



CARRARA

Pakninger

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Spiral Wound Gasket SW

The Spiral Wound Product's Range includes all types of gaskets for any flanges. The gaskets are made in the dimensions and materials highlighted by the International Standard.

The Spiral Wound is the gasket that must answer to specific compressibility and recovery requirements in order to guarantee the sealing.

Carrara produces the Spiral Wound Gaskets on modern machineries equipped with tensile strength control to offer always the products that meet the requirements.

Styles

SW - spiral wound without rings
SWI - spiral wound with inner rings
SWC - spiral wound with outer rings
SWCI - spiral wound with outer and inner rings
LSSW - spiral wound LOW STRESS design
SW OXY - spiral wound gasket for oxygen services

Applications

Spiral Wound Gaskets for Flanges

AISI 304	1.4301
AISI 316	1.4401
AISI 321	1.4541
AISI 316 Ti	1.4571
Monel (NiCu30Fe)	2.4360

PLANISTEEL gaskets are available in all metals and inserts, in standard or customized sizes.



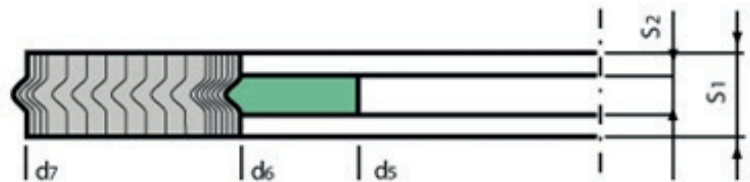
Valve Sealants & Components

Setting Valve

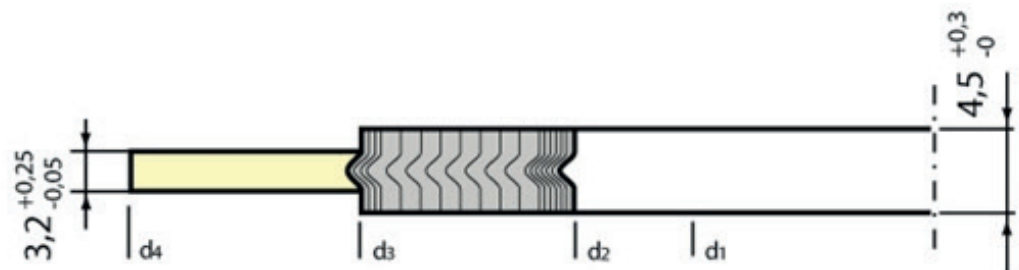
SW



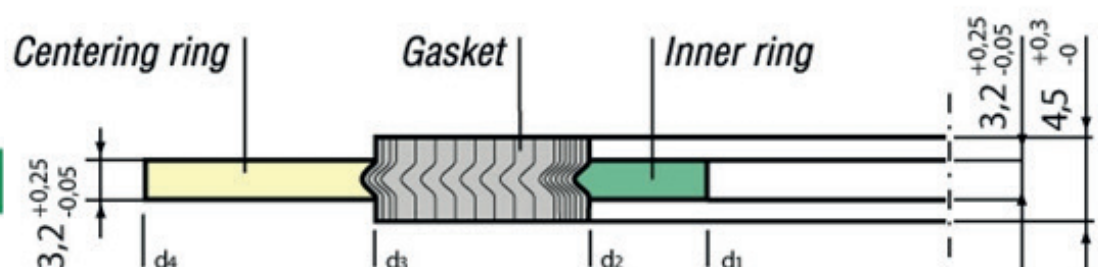
SW/I



SW/C



SWC/I



Valve Sealants & Components Setting Valve

seals for valves

The stamping division for Valvograph graphite seals of Carrara Global Sealing Solutions combines a large production capacity with a high level of flexibility and includes in its range seals certified for stems, closures and seats, which meet the most stringent requirements regarding runaway emission controls and of purity of the materials.



PGT3 GR8622 PGT4 GR8622

PGT3 GR8622

is the full braided graphite rings stem seal certified API 622 which guarantees a maintenance of the low emission profile of the valve, even under maintenance with the GR8622 braid.

PGT4 GR8622 is the certified low mission stem seal complying with API 22 e ISO 15848 Standards which makes valid solution for reducing the type of seal used for the first use on new valves.

Indeed, it can be used as much in the context of Oil & Gas and Chemicals, as in high pressure and temperature steam applications.

Approvals

- ISO 15848 C01 BH
- ISO 15848 C02 BH
- API 622 2nd Edition
- Fire Test API 589
- CorrosionTest
- Weight Loss Test
- EN 14772, section 6.7

Full low emission approvals

PGT3 GR8622 and PGT4 GR8622 are the seal sets with low emission approval, be that in compliance with Standard API 622 2nd Edition or with Standard ISO 15848 (400°C, BH seal class, endurance class C01 and C02), to offer the maximum certified cover with a single seal.

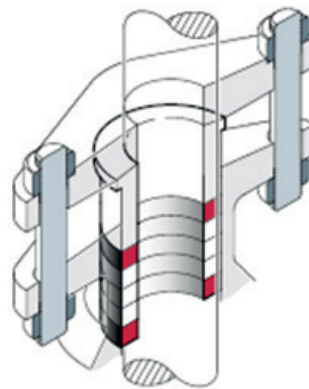
Applications

PGT3 GR8622 e PGT4 GR8622 are the Valvograph graphite seal sets for Gate, Globe, Butterfly, Ball and Oil & Gas e Chemical Service Control valves, yet applicable with all industrial fluids compatible with graphite, allowing for the use of a single seal for all applications.

