Catalogue

DYNAMIC SEALING

STATIC SEALING

VALVES

TOOLS AND ACCESSORIES

SERVICES

Designer for industrial sealing solutions

GROUPE LATTY®

SUMMARY



Quality
Innovation
Performance

GROUPE LATTY®

Designer for industrial sealing solutions

LATTY PRESENTATION

Innovated to last

GROUPE LATTY has been designing and manufacturing industrial sealing solutions in many diverse industrial areas for over a century. This longevity relates to the permanent willingness to innovate so as to address each new technical challenge, in France and worldwide.

Founded in 1920, this family-run company is now run by Christian-Xavier LATTY, the founder's grandson.

GROUPE LATTY belong to such various industrial sectors such as Agrichemical, food & drink chemical, petrochemical, pharmaceutical, waste water, pulp and paper, energy, aerospace, automotive, shipbuilding and mining, etc. Designers man and women working within these industries trust the manufacture of Latty® products, due to Latty's understanding of what addressing a challenge means.

We combine our expertise and with state-of-the-art equipment located at our production facilities in Brou, France (near to Chartres). Also, based here is our R&D department, testing laboratory, gasket cutting, mechanical seal repair and reconditioning workshops.

Our packing, mechanical seals, rotary unions, static and flange seals all meet the same high-quality criteria. In other words, they will withstand repeated stress in harsh environments, always providing the same sealing efficiency.

Designer for industrial sealing solutions

DESIGNER FOR INDUSTRIAL SEALING SOLUTION

A comprehensive range of products

The Latty® product is expected to meet particular requirements from the design stage through to testing and manufacture. This is the way the Group has been providing its industrial customers full reliability for over a century..

The complete Latty® range of sealing products are as follows:

- Compression packings, available as boxes and cuts, preformed and compressed rings.
- Mechanical seals, sealing solutions for pumps, compressors and mixers.
- Rotary unions, solutions for rotating applications where multiple media is required.
- Gasketing, available in sheet material, cut gaskets and metallic.
- Tools and accessories: extractors, packing cutters, etc.

And additional services...

Because technical solutions are best suited for industries and are often custom-designed, Groupe Latty has teams of technical consultants at their disposal.

Once an in-depth assessment of the application, including the needs and conditions of use, a recommendation report including implementation solutions will be handed over.

If necessary, on-site or off-site technical training can be provided to guarantee the sustainability of the rotary unit, bolted assembly or the valve sealing systems.

AS CLOSE AS POSSIBLE TO CUSTOMERS

In France...

The French distribution network is made up of a hundred of distributors and gasket cutters, managed by teams of technicians and sales engineers who have expert knowledge of the characteristics and applications of Latty® products. They work directly with companies in their areas as to be as close as possible to the requirements of the end user.

... Worldwide

GROUPE LATTY's reputation goes beyond the borders of France with subsidiarie in Europe, South America and North Africa. Also, LATTY® is distributed in the United States, in Africa, in Oceania, in China, etc. Sales abroad account for about half the Group's sales.

Our subsidiaries and offices:

West Africa	Argentina	United States
South Africa	Belgium	Morocco
Germany	Chile	Poland
United-Kingdom	Spain	Switzerland

Designer for industrial sealing solutions

SEALING SOLUTIONS FOR INDUSTRIES

Diversity as an asset

Today, industry trusts GROUPE LATTY. This is due to the requirements for high standards, and the requirements for special approvals. For almost a century, Latty products have benefitted from the diversity acquired from innovations in design.

The LATTY sealing components meet the needs of diverse applications and varied and diverse equipment. Industrial sealing may apply to valves and fittings, rotary machinery or bolted assemblies.

Because there is a specific solution for each application, GROUPE LATTY commits to share its expertise with OEMs and other manufacturers alike.

The main industrial sectors:

- Food processing
- Chemicals
- Aerospace, automotive and shipbuilding
- Mining and quarrying
- Pulp & Paper
- Petrochemicals
- Pharmaceuticals
- Energy: nuclear, thermal, coal, gas, oil, solar, wind, hydrokinetic
- Water treatment

Some examples of equipment that require LATTY sealing components:

- Industrial valves and fittings
- Pumps
- Agitators
- Cookers
- Dryer cylinders
- Mixers
- Stirrers
- Crushers
- Reactors
- Many more

...

A HIGH-PERFORMANCE PRODUCTION SITE

Modern machinery at the service of the know-how

GROUPE LATTY's main production site is located in Brou, in Eure-et-Loir (France). On over 10,000 m², men and women perpetuate a know-how that has grown over the century of the company's existence.

Regularly trained in the ISO 9001 procedures, Statistical Process Control (SPC) and in the manufacturing and packaging specifically related to certain approvals, the personnel contribute daily to the quality of the LATTY products.

This production force relies on state-of-the-art machinery including diagonal braiding machines (8 to 36 spindles) or circular braiding machines (18 to 36 spindles), hydraulic presses (12 to 5,500 kN), 4- to 5-axis machining centres, lapping machines, a water-jet cutting machine, etc.

In addition to further deliver customers ever more effective solutions, a group of engineers and technicians lead a Research & Development Centre within the production area.

Made in France

Designer for industrial sealing solutions

TECHNICAL TRAINING DEDICATED INDUSTRIAL SEALING SOLUTIONS

For sustainable sealing solutions

Industrial sealing is an issue that goes far beyond the issue of productivity. As well as the financial element, staff safety and environmental protection are also important considerations. In order to be equal to this responsibility, GROUPE LATTY provides its customers with training in the assembly and maintenance of its equipment using best practice techniques.

Training modules are aimed at any kind of customers. They can be delivered in different languages, taking into account the variety of equipment, the specific operating conditions of the activity and are adapted to the level of each participant's expertise, whether from the maintenance or the engineering departments.

These training modules aim to give an understanding of the varying seal failures and how to handle the varying leak occurrences in:

- **sealing rotary units:** mechanical seals and packings for the dynamic sealing of pumps or agitation processes.
- **sealing in valves:** packings, rings and gaskets for semi-static sealing.
- **sealing bolted assemblies:** cut gaskets, compressed expanded graphite gaskets, for static sealing in the metal sheet or pipework industry.

LATTY International is a **training organisation** registered to the French regional office of work and employment, the vocational training number is **24750019028.**

QUALITY ABOVE ALL

Latty quality policy, the evidence of a permanent commitment

With almost a century's existence behind us, GROUPE LATTY had already defined its main quality goals before this strategy was confirmed by the first ISO certification in 1933.

Since then, the Group's choices have enabled us to develop a quality strategy and assign to it objectives and related resources that allow all staff members to engage in it, in a coherent dynamic way.

Thus, the products and services supplied by Latty continue to meet the requirements of the Group's customers who remain faithful to the brand, which is evidence of their satisfaction.

Designer for industrial sealing solutions

RESEARCH & DEVELOPMENT: THE KEYS TO SUCCESS

Continuous improvement: As a drive to Innovation

GROUPE LATTY helps its customers to incorporate the technical innovations demanded by an increasingly competitive environment. Every day, a team of engineers focuses exclusively on developing new processes and designing new products that provide dynamic, semi-dynamic or static sealing.

Every year, 5% of GROUPE LATTY revenues are invested in the test laboratory at its plant in Brou. All products are tested in actual operating conditions in order to perfectly satisfy users' needs.

Whether it's a matter of reducing frictional forces, facilitating equipment operation while preserving efficiency or cutting down on maintenance time, GROUPE LATTY strives to deliver ever more innovative products.

These efforts are successful when Latty's customers are awarded their ISO 15848, API 622, 624 or 641 qualifications.

PRODUCT APPROVAL:

Latty® products satisfy the requirements of a large number of approvals, standards and directives.

Food processing: FDA, EC 1935/2004

Water: WRAS, KTW

Nuclear energy: PMUC, AECL

Fire test: API 607, API 589

Gas: DVGW, TÜV

Hygiene: EHEDG,

Oxygen: BAM, ATEX, SHELL

Fugitive emissions: API 622, API 624, API 641, ISO 15848-1, TÜV VDI 2440, SHELL, Total SGM 2082.TUY

APPROVALS: MANUFACTURERS AND CUSTOMERS TRUST US

Trust as a partner

By virtue of a policy of constant innovation, GROUPE LATTY, via its Research & Development department, is able to satisfy new requirements and keep pace with changing standards and directives.

Whether certifying its customers' equipment or its own products trust must be ensured.

EQUIPMENT APPROVAL

Equipment approval by GROUPE LATTY for its customers, whether users or manufacturers is performed within its test and measurement laboratory in Brou.

This platform, which stretches over 500 m², may accommodate large and small equipment alike. Approvals can thus be carried out up to ISO 15848-1 (control valves, on-off valves, in dimensions 1'' to 10'' and pressure classes 150 to 2500 lbs).

Designer for industrial sealing solutions

RECONDITIONING OF MECHANICAL SEALS

Product-services

GROUPE LATTY has a network of service, repair and reconditioning centres in France and abroad via its subsidiaries.

Specialists are at hand in the following cases:

- reconditioning of standard or specific mechanical seals, seals in cartridge boxes, pumps, stirrers, crushers, etc.
- advice for more reliable sealing.
- assessment of the customers' equipment.
- upgrading equipment to take account of changes in technological and environmental standards.
- preparing free detailed and customised cost estimates for the various reconditioning operations.

Our service centres have all the necessary repair and reconditioning tools and equipment to provide:

- extension of the lifetime of your equipment with retrofitting,
- reduced maintenance costs,
- and train customers on their site or at Latty's premises.

Main industrial sectors concerned

- Food processing
- Boilers
- Chemicals
- Pharmaceuticals
- Cosmetics
- Energy
- Extraction and processing of ores
- Water treatment, pumping stations, etc.

A range of mechanical seals intended for the rapid repair of process pumps has been specially designed to meet the requirements of maintenance departments (catalogue on request)**.**

GASKET-CUTTING SERVICE

Gasket cutting: the strength of a network

GROUPE LATTY relies on a wide and competent network for the distribution and the cutting of gaskets. In France and abroad, Latty can thus offer its clients a gasket-cutting service with a quality matching its products.

Latty's partners are all specialists in their area. They distribute and cut gaskets in any shape and material.
Every cut gasket maker has the required production tools such as cutting tables, manual or automatic presses. They have other digital, modern and efficient tools such as water jet cutting or cutter-type tables.

With the quality of the Latty® sheet materials, the main customers work with confidence with these cut gasket makers in industrial sectors such as:

- food processing,
- chemicals,
- energy production,
- petrochemicals,
- aeronautics,
- automotive

...

ADVANTAGES

- Quick provision of services
- Quality of performance
- Quality of the products supplied
- Proximity service
- Traceability
- Prototypes, small and large series

Industry

GROUPE LATTY®

SEALING SOLUTIONS FOR EACH INDUSTRY

Dedicated industrial solutions

We have been able to adapt to all environmental and industrial constraints for almost a century.

Sealing is an issue in most industries:

FOOD-PROCESSING INDUSTRY

Beside standard products such as packings, mechanical seals or static seals, LATTY designs and manufactures sealing solutions to specifically meet the requirements of food-processing industries.

STRENGTHS

- Adapted to such equipment as pumps, valves, agitators, cookers, bottling, filling, etc.
- Sealing systems dedicated to cartridge boxes or rotary unions
- Automatic clean-in- place (CIP) and sterilisation in place (SIP) processes
- Approved products

SERVICES

- On site repair of or intervention on the customer's equipment
- Design solutions to meet the requirements of the customer's process
- Practical training in rotary machinery on training benches
- Range of process mechanical seals

APPROVALS & CERTIFICATIONS

1935/2004





MINING AND QUARRYING

Thanks to our experience acquired in the mining industry in Africa and in Europe, our ranges of products meet the main challenges such as dust, debris, sludge and moisture present in the mining and quarrying industry. These particularly harsh conditions take into account the safety of men and equipment.

STRENGTHS

- Ranges of robust products suitable for abrasive environments
- Packings that drastically reduce water consumption in arid or poorly irrigated areas
- Mechanical seals for slurries and/or harsh condition of use

SERVICES

- Assembly assistance
- Packing or mechanical seal tightness
- Repair of our sealing solutions in a workshop
- On-site intervention to repair the customer's equipment

CHEMICAL INDUSTRIES

The sealing solutions sought in the chemical industry are mainly oriented towards personnel safety and environmental protection. The products used may be aggressive or hazardous, sometimes subjected to drastic variations in temperatures that make them unstable.
LATTY packings, mechanical seals, rotary unions or cartridge boxes meet the requirements for pumps, valves, mixers, agitators, etc.

STRENGTHS

- Sealing solutions for ATEX cartridge boxes
- Products for high temperatures or cryogenic fluids
- PECODY system, for very harsh applications (see pages p. 86-87)

SERVICES

- On-site repair/intervention
- Auxiliary system

APPROVALS & CERTIFICATIONS





OIL AND GAS

Safety of persons and respect for the environment are a major concern for the oil and gas industry.
For several years now, our Research & Development Department has been devoted to improving sealing efficiency in industrial valves for the oil and gas industries. New products have been designed to reduce fugitive emissions, friction on valve stems, thus reducing the response time of actuators as well as for very specific applications such as liquid or gaseous oxygen transportation.

Numerous of manufacturers every year entrust us with their equipment to provide them with the necessary fittings and instruments for ISO 15848, API 622 approval.

STRENGTHS

- Solutions for all valve sealing applications: stuffing boxes, seats, flanges, bodies/bonnets
- Unmatched experience in industrial valves and fittings
- Material and product approvals

SERVICES

- Training in the sealing of valves and bolted assemblies
- Test laboratory for the ISO 15848 or API approval for valve manufacturers

APPROVALS & CERTIFICATIONS

- API 622
- BAM
- ISO 15848-1
- 2440
- Shell, TOTAL

WATER TREATMENT

We use drinking water every day without asking ourselves any questions. Yet this natural resource tends to deplete.
That is the reason why we provide specific products to the water industry (extraction, waste water treatment, drinking water) for improved respect for the environment and reduction in water consumption.

STRENGTHS

- Split seal for use in hard to access areas
- Minimising operational costs due to extension of mean time between failure (MTBF)
- Process mechanical seals

SERVICES

- Increasing the reliability of the pump sealing systems
- Training in rotary units and valves and fittings
- Study of the sealing solutions to reduce water consumption

APPROVALS & CERTIFICATIONS

PAPER INDUSTRY

Environmental protection and the reduction of water consumption are priorities for the paper industry, but reducing, or even eliminating down-time is just as important. Our reliable quality products meet these expectations.

STRENGTHS

- Products optimised to specific service conditions
- Silicone-free packings
- Rotary unions or mechanical seals dedicated to the paper applications
- Additional peripheral equipment complete the product offer, thus providing a global solution that will meet your requirements

SERVICES

- Traininig to reduce intervention and maintenance time
- Appraisals and repairs of mechanical seals
- Assistance for the assembly packings or mechanical seals in rotary unions

ENERGY PRODUCTION

As a long-time partner with the key players in energy production, we have developed sealing solutions for for NUCLEAR, THERMAL, HYDRO ENERGIES, and also for renewable energies such as SOLAR, WIND or TIDAL..

An Energy division has been set up comprising of technicians and sales staff specifically trained in these industries and their requirements.

STRENGTHS

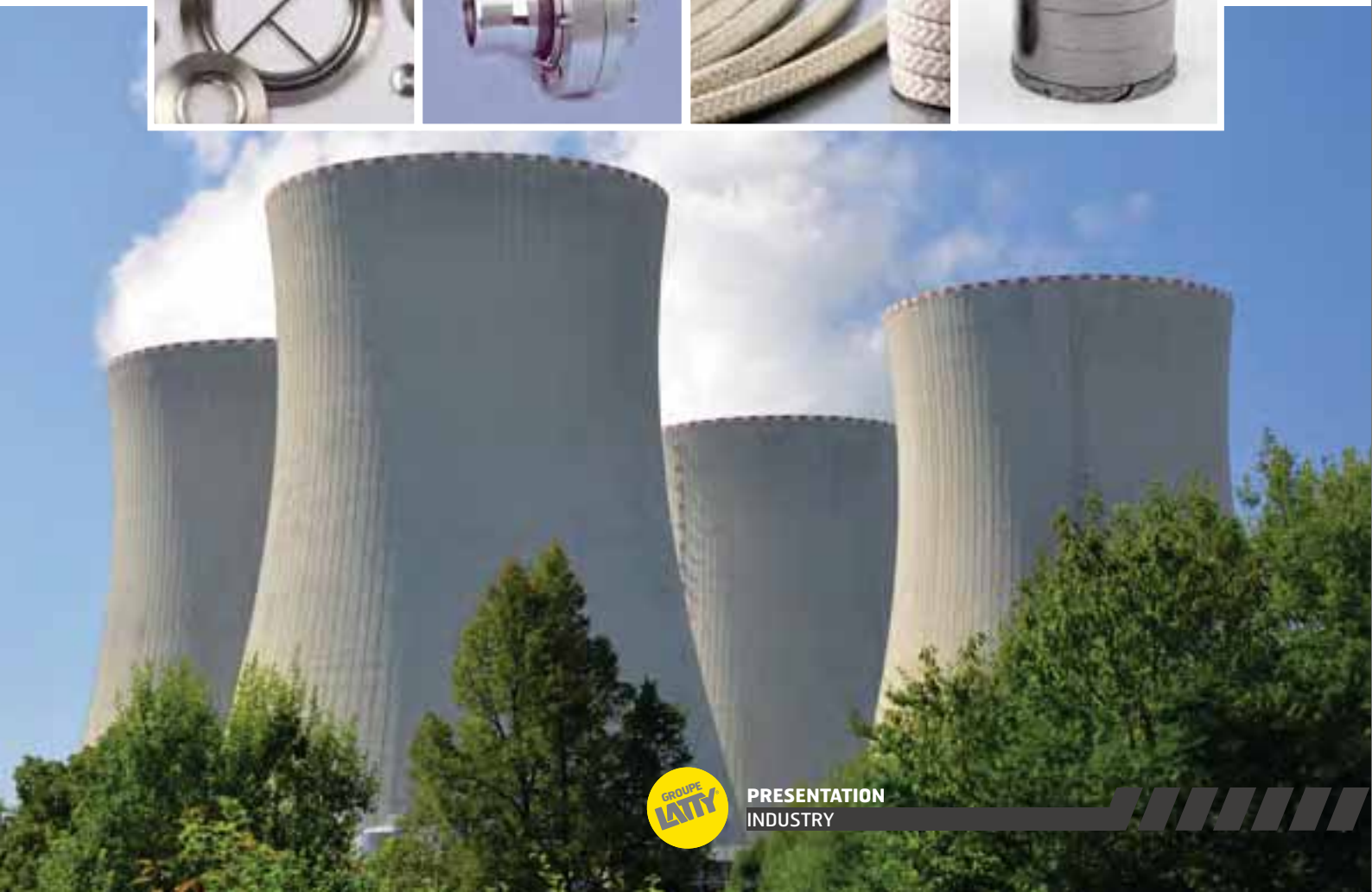
- Quality, safety, reliability of the equipment
- Experience with many manufacturers
- Expertise in complex projects

SERVICES

- Project support tailored to requirements: research and recommendations
- Training for the project and/or maintenance teams
- Expertise in and repairs of mechanical seals
- Provision of assistance services for on-site installation

APPROVALS



PHARMACEUTICAL INDUSTRY

Traceability, safety of people and equipment, standard compliance are a major concern for pharmaceutical companies.
Avoiding any contamination of medical products by means of reliable and efficient sealing is possible with our solutions for pumps, valves, agitator or stirrers.

STRENGTHS

- Standard or specific ranges
- PECODY system for pharmaceutical applications
- Mechanical seals and packing in compliance with approvals and directives

SERVICES

- Repair
- Site Assistance and troubleshooting
- Sealing optimisation by increasing its reliability
- Assistance for the installation of mechanical seals

APPROVALS & CERTIFICATIONS

- USP CLASS VI

MARINE INDUSTRY

Having a breakdown out at sea can be demanding.
We have therefore developed a range of mechanical seals specifically for the marine industry and its constraints such as a mechanical seal that can be disassembled out at sea whilst maintaining sealing entegrity between salt water and the ship by means of a static inflatable seal.

STRENGTHS

- Bulkhead mechanical seals (GPC)
- Mechanical seal or stuffing box packing for all marine applications
- Mechanical seal for pumps
- Range of multi-purpose gaskets, to suit a wide range of marine applications.

SERVICES

- Repair with cut gaskets
- Specific tools
- Training

APPROVALS

- BUREAU VERITAS
- DCNS

OTHER INDUSTRIES

A large number of other industries utilise our sealing solutions: special machinery, boilers, machine-tools, etc.

One of them, and by far not the only one is the EIFFEL TOWER, has been operating part of its machinery using our products for many decades now.

STRENGTHS

- A complete range of sealing solutions
- Approvals in compliance with applicable regulations
- Personnel specialising in industrial sealing
- A company at the cutting edge of research
- A French company recognised as a leader in its activity which has its clients benefit from the expertise
- Products designed and manufactured up to ISO 9001 quality procedures
- Technical teams dedicated to the design of technical solutions tailored to the specific user's features.

SERVICES

- Training in industrial sealing for rotary unions, valves or bolted assemblies
- A test laboratory
- Repairs and interventions on customer's site
- Technical assessment at the service of customers
- Technical and sales teams at the service of any type of industry
- Products rapidly available from comprehensive stock
- Refurbishment and repair of all makes of mechanical seals
- Studies and solution execution to suit every customer's process

DYNAMIC SEALING: ROTARY AND RECIPROCATING UNITS

Our solutions include a large selection of sealing products and recommendations regarding the use of dynamic sealing in standard products or adapted to rotary or reciprocating units such as:

- Single mechanical seal or cartridge assembly
- PECODY, factory-preset cartridge box fitted with packings
- Packing precut to the required length or as rings
- Compressed or preformed rings
- Auxiliary pressurisation, control, cooling
- Rotary unions for many applications

These sealing solutions are determined according to the following characteristics:

- Nature of the fluid to be sealed (viscosity, pH, density, etc.)
- Pressure of the fluid to be sealed
- Temperature
- Environment
- Mechanical conditions
- Customer's constraints and requirements

All of these operating conditions are gathered in a specification drafted jointly with our customers to determine the recommendations and most suitable types of assembly.

EQUIPMENT

- **Rotary units: pumps, reactors, agitators, stirrers, mixers, dryer filters, extruders, etc.**
- **Reciprocating units: piston pumps, homogenisers, etc.**

APPROVALS

ROTARY AND RECIPROCATING UNITS

Rotary Pumps
Valves
Reciprocating Pumps
Static Applications
Insulation

Food industry / Mining industry / Chemical industry / Oil and Gas / Water treatment / Pulp and paper /
Energy production / Pharmaceutical Industry / Navire Industry / All industries



CHOOSING A MECHANICAL SEAL

A mechanical seal is a set consisting of two sub-assemblies that provides sealing efficiency between the rotary part and the stationary part and is generally used to seal shafts in pumps, agitators, etc.

The basic principle is common to all mechanical seals: provide sealing efficiency between two moving faces, lubricated by a liquid film, the so-called primary sealing.

- The film maintained by the rotation comes from the medium conveyed by the machine or is an auxiliary fluid.
- An insignificant part of the film may flow out of the friction faces: this flow is called the consumption of the seal.
- The friction, at the level of the film, produces calories that heat the friction faces, the film itself and the surrounding fluid.
- To ensure optimum seal face service life, the film must be stable and liquid.
- To prevent it from vaporising, the fluid to be sealed should have a sufficient pressure at the level of the seal faces.

Depending on the service conditions and nature of the fluid, there are three types of seals:

- Mechanical seals lubricated by a liquid
- Non-lubricated mechanical seals (contact seals) or "dry" seals
- Contactless mechanical seals, gas type

Depending on the applications, component or cartridge seals will be used. They can be either unbalanced (U) **or balanced** (B).

Secondary sealing is ensured by O-rings, elastomer bellows, welded or hydroformed metal bellows that provide leakproof connection between the friction faces and holders.

Depending on the design, other adaptation elements may be associated to the sub-assemblies (sleeves, flange, cover, drive ring, etc.)

Parameters to be considered when choosing a mechanical seal:

FLUID TO BE SEALED: be aware of the characteristics (abrasive, corrosive, volatile, etc.) and have additional information about the fluid such as its chemical formula, concentration,density, composition when mixed, crystals and solids, toxicity, corrosivity (pH), volatility (vaporising pressure), viscosity.

PRESSURE: required to select a balanced seal (B) > 10 bar
or an unbalanced seal (U) < 10 bar.

SPEED: a mechanical seal should be dynamically stable at its rotation speed. Geometric imperfections of the machine (for example stator coaxial misalignment to rotor) generate an unstable interface film at high speed. Over 20 m/s, the choice should be stationary mechanical seals that allow for more geometric imperfections as they are not subjected to centrifugal forces.To avoid excessive heat generation and to promote a stable fluid film within the interface, the choice of the materials will depend on the speed.

TEMPERATURE: all mechanical seal components should retain their physical integrity over the whole service temperature range.

None of the above parameters may be considered independently from each other. Their combination will actually change the service characteristics of the mechanical seal.

The materials used for the friction faces are selected based on their intrinsic properties(chemical resistance, mechanical and thermal characteristics) **and their pairing suitability** (lubrication).

APPROVALS

EXAMPLE

LATTYseal B 24610 U6 U6 V4 = mechanical seal type 24610 balanced (B) **with friction face made of pure silicon carbide** (U6) **/ pure silicon carbide** (U6) **and FKM FDA-approved O-ring** (V4)

Functional diagram of a mechanical seal, See page 220-222

Table of friction torques de frictions, See page 223

Single-seal

LATTYSEAL U 1000

Dynamic sealing through complete, unbalanced mechanical seal

IT'S CONICAL SPRING CONCEPT MAKES IT DEPENDENT ON DIRECTION OF ROTATION

- FULLY RELIABLE SEAL
- EASY TO INSTALL
- COMPACT-SIZE SEAL

OPERATING PARAMETERS (NOT ASSOCIATED)

Pressure : 0 to 10 bar
Temperature : -20 °C to 180°C
Speed : 10 m/s

COMPOSITION

FKM O-ring, right (R) or left (L) winding spring (R G2 B V or L G2 B V). Friction faces stainless steel 1.4571 (G2) , resin-impregnated hard carbon (B)

TYPES OF INDUSTRIES

FLUIDS

All slightly corrosive, non-abrasive and non-clogging fluids.

GUIDELINES, STANDARDS AND APPROVALS
(ON REQUEST)

d1 nominal h6	d3	d4 mini	d6 H 11	d6* ± 0,1	d7* H7	d7 H8	d9 mini	L1 ±0,5	L3	L4	L5 ± 0,1	L6
10	19	22	17	15.5	19.2	21	12	25	18	7	1.5	4
12	21	24	19	17.5	21.6	23	14	25.5	18	7.5	1.5	4
14	23	26	21	20.5	24.6	25	17	25.5	18	7.5	1.5	4
16	26	28	23	22	28	27	19	26.5	18.5	8	1.5	4
18	29	34	27	24	30	33	21	28.5	19	9.5	2	5
20	31	36	29	29.5	35	35	24	29.5	20	9.5	2	5
22	33	38	31	29.5	35	37	26	31	21.5	9.5	2	5
24	35	40	33	32	38	39	28	32.5	23	9.5	2	5
25	36	41	34	32	38	40	29	34	24.5	9.5	2	5
28	40	44	37	36	42	43	33	35.5	24.5	11	2	5
30	43	46	39	39.2	45	45	35	35.5	24.5	11	2	5
32	45	48	42	42.2	48	48	37	39	28	11	2	5
33	47	49	42			48	38	39.5	28	11.5	2	5
35	49	51	44	46.2	52	50	40	39.5	28	11.5	2	5
38	53	58	49	49.2	55	56	44	42.5	30	12.5	2	6
40	56	60	51	52.2	58	58	47	45.5	33	12.5	2	6
43	59	63	54			61	50	49.5	36	13.5	2	6
45	61	65	56	55.3	64	63	52	51	37.5	13.5	2	6
48	64	68	59	59.7	68.4	66	56	56.5	43	13.5	2	6
50	66	70	62	60.8	69.3	70	58	57.5	43.5	14	2.5	6
53	70	73	65			73	61	59.5	45.5	14	2.5	6
55	71	75	67	66.5	75.4	75	64	62.5	47.5	15	2.5	6
58	76	83	70	69.5	78.4	78	67	65.5	50.5	15	2.5	6
60	78	85	72	71.5	80.4	80	69	66.5	51.5	15	2.5	6
63	83	88	75			83	72	67.5	52.5	15	2.5	6
65	84	90	77	76.5	85.4	85	74	67.5	52.5	15	2.5	6
68	88	93	81	82.7	91.5	90	78	69	53.7	15.3	2.5	7
70	90	95	83	83	92	92	80	69.5	54.2	15.3	2.5	7
75	97	104	88	90.2	99	97	85	70.5	55.2	15.3	2.5	7
80	100	109	95	95.2	104	105	91	74.5	57.5	17	3	7

*Complies with NF EN 12756 r : 1,2 mm for d1 10 to 16 - 1,6 mm for d1 18 to 35 - 2,5 mm for d1 38 to 80. * These special stationaries, used on many pumps, can be delivered on request*

Single-seal

LATTYSEAL B 1000

Dynamic sealing through complete, balanced mechanical seal

IT'S CONICAL SPRING CONCEPT MAKES IT DEPENDENT ON DIRECTION OF ROTATION

- FULLY RELIABLE SEAL
- EASY TO INSTALL
- COMPACT-SIZE SEAL

OPERATING PARAMETERS (NOT ASSOCIATED)

Pressure : 0 to 25 bar
Temperature : -20 °C to 180°C
Speed : 20 m/s

COMPOSITION

FKM O-ring, right (R) or left (L) winding spring (R G2 B V or L G2 B V). Friction faces stainless steel 1.4571 (G2) , resin-impregnated hard carbon (B)

TYPES OF INDUSTRIES

FLUIDS

All slightly corrosive, non-abrasive and non-clogging fluids.

GUIDELINES, STANDARDS AND APPROVALS
(ON REQUEST)

d1 nominal h6	d2 h6	d3 maxi	d4 mini	d6 H 11	d7 H8	d9 mini	L1 ±0,5	L2	L3	L4	L5 ± 0,1	L6 ± 0,1
10	14	24	26	17	21	17	37	18	26.5	10.5	1.5	4
12	16	26	28	19	23	19	39	18	28.5	10.5	1.5	4
14	18	32	34	21	25	21	40	18	29.5	10.5	1.5	4
16	20	34	36	23	27	24	42.5	18	32	10.5	1.5	4
18	22	36	38	27	33	26	45	20	32.5	12.5	2	5
20	24	38	40	29	35	28	45	20	32.5	12.5	2	5
22	26	40	42	31	37	30	47	20	34.5	12.5	2	5
24	28	42	44	33	39	33	47.5	20	35.5	12	2	5
25	30	44	46	34	40	35	47.5	20	35.5	12	2	5
28	33	47	49	37	43	37	50	20	38	12	2	5
30	35	49	51	39	45	40	50	20	38	12	2	5
32	38	54	58	42	48	44	53	20	41.5	11.5	2	5
33	38	54	58	42	48	44	54	20	42.5	11.5	2	5
35	40	56	60	44	50	47	55	20	43.5	11.5	2	5
38	43	59	63	49	56	50	60	23	46.5	13.5	2	6
40	45	61	65	51	58	52	63	23	49.5	13.5	2	6
43	48	64	68	54	61	56	68	23	54.5	13.5	2	6
45	50	66	70	56	63	58	69	23	55.5	13.5	2	6
48	53	69	73	59	66	61	70	23	56.5	13.5	2	6
50	55	71	75	62	70	64	73	25	58	15	2.5	6
53	58	78	83	65	73	67	75	25	60.5	14.5	2.5	6
55	60	80	85	67	75	69	76	25	61.5	14.5	2.5	6
58	63	83	88	70	78	72	76	25	61	15	2.5	6
60	65	85	90	72	80	74	77	25	62	15	2.5	6
63	68	88	93	75	83	78	80	25	65	15	2.5	6
65	70	90	95	77	85	80	80	25	65	15	2.5	6
70	75	99	104	83	92	86	82	28	65.5	16.5	2.5	7
75	80	104	109	88	97	91	85	28	68.5	16.5	2.5	7
80	85	109	114	95	105	96	87	28	70	17	3	7

*"Complies with NF EN 12756 r : 1,2 mm for d1 10 to 16 - 1,6 mm for d1 18 to 35 - 2,5 mm for d1 38 to 80. * These special stationaries, used on many pumps, can be delivered on request"*

Single-seal

LATTYSEAL U 1112

Dynamic sealing through complete, unbalanced mechanical seal

IT'S CONICAL SPRING CONCEPT MAKES IT DEPENDENT ON DIRECTION OF ROTATION

- UNBALANCED MECHANICAL SEAL
- RUGGED DESIGN, IN PARTICULAR WITH ITS SHRUNK STATIONARY FIT AND STAINLESS STEEL HOLDER

OPERATING PARAMETERS (NOT ASSOCIATED)

Pressure : 0 to 10 bar
Temperature : -20 °C to 180°C
Speed : 10 m/s

COMPOSITION

Supplied with FKM O-ring and a kit of ethylene-propylene (E) O-rings
Resin-impregnated hard carbon (B), pure silicon carbide (U6)

TYPES OF INDUSTRIES

FLUIDS

All slightly corrosive, non-abrasive and non-clogging fluids.

GUIDELINES, STANDARDS AND APPROVALS
(ON REQUEST)

d1 nominal h6	d3	d4 mini	d6 H 11	d7 H8	d9 mini	L1 ±0,5	L3	L4	L5 ± 0,1	L6 ± 0,1	L8
10	20	22	17	21	12	25	17.5	7.5	1.5	4	7.5
12	22	24	19	23	14	25.5	18	7.5	1.5	4	7.5
14	24	26	21	25	17	25.5	17.5	8	1.5	4	7.5
16	26	28	23	27	19	26.5	18.5	8	1.5	4	7.5
18	32	34	27	33	21	28.5	19.5	9	2	5	7.5
20	34	36	29	35	24	29.5	19.5	10	2	5	7.5
22	36	38	31	37	26	31	21	10	2	5	7.5
24	38	40	33	39	28	32.5	22	10.5	2	5	7.5
25	39	41	34	40	29	34	23.5	10.5	2	5	7.5
28	42	44	37	43	33	35.5	25	10.5	2	5	7
30	44	46	39	45	35	35.5	24	11.5	2	5	7.5
32	46	48	42	48	37	39	27.5	11.5	2	5	7.5
33	47	49	42	48	38	39.5	28.5	11	2	5	7.5
35	49	51	44	50	40	39.5	28.5	11	2	5	7.5
38	54	58	49	56	44	42.5	30.5	12	2	6	8.5
40	56	60	51	58	47	45.5	33	12.5	2	6	8.5
43	59	63	54	61	50	49.5	37	12.5	2	6	8.5
45	61	65	56	63	52	51	38.5	12.5	2	6	8.5
48	64	68	59	66	56	56.5	44	12.5	2	6	8.5
50	66	70	62	70	58	57.5	44	13.5	2.5	6	8
53	69	73	65	73	61	59.5	46	13.5	2.5	6	8
55	71	75	67	75	64	62.5	49	13.5	2.5	6	8
58	78	83	70	78	67	65.5	51	14.5	2.5	6	8
60	80	85	72	80	69	66.5	52	14.5	2.5	6	8
63	83	88	75	83	72	67.5	52	15.5	2.5	6	8
65	85	90	77	85	74	67.5	52	15.5	2.5	6	8
68	88	93	81	90	78	69	53.5	15.5	2.5	7	8
70	90	95	83	92	80	69.5	54	15.5	2.5	7	8
75	99	104	88	97	85	70.5	55	15.5	2.5	7	8
80	104	109	95	105	91	74.5	58.5	16	3	7	8

Complies with NF EN 12756 d8 (tigh to sleeve) : 3 mm for d1 18 to 35, 4 mm for d1 38 to 100. r : 1,2 mm for d1 10 to 16 -1.6 mm for d1 18 to 35, 2,5 mm for d1 38 to 100

Single-seal

LATTYSEAL U 1212

Dynamic sealing through complete, unbalanced mechanical seal

IT'S CONICAL SPRING CONCEPT MAKES IT DEPENDENT ON DIRECTION OF ROTATION

- WITHSTANDS EXTREME CONDITIONS
- OPTIONAL TUNGSTEN CARBIDE POSSIBLE FOR INSTALLATION IN MORE SEVERE OPERATING CONDITIONS.

OPERATING PARAMETERS (NOT ASSOCIATED)

Pressure : 0 to 10 bar
Temperature : -20 °C to 180°C
Speed : 10 m/s

COMPOSITION

FKM O-ring, right (R) or left (L) winding spring (R U6U6 V or L U6U6 V). Supplied with friction faces made of pure silicon carbide (U6) and a kit of ethylene-propylene (E) O-rings

TYPES OF INDUSTRIES

FLUIDS

All slightly corrosive, abrasive and non-clogging fluids.

GUIDELINES, STANDARDS AND APPROVALS
(ON REQUEST)

d1 nominal h6	d3	d4 mini	d6 H 11	d7 H8	d9 mini	L1 ± 0,5	L3	L4	L5 ± 0,1	L6 ± 0,1	L8
10	20	22	17	21	12	25	17.5	7.5	1.5	4	7.5
12	22	24	19	23	14	25.5	18	7.5	1.5	4	7.5
14	24	26	21	25	17	25.5	17.5	8	1.5	4	7.5
16	26	28	23	27	19	26.5	18.5	8	1.5	4	7.5
18	32	34	27	33	21	28.5	19.5	9	2	5	7.5
20	34	36	29	35	24	29.5	19.5	10	2	5	7.5
22	36	38	31	37	26	31	21	10	2	5	7.5
24	38	40	33	39	28	32.5	22	10.5	2	5	7.5
25	39	41	34	40	29	34	23.5	10.5	2	5	7.5
28	42	44	37	43	33	35.5	25	10.5	2	5	7
30	44	46	39	45	35	35.5	24.5	11	2	5	7.5
32	46	48	42	48	37	39	28	11	2	5	7.5
33	47	49	42	48	38	39.5	28.5	11	2	5	7.5
35	49	51	44	50	40	39.5	28.5	11	2	5	7.5
38	54	58	49	56	44	42.5	30.5	12	2	6	8.5
40	56	60	51	58	47	45.5	33	12.5	2	6	8.5
43	59	63	54	61	50	49.5	37	12.5	2	6	8.5
45	61	65	56	63	52	51	38.5	12.5	2	6	8.5
48	64	68	59	66	56	56.5	44	12.5	2	6	8.5
50	66	70	62	70	58	57.5	44	13.5	2.5	6	8
53	69	73	65	73	61	59.5	46	13.5	2.5	6	8
55	71	75	67	75	64	62.5	49	13.5	2.5	6	8
58	78	83	70	78	67	65.5	51	14.5	2.5	6	8
60	80	85	72	80	69	66.5	52	14.5	2.5	6	8
63	83	88	75	83	72	67.5	52	15.5	2.5	6	8
65	85	90	77	85	74	67.5	52	15.5	2.5	6	8
70	88	93	81	90	78	69	53.5	15.5	2.5	7	8
75	90	95	83	92	80	69.5	54	15.5	2.5	7	8
80	99	104	88	97	85	70.5	55	15.5	2.5	7	8
80	104	109	95	105	91	74.5	58.5	16	3	7	8

Complies with NF EN 12756 and DIN 24960 d8 (tigh to sleeve) : 3 mm for d1 18 to 35, 4 mm for d1 38 to 80 r : 1,2 mm for d1 10 to 16 -1.6 mm for d1 18 to 35, 2,5 mm for d1 38 to 80

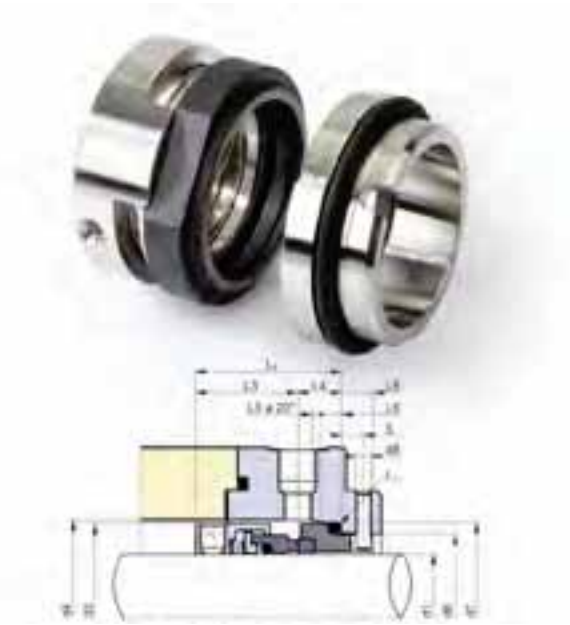
Single-seal

LATTYSEAL U 6812

Dynamic sealing through complete, unbalanced mechanical seal

REMOVABLE FRICTION FACE - FDA-APPROVED STANDARD VERSION

- UNBALANCED VERSION
- COMPACT SIZE
- MULTIPURPOSE



OPERATING PARAMETERS (NOT ASSOCIATED)

Pressure : 0 to 10 bar
Temperature : -20 °C to 220°C
Speed : 15 m/s

COMPOSITION

Supplied with FKM O-ring and a kit of ethylene-propylene (E) O-rings
Friction faces made of resin-impregnated carbon (B)/ pure silicon carbide (U6) or pure silicon carbide (U6) / pure silicon carbide(U6)

TYPES OF INDUSTRIES

FLUIDS

All slightly corrosive, non-abrasive and non-clogging fluids.

GUIDELINES, STANDARDS AND APPROVALS

CE (ON REQUEST) FDA (ON REQUEST)

d1 nominal h6	d3 (U) maxi	d4 (U) mini	d6 H 11	d7 H8	L	L3	L4	L5 ± 0,1	L6 ± 0,1	L8
16	26	28	23	27	28	20	8	2	5	7.5
18	32	34	27	33	30.5	21.5	9	2	5	7.5
20	34	36	29	35	31.5	21.5	10	2	5	7.5
22	36	38	31	37	31.5	21.5	10	2	5	7.5
24	38	40	33	39	33.5	23	10.5	2	5	7.5
25	39	41	34	40	34.5	24	10.5	2	5	7.5
28	42	44	37	43	33.5	23	10.5	2	5	7
30	44	46	39	45	35.5	24	11.5	2	5	7.5
32	46	48	42	48	35.5	24	11.5	2	5	7.5
33	47	49	42	48	35	24	11	2	5	7.5
35	49	51	44	50	35	24	11	2	5	7.5
38	54	58	49	56	38.5	26.5	12	2	6	8.5
40	56	60	51	58	40	27.5	12.5	2	6	8.5
43	59	63	54	61	40	27.5	12.5	2	6	8.5
45	61	65	56	63	40	27.5	12.5	2	6	8.5
48	64	68	59	66	40	27.5	12.5	2	6	8.5
50	66	70	62	70	40.5	27	13.5	2.5	6	8
53	69	73	65	73	40.5	27	13.5	2.5	6	8
55	71	75	67	75	40.5	27	13.5	2.5	6	8
58	78	83	70	78	43	28.5	14.5	2.5	6	8
60	80	85	72	80	43	28.5	14.5	2.5	6	8
63	83	88	75	83	47	31.5	15.5	2.5	6	8
65	85	90	77	85	47	31.5	15.5	2.5	6	8
68	88	93	81	90	49	33.5	15.5	2.5	7	8
70	90	95	83	92	47.5	32	15.5	2.5	7	8
75	99	104	88	97	47.5	32	15.5	2.5	7	8.2
80	104	109	95	105	49	33	16	3	7	8
85	109	114	100	110	48	32	16	3	7	8
90	114	119	105	115	55	38	17	3	8	8
95	119	124	110	120	56	38	18	3	8	8
100	124	129	115	125	56	38	18	3	8	8

Complies with NFE 29991 and DIN 24960 except for L which is less than the L1K in the standards.Adaptor rings can be supplied if required. d8 (tigh to sleeve) : 3 mm for d1 16 to 35, 4 mm for d1 38 to 100. r : 1,6 mm for d1 16 to 55, 2,5 mm for d1 58 to 100*

Single-seal

LATTYSEAL B 6812

Dynamic sealing through complete, balanced mechanical seal

REMOVABLE FRICTION FACE

- BALANCED VERSION
- COMPACT SIZE
- MULTIPURPOSE USE

OPERATING PARAMETERS (NOT ASSOCIATED)

Pressure : 10 to 25 bar
Temperature : -20 °C to 220°C
Speed : 25 m/s

COMPOSITION

Supplied with FKM O-ring and a kit of ethylene-propylene (E) O-rings
Friction faces made of resin-impregnated carbon (B)/ pure silicon carbide (U6) or pure silicon carbide (U6) / pure silicon carbide(U6)

TYPES OF INDUSTRIES

FLUIDS

All slightly corrosive, non-abrasive and non-clogging fluids.

