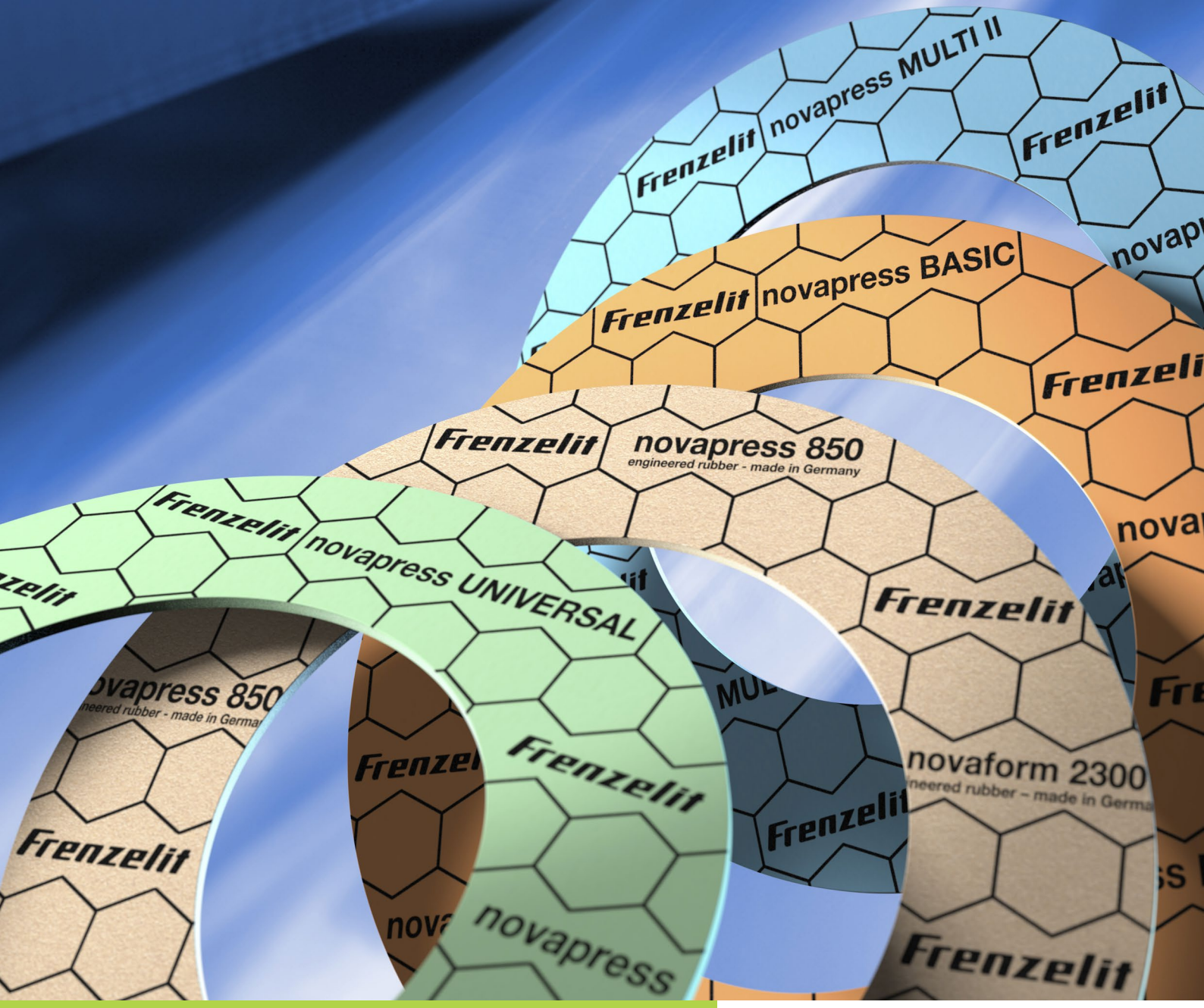
novapress®

Elastomer-bonded fibre gaskets.