PGT3 GR8622



PGT4 GR8622



Temperature

-200°C up to 650°C, having limitations at 450°C with weakly oxidizing fluids and hot air



Pressure range

All Pressure Classes are covered up to API 10000 psi



PH Range

0 ÷ 14 except for strong oxidants



09.07.20

GR80SGR - Oxygen service

GR80SGR OXY is the Valvograph packing in graphite, BAM approved for Industrial Valve Oxygen applications.

The packing is made with spun expanded graphite yarn of the maximum purity and enriched with oxidation retardant. It is this very characteristic, along with the care with which it is made, which confers on GR80SGR OXY the exceptional resistance to contact with oxygen, both in liquid and in gaseous form.

Each production batch can be evaluated according to ASTM G136 to determine the quantity of residual soluble compounds, and to guarantee the extreme cleanliness of the products

Approvals

- AIT greater than 500°C
- Artificial ageing: 100 hrs at 325°C and 250 Bar
- AIT of the aged sample greater than 500°C
- Impact with gaseous oxygen at 300°C
- Impact with liquid oxygen

Product range with BAM approval for oxygen applications

GR80SGR OXY

GR80SGR OXY packing is available in packaging of 1.0, 2.5 and 5.0 kg in all the sections, for maintenance activities on oxygen application lines.

CONTROLLER 2 EVO OXY

The CONTROLLER 2 EVO OXY set in graphite is made up of packing rings such as Top & Bottom and of pressed graphite rings. The pressed rings also have BAM approval.

CONTROLLER 3 OXY

The CONTROLLER 3 OXY set in graphite is wholly made up of packing rings GR80SGR OXY stamped.

V48Z OXY e V48ZN OXY

Single rings in graphite and reinforces graphite such as static seals for valves.

SW316G OXY

Wound metal with filter in graphite for the valve bonnet and the line flange.

HOCKDRUCK

Gaskets in graphite for the valve bonnet and line flanges.



BAM approved
for Oxygen Services



09.07.20

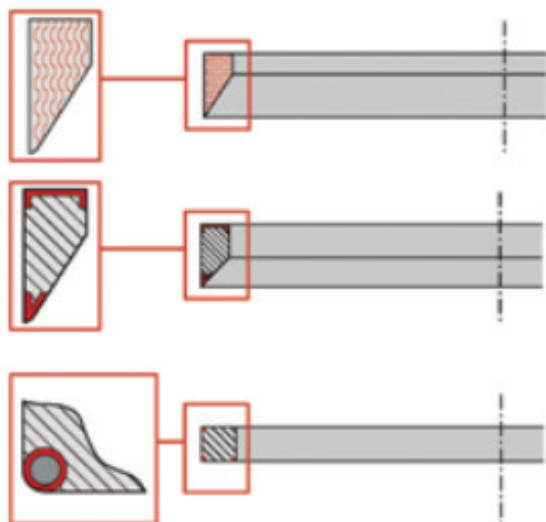
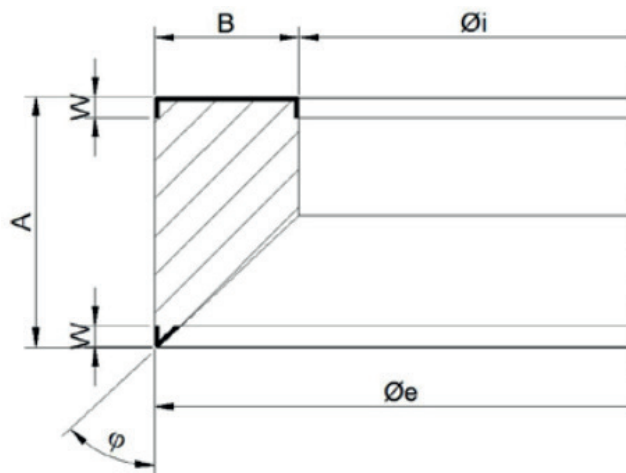
Steelgraph - for Pressure Seal Gates and Check Valves

The Steelgraph gaskets for pressure seal Gate and Check Valve are made of Valvograph graphite and steel in different combinations to offer elasticity and resistance.

The graphite with oxidation retardants guarantee an exceptional service life thanks to their lack of sensitivity to thermal cycles.



-  **Temperature**
-200°C up to 650°C, having limitations at 450°C with easily oxidizing fluids and hot air
-  **Pressure range**
Up to 1.500 bar
-  **Ph Range**
0 ÷ 14 except for strong incompatible oxidants and fluids



Steelgraph G11

G11 is the gasket produced by stamping Valvograph graphite, supported by metal layers. An ultra-resistant solution.

Steelgraph G22

G22 is obtained by stamping Valvograph graphite simultaneously with metallic covers, sized in thickness and rounded edge corners as a function of the valve rating and its size, always to guarantee the maximum resistance to extrusion and an exceptional elasticity.