GUIDELINES, STANDARDS AND APPROVALS
(ON REQUEST)

d1 nominal h6	d2 h6	d3 (B) maxi	d4 (B) mini	d6 H11	d7 H8	L*	L2 ± 0,5	L3	L4	L5 ± 0,1	L6 ± 0,1	L8
18	22	36	38	27	33	30.5	20	29.5	9	2	5	7.5
20	24	38	40	29	35	31.5	20	32.5	10	2	5	7.5
22	26	40	42	31	37	31.5	20	33.5	10	2	5	7.5
24	28	42	44	33	39	33.5	20	33	10.5	2	5	7.5
25	30	44	46	34	40	34.5	20	34	10.5	2	5	7.5
28	33	47	49	37	43	33.5	20	33	10.5	2	5	7
30	35	49	51	39	45	35.5	20	33	11.5	2	5	7.5
32	38	54	58	42	48	35.5	20	34	11.5	2	5	7.5
33	38	54	58	42	48	35	20	34	11	2	5	7.5
35	40	56	60	44	50	35	20	35	11	2	5	7.5
38	43	59	63	49	56	38.5	23	37.5	12	2	6	8.5
40	45	61	65	51	58	40	23	37.5	12.5	2	6	8.5
43	48	64	68	54	61	40	23	37.5	12.5	2	6	8.5
45	50	66	70	56	63	40	23	37.5	12.5	2	6	8.5
48	53	69	73	59	66	40	23	37.5	12.5	2	6	8.5
50	55	71	75	62	70	40.5	25	38	13.5	2.5	6	8
53	58	78	83	65	73	40.5	25	39	13.5	2.5	6	8
55	60	80	85	67	75	40.5	25	39	13.5	2.5	6	8
58	63	83	88	70	78	43	25	41.5	14.5	2.5	6	8
60	65	85	90	72	80	43	25	41.5	14.5	2.5	6	8
63	68	88	93	75	83	47	25	41.5	15.5	2.5	6	8
65	70	90	95	77	85	47	25	41.5	15.5	2.5	6	8
70	75	99	104	83	92	47.5	28	43	15.5	2.5	7	8
75	80	104	109	88	97	47.5	28	44	15.5	2.5	7	8.2
80	85	109	114	95	105	49	28	44	16	3	7	8
85	90	114	119	100	110	48	28	50	16	3	7	8
90	95	119	124	105	115	55	28	50	17	3	7	8
95	100	124	129	110	120	56	28	50	18	3	7	8
100	105	129	134	115	125	56	28	50	18	3	7	7.8

Complies with NFE 29991 and DIN 24960 except for L which is less than the L1K in the standards.Adaptor rings can be supplied if required.d8 (tigh to sleeve) : 3 mm for d1 18 to 35, 4 mm for d1 38 to 100. r : 1.6 mm for d1 18 to 55, 2,5 mm for d1 58 to 100*

The maximum temperature, pressure and speed given in this document cannot be associated in any case.

Single-seal

LATTYSEAL B 17110 B

Dynamic sealing through complete, balanced mechanical seal

PERFORMANCE AT HIGH TEMPERATURES, HEAT TRANSFER FLUIDS

- SELF-CLEANING MECHANICAL SEAL
- POTENTIALLY USABLE FOR HIGH-ROTATION SPEEDS
- BELLOWS MECHANICAL SEAL

OPERATING PARAMETERS (NOT ASSOCIATED)

Pressure : 0 to 20 bar
Temperature : -20 °C to 200°C
Speed : 20 m/s

COMPOSITION

Supplied with FKM O-ring Metal-impregnated carbon (A), pure silicon carbide (U6)

TYPES OF INDUSTRIES

FLUIDS

All corrosive, abrasive and clogging fluids.

GUIDELINES, STANDARDS AND APPROVALS
(ON REQUEST)

Single-seal

LATTYSEAL B 17110 B

Dynamic sealing through complete, balanced mechanical seal

METRIC VERSION

d1 nominal h6	d3	d4 mini	d6 H11	d7 H8	L1	L3	L4	L5 ± 0,1	L6 ± 0,1	L8
25	37	41	34	40	40	30.5	9.5	2	5	7.5
28	42.8	44	37	43	42.5	32	10.5	2	5	7
30	43	46	39	45	42.5	32	10.5	2	5	7.5
32	43	48	42	48	42.5	32	10.5	2	5	7.5
33	46	49	42	48	42.5	32	10.5	2	5	7.5
35	49.2	51	44	50	42.5	32	10.5	2	5	7.5
38	49.4	58	49	56	45	33.5	11.5	2	6	8.5
40	55.5	60	51	58	45	33.5	11.5	2	6	8.5
43	58.7	63	54	61	45	33.5	11.5	2	6	8.5
45	58.7	65	56	63	45	33.5	11.5	2	6	8.5
48	61.9	68	59	66	45	33.5	11.5	2	6	8.5
50	65.1	70	62	70	47.5	34.5	13	2.5	6	8
53	68.2	73	65	73	47.5	34.5	13	2.5	6	8
55	71.4	75	67	75	47.5	34.5	13	2.5	6	8
58	74.6	83	70	78	52.5	39	13.5	2.5	6	8
60	74.6	85	72	80	52.5	39	13.5	2.5	6	8
63	80.9	88	75	83	52.5	39	13.5	2.5	6	8
65	84.1	90	77	85	52.5	39	13.5	2.5	6	8
68	87.3	93	81	90	52.5	39	13.5	2.5	7	8
70	87.3	95	83	92	60	45	15	2.5	7	8
75	95.2	104	88	97	60	45	15	2.5	7	8
80	98.4	109	95	105	60	45	15	3	7	8
85	104.8	114	100	110	60	44	16	3	7	8
90	108	119	105	115	65	49	16	3	7	8
95	114.3	124	110	120	65	49	16	3	7	8
100	120.7	129	115	125	65	49	16	3	7	8

Complies with NF E 29991 and DIN 24960 d8 (tight to sleeve) : 3 mm for d1 25 to 35 - 4 mm for d1 38 to 100 r : 1,5 mm for d1 25 to 55 - 2,5 mm for d1 58 to 100.

IMPERIAL VERSION

d1 nominal in	d1 nominal inches	d3	d4 mini	d6 H 11	d7 H8	L1	L3	L4	L5 ± 0,1	L6 ± 0,1	L8
1"	1.000	37	39	34	40	41.3	31.8	9.5	2	5	7.5
1"1/8	1.125	42.8	44.8	39	45	42.3	31.8	10.5	2	5	7.5
1"1/4	1.250	46	50	42	48	43.8	33.3	10.5	2	5	7.5
1"3/8	1.375	49.2	53.2	44	50	47	36.5	10.5	2	5	7.5
1"1/2	1.500	52.4	56.4	49	56	48	36.5	11.5	2	6	8.5
1"5/8	1.625	55.5	59.5	54	61	48	36.5	11.5	2	6	8.5
1"3/4	1.750	58.7	62.7	56	63	48	36.5	11.5	2	6	8.5
1"7/8	1.875	61.9	65.9	59	66	49.6	38.1	11.5	2	6	8.5
2"	2.000	65.1	70.1	65	73	51.1	38.1	13	2.5	6	8
2"1/8	2.125	68.2	73.2	67	75	51.1	38.1	13	2.5	6	8
2"1/4	2.250	71.4	76.4	70	78	53.2	39.7	13.5	2.5	6	8
2"3/8	2.375	74.6	79.6	72	80	53.2	39.7	13.5	2.5	6	8
2"1/2	2.500	80.9	85.9	77	85	53.2	39.7	13.5	2.5	6	8
2"5/8	2.625	84.1	89.1	81	90	54.8	41.3	13.5	2.5	7	8
2"3/4	2.750	87.3	92.3	83	92	56.3	41.3	15	2.5	7	8
2"7/8	2.875	92.1	97.1	88	97	57.8	42.8	15	2.5	7	8
3"	3.000	95.3	100.3	88	97	57.8	42.8	15	2.5	7	8
3"1/8	3.125	98.4	103.4	95	105	59.5	44.5	15	3	7	8
3"1/4	3.250	101.6	106.6	100	110	60.5	44.5	16	3	7	8
3"3/8	3.375	104.8	109.8	100	110	60.5	44.5	16	3	7	8
3"1/2	3.500	108	113	105	115	63.6	47.6	16	3	7	8
3"5/8	3.625	111.1	116.1	110	120	63.6	47.6	16	3	7	8
3"3/4	3.750	114.3	119.3	110	120	63.6	47.6	16	3	7	8
3"7/8	3.875	117.5	122.5	115	125	63.6	47.6	16	3	7	8
4"	4.000	120.7	125.7	115	125	63.6	47.6	16	3	7	8

Complies with NF E 29991 and DIN 24960 d8 (tight to sleeve) : 3 mm for d1 1.000 to 1.375 - 4 mm for d1 1.500 to 4.000 r : 1,5 mm for d1 1.000 to 2.125 - 2,5 mm for d1 2.250 to 4.000

Single-seal

LATTYSEAL B 17210 B

Dynamic sealing through complete, balanced mechanical seal

BELLOWS MECHANICAL SEAL FOR HIGH-TEMPERATURE APPLICATIONS

- SELF-CLEANING MECHANICAL SEAL
- BELLOWS MECHANICAL SEAL

OPERATING PARAMETERS (NOT ASSOCIATED)

Pressure : 0 to 20 bar
Temperature : -20 °C to 200°C
Speed : 20 m/s

COMPOSITION

Supplied with FKM O-ring Pure silicon carbide (U6)

TYPES OF INDUSTRIES

FLUIDS

All corrosive, abrasive and slightly clogging fluids.

GUIDELINES, STANDARDS AND APPROVALS (ON REQUEST)

d1 nominal h6	d3	d4 mini	d6 H 11	d7 H8	L1	L3	L4	L5 ± 0,1	L6 ± 0,1	L8
25	37	41	34	40	40	30.5	9.5	2	5	7.5
28	42.8	44	37	43	42.5	32	10.5	2	5	7
30	43	46	39	45	42.5	32	10.5	2	5	7.5
32	43	48	42	48	42.5	32	10.5	2	5	7.5
33	46	49	42	48	42.5	32	10.5	2	5	7.5
35	49.2	51	44	50	42.5	32	10.5	2	5	7.5
38	49.4	58	49	56	45	33.5	11.5	2	6	8.5
40	55.5	60	51	58	45	33.5	11.5	2	6	8.5
43	58.7	63	54	61	45	33.5	11.5	2	6	8.5
45	58.7	65	56	63	45	33.5	11.5	2	6	8.5
48	61.9	68	59	66	45	33.5	11.5	2	6	8.5
50	65.1	70	62	70	47.5	34.5	13	2.5	6	8
53	68.2	73	65	73	47.5	34.5	13	2.5	6	8
55	71.4	75	67	75	47.5	34.5	13	2.5	6	8
58	74.6	83	70	78	52.5	39	13.5	2.5	6	8
60	74.6	85	72	80	52.5	39	13.5	2.5	6	8
63	80.9	88	75	83	52.5	39	13.5	2.5	6	8
65	84.1	90	77	85	52.5	39	13.5	2.5	6	8
68	87.3	93	81	90	52.5	39	13.5	2.5	7	8
70	87.3	95	83	92	60	45	15	2.5	7	8
75	95.2	104	88	97	60	45	15	2.5	7	8
80	98.4	109	95	105	60	45	15	3	7	8
85	104.8	114	100	110	60	44	16	3	7	8
90	108	119	105	115	65	49	16	3	7	8
95	114.3	124	110	120	65	49	16	3	7	8
100	120.7	129	115	125	65	49	16	3	7	8

Complies with NF E 29991 and DIN 24960 d8 (tight to sleeve) : 3 mm for d1 25 to 35 - 4 mm for d1 38 to 100 r : 1,5 mm for d1 25 to 55 - 2,5 mm for d1 58 to 100.

Single-seal

LATTYSEAL B 17210 HT

Dynamic sealing through complete, balanced mechanical seal

VERY HIGH TEMPERATURES AND HIGH-ROTATION SPEEDS POSSIBLE

- SELF-CLEANING MECHANICAL SEAL
- BELLOWS MECHANICAL SEAL
- FITTED WITH GRAPHITE GASKET

OPERATING PARAMETERS (NOT ASSOCIATED)

Pressure : 0 to 20 bar
Temperature : -20 °C to 400°C
Speed : 25 m/s

COMPOSITION

Supplied with graphite gasket for the rotary part. If T°< 270°C, supplied for the friction face with FFKM O-ring. If T°>270°C, supplied with specific friction face and graphite gasket.

TYPES OF INDUSTRIES

d1 nominal h6	d3	d4 mini	d6* H11	d7* H 8	L1	L3	L4	L5* ±0,1	L6* ± 0,1	L8	L9
25	39.7	41.7	34	40	52.3	42.8	9.5	2	5	7.5	3.2
28	42.8	44.8	37	43	50.2	39.7	10.5	2	5	7	3.2
30	46	48	39	45	50.2	39.7	10.5	2	5	7.5	3.2
32	46	50	42	48	50.2	39.7	10.5	2	5	7.5	3.2
33	46	50	42	48	50.2	39.7	10.5	2	5	7.5	3.2
35	49.2	53.2	44	50	55	44.5	10.5	2	5	7.5	3.2
38	55.1	59.1	49	56	56	44.5	11.5	2	6	8.5	4.2
40	58.3	62.3	51	58	56	44.5	11.5	2	6	8.5	4.2
43	61.5	65.5	54	61	56	44.5	11.5	2	6	8.5	4.2
45	61.5	65.5	56	63	56	44.5	11.5	2	6	8.5	4.2
48	64.6	68.6	59	66	56	44.5	11.5	2	6	8.5	4.2
50	67.8	71.8	62	70	57.5	44.5	13	2.5	6	8	4.2
53	71	76	65	73	57.5	44.5	13	2.5	6	8	4.2
55	74.2	79.2	67	75	60.6	47.6	13	2.5	6	8	4.2
58	77.3	82.3	70	78	61.1	47.6	13.5	2.5	6	8	4.2
60	77.3	82.3	72	80	61.1	47.6	13.5	2.5	6	8	4.2
63	80.9	85.9	75	83	61.1	47.6	13.5	2.5	6	8	4.2
65	84.1	89.1	77	85	61.1	47.6	13.5	2.5	6	8	4.2
68	87.3	92.3	81	90	61.1	47.6	13.5	2.5	7	8	4.2
70	87.3	92.3	83	92	62.6	47.6	15	2.5	7	8	4.2
75	95.3	100.3	88	97	62.6	47.6	15	2.5	7	8	4.8
80	98.4	103.4	95	105	62.6	47.6	15	3	7	8	4.8
85	104.8	109.8	100	110	63.6	47.6	16	3	7	8	4.8
90	108	113	105	115	63.6	47.6	16	3	7	8	4.8
95	114.3	119.3	110	120	63.6	47.6	16	3	7	8	4.8
100	120.7	125.7	115	125	63.6	47.6	16	3	7	8	4.8

Complies with NF E 29991 and DIN 24960 d8 (tight to sleeve) : 3 mm for d1 25 to 35 - 4 mm for d1 38 to 100 r : 1,5 mm for d1 25 to 55 - 2,5 mm for d1 58 to 100.

Single-seal

LATTYSEAL B 17110 HT

Dynamic sealing through complete, balanced mechanical seal

FOR HIGH-TEMPERATURE APPLICATIONS

- SELF-CLEANING MECHANICAL SEAL
- POTENTIALLY USABLE FOR HIGH-ROTATION SPEEDS
- INSTALLED WITH GRAPHITE GASKET

OPERATING PARAMETERS (NOT ASSOCIATED)

Pressure : 0 to 20 bar
Temperature : -20 °C to 400°C
Speed : 25 m/s

COMPOSITION

Supplied with graphite gasket for the rotary part. If T°< 270°C, supplied for the friction face with FFKM O-ring. If T°>270°C, supplied with specific friction face and graphite gasket. Metal-impregnated carbon (A), pure silicon carbide (U6)

TYPES OF INDUSTRIES

FLUIDS

All corrosive, abrasive and clogging fluids.

The maximum temperature, pressure and speed given in this document cannot be associated in any case.

Single-seal

LATTYSEAL B 17110 HT

Dynamic sealing through complete, balanced mechanical seal

METRIC VERSION

d1 nominal h6	d3	d4 mini	d6 H11	d7 H8	L1	L3	L4	L5 ± 0,1	L6 ± 0,1	L8	L9
25	39,7	41,7	34	40	52.3	42.8	9.5	2	5	7.5	3.2
28	42,8	44,8	37	43	50.2	39.7	10.5	2	5	7	3.2
30	46	48	39	45	50.2	39.7	10.5	2	5	7.5	3.2
32	46	50	42	48	50.2	39.7	10.5	2	5	7.5	3.2
33	46	50	42	48	50,2	39.7	10.5	2	5	7.5	3.2
35	49,2	53.2	44	50	55	44.5	10.5	2	5	7.5	3.2
38	55,1	59.1	49	56	56	44.5	11.5	2	6	8.5	4.2
40	58,3	62.3	51	58	56	44.5	11.5	2	6	8.5	4.2
43	61,5	65.5	54	61	56	44.5	11.5	2	6	8.5	4.2
45	61,5	65.5	56	63	56	44.5	11.5	2	6	8.5	4.2
48	64,6	68.6	59	66	56	44.5	11.5	2	6	8.5	4.2
50	67,8	71.8	62	70	57,5	44.5	13	2.5	6	8	4.2
53	71	76	65	73	57,5	44.5	13	2.5	6	8	4.2
55	74,2	79.2	67	75	60.6	47.6	13	2.5	6	8	4.2
58	77,3	82.3	70	78	61.1	47.6	13.5	2.5	6	8	4.2
60	77,3	82.3	72	80	61.1	47.6	13.5	2.5	6	8	4.2
63	80,9	85,9	75	83	61.1	47.6	13.5	2.5	6	8	4.2
65	84,1	89,1	77	85	61.1	47.6	13.5	2.5	6	8	4.2
68	87,3	92,3	81	90	61.1	47.6	13.5	2.5	7	8	4.2
70	87,3	92,3	83	92	62.6	47.6	15	2.5	7	8	4.2
75	95,3	100,3	88	97	62.6	47.6	15	2.5	7	8	4.8
80	98,4	103,4	95	105	62.6	47.6	15	3	7	8	4.8
85	104,8	109,8	100	110	63.6	47.6	16	3	7	8	4.8
90	108	113	105	115	63.6	47.6	16	3	7	8	4.8
95	114,3	119,3	110	120	63.6	47.6	16	3	7	8	4.8
100	120,7	125,7	115	125	63.6	47.6	16	3	7	8	4.8

Complies with NF E 29991 and DIN 24960 d8 (tight to sleeve) : 3 mm for d1 25 to 35 - 4 mm for d1 38 to 100 r : 1,5 mm for d1 25 to 55 - 2,5 mm for d1 58 to 100.

IMPERIAL VERSION

d1 nominal in	d1 nominal inches	d3	d4 mini	d6 H 11	d7 H8	L1	L3	L4	L5 ± 0,1	L6 ±0,1	L8	L9
1"	1.000	39,7	41.7	34	40	52.3	42.8	9.5	2	5	7.5	3.2
1"1/8	1.125	42,8	44.8	39	45	50.2	39.7	10.5	2	5	7.5	3.2
1"1/4	1.250	46	50	42	48	50.2	39.7	10.5	2	5	7.5	3.2
1"3/8	1.375	49,2	53.2	44	50	55	44.5	10.5	2	5	7.5	3.2
1"1/2	1.500	55,1	59.1	49	56	56	44.5	11.5	2	6	8.5	4.2
1"5/8	1.625	58,3	62.3	54	61	56	44.5	11.5	2	6	8.5	4.2
1"3/4	1.750	61,5	65.5	56	63	56	44.5	11.5	2	6	8.5	4.2
1"7/8	1.875	64,6	68.6	59	66	56	44.5	11.5	2	6	8.5	4.2
2"	2.000	67,8	72.8	65	73	57.5	44.5	13	2.5	6	8	4.2
2"1/8	2.125	71	76	67	75	57.5	44.5	13	2.5	6	8	4.2
2"1/4	2.250	74,2	79.2	70	78	61.1	47.6	13.5	2.5	6	8	4.2
2"3/8	2.375	77,3	82.3	72	80	61.1	47.6	13.5	2.5	6	8	4.2
2"1/2	2.500	80,9	85.9	77	85	61.1	47.6	13.5	2.5	6	8	4.2
2"5/8	2.625	84,1	89.1	81	90	61.1	47.6	13.5	2.5	7	8	4.2
2"3/4	2.750	87,3	92.3	83	92	62.6	47.6	15	2.5	7	8	4.2
2"7/8	2.875	92,1	97.1	88	97	62.6	47.6	15	2.5	7	8	4.8
3"	3.000	95,3	100.3	88	97	62.6	47.6	15	2.5	7	8	4.8
3"1/8	3.125	98,4	103.4	95	105	62.6	47.6	15	3	7	8	4.8
3"1/4	3.250	101,6	106.6	100	110	63.6	47.6	16	3	7	8	4.8
3"3/8	3.375	104,8	109.8	100	110	63.6	47.6	16	3	7	8	4.8
3"1/2	3.500	108	113	105	115	63.6	47.6	16	3	7	8	4.8
3"5/8	3.625	111,1	116.1	110	120	63.6	47.6	16	3	7	8	4.8
3"3/4	3.750	114,3	119.3	110	120	63.6	47.6	16	3	7	8	4.8
3"7/8	3.875	117,5	122.5	115	125	63.6	47.6	16	3	7	8	4.8
4"	4.000	120,7	125.7	115	125	63.6	47.6	16	3	7	8	4.8

Complies with NF E 29991 and DIN 24960 d8 (tight to sleeve) : 3 mm for d1 1.000 to 1.375 - 4 mm for d1 1.500 to 4.000 r : 1,5 mm for d1 1.000 to 2.125 - 2,5 mm for d1 2.250 to 4.000

Single-seal

LATTYSEAL B 10712 REV/REP - RIV/RIP

Dynamic sealing through complete, balanced mechanical seal

FOR HIGHLY ABRASIVE OR VISCOUS FLUIDS

- STATIONARY MECHANICAL SEAL WITH SINGLE PROTECTED SPRING
- SURFACE TREATMENT IS POSSIBLE TO INCREASES SEAL LIFE EXPECTANCY
- AVAILABLE WITH EXTERNAL SCREWED SPRING (REV) OR EXTERNAL PINCHED SPRING (REP), INTERNAL SCREWED SPRING (RIV) OR INTERNAL PINCHED SPRING (RIP)

OPERATING PARAMETERS (NOT ASSOCIATED)

Pressure : 0 to 25 bar
Temperature : -20 °C to 180°C
Speed : 10 m/s

COMPOSITION

Supplied with FKM O-ring Nickel-impregnated tungsten carbide (U2)

TYPES OF INDUSTRIES

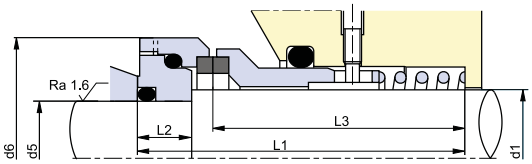
FLUIDS

All corrosive, abrasive and highly clogging fluids.

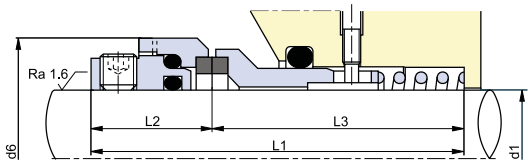
GUIDELINES, STANDARDS AND APPROVALS (ON REQUEST)

CE FDA

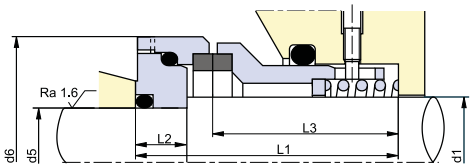
LATTYSEAL B 10712 REP



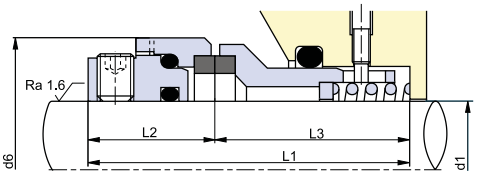
LATTYSEAL B 10712 REV



LATTYSEAL B 10712 RIP



LATTYSEAL B 10712 RIV



Single-seal

LATTYSEAL B 10712 REV/REP

										REP		REV							
d1 nominal h11	d5 h8	d6 ±0,2	d7 H11	d8 ±0,1	d9 ±0,1	d10 + 0,4 + 0	d11 + 0,5 + 0	d12 ±0,1	d13 ±0,1	L1 ±1	L2 ±0,1	L1 ±1	L2 ±0,1	L3	L4 ±0,1	L5 ± 0,1	L6 -0 -0,5	L7 ±0,1	L8 ± 0,1
20	15	42	36,2	32	30,4	23,4	21	30	3	66	10	76	24,5	51,5	36,8	22,8	14	4	4
25	20	48	41,2	37	35,4	28,4	26	34	3	68,5	10	78,5	24,5	54	39,3	25,3	14	4	4
30	25	53	49,2	43	40,4	33,4	31	40	3	72	12	82	26,5	55,5	40,8	24,8	13	4	6
35	30	58	54,2	48	45,4	38,4	36	45	3	76	12	86	28	58	41,8	25,8	15	4	6
40	35	68	64,2	58	55,6	46,6	41	54	3	89	15	99	31	68	51,3	34,3	20	5	6
45	40	73	69,2	63	60,6	51,6	46	59	3	90	15	100	31	69	52,3	35,3	23	5	6
50	45	78	74,2	68	65,6	56,6	51	64	4	96	15	106	31,5	74,5	57,3	39,7	26	5	6
55	50	83	79,2	73	70,6	61,6	56	69	4	98	15	108	31,5	76,5	59,3	41,7	29	5	6
60	55	88	84,2	78	75,6	66,6	61	74	4	100	15	112	33,5	78,5	61,3	43,7	29	5	6
65	57	93	89,2	83	80,6	69,6	66	79	4	99,5	16	110,5	33,5	77	57,8	39,2	25	6	6
70	62	98	94,2	88	85,8	74,6	71	84	4	103,5	16	114,5	34	80,5	60,8	42,2	27	6	6
75	67	103	99,2	93	90,8	79,6	76	89	4	111,5	16	122,5	34	88,5	68,8	50,2	37	6	6
80	72	108	104,2	98	95,8	84,6	81	94	4	115,5	18	124,5	34	90,5	70,8	52,2	37	6	6
85	75	118	114,2	108	105,8	90,8	86,5	103	4	118	20	128	37	91	70,8	50,2	34	8	6
90	80	127	119,2	113	110,8	98,8	91,5	109	5	136,5	23	146,5	44	102,5	77,3	56	40	6,5	6
95	85	132	127,3	119	115,8	102,8	96,5	113	5	142	26	153	48	105	74,3	51	35	7	8
100	90	138	132,3	124	120,8	107,8	101,5	120	5	153	27	163	48	115	84,3	61	45	7	8
105	95	144	137,3	129	125,8	112	106,5	125	5	159	32	164	48	116	82	58	42	7,5	8
110	100	154	147,3	139	135,8	117	111,5	130	5	158	32	163	48	115	79	54,5	33	10	8
115	105	159	152,3	144	140,8	122	116,5	136,5	5	172	35	177,5	53,5	124	85	61	43	10	8
120	110	164	157,3	149	145,8	128	121,5	143,5	5	165	35	170,5	53,5	117	77	53	35	9,5	8
125	115	169	162,3	154	150,8	133	126,5	147,5	5	166	35	171,5	53,5	118	79	55	35	9,5	8
130	120	174	167,3	159	155,8	140	131,5	154,5	5	173	35	178	53,5	125	85	61	44	8,5	8

LATTYseal B10712 REP : The spring cavity must be kept filled with grease and regularly checked. Only silicon grease should be used due to the presence of ethylene propylene O-ring.

LATTYSEAL B 10712 RIV/RIP

									RIV		RIP						
d1 nominal h11	d5 h8	d6 ±0,2	d7 H11	d8 ±0,1	d9 ±0,1	d10 + 0,4 + 0	d11 + 0,5 + 0	d13 ±0,1	L1 ±1	L2 ±0,1	L1 ±1	L2 ±0,1	L3	L4 ±0,1	L5 ± 0,1	L7 ±0,1	L8 ± 0,1
15	10	42	36,2	32	30,4	23,4	16	3	62,5	24,5	52,5	10	38	23,3	9,3	4	4
20	15	48	41,2	37	35,4	28,4	21	3	64	24,5	54	10	39,5	24,8	10,8	4	4
25	20	53	49,2	43	40,4	33,4	26	3	68	26,5	58	12	41,5	26,8	10,8	4	6
30	25	58	54,2	48	45,4	38,4	31	3	71	28	61	12	43	26,8	10,8	4	6
35	30	68	64,2	58	55,6	46,6	36	3	76,5	31	66,5	15	45,5	28,8	11,8	5	6
40	35	73	69,2	63	60,6	51,6	41	3	76,5	31	66,5	15	45,5	28,8	11,8	5	6
45	40	78	74,2	68	65,6	56,6	46	4	78,5	31,5	68,5	15	47	29,8	12,2	5	6
50	45	83	79,2	73	70,6	61,6	51	4	78,5	31,5	68,5	15	47	29,8	12,2	5	6
55	50	88	84,2	78	75,6	66,6	56	4	82,5	33,5	70,5	15	49	31,8	14,2	5	6
58	52	93	89,2	83	80,6	69,6	59	4	84,5	33,5	73,5	16	51	31,8	13,2	6	6
60	52	98	94,2	88	85,8	74,6	61	4	88	34	77	16	54	34,3	15,7	6	6
65	57	103	99,2	93	90,8	79,6	66	4	85,5	34	76,5	18	51,5	31,8	13,2	6	6
70	62	108	104,2	98	95,8	84,6	71	4	88,5	34	81,5	20	54,5	34,8	16,2	6	6
75	65	118	114,2	108	105,8	90,8	76	4	96	37	88	22	59	40,3	18,2	8	6
80	70	127	119,2	113	110,8	98,8	81	5	109,5	44	101,5	25	65,5	42,3	19	6,5	6
85	75	132	127,3	119	115,8	102,8	86,5	5	121	48	110	26	73	39	19	7	8
90	80	138	132,3	124	120,8	107,8	91,5	5	118	48	108	27	70	3	16	7	8
95	85	144	137,3	129	125,8	112	96,5	5	128	48	123	32	80	46	22	7,5	8
100	90	154	147,3	139	135,8	117	101,5	5	133	48	128	32	85	48,5	24	10	8
105	95	159	152,3	144	140,8	122	106,5	5	136,5	53,5	131	35	83	44	20	10	8
110	100	164	157,3	149	145,8	128	111,5	5	143,5	53,5	138	35	90	50	26	9,5	8
115	105	169	162,3	154	150,8	133	116,5	5	143,5	53,5	138	35	90	51	27	9,5	8
120	110	174	167,3	159	155,8	140	121,5	5	145,5	53,5	140	35	92	52	28	8,5	8

LATTYseal B10712 RIP : The spring cavity must be kept filled with grease and regularly checked. Only silicon grease should be used due to the presence of ethylene propylene O-ring.

Single-seal

LATTYSEAL B 18212

Dynamic sealing through complete, balanced mechanical seal

FOR PARTICULARLY SEVERE ENVIRONMENTS

- DESIGN WITH SINGLE SPRING ALLOWING WIDER INSTALLATION TOLERANCES
- ALLOWS FOR GREATER AXIAL CLEARANCES

OPERATING PARAMETERS (NOT ASSOCIATED)

Pressure : 0 to 25 bar
Temperature : -20 °C to 180°C
Speed : 20 m/s

COMPOSITION

Supplied with FKM O-ring Pure silicon carbide (U6U6 V)

TYPES OF INDUSTRIES

FLUIDS

All corrosive, abrasive and clogging fluids.

GUIDELINES, STANDARDS AND APPROVALS

(ON REQUEST)

d1 nominal h6	d3	d4 mini	d6 H 11	d7 H8	L1	L3	L4	L5 ± 0,1	L6 ± 0,1	L8
35	49	51	44	50	73	62.5	10.5	2	5	7.5
38	54	58	49	56	84.5	73	11.5	2	6	8.5
40	56	60	51	58	84.5	73	11.5	2	6	8.5
43	60	64	54	61	86	74.5	11.5	2	6	8.5
45	61	65	56	63	86	74.5	11.5	2	6	8.5
48	65	69	59	66	89.5	78	11.5	2	6	8.5
50	66	70	62	70	89.5	76.5	13	2.5	6	8
53	71	75	65	73	92	79	13	2.5	6	8
55	71	75	67	75	93	80	13	2.5	6	8
58	78	83	70	78	99	85.5	13.5	2.5	6	8
60	81	86	72	80	96	82.5	13.5	2.5	6	8
63	87	92	75	83	106.5	93	13.5	2.5	6	8
65	87	92	77	85	106.5	93	13.5	2.5	6	8
68	88	93	81	90	103.5	90	13.5	2.5	7	8
70	93	98	83	92	106	91	15	2.5	7	8
75	99	104	88	97	108	93	15	2.5	7	8
80	105	110	95	105	109	94	15	3	7	8
85	109	114	100	110	111	95	16	3	7	8
90	114	119	105	115	113	97	16	3	7	8
95	122	127	110	120	119	103	16	3	7	8
100	128	133	115	125	119.5	103.5	16	3	7	8

Complies with NF EN 12756 d8 (tigh to sleeve) : 3 mm for d1 35 - 4 mm for d1 38 to 100. r : 1,6 mm for d1 35- 2,5 mm for d1 38 to 100

TRAINING (See page 202)

AIM: Understand the different leak occurrences in:

Seals for rotary units:
- **mechanical seals and packings**
- **for the dynamic sealing**
- **of pumps or stirring processes.**

202

ON-SITE TRAINING (See page 203)

AIM: ensure and check the quality of the equipment and sealing assemblies.

- the assessment of the equipment with a replacement recommendation if necessary
- the maintenance (preventive or corrective)
- the training during installation
- the service contracts
- the project monitoring

203

Single-seal

LATTYSEAL B23112 / B23212

Dynamic sealing through complete, balanced mechanical seal

INDEPENDENT OF ROTATION DIRECTION, FDA-APPROVED STANDARD VERSION

- PROTECTED SPRING PREVENTING CLOGGING THROUGH THE MEDIUM
- PENTAGONAL DRIVE FOR FREQUENT STOPS/STARTS AND IMPROVED TORQUE TRANSMISSION
- MULTIPRODUCT, HIGHLY VERSATILE

OPERATING PARAMETERS (NOT ASSOCIATED)

Pressure : 0 to 25 bar
Temperature : -20 °C to 160°C
Speed : 20 m/s

COMPOSITION

LATTYseal B 23112: Friction faces Carbon impregnated resin (B1) Silicon carbide (U6). LATTYseal B 23212: Friction faces Silicon carbide (U6) Silicon carbide (U6). For the most difficult cases use friction faces made of nickel-tungsten carbide (U2). Supplied with FKM seals..

TYPES OF INDUSTRIES

FLUIDS

All corrosive, abrasive and clogging fluids.

GUIDELINES, STANDARDS AND APPROVALS

CE (ON REQUEST) FDA (ON REQUEST)

The maximum temperature, pressure and speed given in this document cannot be associated in any case.

Single-seal

LATTYSEAL B23112 / B23212

Dynamic sealing through complete, balanced mechanical seal

METRIC VERSION

d1 nominal h6	d3	d4	d6 H 11	d7 H8	d8 d8	L1 ±0,5	L3	L4	L5	L6	L8	L9
18	32	34	27	33	3	37.5	28.5	9	2	5	7.5	3.5
20	34	36	29	35	3	37.5	28.5	9	2	5	7.5	3.5
22	36	38	31	37	3	37.5	28.5	9	2	5	7.5	3.5
24	38	40	33	39	3	40	30.5	9.5	2	5	7.5	3.5
25	39	41	34	40	3	40	30.5	9.5	2	5	7.5	3.5
28	42	44	37	43	3	42.5	32	10.5	2	5	7.5	3.5
30	44	46	39	45	3	42.5	32	10.5	2	5	7.5	3.5
32	46	48	42	48	3	42.5	32	10.5	2	5	7.5	3.5
33	47	49	42	48	3	42.5	32	10.5	2	5	7.5	3.5
35	49	51	44	50	3	42.5	32	10.5	2	5	7.5	3.5
38	54	58	49	56	4	45	33.5	11.5	2	6	8.5	4
40	56	60	51	58	4	45	33.5	11.5	2	6	8.5	4
43	59	63	54	61	4	45	33.5	11.5	2	6	8.5	4
45	61	65	56	63	4	45	33.5	11.5	2	6	8.5	4
48	64	68	59	66	4	45	33.5	11.5	2	6	8.8	4
50	66	70	62	70	4	47.5	34.5	13	2.5	6	8	4
53	69	73	65	73	4	47.5	34.5	13	2.5	6	8	4
55	71	75	67	75	4	47.5	34.5	13	2.5	6	8	4
58	78	83	70	78	4	52.5	39	13.5	2.5	6	8	5
60	80	85	72	80	4	52.5	39	13.5	2.5	6	8	5
63	83	88	75	83	4	52.5	39	13.5	2.5	6	8	5
65	85	90	77	85	4	52.5	39	13.5	2.5	6	8	5
68	88	93	81	90	4	52.5	39	13.5	2.5	7	8.2	5
70	90	95	83	92	4	60	45	15	2.5	7	8.2	5
75	99	104	88	97	4	60	45	15	2.5	7	8.2	5
80	104	109	95	105	4	60	45	15	3	7	8	5
85	109	114	100	110	4	60	44	16	3	7	8	5
90	114	119	105	115	4	65	49	16	3	7	8	5
95	119	124	110	120	4	65	49	16	3	7	8	5
100	124	129	115	125	4	65	49	16	3	7	7.8	5

IMPERIAL VERSION

d1 nominal in	d1 nominal inches	d3	d6 H 11	d7 H8	d8	L1 ±0,5	L3	L4	L5	L6	L8	L9
0.75	3/4"	34	29	35	3	37.5	28.5	9	2	5	7.5	3.5
0.875	7/8"	36	31	37	3	37.5	28.5	9	2	5	7.5	3.5
1	1"	39	34	40	3	40	30.5	9.5	2	5	7.5	3.5
1.125	1"1/8	44	39	45	3	42.5	32	10.5	2	5	7.5	3.5
1.25	1"1/4	46	42	48	3	42.5	32	10.5	2	5	7.5	3.5
1.375	1"3/8	49	44	50	3	42.5	32	10.5	2	5	7.5	3.5
1.5	1"1/2	54	49	56	4	45	33.5	11.5	2	6	8.5	4
1.625	1"5/8	59	54	61	4	45	33.5	11.5	2	6	8.5	4
1.75	1"3/4	61	56	63	4	45	33.5	11.5	2	6	8.5	4
1.875	1"7/8	64	59	66	4	45	33.5	11.5	2	6	8.8	4
2	2"	69	65	73	4	47.5	34.5	13	2.5	6	8	4
2.125	2"1/8	71	67	75	4	47.5	34.5	13	2.5	6	8	4
2.25	2"1/4	78	70	78	4	52.5	39	13.5	2.5	6	8	5
2.375	2"3/8	80	72	80	4	52.5	39	13.5	2.5	6	8	5
2.5	2"1/2	85	77	85	4	52.5	39	13.5	2.5	6	8	5
2.625	2"5/8	88	81	90	4	52.5	39	13.5	2.5	7	8.2	5
2.75	2"3/4	90	83	92	4	60	45	15	2.5	7	8.2	5
2.875	2"7/8	99	88	97	4	60	45	15	2.5	7	8.2	5
3	3"	100	88	97	4	60	45	15	2.5	7	8.2	5
3.125	3"1/8	104	95	105	4	60	45	15	3	7	8	5
3.25	3"1/4	109	100	110	4	60	44	16	3	7	8	5
3.375	3"3/8	110	100	110	4	60	44	16	3	7	8	5
3.5	3"1/2	114	105	115	4	65	49	16	3	7	8	5
3.625	3"5/8	119	110	120	4	65	49	16	3	7	8	5
3.75	3"3/4	119	110	120	4	65	49	16	3	7	8	5
3.875	3"7/8	124	115	125	4	65	49	16	3	7	7.8	5
4	4"	126	115	125	4	65	49	16	3	7	7.8	5

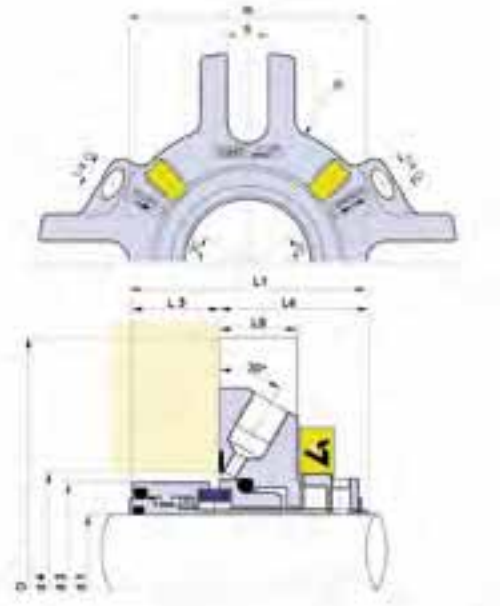
Cartridge version

CARTSEAL B 23612

Dynamic sealing through single cartridge seal

BALANCED MECHANICAL SEAL WITH PROTECTED SPRING

- PROTECTED SPRING AND PENTAGONAL DRIVE
- PENTAGONAL DRIVE FOR FREQUENT STOPS/STARTS
- OPTIMISED FOR SLURRY DUTIES
- FLUSH ON REQUEST



OPERATING PARAMETERS (NOT ASSOCIATED)

Pressure : 0 to 25 bar
Temperature : -20 °C to 200°C
Speed : 20 m/s

COMPOSITION

Friction faces: Silicon carbide / silicon carbide (U6/U6) or silicon carbide / resin-impregnated carbon (U6/B1)

TYPES OF INDUSTRIES

FLUIDS

All corrosive, abrasive and slightly clogging fluids.

GUIDELINES, STANDARDS AND APPROVALS (ON REQUEST)

Cartridge version

CARTSEAL B 23612

Dynamic sealing through single cartridge seal

METRIC VERSION

d1 nominal h6	d3	d4 mini	d4 maxi	L1	L3	L4	L5	D	D'	S	W
25	42	46	56	68	24	44	23	105	83	12.5	63
28	46	49	57	67	23	44	23	110	86	12.5	64
30	47	51	61	68	24	44	23	115	85	12.5	68
32	49	58	66	68	24	44	23	125	90	12.5	73
33	54	58	66	70	26	44	23	125	90	12.5	73
35	54	58	66	70	26	44	23	125	90	12.5	73
38	59	63	70	71	27	44	23	133	95	14.7	77
40	59	65	73	70	26	44	23	141	97	14.7	80
43	64	68	75	71	27	44	23	141	100	14.7	82
45	64	70	78	70,5	26,5	44	23	150	102	14.7	85
48	69	75	83	72,5	28,5	44	23	150	107	18	90
50	69	75	83	72.5	28,5	44	23	150	107	18	90
53	78	85	91	75	31	44	23	157	123	18	98
55	78	85	91	75	31	44	23	157	123	18	98
60	83	90	98	74	30	44	23	165	128	18	105
65	88	95	108	74	30	44	23	180	132	18	115
70	99	104	118	83.5	34.5	49	28	190	143	18	129

IMPERIAL VERSION

d1 nominal in	d1 nominal inches	d3	d4 mini	d4 maxi	L1	L3	L4	L5	D	D'	S	W
1	1"	42	46	56	68	24	44	23	105	83	12.5	63
1.125	1"1/8	47	51	61	68	24	44	23	115	85	12.5	68
1.25	1"1/4	49	58	66	68	24	44	23	125	90	12.5	73
1.375	1"3/8	54	58	66	70	26	44	23	125	90	12.5	73
1.5	1"1/2	59	63	70	71	27	44	23	133	95	14.7	77
1.625	1"5/8	64	68	75	71	27	44	23	141	100	14.7	82
1.75	1"3/4	64	70	78	70,5	26.5	44	23	150	102	14.7	85
1.875	1"7/8	69	75	83	72,5	28.5	44	23	150	107	18	90
2	2"	78	85	91	75	31	44	23	157	123	18	98
2.125	2"1/8	78	85	91	75	31	44	23	157	123	18	98
2.25	2"1/4	83	90	98	74	30	44	23	165	128	18	105
2.375	2"3/8	83	90	98	74	30	44	23	165	128	18	105
2.5	2"1/2	88	95	108	74	30	44	23	180	132	18	115
2.625	2"5/8	99	104	118	83,5	34.5	49	28	190	143	18	129
2.75	2"3/4	99	104	118	83.5	34.5	49	28	190	143	18	129

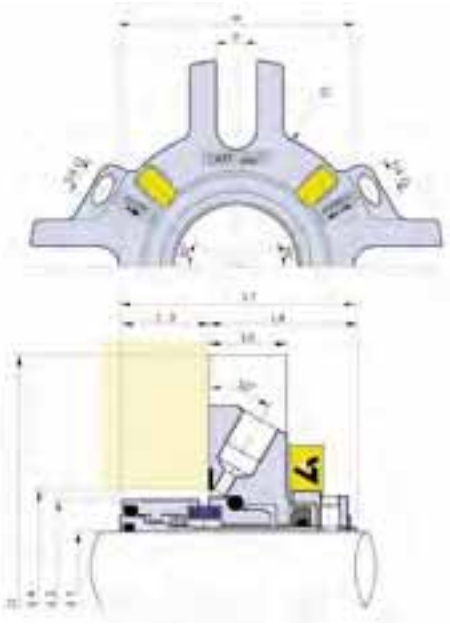
Cartridge version

CARTSEAL B 23612 Q

Dynamic sealing through single cartridge seal with Quench

FOR CRYSTALLISING, SOLIDIFYING OR VAPORIZING PRODUCTS

- MECHANICAL SEAL, BALANCED WITH QUENCH
- THE QUENCH (Q) OPTION INCREASES SEAL LIFE EXPECTANCY
- BALANCED MECHANICAL SEAL



OPERATING PARAMETERS (NOT ASSOCIATED)

Pressure : 0 to 25 bar
Temperature : -20 °C to 200°C
Speed : 20 m/s

COMPOSITION

Friction faces: Silicon carbide / silicon carbide (U6/U6) or silicon carbide / resin-impregnated carbon (U6/B1)

TYPES OF INDUSTRIES

FLUIDS

All corrosive, abrasive and slightly clogging fluids.