GASKETS

TECHNICAL TEXTILES

EXPANSION JOINTS

INSULATION

NEW MATERIALS

Frenzelit

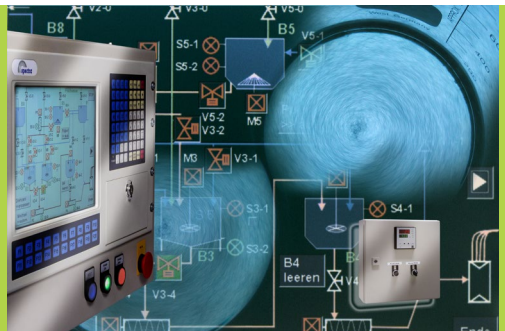
creating hightech solutions

novapress® – production and quality

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

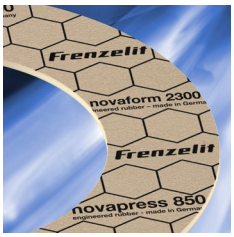
novapress® products represent the latest state of the art for gasket boards manufactured by the calendering process. The blends consist exclusively of high-quality raw materials obtained from well-known suppliers. All the batches delivered are not merely in line with precise specifications; they are 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.



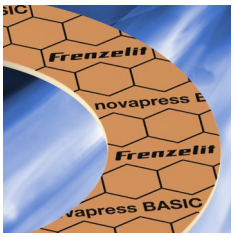
novapress® – the right choice for numerous applicati

novapress® 850



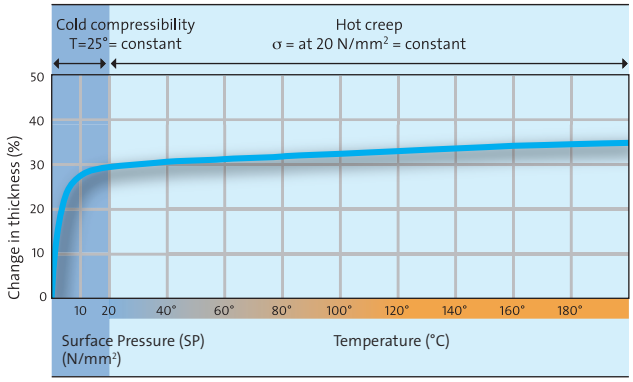
provides a higher degree of adaptability to unevenness than has been achieved in the past even at minimum surface pressure level, so that it is the ideal option for use in low-rigidity structures or when low bolting forces are involved. novapress® 850 solves problems in drives, transmissions, covers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

novapress® BASIC

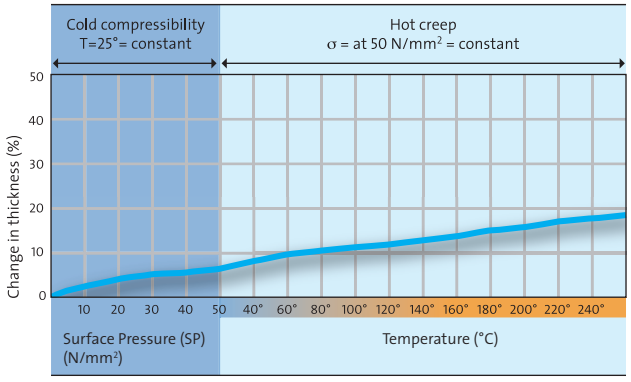


combines performance and cost effectiveness for a wide range of different applications, from machine manufacturing to shipbuilding and from gas / water supply to the food industry.