Steelgraph G33

G33 is a gasket obtained by stamping Valvograph graphite with the insertion of metallic rings at the corners. This solution, especially useful for rectangular and square section gaskets, is advised for high and medium pressure calorific power station heat exchangers.

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Valvograph Rings

Graphite C content > 99.00 %
 Ash content < 1,00%
 Treatment with passive corrosion
 Inhibitor

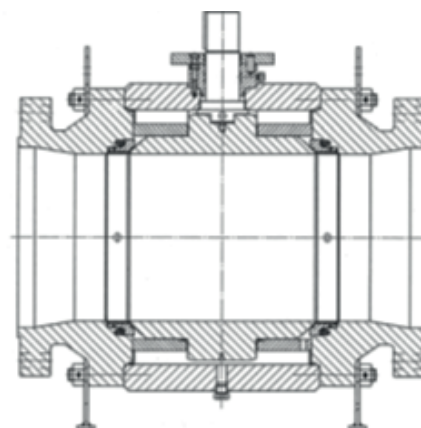
from 10 up to 2300 mm:
 Standard Standard production tolerances

Dimensions mm

	Diam. External	Diam. Internal	Thickness	Strip	Density
up to 250	+0,20 0,00	0,00 -0,10	+/-0,20		
from 251 to 500	+0,25 0,00	0,00 -0,25	+/-0,20		
from 501 to 750	0,30 0,00	0,00 -0,30	+/-0,25	0,00 -	1,25 -
from 751 to 1000	0,40 0,00	0,00 -0,40	+/-0,25	-0,25	1,65
from 1001 to 1250	0,45 0,00	0,00 -0,45	+/-0,30		
from 1251 to 2300	+0,50 0,00	0,00 -0,50	+/-0,30		



The Valvograph graphite gaskets, made of graphite enriched with oxidation retardant and corrosion inhibitor, comply with EN14772, ASTM F2168 and BAM requirements for oxygen applications. The Valvograph gaskets are available in sizes from 10 to 2,300 mm in different densities depending on the technical requirements of the Client and the application.



Packings



09.07.20

Packings

 Performer Range
 Premium Range
 Basic Range



B1204
DINAWHITE

This is a packing specifically for paper mills, made from a special composite yarn with a high breaking strength and very low friction coefficient to guarantee high performance over time.

RECOMMENDED USE

This packing is specifically for pumps, agitators and mixers in paper mills. It is also recommended for all dynamic services related to low-temperature fluids.

	P bar	lbf/in ²	Vm/S	t/pm	pH	T °C	°F
					1 ÷ 14	+100	+212
							
	50	750	15	3000			



GF4770
G4 GORE®

This is a packing made from genuine GORE® G4 yarn. Silicone-free GORE® GFO® can be used for services that do not required lubrication.

RECOMMENDED USE

This packing is recommended for services on valves and piston pumps. It is suitable for API 641 services. It is not suitable for use with oxidising fluids.

	P bar	lbf/in ²	Vm/S	t/pm	pH	T °C	°F
	500	7500	1	200	0 ÷ 14	-200/+280	-330/+540
	200	3000	2	400			
	80	1200	10	2000			



GF7700
GFO® GORE®

This is a packing made from genuine GFO® GORE® yarn. The words 100% GFO® are printed on the packing to guarantee the authenticity of the product.

RECOMMENDED USE

This packing is recommended for all dynamic applications that require resistance and flexibility at the same time. It is not suitable for use with strong oxidants.

	P bar	lbf/in ²	Vm/S	t/pm	pH	T °C	°F
	300	4500	1,5	300	0 ÷ 14	-200/+280	-330/+540
	200	3000	2	400			
	50	750	25	5000			

Performer Range
Premium Range
Basic Range



GR80SGR

EVO

This is a packing made from pure mineral graphite with a special metal reinforcement. This packing is TA LUFT VDI2440 certified and is impregnated with a special graphite compound enriched with an inorganic corrosion inhibitor.

RECOMMENDED USE

This packing is for industrial valve applications in high-pressure and high-temperature services in power stations, refineries and petrochemical plants.

	P bar	lb/in ²	Vm/S	t/pm	pH	T °C	°F
	500	7500	1	200	0 ÷ 14	-100/+600	-150/+1100
	100	1500	1,5	300			

*With weak oxidants and hot air ** With steam
*** Not compatible with oxidants



GR80SG

FLEXIBLE GRAPHITE HP

This is a packing made from expanded pure mineral graphite. It is impregnated with a special graphite compound enriched with an inorganic corrosion inhibitor.

RECOMMENDED USE

This packing can be used in industrial valve applications. For services above 100 bar and high temperatures, GR80SG must be used for Muddling Rings together with the GR80SGR or GR8622 reinforced Top & Bottom Rings.

	P bar	lb/in ²	Vm/S	t/pm	pH	T °C	°F
	300	4500	1	200	0 ÷ 14	-200/+450*	-330/+840*
	20	300	2	400			
	40	600	25	5000		-200/+650**	-330/+1200**

*With weak oxidants and hot air ** With steam
*** Not compatible with oxidants

 Can only be used above 100 bar if assisted by anti-extrusion rings.



GR8622

API 622 APPROVED

This is a packing made from very pure expanded mineral graphite with special reinforcement. It is impregnated with a corrosion inhibitor and solid lubricants and is API 622 and EN14772 Section 6.7 low-emission approved.