GUIDELINES, STANDARDS AND APPROVALS (ON REQUEST)

Cartridge version

CARTSEAL B 23612 Q

Dynamic sealing through single cartridge seal with Quench

METRIC VERSION

d1 nominal h6	d3	d4 mini	d4 maxi	L1	L3	L4	L5	D	D'	S	W
25	42	46	56	68	24	44	23	105	83	12.5	63
28	46	49	57	67	23	44	23	110	86	12.5	64
30	47	51	61	68	24	44	23	115	85	12.5	68
32	49	58	66	68	24	44	23	125	90	12.5	73
33	54	58	66	70	26	44	23	125	90	12.5	73
35	54	58	66	70	26	44	23	125	90	12.5	73
38	59	63	70	71	27	44	23	133	95	14.7	77
40	59	65	73	70	26	44	23	141	97	14.7	80
43	64	68	75	71	27	44	23	141	100	14.7	82
45	64	70	78	70,5	26,5	44	23	150	102	14.7	85
48	69	75	83	72,5	28,5	44	23	150	107	18	90
50	69	75	83	72.5	28,5	44	23	150	107	18	90
53	78	85	91	75	31	44	23	157	123	18	98
55	78	85	91	75	31	44	23	157	123	18	98
60	83	90	98	74	30	44	23	165	128	18	105
65	88	95	108	74	30	44	23	180	132	18	115
70	99	104	118	83.5	34.5	49	28	190	143	18	129

IMPERIAL VERSION

d1 nominal in	d1 nominal inches	d3	d4 mini	d4 maxi	L1	L3	L4	L5	D	D'	S	W
1	1"	42	46	56	68	24	44	23	105	83	12.5	63
1.125	1"1/8	47	51	61	68	24	44	23	115	85	12.5	68
1.25	1"1/4	49	58	66	68	24	44	23	125	90	12.5	73
1.375	1"3/8	54	58	66	70	26	44	23	125	90	12.5	73
1.5	1"1/2	59	63	70	71	27	44	23	133	95	14.7	77
1.625	1"5/8	64	68	75	71	27	44	23	141	100	14.7	82
1.75	1"3/4	64	70	78	70.5	26.5	44	23	150	102	14.7	85
1.875	1"7/8	69	75	83	72.5	28.5	44	23	150	107	18	90
2	2"	78	85	91	75	31	44	23	157	123	18	98
2.125	2"1/8	78	85	91	75	31	44	23	157	123	18	98
2.25	2"1/4	83	90	98	74	30	44	23	165	128	18	105
2.375	2"3/8	83	90	98	74	30	44	23	165	128	18	105
2.5	2"1/2	88	95	108	74	30	44	23	180	132	18	115
2.625	2"5/8	99	104	118	83,5	34.5	49	28	190	143	18	129
2.75	2"3/4	99	104	118	83.5	34.5	49	28	190	143	18	129

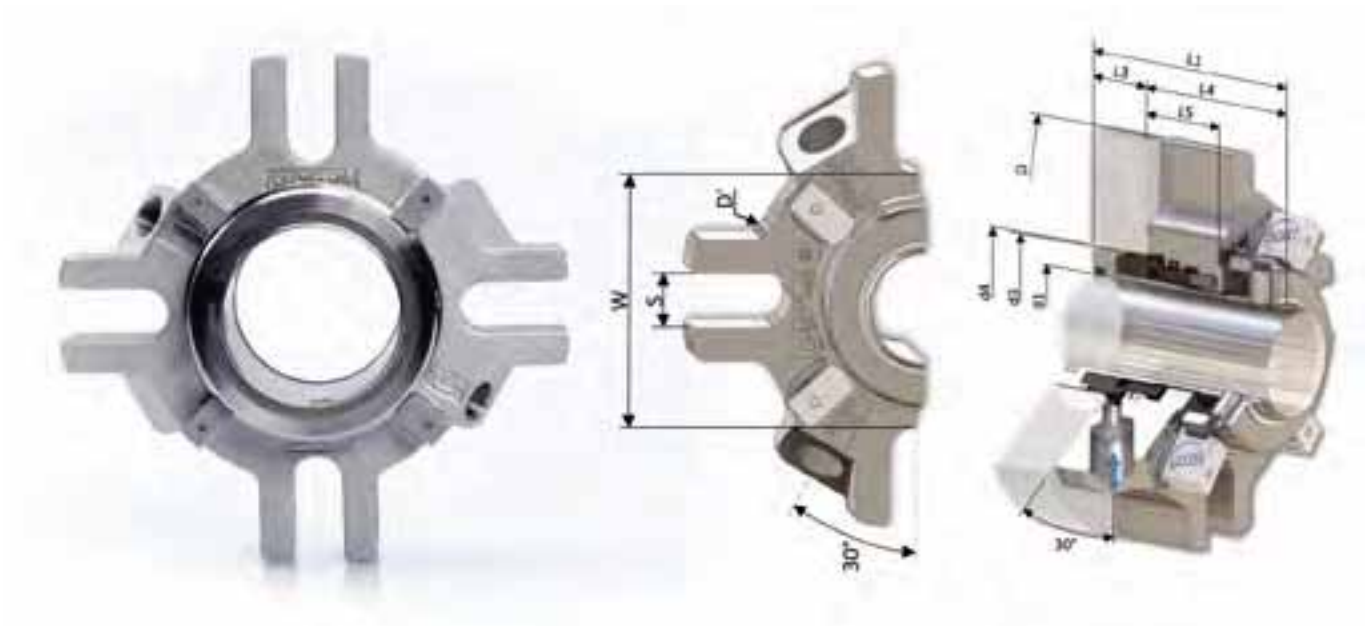
Cartridge version

CARTSEAL B 24610

Dynamic sealing through single cartridge seal

CONNECTION WITH FLUSHING AS STANDARD VERSION

- ACS, ATEX (IIGD IIA-IIB T6 À T3), EC 1935/2004 AND FDA AS STANDARD
- COMPLETE, BALANCED STATIONARY MECHANICAL SEAL FOR HIGH-ROTATION SPEEDS, ALLOWS FOR ANGULAR SHAFT MISALIGNMENT
- SPRINGS ENCAPSULATED IN THE CARTRIDGE BOX, NO LOSS OR IMPROPER HANDLING DURING INSTALLATION
- SELF-TURNING SETTING CLAMPS



OPERATING PARAMETERS (NOT ASSOCIATED)

Pressure : 0 to 25 bar
Temperature : -20 °C to 200°C
Speed : 20 m/s

COMPOSITION

Friction faces: Silicon carbide / silicon carbide (U6/U6) or silicon carbide / resin-impregnated carbon (U6/B1). High-performance surface drive system: prevents breakage when starting with clogging products and ensures even effort distribution. FLUSHING : ⅜ Gaz - L6 : Flushing ports position

TYPES OF INDUSTRIES

FLUIDS

All corrosive, abrasive and slightly clogging fluids.

GUIDELINES, STANDARDS AND APPROVALS (ON REQUEST)

Cartridge version

CARTSEAL B 24610

Dynamic sealing through single cartridge seal

METRIC VERSION

d1 nominal h6	d3	d4 mini	d4 maxi	L1	L3	L4	L5	D	D'	S	W
25	40	41	51	61	17	44	23	105	75	12.5	58
28	43	44	52	61	17	44	23	105	83	12.5	59
30	45	46	56	61	17	44	23	105	83	12.5	63
32	47	48	57	61	17	44	23	110	85	12.5	64
33	48	49	57	61	17	44	23	110	86	12.5	64
35	50	51	61	61	17	44	23	115	85	12.5	68
38	55	58	66	61	17	44	23	125	90	12.5	73
40	57	60	68	61	17	44	23	125	92	14.7	75
43	60	63	70	61	17	44	23	133	95	14.7	77
45	62	65	73	61	17	44	23	141	97	14.7	80
48	65	68	75	61	17	44	23	141	100	14.7	82
50	67	70	78	61	17	44	23	150	102	14.7	85
53	70	73	81	61	17	44	23	150	105	14.7	88
55	72	75	83	61	17	44	23	150	107	18	90
60	80	85	91	61	17	44	23	157	123	18	98
65	85	90	98	61	17	44	23	165	128	18	105
70	90	95	108	61	17	44	23	180	132	18	115

IMPERIAL VERSION

d1 nominal	d1 nominal inches	d3	d4 mini	d4 maxi	L1	L3	L4	L5	D	D'	S	W
1	1"	40	41	51	61	17	44	23	105	75	12.5	58
1.125	1"1/8	45	46	56	61	17	44	23	105	83	12.5	63
1.25	1"1/4	47	48	57	61	17	44	23	110	85	12.5	64
1.375	1"3/8	50	51	61	61	17	44	23	115	85	12.5	68
1.5	1"1/2	55	58	66	61	17	44	23	125	90	12.6	73
1.625	1"5/8	60	63	70	61	17	44	23	133	95	14.7	77
1.75	1"3/4	62	65	73	61	17	44	23	141	97	14.7	80
1.875	1"7/8	65	68	75	61	17	44	23	141	100	14.7	82
2	2"	70	73	81	61	17	44	23	150	105	14.7	88
2.125	2"1/8	72	75	83	61	17	44	23	150	107	18	90
2.25	2"1/4	78	83	90	61	17	44	23	157	114	18	97
2.375	2"3/8	80	85	91	61	17	44	23	157	123	18	98
2.5	2"1/2	85	90	98	61	17	44	23	165	128	18	105
2.625	2"5/8	88	93	100	61	17	44	23	165	131	18	107
2.75	2"3/4	90	95	108	61	17	44	23	180	132	18	115

Cartridge version

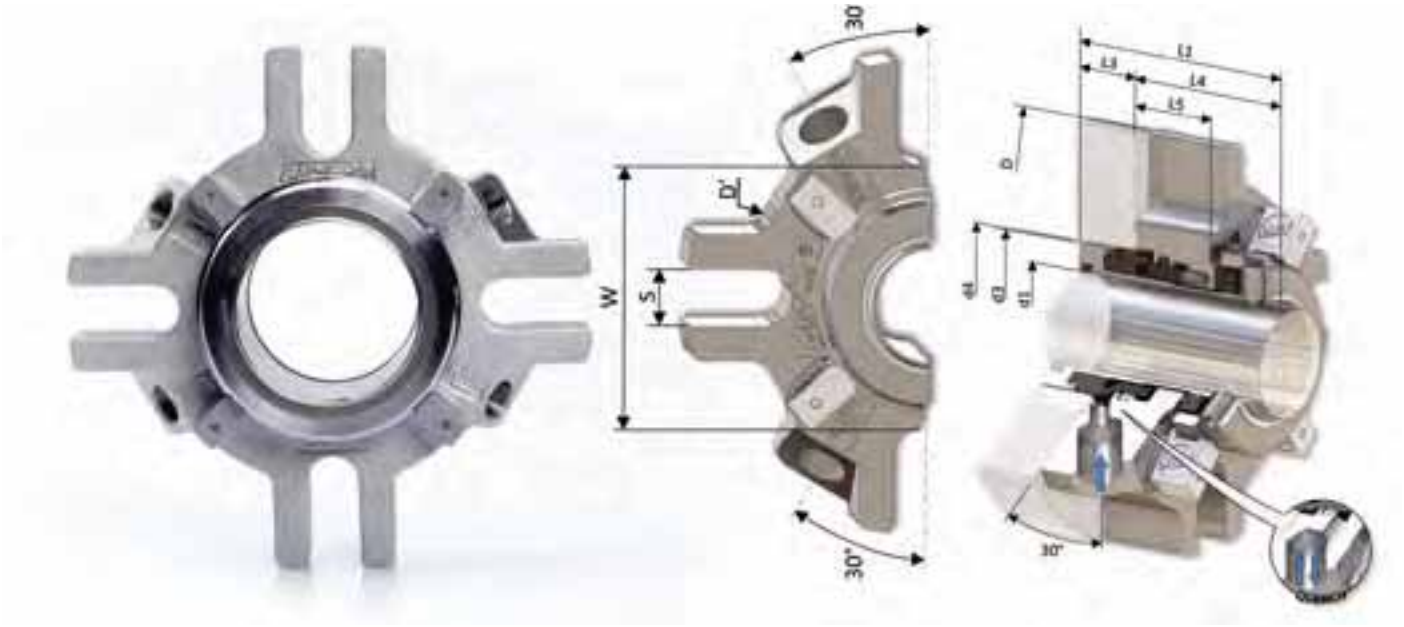
CARTSEAL B 24610 Q

Dynamic sealing through single cartridge seal

VERSION WITH FLUSH AND QUENCH, BALANCED

- ACS, ATEX (IIGD IIA-IIB T6 À T3), EC 1935/2004 AND FDA AS STANDARD
- PRESSURELESS FLUID FEED. WITHSTANDS TEMPORARY WATER CUTS

- INCREASES SEAL LIFE EXPECTANCY WITH CRYSTALLISING, SOLIDIFYING OR VAPORIZING PRODUCTS
- THE HYDROPHILIC PROPERTIES OF THE QUENCH RING MATERIAL MAINTAIN A THICK AND PERMANENT LUBRICATION FILM WHICH ENSURES HIGH LIFE EXPECTANCY



OPERATING PARAMETERS (NOT ASSOCIATED)

Pressure : 0 to 25 bar
Temperature : -20 °C to 200°C
Speed : 20 m/s

COMPOSITION

Friction faces: Silicon carbide / silicon carbide (U6/U6) or silicon carbide / resin-impregnated carbon (U6/B1). FLUSHING : ¼ Gaz QUENCH : ¼ Gaz

TYPES OF INDUSTRIES

FLUIDS

All corrosive, abrasive and slightly clogging fluids.

GUIDELINES, STANDARDS AND APPROVALS (ON REQUEST)

Cartridge version

CARTSEAL B 24610 Q

Dynamic sealing through single cartridge seal

METRIC VERSION

d1 nominal h6	d3	d4 mini	d4 maxi	L1	L3	L4	L5	D	D'	S	W
25	40	41	51	61	17	44	23	105	75	12.5	58
28	43	44	52	61	17	44	23	105	83	12.5	59
30	45	46	56	61	17	44	23	105	83	12.5	63
32	47	48	57	61	17	44	23	110	85	12.5	64
33	48	49	57	61	17	44	23	110	86	12.5	64
35	50	51	61	61	17	44	23	115	85	12.5	68
38	55	58	66	61	17	44	23	125	90	12.5	73
40	57	60	68	61	17	44	23	125	92	14.7	75
43	60	63	70	61	17	44	23	133	95	14.7	77
45	62	65	73	61	17	44	23	141	97	14.7	80
48	65	68	75	61	17	44	23	141	100	14.7	82
50	67	70	78	61	17	44	23	150	102	14.7	85
53	70	73	81	61	17	44	23	150	105	14.7	88
55	72	75	83	61	17	44	23	150	107	18	90
60	80	85	91	61	17	44	23	157	123	18	98
65	85	90	98	61	17	44	23	165	128	18	105
70	90	95	108	61	17	44	23	180	132	18	115

IMPERIAL VERSION

d1 nominal in	d1 nominal inches	d3	d4 mini	d4 maxi	L1	L3	L4	L5	D	D'	S	W
1	1"	40	41	51	61	17	44	23	105	75	12.5	58
1.125	1"1/8	45	46	56	61	17	44	23	105	83	12.5	63
1.25	1"1/4	47	48	57	61	17	44	23	110	85	12.5	64
1.375	1"3/8	50	51	61	61	17	44	23	115	85	12.5	68
1.5	1"1/2	55	58	66	61	17	44	23	125	90	12.5	73
1.625	1"5/8	60	63	70	61	17	44	23	133	95	14.7	77
1.75	1"3/4	62	65	73	61	17	44	23	141	97	14.7	80
1.875	1"7/8	65	68	75	61	17	44	23	141	100	14.7	82
2	2"	70	73	81	61	17	44	23	150	105	14.7	88
2.125	2"1/8	72	75	83	61	17	44	23	150	107	18	90
2.25	2"1/4	78	83	90	61	17	44	23	157	114	18	97
2.375	2"3/8	80	85	91	61	17	44	23	157	123	18	98
2.5	2"1/2	85	90	98	61	17	44	23	165	128	18	105
2.625	2"5/8	88	93	100	61	17	44	23	165	131	18	107
2.75	2"3/4	90	95	108	61	17	44	23	180	132	18	115

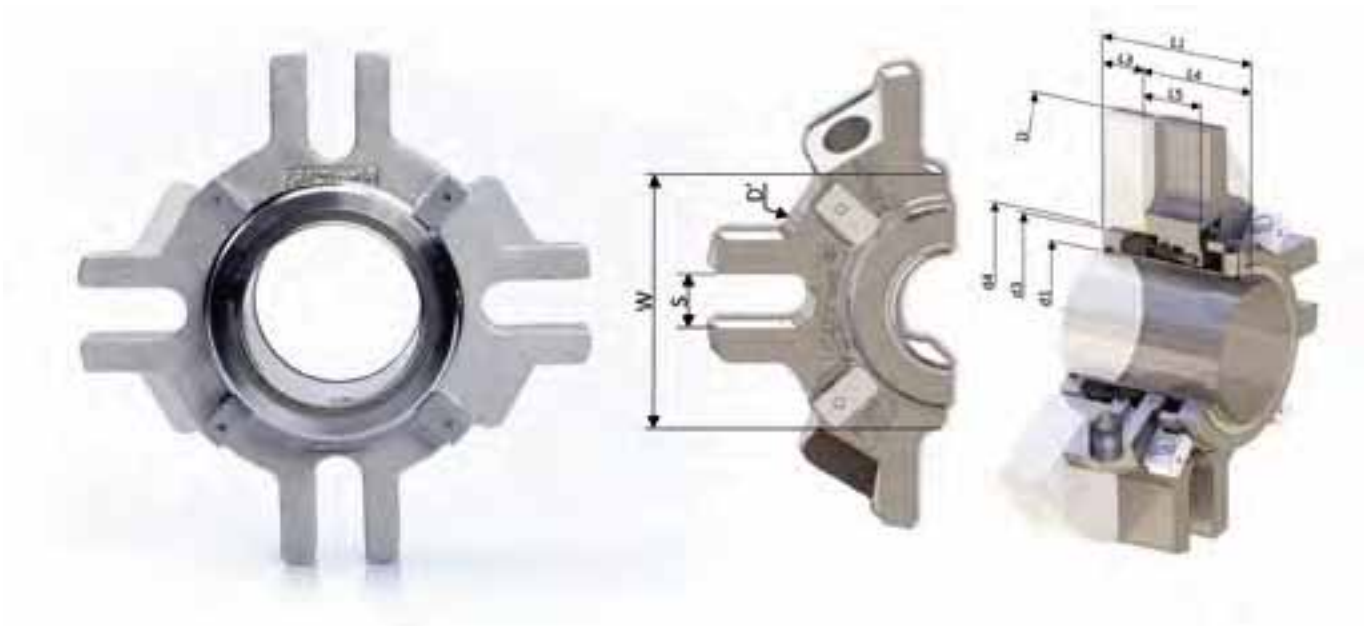
Cartridge version

CARTSEAL B 24610 PP

Dynamic sealing through single cartridge seal

VERSION BALANCED WITHOUT FLUID CIRCULATION, WITHOUT FLUSH

- ACS, ATEX (IIGD IIA-IIB T6 À T3), EC 1935/2004 AND FDA AS STANDARD
- SPECIALLY DESIGNED FOR APPLICATIONS WHERE FLUSH CIRCULATION IS PROHIBITIVE OR NOT REQUIRED
- THINNER GLAND PLATE FOR IMPROVED LUBRICATION OF FRICTION FACES
- DEDICATED TO PAPER INDUSTRIES



OPERATING PARAMETERS (NOT ASSOCIATED)

Pressure : 0 to 25 bar
Temperature : -20 °C to 200°C
Speed : 20 m/s

COMPOSITION

Friction faces: Silicon carbide / silicon carbide (U6/U6) or silicon carbide / resin-impregnated carbon (U6/B1) High-performance surface drive system: prevents breakage when starting with clogging products and ensures even effort distribution.

TYPES OF INDUSTRIES

FLUIDS

All corrosive, abrasive and slightly clogging fluids.

GUIDELINES, STANDARDS AND APPROVALS (ON REQUEST)

Cartridge version

CARTSEAL B 24610 PP

Dynamic sealing through single cartridge seal

METRIC VERSION

d1 nominal h6	d3	d4 mini	d4 maxi	L1	L3	L4	L5	D	D'	S	W
25	40	41	51	61	17	44	23	105	75	12.5	58
28	43	44	52	61	17	44	23	105	83	12.5	59
30	45	46	56	61	17	44	23	105	83	12.5	63
32	47	48	57	61	17	44	23	110	85	12.5	64
33	48	49	57	61	17	44	23	110	86	12.5	64
35	50	51	61	61	17	44	23	115	85	12.5	68
38	55	58	66	61	17	44	23	125	90	12.5	73
40	57	60	68	61	17	44	23	125	92	14.7	75
43	60	63	70	61	17	44	23	133	95	14.7	77
45	62	65	73	61	17	44	23	141	97	14.7	80
48	65	68	75	61	17	44	23	141	100	14.7	82
50	67	70	78	61	17	44	23	150	102	14.7	85
53	70	73	81	61	17	44	23	150	105	14.7	88
55	72	75	83	61	17	44	23	150	107	18	90
60	80	85	91	61	17	44	23	157	123	18	98
65	85	90	98	61	17	44	23	165	128	18	105
70	90	95	108	61	17	44	23	180	132	18	115

IMPERIAL VERSION

d1 nominal in	d1 nominal inches	d3	d4 mini	d4 maxi	L1	L3	L4	L5	D	D'	S	W
1	1"	40	41	51	61	17	44	23	105	75	12.5	58
1.125	1"1/8	45	46	56	61	17	44	23	105	83	12.5	63
1.25	1"1/4	47	48	57	61	17	44	23	110	85	12.5	64
1.375	1"3/8	50	51	61	61	17	44	23	115	85	12.5	68
1.5	1"1/2	55	58	66	61	17	44	23	125	90	12.5	73
1.625	1"5/8	60	63	70	61	17	44	23	133	95	14.7	77
1.75	1"3/4	62	65	73	61	17	44	23	141	97	14.7	80
1.875	1"7/8	65	68	75	61	17	44	23	141	100	14.7	82
2	2"	70	73	81	61	17	44	23	150	105	14.7	88
2.125	2"1/8	72	75	83	61	17	44	23	150	107	18	90
2.25	2"1/4	78	83	90	61	17	44	23	157	114	18	97
2.375	2"3/8	80	85	91	61	17	44	23	157	123	18	98
2.5	2"1/2	85	90	98	61	17	44	23	165	128	18	105
2.625	2"5/8	88	93	100	61	17	44	23	165	131	18	107
2.75	2"3/4	90	95	108	61	17	44	23	180	132	18	115

Cartridge version

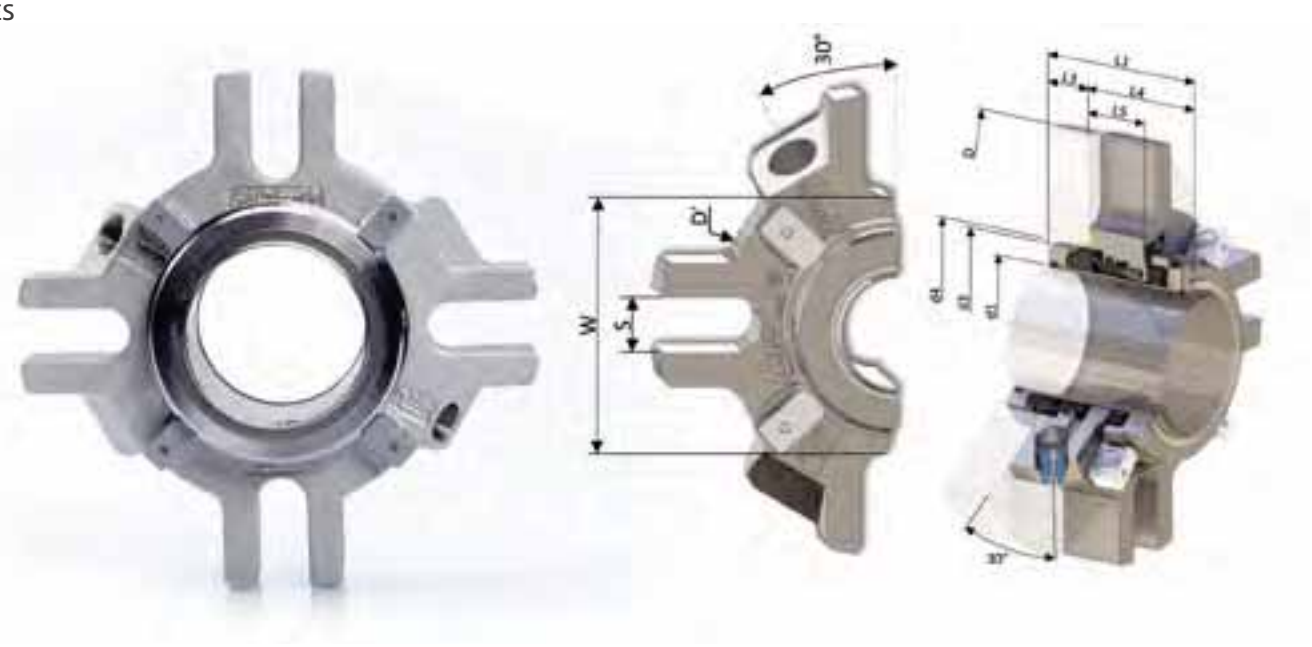
CARTSEAL B 24610 PPQ

Dynamic sealing through single cartridge seal

VERSION WITHOUT FLUID CIRCULATION, WITHOUT FLUSH AND WITH QUENCH

- ACS, ATEX (IIGD IIA-IIB T6 À T3), EC 1935/2004 AND FDA AS STANDARD
- BUILT-IN AUXILIARY SEAL ACTING AS A QUENCH

- SPECIALLY DESIGNED FOR APPLICATIONS WHERE PRODUCT CIRCULATION IS USELESS OR PROHIBITED
- THINNER GLAND PLATE FOR IMPROVED LUBRICATION OF FRICTION FACES



OPERATING PARAMETERS (NOT ASSOCIATED)

Pressure : 0 to 25 bar
Temperature : -20 °C to 200°C
Speed : 20 m/s

COMPOSITION

Friction faces: Silicon carbide / silicon carbide (U6/U6) or silicon carbide / resin-impregnated carbon (U6/B1). High-performance surface drive system: prevents breakage when starting with clogging products and ensures even effort distribution. Gaz QUENCH : ¼ Gaz

TYPES OF INDUSTRIES

FLUIDS

All corrosive, abrasive and slightly clogging fluids.

GUIDELINES, STANDARDS AND APPROVALS (ON REQUEST)

Cartridge version

CARTSEAL B 24610 PPQ

Dynamic sealing through single cartridge seal

METRIC VERSION

d1 nominal h6	d3	d4 mini	d4 maxi	L1	L3	L4	L5	D	D'	S	W
25	40	41	51	61	17	44	23	105	75	12.5	58
28	43	44	52	61	17	44	23	105	83	12.5	59
30	45	46	56	61	17	44	23	105	83	12.5	63
32	47	48	57	61	17	44	23	110	85	12.5	64
33	48	49	57	61	17	44	23	110	86	12.5	64
35	50	51	61	61	17	44	23	115	85	12.5	68
38	55	58	66	61	17	44	23	125	90	12.5	73
40	57	60	68	61	17	44	23	125	92	14.7	75
43	60	63	70	61	17	44	23	133	95	14.7	77
45	62	65	73	61	17	44	23	141	97	14.7	80
48	65	68	75	61	17	44	23	141	100	14.7	82
50	67	70	78	61	17	44	23	150	102	14.7	85
53	70	73	81	61	17	44	23	150	105	14.7	88
55	72	75	83	61	17	44	23	150	107	18	90
60	80	85	91	61	17	44	23	157	123	18	98
65	85	90	98	61	17	44	23	165	128	18	105
70	90	95	108	61	17	44	23	180	132	18	115

IMPERIAL VERSION

d1 nominal in	d1 nominal inches	d3	d4 mini	d4 maxi	L1	L3	L4	L5	D	D'	S	W
1	1"	40	41	51	61	17	44	23	105	75	12.5	58
1.125	1"1/8	45	46	56	61	17	44	23	105	83	12.5	63
1.25	1"1/4	47	48	57	61	17	44	23	110	85	12.5	64
1.375	1"3/8	50	51	61	61	17	44	23	115	85	12.5	68
1.5	1"1/2	55	58	66	61	17	44	23	125	90	12.5	73
1.625	1"5/8	60	63	70	61	17	44	23	133	95	14.7	77
1.75	1"3/4	62	65	73	61	17	44	23	141	97	14.7	80
1.875	1"7/8	65	68	75	61	17	44	23	141	100	14.7	82
2	2"	70	73	81	61	17	44	23	150	105	14.7	88
2.125	2"1/8	72	75	83	61	17	44	23	150	107	18	90
2.25	2"1/4	78	83	90	61	17	44	23	157	114	18	97
2.375	2"3/8	80	85	91	61	17	44	23	157	123	18	98
2.5	2"1/2	85	90	98	61	17	44	23	165	128	18	105
2.625	2"5/8	88	93	100	61	17	44	23	165	131	18	107
2.75	2"3/4	90	95	108	61	17	44	23	180	132	18	115

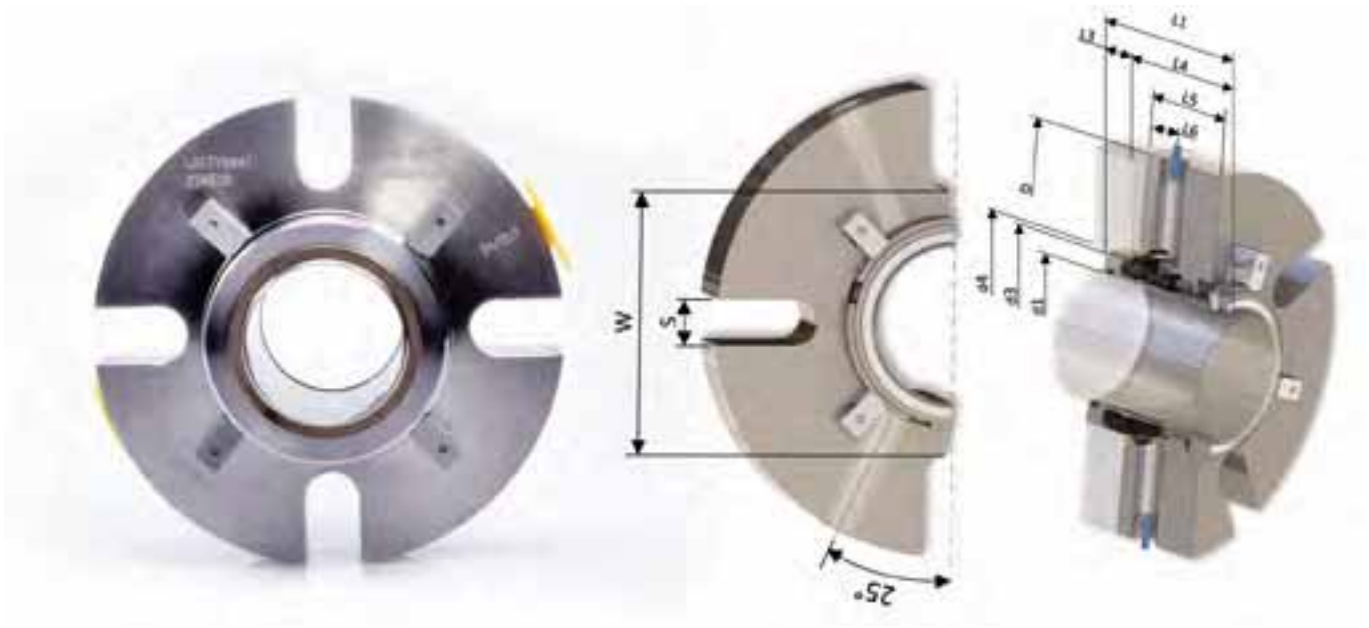
Cartridge version

CARTSEAL B 24810

Dynamic sealing through single cartridge seal

CONNECTION WITH FLUSHING AS STANDARD VERSION

- ACS, ATEX (IIGD IIA-IIB T6 À T3), EC 1935/2004 AND FDA AS STANDARD
- COMPLETE, BALANCED STATIONARY MECHANICAL SEAL FOR HIGH-ROTATION SPEEDS, ALLOWS FOR ANGULAR SHAFT OFFSET
- SPRINGS ENCAPSULATED IN THE CARTRIDGE BOX, NO LOSS OR IMPROPER HANDLING DURING INSTALLATION
- SELF-TURNING SETTING CLAMPS



OPERATING PARAMETERS (NOT ASSOCIATED)

Pressure : 0 to 25 bar
Temperature : -20 °C to 200°C
Speed : 20 m/s

COMPOSITION

Friction faces: Silicon carbide / silicon carbide (U6/U6) or silicon carbide / resin-impregnated carbon (U6/B1). FLUSHING : ⅜ Gaz

TYPES OF INDUSTRIES

FLUIDS

All corrosive, abrasive and slightly clogging fluids.

GUIDELINES, STANDARDS AND APPROVALS

Cartridge version

CARTSEAL B 24810

Dynamic sealing through single cartridge seal

METRIC VERSION

d1 nominal h6	d3	d4 mini	d4 maxi	L1	L3	L4	L5	L6	D	S	W
75	100	104	118	73	18	55	40	14	190	18	129
80	105	109	124	73	18	55	40	14	195	18	135
85	110	114	128	73	18	55	40	14	200	20	139
90	115	119	135	73	18	55	40	14	205	20	146
95	120	124	138	73	18	55	40	14	210	20	149
100	126	129	144	73	18	55	40	14	215	20	155

IMPERIAL VERSION

d1 nominal in	d1 nominal inches	d3	d4 mini	d4 maxi	L1	L3	L4	L5	L6	D	S	W
2.875	2"7/8	100	104	118	73	18	55	40	14	190	18	129
3.000	3"	100	104	118	73	18	55	40	14	190	18	129
3.125	3"1/8	105	109	124	73	18	55	40	14	195	18	135
3.250	3"1/4	110	114	128	73	18	55	40	14	200	20	139
3.375	3"3/8	110	114	128	73	18	55	40	14	200	20	139
3.500	3"1/2	115	119	135	73	18	55	40	14	205	20	146
3.625	3"5/8	120	124	138	73	18	55	40	14	210	20	149
3.750	3"3/4	120	124	138	73	18	55	40	14	210	20	149
4.000	4"	126	129	144	73	18	55	40	14	215	20	155

L6: Flushing ports position

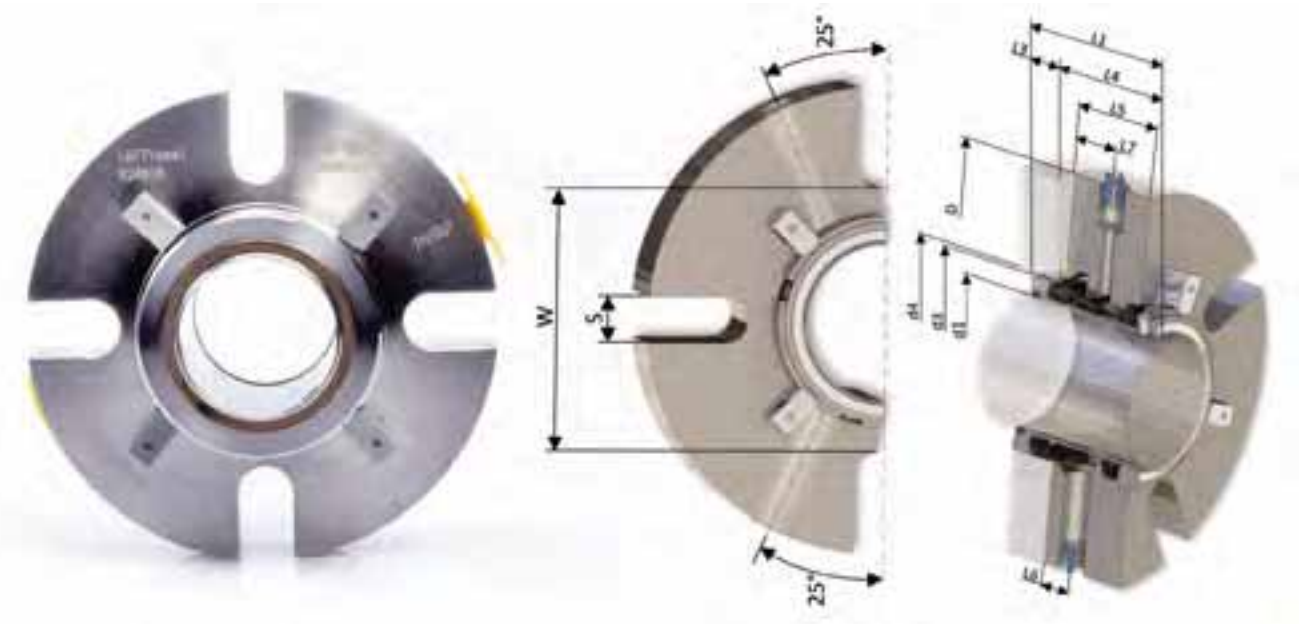
Cartridge version

CARTSEAL B 24810 Q

Dynamic sealing through single cartridge seal

VERSION WITH FLUSH AND QUENCH

- ACS, ATEX (IIGD IIA-IIB T6 À T3), EC 1935/2004 AND FDA AS STANDARD
- PRESSURELESS FLUID FEEDING WITHSTANDS TEMPORARY WATER CUTS
- INCREASES SEAL LIFE EXPECTANCY WITH CRYSTALLISING, SOLIDIFYING OR VAPORIZING PRODUCTS
- THE HYDROPHILIC PROPERTIES OF THE QUENCH RING MATERIAL MAINTAIN A THICK AND PERMANENT LUBRICATION FILM WHICH ENSURES HIGH LIFE EXPECTANCY



OPERATING PARAMETERS (NOT ASSOCIATED)

Pressure : 0 to 25 bar
Temperature : -20 °C to 200°C
Speed : 20 m/s

COMPOSITION

Friction faces: Silicon carbide / silicon carbide (U6/U6) or silicon carbide / resin-impregnated carbon (U6/B1). FLUSHING : ⅜ Gaz QUENCH : ⅜ Gaz. L6 : Flushing port position. L7 : Quench port position

TYPES OF INDUSTRIES

FLUIDS

All corrosive, abrasive and slightly clogging fluids.

GUIDELINES, STANDARDS AND APPROVALS (ON REQUEST)

The maximum temperature, pressure and speed given in this document cannot be associated in any case.

Cartridge version

CARTSEAL B 24810 Q

Dynamic sealing through single cartridge seal

METRIC VERSION

d1 nominal h6	d3	d4 mini	d4 maxi	L1	L3	L4	L5	L6	L7	D	S	W
75	100	104	118	73	18	55	40	14	20	190	18	129
80	105	109	124	73	18	55	40	14	20	195	18	135
85	110	114	128	73	18	55	40	14	20	200	20	139
90	115	119	135	73	18	55	40	14	20	205	20	146
95	120	124	138	73	18	55	40	14	20	210	20	149
100	126	129	144	73	18	55	40	14	20	215	20	155

IMPERIAL VERSION

d1 nominal in	d1 nominal inches	d3	d4 mini	d4 maxi	L1	L3	L4	L5	L6	L7	D	S	W
2.875	2"7/8	100	104	118	73	18	55	40	14	20	190	18	129
3	3"	100	104	118	73	18	55	40	14	20	190	18	129
3.125	3"1/8	105	109	124	73	18	55	40	14	20	195	18	135
3.25	3"1/4	110	114	128	73	18	55	40	14	20	200	20	139
3.375	3"3/8	110	114	128	73	18	55	40	14	20	200	20	139
3.5	3"1/2	115	119	135	73	18	55	40	14	20	205	20	146
3.625	3"5/8	120	124	138	73	18	55	40	14	20	210	20	149
3.75	3"3/4	120	124	138	73	18	55	40	14	20	210	20	149
4	4"	126	129	144	73	18	55	40	14	20	215	20	155

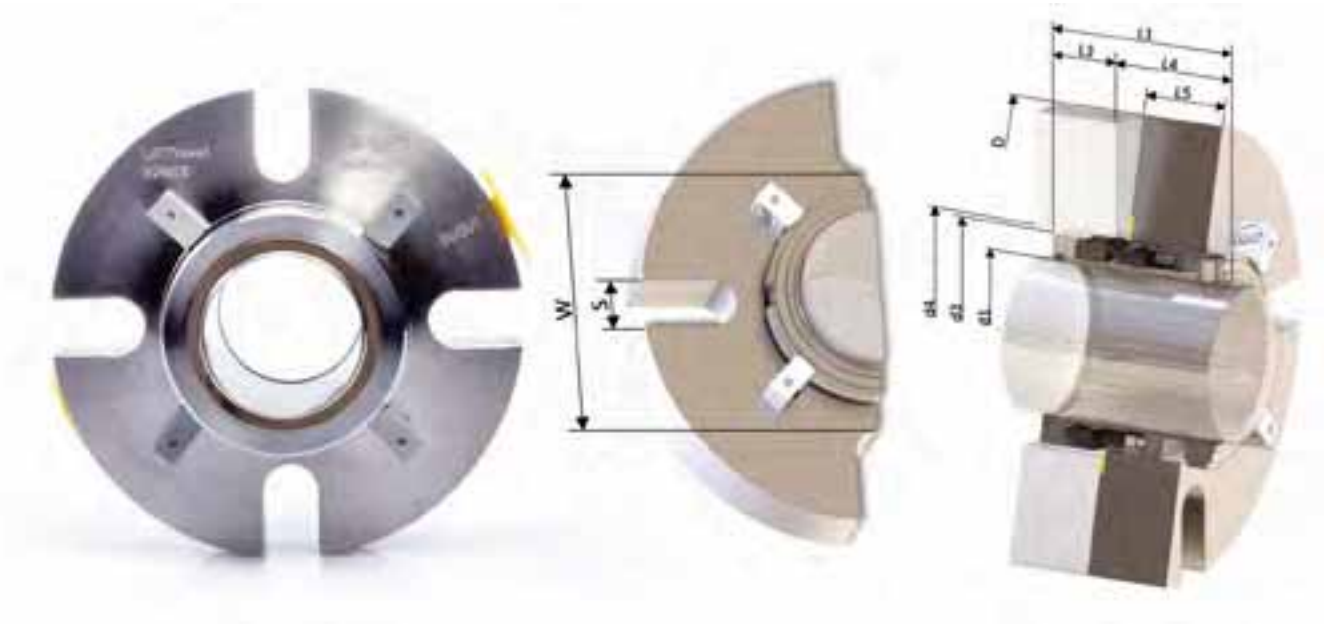
Cartridge version

CARTSEAL B 24810 PP

Dynamic sealing through single cartridge seal

BALANCED VERSION WITHOUT FLUID CIRCULATION, WITHOUT FLUSH

- ACS, ATEX (IIGD IIA-IIB T6 À T3), EC 1935/2004 AND FDA AS STANDARD
- SPECIALLY DESIGNED FOR APPLICATIONS WHERE FLUSH CIRCULATION IS USELESS OR PROHIBITED
- THINNER GLAND PLATE FOR IMPROVED LUBRICATION OF FRICTION FACES



OPERATING PARAMETERS (NOT ASSOCIATED)

Pressure : 0 to 25 bar
Temperature : -20 °C to 200°C
Speed : 20 m/s

COMPOSITION

Friction faces: Silicon carbide / silicon carbide (U6/U6) or silicon carbide / resin-impregnated carbon (U6/B1)

TYPES OF INDUSTRIES

FLUIDS

All corrosive, abrasive and slightly clogging fluids.