Temp-Test
at 20 MPa – sample thickness 1.0 mm

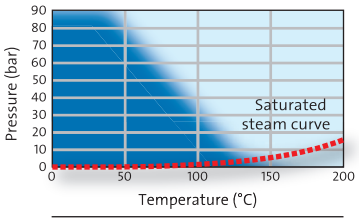


Temp-Test
at 50 MPa – sample thickness 2.0 mm

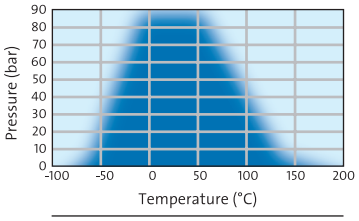


Recommendations for use
Depending on pressure and temperature levels

Water/ water vapour

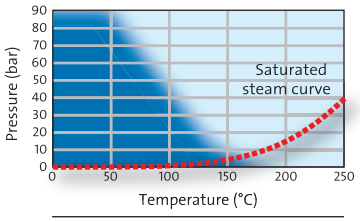


Other media*

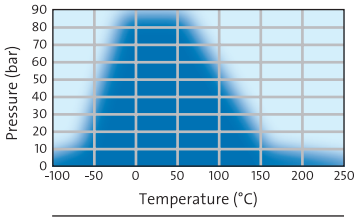


Recommendations for use
Depending on pressure and temperature levels

Water/ water vapour



Other media*

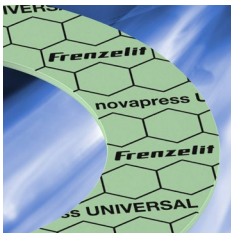


Explanatory notes about the temperature test:
The purpose of the temperature test is to determine how the gasket deforms under certain conditions. It is a special Frenzelit development that represents what is effectively a "fingerprint" of major gasket properties. The compression set of the gasket at 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.

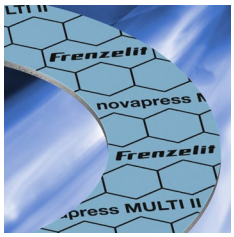
ons

novapress® UNIVERSAL



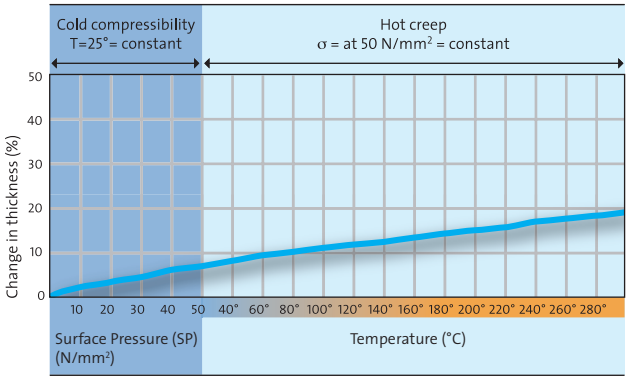
is one of the mechanically toughest fibre gaskets and is exceptionally resistant to chemicals. It is extremely versatile, can be used as an all-round material and proves to be hard-wearing and reliable at and around the maximum temperature level too.

novapress® MULTI II

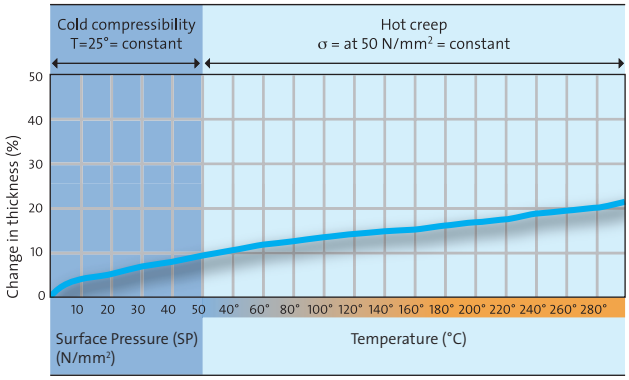


is a real classic, which still has an impressively unique performance profile thanks to systematic optimisation. Designed as the first legitimate solution for applications in steam environments, it is still first choice when purely graphite gaskets cannot be used, e.g. due to the torsional stress encountered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

Temp-Test
at 50 MPa – sample thickness 2.0 mm

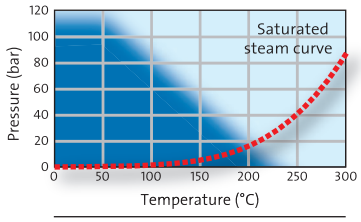


Temp-Test
at 50 MPa – sample thickness 2.0 mm

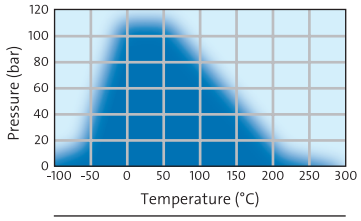


Recommendations for use
Depending on pressure and temperature levels

Water/ water vapour

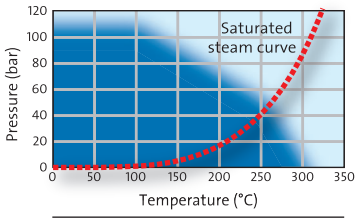


Other media*

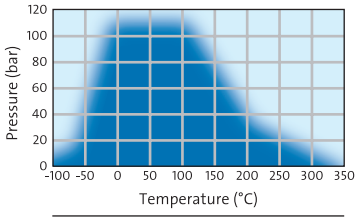


Recommendations for use
Depending on pressure and temperature levels

Water/ water vapour



Other media*



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.