RECOMMENDED USE

GR8622 packing is specifically for low-emission service valves in refineries, petrochemical plants and gas plants. GR8622 can be used for any valve service that is compatible with graphite.

	P bar	lb/in ²	Vm/S	t/pm	pH	T °C	°F
	500	7500	2	400	0 ÷ 14	-200/+450*	-330/+840*
	100	1500	1,5	300			
						+650**	+1200**

*With weak oxidants and hot air ** With steam
*** Not compatible with oxidants

 Performer Range

 Premium Range

 Basic Range

GR8807
INCOBRAID®

This is a special packing made from long-fibre PAN graphite reinforced with micrometric discontinuous metal filaments. The special impregnation is done in three phases: on the individual yarn, during braiding and on the packing body. The mix is enriched with an inorganic corrosion inhibitor.

RECOMMENDED USE

This packing is for industrial valves in high-pressure and high-temperature services in power stations, refineries and petrochemical plants.

	P bar	lbf/in ²	Vm/S	t/pm	pH	T °C	°F
	300	4500	1	200	0 ÷ 14	-100/+450*	-150/+840*
	80	1200	1/5	300			
							

*With weak oxidants and hot air ** With steam
 *** Not compatible with oxidants

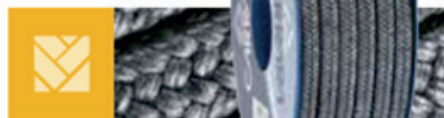

N1704
SUPER HP

This is a special packing made from high toughness fibre with good mechanical and thermal properties, better than those of aramid fibre. It offers better performance on piston and centrifugal pumps where high mechanical resistance is required.

RECOMMENDED USE

N1704 is a packing specifically for slurry pumps. It can be used in all dynamic applications with a U13 pH range.

	P bar	lbf/in ²	Vm/S	t/pm	pH	T °C	°F
	500	7250	5	1000	1 ÷ 13	+280	+540
	30	450	20	4000			


GR8888
SUPER GRAPHITE

This is a packing made from very pure (C > 99%) long-fibre RAYON graphite. This packing is impregnated with a special graphite compound enriched with an inorganic corrosion inhibitor.

RECOMMENDED USE

This packing is for industrial valve and pump applications in high-pressure and high-temperature services in power stations, refineries and petrochemical plants.

	P bar	lbf/in ²	Vm/S	t/pm	pH	T °C	°F
	200	3000	1	200	0 ÷ 14	-100/+450*	-150/+840*
	20	300	3	600			
	40	600	30	6000			

*With weak oxidants and hot air ** With steam
 *** Not compatible with oxidants


N1706
DINACOMB EVO

This is a packing made from new-generation technical yarn and special lubricants that guarantee excellent performance in dynamic applications with particulate-rich fluids (slurry).

RECOMMENDED USE

N1706 is specifically for reciprocating and centrifugal pumps, mixers, augers, dryers and refiners.

	P bar	lbf/in ²	Vm/S	t/pm	pH	T °C	°F
	500	7250	3.5	700	1 ÷ 13	+260	+500
	25	375	15	3000			


KD6605
DINACOMB

This is a special packing made from long-fibre aramid yarn with PBI yarn at the edges. It is impregnated with PTFE and special compounds in three phases. The friction coefficient of PBI is much lower than that of aramid yarn to maintain the pump shaft and bearings intact.

RECOMMENDED USE

KD6605 is an innovative packing recommended for dynamic applications with the very abrasive fluids found in paper mills, sugar factories or cement factories.

	P bar	lbf/in ²	Vm/S	t/pm	pH	T °C	°F
	80	1200	2	400	3 ÷ 12	-100/+250	-150/+480
	30	450	20	4000			


SQ5000
PTFE WHITE GRAPHITE

This is a packing made from pure white PTFE yarn loaded with a compound to improve its heat dispersion coefficient. SQ5000 is an FDA packing.

RECOMMENDED USE

This packing is recommended for the pharmaceutical and food industries when there is a requirement for an FDA approved packing that is more resistant than the traditional PTFE packings.

	P bar	lbf/in ²	Vm/S	t/pm	pH	T °C	°F
	30	450	2	400	0 ÷ 14	-100/+280	-148/+540
	20	300	15	3000			

 Performer Range

 Premium Range

 Basic Range
**PB5000K****DINACOMB PB5000K**

This is a packing made from discontinuous PBI and aramide yarn with a special impregnation to further reduce its already low friction coefficient.

RECOMMENDED USE

PB5000K is a specialised packing for mixer and agitator applications. It can also be used in all dynamic applications.

	P bar	lbf/in ²	Vm/S	t/pm	pH	T °C	°F
	500	7250	3.5	700	2 ÷ 12	+260	+500
	20	300	15	3000			

**GF4600KS****G4 GORE® ARAMID GF4600KS**

This is a braid made from pure GORE® G4 yarn with aramid yarn at the edges. The G4 yarn is composed of PTFE with encapsulated graphite. GF4600KS does not contain any lubricant and offers great resistance to extrusion and wear thanks to its ultra-dense body.

RECOMMENDED USE

GF4600KS is a packing specifically for high-pressure reciprocating pumps. It is suitable for all industrial fluids with a pH range from 3 to 12.