GUIDELINES, STANDARDS AND APPROVALS (ON REQUEST)

Cartridge version

CARTSEAL B 24810 PP

Dynamic sealing through single cartridge seal

METRIC VERSION

d1 nominal h6	d3	d4 mini	d4 maxi	L1	L3	L4	L5	D	S	W
75	100	104	118	73	27	46	31	190	18	129
80	105	109	124	73	27	46	31	195	18	135
85	110	114	128	73	27	46	31	200	20	139
90	115	119	135	73	27	46	31	205	20	146
95	120	124	138	73	27	46	31	210	20	149
100	126	129	144	73	27	46	31	215	20	155

IMPERIAL VERSION

d1 nominal in	d1 nominal inches	d3	d4 mini	d4 maxi	L1	L3	L4	L5	D	S	W
2.875	2"7/8	100	104	118	73	27	46	31	190	18	129
3	3"	100	104	118	73	27	46	31	190	18	129
3.125	3"1/8	105	109	124	73	27	46	31	195	18	135
3.25	3"1/4	110	114	128	73	27	46	31	200	20	139
3.375	3"3/8	110	114	128	73	27	46	31	200	20	139
3.5	3"1/2	115	119	135	73	27	46	31	205	20	146
3.625	3"5/8	120	124	138	73	27	46	31	210	20	149
3.75	3"3/4	120	124	138	73	27	46	31	210	20	149
3.875	3"7/8	126	129	144	73	27	46	31	215	20	155
4	4"	126	129	144	73	27	46	31	215	20	155

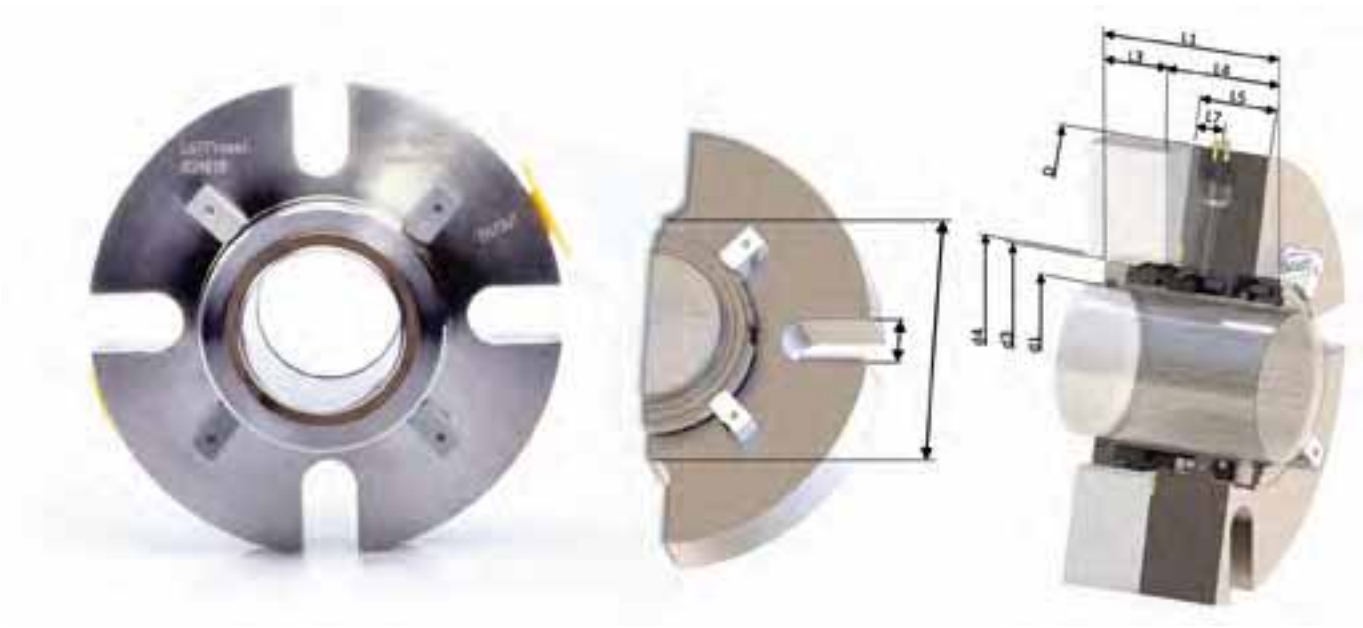
Cartridge version

CARTSEAL B 24810 PPQ

Dynamic sealing through single cartridge seal

BUILT-IN AUXILIARY SEAL ACTING AS A QUENCH

- ACS, ATEX (IIGD IIA-IIB T6 À T3), EC 1935/2004 AND FDA AS STANDARD
- SPECIALLY DESIGNED FOR APPLICATIONS WHERE PRODUCT CIRCULATION IS USELESS OR PROHIBITED
- THINNER GLAND PLATE FOR IMPROVED LUBRICATION OF FRICTION FACES



OPERATING PARAMETERS (NOT ASSOCIATED)

Pressure : 0 to 25 bar
Temperature : -20 °C to 200°C
Speed : 20 m/s

COMPOSITION

Friction faces: Silicon carbide / silicon carbide (U6/U6) or silicon carbide / resin-impregnated carbon (U6/B1). QUENCH 3/8 Gaz - L7 : Quench ports position

TYPES OF INDUSTRIES

FLUIDS

All corrosive, abrasive and slightly clogging fluids.

GUIDELINES, STANDARDS AND APPROVALS (ON REQUEST)

Cartridge version

CARTSEAL B 24810 PPQ

Dynamic sealing through single cartridge seal

METRIC VERSION

d1 nominal h6	d4 mini	d4 maxi	L1	L3	L4	L5	L7	D	S	W
70	95	108	63	23.5	39.5	26.5	9.5	180	18	115
75	104	118	73	27	46	31	11	190	18	129
80	109	124	73	27	46	31	11	195	18	135
85	114	128	73	27	46	31	11	200	20	139
90	119	135	73	27	46	31	11	205	20	146
95	124	138	73	27	46	31	11	210	20	149
100	129	144	73	27	46	31	11	215	20	155

IMPERIAL VERSION

d1 nominal in	d1 nominal inches	d3	d4 mini	d4 maxi	L1	L3	L4	L5	L7	D	S	W
2.875	2"7/8	100	104	118	73	27	46	31	11	190	18	129
3	3"	100	104	118	73	27	46	31	11	190	18	129
3.125	3"1/8	105	109	124	73	27	46	31	11	195	18	135
3.25	3"1/4	110	114	128	73	27	46	31	11	200	20	139
3.375	3"3/8	110	114	128	73	27	46	31	11	200	20	139
3.5	3"1/2	115	119	135	73	27	46	31	11	205	20	146
3.625	3"5/8	120	124	138	73	27	46	31	11	210	20	149
3.75	3"3/4	120	124	138	73	27	46	31	11	210	20	149
4	4"	126	129	144	73	27	46	31	11	215	20	155

Cartridge version

CARTSEAL B 24810 DB

Dynamic sealing through double cartridge seal

DOUBLE BALANCED CARTRIDGE SEAL VERSION

- ACS, ATEX (IIGD IIA-IIB T6 À T3), EC 1935/2004 AND FDA AS STANDARD
- CAPABLE OF OPERATING AS A DOUBLE PRESSURISED MECHANICAL SEAL OR AS A TANDEM SEAL WITHOUT BARRIER PRESSURE
- FULLY SUITABLE FOR ANY TYPE OF ENVIRONMENT
- SELF-TURNING SETTING CLAMPS

OPERATING PARAMETERS (NOT ASSOCIATED)

Pressure : 0 to 25 bar
Temperature : -20 °C to 200°C
Speed : 20 m/s

COMPOSITION

Friction faces: Silicon carbide / silicon carbide (U6/U6) or silicon carbide / resin-impregnated carbon (U6/B1).BUFFER FLUID d1<75 : ¼ Gaz d1≥75 : ⅜ Gaz- L8 : Inlet buffer fluid - L9 : Outlet buffer fluid

TYPES OF INDUSTRIES

FLUIDS

All corrosive, abrasive and slightly clogging fluids.

GUIDELINES, STANDARDS AND APPROVALS
(ON REQUEST)

d1 nominal h6	d3	d4 mini	d4 maxi	L1	L3	L4	L5	L8	L9	D	S	W
25	40	41	51	83.5	23.5	60	28.5	9.5	20	105	12.5	58
28	43	44	52	83.5	23.5	60	28.5	9.5	20	105	12.5	59
30	45	46	56	83.5	23.5	60	28.5	9.5	20	105	12.5	63
32	47	48	57	83.5	23.5	60	28.5	9.5	20	110	12.5	64
33	48	49	57	83.5	23.5	60	28.5	9.5	20	110	12.5	64
35	50	51	61	83.5	23.5	60	28.5	9.5	20	115	12.5	68
38	55	58	66	83.5	23.5	60	28.5	9.5	20	125	12.5	73
40	57	60	68	83.5	23.5	60	28.5	9.5	20	125	14.7	75
43	60	63	70	83.5	23.5	60	28.5	9.5	20	133	14.7	77
45	62	65	73	83.5	23.5	60	28.5	9.5	20	141	14.7	80
48	65	68	75	83.5	23.5	60	28.5	9.5	20	141	14.7	82
50	67	70	78	83.5	23.5	60	28.5	9.5	20	150	14.7	85
53	70	73	81	83.5	23.5	60	28.5	9.5	20	150	14.7	88
55	72	75	83	83.5	23.5	60	28.5	9.5	20	150	18	90
60	80	85	91	83.5	23.5	60	28.5	9.5	20	157	18	98
65	85	90	98	83.5	23.5	60	28.5	9.5	20	165	18	105
70	90	95	108	83.5	23.5	60	28.5	9.5	20	180	18	115
75	100	104	118	97	27	70	33	11	23	190	18	129
80	105	109	124	97	27	70	33	11	23	195	18	135
85	110	114	128	97	27	70	33	11	23	200	20	139
90	115	119	135	97	27	70	33	11	23	205	20	146
95	120	124	138	97	27	70	33	11	23	210	20	149
100	126	129	144	97	27	70	33	11	23	215	20	155

The maximum temperature, pressure and speed given in this document cannot be associated in any case.

Spares kit

KIT CARTSEAL B 24

Spares kit for mechanical seal

KIT FOR CARTRIDGE SEAL

- INCLUDES ALL WEAR PARTS

COMPOSITION

Spares kit includes friction faces, O-rings, springs, etc. for a complete renewal of your mechanical seals.

TYPES OF INDUSTRIES

GUIDELINES, STANDARDS AND APPROVALS
(ON REQUEST)

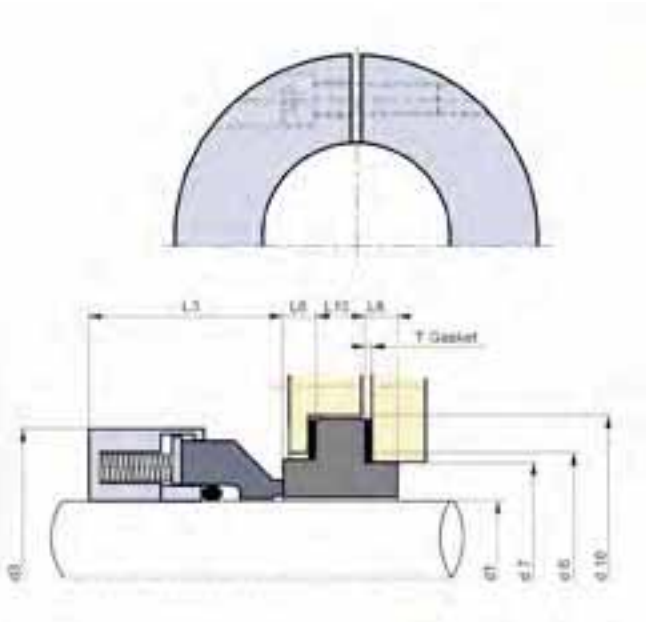
Single-seal

LATTYSEAL B 16660 A3

Dynamic sealing through complete, external balanced mechanical seal

EXTERNAL MECHANICAL SEAL LIMITING THE CONTACT WITH THE PRODUCT

- OPTION POSSIBLE FOR AGITATORS WITH AXIAL CLEARANCES
- SIMPLE AND FAST INSTALLATION
- FOR HIGHLY CORROSIVE FLUIDS



OPERATING PARAMETERS (NOT ASSOCIATED)

Pressure : 0 to 10 bar
Temperature : -20 °C to 220°C
Speed : 15 m/s

COMPOSITION

Pure silicon carbide (U6) or resin-impregnated carbon (B1)

TYPES OF INDUSTRIES

FLUIDS

All highly corrosive, abrasive and slightly clogging fluids.

GUIDELINES, STANDARDS AND APPROVALS
(ON REQUEST)

Single-seal

LATTYSEAL B 16660 A3

Dynamic sealing through complete, external balanced mechanical seal

METRIC VERSION

d1 nominal h6	d3	d6 -0 + 0,2	d7 ± 0,5	d10 -0 + 0,2	L3	L6	L10	T
18	44	37,5	36.51	48	38	4.8	8	0.8
20	46	40,5	39.69	51	38	4.8	8	0.8
22	48	40,5	39.69	51	38	4.8	8	0.8
24	50	43,5	42,86	54	38	4.8	8	0.8
25	52	43.5	42.86	54	38	4.8	8	0.8
28	55	51.5	50.8	65	38	8	11	1.6
30	58	55	53.98	68	38	8	11	1.6
32	60	55	53.98	68	38	8	11	1.6
33	60	58	57.15	71	38	8	11	1.6
35	62	58	57.15	71	38	8	11	1.6
38	65	64.5	63.5	78	38	8	11	1.6
40	68	67.5	66.68	81	38	8	11	1.6
43	70	71	69.85	84	38	8	11	1.6
45	72	71	69.85	84	42	8	11	1.6
48	75	80	79.38	97	42	9.5	14.3	1.6
50	78	80	79.38	97	42	9.5	14.3	1.6
53	80	83,5	82.55	100	42	9.5	14.3	1.6
55	80	86,5	85.73	103	42	9.5	14.3	1.6
58	83	89,5	88.9	106	42	9.5	14.3	1.6
60	86	89,5	88.9	106	42	9.5	14.3	1.6
63	90	93	92,08	110	42	9.5	14.3	1.6
65	93	96	95.25	113	42	9.5	14.3	1.6
68	98	99	98.43	116	42	9.5	14.3	1.6
70	98	99	98.43	116	42	9.5	14.3	1.6
75	105	104	103.19	121	42	9.5	14.3	1.6
80	109	115	114.3	132	42	9.5	14.3	1.6
85	114	121,5	120.65	138	42	9.5	14.3	1.6
90	120	128	127	144	42	9.5	14.3	1.6
95	125	128	127	144	42	9.5	14.3	1.6
100	130	134	133.35	151	42	9.5	14.3	1.6

IMPERIAL VERSION

d1 nominal in	d1 nominal inches	d3	d6 -0 + 0,2	d7 ± 0,5	d10	L3	L6	L10	T
0.750	3/4	44	37.5	36.51	48	38	4.8	8	0.8
0.875	7/8	48	40.5	39.69	51	38	4.8	8	0.8
1.000	1"	52	43.5	42.86	54	38	4.8	8	0.8
1.125	1"1/8	55	51,5	50.8	65	38	8	11	1.6
1.250	1"1/4	60	55	53,98	68	38	8	11	1.6
1.375	1"3/8	62	58	57,15	71	38	8	11	1.6
1.500	1"1/2	65	64.5	63,50	78	38	8	11	1.6
1.625	1"5/8	68	67.5	66,68	81	38	8	11	1.6
1.750	1"3/4	72	71	69,85	84	38	8	11	1.6
1.875	1"7/8	75	74	73.03	87	42	8	11	1.6
2.000	2"	78	80	79,38	97	42	9.5	14.3	1.6
2.125	2"1/8	80	83.5	82.55	100	42	9.5	14.3	1.6
2.250	2"1/4	83	86.5	85.73	103	42	9.5	14.3	1.6
2.375	2"3/8	86	89.5	88.9	106	42	9.5	14.3	1.6
2.500	2"1/2	90	93	92.08	110	42	9.5	14.3	1.6
2.625	2"5/8	98	96	95.25	113	42	9.5	14.3	1.6
2.750	2"3/4	98	99	98.43	116	42	9.5	14.3	1.6
2.875	2"7/8	105	101	100	117	42	9.5	14.3	1.6
3.000	3"	105	104	103.19	121	42	9.5	14.3	1.6
3.250	3"1/4	109	115	114.3	132	42	9.5	14.3	1.6
3.500	3"1/2	120	121.5	120.65	138	42	9.5	14.3	1.6
3.750	3"3/4	125	128	127	144	42	9.5	14.3	1.6
4.000	4"	130	134	133.35	151	42	9.5	14.3	1.6

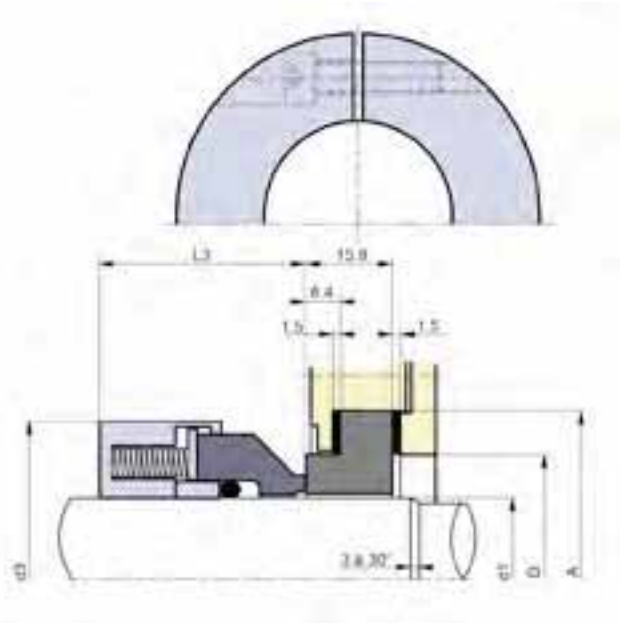
Single-seal

LATTYSEAL B 16670 A3

Dynamic sealing through complete, external balanced mechanical seal

EXTERNAL MECHANICAL SEAL LIMITING THE CONTACT WITH THE PRODUCT

- OPTION POSSIBLE FOR AGITATORS WITH AXIAL CLEARANCES
- SIMPLE AND FAST INSTALLATION
- FOR HIGHLY CORROSIVE FLUIDS



OPERATING PARAMETERS (NOT ASSOCIATED)

Pressure : 0 to 10 bar
Temperature : -20 °C to 220°C
Speed : 15 m/s

COMPOSITION

Supplied with FKM O-ring Pure silicon carbide (U6) or resin-impregnated carbon (B1) ceramic-impregnated carbon (V)

TYPES OF INDUSTRIES

FLUIDS

All highly corrosive, abrasive and slightly clogging fluids.

GUIDELINES, STANDARDS AND APPROVALS (ON REQUEST)

Single-seal

LATTYSEAL B 16670 A3

Dynamic sealing through complete, external balanced mechanical seal

METRIC VERSION

d1 nominal h6	d3	L3	A -0 +1	D -0 + 0,2
18	44	38	46.5	34
20	46	38	49.5	38.1
22	48	38	50.5	38
24	50	38	54,5	40
25	52	38	54.5	41.5
28	55	38	57.5	45
30	58	38	63	46.5
32	60	38	60.5	48
33	60	38	60.3	49.3
35	62	38	62.5	51
38	65	38	69.9	58.2
40	68	38	73.5	60.5
43	70	38	80	64
45	72	42	83	67
48	75	42	82.6	70.4
50	78	42	89.5	70
53	80	42	88.9	73.2
55	80	42	99	76.5
58	83	42	99.2	85.3
60	86	42	99.5	78
63	90	42	105	83
65	93	42	108.5	86
68	98	42	115	88
70	98	42	115	88
75	105	42	122.5	94
80	109	42	122.5	100.5
85	114	42	122.5	103.5
90	120	42	133.5	110
95	125	42	132	113.5
100	130	42	157.5	120

IMPERIAL VERSION

d1 nominal in	d1 nominal inches	d3	L3	A -0 +1	D -0 + 0,2
0.938	15/16	50	38	50.5	40
1.000	1"	52	38	54.5	41.5
1.125	1"1/8	55	38	57.5	45
1.250	1"1/4	60	38	60.5	48
1.375	1"3/8	62	38	62,5	51
1.500	1"1/2	65	38	70,5	57,5
1.625	1"5/8	68	38	73,5	60,5
1.750	1"3/4	72	38	80	64
1.875	1"7/8	75	42	83	67
2.000	2"	78	42	89,5	70
2.125	2"1/8	80	42	96	73,5
2.250	2"1/4	83	42	99	76,5
2.375	2"3/8	86	42	99.5	78
2.500	2"1/2	90	42	105	83
2.625	2"5/8	98	42	108.5	86
2.750	2"3/4	98	42	115	88
2.875	2"7/8	105	42	118	91
3.000	3"	105	42	122.5	94
3.125	3"1/8	109	42	132	97.5
3.250	3"1/4	109	42	122.5	100.5
3.375	3"3/8	114	42	122.5	103.5
3.500	3"1/2	120	42	125.5	107
3.625	3"5/8	120	42	133.5	110
3.750	3"3/4	125	42	132	113.5
4.000	4"	130	42	157.5	120

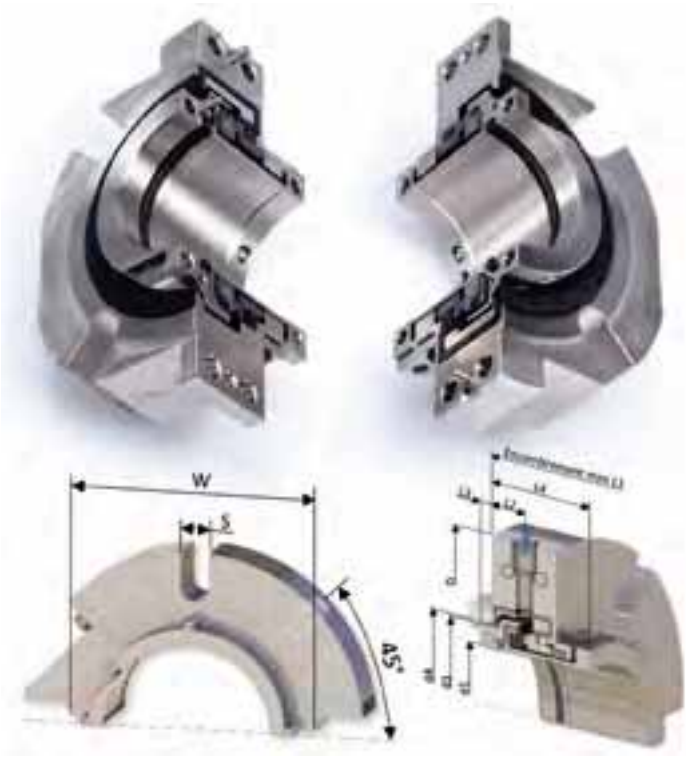
Cartridge version

CARTSEAL B 25

Dynamic sealing through split seal

SPLIT SEAL

- ONLY TWO SUB-ASSEMBLIES TO BE HANDLED
- FACTORY PRESET, NO SETTING NECESSARY WHEN INSTALLING IT REDUCED PRODUCTION DOWNTIME
- NO ELASTOMER BONDING REQUIRED
- IMPERIAL VERSION ON REQUEST



OPERATING PARAMETERS (NOT ASSOCIATED)

Pressure : 0 to 17 bar
Temperature : -20 °C to 170°C
Speed : 15 m/s

COMPOSITION

Flange, sleeve, screw: stainless steel 316 (1.4401)
Spring: hastelloy C
O-ring : FKM
Face of stationary fit: carbon or silicon carbide
Face of rotary fit: silicon carbide

TYPES OF INDUSTRIES

FLUIDS

All corrosive, abrasive and slightly clogging fluids.

d1 +0 /-0.05	d3	d4 mini	d4 maxi	L1	L2	L3	L4	D	S	W
45	65.1	66.68	76.20	64	16.7	6.35	54	140	14.3	84.9
48 - 50	68.2	68.85	79.38	64	16.7	6.35	54	140	14.3	90.5
55	77.8	79.4	88.9	64	16.7	6.35	54	159	17.4	100
60 - 62	81	85.73	95.25	64	16.7	6.35	54	165	17.4	104.8
65	85	88.9	98.4	64	16.7	6.35	54	165	17.4	112.8
68	90.5	92.08	104.78	64	16.7	6.35	54	169	17.4	112.8
70	90.5	92.08	104.77	64	16.7	6.35	54	197	17.4	112.8
71	93.6	96.8	107.9	64	16.7	6.35	54	198	17.4	122.2
75	96.8	100	111.1	64	16.7	6.35	54	203	17.4	125.4
80	106.4	108	120.65	72	20.6	7.14	62	210	20.6	131.8
87	112.7	114.3	127	72	20.6	7.14	62	216	20.6	138.1
90	115.9	117.5	130.2	72	20.6	7.14	62	219	20.6	141.3
95	117.5	119.05	130.18	72	20.6	7.14	62	222	20.6	144.5
100	125.4	127	136.52	72	20.6	7.14	62	224	20.6	147.6
110	135	136.5	149.2	72	20.6	7.14	62	235	20.6	163.5
115	140.5	142.9	155.6	72	20.6	7.14	62	248	20.6	173
120	143.7	146.05	158.75	72	20.6	7.14	62	248	20.6	176.2
125	157.2	160.3	171.4	96.8	23.4	9.5	77.8	273**	23.8	185.7
140	169.9	173	184.1	97	23.4	9.5	78	292	23.8	198.4
145	176.2	179.4	193.7	96.8	23.4	9.5	77.8	305**	23.8	207.2
150	182.6	185.7	200	96.8	23.4	9.5	77.8	311**	23.8	214.3
160	195.3	198.4	212.7	96.8	23.4	9.5	77.8	311**	23.8	223.8
180	214.3	217.5	231.8	101.6	23.4	9.5	82.6	343**	23.8	247.6
219	250.8	254	269.9	101.6	23.4	9.5	82.6	432**	31.7	285.8

*Non-associated parameters
** Dimensional using an extension

The maximum temperature, pressure and speed given in this document cannot be associated in any case.

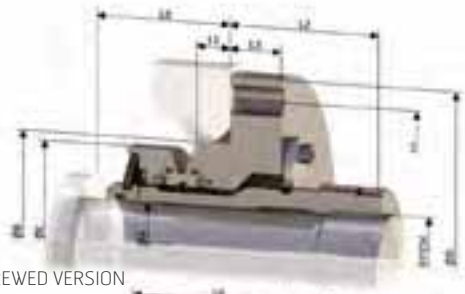
Cartridge version

LATTY SEALIS

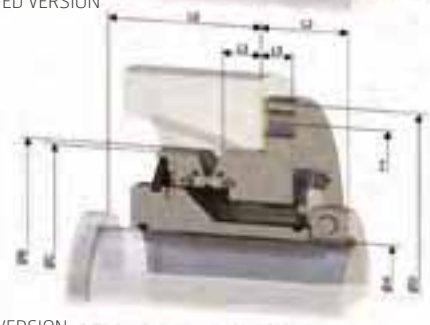
Dynamic sealing through cartridge seal

MECHANICAL SEALS FOR DIFFICULT ENVIRONMENTS

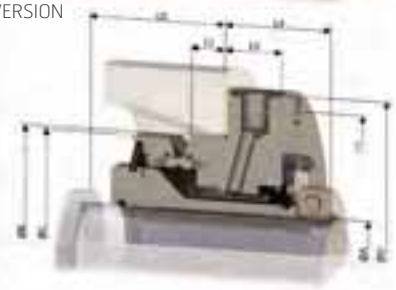
- DOES NOT REQUIRE RINSING OR EXTERNAL LUBRICATION EASY TO INSTALL
- INDEPENDENT OF ROTATION DIRECTION READY-TO-INSTALL QUENCH VERSION
- NO FACE BLOCKING THANKS TO THE CLOGGING OF THE SEMI-DYNAMIC O RING.



SCREWED VERSION



TIGHT VERSION



QUENCH VERSION

OPERATING PARAMETERS (NOT ASSOCIATED)

Pressure : 0 to 20 bar
Temperature : -30 °C to 200°C
Speed : 20 m/s

COMPOSITION

Friction faces: Nickel-impregnated tungsten carbide (U2), nickel-impregnated tungsten carbide (U2) - option possible silicon carbide (U6)
Secondary sealing: HNBR/ FKM / EPDM / FFKM
Optional: deposition of chromium carbide on metal parts in contact with the product to protect them against abrasion or erosion

TYPES OF INDUSTRIES

FLUIDS

All highly corrosive, abrasive and slightly clogging fluids.

A	B	C	D	E	F	L0	L1	L2	L3	L4	L5
20 → 32	76	72	124	11	106	48.5	13	32	12	61.5	30
33 → 51	108	99	168	13	148	61	15	38	18	70	35
52 → 78	140	135	199	13	180	61	15	39	19	81	40
79 → 108	185	170	240	13	220	62	16	40	20	85	40
109 → 137	210	208	290	13	260	72	22	40	20	90	40
138 →180	280	264	370	17	330	93	25	42	20	93	42

The maximum temperature, pressure and speed given in this document cannot be associated in any case.

Designer for industrial sealing solutions

MECHANICAL SEAL FOR

OEM MECHANICAL SEALS FOR PROCESS PUMPS

OEM mechanical seals for process pumps

We offer a new range of mechanical seals for the rapid repair of process pumps.

This comprehensive range of OEM mechanical seals has been specifically designed to meet maintenance requirements in the following sectors:

- Food processing
- Chemicals
- Environment
- Extraction and processing of ores,
- Paper
- Pharmaceuticals
- Water treatment

Specifically trained in different production environments, our technicians advise our customers on how to improve their standard or specific mechanical seal systems, cartridge boxes or process pumps.

Our technicians intervene to improve the reliability of sealing solutions and upgrade equipment to take account of technological and environmental changes.

A specific catalogue is available on request.

APPROVALS

FDA (on request)

ROTARY UNIONS

Rotary unions are used to create a tight connection between fixed and rotary piping. There are many applications within the sectors of bottling, filling, machine tools, automobile, mining or heating and cooling systems.

Based on the specific specification drafted together with the customer, innovative technical assemblies are proposed, with special economic focus on design and maintenance.

ADVANTAGES

- Conveys one or several fluids simultaneously from fixed and rotating pipework.
- Withstands a wide range of working pressures/temperatures/speeds
- Takes into account the different output values with the definition of the chambers via calculations
- Reduces friction torques (friction seals)
- Used when a heating system is available at the shaft end or for through shafts (filters, dryers, etc.)
- Seal performance teat benches to guarantee our customers the validity of the products prior to delivery.

SERVICES

- Repair and reconditioning of rotary unions
- On large series, standard exchange programme possible
- Training of personnel on product maintenance
- Works on customer's site: maintenance, assembly, disassembly

PRODUCTION

Manufactured and assembled on our production site in Brou (France), each rotary union is unique due to its design and production even when manufactured in series in compliance with specific procedures and with our ISO 9001 qualification. Endurance tests are carried out on each rotary union in order to validate the design and materials. As a result, we can steadily improve our products and commit ourselves to guaranteeing compliance with the requirements of equipment manufacturers. These tests ensure our customers the supply of rotary unions will be up to their expectations.

EQUIPMENT

Agitator
Filter-drier
Crusher
Blower filler
Centrifuge
Cooker
Washing equipment
CIP/SIP-cleaning
Others

TYPES OF INDUSTRIES

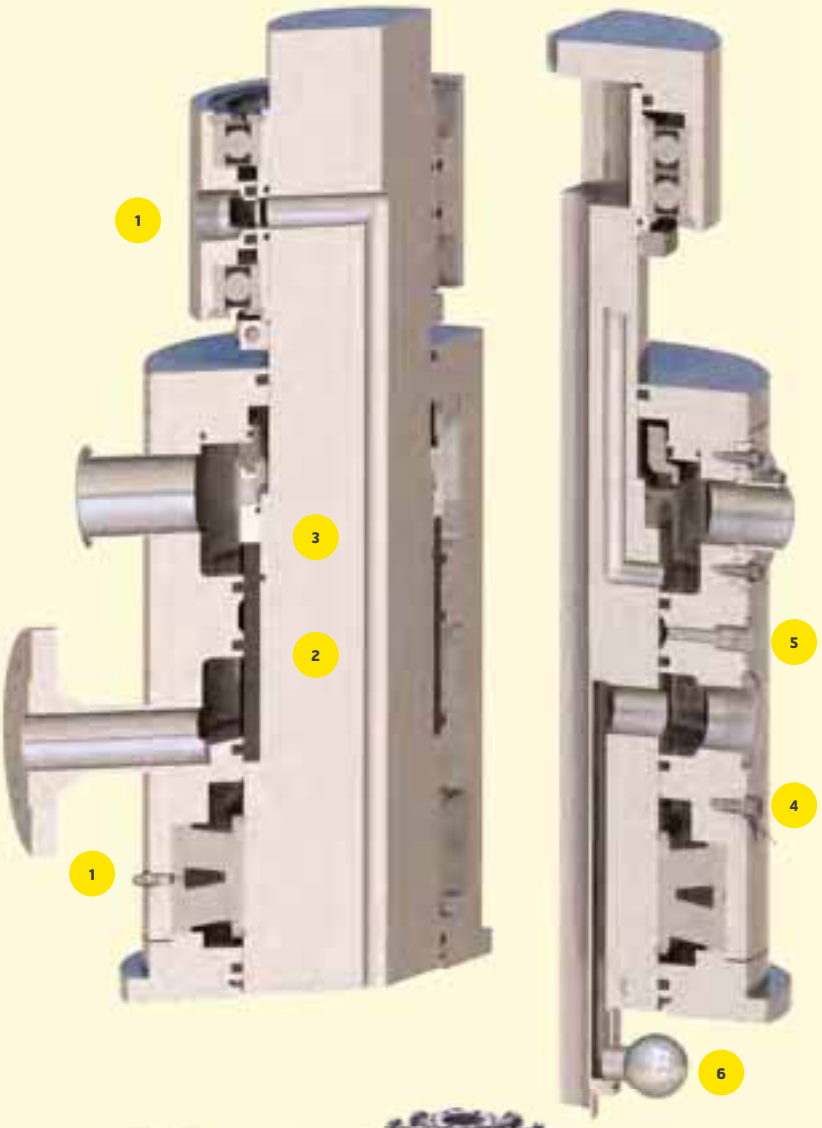
Food processing	Medical
Automobile	Mining
Chemicals	Petrochemicals
Cosmetics	Paper
Machine-tools	Steel

APPROVALS (on request)

SERVICE PARAMETERS (NOT ASSOCIATED)

Pressure: 0 to 100 bar (10 MPa)
Temperature: from -196°C to 250°C (from -320.8°F to 482°F)
Speed: 6,000 rpm

THE DIFFERENT TECHNOLOGIES: depending on the fluids to be sealed, there are different types of rotary union technologies with friction seal or with mechanical seal.



OPTIONS

1. **Ball bearings or roller bearings** (to be lubricated or greased for life): Choice depending on the type of assembly and loads applied. Ensures good concentricity and coaxiality of assembly, which offers the guarantee of long life and performance. Materials available: stainless steel, ceramics, thermoplastic materials, etc.

2. **Friction seal with support sleeve or with coating:** solution recommended for clear fluids and with speeds below 2 m/sec. The addition of a bush makes maintenance operations easier. No or very few coated areas. Possible approved: FDA, EC 1935/2004, ATEX, EHEDG.

3. **Mechanical seal**

4. **Measurement sensor:** For the remote control and monitoring of the temperature, pressure, etc. of the rotary union. Required for sensitive applications such as ATEX Environments.

5. **Steam barrier or leak detector:** A barrier fluid (or steam) is injected through openings to create an aseptisation effect. The steam barrier may be added as hygienic protection between two circuits or to perform sterilization procedures.

6. **Washing ball:** Provides optimised washing

Limited retention areas: To comply with the different standards and guidelines; in particular in food environments.

FRICTION SEAL

Friction seal technologies are used for gas applications (nitrogen dioxide, air, steam, helium, etc.) **or clear liquids (solvents, oil, detergents, nitrogen, etc.) and/or associated with slow speed.**

MECHANICAL SEAL

Mechanical seal technologies are used for slurries (chocolate, cream, ice, fuel oil, etc.)**, transitional pressures/temperatures and/or associated with high speed.**

SEALING SOLUTION FOR CARTRIDGE BOX

SEALING and AGITATION

Agitation is a major operation in many areas such as pharmaceuticals, chemicals, food processing, petrochemicals, etc. Agitation reduces the time for the heat transfer to products, contributes to the reduction of process times, speeds up reactions, promotes product homogenisation, filtration, smoothing and drying.

Agitation equipment may be based on different designs (filters, dryers, reactors, etc.) **depending on the industries, products and specifications.**

The equipment is made up of a drive, a bearing, one or several seals, a shaft associated to one or several propellers and a vessel.

Dimensional characteristics, motor power, pressure ranges and temperatures vary from process to process.

All the criteria and parameters mentioned above are necessary to determine the solution and position of the seal.

Our experience in the solutions proposed guarantee the durability of your installations and optimisation of maintenance operations.

TYPES OF INDUSTRIES AND EQUIPMENT

- **Industries:** Pharmaceuticals, chemicals, food processing, cosmetics
- **Equipment:** agitator, reactor, filter-drier, polymeriser, mixer, crusher
- **Medium:** powder, gas, steam, toxic fluid, non-toxic fluid

APPROVALS AND CONSTRUCTION CODES
(ON REQUEST)

Materials compliant with: FDA CE 1935/ 2004 Ex
DIN 28138 for mechanical seals
DIN 28154 and 28159 for shafts
DIN 28137 for flange connections
DIN 28136 for vessels

SERVICES AND ASSISTANCE

We provide support throughout your project, from assessment of the equipment to be replaced or designed through to recommendation of improvement actions, dimensional and geometrical statements for the equipment to be fitted with seals, right up to our presence on start-up of equipment.

Our service and repair centres de services, our on-site technical assistance complement our expert mission.

POSITION OF THE SEALING SYSTEM DEPENDING ON THE AGITATION

In order to best determine the most appropriate seal, the positioning of the seal in the vessel will precisely help define the best-adapted seal type and technology for optimum performance. The service and environmental parameters are also accounted for in the specification.

AGITATION at vessel top

Vertical shaft for reactors, driers or crushers

- Single cartridge seal
- Single, dry mechanical seal, with or without friction seal
- Double mechanical seal with friction seal
- Double lubricated mechanical seal

AGITATION at vessel bottom

Vertical shaft for driers or mixers

Recommendations of sealing assemblies more limited due to permanent operation in direct contact with the products.

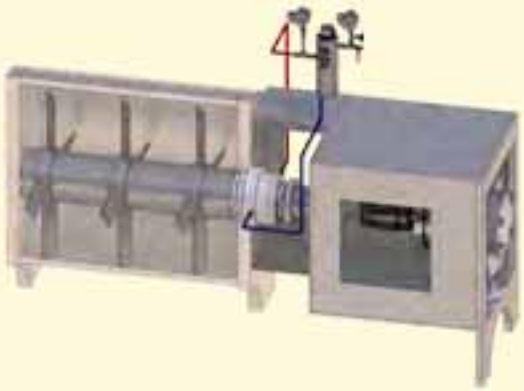
- Double lubricated mechanical seal
- Stationary mechanical seal
- PECODY system

AGITATION at vessel bottom of filter-drier

Vertical shaft, axial motion of the shaft, stroke from 200 mm to 1000 mm

- Double mechanical seal, dry or lubricated, stationary

AGITATION drier-mixer or lateral



Horizontal shaft

- Single cartridge seal
- Double lubricated mechanical seal
- Double mechanical seal with friction seal

Cartridge box

TYPES OF MECHANICAL SEALS for cartridge box

AGITATION AT VESSEL TOP

Single, dry mechanical seal without friction seal

Series LATTYseal B 16 A3 and LATTYseal B 16 A4

Mechanical seal installed outside the vessel, thus making access and setting easier. It allows dry operation, with negative pressures < 6 bar (87PSI). May be supplied as cartridge with or without ball bearing. The A4 version is recommended for radial motions (0.2 mm)

Single, dry mechanical seal, with friction seal

Series LATTYseal RB 4000 and friction seal

Double cartridge assembly with gas cooling. The design is based on a mechanical seal (negative pressure possible) for process side. The secondary sealing is provided with friction seal combined with a coated bearing surface. Lower height requirement. Large number of options possible. The assembly is simplified with a single mechanical seal and less control.

Double mechanical seal with friction seal

LATTYseal Cartridge with FRICTION SEAL

Despite its restriction in linear speed <2m/s , this cartridge runs under nitrogen flush and can be included in different process phases.

Its operation is constant whatever the variations in pressure, temperature or speed.

Double lubricated mechanical seal

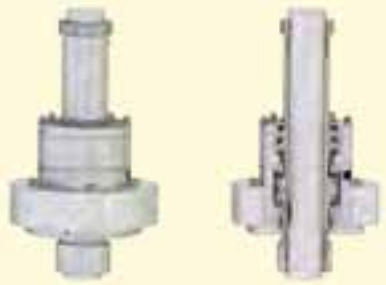
LATTYseal RU 4000/RU 68 (dynamic mechanical seal) and
LATTYseal RU 10000 (stationary mechanical seal – as in illustration below)

The choice is determined by the types of equipment, the speed conditions, the process and applies to sterile applications with reduced retention areas. These mechanical seals run with a process-compatible barrier fluid. A pressure above 1.5 to 2 bar should be maintained at all times. Pressure and temperature monitoring is secured by auxiliary systems.

Cartridge box

AGITATION at vessel top of filter-drier

The filter-drier performs several operations including filtration. During filtration, the shaft slides through the sleeve of the mechanical seal.
The sleeve will be defined based on axial motions whilst keeping a double stationary mechanical seal design (Series LATTYseal RUC 1000) or dynamic (Series LATTYseal RUC 4000). Sealing between the shaft and the sleeve will be secured by scrapers and profile gaskets or hydroformed bellows.



HORIZONTAL or lateral agitation

Double lubricated mechanical seal

Series LATTYseal RU or RB.

This mechanical seal is particularly recommended for horizontal or lateral agitation subjected to regular mechanical or thermal constraints. These indications must be taken into consideration when drafting the specification.

Options such as hydroformed bellows that allow for significant deformations are recommended depending on shaft deflections as well as radial and axial motions.

The double-type technology ranges LATTYseal RU, RB 10000 or RB 24810 with friction seal are recommended when the speed is < 2m/s or where there is a secondary seal.

AGITATION at vessel bottom

Double, stationary, lubricated mechanical seal:

Series LATTYseal RU 10000.

Cooling and lubrication will be secured in a permanent manner to guarantee the reliability and lifespan of the equipment.

Options are proposed based on the industry and its specific requirements :

- Electropolishing, polishing, reduction of retention areas. (sterile environments)
- The installation of a probe (ATEX)
- Integration of geometric imperfections (axial, radial)
- Cooling or heating flange, etc.
- For intensive use, a alternative solution to a mechanical seal is possible with the implementation of the PECODY system (See page 86-87)

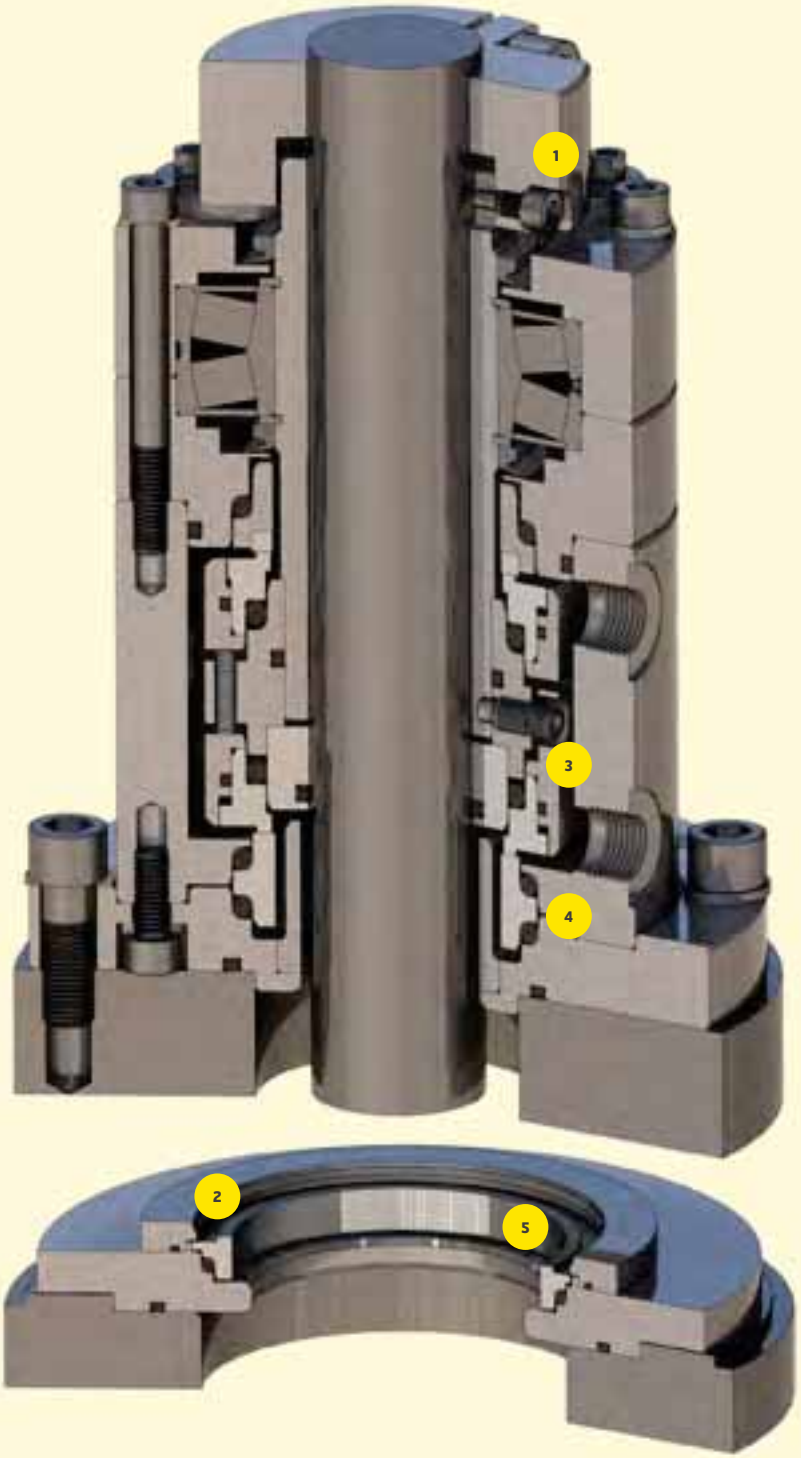
Cartridge box

OPTIONS POSSIBLE on cartridge boxes

Many adaptation possibilities can meet other pressure, fluid and speed conditions. Our engineers will check and recommend these options in order to provide the products that perfectly meet the technical and economic requirements.

