transverse | | [N/mm²] | 5 | 6 | 10 | 12 |
| Residual stress | DIN 52913 | | | | | |
| 175 °C | | [N/mm²] | 32 | 28 | 39 | 32 |
| 300 °C | | [N/mm²] | | 18 | 25 | 22 |
| Compressibility | ASTM F 36 J | [%] | 35 | 6 | 6 | 7 |
| Recovery | ASTM F 36 J | [%] | 65 | 55 | 60 | 60 |
| Cold compressibility | DIN 28090-2 | [%] | | 8.0 | 6.0 | 6.0 |
| Hot compressibility | DIN 28090-2 | [%] | | 3.0 | 3.0 | 3.0 |
| Hot creep | DIN 28090-2 | [%] | | 22.0 | 5.5 | 10.0 |
| Hot recovery | DIN 28090-2 | [%] | | 2.0 | 2.0 | 2.0 |
| Specific leakage rate | DIN 3535-6 | [mg/(s·m)] | < 0.001 | ≈ 0.05 | ≈ 0.03 | ≈ 0.08 |
| Specific leakage rate λ _{2.0} | DIN 28090-2 | [mg/(s·m)] | < 0.001 | ≈ 0.05 | ≈ 0.03 | ≈ 0.08 |
| Media resistance | ASTMF 146 | | | | | |
| ASTM IRM903 | 5 h / 150 °C | | | | | |
| Weight change | | [%] | 8 | 7 | 6 | 6 |
| Thickness change | | [%] | 2 | 2 | 2 | 2 |
| ASTM Fuel B | 5 h / 23 °C | | | | | |
| Weight change | | [%] | 13 | 9 | 7 | 8 |
| Thickness change | | [%] | 9 | 5 | 6 | 4 |
| Approvals and compliance | | | DVGW / VP401 / FDA / EG 1935/2004 / Fire Safe / Germ. Lloyd / applied for: KTW / W270 | DVGW / SVGW / VP401 / KTW / W270 / WRAS / EG 1935/2004 / TA Luft / Germ. Lloyd / BS 7531 Grade Y | DVGW / SVGW / KTW / W270 / WRAS / EG 1935/2004 / TA Luft / Germ. Lloyd / BAM / BS 7531 Grade X | DVGW / TA Luft / BAM / Germ. Lloyd / BS 7531 Grade X |
| *Modal value (typical value) | | | | | | |
| Product data | | | | | | |
| Dimensions [mm] | | | 1,000 x 1,500 / 1,500 x 1,500 / 3,000 x 1,500 | | | |
| Thicknesses [mm] | | | 0.5 / 0.75 / 1.0 / 1.5 / 2.0 / 3.0 | 0.3 / 0.5 / 0.75 / 1.0 / 1.5 / 2.0 / 3.0 / 4.0 | | |
| Further dimensions and thicknesses are available on request. | | | | | | |

If you have any application engineering questions,
we will be delighted to answer them. Just contact:

gaskets@frenzelit.de

Good for people and the environment.

From research and development to our manufacturing operations and use of the product by the customer: quality assurance and a responsible approach to resources and the environment are a firm commitment we observe in everything we do throughout the life cycle of all products.

The Frenzelit gasket division has obtained certification that the company complies with the requirements of ISO 9001, ISO 14001 and ISO 50001. This means complete transparency in all areas and therefore provides a high degree of security – for the benefit of our employees, the environment and our customers.









Quality management ISO 9001

Environment management ISO 14001

Energy management ISO 50001



Engineered by Frenzelit: Gasket materials / fibre-reinforced compounds

| novapress® | novatec® | novaflon® | novaphit® | novamica® | novaform® Soft Compounds | novaplan® | isoplan® |
|--|---|---|---|---|--|---|---|
|  |  |  |  |  |  |  |  |
| 200°C -100°C | 250°C -100°C | 260°C -200°C | 550°C -200°C | 1000°C -200°C | 250°C -100°C | 1000°C -100°C | 1100°C -100°C |
| Elastomer-bonded fibre gaskets | Fibre-reinforced graphite gaskets with Kevlar® | Modified and filled PTFE gaskets | Expanded graphite with/without stainless steel expanded metal insert | Phlogopite mica with/without stainless steel expanded metal insert | Technical films for insulation, sealing, acoustic applications etc. | Soft layer/insert for heat shield applications and cylinder head gaskets | High-temperature insulation materials |

Kevlar® is a DuPont registered trademark.

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INSULATION

NEW MATERIALS

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 **Frenzelit**
creating hightech solutions