	P bar	lbf/in ²	Vm/S	t/pm	pH	T °C	°F
	500	7500	3	600	3 ÷ 12	-100/+250	-150/+480
	50	750	25	5000			

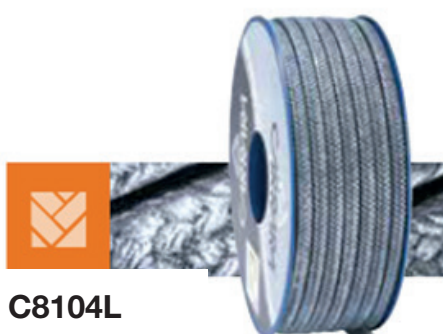
**C8100**

This is a pure long-fibre PAN carbon packing. Each yarn is twisted and impregnated to ensure that the packing is very flexible.

RECOMMENDED USE

This packing is specifically for applications on boiler feed pumps and industrial pumps.

	P bar	lbf/in ²	Vm/S	t/pm	pH	T °C	°F
	100	1500	1.5	300	2 ÷ 12	-60/+500	-80/+940
	40	600	25	5000			

**C8104L**

This is a special packing made from multifilament PAN carbon fibre. It is impregnated with a special mixture of PTFE enriched with very pure powdered graphite.

RECOMMENDED USE

This packing is specifically for applications on industrial service pumps.

	P bar	lbf/in ²	Vm/S	t/pm	pH	T °C	°F
	210	3150	1.5	300	1 ÷ 13	-60/+280	-80/+540
	100	1500	2	400			
	50	750	25	5000			

**C8200**

This is a packing made from pre-oxidised multifilament PAN. This packing is impregnated with a special graphite compound enriched with an inorganic corrosion inhibitor. It is also available in the C8300/R version with metal reinforcement.

RECOMMENDED USE

This packing is for general services on industrial valves and pumps (C8200 style only). It is not compatible with oxidising fluids.

	P bar	lbf/in ²	Vm/S	t/pm	pH	T °C	°F
	200	3000	1	200	2 ÷ 12	-50/+500*	-60/+940*
	100	1500	2	600			
	40	600	20	6000			

* Short exposure to peak temperature

**C8207****INCOBRAID®**

This is a special packing made from long-fibre PAN graphite reinforced with micrometric discontinuous metal filaments. The special impregnation is done in three phases: on the individual yarn, during braiding and on the packing body. The mix is enriched with an inorganic corrosion inhibitor.

RECOMMENDED USE

This packing is for industrial valves in high-pressure and high-temperature services in power stations, refineries and petrochemical plants.

	P bar	lbf/in ²	Vm/S	t/pm	pH	T °C	°F
	500	7250	3.5	700	1 ÷ 13	-50/+500	-60/+940
	25	375	15	3000			

 Performer Range

 Premium Range

 Basic Range
**GF7600/K****GFO® GORE® ARAMID**

This is a packing made from GORE® GFO® yarn with aramid yarn at the edges to increase its mechanical resistance.

RECOMMENDED USE

This packing is specifically for applications on piston pumps, but it is suitable for all dynamic applications with industrial fluids except for strong oxidants. It is also available in the GL7600K and GL7676 styles with a striped design.

	P bar	lbf/in ²	Vm/S	t/pm	pH	T °C	°F
	250		3		3 ÷ 12	-100/+250	-150/+480
	50		25				

**GF7676****GFO® GORE® ARAMID ZEBRA**

This is a packing made from GORE® GFO® yarn and aramid yarn with a striped design.

RECOMMENDED USE

This packing is specifically for applications on piston pumps, but it is suitable for all dynamic applications with industrial fluids except for strong oxidants. It is also available in the GL7676 version.

	P bar	lbf/in ²	Vm/S	t/pm	pH	T °C	°F
	250		3		3 ÷ 12	-100/+250	-150/+480
	50		25				

**GL7000****PTFE**

This is a packing made from expanded PTFE yarn loaded with graphite and lubricated with silicone. It offers excellent reliability and performance.

RECOMMENDED USE

This packing is recommended for dynamic applications. It is not suitable for use with oxidizing fluids.

	P bar	lbf/in ²	Vm/S	t/pm	pH	T °C	°F
	200	3000	2	400	0 ÷ 14	-200/+280	-330/+540
	50	750	25	5000			

**GR8048****FLEXIBLE CARBONGRAPHITE**

This is a packing made with expanded pure mineral graphite in the core and long-fibre PAN graphite at the edges. This packing is impregnated with a special graphite compound enriched with an inorganic corrosion inhibitor.

RECOMMENDED USE

This packing is for industrial valve and pump applications in high-pressure and high-temperature services in power stations, refineries and petrochemical plants with nonoxidizing fluids.

	P bar	lbf/in ²	Vm/S	t/pm	pH	T °C	°F
	300	4500	1.5	300	0 ÷ 14	-100/+450*	-148/+450*
	20	300	2	400			
	40	600	25	5000			

*With weak oxidants and hot air ** With steam
***Not compatible with oxidants

**GR8800****CARBON SPECIAL**

This is a packing made from pure long-fibre multifilament PAN graphite. It is specially impregnated in three phases with a mixture enriched with an inorganic corrosion inhibitor.