ADDITIONAL OPTIONS

- Cooling or heating flange.
- Electropolishing, polishing for sterile applications
- Mechanical seals allowing for negative pressures
- Specific marking on request
- With or without ball bearing



SERVICE PARAMETERS

(not associated) for all these ranges:

Temperature = 250 °c (482 °F) – with cooling flange
Pressure: vacuum to 30 bar (435 PSI)
Speed = 0 to 20 m/s (66 ft/s)
Diameter from 20 mm to 200 mm (0.79'' to 7.87'')
Other parameters on request.

Cartridge box

1

Drive systems
- By key(s), on large-dimension assemblies
- By shrink disc (elastic deformation and no marking on the shaft)
- By drive rings: split (no marks), split (easy disassembly and no marks), ring and screw (standard version)
- By special screws and clamping ring, example according to illustration, allowing for axial motions.

2

Removable floating faces
- Reduces deformations
- Surface drive
- Possible for all materials
- Easier maintenance

3

Sleeve end
- On enamelled reactors, SSiC insert
- Reliability and interchangeability

4

Deflector beneath the faces
- Recovery of leakage
- Injection for the cleaning
- Execution in exotic materials

5

Anti-rotation
- Efficient flat machined surfaces on stationary fits
- Prevents breakage at the level of notches, by means of anti-rotation pins
- Compact size

Cartridge box

PACKING PECODY CARTRIDGE BOX

ABSOLUTE SEALING EFFICIENCY, IN PARTICULAR IN HOSTILE ENVIRONMENTS.

The PECODY (Presse Etoupe à COmpression DYnamique) **operates according to the dynamic compression principle** (calibration of the clamping force) **and optimises sealing in very demanding applications and under hostile conditions in which other sealing systems have reached their limits. It meets constraints, environmental standards and directives such as ATEX, FDA, EHEDG, EC 1935/2004, etc.**

This technology has been developed for companies requiring for their process equipment:

- an optimisation of productivity,
- an optimisation of maintenance,
- improved individual protection in hazardous industries such as nuclear power and powdery materials or chemicals.

THE PECODY IS PROVING TO BE VERY EFFICIENT ON

- Abrasive medium
- Slurries
- Clogging medium
- Powdery medium
- Toxic medium
- Flammable or explosive

It is custom-mounted as a cartridge on machinery being designed, refurbished or to improve existing installations such as:

- Mixers
- Stirrers
- Horizontal dryers
- Cookers
- Sterilizers
- Reactors

etc.

PECODY is both ergonomic and compact, which facilitates access for assembly, disassembly and maintenance operations, including in areas where access is difficult.

APPROVALS (on request)

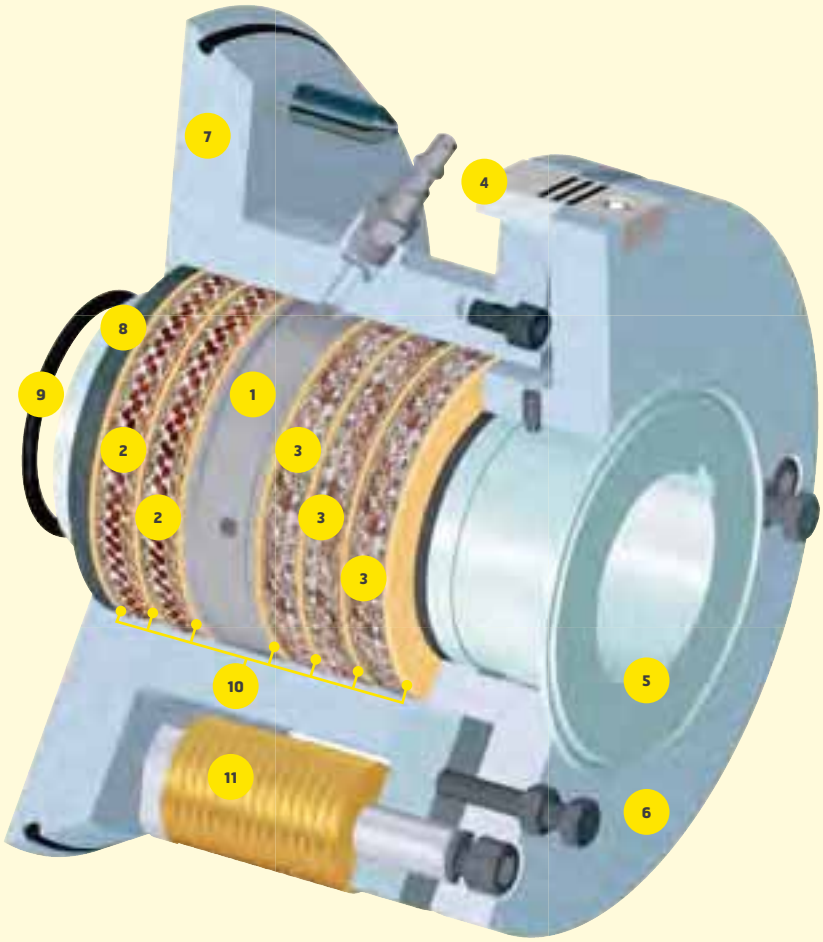
ADVANTAGES

- **Coating: c**hromium carbide, special for rotary machinery, suitable for abrasion, flaking and corrosion risks.
- **Limited frictions:** prevents overheating and premature wear
- **Total interchangeability:** packings, springs, sleeves, etc.
- **Rapidity:** reduces production downtime
- **Security:** no time-consuming handling in hazardous, radioactive and dusty areas.

Repair and renovation: programmable, rapid maintenance, without disconnecting the machine
Ergonomic models to facilitate access for assembly, disassembly and reconditioning operations
Compact for areas where access is difficult
Remotely controlled for hostile (thermal, contaminated, radioactive) environments.

Cartridge box

1. Lantern ring
2. Braided packing 1
3. Braided packing 2
4. Gauge
5. Sleeve
6. Gland
7. Casing
8. Packing ring
9. O ring
10. Separators
11. Live loading system (LLS)



EXAMPLES

ATEX drier: Sealing powder

Two-part PECODY box installed in a mixer: Sealing abrasive product

PECODY drier: Sealing nitrogen with ATEX probe with explosion-proof head

AUXILIARY SYSTEMS FOR MECHNICAL SEALS

Auxiliary feed systems simultaneously secure mechanical seal pressurisation, cooling and barrier fluid thermoregulation.

We offer you a comprehensive range with various options depending on the types mechanical seal assemblies in compliance with applicable standards.

Lubricated mechanical seals installed on process pumps, reactors or filter-driers are the main areas of use. Our technical teams can install and maintain the equipment on your sites.

The equipment is tested and validated at the factory beforehand, thus securing reliable commissioning.

ADVANTAGES

- Suitable for harsh environments
- Maintains the fluid level and pressure in the barrier circuit
- Allows rapid visual check of barrier fluid level in the event of pressure loss
- Optimises maintenance time between interventions
- Increases mechanical seal life
- Ensures environmental and individual protections

DIRECTIVES, STANDARDS AND APPROVALS

- DESP 97/23/EC
- Electromagnetic compatibility 2004/108/EC
- Electrical equipment 2006/95/EC
- API Plan 52 and 53 A
- Safety and construction of machinery 2006 /42 /EC
- ATEX 94/9/EC

SERVICE PARAMETERS*:

- Weight empty: 15 kg
- Pressure: 1 to 10 bar
- Temperature: 30°C to 80°C
- Inlet/Outlet/pressurisation connections: 1/2 gas

VESSEL CHARACTERISTICS*:

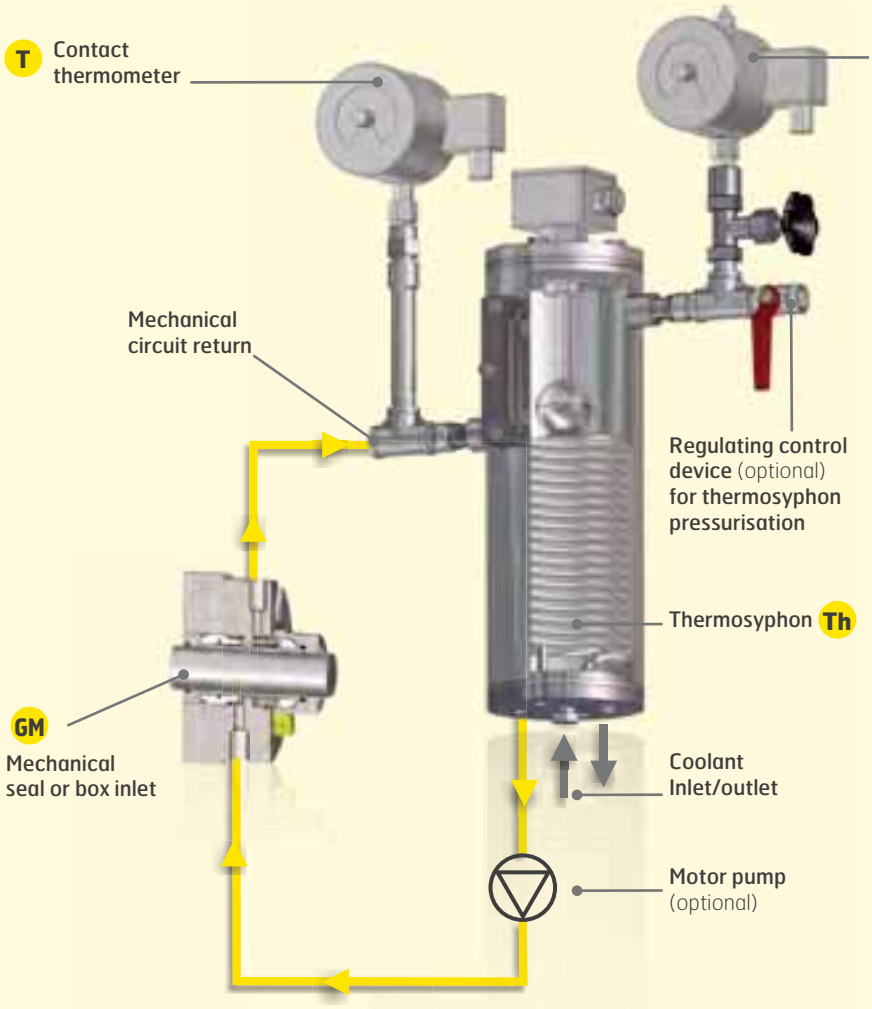
- Materials: 316 and 316 L
- Capacity: 5 litres
- Cooling coil (secondary circuit)

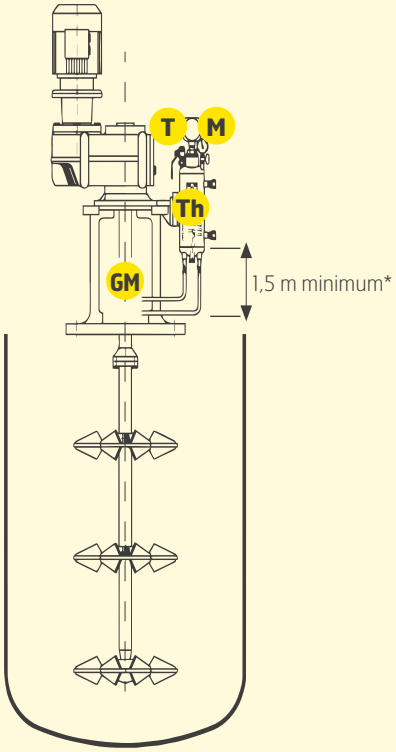
COMPONENT CHARACTERISTICS*:

- Option ATEX EExia II CT6
- Two-threshold indicator (high and low)
- Contact manometer (lower threshold)
- Contact manometer (higher threshold)
- Motor pump: Motor: 275/480 V 60Hz 0.18Kw 2720 rpm (option ATEX EExdIICT4) or pump: 200l/hr < flow < 250 l/hr

** Other configurations on request*

Auxiliary systems





*Minimum height to ensure the mechanical seal cooling.

Thermosyphon alone

- **Without instruments**
- **With or without a cooling coil** (secondary circuit)

Lubrication kit

Combination possible without motor pump:

- **Thermosyphon**
- **Contact thermometer**
- **Contact manometer**
- **Pressure sensor**
- **Two-threshold indicator**
- **Manual filling pump**

Lubrication unit

If installation <1.5 m from the floor

- **Lubrication kit with motor pump.**
- **Adding components possible.**
- **The whole of it is installed and tested on a connection-ready stainless steel plate.**

Pressure and flow (nitrogen or air) control system

System ensuring the nitrogen or air flushing at constant pressure and flow level in the barrier circuit of our mechanical seals (closed circuit)

Gas Control Panel (GCP)

Assembly for the regulation of the air or nitrogen in the boxes that are cooled by these gases

Braided packings

PACKINGS FOR DYNAMIC SEALING

THE FILCOAT® LUBRICATION PROCESS, patented by LATTY

Packings are made of one or several yarn grades and a series of impregnations. These operations are essential steps in the quality packing manufacturing process.

The first impregnation is performed throughout the yarn using our exclusive FILCOAT® process (LATTY patent)**. The second impregnation is performed during the braiding operation itself. A third impregnation may be applied to packings intended for use with fast moving equipment.**

The impregnation of the packings enables us to obtain or improve specific characteristics such as:

Chemical resistance

Thermal conductivity

Stability under pressure

Lubrication (especially during transitional conditions)

Protection against corrosion

Then these fibres are again impregnated during the braiding operation with a mix specific to the use of the packing. These processes significantly reduce frictions and improve the lifespan of the equipment (pumps, valves, etc.)**.**

FILCOAT process

THE ADVANTAGE OF LATTY PACKINGS

Since the foundation of our company, we have had a record of providing quality and performance with our ranges of sealing packings and rings.
With our FILCOAT® process, patented by LATTY, we ensure performance and reliability.

Our research for the development of fibres and lubricants allows us to offer a range that includes about fifty different grades of packings

Made up of over 70 types of impregnation and 120 different kinds of yarns (aramid, PTFE, graphite, carbon, etc.)**, the sealing packings are intended for use in the stuffing box of:**

ROTARY UNITS: pumps, agitators, stirrers, mixers, feeder screws, etc.

RECIPROCATING UNITS: piston pumps, homogenisers, etc.

The quality of the fibres and lubricants combined with LATTY's expertise allows us to offer a range of high-quality products with the following characteristics:

- Sufficient mechanical resistance for the conditions of use
- No shrinkage or as small as possible in temperature
- Good resistance in diverse chemicals (liquid or gas)
- Good resistance to compression, bending, wear and vibrations
- Very low abrasive characteristic to reduce pump sleeve and/or shaft wear
- Very good lubrication properties
- Excellent heat dissipation characteristics

**Our experience of the manufacturing process allows us to offer an optimised stuffing box. All the steps in the manufacture of our packings enable them to keep their appropriate density for your applications during the first tightening operations.
This guarantees sustainability of the sealing solutions on your installations.**

THE DIFFERENT FIBRES AND THEIR MAIN CHARACTERISTICS

ARAMID FIBRE

- Excellent chemical resistance
- Excellent abrasive resistance
- Outstanding dimensional stability
- High elasticity and elastic recovery
- Very good resistance at high temperatures

PTFE FIBRE

- Applied to rotary units and valves with chemically aggressive fluids
- Very good resistance to strong bases and acids
- Reduces friction, which is important with control valves.
- Good resistance to high surface speeds.

SYNTHETIC FIBRE

- Used up to 200/250°C
- All types of industries except chemicals
- Not suitable for strong acid or alkaline duties

CARBON/GRAPHITE FIBRE

- Pure graphite for high-temperature and high-pressure applications
- Suitable for use with thermal shock
- Outstanding chemical inertness
- Used in valves and static applications
- Specific versions for zero fugitive emmsions.

COMPRESSED or PREFORMED RINGS AND PACKINGS

Compressed rings and packings or preformed rings offer the following advantages:

- Optimisation of the number of rings
- A reduction up to 30% of the friction, as a result of the presence of lubricating agent that has been specifically developed by LATTY
- Reduced maintenance costs
- Quick and simple installation into the stuffing box, time-saving for maintenance teams and reduced production downtime
- Maximise the operational lifetime of your equipment



APPROVALS AND CERTTIFICATIONS

TRAINING

LATTY packings provide you perfect sealing efficiency from the first installation, provided rules of best fitting practice have been followed with. For this purpose, we have developed training sessions dedicated to the installation process using our specifically designed training benches.

Aramid packing

LATTYFLON 4488

The aramid-carbon synergy: a robust, durable and reliable packing.

ARAMID-CARBON PACKING, VERY GOOD HEAT DISSIPATION

- FOR ALL ROTATING AND RECIPROCATING MACHINERY APPLICATIONS
- ENSURES GOOD HEAT DISSIPATION
- LATTY-EXCLUSIVE FILCOAT-PROCESS

OPERATING PARAMETERS
(NOT ASSOCIATED)

Pressure : 0 to 300 bar
Temperature : -200 °C to 300°C
Speed : < 30 m/s
pH : 1 - 13

COMPOSITION

Packing made of LATTY-exclusive intimately mixed carbon/aramid yarn, each single yarn being impregnated with PTFE using our exclusive Filcoat-process, then re-impregnated with a mix of PTFE and inert food-grade lubricant during braiding operation. The combination of the mechanical characteristics of aramid associated with the heat dissipation properties of carbon account for the unmatched performance of LATTYflon 4488.

TYPES OF INDUSTRIES

FLUIDS

Slurries fluids

Item	Dimensions	Description
00101712*	☐ 4 mm	35 m / 0,80 Kg
00101491	☐ 6 mm	20 m / 1,12 Kg
00101934*	☐ 6,35 mm	20 m / 1,25 Kg
00101467	☐ 8 mm	15 m / 1,34 Kg
00101488	☐ 9,5 mm	12 m / 1,66 Kg
00101405	☐ 10 mm	12 m / 1,74 Kg
00101549	☐ 12 mm	11 m / 2,39 Kg
00101436	☐ 12,7 mm	11 m / 2,58 Kg
00101496	☐ 14 mm	10 m / 2,70 Kg
00101647	☐ 15 mm	10 m / 3,44 Kg
00101446	☐ 16 mm	10 m / 3,88 Kg
00101670	☐ 18 mm	10 m / 4,90 Kg
00101492	☐ 19 mm	10 m / 5,40 Kg
00101447	☐ 20 mm	10 m / 5,70 Kg
00101469	☐ 25,4 mm	10 m / 8,7 Kg

Made to order

The maximum temperature, pressure and speed parameters specified in this document can not be combined.

Aramid packing

LATTYFLON 4757

Packing for reciprocating, rotary or static applications

PACKING FOR RECIPROCATING, ROTARY OR STATIC APPLICATIONS

- OUTSTANDING MECHANICAL RESISTANCE, VERY GOOD HEAT DISSIPATION
- HIGH FLEXIBILITY, MAKES INSTALLATION EASIER
- GRAPHITE-PTFE AND ARAMID PACKING, SELF-LUBRICATING
- LATTY-EXCLUSIVE «FILCOAT»-PROCESS

OPERATING PARAMETERS
(NOT ASSOCIATED)

Pressure : 0 to 1800 bar
Temperature : -200 °C to 300°C
Speed : < 22 m/s
pH : 2 - 14

COMPOSITION

Multi-yarn packing: the corners of the packing are made of 100% aramid yarns, each single yarn being impregnated with PTFE using our exclusive «Filcoat»-process, then re-impregnated with a mix of PTFE and inert lubricant during braiding operation.

TYPES OF INDUSTRIES

FLUIDS

Slurries fluids

Item	Dimensions	Description
00100848	☐ 6 mm	20 m / 1,20 Kg
00101618*	☐ 6,35 mm	20 m / 1,34 Kg
00100653	☐ 8 mm	15 m / 1,30 Kg
00101054*	☐ 9,52 mm	12 m / 1,48 Kg
00100654	☐ 10 mm	12 m / 1,63 Kg
00100655	☐ 12 mm	11 m / 2,25 Kg
00101545	☐ 12,7 mm	11 m / 2,47 Kg
00100656	☐ 14 mm	10 m / 2,86 Kg
50976	☐ 15 mm	10 m / 3,31 Kg
00101547	☐ 16 mm	10 m / 3,83 Kg
00101413	☐ 18 mm	10 m / 4,92 Kg
00101471	☐ 19 mm	10 m / 5,54 Kg
00101756	☐ 20 mm	10 m / 5,74 Kg
00101701	☐ 22 mm	10 m / 6,80 Kg
00101700	☐ 25,4 mm	10 m / 9,44 Kg

Made to order

The maximum temperature, pressure and speed parameters specified in this document can not be combined.

Aramid packing

LATTYFLON 4758

High performance with reciprocating applications

GOOD RESISTANCE WITH ABRASIVE FLUIDS

- SOLUTION FOR SEALING RECIPROCATING UNITS AND ROTARY APPLICATIONS WITH AGGRESSIVE FLUIDS.
- SILICONE-FREE PACKING
- SELF-LUBRICATING
- LATTY-EXCLUSIVE «FILCOAT»-PROCESS

OPERATING PARAMETERS

(NOT ASSOCIATED)

Pressure : 0 to 1000 bar
Temperature : -200 °C to 300°C
Speed : < 10 m/s
pH : 2 - 14

COMPOSITION

Multi-yarn packing: the corners of the packing are made of 100% aramid yarns impregnated with PTFE using our exclusive «Filcoat»-process, while the friction faces are made of lubricated and silicone-free 100% PTFE, then re-impregnated with a PTFE mix during braiding operation.

TYPES OF INDUSTRIES

FLUIDS

Slurries fluids

Item	Dimensions	Description
00100194	□ 4 mm	35 m / 0,84 Kg
00100195	□ 5 mm	25 m / 0,86 Kg
00100196	□ 6 mm	20 m / 1,02 Kg
00101105*	□ 6,35 mm	20 m / 1,14 Kg
00100198	□ 8 mm	15 m / 1,30 Kg
00100199	□ 9,5 mm	12 m / 1,45 Kg
00100200	□ 10 mm	12 m / 1,56 Kg
00100201	□ 11 mm	11 m / 1,89 Kg
00100202	□ 12 mm	11 m / 2,37 Kg
00100203	□ 12,7 mm	11 m / 2,61 Kg
00100204	□ 14 mm	10 m / 2,73 Kg
00100206	□ 16 mm	10 m / 3,60 Kg
00100713	□ 18 mm	10 m / 4,40 Kg
00100714	□ 19 mm	10 m / 4,90 Kg
00100715	□ 20 mm	10 m / 5,43 Kg
00100717	□ 25,4 mm	10 m / 8,94 Kg

Made to order

The maximum temperature, pressure and speed parameters specified in this document can not be combined.

Aramid packing

LATTYTEX 4777

General-purpose packing

FOR EVERYDAY APPLICATIONS IN ALL INDUSTRIES.

- ARAMID/STAPLE RAYON YARNS ON THE CORNERS
- POLYACRYLIC FRICTION FACES
- LATTY-EXCLUSIVE «FILCOAT»-PROCESS

OPERATING PARAMETERS

(NOT ASSOCIATED)

Pressure : 0 to 60 bar
Temperature : -50 °C to 200°C
Speed : < 15 m/s
pH : 3 - 11

COMPOSITION

Compound packing made of blended yarns: aramid/staple rayon yarns on the corners and polyacrylic yarns for friction faces, each single yarn being impregnated with PTFE using our exclusive «Filcoat»-process, then re-impregnated with a mix of paraffin lubricants and gelling agents during braiding operation.

TYPES OF INDUSTRIES

FLUIDS

Slurries fluids

Item	Dimensions	Description
36011	□ 6 mm	20 m / 1,11 Kg
36616*	□ 6,35 mm	20 m / 1,24 Kg
34954	□ 8 mm	15 m / 1,21 Kg
36012*	□ 9,5 mm	15 m / 1,35 Kg
34955	□ 10 mm	12 m / 1,61 Kg
34956	□ 12 mm	11 m / 2,11 Kg
34957	□ 12,7 mm	11 m / 2,38 Kg
36013	□ 14 mm	10 m / 2,65 Kg
36014	□ 16 mm	10 m / 3,51 Kg
36617	□ 18 mm	10 m / 4,20 Kg
36015	□ 19 mm	10 m / 4,80 Kg
36618	□ 20 mm	10 m / 5,00 Kg
36620	□ 25,4 mm	10 m / 8,20 Kg

** **Made to order***

The maximum temperature, pressure and speed parameters specified in this document can not be combined.

Aramid packing

LATTYFLON 4788

Aramid packing: the first one and still n°1!

OUTSTANDING RESISTANCE WITH ABRASIVE FLUIDS

- LATTY-EXCLUSIVE «FILCOAT»-PROCESS
- UNMATCHED MECHANICAL RESISTANCE
- SILICONE-FREE PACKING

OPERATING PARAMETERS
(NOT ASSOCIATED)

Pressure : 0 to 200 bar
Temperature : -200 °C to 300°C
Speed : < 25 m/s
pH : 2 - 13

COMPOSITION

Packing made of continuous 100% aramid fibres, each single yarn being impregnated with PTFE using our exclusive «Filcoat»-process, then re-impregnated with a mix of PTFE and inert food-quality lubricant during braiding operation.

TYPES OF INDUSTRIES

FLUIDS

Slurries fluids

GUIDELINES, STANDARDS AND APPROVALS

Item	Dimensions	Description
00100276	□ 5 mm	25 m / 0,85 Kg
00100277	□ 6 mm	20 m / 1,00 Kg
00101153*	□ 6,35 mm	20 m / 1,12 Kg
00100278*	□ 7 mm	20 m / 1,02 Kg
00100279	□ 8 mm	15 m / 1,33 Kg
00100280	□ 9,5 mm	12 m / 1,55 Kg
00100281	□ 10 mm	12 m / 1,70 Kg
00100282*	□ 11 mm	12 m / 1,85 Kg
00100283	□ 12 mm	11 m / 2,20 Kg
00100284	□ 12,7 mm	11 m / 2,45 Kg
00100285	□ 14 mm	10 m / 2,75 Kg
00100286	□ 15 mm	10 m / 3,20 Kg
00100287	□ 16 mm	10 m / 3,62 Kg
00100288	□ 18 mm	10 m / 4,44 Kg
00100289	□ 19 mm	10 m / 4,94 Kg
00100290	□ 20 mm	10 m / 5,47 Kg
00100291	□ 22 mm	10 m / 6,66 Kg
00100292	□ 25,4 mm	10 m / 9,00 Kg

** Made to order*

The maximum temperature, pressure and speed parameters specified in this document can not be combined.

Aramid packing

LATTYFLON 4789

the high-performance aramid packing

ARAMID PACKING, GOOD MECHANICAL PROPERTIES

- LUBRICATED FRICTION, SILICONE-FREE PACKING
- GOOD RESISTANCE WITH ABRASIVE FLUIDS
- EASY CUTTING, REQUIRES LITTLE RETIGHTENING
- LATTY-EXCLUSIVE «FILCOAT»-PROCESS

OPERATING PARAMETERS
(NOT ASSOCIATED)

Pressure : 0 to 100 bar
Temperature : -200 °C to 275°C
Speed : < 20 m/s
pH : 2 - 12

COMPOSITION

Packing made of aramid/staple rayon compound yarns, each single yarn being impregnated with PTFE using our exclusive «Filcoat»-process, then re-impregnated with a mix of PTFE and inert food-quality lubricant during braiding operation.

TYPES OF INDUSTRIES

FLUIDS

Slurries fluids

GUIDELINES, STANDARDS AND APPROVALS

Item	Dimensions	Description
00100209*	☐ 3 mm	35 m / 0,84 Kg
00100210	☐ 4 mm	55 m / 0,73 Kg
00100211	☐ 5 mm	25 m / 0,85 Kg
00100212	☐ 6 mm	20 m / 0,97 Kg
00101103*	☐ 6,35 mm	20 m /1,08 Kg
00100213	☐ 8 mm	15 m / 1,22 Kg
00100214	☐ 9,5 mm	12 m / 1,32 Kg
00100215	☐ 10 mm	12 m / 1,54 Kg
00100216	☐ 11 mm	11 m / 1,69 Kg
00100217	☐ 12 mm	11 m / 2,06 Kg
00100218	☐ 12,7 mm	11 m / 2,23 Kg
00100219	☐ 14 mm	10 m / 2,52 Kg
00100220	☐ 15 mm	10 m / 2,86 Kg
00100221	☐ 16 mm	10 m / 3,33 Kg
00100222	☐ 18 mm	10 m / 4,30 Kg
00100223	☐ 19 mm	10 m / 4,80 Kg
00100224	☐ 20 mm	10 m / 5,00 Kg
00100225	☐ 22 mm	10 m / 6,10 Kg
00100227	☐ 25,4 mm	10 m / 8,02 Kg
00101211	☐ 26 mm	10 m / 8,35 Kg
00100229	☐ 30 mm	10 m / 11,3 Kg
00100968	☐ 32 mm	10 m / 12,73 Kg

Made to order

The maximum temperature, pressure and speed parameters specified in this document can not be combined.

Aramid packing

LATTYFLON 5790

Dynamic sealing: packing for Food Industry (EC 1935/2004)

GOOD WEAR RESISTANCE

- GENTLE ON SLEEVE OR SHAFT AS A RESULT OF THE SYNTHETIC YARNS OF THE PACKING
- IMPREGNATED WITH SILICONE-FREE LUBRICANT
- PACKING FOR HIGH-SPEED APPLICATIONS
- LATTY-EXCLUSIVE «FILCOAT»-PROCESS

OPERATING PARAMETERS
(NOT ASSOCIATED)

Pressure : 0 to 100 bar
Temperature : -50 °C to 260°C
Speed : < 20 m/s
pH : 2 - 13

COMPOSITION

Outstanding resistance to wear in rotation. Very high mechanical resistance, whilst being less abrasive. The yarns are impregnated with silicone-free lubricant to the core prior to braiding using our patented «FILCOAT» process. Specific lubricant with outstanding sliding properties. Enhances abrasion resistance. The low friction coefficient ensures significant energy savings.

TYPES OF INDUSTRIES

FLUIDS

Slurries fluids

GUIDELINES, STANDARDS AND APPROVALS (ON REQUEST)

Item	Dimensions	Description
80361	☐ 6 mm	12 m / 0,69 Kg
80362	☐ 8 mm	12 m / 1,15 Kg
80363	☐ 10 mm	9 m / 1,35 Kg
80364	☐ 12 mm	9 m / 1,94 Kg
80365	☐ 12,7 mm	9 m / 2,18 Kg
80366	☐ 14 mm	6 m / 1,76 Kg
80367	☐ 16 mm	6 m / 2,3 Kg
80369	☐ 20 mm	6 m / 3,6 Kg
900001145*	☐ 18 mm	6 m / 2,6 Kg
900002860*	☐ 22 mm	6 m / 3,9 Kg
900002861*	☐ 25,4 mm	6 m / 5,2 Kg

Made to order

The maximum temperature, pressure and speed parameters specified in this document can not be combined.

Aramid packing

LATTYFLON 5790 S

Packing for Food Industry (EC 1935/2004)

PACKING FOR FOOD INDUSTRY (EC 1935/2004)

- DRY PACKING WITHOUT IMPREGNATION DURING BRAIDING OPERATION
- PACKING FOR MIXERS, CONVEYORS, ETC.
- IMPREGNATED WITH SILICONE-FREE LUBRICANT
- LATTY-EXCLUSIVE «FILCOAT»-PROCESS

OPERATING PARAMETERS
(NOT ASSOCIATED)

Pressure : 0 to 100 bar
Temperature : -50 °C to 260°C
Speed : < 20 m/s
pH : 2 - 13

COMPOSITION

Outstanding resistance to wear in rotation. Very high mechanical resistance, whilst being less abrasive. The yarns are impregnated with silicone-free lubricant to the core prior to braiding using our patented «FILCOAT» process. Specific lubricant with outstanding sliding properties. Enhances abrasion resistance. The low friction coefficient ensures significant energy savings.

TYPES OF INDUSTRIES

FLUIDS

Slurries fluids

GUIDELINES, STANDARDS AND APPROVALS (ON REQUEST)

CE

Made to order Consultarnos

The maximum temperature, pressure and speed parameters specified in this document can not be combined.

PTFE packing

LATTYFLON 3206

Chemically inert packing for dynamic applications

CHEMICAL INERTNESS OF PTFE FOR DYNAMIC APPLICATIONS

- VERY LOW FRICTION COEFFICIENT
- PERFECT CHEMICAL INERTNESS

OPERATING PARAMETERS
(NOT ASSOCIATED)

Pressure : 0 to 100 bar
Temperature : -200 °C to 280°C
Speed : < 10 m/s
pH : 0 - 14

COMPOSITION

Packing made of 100% PTFE silk yarns and inert lubricant.

TYPES OF INDUSTRIES

FLUIDS

Chemically aggressive fluids

Item	Dimensions	Description
00100164	□ 4 mm	35 m / 1,07 Kg
00100166	□ 6 mm	20 m / 1,36 Kg
00101349*	□ 6,35 mm	20 m / 1,53 Kg
00100168	□ 8 mm	15 m / 1,65 Kg
00100169	□ 9,5 mm	12 m / 1,86 Kg
00100170	□ 10 mm	12 m / 2,09 Kg
00100172	□ 12 mm	11 m / 2,70 Kg
00100173	□ 12,7 mm	11 m / 3,00 Kg
00100174	□ 14 mm	10 m / 3,50 Kg
00100696	□ 16 mm	10 m / 4,53 Kg
00100699	□ 20 mm	10 m / 6,70 Kg

Made to order

The maximum temperature, pressure and speed parameters specified in this document can not be combined.

PTFE packing

LATTYFLON 3206 S

Chemically inert packing for static applications

CHEMICAL INERTNESS OF PTFE IN STATIC APPLICATION.

- VERY LOW FRICTION COEFFICIENT
- PERFECT CHEMICAL INERTNESS
- DRY PACKING

OPERATING PARAMETERS
(NOT ASSOCIATED)

Pressure : 0 to 300 bar
Temperature : -200 °C to 300°C
Speed : < 5 m/s
pH : 0 - 14

COMPOSITION

Packing made of 100% PTFE silk yarns, dry packing.

TYPES OF INDUSTRIES

FLUIDS

Chemically aggressive fluids

Item	Dimensions	Description
00100250	□ 4 mm	35 m / 1,02 Kg
00100251	□ 5 mm	25 m / 1,04 Kg
00100252	□ 6 mm	20 m / 1,21 Kg
00101104*	□ 6,35 mm	20 m / 1,36 Kg
00100254	□ 8 mm	15 m / 1,55 Kg
00100255	□ 9,5 mm	12 m / 1,74 Kg
00100256	□ 10 mm	12 m / 1,94 Kg
00100258	□ 12 mm	11 m / 2,51 Kg
00100259	□ 12,7 mm	11 m / 2,80 Kg
00100260	□ 14 mm	10 m / 3,20 Kg
00100262	□ 16 mm	10 m / 4,32 Kg
00100702	□ 20 mm	10 m / 6,59 Kg
00100703*	□ 22 mm	10 m / 7,8 Kg
00100704*	□ 25,4 mm	10 m / 10 Kg

** **Made to order***

The maximum temperature, pressure and speed parameters specified in this document can not be combined.

PTFE packing

LATTYFLON 3206 SO

Oxygen-compatible packing

PRODUCTS DEDICATED TO OXYGEN-TYPE APPLICATIONS.

- VERY LOW FRICTION COEFFICIENT
- PERFECT CHEMICAL INERTNESS

OPERATING PARAMETERS
(NOT ASSOCIATED)

Pressure : 0 to 300 bar
Temperature : -200 °C to 300°C
Speed : < 5 m/s
pH : 0 - 14

COMPOSITION

Packing made of 100% PTFE silk yarns, each single yarn being impregnated with PTFE, then treated to ensure perfect oxygen compatibility.

TYPES OF INDUSTRIES

FLUIDS

All types of fluids, except abrasive fluids

GUIDELINES, STANDARDS AND APPROVALS

Item	Dimensions	Description
31449	□ 5 mm	25 m / 0,95 Kg
31353	□ 6 mm	20 m / 1,06 Kg
31414	□ 8 mm	15 m / 1,45 Kg
33275	□ 10 mm	12 m / 1,72 Kg
33276	□ 12 mm	11 m / 2,30 Kg
33277	□ 14 mm	10 m / 3,00 Kg
31584	□ 16 mm	10 m / 4,00 Kg
30484*	□ 18 mm	10 m / 5,00 Kg
30568	□ 19 mm	10 m / 5,10 Kg
31667	□ 20 mm	10 m / 5,60 Kg

Made to order

The maximum temperature, pressure and speed parameters specified in this document can not be combined.

PTFE packing

LATTYFLON 3206 AL

PTFE packing

FOOD COMPATIBILITY IN DYNAMIC APPLICATIONS, WITH CHEMICAL INERTNESS OF PTFE.

- VERY LOW FRICTION COEFFICIENT
- EASY STEM OPERATION

OPERATING PARAMETERS
(NOT ASSOCIATED)

Pressure : 0 to 100 bar
Temperature : -200 °C to 280°C
Speed : < 10 m/s
pH : 0 - 14

COMPOSITION

Packing made of 100% PTFE silk yarns and lubricant with food-grade silicon.

TYPES OF INDUSTRIES

FLUIDS

Chemically aggressive fluids

GUIDELINES, STANDARDS AND APPROVALS

Item	Dimensions	Description
33746	☐ 5 mm	25 m / 1,00 Kg
33747	☐ 6 mm	20 m / 1,28 Kg
37194*	☐ 6,35 mm	20 m / 1,14 Kg
33748	☐ 8 mm	15 m / 1,56 Kg
33749	☐ 10 mm	12 m / 1,86 Kg
33750	☐ 12 mm	11 m / 2,48 Kg
33752	☐ 14 mm	10 m / 3,25 Kg
33753	☐ 16 mm	10 m / 4,10 Kg
33754*	☐ 18 mm	10 m / 5,30 Kg
33755	☐ 19 mm	10 m / 6,20 Kg
33756	☐ 20 mm	10 m / 6,40 Kg

** **Made to order***

The maximum temperature, pressure and speed parameters specified in this document can not be combined.

PTFE packing

LATTYFLON 3206 CE

Packing for Food Industry (EC 1935/2004)

FOOD COMPATIBILITY IN DYNAMIC APPLICATIONS

- VERY LOW FRICTION COEFFICIENT
- PERFECT CHEMICAL INERTNESS

OPERATING PARAMETERS
(NOT ASSOCIATED)

Pressure : 0 to 100 bar
Temperature : -200 °C to 280°C
Speed : < 10 m/s
pH : 0 - 14

COMPOSITION

Packing made of 100% PTFE silk yarns, each single yarn being impregnated with PTFE using our exclusive «Filcoat»-process, then re-impregnated with a mix of PTFE and food-grade lubricant during braiding operation.

TYPES OF INDUSTRIES

FLUIDS

All types of fluids

GUIDELINES, STANDARDS AND APPROVALS

CE

Made to order Consultarnos

The maximum temperature, pressure and speed parameters specified in this document can not be combined.

PTFE packing

LATTYFLON 3207

Packing suitable for aggressive environments in dynamic sealing

FOR CHEMICALLY AGGRESSIVE FLUIDS

- GRAPHITED PTFE PACKING
- DEDICATED TO APPLICATIONS ON ROTARY PUMPS

OPERATING PARAMETERS
(NOT ASSOCIATED)

Pressure : 0 to 80 bar
Temperature : -200 °C to 250°C
Speed : < 20 m/s
pH : 0 - 14

COMPOSITION

Packing made of 100% PTFE silk yarns, pre-treated with continuous graphite impregnation to the core, then re-impregnated with a silicon lubricant.

TYPES OF INDUSTRIES

FLUIDS

All types of fluids, except abrasive fluids

Item	Dimensions	Description
42957	□ 6 mm	20 m / 1,16 Kg
42959	□ 8 mm	15 m / 1,47 Kg
42960	□ 9,5 mm	12 m / 1,76 Kg
42961	□ 10 mm	12 m / 1,89 Kg
55981	□ 11 mm	11 m / 1,98 Kg
42962	□ 12 mm	11 m / 2,47 Kg
42963	□ 12,7 mm	11 m / 2,80Kg
42964	□ 14 mm	10 m / 3,2 Kg
55982	□ 15 mm	10 m / 3,71 Kg
42965	□ 16 mm	10 m / 4,1 Kg
46924	□ 18 mm	10 m / 5,25 Kg
45219	□ 19 mm	10 m / 6,05 Kg
43003	□ 20 mm	10 m / 6,4 Kg
46925	□ 22 mm	10 m / 7,8 Kg
44116	□ 25,4 mm	11 m / 10,9 Kg

The maximum temperature, pressure and speed parameters specified in this document can not be combined.

PTFE packing

LATTYFLON 4308

Packing for applications on rotary pumps with chemically aggressive fluids

VERY LOW FRICTION COEFFICIENT

- GRAPHITED PTFE PACKING, DEDICATED TO APPLICATIONS ON ROTARY PUMPS WITH CHEMICALLY AGGRESSIVE FLUIDS
- OUTSTANDING HEAT TRANSFER COEFFICIENT
- GOOD ELECTRICAL CONDUCTOR, NO BUILD-UP OF STATIC CHARGE

OPERATING PARAMETERS
(NOT ASSOCIATED)

Pressure : 0 to 110 bar
Temperature : -200 °C to 300°C
Speed : < 26 m/s
pH : 0 - 14

COMPOSITION

Packing made of 100% PTFE silk yarns, pre-treated with continuous graphite impregnation to the core, then re-impregnated with a silicon lubricant.

TYPES OF INDUSTRIES

FLUIDS

All types of fluids, except abrasive fluids

Item	Dimensions	Description
00101655*	□ 4 mm	35 m / 0,93 Kg
00101626	□ 5 mm	25 m / 1,05 Kg
00101581	□ 6 mm	20 m / 1,16 Kg
00101663*	□ 6,35 mm	20 m / 1,3 Kg
00101579	□ 8 mm	15 m / 1,47 Kg
00101617	□ 9,5 mm	12 m / 1,76 Kg
00101580	□ 10 mm	12 m / 1,89 Kg
00101583*	□ 11 mm	11 m /2,00 Kg
00101582	□ 12 mm	11 m / 2,47 Kg
00101584	□ 12,7 mm	11 m / 2,8 Kg
00101652	□ 14 mm	10 m / 3,2 Kg
00101634	□ 15 mm	10 m / 3,71 Kg
00101616	□ 16 mm	10 m / 4,10 Kg
00101685	□ 18 mm	10 m / 5,25 Kg
00101653	□ 19 mm	10 m / 6,05 Kg
00101654	□ 20 mm	10 m / 6,40 Kg
00101635	□ 22 mm	10 m / 7,80 Kg
00101632	□ 25,4 mm	10 m / 10 Kg

**** Made to order***

The maximum temperature, pressure and speed parameters specified in this document can not be combined.

TRAINING (See page 202)

AIM: Understand the different leak occurrences in:

Seals for **rotary units:**
- mechanical seals and packings
- for the dynamic sealing
- of pumps or stirring processes.

202

Synthetic packing

LATTYTEX 2761

Graphited packing

LOW-PRESSURE APPLICATIONS

- FOR ROTARY UNITS AND INDUSTRIAL VALVES AND FITTINGS
- LATTY-EXCLUSIVE «FILCOAT»-PROCESS

OPERATING PARAMETERS
(NOT ASSOCIATED)

Pressure : 0 to 100 bar
Temperature : -50 °C to 260°C
Speed : < 15 m/s
pH : 1 - 13

COMPOSITION

Packing made of special polyacrylic yarns, each single yarn being impregnated with PTFE using our exclusive «Filcoat»-process, then re-impregnated during braiding operation in a bath consisting of graphite mixed with special lubricants.

TYPES OF INDUSTRIES

FLUIDS

Moderately aggressive fluids

Item	Dimensions	Description
00101758	□ 4 mm	47 m / 1,17 Kg
00101759	□ 5 mm	35 m / 1,29 Kg
00101760	□ 6 mm	30 m / 1,47 Kg
00101762	□ 8 mm	15 m / 1,30 Kg
00101763	□ 9,5 mm	12 m / 1,50 Kg
00101764	□ 10 mm	12 m / 1,65 Kg
00101765	□ 11 mm	11 m / 1,70 Kg
00101766	□ 12 mm	11 m / 2,21 Kg
00101767	□ 12,7 mm	11 m / 2,51 Kg
00101768	□ 14 mm	10 m / 2,60 Kg
00101769	□ 15 mm	10 m / 2,90 Kg
00101770	□ 16 mm	10 m / 3,45 Kg
00101771	□ 18 mm	10 m / 4,34 Kg
00101772	□ 19 mm	10 m / 4,58 Kg
00101773	□ 20 mm	10 m / 5,37 Kg
00101774	□ 22 mm	10 m / 6,10 Kg
00101775	□ 25,4 mm	10 m / 8,20 Kg
00101778*	□ 30 mm	10 m / 11,77 Kg

**** Made exclusively on request***

The maximum temperature, pressure and speed given in this document cannot be associated in any case.