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 raised face 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

General informations		novapress® 850	novapress® BASIC	novapress® UNIVERSAL	novapress® MULTI II
Approvals and tests	DVGW	✓	✓	✓	✓
	SVGW	-	✓	✓	-
	VP401	✓	✓	-	-
	FDA	✓	-	-	-
	Drinking water**	✓	✓	✓	-
	W270	✓	✓	✓	-
	WRAS	✓	✓	✓	-
	EG 1935/2004	✓	✓	✓	-
	TA Luft	✓	✓	✓	✓
	Blow-out safety according to VDI 2200	✓	-	✓	-
	Germanischer Lloyd (GL)	✓	✓	✓	✓
	BS 7531 Grade X	-	-	✓	✓
	BS 7531 Grade Y	-	✓	-	-
	BAM	-	-	✓	✓
Anti-stick coating		optionally	as standard	PTFE as standard	as standard
Identification colour		light brown	orange	light green	blue

Physical properties Sample thickness	Test standard	Unit	Value* 1.0 mm	Value* 2.0 mm	Value* 2.0 mm	Value* 2.0 mm
Density	DIN 28 090-2	[g/cm³]	1.25	1.70	1.80	1.60
Residual stress	DIN 52 913					
175 °C		[N/mm²]	32	28	39	32
300 °C		[N/mm²]		18	25	22
Compressibility	ASTM F 36 J	[%]	39	6	6	7
Recovery	ASTM F 36 J	[%]	60	55	60	60
Cold compressibility ε_{KSW}	DIN 28 090-2	[%]	18	8	6	6
Cold recovery ε_{KRW}	DIN 28 090-2	[%]	8	3	3	3
Hot creep $\varepsilon_{WSW/200}$	DIN 28 090-2	[%]	28	22	6	10
Hot recovery $\varepsilon_{WRW/200}$	DIN 28 090-2	[%]	1	2	2	2
Specific leakage rate	DIN 3535-6	[mg/(s·m)]	0.001	0.05	0.03	0.08
Tensile strength transverse	DIN 52 910	[N/mm²]	5	6	10	12
Fluid resistance	ASTM F 146					
ASTM IRM 903	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		[%]	12	9	7	8
Thickness change		[%]	9	5	6	4
Leachable chloride content	PV 01605	[ppm]	≤ 150	≤ 150	≤ 100	≤ 150

*Modal value (typical value)

**Drinking water according to the Elastomer-guideline ("KTW")

Product data (tolerances acc. to DIN 28 091-1)		
Dimensions [mm]	1,000 x 1,500 / 1,500 x 1,500 / 3,000 x 1,500	
Thicknesses [mm]	0.3 / 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

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

gaskets@frenzelit.com

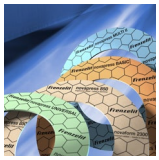
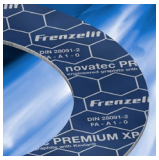
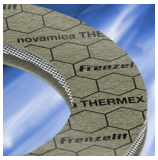
Good for people and the environment.

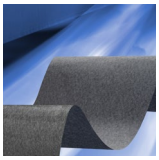
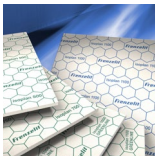
From research and development to our manufacturing operations and use of the product by the customer: quality assurance and a responsible approach to resources and the environment are a firm commitment we observe in everything we do throughout the life cycle of all products.

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®
				
200°C	250°C	260°C	550°C	1000°C
-100°C	-100°C	-200°C	-200°C	-200°C
Elastomer-bonded fibre gaskets	Fibre-reinforced graphite gaskets	Modified and filled PTFE gaskets	Expanded graphite with/without stainless steel expanded metal insert	Phlogopite mica with/without stainless steel expanded metal insert

novaform® Soft Compounds	novaplan®	isoplan®
		
250°C	1000°C	1100°C
-100°C	-100°C	-100°C
Technical films for insulation, sealing, acoustic applications etc.	Soft layer/ insert for heat shield applications and cylinder head gaskets	High-temperature insulation materials

GASKETS

TECHNICAL TEXTILES

EXPANSION JOINTS

INSULATION

NEW MATERIALS

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creating hightech solutions