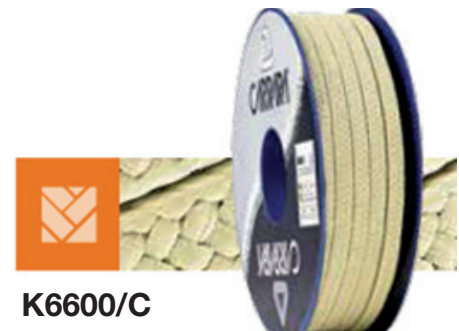
It is also available in the GR8800R version reinforced with a continuous metal filament.

RECOMMENDED USE

This packing is for industrial valve and pump applications (GR8800 style only) in high-pressure and high-temperature services in power stations, refineries and petrochemical plants. It is not compatible with oxidising fluids.

	P bar	lbf/in ²	Vm/S	t/pm	pH	T °C	°F
	200	300	1	200	0 ÷ 14	-100/+450*	-150/+840*
	20	300	2	400			
	40	600	25	5000			

*With weak oxidants and hot air ** With steam
***Not compatible with oxidants

**K6600/C****ARAMID SILICON FREE K6600C**

This is a packing made from continuous aramid yarn. Each yarn is impregnated with PTFE dispersion and silicone. It is also available in the version without silicone.

RECOMMENDED USE

This continuous aramid yarn packing is recommended for strongly abrasive dynamic applications that require the maximum resistance. It is available in the KD6604A version for the glass industry.

	P bar	lbf/in ²	Vm/S	t/pm	pH	T °C	°F
	100	1500	3	600	3 ÷ 12	-100/+280	-150/+540
	50	750	15	3000			

 Performer Range
 Premium Range
 Basic Range
**KD6604****ARAMID SPECIAL**

This is a packing made from long-fibre aramid yarn. It is impregnated with PTFE and lubricants in three phases: on the individual yarn, during braiding and on the packing body.

RECOMMENDED USE

This packing is recommended for dynamic applications with abrasive fluids and on driers.

It is excellent for water sampling pumps. It is also available in the KD6104 style.

	P bar	lbf/in ²	Vm/S	t/pm	pH	T °C	°F
	80	1200	2	400	3 ÷ 12	-100/+250	-150/+480
	30	450	20	4000			

**N1304****PHENOLIC PTFE**

This is a packing made from phenolic yarn, which has a mechanical resistance and cutting resistance similar to that of aramid yarn, but with a much lower friction coefficient. The packing is impregnated with PTFE and inert lubricants.

RECOMMENDED USE

N1304 is recommended for dynamic applications that require a strong packing with better chemical resistance than that offered by aramid yarn.

	P bar	lbf/in ²	Vm/S	t/pm	pH	T °C	°F
	60	900	2	400	1 ÷ 13	+260	+520
	25	375	15	3000			

**N2609****CARBON PREOX**

N2609 is a packing for general use at a very low price. It is made from a composite synthetic fibre with carbon at an intermediate stage of pre-oxidisation. It is impregnated with graphite and a silicone-free hightemperature lubricant.

RECOMMENDED USE

N2609 is a packing for general use.

	P bar	lbf/in ²	Vm/S	t/pm	pH	T °C	°F
	60	900	1	200			
	40	600	3	600	4 ÷ 10	-50/+250	-60/+480
	20	300	10	2000			

**N3404****SYNTHETIC**

This packing is made from synthetic yarns chosen to meet the demands of a general purpose seal. N3404 is impregnated with PTFE and inert lubricants.

It is also available in the N2609 graphite-filled version.

RECOMMENDED USE

This packing is for general use in dynamic services. It is also available in the N3104 and N3404/SS versions specifically for manholes in tank lorries.

	P bar	lbf/in ²	Vm/S	t/pm	pH	T °C	°F
	80	1200	2	400	2 ÷ 12	-100/+250	-150/+480
	50	750	15	3000			

**PA3604****META ARAMID PTFE**

This is a packing made 100% with continuous meta-aramid yarn.

This meta-aramid packing has a lower friction coefficient than para-aramid, but with the same resistance to cutting and abrasion.

RECOMMENDED USE

PA3604 packing is specifically for dynamic applications with abrasive fluids that are compatible with metaaramid.

	P bar	lbf/in ²	Vm/S	t/pm	pH	T °C	°F
	80	1200	2	400	4 ÷ 10	-50/+250	-60/+480
	20	300	15	3000			

**PT5504S****PTFE FDA**

This is a packing made from pure GORE PTFE yarn. It is available in the PT5504L lubricated style, the PT5504AL type for food and pharmaceutical services and the PT55000X type for oxygen services. These products are FDA approved.

RECOMMENDED USE

PTFE packings have a wide range of uses in both static and dynamic applications. It is also available in PL5500S, PL5500L and PL5500AL versions.

	P bar	lbf/in ²	Vm/S	t/pm	pH	T °C	°F
	500	7500	1	200			
	150	2250	2	400	0 ÷ 14	-200/+280	-330/+540

 Performer Range
 Premium Range
 Basic Range

PT5600/K
 ARAMID PTFE

This packing is made from pure GORE PTFE yarn with aramid yarn at the edges to improve its resistance in high-pressure services and on driers.