FLEXIBLE AND RIGID PACKING EXTRACTORS (See page 213)

These extractors are designed to remove packing rings with cross-sections from 4 to 25 mm that are in use in valve glands, pumps, stirrers, mixers, etc. The size and robustness of LATTY international extractors enable quick removal of even the most inaccessible packing rings.

Set of 2 extractors with the same dimension

Types LI: FF4, FF16, FF20, FF25, RF16, RF20)
• Set of 2 extractors with the same dimension + 5 spare ends

Types LI: FD6, FD10, FD14, RD6, RD10, RD14.
• Set of 10 extractors with the same dimension

Types LI: E6, E10, E14

213

Synthetic packing

LATTYFLON 2790 AL

Packing for drinking water for dynamic sealing

PACKING FOR DRINKING WATER FOR DYNAMIC SEALING

- LATTY-EXCLUSIVE «FILCOAT»-PROCESS
- LIMITATIONS WITH ACIDS AND STRONG BASES

OPERATING PARAMETERS
(NOT ASSOCIATED)

Pressure : 0 to 100 bar
Temperature : -50 °C to 260°C
Speed : < 15 m/s
pH : 1 - 13

COMPOSITION

Packing made of special polyacrylic yarns, each single yarn being impregnated with PTFE using our exclusive «Filcoat»-process, then re-impregnated during braiding operation with a mix of PTFE and food-grade silicon lubricant.

TYPES OF INDUSTRIES

FLUIDS

All types of fluids

GUIDELINES, STANDARDS AND APPROVALS

Item	Dimensions	Description
63520*	☐ 4 mm	35 m / 0,84Kg
63521*	☐ 5 mm	25 m /0,81 Kg
37964	☐ 6 mm	20 m / 0,96 Kg
34259*	☐ 6,35 mm	20 m / 1,05 Kg
34260	☐ 8 mm	15 m / 1,25 Kg
36959	☐ 9,5 mm	12 m / 1,44 Kg
34261	☐ 10 mm	12 m / 1,56 Kg
34262	☐ 11 mm	11 m / 1,72 Kg
34263	☐ 12 mm	11 m / 2,10 Kg
34264	☐ 12,7 mm	11 m / 2,32 Kg
40845	☐ 14 mm	10 m / 2,53 Kg
34265	☐ 16 mm	10 m / 3,30 Kg
37729	☐ 19 mm	10 m / 4,60 Kg
40847	☐ 20 mm	10 m / 5,20 Kg

Made to order

The maximum temperature, pressure and speed parameters specified in this document can not be combined.

Synthetic packing

LATTYFLON 2790

Packing for Food Industry (EC 1935/2004) in dynamic sealing

PACKING FOR FOOD INDUSTRY (EC 1935/2004)

- FOR ROTARY UNITS
- LATTY-EXCLUSIVE «FILCOAT»-PROCESS

OPERATING PARAMETERS
(NOT ASSOCIATED)

Pressure : 0 to 100 bar
Temperature : -50 °C to 260°C
Speed : < 15 m/s
pH : 1 - 13

COMPOSITION

Packing made of special polyacrylic yarns, each single yarn being impregnated with PTFE using our exclusive Filcoat-process, then re-impregnated during braiding operation with a mix of PTFE and inert lubricant.

TYPES OF INDUSTRIES

FLUIDS

All types of fluids

GUIDELINES, STANDARDS AND APPROVALS (ON REQUEST)

Item	Dimensions	Description
00101431	☐ 6 mm	20 m / 0,99 Kg
00101458*	☐ 6,35 mm	20 m / 1,11 Kg
00101430	☐ 8 mm	15 m / 1,35 Kg
00101422	☐ 9,5 mm	12 m / 1,50 Kg
00101435	☐ 10 mm	12 m / 1,73 Kg
00101440	☐ 11 mm	11 m / 1,92 Kg
00101423	☐ 12 mm	11 m / 2,25 Kg
00101410	☐ 12,7 mm	11 m / 2,53 Kg
00101424	☐ 14 mm	10 m / 2,80 Kg
00101433	☐ 16 mm	10 m / 3,60 Kg
00101442	☐ 19 mm	10 m / 4,70 Kg
00101434	☐ 20 mm	10 m / 5,20 Kg
00101443	☐ 22 mm	10 m / 6,13 Kg
00101444	☐ 25,4 mm	10 m / 8,06 Kg

Made to order

The maximum temperature, pressure and speed parameters specified in this document can not be combined.

Synthetic packing

LATTYFLON 7188

Packing made of compound yarn, impregnated with a mix of PTFE and inert lubricant for dynamic sealing

HIGH-PERFORMANCE SYNTHETIC PACKING FOR SLURRIES

- REDUCED RUNNING-IN TIME. SILICONE-FREE LUBRICANT
- REDUCED RETIGHTENING OPERATIONS
- PACKING SOLD ONLY BY THE METRE OR PREFORMED LENGTH

OPERATING PARAMETERS
(NOT ASSOCIATED)

Pressure : 0 to 200 bar
Temperature : -200 °C to 300°C
Speed : < 20 m/s
pH : 1 - 13

COMPOSITION

Packing made of phenolic compound yarns impregnated during braiding operation with a mix of PTFE and inert lubricant. Very good mechanical characteristics combining both suppleness and robustness.

TYPES OF INDUSTRIES

FLUIDS

All industries using abrasive fluids, slurries.

Item	Dimensions	Description
00101727	☐ 6 mm	20 m / 1,10 Kg
25735*	☐ 6,35 mm	20 m / 1,23 Kg
00101728	☐ 8 mm	15 m / 1,43 Kg
00101729	☐ 9,5 mm	12 m / 1,62 Kg
00101730	☐ 10 mm	12 m / 1,72 Kg
25622*	☐ 11 mm	11 m / 2,04Kg
00101731	☐ 12 mm	11 m / 2,40 Kg
00101732	☐ 12,7 mm	11 m / 2,62 Kg
22222	☐ 14 mm	10 m / 2,92 Kg
00101734	☐ 16 mm	10 m / 3,92 Kg
00101742*	☐ 18 mm	10 m / 4,75 Kg
00101735*	☐ 19 mm	10 m / 5,12 Kg
00101736	☐ 20 mm	10 m / 5,79 Kg
00101737*	☐ 22 mm	10 m / 6,87 Kg
22223*	☐ 25,4 mm	10 m / 8,68 Kg

**** Made to order***

The maximum temperature, pressure and speed parameters specified in this document can not be combined.

Synthetic packing

LATTYFLON 7189

Packing specially dedicated to slurries

FLEXIBLE, ROBUST PACKING WITH EXCELLENT ELASTIC RECOVERY PROPERTIES

- LITTLE RETIGHTENING REQUIRED AFTER INSTALLATION EASY CUTTING, LOW HEAT
- CAN BE USED WITHOUT A LANTERN RING
- PACKING SOLD ONLY BY THE METRE OR PREFORMED LENGTH

OPERATING PARAMETERS
(NOT ASSOCIATED)

Pressure : 0 to 200 bar
Temperature : 0 °C to 260°C
Speed : < 20 m/s
pH : 1 - 13

COMPOSITION

Made on the edges of phenolic composite yarns, each single yarn being impregnated with PTFE using our exclusive Filcoat-process, and of polyacrylic yarns on friction faces.

TYPES OF INDUSTRIES

FLUIDS

Slurries fluids

Item	Dimensions	Description
900015133	☐ 6 mm	10 m / 0,89 Kg
900013745	☐ 8 mm	15 m / 1,4 Kg
900015447	☐ 9,5 mm	10 m / 1,0 Kg
900013746	☐ 10 mm	12 m / 1,8 Kg
900013643	☐ 12 mm	10 m / 1,7 Kg
900013747	☐ 12,7 mm	11 m / 2,0Kg
900013728	☐ 14 mm	10 m / 2,3 Kg
900013552	☐ 16 mm	10 m / 2,9 Kg
900015448	☐ 18 mm	10 m / 3,7 Kg
900013560	☐ 19 mm	10 m / 4,2 Kg
900014501	☐ 20 mm	10 m / 4,6 Kg
900017539	☐ 22 mm	10 m / 6,3 Kg
900013642	☐ 25,4 mm	10 m / 7,4 Kg

Carbon graphite packing

LATTYGRAF T

The packing for extreme conditions: pressure – speed – temperature – ph for dynamic sealing

HIGH SPEEDS, HIGH TEMPERATURES, CLEAN FLUIDS

- SUITABLE FOR ALL CHEMICAL FLUIDS (EXCEPT OXIDANTS)
- OUTSTANDING ELASTIC RECOVERY

OPERATING PARAMETERS
(NOT ASSOCIATED)

Pressure : 0 to 300 bar
Temperature : -200 °C to 600°C
Speed : < 35 m/s
pH : 0 - 14

COMPOSITION

Packing made of 100% pure graphite continuous yarns, impregnated with a graphite mix. Very low friction coefficient, good heat dissipation, outstanding elastic recovery.

TYPES OF INDUSTRIES

FLUIDS

All types of non abrasive fluids, except oxidants

Item	Dimensions	Description
00100510	□ 6 mm	20 m / 0,66 Kg
00100512	□ 8 mm	15 m / 0,82 Kg
00100513	□ 10 mm	12 m / 0,96 Kg
00100514	□ 11 mm	11 m / 1,10 Kg
00100515	□ 12 mm	11 m / 1,38 Kg
00100516	□ 12,7 mm	11 m / 1,60 Kg
00100518	□ 16 mm	10 m / 2,23 Kg
00100521*	□ 20 mm	10 m / 3,63 Kg

Made to order

The maximum temperature, pressure and speed parameters specified in this document can not be combined.

Carbon graphite packing

LATTYGRAF TSP

High-elastic and low-friction packing for dynamic sealing

HIGH SPEEDS, HIGH TEMPERATURES, CLEAN FLUIDS

- OUTSTANDING ELASTIC RECOVERY
- LOW FRICTION COEFFICIENT

OPERATING PARAMETERS
(NOT ASSOCIATED)

Pressure : 0 to 300 bar
Temperature : -200 °C to 550°C
Speed : < 35 m/s
pH : 0 - 14

COMPOSITION

Packing made of carbon continuous yarns, impregnated with a graphite mix. Very low friction coefficient, outstanding elastic recovery. Very low friction coefficient, good heat dissipation, outstanding elastic recovery.

TYPES OF INDUSTRIES

FLUIDS

All types of non abrasive fluids, except oxidants

Item	Dimensions	Description
00100593	☐ 6 mm	20 m / 0,60 Kg
00100594	☐ 8 mm	15 m / 0,78 Kg
00100595	☐ 10 mm	12 m / 1,02 Kg
00100596*	☐ 11 mm	11 m / 0,94 Kg
00100597	☐ 12 mm	11 m / 1,32 Kg
00101023	☐ 12,7 mm	11 m / 1,48 Kg
00100599	☐ 16 mm	10 m / 2,05 Kg

Made to order

The maximum temperature, pressure and speed parameters specified in this document can not be combined.

Carbon graphite packing

LATTYGRAF 6745 NG

The new generation of reduced-friction carbon packings for valves and fittings.

HIGH-TEMPERATURE PACKING UP TO 600°C

- CONTAINS AN INHIBITOR (EXCLUSIVE LATTY PROCESS) TO PROVIDE THE VALVE COMPONENTS GOOD PROTECTION.
- FOR ROTARY UNITS AND INDUSTRIAL VALVES AND FITTINGS

OPERATING PARAMETERS
(NOT ASSOCIATED)

Pressure : 0 to 300 bar
Temperature : 450 °C to 600°C
Speed : < 25 m/s
pH : 0 - 14

COMPOSITION

Packing made from continuous carbon yarns, each yarn being impregnated with PTFE using our patented filcoat process, then re-impregnated during braiding with a graphite-and-PTFE-based mix to ensure optimum performance of pumps and valves. Contains a corrosion inhibitor developed from an exclusive process to provide unlimited protection over time.

TYPES OF INDUSTRIES

FLUIDS

All types of fluids, precautions for use in oxidising environments

GUIDELINES, STANDARDS AND APPROVALS

Item	Dimensions	Description
900003923	□ 4 mm	35 m / 0,65 Kg
900003924	□ 5 mm	25 m / 0,70 Kg
900003925	□ 6 mm	20 m / 0,77 Kg
900004250	□ 6,35 mm	20 m / 0,87 Kg
900003926	□ 8 mm	15 m / 1,06 Kg
900003927	□ 9,5 mm	12 m / 1,20 Kg
900003928	□ 10 mm	12 m / 1,30 Kg
900004251	□ 11 mm	11 m / 1,44 Kg
900003929	□ 12 mm	11 m / 1,66 Kg
900003930	□ 12,7 mm	11 m / 1,81 Kg
900003931	□ 14 mm	10 m / 2,16 Kg
900003933	□ 16 mm	10 m / 2,76 Kg
900003934	□ 19 mm	10 m / 3,78 Kg
900003935	□ 20 mm	10 m / 4,27 Kg
900003936	□ 25,4 mm	10 m / 6,87 Kg

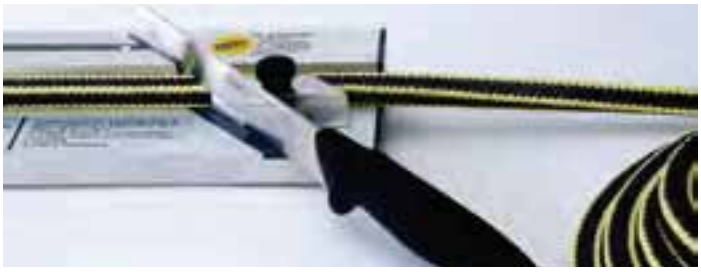
The maximum temperature, pressure and speed parameters specified in this document can not be combined.

PACKING-CUTTING TOOLS (see page 214)

These tools have been designed to cut packing rings to the exact length, thus avoiding cutting errors. Ease of use thanks to a cursor with packing sections, a scale of shaft diameters and which allows to directly obtain the exact ring length. The packings cut at 45°, thus joining together, ensure sealing efficiency. The graduations for packing sections and shaft diameters are given in millimetres and in inches. An appropriate knife is provided with the unit.

ADVANTAGES

- INCREASED RELIABILITY
- DIMENSIONAL REPEATABILITY
- CLEAN CUTS
- REDUCED MAINTENANCE
- PRODUCT SAVINGS
- EASE OF USE
- LIGHT AND ROBUST UNIT



Type	Shaft (mm)	Packing section	Code
LI200	up to 110	< 20 mm	49 06 00 26
LI 201	up to 300	< 30 mm	49 06 00 27
knife			25 49 06 00 25

214

Vegetable packing

LATTYTEX 14

Packing for cold water for dynamic sealing

PACKING FOR COLD WATER FOR DYNAMIC SEALING

- WATER APPLICATIONS UP TO 60°C

OPERATING PARAMETERS
(NOT ASSOCIATED)

Pressure : 0 to 10 bar
Temperature : -40 °C to 60°C
Speed : < 6 m/s
pH : 5 - 9

COMPOSITION

Braided packing made of cotton yarns, impregnated with a mix of tallow and mica.

TYPES OF INDUSTRIES

FLUIDS

All types of fluids

Item	Dimensions	Description
00100024	□ 6 mm	30 m / 1,16 Kg
00100025	□ 8 mm	15 m / 0,99 Kg
00100026	□ 10 mm	12 m / 1,30 Kg
00100027	□ 12 mm	11 m / 1,61 Kg
37635*	□ 12,7 mm	11 m / 1,93 Kg
00100028	□ 14 mm	10 m / 2,15 Kg
00100029	□ 16 mm	10 m / 2,80 Kg
34614*	□ 19 mm	10 m / 4,00 Kg
00100031	□ 20 mm	10 m / 4,15 Kg
00100032	□ 22 mm	10 m / 4,96 Kg

Made to order

The maximum temperature, pressure and speed parameters specified in this document can not be combined.

Vegetable packing

LATTYFLON 1779

Anti-rot packing

VEGETABLE PACKING FOR ROTARY UNIT APPLICATIONS

- IMPREGNATED WITH A MIX OF PTFE AND INERT LUBRICANT DURING BRAIDING OPERATION.

OPERATING PARAMETERS
(NOT ASSOCIATED)

Pressure : 0 to 400 bar
Temperature : -40 °C to 120°C
Speed : < 15 m/s
pH : 4 - 11

COMPOSITION

Packing made of anti-rot high-quality ramie yarns, impregnated with a mix of PTFE and inert lubricant during braiding operation.

TYPES OF INDUSTRIES

FLUIDS

All types of fluids

Item	Dimensions	Description
00100116*	□ 4 mm	35 m / 0,77 Kg
00100118	□ 6 mm	20 m / 1,00 Kg
33980*	□ 6,35 mm	20 m / 1,12 Kg
00100119	□ 8 mm	15 m / 1,28 Kg
00100844	□ 9,5 mm	12 m / 1,44 Kg
00100120	□ 10 mm	12 m / 1,60 Kg
00100122	□ 12 mm	11 m / 2,07 Kg
00100123	□ 12,7 mm	11 m / 2,31 Kg
00100124	□ 14 mm	10 m / 2,55 Kg
00100125	□ 16 mm	10 m / 3,40 Kg
00100126*	□ 18 mm	10 m /4,20 Kg
00100127	□ 20 mm	10 m / 5,30 Kg
00100128*	□ 22 mm	10 m / 5,8 Kg

Made to order

The maximum temperature, pressure and speed parameters specified in this document can not be combined.

RANGE OF GASKETS FOR STATIC SEALING

The primary function of a static gasket is to provide sealing efficiency between a liquid or gaseous substance and the atmosphere.

Our range of gaskets provides static sealing solutions for:

- Pipe flanges
- Valve bodies
- Pump housings

The selection and resistance of a seal depend on very precise criteria:

- Temperature
- Pressure
- Fluid (pH)
- Constraints (vibrations, water hammer, cycles)
- Thickness

QUALITY OF MATERIALS

There are a range of seal materials to be recommended to suit the conditions of use:

- ARAMID
- CARBON / ARAMID
- PTFE
- EXPANDED GRAPHITE
- METAL / GRAPHITE

Our range of standard static seals is completed by a range of specific products manufactured to customers drawings. Our production tools enable us to react very quickly to customer demands..

APPROVALS

API 589 et 607 BAM

CE 1935/2004 DVGW

WRAS FDA PMUC TOTAL

STATIC RANGE / STATIC SEALING

Rotary Pumps
Reciprocating Pumps
Insulation
Valves
Static Applications

Food industry / Chemical industry / Oil and Gas / Water treatment / Pulp and paper
Energy production / Pharmaceutical Industry / Navire Industry / All industries



Carbon Aramid

LATTYCARB 96

A carbon sheet supple and easy to cut for static sealing

GENERAL-PURPOSE ARAMID/CARBON, GRAPHITED ON BOTH FACES

- ANTI-ADHESIVE TREATMENT ON BOTH FACES
- IMPROVED RESISTANCE OF THE GASKET AT HIGH TEMPERATURES RESULTING FROM THE PRESENCE OF ELASTOMER REINFORCED BY CARBON FIBRES
- FOR HIGH-PRESSURE APPLICATIONS

OPERATING PARAMETERS
(NOT ASSOCIATED)

Pressure : 0 to 130 bar
Temperature : 0 °C to 450°C

COMPOSITION

Gasket material made of selected carbon and mineral fibres bonded with a mix of synthetic elastomers, compressed to obtain sheet material. Anti-stick treatment on both faces.

TYPES OF INDUSTRIES

FLUIDS

High-performance material which meets most applications: steam, high-pressure applications, all hydrocarbons.

GUIDELINES, STANDARDS AND APPROVALS

Item	Dimensions	Description
67475	0,5 mm	1,5 m x 2 m
46630	0,5 mm	1 m x 1,5 m
69766	1 mm	1 m x 1,5 m
43948	1 mm	1 m x 1,5 m
47859	1 mm	1,5 m x 2 m
69767	1,5 mm	1 m x 1,5 m
43949	1,5 mm	1 m x 1,5 m
48651	1,5 mm	1,5 m x 2 m
43950	2 mm	1 m x 1,5 m
47860	2 mm	1,5 m x 2 m
50172	2 mm	1 m x 1,5 m
43951	3 mm	1 m x 1,5 m
47068	3 mm	1,5 m x 2 m
51421	3 mm	1,5 m x 1,5 m

The maximum temperature, pressure and speed parameters specified in this document can not be combined.

Carbon Aramid

LATTYCARB 96 G2F

A carbon sheet supple and easy to cut for static sealing

FLEXIBLE GASKET MATERIAL, EASY TO CUT

- ANTI-STICK SPECIFIC GRAPHITE TREATMENT ON BOTH FACES
- FOR HIGH-PRESSURE APPLICATIONS

OPERATING PARAMETERS
(NOT ASSOCIATED)

Pressure : 0 to 130 bar
Temperature : 0 °C to 450°C

COMPOSITION

The specific graphite coating on both faces makes assembly/ disassembly operations extremely fast and minimises flange corrosion.

TYPES OF INDUSTRIES

FLUIDS

High-performance material which meets most applications: steam, high-pressure applications, all hydrocarbons.

Item	Dimensions	Description
43953	1 mm	1 m x 1,5 m
50026	1 mm	1,5 m x 2 m
43954	1,5 mm	1 m x 1,5 m
50027	1,5 mm	1,5 m x 2 m
43955	2 mm	1 m x 1,5 m
49924	2 mm	1,5 m x 2 m
43956	3 mm	1 m x 1,5 m
49925	3 mm	1,5 m x 2 m

The maximum temperature, pressure and speed parameters specified in this document can not be combined.

Carbon Aramid

LATTYCARB 965

A carbon sheet supple and easy to cut for static sealing

SHEET MATERIAL REINFORCED WITH AN INTERNAL STEEL WIRE MESH.

- FLEXIBLE GASKET MATERIAL, EASY TO CUT

OPERATING PARAMETERS
(NOT ASSOCIATED)

Pressure : 0 to 150 bar
Temperature : 0 °C to 450°C

COMPOSITION

Gasket material made of selected carbon and mineral fibres bonded with a mix of synthetic elastomers, compressed to obtain sheet material. The sheet material is reinforced with an internal steel wire mesh. A special graphite coating, applied on both faces, makes disassembly operations extremely fast and minimises flange corrosion.

TYPES OF INDUSTRIES

FLUIDS

High-performance material which meets most applications: steam, high-pressure applications, all hydrocarbons.

Item	Dimensions	Description
43961	1 mm	1 m x 1,5 m
49194	1 mm	1,5 m x 2 m
43962	1,5 mm	1 m x 1,5 m
49512	1,5 mm	1,5 m x 2 m
43963	2 mm	1 m x 1,5 m
47253	2 mm	1,5 m x 2 m
43964	3 mm	1 m x 1,5 m
47861	3 mm	1,5 m x 2 m

The maximum temperature, pressure and speed parameters specified in this document can not be combined.

CUTTER FOR CIRCULAR GASKETS FROM 80 TO 1,250 MM IN DIAMETER

The cutter designed for GROUPE LATTY's gaskets guarantees accurate cutting of any type of material such as aramid, carbon, graphite, PTFE as well as leather, rubber, plastic materials, felt and vulcanised fibre. The design of these cutters allow for easy and rapid cutting, without marking, of gaskets in a wide range of dimensions (80 to 1,250 mm).

ADVANTAGES

- RAPID IMPLEMENTATION
- ACCURACY OF GASKET DIMENSIONS AND GEOMETRY
- REPEATABILITY ENSURED
- QUALITY OF THE CUT

MANUAL CUTTER FOR CIRCULAR GASKETS (see page 216)

To cut thicker material with this model, it is recommended to cut from both sides by turning the sheet.

- REFERENCE: LI 12

216

ELECTRICAL CUTTER FOR CIRCULAR GASKETS (see page 217)

This model is equipped with a 220V – 50 Hz, thermally protected motor and with a safety device to prevent it from accidentally starting up during use.

- REFERENCE: LI 12M

217

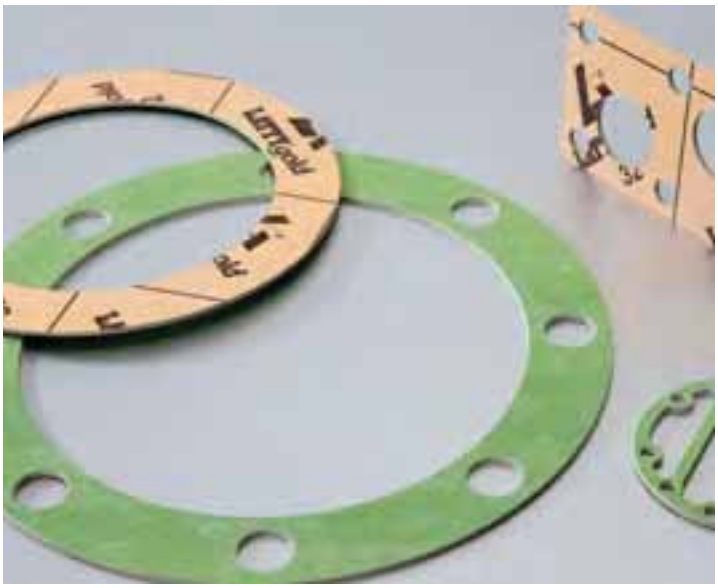
Aramid

LATTYGOLD 32

Calendered gasket of synthetic fibres with anti-stick treatment on both faces for static sealing

CALENDERED GASKET OF SYNTHETIC FIBRES WITH A MIX OF NBR-SBR ELASTOMERS

- ANTI-STICK TREATMENT ON BOTH FACES.
- SUITABLE FOR ANY TYPE OF INDUSTRIES



OPERATING PARAMETERS
(NOT ASSOCIATED)

Pressure : 0 to 60 bar
Temperature : 0 °C to 300°C

COMPOSITION

Gasket material made of synthetic fibres bonded together with a mix of NBR-SBR elastomers.

TYPES OF INDUSTRIES

FLUIDS

Applications for all slightly aggressive fluids (water, oil, fuels, etc.).

Item	Dimensions	Description
23488	1 mm	1 m x 1,5 m
46928	1 mm	1,5 m x 2 m
27692	1,5 mm	1,5 m x 2 m
23489	1,5 mm	1 m x 1,5 m
23490	2 mm	1 m x 1,5 m
26492	2 mm	1,5 m x 2 m
23491	3 mm	1 m x 1,5 m
27693	3 mm	1,5 m x 2 m

The maximum temperature, pressure and speed parameters specified in this document can not be combined.

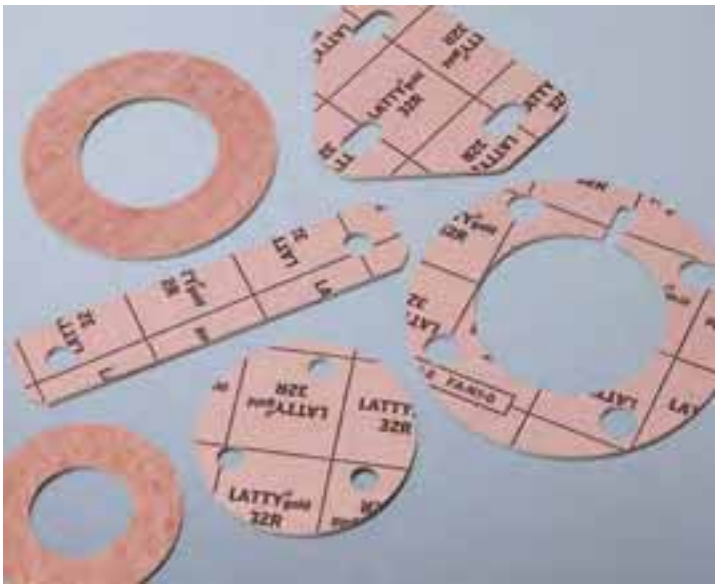
Aramid

LATTYGOLD 32R

Calendered gasket of synthetic fibres with anti-stick treatment on both faces for static sealing

GASKET MATERIAL BASED ON SYNTHETIC FIBRES AND NBR-TYPE ELASTOMER FIBRES

- VERY GOOD RESISTANCE TO MECHANICAL, THERMAL AND CHEMICAL STRESSES.
- ANTI-STICK COATING ON BOTH FACES
- SUITABLE FOR ANY TYPE OF INDUSTRIES



OPERATING PARAMETERS
(NOT ASSOCIATED)

Pressure : 0 to 40 bar
Temperature : -50 °C to 180°C

COMPOSITION

Gasket material made of synthetic fibres bonded together with a mix of NBR-SBR elastomers.

TYPES OF INDUSTRIES

FLUIDS

Applications for all slightly aggressive fluids (water, oil, fuels, etc.).

Item	Dimensions	Description
900019295	1,5 mm	1,5 m x 1,5 m
900019296	2 mm	1,5 m x 4,5 m
900019297	3 mm	1,5 m x 1,5 m
900019298	4 mm	1,5 m x 1,5 m

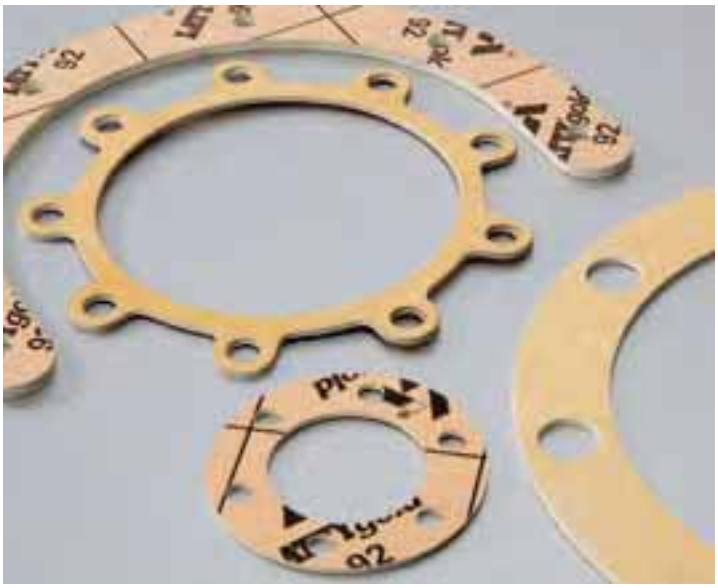
Aramid

LATTYGOLD 92

General-purpose aramid sheet material for static sealing

VERY GOOD RESISTANCE TO MECHANICAL, THERMAL AND CHEMICAL STRESSES.

- ANTI-STICK TREATMENT ON BOTH FACES.
- FLEXIBLE GASKET MATERIAL, EASY TO CUT



OPERATING PARAMETERS
(NOT ASSOCIATED)

Pressure : 0 to 100 bar
Temperature : 0 °C to 440°C

COMPOSITION

Gasket material made of synthetic fibres bonded together with a mix of NBR-SBR elastomers.

TYPES OF INDUSTRIES

FLUIDS

All types and non aggressive fluids

GUIDELINES, STANDARDS AND APPROVALS

Item	Dimensions	Description
21734	0,5 mm	1 m x 1,5 m
46349	0,5 mm	1,5 m x 2 m
27688	0,8 mm	1,5 m x 2 m
26221	0,8 mm	1 m x 1,5 m
21411151	1 mm	1 m x 1,5 m
28898	1 mm	1,5 m x 2 m
40210	1 mm	1,5 m x 1,5 m
21471151	1,5 mm	1 m x 1,5 m
27689	1,5 mm	1,5 m x 2 m
40337	1,5 mm	1,5 m x 1,5 m
21421151	2 mm	1 m x 1,5 m
26041	2 mm	1,5 m x 2 m
40338	2 mm	1,5 m x 1,5 m
21431151	3 mm	1 m x 1,5 m
27690	3 mm	1,5 m x 2 m
39897	3 mm	1,5 m x 1,5 m
24821	4 mm	1 m x 1,5 m
50025	4 mm	1,5 m x 2 m

Aramid

LATTYGOLD 92 G2F

General-purpose aramid sheet material for static sealing

GENERAL-PURPOSE ARAMID-BASED GASKET

- ANTI-STICK SPECIFIC GRAPHITE TREATMENT ON BOTH FACES

OPERATING PARAMETERS
(NOT ASSOCIATED)

Pressure : 0 to 100 bar
Temperature : 0 °C to 440°C

COMPOSITION

The specific graphite coating on both faces makes disassembly operations extremely fast and minimises flange corrosion.

TYPES OF INDUSTRIES

FLUIDS

All types and non aggressive fluids

GUIDELINES, STANDARDS AND APPROVALS

PMUC

Item	Dimensions	Description
43019	1 mm	1 m x 1,5 m
50436	1 mm	1,5 m x 2 m
43020	1,5 mm	1 m x 1,5 m
50437	1,5 mm	1,5 m x 2 m
43021	2 mm	1 m x 1,5 m
46655	2 mm	1,5 m x 2 m
43022	3 mm	1 m x 1,5 m
46656	3 mm	1,5 m x 2 m

Aramid

LATTYGOLD 925

General-purpose aramid sheet material for static sealing

GENERAL-PURPOSE ARAMID-BASED GASKET

- SHEET MATERIAL REINFORCED WITH AN INTERNAL STEEL WIRE MESH.
- ANTI-STICK SPECIAL GRAPHITE TREATMENT ON BOTH FACES

OPERATING PARAMETERS
(NOT ASSOCIATED)

Pressure : 0 to 130 bar
Temperature : 0 °C to 440°C

COMPOSITION

Gasket material made of selected synthetic and mineral fibres bonded with a special acrylonitrile-elastomer mix, compressed to obtain sheet material. The sheet material is reinforced with an internal steel wire mesh. A special graphite coating, applied on both faces, makes disassembly operations extremely fast and minimises flange corrosion.

TYPES OF INDUSTRIES

FLUIDS

All types and non aggressive fluids

GUIDELINES, STANDARDS AND APPROVALS

PWUC

Item	Dimensions	Description
21511151	1 mm	1 m x 1,5 m
34706	1 mm	1,5 m x 2 m
21571151	1,5 mm	1 m x 1,5 m
48236	1,5 mm	1,5 m x 2 m
21521151	2 mm	1 m x 1,5 m
46348	2 mm	1,5 m x 2 m
21531151	3 mm	1 m x 1,5 m
46347	3 mm	1,5 m x 2 m

The maximum temperature, pressure and speed parameters specified in this document can not be combined.

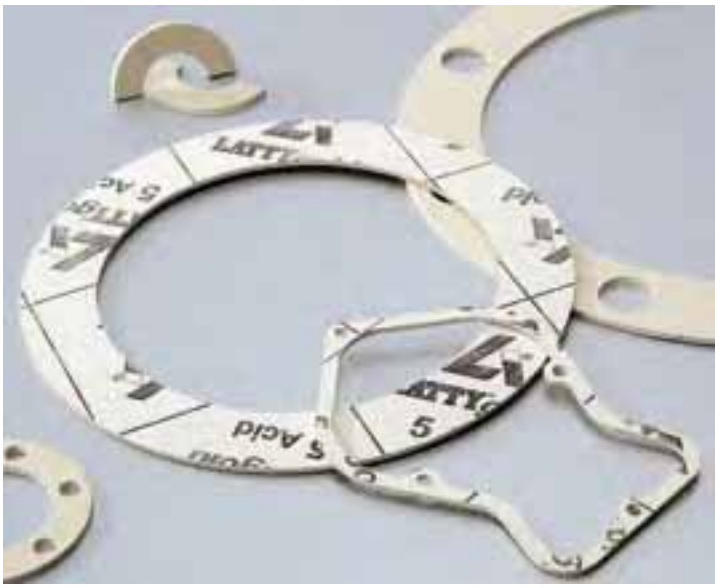
Aramid

LATTYGOLD 5 ACID

Sheet material for aggressive environments for static sealing

GASKET THAT WITHSTANDS CHEMICALLY AGGRESSIVE FLUIDS

- SUITABLE FOR MINERAL ACIDS, BASES AND STRONG OXIDANTS



OPERATING PARAMETERS
(NOT ASSOCIATED)

Pressure : 0 to 60 bar
Temperature : 0 °C to 200°C

COMPOSITION

Gasket material made of selected synthetic fibres bonded together with a mix of special resins and elastomers resulting in high resistance to aggressive fluids, compressed to obtain sheet material.

TYPES OF INDUSTRIES

FLUIDS

High-performance material specially designed for applications with highly corrosive fluids: mineral acids, bases and strong oxidants.

Item	Dimensions	Description
43970	1 mm	1 m x 1,5 m
46099	1 mm	1,5 m x 2 m
43971	1,5 mm	1 m x 1,5 m
49403	1,5 mm	1,5 m x 2 m
43972	2 mm	1 m x 1,5 m
46100	2 mm	1,5 m x 2 m
43973	3 mm	1 m x 1,5 m
46101	3 mm	1,5 m x 2 m

The maximum temperature, pressure and speed parameters specified in this document can not be combined.

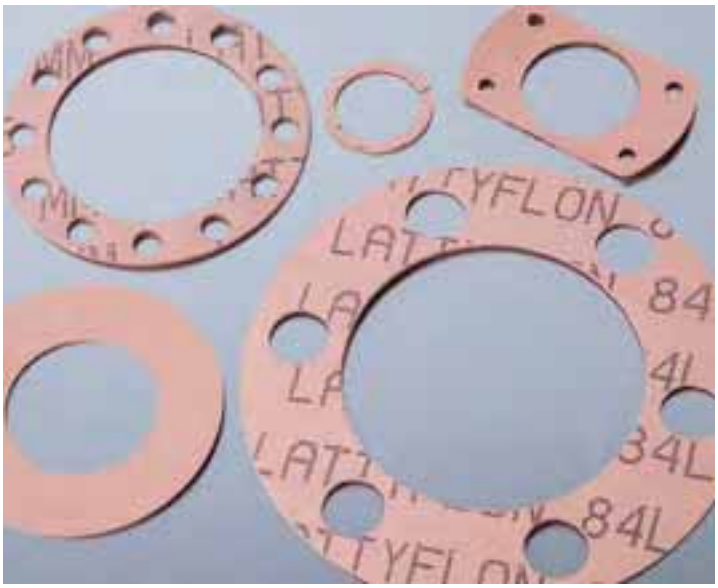
PTFE

LATTYFLON 84 L

Flexible, modified filled PTFE sheet for difficult applications for static sealing

MODIFIED FILLED PTFE SHEET FOR DIFFICULT APPLICATIONS

- TOTAL CHEMICAL INERTNESS_X0000D_
- APPROVED FOOD CONTACT
- WATER-REPELLENT, NON-FLAMMABLE



OPERATING PARAMETERS
(NOT ASSOCIATED)

Pressure : 0 to 85 bar
Temperature : -200 °C to 260°C
pH : 0 - 14

COMPOSITION

Designed for all industries, chemically resitant to various fluids such as acids, solvents, hydrocarbons, chlorine, water and steam. Outstanding mechanical properties, very high resistance to creep, compression and wear, added to the outstanding PTFE properties for aggressive environments.

TYPES OF INDUSTRIES

FLUIDS

All types of fluids, limitation for fluorinated gases or molten alkali metals.

GUIDELINES, STANDARDS AND APPROVALS

Item	Dimensions	Description
900019004	1,5 mm	1,5 m x 1,5 m
900019005	2 mm	1,5 m x 1,5 m
900019006	3 mm	1,5 m x 1,5 m

The maximum temperature, pressure and speed parameters specified in this document can not be combined.

PTFE

LATTYFLON 94 L

Modified filled PTFE sheet for industrial use for static sealing

MODIFIED PTFE GASKET, HIGH MECHANICAL RESISTANCE

- HIGH ELASTIC RECOVERY AND LOW RELAXATION
- REDUCED PERMEABILITY, FLEXIBILITY, FOR EASIER CUTTING AND INSTALLATION
- ISOTROPIC STRUCTURE

OPERATING PARAMETERS
(NOT ASSOCIATED)

Pressure : 0 to 80 bar
Temperature : -210 °C to 260°C
pH : 0 - 14

COMPOSITION

Modified filled PTFE gasket Its isotropic structure provides high resistance to creep and its elastic recovery guarantees high sealing performance.

TYPES OF INDUSTRIES

FLUIDS

All types of fluids, restriction for fluorinated gases or molten alkali metals.

GUIDELINES, STANDARDS AND APPROVALS

Item	Dimensions	Description
72477	0,5 mm	1,5 m x 1,5 m
69536	1 mm	1,5 m x 1,5 m
56306	1,5 mm	1,5 m x 1,5 m
56307	2 mm	1,5 m x 1,5 m
58754	3 mm	1,5 m x 1,5 m

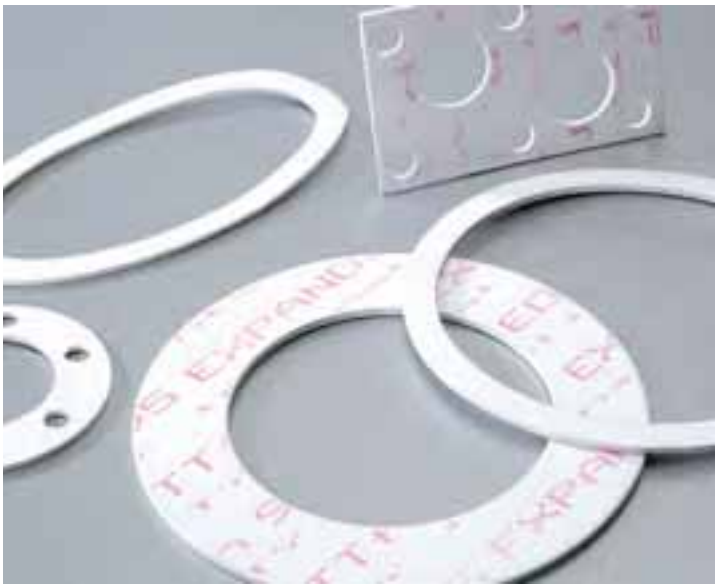
PTFE

LATTYFLON 95

PTFE gasket, outstanding resistance in aggressive environments for static sealing

FLEXIBLE PTFE GASKET, OUTSTANDING RESISTANCE IN AGGRESSIVE ENVIRONMENTS

- SUITABLE FOR FLANGES WITH FRAGILE, CORRODED OR NEW SURFACES.
- VERY LOW RELAXATION



OPERATING PARAMETERS
(NOT ASSOCIATED)

Pressure : 0 to 210 bar
Temperature : -240 °C to 270°C
pH : 0 - 14

COMPOSITION

Pure expanded PTFE gasket whose high malleability allows sealing of even damaged flanges, while its very low relaxation under load guarantees high fitting reliability. Requiring a low tightening torque, this gasket material is recommended for the fitting of fragile glass lined or plastic flanges.

TYPES OF INDUSTRIES

FLUIDS

All types of fluids, restriction for fluorinated gases or molten alkali metals.

GUIDELINES, STANDARDS AND APPROVALS

Item	Dimensions	Description
50353	1 mm	1,5 m x 1,5 m
50354	1,5 mm	1,5 m x 1,5 m
50355	2 mm	1,5 m x 1,5 m
50190	3 mm	1,5 m x 1,5 m
69979*	6 mm	1,5 m x 1,5 m

The maximum temperature, pressure and speed parameters specified in this document can not be combined.

PTFE

LATTYFLON 97

Molded in-shape PTFE

100%-PTFE GASKET WITH METAL INSERT FOR IMPROVED MECHANICAL STRENGTH

- WITHSTAND COLD CREEP DUE TO THE PERFORATED PLATE REINFORCEMENT
- EASY INSTALLATION AND TIGHTENING NON-DEFORMABLE
- ANTI-STICK, EASY TO DISASSEMBLE

OPERATING PARAMETERS
(NOT ASSOCIATED)

Pressure : 0 to 100 bar
Temperature : -100 °C to 250°C
pH : 0 - 14

COMPOSITION

Molded in-shape PTFE gasket over an ISO 1.4306 perforated stainless steel insert. Provides outstanding resistance to cold creep due to the specific design of the perforated plate reinforcement. Highly moisture-resistant, can be stored for unlimited time.

TYPES OF INDUSTRIES

FLUIDS

All types of fluids, restriction for fluorinated gases or molten alkali metals.

GUIDELINES, STANDARDS AND APPROVALS

Item	Dimensions	Description
43442*	DN 15	PN 10 / PN 16 / PN 25 / PN 40
43443*	DN 20	PN 10 / PN 16 / PN 25 / PN 40
43444*	DN 25	PN 10 / PN 16 / PN 25 / PN 40
43445*	DN 32	PN 10 / PN 16 / PN 25 / PN 40
43446*	DN 40	PN 10 / PN 16 / PN 25 / PN 40
42996*	DN 50	PN 10 / PN 16 / PN 25 / PN 40
43447*	DN 65	PN 10 / PN 16 / PN 25 / PN 40
43448*	DN 80	PN 10 / PN 16 / PN 25 / PN 40
43449*	DN 100	PN 10 / PN 16
54803*	DN 100	PN 25 / PN 40
45653*	DN 125	PN 10 / PN 16
58531*	DN 125	PN 25 / PN 40
43450*	DN 150	PN 10 / PN 16
56533*	DN 150	PN 25 / PN 40
61344*	DN 200	PN 10 / PN 16
61345*	DN 200	PN 25
61346*	DN 200	PN 40
61347*	DN 250	PN 10
61348*	DN 250	PN 16
61349*	DN 250	PN 40
61835*	DN 250	PN 25
61352*	DN 300	PN 40
61354*	DN 350	PN 16
61355*	DN 350	PN 40

Made to order

The maximum temperature, pressure and speed parameters specified in this document can not be combined.