RECOMMENDED USE

PT5600K is suitable for pumps in the food and chemical industries. It is recommended for driers, agitators and mixers, and it can also be used on valves.

	P bar	lbf/in ²	Vm/S	t/pm	pH	T °C	°F
	500	7500	1	200	3 ÷ 12	-200/+280	-330/+540
	300	4500	3	600			
	150	2250	10	2000			

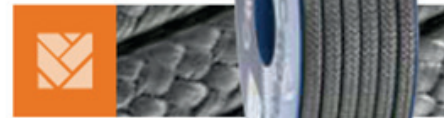

R4804
 RAMIE

This is a packing made from ramie yarn impregnated with PTFE and silicone-free lubricants.

RECOMMENDED USE

This packing is specifically for dynamic applications in water and industrial fluid services with medium pH values.

	P bar	lbf/in ²	Vm/S	t/pm	pH	T °C	°F
	60	900	2	400	4 ÷ 10	-50/+120	-60/+240
	25	375	10	2000			
							

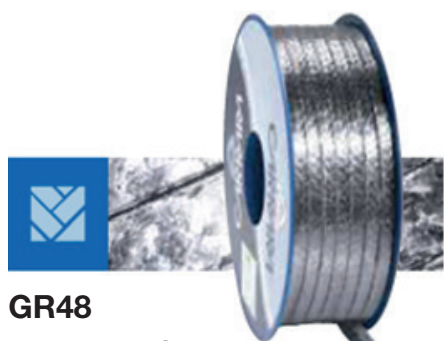

GB70
 PTFE

GB70 packing is made from expanded PTFE yarn loaded with powdered graphite and a silicone lubricant.

RECOMMENDED USE

This packing is for sealing applications on pumps with any fluids, except for strong oxidants.

	P bar	lbf/in ²	Vm/S	t/pm	pH	T °C	°F
	100	1500	2	400	0 ÷ 14	-200/+280	-330/+540
	25	750	20	4000			
							


GR48
 FLEXIBLE GRAPHITE

This is a packing made from pure expanded mineral graphite. It is also available in the GR48R version with metal reinforcement.

RECOMMENDED USE

This packing is for applications on industrial valves and pumps with all fluids, except for oxidants.

	P bar	lbf/in ²	Vm/S	t/pm	pH	T °C	°F
	300	4500*	1	200	0 ÷ 14	-100/+450*	-150/+840*
							
							

*With weak oxidants and hot air ** With steam

*** Not compatible with oxidants

⚠ Can only be used above 100 bar if assisted by anti-extrusion rings.


GR8000
 CARBON

This is a packing made 100% with continuous PN carbon fibre impregnated with colloidal graphite. It is also available in the GR8000R version with Inconel™ reinforcement.

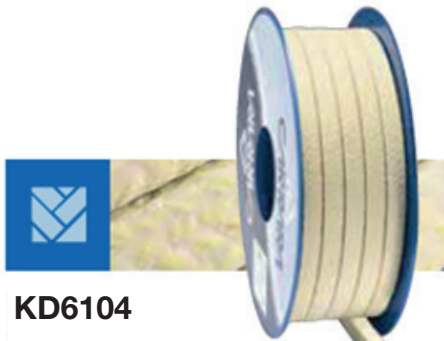
RECOMMENDED USE

This packing can be used for valve and pump services (GR8000 style only) with all high-temperature fluids, except for strong oxidants.

	P bar	lbf/in ²	Vm/S	t/pm	pH	T °C	°F
	300	4500	1	200	0 ÷ 14	-100/+450*	-150/+840*
	20	300	2	400			
	40	600	25	5000			

*With weak oxidants and hot air ** With steam

*** Not compatible with oxidants


KD6104
 ARAMID PTFE

This is a packing made from twisted short-fibre aramid yarn. It is impregnated in 2 stages: one on the thread, and a second one during twisting.

RECOMMENDED USE

This packing is for dynamic applications on pumps and agitators. It can be used in the most demanding applications where a resistant product is required.

	P bar	lbf/in ²	Vm/S	t/pm	pH	T °C	°F
	80	1200	2	400	3 ÷ 12	-100/+250	-150/+480
	30	450	20	4000			
							

 Performer Range
 Premium Range
 Basic Range
**N2109****CARBON PREOX**

This is a packing made from synthetic fibre. It is impregnated with graphite and a silicone-free high-temperature lubricant.

RECOMMENDED USE

N2109 is a packing for general use.

	P bar	lbf/in ²	Vm/S	t/pm	pH	T °C	°F
	50	750	1	200	4 ÷ 10	-50/+250	-60/+480
	20	300	2	400			
	15	225	8	1600			

**N3104****SYNTHETIC**

This is a packing made from composite yarn impregnated with PTFE and a silicone-free lubricant.

RECOMMENDED USE

N3104 is a packing for general applications. It is extremely versatile and of excellent quality while meeting the demand for economy and ease of use.

	P bar	lbf/in ²	Vm/S	t/pm	pH	T °C	°F
	50	750	2	400	2 ÷ 12	-100/+250	-150/+480
	20	300	10	2000			
							

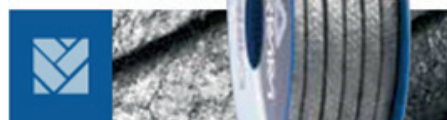
**PL5000/S****PTFE**

The PL5000S braid is made from white PTFE.