PTFE

LATTYFLON UNISEAL

PTFE LATTYflon UNISEAL gasket: continuous extruded, self-adhesive tape for static sealing

100%-EXPANDED PTFE SELF-ADHESIVE TAPE

- SUITABLE FOR FLANGES WITH FRAGILE, CORRODED OR NEW SURFACES.
- SUITABLE FOR FOODSTUFFS AND PHARMACEUTICALS
- HIGH TENSILE STRENGTH

OPERATING PARAMETERS
(NOT ASSOCIATED)

Pressure : 0 to 200 bar
Temperature : -240 °C to 250°C
pH : 0 - 14

COMPOSITION

100%-pure PTFE extruded gasket with micro-fibrous structure. Self-adhesive. Withstands chemicals.

TYPES OF INDUSTRIES

FLUIDS

All types of fluids

GUIDELINES, STANDARDS AND APPROVALS

Item	Dimensions	Description
49040012	☐10,0 x 3,0 mm	12 m
49040013	☐14,0 x 5,0 mm	15 m
49040023	☐17,0 x 6,0 mm	10 m
49040014	☐20,0 x 7,0 mm	8 m
50446	☐28,0 x 5,0 mm	10 m
49040011	☐3,0 x 1,5 mm	15 m
72476	☐40,0 x 5,0 mm	10 m
49040018	☐5,0 x 2,0 mm	20 m
49040010	☐7,0 x 2,5 mm	20 m

CUTTER FOR CIRCULAR GASKETS FROM 80 TO 1,250 MM IN DIAMETER

The cutter designed for GROUPE LATTY's gaskets guarantees accurate cutting of any type of material such as aramid, carbon, graphite, PTFE as well as leather, rubber, plastic materials, felt and vulcanised fibre. The design of these cutters allow for easy and rapid cutting, without marking, of gaskets in a wide range of dimensions (80 to 1,250 mm).

ADVANTAGES

- RAPID IMPLEMENTATION
- ACCURACY OF GASKET DIMENSIONS AND GEOMETRY
- REPEATABILITY ENSURED
- QUALITY OF THE CUT

MANUAL CUTTER FOR CIRCULAR GASKETS (see page 216)

To cut thicker material with this model, it is recommended to cut from both sides by turning the sheet.

- REFERENCE: LI 12

216

ELECTRICAL CUTTER FOR CIRCULAR GASKETS (see page 217)

This model is equipped with a 220V – 50 Hz, thermally protected motor and with a safety device to prevent it from accidentally starting starting up during use.

- REFERENCE: LI 12M

217

Graphite

LATTYGRAF EFA

Sheet material providing the highest pressure/temperature factor for static sealing

RIGID GRAPHITE GASKET FOR HIGH-PRESSURE AND HIGH-TEMPERATURE APPLICATIONS

- GASKET MATERIAL REINFORCED BY TANGED STAINLESS STEEL INSERT AND TWO 3-MM STEEL SHEETS.
- RIGID GASKET, IDEAL FOR BLIND ASSEMBLIES

OPERATING PARAMETERS
(NOT ASSOCIATED)

Pressure : 0 to 650 bar
Temperature : -200 °C to 650°C
pH : 0 - 14

COMPOSITION

Gasket material made of 98% pure expanded graphite material laminated and clamped over a tanged ISO 1.4404 stainless steel insert. Cohesion forces hold this composite structure together without any bonding agent. With its rigidity, it provides outstanding performance in very high-temperature and high-pressure applications. Its rigidity makes it most convenient for all blind assemblies.

TYPES OF INDUSTRIES

FLUIDS

Compatible with all fluids, except strong oxidants.

GUIDELINES, STANDARDS AND APPROVALS

Item	Dimensions	Description
38799	1,5 mm	1 m x 1 m
77600*	1,5 mm	1,5 m x 1,5 m
71836	2 mm	1,5 m x 1,5 m
38797	2 mm	1 m x 1 m
71837	3 mm	1,5 m x 1,5 m
38798	3 mm	1 m x 1 m

Made to order

The maximum temperature, pressure and speed parameters specified in this document can not be combined.

Graphite

LATTYGRAF EFA G2F

Sheet material providing the highest pressure/temperature factor for static sealing

RIGID GRAPHITE GASKET FOR HIGH-PRESSURE AND HIGH-TEMPERATURE APPLICATIONS

- GASKET MATERIAL REINFORCED BY TANGED STAINLESS STEEL INSERT AND TWO 3-MM STEEL SHEETS.
- ANTI-STICK, SPECIAL GRAPHITE TREATMENT ON BOTH FACES

OPERATING PARAMETERS
(NOT ASSOCIATED)

Pressure : 0 to 650 bar
Temperature : -200 °C to 650°C
pH : 0 - 14

COMPOSITION

Gasket material with the same structure as LATTYgraf EFA. A special graphite coating, applied on both faces, makes disassembly operations extremely fast.

TYPES OF INDUSTRIES

FLUIDS

Compatible with all fluids, except strong oxidants.

Item	Dimensions	Description
43815*	1,5 mm	1 m x 1 m
39654	2 mm	1 m x 1 m
44840	3 mm	1 m x 1 m

Made to order

The maximum temperature, pressure and speed parameters specified in this document can not be combined.

Graphite

LATTYGRAF EFA NG

Sheet material 98% pure expanded graphite

EXPANDED GRAPHITE GASKET < 650°C / 650 BAR

- SHEET MATERIAL WITH MULTIPLE LAYERS OF EXPANDED GRAPHITE AND A STAINLESS STEEL SHEET DESIGNED TO PROMOTE ADHERENCE OF THE GRAPHITE WITHOUT ADHESIVE.
- HIGH-PURITY GRAPHITE GASKET MATERIAL (>99.5%)

OPERATING PARAMETERS
(NOT ASSOCIATED)

Pressure : 0 to 650 bar
Temperature : -210 °C to 650°C
pH : 0 - 14

COMPOSITION

Multiple layers of thin high-purity expanded graphite (>99.5%) combined with stainless steel sheets specially designed to promote adherence of the graphite without gluing. This bonding method allows the product to retain the intrinsic properties of soft graphite, thereby simplifying sheet handling and gasket production.

TYPES OF INDUSTRIES

FLUIDS

Compatible with all fluids, except strong oxidants.

GUIDELINES, STANDARDS AND APPROVALS

Item	Dimensions	Description
900003901	2 mm	1 m x 1 m
900003902	3 mm	1 m x 1 m
900003903	4 mm	1 m x 1 m

The maximum temperature, pressure and speed parameters specified in this document can not be combined.

Graphite

LATTYGRAF EFMC @

Reinforced graphite sheet material for static sealing

MULTILAYER EXPANDED GRAPHITE SHEET MATERIAL, WITH ANTI-CORROSION TREATMENT

- HIGH-PURITY GRAPHITE (99.85%)
- MULTILAYER SHEET MATERIAL WITH TANGED STAINLESS STEEL INSERTS. THE GRAPHITE AND STAINLESS STEEL INSERTS BOND WITHOUT ANY ADHESIVE.
- EASY TO CUT
- LATTYGRAF EFMC BS, VERSION PMUC

OPERATING PARAMETERS
(NOT ASSOCIATED)

Pressure : 0 to 650 bar
Temperature : -210 °C to 650°C
pH : 0 - 14

COMPOSITION

Multiple layers of thin expanded graphite combined with stainless steel sheets specially designed to promote bonding of the graphite without any adhesive. This bonding method allows the product to retain the intrinsic properties of soft graphite, thereby simplifying sheet handling and gasket production.

TYPES OF INDUSTRIES

FLUIDS

Compatible with all fluids, except strong oxidants.

GUIDELINES, STANDARDS AND APPROVALS

589 PMUC

Item	Dimensions	Description
82762*	1,5 mm	1 m x 1 m
84373*	1,5 mm	1,5 m x 1,5 m
82763*	2 mm	1 m x 1 m
84374*	2 mm	1,5 m x 1,5 m
82764	3 mm	1 m x 1 m
84375	3 mm	1,5 m x 1,5 m
82765	4 mm	1 m x 1 m
84376	4 mm	1,5 m x 1,5 m

Made to order

The maximum temperature, pressure and speed parameters specified in this document can not be combined.

Expanded graphite tape or ring

LATTYGRAF E

High-purity expanded graphite compressed rings or tape for industrial valves and fittings

HIGH-PURITY EXPANDED GRAPHITE COMPRESSED RINGS OR TAPE

- SUITABLE FOR VALVES AND FITTINGS
- VERY LOW FRICTION COEFFICIENT

OPERATING PARAMETERS
(NOT ASSOCIATED)

Pressure : 0 to 600 bar
Temperature : 0 °C to 600°C

COMPOSITION

High-purity expanded graphite without binder. Resistant up to 3,000°C (in inert atmosphere). Compressed sealing rings made of 99.85% pure expanded graphite, without binder or additives. Very low friction coefficient, very high self-lubricating capability, good chemical resistance and high thermal conductivity.

TYPES OF INDUSTRIES

FLUIDS

All types of high-temperature fluids and steam

GUIDELINES, STANDARDS AND APPROVALS

Item	Dimensions	Description
5106212	12,5 mm	20 m
05106225	25,0 mm	20 m

The maximum temperature, pressure and speed parameters specified in this document can not be combined.

Expanded graphite tape or ring

LATTYGRAF E1

High-purity expanded graphite compressed rings or tape for industrial valves and fittings

HIGH-PURITY EXPANDED GRAPHITE COMPRESSED RINGS OR TAPE

- CONTAINS A CORROSION INHIBITOR (EXCLUSIVE LATTY PROCESS)
- SUITABLE FOR VALVES AND FITTINGS

OPERATING PARAMETERS
(NOT ASSOCIATED)

Pressure : 0 to 600 bar
Temperature : 0 °C to 600°C

COMPOSITION

High-purity expanded graphite without binder. Resistant up to 3,000°C (in inert atmosphere). Compressed sealing rings made of 99.85% pure expanded graphite, without binder. The rings contain a finely dispersed metallic inhibitor (zinc) for stem and stuffing box corrosion protection. Very low friction coefficient, very high self-lubricating capability, good chemical resistance and high thermal conductivity.

TYPES OF INDUSTRIES

FLUIDS

All types of high-temperature fluids and steam

Item	Dimensions	Description
05156212	12,5 mm	20 m
05156225	25,0 mm	20 m

Expanded graphite

LATTYGRAF E2

Expanded graphite sheet

GOOD CHEMICAL INERTIA

- HIGH THERMAL CONDUCTIVITY
- NATURALLY LUBRICATING

OPERATING PARAMETERS
(NOT ASSOCIATED)

Pressure : 0 to 450 bar
Temperature : 0 °C to 650°C
pH : 0 - 14

COMPOSITION

High-purity expanded graphite without binder. Very low friction coefficient, very high self lubricating capability, good chemical resistance and high thermal conductivity. 98% pure expanded graphite

TYPES OF INDUSTRIES

FLUIDS

All types of fluids

Item	Dimensions	Description
45452*	0,5 mm	1 m x 1 m
37304*	1 mm	1 m x 1 m
25362	1,5 mm	1 m x 1 m
25363	2 mm	1 m x 1 m
26128*	3 mm	1 m x 1 m
84188*	4 mm	1 m x 1 m

Made to order

The maximum temperature, pressure and speed parameters specified in this document can not be combined.

Graphite

LATTYGRAF EFI

Expanded graphite and stainless steel sheet material for static sealing

GRAPHITE GASKET FOR HIGH-TEMPERATURE APPLICATIONS

- INSENSITIVE TO THERMAL SHOCKS
- BALANCES OUT ANY FLANGE UNEVENNESS
- EASY TO CUT

OPERATING PARAMETERS
(NOT ASSOCIATED)

Pressure : 0 to 650 bar
Temperature : -200 °C to 600°C
pH : 0 - 14

COMPOSITION

Gasket material made of high-purity expanded graphite material (>98%) bonded and laminated over a ISO 1.4401 stainless steel 50µ foil. The medium rigidity of LATTYgraf EFI permits on-site easy gasket cutting and fast installation in inaccessible locations where gasket flexing is necessary.

TYPES OF INDUSTRIES

FLUIDS

Compatible with all fluids, except strong oxidants.

GUIDELINES, STANDARDS AND APPROVALS

DVGW

Item	Dimensions	Description
05050401	1 mm	1 m x 1 m
05050400	1,5 mm	1 m x 1 m
05050402	2 mm	1 m x 1 m
05050303	3 mm	1 m x 1 m

Expanded graphite

LATTYGRAF E2 ADHESIVE

High-purity expanded graphite tape to make good-quality gaskets on site

SINGLE-SIDED ADHESIVE TAPE, EXPANDED GRAPHITE FOR STATIC APPLICATIONS.

- HIGH-PURITY EXPANDED GRAPHITE TAPE

OPERATING PARAMETERS
(NOT ASSOCIATED)

Pressure : 0 to 600 bar
Temperature : °C to 650°C

COMPOSITION

High-purity expanded graphite compressed tape

TYPES OF INDUSTRIES

FLUIDS

Compatible with all fluids, except strong oxidants.

Item	Dimensions	Description
05116120	20,0 mm	10 m

Graphite

LATTYGRAF EFN

Reinforced expanded graphite and nickel sheet material for static sealing

GRAPHITE GASKET FOR HIGH-TEMPERATURE APPLICATIONS.

- INSENSITIVE TO THERMAL SHOCKS, PREVENTS LEAKS AT START UP
- BALANCES OUT ANY FLANGE UNEVENNESS
- REDUCED MAINTENANCE, NO RETIGHTENING REQUIRED

OPERATING PARAMETERS
(NOT ASSOCIATED)

Pressure : 0 to 650 bar
Temperature : -200 °C to 600°C
pH : 0 - 14

COMPOSITION

Gasket material made of high-purity expanded graphite material (>98%) bonded and laminated over a 99.95%-pure 13µ or 25 µ nickel foil. The medium rigidity of LATTYgraf EFN permits on-site easy gasket cutting and fast installation in inaccessible locations where gasket flexing is necessary.

TYPES OF INDUSTRIES

FLUIDS

Compatible with all fluids, except strong oxidants. Particularly suitable for chlorinated environments.

Item	Dimensions	Description
28073	1 mm	1 m x 1 m
28074	1,5 mm	1 m x 1 m
49072011	2 mm	1 m x 1 m
49073011	3 mm	1 m x 1 m

Made to order

The maximum temperature, pressure and speed parameters specified in this document can not be combined.

Expanded graphite ring

LATTYGRAF EBST

Expanded graphite tape, for nuclear valves

HIGH-PURITY EXPANDED GRAPHITE RINGS

- PERMANENT CORROSION INHIBITOR
- DEDICATED TO NUCLEAR APPLICATIONS

OPERATING PARAMETERS
(NOT ASSOCIATED)

Pressure : 0 to 600 bar
Temperature : 0 °C to 3000°C (in inerte atmosphere)

COMPOSITION

High-purity expanded graphite without binder. Very low friction coefficient, very high self-lubricating capability, good chemical resistance and high thermal conductivity.

TYPES OF INDUSTRIES

FLUIDS

All types of fluids: water, steam, gases, hydrocarbons, except strong oxidants.

GUIDELINES, STANDARDS AND APPROVALS

PMUC

Item	Dimensions	Description
68033	☐12,5 x 0,5 mm	16 ml
900018821	☐20 x 0,5 mm	16 ml
68035	☐25 x 0,5 mm	24 ml
68036	☐30 x 0,5 mm	24 ml
900018822	☐45 x 0,5 mm	30 ml

Made to order

The maximum temperature, pressure and speed parameters specified in this document can not be combined.

Expanded graphite

LATTYGRAF BA

Expanded graphite autoclave ring

EASY TO REMOVE (NON-STICK), TIGHT SEALING ON UNEVEN SURFACES

- AUTOCLAVE RINGS WITH OR WITHOUT ANTI-EXTRUSION CUPS
- SUITABLE FOR LOW PRESSURES, THEY RESPECT THE VALVE BODY.

- LOW TIGHTENING REQUIRED FOR OPTIMUM SEALING EFFICIENCY

OPERATING PARAMETERS
(NOT ASSOCIATED)

Pressure : 0 to 250 bar
Temperature : 0 °C to 600°C

COMPOSITION

Compressed sealing rings made from various grades of expanded graphite with or without anti-extrusion stainless steel cups. Easy to remove (non-stick), LATTYgraf BA autoclave rings seal tight on uneven surfaces. Suitable for low pressures, they respect the valve body. Various profiles. Available in diameters from 60 mm (NP 250 bar) to 1,000 mm (NP 160 bar)

TYPES OF INDUSTRIES

FLUIDS

Water, steam, gases, hydrocarbons.

Made to order

The maximum temperature, pressure and speed parameters specified in this document can not be combined.

Graphite

LATTYGRAF REFLEX

High-performance, high-temperature, high-pressure graphite gasket: LATTYgraf REFLEX for static sealing

LATTY-PATENTED COMPOSITE GASKET WITH COMPRESSION LIMITERS

- **NUCLEAR OR DIFFICULT INDUSTRIAL APPLICATIONS** (600° / 500 BAR)
- **FOR PRESSURE EQUIPMENT AND BOLTED FLANGES**

OPERATING PARAMETERS
(NOT ASSOCIATED)

Pressure : 0 to 500 bar
Temperature : -200 °C to 600°C
pH : 0 - 14

COMPOSITION

Patented composite gasket consisting of a massive expanded graphite sealing ring, die-formed in place, between two stainless steel rings used as compression limiters. The main feature of this gasket lies in the metal-to-metal contact. During operation, the compression limiter ring protects the gasket by absorbing all mechanical stresses from the pipework, thermal shocks, etc. LATTYgraf REFLEX is warranted to seal under extreme and variable pressure and temperature conditions. Outstanding elastic recovery.

TYPES OF INDUSTRIES

FLUIDS

All types of fluids

GUIDELINES, STANDARDS AND APPROVALS

PWUC

Made to order

The maximum temperature, pressure and speed parameters specified in this document can not be combined.

Graphite

LATTYGRAF S

Gasket specially designed for triple offset butterfly valve

GASKET SPECIALLY DESIGNED FOR TRIPLE OFFSET BUTTERFLY VALVE

- AVAILABLE IN TWO VERSIONS: GASKET ON GATE OR IN VALVE BODY
- REDUCED FRICTION COEFFICIENT

OPERATING PARAMETERS
(NOT ASSOCIATED)

Temperature : -200 °C 450°C

COMPOSITION

Multilayer gate gasket made of compressed graphite and metal. Its high elastic recovery provides perfect sealing, optimum reliability and reduced maintenance. The gasket LATTYgraf S meets the requirements of the harshest applications.

TYPES OF INDUSTRIES

FLUIDS

Cryonegics, gas, liquid or steam

Made to order

The maximum temperature, pressure and speed parameters specified in this document can not be combined.

Graphite

GRAPHITE RINGS

Expanded graphite rings

EXPANDED GRAPHITE RINGS, DEDICATED TO INDUSTRIAL VALVES AND FITTINGS

- LOW TIGHTENING REQUIRED FOR OPTIMUM SEALING EFFICIENCY
- EASY ASSEMBLY AND DISASSEMBLY OPERATIONS
- IMPROVED RELIABILITY. PREVENTS EQUIPMENT CORROSION

OPERATING PARAMETERS
(NOT ASSOCIATED)

Pressure : 0 to 1000 bar
Temperature : -200 °C to 650°C

COMPOSITION

LATTY rings are made of high-purity expanded graphite without binder. Their temperature resistance may reach 650°C. The rings provide both high chemical inertness and high thermal conductivity. They contain a corrosion inhibitor which protects the equipment. This passive inhibitor builds up a protective coating between the valve components and the graphite rings, thus preventing the contact between the two electricity-generating materials and the resulting corrosion. This inhibitor provides durable protection for your equipment

TYPES OF INDUSTRIES

GUIDELINES, STANDARDS AND APPROVALS

Made to order

The maximum temperature, pressure and speed parameters specified in this document can not be combined.

Graphite

LATTYFLEX

Spiral wound stainless steel and graphite gasket for static sealing

SEALING UNDER EXTREME OPERATING CONDITIONS

- HIGH COMPENSATION OF STRESSES, SEALING EFFICIENT, INCLUDING UNDER FREQUENT PRESSURE VARIATIONS.
- ROBUST CONSTRUCTION WHICH GUARANTEES SEALING STABILITY AND CAPACITY

OPERATING PARAMETERS
(NOT ASSOCIATED)

Pressure : 0 to 350 bar
Temperature : -200 °C to 1000°C
pH : 0 - 14

COMPOSITION

Spiral wound gaskets are special semi-metallic gaskets of great resilience. They are perfectly suitable for applications featuring extreme operating conditions.

TYPES OF INDUSTRIES

FLUIDS

Water, steam, gases, hydrocarbons.

GUIDELINES, STANDARDS AND APPROVALS

** Made to order*

The maximum temperature, pressure and speed parameters specified in this document can not be combined.

Mineral packing

LATTY HEPHAISTOS 2000 G

insulating bolster up to 850°C

EXPANSION JOINT, HIGH-TEMPERATURE APPLICATIONS AND INSULATION

- HIGH THERMAL INSULATION CAPACITY
- GOOD SOUND INSULATION PROPERTIES

OPERATING PARAMETERS
(NOT ASSOCIATED)

Temperature : 0 °C 850°C
pH : 2 - 13

COMPOSITION

Flexible sleeve braided with glass fibres, treated for high-temperature resistance, reinforced with nickel-chrome alloy yarns, around a core containing high-temperature corded glass fibres and natural fibres. Outstanding thermal insulation capacity, high resistance to thermal shocks, good sound insulation properties.

TYPES OF INDUSTRIES

FLUIDS

High-temperature sealing

Item	Dimensions	Description
61167	Ø 5 mm	350 m
61168	Ø 6 mm	250 m
61169	Ø 8 mm	200 m
61170	Ø 10 mm	200 m
61171	Ø 12 mm	125 m
61172	Ø 15 mm	75 m
61173	Ø 20 mm	50 m
61174	Ø 25 mm	40 m
61166	Ø 30 mm	25 m
61175	Ø 50 mm	15 m

Mineral packing

LATTY HEPHAISTOS 2000 T

very high fire resistance

HIGH-TEMPERATURE APPLICATIONS

- FOR OVEN DOORS, BOILERS, BURNERS, ETC.
- VARIOUS INSULATIONS

OPERATING PARAMETERS
(NOT ASSOCIATED)

Pressure : 0 to < 100 bar
Temperature : 0 °C to 850°C
pH : 2 - 13

COMPOSITION

Braided packing made of high-temperature treated glass fibres reinforced with nickel-chrome wires and impregnated with a mica-based mix.

TYPES OF INDUSTRIES

FLUIDS

High-temperature sealing

Item	Dimensions	Description
60589	□ 6 mm	20 m
60590	□ 8 mm	15 m
60591	□ 10 mm	12 m
60592	□ 12 mm	11 m
60593*	□ 12,7 mm	11 m
60594	□ 14 mm	10 m
60595	□ 16 mm	10 m
60596	□ 20 mm	10 m

** Made to order*

The maximum temperature, pressure and speed parameters specified in this document can not be combined.

Graphite

LATTYPACK 960

Gasket for industrial boilers: LATTYPACK 960, choosing safety for static sealing

ELLIPTICALLY SHAPED MOLDED GASKET

- SPECIALLY DESIGNED FOR INDUSTRIAL BOILERS (48 BAR/ 250°C)
- OUTSTANDING BEHAVIOUR IN THE PRESENCE OF WATER AND STEAM

OPERATING PARAMETERS
(NOT ASSOCIATED)

Pressure : 0 to 80 bar
Temperature : 0 °C to 350°C

COMPOSITION

Molded, graphite-impregnated gasket for boilers consisting of a mix of synthetic fibres coated with expanded graphite yarns reinforced with nickel-chrome. Good elastic recovery, very low relaxation. Can be used up to 250° C./48 bar in appropriate environment and with suitable tightening means.

TYPES OF INDUSTRIES

FLUIDS

Outstanding behaviour in the presence of water and steam (absence of hydrolysis).

Item	Dimensions	Description
47465	100 x 150 x 15 x 6 mm	5 Seals per package
47467	220 x 320 x 25 x 8 mm	2 Seals per package
47468	280 x 380 x 25 x 8 mm	2 Seals per package
47471	300 x 400 x 25 x 8 mm	2 Seals per package
47473	300 x 400 x 30 x 10 mm	2 Seals per package
47472	300 x 400 x 30 x 8 mm	2 Seals per package
47474	300 x 400 x 35 x 8 mm	2 Seals per package
47475	305 x 405 x 25 x 8 mm	2 Seals per package
47476	305 x 405 x 30 x 8 mm	2 Seals per package
47477	320 x 420 x 25 x 8 mm	2 Seals per package

The maximum temperature, pressure and speed parameters specified in this document can not be combined.

TOOLS FOR MAINTENANCE

CUTTING TOOLS BOXES (see page 216)

The significant number of punches covers a wide range of possibilities for the cutting of circular gaskets from 3 to 50 mm (in increments of 2 mm from 4 mm upwards).

The box includes:
- 1 PUNCH HOLDER
- 25 PUNCHES

216

TRAINING

TRAINING (see page 202)

AIM: Understand the different leak occurrences in:

Sealing bolted assemblies: cut gaskets, compressed expanded graphite gaskets, for static sealing in the metal sheet or pipework industry.

206

ADVANTAGES

- UNDERSTAND THE DIFFERENT LEAK OCCURRENCES.
- ESTABLISH TECHNICAL SPECIFICATIONS WHICH ALLOW US TO RECOMMEND A SEALING SYSTEM
- CHOOSE A SEALING METHOD ACCORDING TO OPERATING CONDITIONS.
- ACQUIRE THE GOOD PRACTICES IN SEAL ASSEMBLY AND MAINTENANCE ON OUR INSTRUMENTED BENCHES
- TRAINING AT OUR PRODUCTION SITE, WITH A VISIT OF THE FACILITIES
- POSSIBLE ON-SITE TRAINING

SEALING SOLUTIONS DEDICATED TO INDUSTRIAL VALVES

Since it's foundation, GROUPE LATTY has been recognised for the quality and performance of its ranges of sealing packings and rings. With among others our FILCOAT® process, patented by LATTY, we ensure performance and reliability.

Our research for the development of fibres and lubricants allows us to offer a range that includes about fifty different grades of sealing efficiency in the most demanding of applications. The packings and sealing rings, which meet the highest safety criteria, include over 70 types of impregnation and 120 varieties of yarns (aramid, PTFE, graphite, carbon, etc.), are intended for use in industrial valves and fittings such as in globe valves, ball valves, gate valves, butterfly valves, etc.

We have developed in specific products that meet the requirements of the valve industry and designed sealing solutions for:

- Complete solutions suitable for each type of valve
- Ranges of standard or specific products
- Research & testing laboratory
- Achieving approval of your valves
- Training adapted to your needs
- A French product, guarantee of quality

Our test and measurement laboratory covering an area of over 500 sq. m. and specialising in valves and fittings, allows us to test sealing solutions on your own equipment under optimum conditions, i.e.:

Temperature: - 196°C to
Pressure: vacuum to 650 bar for gas applications or 0 to 700 bar for liquid applications.

This equipment comply with existing regulations relative to fugitive emissions, fire and oxygen tests..

To date, we have performed over 100 approvals, with validation by certified bodies, on equipment such as:

- control valves
- on/off valves
- valves in dimensions 1'' to 10'' and in pressure classes ranging from 150 to 2,500 lbs

TYPES OF INDUSTRIES

Food processing
Chemicals
Fine chemicals
Cosmetics
Drinking water
Gas
Hydraulic
Nuclear
Petrochemicals
Pharmaceuticals
Refineries
Thermal/gas-fired combined cycle power plants,

TRAINING

Our training modules are dedicated to the selection of sealing solutions on your industrial valves or fittings. The focus of our training modules is on the implementation and good practices in the assembly of stuffing boxes and static seals, a guarantee of security for your personnel and equipment reliability. Every year, we organise a number of multilingual training sessions at our production site or on the customer's premises. We are registered as a training organisation

APPROVALS & CERTIFICATIONS

689

Clean air act

15848-1*

VDI 2440

INDUSTRIAL VALVES

Rotary Pumps
Reciprocating Pumps
Insulation
Valves
Static Applications

Food industry / Mining industry / Oil and Gas / Water treatment / Pulp and paper
Energy production / Pharmaceutical Industry / All industries



** Regarding approval ISO 15848-1 (fugitive emissions), we provide sealing solutions up to Class A i.e. a leakage of 10-6 mg/s-1/m-1.*

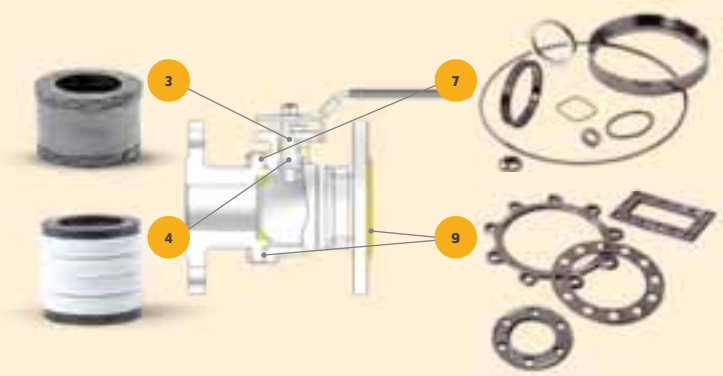
Sealing solution

A UNIQUE SOLUTION FOR EACH VALVE

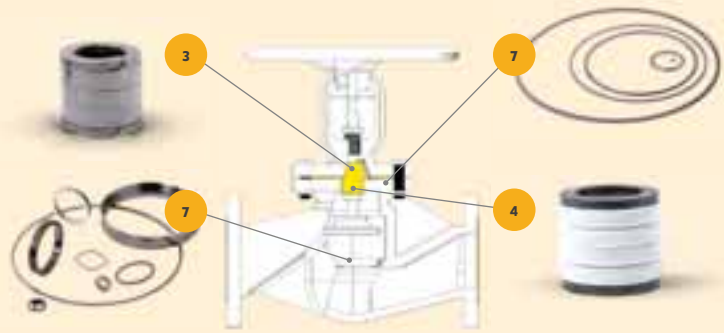
We have developed in particular products that meet the requirements for the valve industry and designed sealing solutions for:

- stuffing boxes
- flange gaskets
- seat gaskets
- valve body/bonnet gaskets
- fire safety seals
- butterfly valve seals

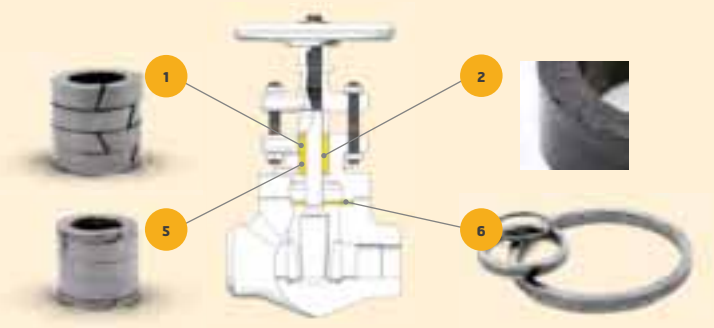
BALL VALVE



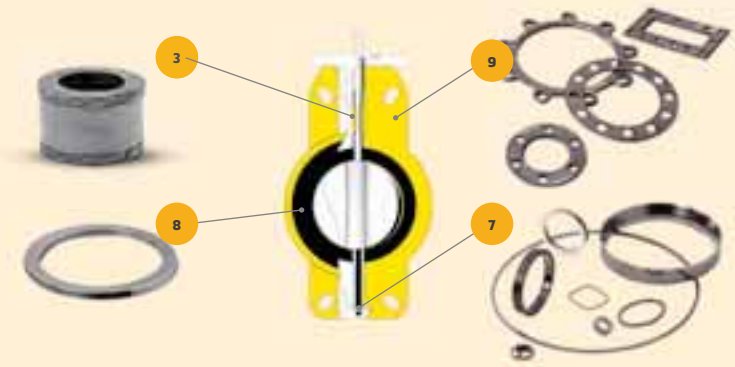
GLOBE VALVE



GATE VALVE



BUTTERFLY VALVE



1 Closed or split rings

Expanded graphite rings, with corrosion inhibitor. They may be subjected to pressures from vacuum to 1,000 bar and temperatures from -200°C to +650°C

2 Bi-components rings

Rings consisting of an expanded graphite ring with compressed braided rings at both ends. Provide perfect sealing efficiency up to 1,000 bar

3 LATTYpack Valve

Packing consisting of compressed expanded graphite rings and compressed anti-extrusion rings. Contains a corrosion inhibitor. Withstands very significant temperature or pressure variations (450°C/450 bar)

4 LATTYpack Control

Packing consisting of compressed PTFE/carbon or expanded graphite rings and compressed anti-extrusion rings Intended primarily for control valves. Provides outstanding sealing efficiency under low clamping force. Very low friction coefficient and very good elastic recovery

5 LATTYpack Oil

Packing consisting of of expanded graphite rings and compressed anti-extrusion rings. Contains a corrosion inhibitor. Withstands very significant temperature or pressure variations (450°C/450 bar)

6 LATTYgraf BA

Compressed expanded graphite rings with or without stainless steel cups (anti-extrusion). Suitable for high pressures. Dimensions to suit the configuration of the valve body: conical or cylindrical profile. Diameters from 60 mm (NP 250 bar) to 1,000 mm (NP 160 bar).

7 Expanded graphite rings

Forms and dimensions adapted to your needs for your static sealing applications: valve bodies/bonnets, flanges, etc. Tailor-made from 2 to 900 mm. Use even on damaged or deformed flanges

8 LATTYgraf S

Gasket specially designed to seal triple-offset valves. Consists of high-purity graphite sheet material and steel reinforcement. Withstands very significant termperature variations (- 200°C / + 450°C)

9 LATTYgraf EFMC@

Multi-layer expanded graphite sheet. Easy-to-cut designe. Used in high-pressure, high-temperature applications.

COMPRESSED, PREFORMEED, ANTI-EXTRUSION RINGS

Packings consist of several preformed rings with a fully controlled height under load, used in valve stuffing boxes. Compressed rings and packings or preformed rings offer the following advantages:

- Optimisation of the number of rings
- A reduction up to 30% of the friction, as a result of the presence of an agent that has been specifically developed by LATTY
- Reduced maintenance costs
- Quick implementation and replacement of the stuffing box, time-saving for maintenance teams and reduced production downtime
- Reduced production downtime
- Extension of the lifetime of your equipment
- Multi-purpose which makes it suitable for use in a wide variety of areas

ANTI-EXTRUSION RINGS

Anti-extrusion rings are mainly used for valve applications. These rings located at the top and bottom of the stuffing box provide protection for the rings in the middle of the stuffing box that provide the sealing function. Not only do these anti-extrusion rings have a protective function, they reduce the friction coefficient, sometimes up to 30%, during valve operation. These mixed assemblies largely contribute to the reduction of fugitive emissions. For this purpose, LATTY products benefit from several approvals up ISO 15848-1, API 622, 624 or 641.

SOLUTIONS FOR THE FOOD-PROCESSING INDUSTRY

For many years, LATTY has been devoting a part of its Research & Development to improve sealing solutions that meet the requirements of the industrial valve industry in the FOOD sector such as:

- Compliance with applicable standards and directives
- Compatibility between our sealing solutions and the fluid to be sealed, even in the event of accidental contacts
- Rationalisation of the sealing solutions
- PTFE-based products dedicated to any chemically aggressive environment (strong acids and bases)
- Packing for stuffing box, consisting of compressed rings and anti-extrusion rings which provide outstanding sealing efficiency under low clamping force, a very low friction coefficient and very good elastic recovery

EQUIPMENT

Control valves
On/off valves

TYPES OF INDUSTRIES

Food processing
Fine chemicals
Cosmetics
Drinking water
Pharmaceuticals

APPROVALS & CERTIFICATIONS

KTW , DVGW



LATTYpack VALVE

For on/off valves. Compressed expanded graphite rings and compressed anti-extrusion rings with corrosion inhibitor (450°C / 450 bar).

LATTYflon 3206 SO

Packing made of 100% PTFE silk yarns, impregnated with PTFE, then treated to ensure perfect oxygen compatibility.
Approvals: BAM, EC 1935/2004 (on request), FDA.

LATTYflon 94 L

Modified filled PTFE gasket. Its isotropic structure provides high resistance to creep and its elastic recovery guarantees high sealing performance.
Approvals: BAM, FDA, EC 1935/200 (on request).

LATTYgold 92

Gasket material made of synthetic fibres bonded together with a mix of NBR-SBR elastomers, compressed to obtain sheet material.
Approvals: BAM, DVGW, KTW, WRAS.

LATTYgraf EFA

Gasket material made of 98% pure expanded graphite material laminated and clamped over a tanged ISO 1.4404 stainless steel insert.
Approvals: BAM and WRAS.

SOLUTIONS FOR ENERGY PRODUCTION

For many years, we have been devoting a part of our Research & Development to improve sealing solutions that meet the requirements of the industrial valve industry in the ENERGY PRODUCTION sector for:

- Optimum operating safety of the high-performance installation to optimise opening/closing time of motor valves as a result of reduced friction.
- Reduction in the stem operation torque required to operate the valve
- Healthier environment resulting from more reliable sealing with reduced leakages (fugitive emissions)
- Rationalisation of the sealing solutions
- Packings for stuffing box, consisting of compressed rings and anti-extrusion rings which provide outstanding sealing efficiency under low clamping force, a very low friction coefficient and very good elastic recovery

INDUSTRIES

Nuclear
Thermal/gas-fired combined cycle power plants
Hydraulic

APPROVALS & CERTIFICATIONS

PMUC

LATTYpack CONTROL NUC

For control valves. Packings consisting of PTFE/carbon rings and compressed anti-extrusion rings containing a corrosion inhibitor that withstands very temperature or pressure variations (450°C/450 bar).
Approvals: PMUC

LATTYpack VALVE NUC

For on/off valves. Packings consisting of compressed expanded graphite rings and compressed anti-extrusion rings with corrosion inhibitor (450°C / 450 bar).
Approvals: PMUC

LATTYgraf Reflex

Graphite/metal gasket consisting of an active, expanded graphite part and 2 metal rings precision-machined used as compression limiters.
Approvals: PMUC

LATTY FLEX

Semi-metallic spiral wound gasket particularly suitable for any applications subjected to extreme operating conditions

Autoclave rings

Compressed expanded graphite rings with or without stainless steel cups (anti-extrusion). Diameters from 60 mm (NP 250 bars) to 1,000 mm (NP 160 bar).
Approvals: PMUC

LATTYgraf EBST

High-purity expanded graphite without binder. Resistant up to 3,000°C (in inert atmosphere). Very low friction coefficient, very high self-lubricating capability, good chemical resistance and high thermal conductivity.
Approvals: PMUC

SOLUTIONS FOR THE OIL AND GAS INDUSTRY

For many years, LATTY has been devoting a part of its Research & Development to improve sealing solutions that meet the requirements of the industrial valve industry in the OIL and GAS sector by means of:

- Reliable sealing solutions to guarantee a better environment and a reduction of product losses
- Products in compliance with standards relative to FUGITIVE EMISSIONS
- Increased safety of personnel (unit operators and maintenance personnel) resulting from reduced hazardous emissions
- Easier maintenance resulting from the use of preformed rings and of packings
- Reduced maintenance costs and production downtime resulting from the rationalisation of sealing solutions
- Development of packings for stuffing box, consisting of compressed rings and anti-extrusion rings which provide outstanding sealing efficiency under low clamping force, a very low friction coefficient and very good elastic recovery

INDUSTRIES

Chemicals
Gas
Petrochemicals
Refinery

APPROVALS & CERTIFICATIONS

TOTAL
589, 622, 624, 641
BAM ISO 15848 – 1
CLEAN AIR ACT
VDI 2440

FUGITIVE EMISSIONS

Over 100 valves in dimensions 1'' to 10'' and pressure classes 150 to 2500 lbs have been approved up to ISO 15848-1 (helium test) **or API 622, 624 and 641** (methane test).

CRYOGENICS

Cryogenic tests up to -196°C are performed on our test benches for ISO 15848-1 approvals. There are numerous applications, in particular in the area of liquefied natural gas (LNG).

OXYGEN

The use of BAM-approved products is required in order to make the equipment used on potentially hazardous circuits safe in the event of autoignition or mechanical and thermal shocks.

LATTYpack OIL

Compressed expanded graphite rings and compressed anti-extrusion rings containing a corrosion inhibitor that withstands very significant temperature or pressure variations (450°C/450 bar). Certification ISO 15848-1 and API 622,624, 589.

LATTYpack VALVE

Graphite rings for on/off valves. Packing consisting of compressed expanded graphite rings and compressed anti-extrusion rings. Contains a corrosion inhibitor. Withstands very significant temperature or pressure variations (450°C/450 bar)

LATTYgraf BA

Compressed expanded graphite rings with or without stainless steel cups (anti-extrusion). Diameters from 60 mm (NP 250 bar) to 1,000 mm (NP 160 bar).

LATTYgraf EFMC@

Multi-layer expanded graphite sheet. Used in high-pressure, high-temperature applications (650 bar/650°C)

LATTYgraf Graf S

Gasket specially designed for triple offset butterfly valves. Multilayer gasket made of compressed graphite and metal. High elastic recovery, optimum reliability and reduced maintenance. Meets the requirement of the harshest applications (- 200°C to + 450°C)

Graphite rings

Tailor-made from 2 to 900 mm. Forms and dimensions adapted to your needs for your static sealing applications: valve bodies/bonnets, flanges, etc. Use even on damaged or deformed flanges

Carbon graphite packing

LATTYGRAF 6118

Packing for valves and fittings > 250°C, medium and high-pressure steam

APPLICATIONS FOR VALVES AND FITTINGS > 250°C

- MEDIUM AND HIGH-PRESSURE STEAM
- CONTAINS A CORROSION INHIBITOR (EXCLUSIVE LATTY PROCESS)

OPERATING PARAMETERS
(NOT ASSOCIATED)

Pressure : 0 to 300 bar
Temperature : -200 °C to 600°C
Speed : < 1 m/s
pH : 0 - 14

COMPOSITION

Packing made of an exclusive LATTY yarn - high-strength carbon fibres and Inconel wires intimately mixed - and expanded graphite yarns, then impregnated and coated with a graphite-based mix. LATTYgraf 6118 contains a corrosion inhibitor.

TYPES OF INDUSTRIES

FLUIDS

All types of high-temperature fluids and steam

Item	Dimensions	Description
32092**	□ 3 mm	40 m / 0,58 Kg
32093**	□ 4 mm	30 m / 0,60 Kg
32094**	□ 5 mm	20 m / 0,68 Kg
32095**	□ 6 mm	20 m / 0,98 Kg
32096**	□ 6,35 mm	20 m / 1,08 Kg
25715	□ 8 mm	15 m / 1,26 Kg
25716	□ 9,5 mm	12 m / 1,51 Kg
25717	□ 10 mm	12 m / 1,62 Kg
27754	□ 11 mm	11 m / 1,80 Kg
25718	□ 12 mm	11 m / 2,02 Kg
25719	□ 12,7 mm	11 m / 2,20 Kg
25720	□ 14 mm	10 m / 2,55 Kg
25721	□ 16 mm	10 m / 3,10 Kg
25749	□ 19 mm	10 m / 4,40 Kg

**** Boxes of 20 to 40 m are packed in multiples of 10 m.***

The maximum temperature, pressure and speed parameters specified in this document can not be combined.

Carbon graphite packing

LATTYGRAF 6745 NG

The new generation of reduced-friction carbon packings for pumps and valves.

HIGH-TEMPERATURE PACKING UP TO 600°C

- CONTAINS AN INHIBITOR (EXCLUSIVE LATTY PROCESS) TO PROVIDE THE VALVE COMPONENTS GOOD PROTECTION.
- FOR ROTARY UNITS AND INDUSTRIAL VALVES AND FITTINGS

OPERATING PARAMETERS
(NOT ASSOCIATED)

Pressure : 0 to 300 bar
Temperature : 450 °C to 600°C
Speed : < 25 m/s
pH : 0 - 14

COMPOSITION

Packing made from continuous carbon yarns, each yarn being impregnated with PTFE using our patented filcoat process, then re-impregnated with a graphite-and-PTFE-based mix during braiding operation to ensure optimum performance of pumps and valves. LATTYgraf 6745 NG contains a corrosion inhibitor developed from an exclusive process to provide unlimited protection against corrosion of the stem, stuffing box housing and stuffing box over time.

TYPES OF INDUSTRIES

FLUIDS

All types of fluids: water, steam, gases, hydrocarbons

GUIDELINES, STANDARDS AND APPROVALS

Item	Dimensions	Description
900003923	□ 4 mm	35 m / 0,65 Kg
900003924	□ 5 mm	25 m / 0,70 Kg
900003925	□ 6 mm	20 m / 0,77 Kg
900004250	□ 6,35 mm	20 m / 0,87 Kg
900003926	□ 8 mm	15 m / 1,06 Kg
900003927	□ 9,5 mm	12 m / 1,20 Kg
900003928	□ 10 mm	12 m / 1,30 Kg
900004251	□ 11 mm	11 m / 1,44 Kg
900003929	□ 12 mm	11 m / 1,66 Kg
900003930	□ 12,7 mm	11 m / 1,81 Kg
900003931	□ 14 mm	10 m / 2,16 Kg
900003933	□ 16 mm	10 m / 2,76 Kg
900003934	□ 19 mm	10 m / 3,78 Kg
900003935	□ 20 mm	10 m / 4,27 Kg
900003936	□ 25,4 mm	10 m / 6,87 Kg

The maximum temperature, pressure and speed parameters specified in this document can not be combined.