RECOMMENDED USE

PL5000S can be used both for sealing on valve stems, or static sealing in general, and for sealing on reciprocating pumps and low-speed agitators. It is also available in the PL5000L lubricated version.

	P bar	lbf/in ²	Vm/S	t/pm	pH	T °C	°F
	300	4500	1	200	0 ÷ 14	-200/+280	-330/+540
	100	1500	2	400			
	20	300	10	2000			

**V9907****GRAPHITIZED GLASS**

This is a packing made from twisted glass fibre yarn (taslan) from 6 to 9 microns in size. It has a high percentage of a special graphite-based compound with the addition of a small amount of lubricant and corrosion inhibitor.

RECOMMENDED USE

V9907 can be used on valve stems, manholes and where there is steam, gas, fumes, oils, acids and alkalis that are compatible with glass fibre.

	P bar	lbf/in ²	Vm/S	t/pm	pH	T °C	°F
	200	3000	1.5	300	2 ÷ 12	-50/+500	-60/+940
	40	600	2	400			
	20	300	5	100			

**V9944****LUBRICATED GLASS**

This is a packing made from slightly twisted, textured glass fibre yarn (taslan) from 6 to 9 microns in size. The braid is also impregnated with a mixture of PTFE and silicone-free inert lubricants.

RECOMMENDED USE

V9944 can be used with water, steam, oils, solvents and almost any abrasive or crystallizing chemical product that is compatible with glass fibre.

	P bar	lbf/in ²	Vm/S	t/pm	pH	T °C	°F
	60	900	1.5	300	2 ÷ 12	-50/+280	-60/+540
	40	600	2	400			
	20	300	15	3000			

**55B****LUBRICATED GLASS**

This is extruded pure unsintered PTFE with lubricants. 55B minimises shaft wear thanks to its softness. It can also be modelled in any way. Due to its high PTFE content, it is chemical resistant over the whole pH range.

RECOMMENDED USE

55B is suitable for use with acids and alkalis, oils, gasses, solvents, steam and clean fluids. It can be used on centrifugal and piston pumps, mixers, agitators as well as on valves or expansion joints and vacuum pumps.

IT IS ALSO AVAILABLE IN THE 55G GRAPHITEFILLED VERSION.

	P bar	lbf/in ²	Vm/S	t/pm	pH	T °C	°F
					0 ÷ 14	-50/+260	-60/+510
							
	10	150	10	2000			

Wide range

The most innovative graphite packings in the Performer range are INCOBRAID® GR8807, the patented PAN graphite packing with discontinuous microfilament reinforcement, and GR8622.

Also, for the most demanding and LOW EMISSION applications, the special GR80SGR OXY version of the GR80S-GR packing is equally advanced and innovative. The PTFE packings are an important part of the packing product range.

There are many versions of the PTFE packing: dry, lubricated, food grade and graphite filled. The whole range of PTFE packings, including GF7700 100% GORE® GFO®, is made using yarns from W.L. Gore, Carrara's partner for more than 25 years.

Aramid yarn packings for dynamic applications, para-aramid and meta-aramid yarn packings, such as KD6605 e PA3604, and special yarn packings for abrasive applications, such as N1704 and N1706, are an important part of the range.

To ensure Carrara quality, even the most well-established packings, such as the V9907 and V9944 glass fibre packings, or the packings for general applications, such as N3404 e N2609, are made with the utmost care in the choice of materials and production.

The Carrara packing range is divided into three product lines:

PERFORMER

The Performer line has been designed to provide customers with a high-tech packing line. It is made from the best materials, provided with full certification and is characterized by high performance and long service life.

PREMIUM

The Premium line has been designed to provide customers with a high-tech packing line. It is made from the best materials, provided with full certification and is characterized by high performance and long service life.

BASIC

The Basic line consists of excellent quality packings for general applications.



Carrara Packaging

Carrara packings with sizes from 3.0 to 25.00 mm are packaged in 1.0, 2.5 and 5.0 kg reels.

They are packed with the utmost care to ensure a suitable storage environment for 24 months. Packings with sections greater than 25 mm in size or rectangular in shape or in customized packaging are available on request.

The package weight may vary by +/- 10% with respect to the nominal value. The dimensional tolerances of the packings follow the international reference guidelines if not otherwise agreed.



Standard sections in mm	Std box kg	Std box lbs	Standard sections in inches
3 mm ÷ 5 mm	1.0	2.2	1/8" ÷ 3/16"
6 mm ÷ 12 mm	2.5	5.5	1/4" ÷ 1/2"
14 mm ÷ 25 mm	5.0	11	9/16" ÷ 1"
Over 25 mm	On request	On request	On request

Packing cutter with ruler
Product code 006076

Packing cutter
Product code 056860

Extractor set
Product code 014870

Replacement extractor tips
Product code 014872

For correct product use, we recommend not using any kind of lubricant or grease as it could damage the fibres and compromise the packing performance.

The length of each ring and the quality of the cut are essential for achieving the highest performance. It is always best to cut the packing with professional tools. In addition, use special extractors to remove packings from stuffing boxes.