Carbon graphite packing

LATTYGRAF 6940

The Performances of expanded graphite with the benefits of a packing.

FOR SEALING HIGH-TEMPERATURE STEAM AND AGGRESSIVE CHEMICALS

- APPLICATIONS FOR INDUSTRIAL VALVES AND FITTINGS
- ANTI-EXTRUSION PACKING

OPERATING PARAMETERS
(NOT ASSOCIATED)

Pressure : 0 to 400 bar
Temperature : -200 °C to 600°C
Speed : < 1 m/s
pH : 0 - 14

COMPOSITION

Packing made of expanded graphite yarns reinforced with Inconel wires and coated with a graphite-based mix. LATTYgraf 6940 contains a corrosion inhibitor to provide protection against corrosion of the stem and stuffing box housing. This special structure withstands high pressures and prevents any risks of graphite extrusion.

TYPES OF INDUSTRIES

FLUIDS

All types of high-temperature fluids and steam

GUIDELINES, STANDARDS AND APPROVALS

Item	Dimensions	Description
32117**	□ 3 mm	12 m / 0,220 Kg
32118**	□ 4 mm	12 m / 0,320 Kg
43825**	□ 5 mm	12 m / 0,520 Kg
32120**	□ 6 mm	12 m / 0,660 Kg
43859**	□ 6,35 mm	12 m / 0,730 Kg
47350**	□ 7 mm	12 m / 0,94 Kg
32122**	□ 8 mm	12 m / 1,15 Kg
32123	□ 9,5 mm	9 m / 1,22 Kg
32124	□ 10 mm	9 m / 1,30 Kg
43826	□ 11 mm	9 m / 1,53 Kg
32125	□ 12 mm	9 m / 1,88 Kg
32126	□ 12,7 mm	9 m / 1,98 Kg
32127	□ 14 mm	6 m / 1,56 Kg
32128	□ 16 mm	6 m / 1,90 Kg
43827	□ 18 mm	6 m / 2,25 Kg
43828	□ 19 mm	6 m / 2,64 Kg
43829	□ 20 mm	6 m / 2,86 Kg
43830	□ 22 mm	6 m / 3,4 Kg
43831	□ 25,4 mm	6 m / 4,63 Kg

Boxes containing of 12 m are made of 2 lengths of 6 m each.

The maximum temperature, pressure and speed parameters specified in this document can not be combined.

Carbon graphite packing

LATTYGRAF 6940 EF

Industrial valves and fittings: Packing to fight against fugitive emissions

ANTI-EXTRUSION PACKINGS

- REDUCED FRICTION
- FOR HIGH-PERFORMANCE AND HIGH-TEMPERATURE APPLICATIONS

OPERATING PARAMETERS
(NOT ASSOCIATED)

Pressure : 0 to 400 bar
Temperature : -200 °C to 600°C
Speed : < 1 m/s
pH : 0 - 14

COMPOSITION

Packing made of expanded graphite yarns reinforced with Inconel wires, coated with a graphite-based mix incorporating an agent to improve the friction coefficient. LATTYgraf 6940 EF contains a corrosion inhibitor to provide protection against corrosion of the stem and stuffing box housing. Heat transfer and all high-temperature fluids. Note: LATTYgraf 6940 EF is recommended as anti-extrusion rings when used in conjunction with: LATTYgraf 6960, LATTYgraf EF4 or LATTYflon 3260 LM.

TYPES OF INDUSTRIES

FLUIDS

All types of high-temperature fluids and steam

GUIDELINES, STANDARDS AND APPROVALS

Item	Dimensions	Description
58549**	☐ 4 mm	12 m / 0,340 Kg
62788**	☐ 5 mm	12 m / 0,550 Kg
58545**	☐ 6 mm	12 m / 0,690 Kg
62781**	☐ 6,3 mm	12 m / 0,770 Kg
58546**	☐ 8 mm	12 m / 1,210 Kg
62782	☐ 9,5 mm	9 m / 1,250 Kg
58547	☐ 10 mm	9 m / 1,330 Kg
62787	☐ 11 mm	9 m / 1,550 Kg
62783	☐ 12 mm	9 m / 1,920 Kg
62784	☐ 12,7 mm	9 m / 2,020 Kg
62785	☐ 14 mm	6 m / 1,590 Kg
62786	☐ 16 mm	6 m / 1,980 Kg
71947	☐ 18 mm	6 m / 2,48 Kg

***Boxes containing of 12 m are made of 2 lengths of 6 m each*

The maximum temperature, pressure and speed parameters specified in this document can not be combined.

Carbon graphite packing

LATTYGRAF 6960

Industrial valves and fittings: high-performance expanded graphite packing

PACKING FOR INDUSTRIAL VALVES AND FITTINGS

- CONTAINS A CORROSION INHIBITOR (EXCLUSIVE LATTY PROCESS)

OPERATING PARAMETERS
(NOT ASSOCIATED)

Pressure : 0 to 300 bar
Temperature : -200 °C to 450°C
Speed : < 12 m/s
pH : 0 - 14

COMPOSITION

Packing made of industrial-quality expanded graphite yarns, coated with a graphite mix. LATTYgraf 6960 contains a corrosion inhibitor to provide protection against corrosion of the stem and stuffing box housing.

TYPES OF INDUSTRIES

FLUIDS

All types of non-abrasive high-temperature fluids and steam

Item	Dimensions	Description
50647**	□ 4 mm	12 m / 0,22 Kg
50648**	□ 5 mm	12 m / 0,31 Kg
50651**	□ 6 mm	12 m / 0,44 Kg
50652**	□ 6,35 mm	12 m / 0,49 Kg
50653**	□ 8 mm	12 m / 0,80 Kg
50654	□ 9,5 mm	9 m / 0,83 Kg
50655	□ 10 mm	9 m / 0,94 Kg
50656	□ 11 mm	9 m / 1,12 Kg
50689	□ 12 mm	9 m / 1,36 Kg
50657	□ 12,7 mm	9 m / 1,49 Kg
50658	□ 14 mm	6 m / 1,26 Kg
51187	□ 15 mm	6 m / 1,36 Kg
50659	□ 16 mm	6 m / 1,4 Kg
50660	□ 18 mm	6 m / 1,74 Kg

**** Boxes containing of 12 m are made of 2 lengths of 6 m each***

The maximum temperature, pressure and speed parameters specified in this document can not be combined.

Carbon graphite packing

LATTYGRAF 6988 EF

Carbon graphite packing for use with industrial valves and fittings up to 600°C, medium and high-pressure steam

CARBON PACKING WITH REDUCED FRICTIONS

- VERY GOOD RESISTANCE AT TEMPERATURES UP TO 600°C (NON-OXIDISING ENVIRONMENT)
- VERY GOOD CHEMICAL RESISTANCE

OPERATING PARAMETERS
(NOT ASSOCIATED)

Pressure :0 to 400 bar
Temperature : -200 °C to 600°C
Speed : < 1 m/s
pH : 0 - 14

COMPOSITION

Packing made of an exclusive LATTY yarn - high-strength carbon intimately mixed - and expanded graphite yarns, impregnated and coated with a graphite-based mix. LATTYgraf 6988 EF contains an inhibitor developed from an exclusive process to provide unlimited protection of the stem, stuffing box housing and stuffing box from corrosion over time.

TYPES OF INDUSTRIES

FLUIDS

All types of high-temperature fluids and steam

GUIDELINES, STANDARDS AND APPROVALS

Item	Dimensions	Description
900003943	☐ 3 mm	40 m / 0,58 Kg
900003944	☐ 4 mm	30 m / 0,60 Kg
900003945	☐ 5 mm	20 m / 0,68 Kg
900003946	☐ 6 mm	20 m / 0,98 Kg
900003947	☐ 6,35 mm	20 m / 1,08 Kg
900003948	☐ 8 mm	15 m / 1,26 Kg
900003949	☐ 9,5 mm	12 m / 1,51 Kg
900003950	☐ 10 mm	12 m / 1,62 Kg
900003951	☐ 11 mm	11 m / 1,80 Kg
900003952	☐ 12 mm	11 m / 2,02 Kg
900003953	☐ 12,7 mm	11 m / 2,20 Kg
900003954	☐ 14 mm	10 m / 2,55 Kg
900003955	☐ 16 mm	10 m / 3,10 Kg

The maximum temperature, pressure and speed parameters specified in this document can not be combined.

Carbon graphite packing

LATTYGRAF 6995 NG

Industrial valves and fittings: New generation of carbon-graphite packing to fight fugitive emissions

EXTREMELY RESISTANT TO VERY HIGH PRESSURES

- SPECIALLY DESIGNED TO MEET THE SPECIFIC REQUIREMENTS OF INDUSTRIAL VALVES AND FITTINGS
- VERY HIGH-PERFORMANCE, LOW-FRICTION, VERY-PURE EXPANDED GRAPHITE PACKING, WITH REDUCED FRICTION.
- CONTAINS A CORROSION INHIBITOR (EXCLUSIVE LATTY PROCESS) TO PROVIDE THE VALVE COMPONENTS DURABLE PROTECTION.

OPERATING PARAMETERS
(NOT ASSOCIATED)

Pressure : 0 to 400 bar
Temperature : -200 °C to 600°C
Speed : < 1 m/s
pH : 0 - 14

COMPOSITION

Packing made from high-purity expanded graphite yarns (>99.5%) coated with Inconel wires, impregnated with a high-purity graphite mix (>99.5%) and incorporating an additional agent to improve the friction coefficient. LATTYgraf 6995 NG contains a corrosion inhibitor developed from an exclusive process to provide unlimited protection against corrosion of the stem, stuffing box housing and stuffing box over time. Note: LATTYgraf 6995 NG is recommended as anti-extrusion rings when used in conjunction with LATTYgraf EF NG or LATTYflon 3265 LM:

TYPES OF INDUSTRIES

FLUIDS

All types of fluids: water, steam, gases, hydrocarbons

GUIDELINES, STANDARDS AND APPROVALS

Item	Dimensions	Description
900003965	□ 4 mm	12 m / 0,34 Kg
900003966	□ 5 mm	12 m / 0,55 Kg
900003967	□ 6 mm	12 m / 0,69 Kg
900003968	□ 6,35 mm	12 m / 0,77 Kg
900003969	□ 8 mm	12 m / 1,21 Kg
900003970	□ 9,5 mm	9 m / 1,25 Kg
900003971	□ 10 mm	9 m / 1,33 Kg
900003972	□ 11 mm	9 m / 1,55 Kg
900003973	□ 12 mm	9 m / 1,92 Kg
900003974	□ 12,7 mm	9 m / 2,02 Kg
900003975	□ 14 mm	6 m / 1,59 Kg
900003976	□ 16 mm	6 m / 1,98 Kg
900003977	□ 18 mm	6 m / 2,48 Kg

The maximum temperature, pressure and speed parameters specified in this document can not be combined.

Graphite

LATTYGRAF 8945 BS

Anti-extrusion rings for valves and fittings

EXPANDED GRAPHITE ANTI-EXTRUSION RINGS (BOTTOM AND TOP RINGS)

- LOW FRICTION
- CONTAINS A CORROSION INHIBITOR

OPERATING PARAMETERS
(NOT ASSOCIATED)

Pressure : 0 to 400 bar
Temperature : -200 °C to 650°C
pH : 0 - 14

COMPOSITION

Packing made of pure expanded graphite and Inconel. Contains a corrosion inhibitor. The materials used and the manufacturing process guarantee very low halogen and sulphur contents. The braiding structure makes this packing suitable for use as bottom and top rings (anti-extrusion)

TYPES OF INDUSTRIES

FLUIDS

All types of fluids: water, steam, gases, hydrocarbons

GUIDELINES, STANDARDS AND APPROVALS

Item	Dimensions	Description
900018810	□3,5 x 3,5 mm	4 x 10 m
900018811	□4 x 4 mm	4 x 10 m
900018812	□5 x 4 mm	4 x 10 m
900018813	□6 x 4 mm	4 x 10 m
900018814	□7 x 5 mm	2 x 10 m
900018815	□8 x 5 mm	2 x 10 m
900018816	□10 x 5 mm	2 x 10 m
900018817	□11 x 7 mm	10 m
900018818	□12 x 7 mm	10 m
900018819	□14 x 7 mm	10 m
900018820	□16 x 10 mm	10 m

Made to order

The maximum temperature, pressure and speed parameters specified in this document can not be combined.

Expanded graphite packing rings

LATTYGRAF EF NG

New generation of pure graphite with reduced friction, for industrial valves and fittings

99,5%-PURE GRAPHITE RINGS. GUARANTEED REDUCTION OF FRICTION FORCES!

- VERY GOOD RESISTANCE IN THE EVENT OF DRASTIC VARIATIONS IN TEMPERATURES OR PRESSURES
- REDUCED EFFORT FOR STEM OPERATION

OPERATING PARAMETERS
(NOT ASSOCIATED)

Pressure :0 to 2000 bar
Temperature : -200 °C to 600°C
pH : 0 - 14

COMPOSITION

These new 99.5%-graphite rings have been developed by LATTY's R€D department to primarily meet the needs of petroleum industries. Also containing LATTY's exclusive corrosion inhibitor, these rings have been designed to improve friction coefficients.

TYPES OF INDUSTRIES

FLUIDS

All types of fluids: water, steam, gases, hydrocarbons

GUIDELINES, STANDARDS AND APPROVALS

Made to order

The maximum temperature, pressure and speed parameters specified in this document can not be combined.

Expanded graphite tape or ring

LATTYGRAF E1

High-purity expanded graphite compressed rings or tape for industrial valves and fittings

HIGH-PURITY EXPANDED GRAPHITE COMPRESSED RINGS OR TAPE

- CONTAINS A CORROSION INHIBITOR (EXCLUSIVE LATTY PROCESS)
- SUITABLE FOR VALVES AND FITTINGS

OPERATING PARAMETERS
(NOT ASSOCIATED)

Pressure : 0 to 600 bar
Temperature : 0 °C to 600°C

COMPOSITION

High-purity expanded graphite without binder. Resistant up to 3,000°C (in inert atmosphere). Compressed sealing rings made of 99.85% pure expanded graphite, without binder. The rings contain a finely dispersed metallic inhibitor (zinc) for stem and stuffing box corrosion protection. Very low friction coefficient, very high self-lubricating capability, good chemical resistance and high thermal conductivity.

TYPES OF INDUSTRIES

FLUIDS

All types of high-temperature fluids and steam

Item	Dimensions	Description
05156212	12,5 mm	20 m
05156225	25,0 mm	20 m

Expanded graphite tape or ring

LATTYGRAF E

High-purity expanded graphite compressed rings or tape for industrial valves and fittings

HIGH-PURITY EXPANDED GRAPHITE COMPRESSED RINGS OR TAPE

- SUITABLE FOR VALVES AND FITTINGS
- VERY LOW FRICTION COEFFICIENT

OPERATING PARAMETERS
(NOT ASSOCIATED)

Pressure : 0 to 600 bar
Temperature : 0 °C to 600°C

COMPOSITION

High-purity expanded graphite without binder. Resistant up to 3,000°C (in inert atmosphere). Compressed sealing rings made of 99.85% pure expanded graphite, without binder or additives. Very low friction coefficient, very high self-lubricating capability, good chemical resistance and high thermal conductivity.

TYPES OF INDUSTRIES

FLUIDS

All types of high-temperature fluids and steam

GUIDELINES, STANDARDS AND APPROVALS

Item	Dimensions	Description
05106212*	12,5 mm	20 m
05106225*	25,0 mm	20 m

Made to order

The maximum temperature, pressure and speed parameters specified in this document can not be combined.

SERVICES

GASKET MANUFACTURERS: A KNOW-HOW (See page 206)

SERVICE CHARACTERISTICS: CUTTING AND DISTRIBUTION OF GASKETS IN ANY MATERIAL AND SHAPE.

Every gasket manufacturer has the required production tools:

- **cutting tables**
- **manual or automatic presses**
- **high-performance numerical tools**

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TOOLS FOR MAINTENANCE

CUTTING TOOLS BOXES (See page 216)

The significant number of punches covers a wide range of possibilities for the cutting of circular gaskets from 3 to 50 mm (in increments of 2 mm from 4 mm upwards).

THE BOX INCLUDES:

- 1 PUNCH HOLDER
- 25 PUNCHES

216

PTFE packing

LATTYFLON 3206 SO

Oxygen-compatible packing

PRODUCTS DEDICATED TO OXYGEN-TYPE APPLICATIONS.

- VERY LOW FRICTION COEFFICIENT
- PERFECT CHEMICAL INERTNESS

OPERATING PARAMETERS
(NOT ASSOCIATED)

Pressure : 0 to 300 bar
Temperature : -200 °C to 300°C
Speed : < 5 m/s
pH : 0 - 14

COMPOSITION

Packing made of 100% PTFE silk yarns, each single yarn being impregnated with PTFE, then treated to ensure perfect oxygen compatibility.

TYPES OF INDUSTRIES

FLUIDS

All types of fluids, except abrasive fluids

GUIDELINES, STANDARDS AND APPROVALS

Item	Dimensions	Description
31449	□ 5 mm	25 m / 0,95 Kg
31353	□ 6 mm	20 m / 1,06 Kg
31414	□ 8 mm	15 m / 1,45 Kg
33275	□ 10 mm	12 m / 1,72 Kg
33276	□ 12 mm	11 m / 2,30 Kg
33277	□ 14 mm	10 m / 3,00 Kg
31584	□ 16 mm	10 m / 4,00 Kg
30484*	□ 18 mm	10 m / 5,00 Kg
30568	□ 19 mm	10 m / 5,10 Kg
31667	□ 20 mm	10 m / 5,60 Kg

Made to order

The maximum temperature, pressure and speed parameters specified in this document can not be combined.

PTFE packing

LATTYFLON 3206 S

Chemically inert packing for static applications

CHEMICAL INERTNESS OF PTFE IN STATIC APPLICATION.

- VERY LOW FRICTION COEFFICIENT
- EASY STEM OPERATION
- DRY PACKING

OPERATING PARAMETERS
(NOT ASSOCIATED)

Pressure : 0 to 300 bar
Temperature : -200 °C to 300°C
Speed : < 5 m/s
pH : 0 - 14

COMPOSITION

Packing made of 100% PTFE silk yarns, dry packing.

TYPES OF INDUSTRIES

FLUIDS

Chemically aggressive fluids

Item	Dimensions	Description
00100250	□ 4 mm	35 m / 1,02 Kg
00100251	□ 5 mm	25 m / 1,04 Kg
00100252	□ 6 mm	20 m / 1,21 Kg
00101104*	□ 6,35 mm	20 m / 1,36 Kg
00100254	□ 8 mm	15 m / 1,55 Kg
00100255	□ 9,5 mm	12 m / 1,74 Kg
00100256	□ 10 mm	12 m / 1,94 Kg
00100258	□ 12 mm	11 m / 2,51 Kg
00100259	□ 12,7 mm	11 m / 2,80 Kg
00100260	□ 14 mm	10 m / 3,20 Kg
00100262	□ 16 mm	10 m / 4,32 Kg
00100702	□ 20 mm	10 m / 6,59 Kg
00100703*	□ 22 mm	10 m / 7,8 Kg
00100704*	□ 25,4 mm	10 m / 10 Kg

Made to order

The maximum temperature, pressure and speed parameters specified in this document can not be combined.

PTFE packing

LATTYFLON 3260 LM

Packing for industrial valves and fittings

SPECIALLY DEVELOPED FOR REGULATING VALVES.

- LATTY-EXCLUSIVE «FILCOAT»-PROCESS

OPERATING PARAMETERS
(NOT ASSOCIATED)

Pressure : 0 to 300 bar
Temperature : -100 °C to 300°C
Speed : < 1 m/s
pH : 0 - 14

COMPOSITION

Packing consisting of a PTFE-impregnated braided core made of carbon yarns, covered with a braided sleeve of impregnated and lubricated PTFE yarns. The elastic compound structure of this packing brings secure stem sealing with low tightening torque resulting in reduced effort for stem operation and very low hysteresis.

TYPES OF INDUSTRIES

FLUIDS

All types of fluids

GUIDELINES, STANDARDS AND APPROVALS

Item	Dimensions	Description
00101597	□ 4,7 x 5 mm	25 m / 0,98 Kg
00101598	□ 6,5 x 6,5 mm	20 m / 1,28 Kg
00101595	□ 9,2 x 10 mm	12 m / 1,60 Kg
00101596	□ 8,0 x 8,5 mm	15 m / 1,52 Kg
00101599	□ 16 x 16 mm	10 m / 3,90 Kg
00101594	□ 12,5 x 13,2 mm	11 m / 2,52 Kg

The maximum temperature, pressure and speed parameters specified in this document can not be combined.

PTFE packing

LATTYFLON 3265 LM

Ensured reduction of friction in your industrial valves and fittings

FRICTION REDUCED BY MORE THAN 30%

- DEDICATED TO THE SPECIFIC REQUIREMENTS OF REGULATING VALVES
- CONTAINS A CORROSION INHIBITOR (EXCLUSIVE LATTY PROCESS) TO PROVIDE THE VALVE COMPONENTS DURABLE PROTECTION.
- REDUCED EFFORT FOR STEM OPERATION, VERY LOW HYSTERESIS
- LATTY-EXCLUSIVE «FILCOAT»-PROCESS

OPERATING PARAMETERS
(NOT ASSOCIATED)

Pressure :80 to 300 bar
Temperature : -100 °C to 300°C
Speed : < 1 m/s
pH : 0 - 14

COMPOSITION

Packing consisting of a PTFE-impregnated braided core made of carbon yarns, covered with a braided sleeve of impregnated and lubricated PTFE yarns. Its elastic composite structure ensures sealing efficiency with a low tightening torque, thus allowing reduced effort for stem operation and very low hysteresis, which greatly improves fluid regulation. LATTYflon 3265LM contains a corrosion inhibitor developed from an exclusive process to provide unlimited protection against corrosion of the stem, stuffing box housing and stuffing box over time.

TYPES OF INDUSTRIES

FLUIDS

All types of fluids

GUIDELINES, STANDARDS AND APPROVALS

Item	Dimensions	Description
900003989	□ 4,7 x 5 mm	25 m / 0,98 Kg
900003990	□ 6,5 x 6,5 mm	20 m / 1,28 Kg
900003991	□ 8,0 x 8,5 mm	15 m / 1,52 Kg
900003992	□ 9,2 x 10 mm	12 m / 1,60 Kg
900003993	□ 12,5 x 13,2 mm	11 m / 2,52 Kg
900003994	□ 16,0 x 16 mm	10 m / 3,90 Kg

The maximum temperature, pressure and speed parameters specified in this document can not be combined.

PTFE packing

LATTYFLON 3265 FR

Ensured reduction of friction in your industrial valves and fittings

REDUCTION OF FRICTION OF OVER 30%

- DEDICATED TO THE SPECIFIC REQUIREMENTS OF REGULATING VALVES
- CONTAINS A CORROSION INHIBITOR (EXCLUSIVE LATTY PROCESS) TO PROVIDE THE VALVE COMPONENTS DURABLE PROTECTION.
- REDUCED EFFORT FOR STEM OPERATION, VERY LOW HYSTERESIS
- LATTY-EXCLUSIVE «FILCOAT»-PROCESS

OPERATING PARAMETERS
(NOT ASSOCIATED)

Pressure :80 to 300 bar
Temperature : -100 °C to 300°C
Speed : < 1 m/s
pH : 0 - 14

COMPOSITION

Packing consisting of a PTFE-impregnated braided core made of carbon yarns, covered with a braided sleeve of impregnated and lubricated PTFE yarns. Its elastic composite structure ensures sealing efficiency with a low tightening torque, thus allowing reduced power consumption and minimum emissions while greatly improving fluid sealing. LATTYgraf 3265 FR contains an inhibitor developed from an exclusive process to provide unlimited protection of the stem, stuffing box housing and stuffing box from corrosion over time.

TYPES OF INDUSTRIES

FLUIDS

All types of fluids

GUIDELINES, STANDARDS AND APPROVALS

Item	Dimensions	Description
900010352	□ 4 x 4 mm	35 m
900010359	□ 4,7 x 5 mm	25 m
900010353	□ 6,5 x 6,5 mm	20 m
900010350	□ 8 x 8,5 mm	15 m
900010361	□ 9,2 x 10 mm	12 m
900010354	□ 10 x 10 mm	12 m
900010355	□ 11 x 11 mm	11 m
900010356	□ 12 x 12 mm	11 m
900010362	□ 12,5 x 13,2 mm	11 m
900010357	□ 14 x 14 mm	10 m
900010358	□ 16 x 16 mm	10 m

The maximum temperature, pressure and speed parameters specified in this document can not be combined.

Synthetic packing

LATTYTEX 2761

graphited packing

LOW-PRESSURE APPLICATIONS

- FOR ROTARY UNITS AND INDUSTRIAL VALVES AND FITTINGS
- LATTY-EXCLUSIVE «FILCOAT»-PROCESS

OPERATING PARAMETERS
(NOT ASSOCIATED)

Pressure : 0 to 100 bar
Temperature : -50 °C to 260°C
Speed : < 15 m/s
pH : 1 - 13

COMPOSITION

Packing made of special polyacrylic yarns. Each single yarn is impregnated with PTFE using our exclusive «Filcoat»-process. They are then re-impregnated in a bath consisting with a mix of graphite and special lubricants during braiding operation.

TYPES OF INDUSTRIES

FLUIDS

Moderately aggressive fluids

Item	Dimensions	Description
00101758	□ 4 mm	47 m / 1,17 Kg
00101759	□ 5 mm	35 m / 1,29 Kg
00101760	□ 6 mm	30 m / 1,47 Kg
00101762	□ 8 mm	15 m / 1,30 Kg
00101763	□ 9,5 mm	12 m / 1,50 Kg
00101764	□ 10 mm	12 m / 1,65 Kg
00101765	□ 11 mm	11 m / 1,70 Kg
00101766	□ 12 mm	11 m / 2,21 Kg
00101767	□ 12,7 mm	11 m / 2,51 Kg
00101768	□ 14 mm	10 m / 2,60 Kg
00101769	□ 15 mm	10 m / 2,90 Kg
00101770	□ 16 mm	10 m / 3,45 Kg
00101771	□ 18 mm	10 m / 4,34 Kg
00101772	□ 19 mm	10 m / 4,58 Kg
00101773	□ 20 mm	10 m / 5,37 Kg
00101774	□ 22 mm	10 m / 6,10 Kg
00101775	□ 25,4 mm	10 m / 8,20 Kg
00101778	□ 30 mm	10 m / 11,77 Kg

The maximum temperature, pressure and speed parameters specified in this document can not be combined.

Aramid packing

LATTYFLON 4757

packing for reciprocating, rotary or static applications

PACKING FOR RECIPROCATING, ROTARY OR STATIC APPLICATIONS

- HIGH FLEXIBILITY, MAKES INSTALLATION EASIER SUITABLE FOR ANY TYPE OF EQUIPMENT
- BENEFITS OF GRAPHITE-PTFE AND ARAMID, SELF-LUBRICATING
- LATTY-EXCLUSIVE «FILCOAT»-PROCESS

OPERATING PARAMETERS

(NOT ASSOCIATED)

Pressure : 0 to 1800 bar
Temperature : -200 °C to 300°C
Speed : < 22 m/s
pH : 2 - 14

COMPOSITION

Multi-yarn packing: the corners of the packing are made of 100% aramid yarns impregnated with PTFE using our exclusive «Filcoat»-process, while the friction faces are made of 100% graphited PTFE and lubricated. They are then re-impregnated with a mix of PTFE and inert lubricant during braiding operation.

TYPES OF INDUSTRIES

FLUIDS

Slurries fluids

Item	Dimensions	Description
00100848	□ 6 mm	20 m / 1,20 Kg
00101618*	□ 6,35 mm	20 m / 1,34 Kg
00100653	□ 8 mm	15 m / 1,30 Kg
00101054*	□ 9,52 mm	12 m / 1,48 Kg
00100654	□ 10 mm	12 m / 1,63 Kg
00100655	□ 12 mm	11 m / 2,25 Kg
00101545	□ 12,7 mm	11 m / 2,47 Kg
00100656	□ 14 mm	10 m / 2,86 Kg
50976	□ 15 mm	10 m / 3,31 Kg
00101547	□ 16 mm	10 m / 3,83 Kg
00101413	□ 18 mm	10 m / 4,92 Kg
00101471	□ 19 mm	10 m / 5,54 Kg
00101756	□ 20 mm	10 m / 5,74 Kg
00101701	□ 22 mm	10 m / 6,80 Kg
00101700	□ 25,4 mm	10 m / 9,44 Kg

Made to order

The maximum temperature, pressure and speed parameters specified in this document can not be combined.

Aramid packing

LATTYFLON 4758

High performance with reciprocating applications

GOOD RESISTANCE WITH ABRASIVE FLUIDS

- SILICONE-FREE PACKING
- SELF-LUBRICATING
- LATTY-EXCLUSIVE «FILCOAT»-PROCESS

OPERATING PARAMETERS
(NOT ASSOCIATED)

Pressure : 0 to 1000 bar
Temperature : -200 °C to 300°C
Speed : < 10 m/s
pH : 2 - 14

COMPOSITION

Multi-yarn packing: the corners of the packing are made of 100% aramid yarns impregnated with PTFE using our exclusive «Filcoat»-process, while the friction faces are made of lubricated and silicone-free 100% PTFE. Thy are then re-impregnated with a PTFE mix during braiding operation.

TYPES OF INDUSTRIES

FLUIDS

Slurries fluids

Item	Dimensions	Description
00100194	☐ 4 mm	35 m / 0,84 Kg
00100195	☐ 5 mm	25 m / 0,86 Kg
00100196	☐ 6 mm	20 m / 1,02 Kg
00101105*	☐ 6,35 mm	20 m / 1,14 Kg
00100198	☐ 8 mm	15 m / 1,30 Kg
00100199	☐ 9,5 mm	12 m / 1,45 Kg
00100200	☐ 10 mm	12 m / 1,56 Kg
00100201	☐ 11 mm	11 m / 1,89 Kg
00100202	☐ 12 mm	11 m / 2,37 Kg
00100203	☐ 12,7 mm	11 m / 2,61 Kg
00100204	☐ 14 mm	10 m / 2,73 Kg
00100206	☐ 16 mm	10 m / 3,60 Kg
00100713	☐ 18 mm	10 m / 4,40 Kg
00100714	☐ 19 mm	10 m / 4,90 Kg
00100715	☐ 20 mm	10 m / 5,43 Kg
00100717	☐ 25,4 mm	10 m / 8,94 Kg

Made to order

The maximum temperature, pressure and speed parameters specified in this document can not be combined.

Graphite

LATTYGRAF S

Gasket specially designed for triple offset butterfly valves

GASKET SPECIALLY DESIGNED FOR TRIPLE OFFSET BUTTERFLY VALVE

- AVAILABLE IN TWO VERSIONS: GASKET ON GATE OR IN VALVE BODY
- REDUCED FRICTION COEFFICIENT
- WITHSTANDS VERY SIGNIFICANT TEMPERATURE VARIATIONS

OPERATING PARAMETERS
(NOT ASSOCIATED)

Temperature : -200 °C 450°C

COMPOSITION

Multilayer gate gasket made of compressed graphite and metal. Its high elastic recovery provides perfect sealing, optimum reliability and reduced maintenance. The gasket LATTYgraf S meets the requirements of the harshest applications.

TYPES OF INDUSTRIES

FLUIDS

Cryonegics, gas, liquid or steam

Made to order

The maximum temperature, pressure and speed parameters specified in this document can not be combined.

GRAPHITE

LATTYGRAF REFLEX

High-performance, high-temperature, high-pressure graphite gasket: LATTYgraf REFLEX for static sealing

LATTY-PATENTED COMPOSITE GASKET WITH COMPRESSION LIMITERS

- **NUCLEAR OR DIFFICULT INDUSTRIAL APPLICATIONS** (600° / 500 bar)
- **FOR BOLTED FLANGES**
- **COMPRESSION LIMITERS PROVIDE SAFE INSTALLATION**

OPERATING PARAMETERS
(NOT ASSOCIATED)

Pressure :0 to 500 bar
Temperature : -200 °C to 600°C
pH : 0 - 14

COMPOSITION

Patented composite gasket consisting of a massive expanded graphite sealing ring, die-formed in place, between two stainless steel rings used as compression limiters. The main feature of this gasket lies in a metal-to-metal contact. During operation, the compression limiter ring protects the gasket by absorbing all mechanical stresses from the pipework, thermal shocks, etc. LATTYgraf REFLEX is warranted to seal under extreme and variable pressure and temperature conditions. Outstanding elastic recovery.

TYPES OF INDUSTRIES

FLUIDS

All types of fluids: water, steam, gases, hydrocarbons

GUIDELINES, STANDARDS AND APPROVALS

PWUC

Made to order

The maximum temperature, pressure and speed parameters specified in this document can not be combined.

Graphite

GRAPHITE RINGS

Expanded graphite rings

EXPANDED GRAPHITE RINGS, DEDICATED TO INDUSTRIAL VALVES AND FITTINGS

- LOW TIGHTENING REQUIRED FOR OPTIMUM SEALING EFFICIENCY
- EASY ASSEMBLY AND DISASSEMBLY OPERATIONS
- INSTALLATION INCLUDING ON DAMAGED OR DISTORTED FLANGES
- IMPROVED RELIABILITY. PREVENTS EQUIPMENT CORROSION

OPERATING PARAMETERS
(NOT ASSOCIATED)

Pressure :0 to 1000 bar
Temperature : -200 °C to 650°C

COMPOSITION

LATTY rings are made of high-purity expanded graphite without binder. Their temperature resistance may reach 650°C. The rings provide both high chemical inertness and high thermal conductivity. They contain a corrosion inhibitor which protects the equipment. This passive inhibitor builds up a protective coating between the valve components and the graphite rings, thus preventing the contact between the two electricity-generating materials and the resulting corrosion. This inhibitor provides durable protection for your equipment

TYPES OF INDUSTRIES

FLUIDS

All types of fluids: water, steam, gases, hydrocarbons

GUIDELINES, STANDARDS AND APPROVALS

Made to order

The maximum temperature, pressure and speed parameters specified in this document can not be combined.

Expanded graphite

LATTYGRAF BA

Expanded graphite autoclave ring

EASY TO REMOVE (NON-STICK), TIGHT SEALING ON UNEVEN SURFACES

- AUTOCLAVE RINGS WITH OR WITHOUT ANTI-EXTRUSION CUPS
- SUITABLE FOR LOW PRESSURES, THEY RESPECT THE VALVE BODY.
- PREVENT EQUIPMENT CORROSION
- LOW TIGHTENING REQUIRED FOR OPTIMUM SEALING EFFICIENCY

OPERATING PARAMETERS
(NOT ASSOCIATED)

Pressure : 0 to 250 bar
Temperature : 0 °C to 600°C

COMPOSITION

Compressed sealing rings made from various grades of expanded graphite with or without anti-extrusion stainless steel cups. Easy to remove (non-stick), LATTYgraf BA autoclave rings seal tight on uneven surfaces. Suitable for low pressures, they respect the valve body. Various profiles. Available in diameters from 60 mm (NP 250 bar) to 1,000 mm (NP 160 bar)

TYPES OF INDUSTRIES

FLUIDS

All types of fluids: water, steam, gases, hydrocarbons

Made to order

The maximum temperature, pressure and speed parameters specified in this document can not be combined.

GRAPHITE

LATTYGRAF EFMC @

Reinforced graphite sheet material for static sealing

MULTILAYER EXPANDED GRAPHITE SHEET MATERIAL, WITH ANTI-CORROSION TREATMENT

- HIGH-PURITY GRAPHITE (99.85%)
- MULTILAYER SHEET MATERIAL WITH TANGED STAINLESS STEEL INSERTS. THE GRAPHITE AND STAINLESS STEEL INSERTS BOND WITHOUT ANY ADHESIVE.
- EASY TO CUT
- LATTYGRAF EFMC BS, VERSION PMUC

OPERATING PARAMETERS
(NOT ASSOCIATED)

Pressure :0 to 650 bar
Temperature : -210 °C to 650°C
pH : 0 - 14

COMPOSITION

Multiple layers of thin expanded graphite combined with stainless steel sheets specially designed to promote adherence of the graphite without gluing. This bonding method allows the product to retain the intrinsic properties of soft graphite, thereby simplifying sheet handling and gasket production.

TYPES OF INDUSTRIES

FLUIDS

Compatible with all fluids, except strong oxidants.

GUIDELINES, STANDARDS AND APPROVALS

PMUC

Item	Dimensions	Description
82762*	1,5 mm	1 m x 1 m
84373*	1,5 mm	1,5 m x 1,5 m
82763*	2 mm	1 m x 1 m
84374*	2 mm	1,5 m x 1,5 m
82764	3 mm	1 m x 1 m
84375	3 mm	1,5 m x 1,5 m
82765	4 mm	1 m x 1 m
84376	4 mm	1,5 m x 1,5 m

**** Made to order***

The maximum temperature, pressure and speed parameters specified in this document can not be combined.

Expanded graphite ring

LATTYGRAF EBST

Expanded graphite tape, for industrial valves and fittings

HIGH-PURITY EXPANDED GRAPHITE RINGS

- PERMANENT CORROSION INHIBITOR
- DEDICATED TO NUCLEAR APPLICATIONS IN VALVES AND FITTINGS

OPERATING PARAMETERS
(NOT ASSOCIATED)

Pressure : 0 to 600 bar
Temperature : 0 °C to 3000°C

COMPOSITION

High-purity expanded graphite without binder. Very low friction coefficient, very high self-lubricating capability, good chemical resistance and high thermal conductivity.

TYPES OF INDUSTRIES

FLUIDS

All types of fluids: water, steam, gases, hydrocarbons, except strong oxidants.

GUIDELINES, STANDARDS AND APPROVALS

Item	Dimensions	Description
68033	☐ 12,5 x 0,5 mm	16 ml
900018821	☐ 20 x 0,5 mm	16 ml
68035	☐ 25 x 0,5 mm	24 ml
68036	☐ 30 x 0,5 mm	24 ml
900018822	☐ 45 x 0,5 mm	30 ml

Manufacture on request, please contact us

The maximum temperature, pressure and speed parameters specified in this document can not be combined.

Aramid

LATTYGOLD 92

General-purpose aramid sheet material for static sealing

VERY GOOD RESISTANCE TO MECHANICAL, THERMAL AND CHEMICAL STRESSES.

- ANTI-STICK TREATMENT ON BOTH FACES.
- FLEXIBLE GASKET MATERIAL, EASY TO CUT
- HIGH ELASTIC RECOVERY

OPERATING PARAMETERS
(NOT ASSOCIATED)

Pressure : 0 to 100 bar
Temperature : 0 °C to 440°C

COMPOSITION

Gasket material made of synthetic fibres bonded together with a mix of NBR-SBR elastomers.

TYPES OF INDUSTRIES

FLUIDS

All types of fluids

GUIDELINES, STANDARDS AND APPROVALS

Item	Dimensions	Description
21734	0,5 mm	1 m x 1,5 m
46349	0,5 mm	1,5 m x 2 m
27688	0,8 mm	1,5 m x 2 m
26221	0,8 mm	1 m x 1,5 m
21411151	1 mm	1 m x 1,5 m
28898	1 mm	1,5 m x 2 m
40210	1 mm	1,5 m x 1,5 m
21471151	1,5 mm	1 m x 1,5 m
27689	1,5 mm	1,5 m x 2 m
40337	1,5 mm	1,5 m x 1,5 m
21421151	2 mm	1 m x 1,5 m
26041	2 mm	1,5 m x 2 m
40338	2 mm	1,5 m x 1,5 m
21431151	3 mm	1 m x 1,5 m
27690	3 mm	1,5 m x 2 m
39897	3 mm	1,5 m x 1,5 m
24821	4 mm	1 m x 1,5 m
50025	4 mm	1,5 m x 2 m

The maximum temperature, pressure and speed parameters specified in this document can not be combined.

PTFE

LATTYFLON 94 L

Modified filled PTFE sheet for industrial use for static sealing

MODIFIED PTFE GASKET, HIGH MECHANICAL RESISTANCE

- HIGH ELASTIC RECOVERY AND LOW RELAXATION
- REDUCED PERMEABILITY, FLEXIBILITY, FOR EASIER CUTTING AND INSTALLATION
- MULTIDIRECTIONAL FIBRES WHICH PROVIDE OUTSTANDING RESISTANCE TO CREEP
- ISOTROPIC STRUCTURE

OPERATING PARAMETERS
(NOT ASSOCIATED)

Pressure :0 to 80 bar
Temperature : -210 °C to 260°C
pH : 0 - 14

COMPOSITION

Modified filled PTFE gasket Its isotropic structure provides high resistance to creep and its elastic recovery guarantees high sealing performance.

TYPES OF INDUSTRIES

FLUIDS

All types of fluids, limitation for fluorinated gases or molten alkali metals.

GUIDELINES, STANDARDS AND APPROVALS

Item	Dimensions	Description
72477	0,5 mm	1,5 m x 1,5 m
69536	1 mm	1,5 m x 1,5 m
56306	1,5 mm	1,5 m x 1,5 m
56307	2 mm	1,5 m x 1,5 m
58754	3 mm	1,5 m x 1,5 m

GRAPHITE

LATTYFLEX

Spiral wound stainless steel and graphite gasket for static sealing

SEALING UNDER EXTREME OPERATING CONDITIONS

- HIGH COMPENSATION OF STRESSES, SEALING EFFICIENT, INCLUDING UNDER FREQUENT PRESSURE VARIATIONS.
- ROBUST CONSTRUCTION WHICH GUARANTEES SEALING STABILITY AND CAPACITY
- CAN BE USED EVEN ON SLIGHTLY CORRODED OR DISTORTED SURFACES

OPERATING PARAMETERS
(NOT ASSOCIATED)

Pressure : 0 to 350 bar
Temperature : -200 °C to 1000°C
pH : 0 - 14

COMPOSITION

Spiral wound gaskets are special semi-metallic gaskets of great resilience. They are perfectly suitable for applications featuring extreme operating conditions.

TYPES OF INDUSTRIES

FLUIDS

All types of fluids: water, steam, gases, hydrocarbons

GUIDELINES, STANDARDS AND APPROVALS

Manufacture on request, please contact us

The maximum temperature, pressure and speed parameters specified in this document can not be combined.

TEST & MEASUREMENT LABORATORY FOR APPROVAL OF OEM VALVES (see page 208)

Our R&D department works on the research of sealing solutions that can withstand significant variations in pressure, speed or temperature, with new friction faces.

This facility at meeting the new requirements, standards and directives applicable.

208

APPROVAL OF EQUIPMENT:
in partnership with OEMs
Our test and measurement laboratory covering an area of over 500 sq. m. is equipped so as to meet the new regulations of our customers, either users or OEMs.

Many manufacturers entrust us with their equipment to provide them with the necessary fittings and instruments for ISO 15848, API 622 approval (control valves, on-off valves, in dimensions 1'' to 10'' and in pressure classes ranging from 150 to 2,500 lbs).

TRAINING (see page 202)

AIM: UNDERSTAND THE DIFFERENT LEAK OCCURRENCES IN:

Sealing bolted assemblies: cut gaskets, compressed expanded graphite gaskets, for static sealing in the metal sheet or pipework industry..

202

ADVANTAGES

- UNDERSTAND THE DIFFERENT LEAK OCCURRENCES.
- ESTABLISH TECHNICAL SPECIFICATIONS WHICH ALLOW US TO RECOMMEND A SEALING SYSTEM
- CHOOSE A SEALING METHOD ACCORDING TO OPERATING CONDITIONS.
- ACQUIRE THE GOOD PRACTICES IN SEAL ASSEMBLY AND MAINTENANCE ON OUR INSTRUMENTED BENCHES
- TRAINING AT OUR PRODUCTION SITE, WITH A VISIT OF THE FACILITIES
- POSSIBLE ON-SITE TRAINING

Services

GROUPE LATTY®

SERVICES

Our sealing expertise allows us to accompany you in your projects, make recommendations and manufacture your sealing solutions.

The following services are available:

- Technical training for our client in industrial sealing principles
- On-site assistance
- Site assement and recommendations
- Assembly assistance
- Reconditioning of mechanical seals
- Services, studies and research
- Independent testing and certification of industrial valaves
- Cut gasket manufacture

TECHNICAL TRAINING IN INDUSTRIAL SEALING

GROUPE LATTY, a registered training organisation, organises every year a number training modules these are dedicated to the selection of sealing solutions with a focus on their implementation and good practices in the assembly of the equipment, a guarantee of security for your personnel and equipment reliability

These training modules aim to understand and handle the different leak occurrences in:

• **sealing rotary units:** mechanical seals and packings for the dynamic sealing of pumps or agitation processes.

• **sealing industrial valves:** packings, rings and gaskets for semi-static sealing.

• **sealing bolted assemblies:** cut gaskets, compressed expanded graphite gaskets, for static sealing in the metal sheet or pipework industry.

ADVANTAGES

• Understand the different leak characteristics
• Establish technical specifications which allow us to recommend a sealing system
• Choose the most appropriate sealing method according to operating conditions
• Acquire the good practices in seal assembly and maintenance on our instrumented benches
• Training at our production site, with a visit of the facilities
• On-site training at customers facilitites

THE PEOPLE CONCERNED

Engineers, managers or technicians in:

the design office

maintenance

New projects

engineering

methods

production

PRIMARY MARKET PLACES

Food processing

Chemicals

Rotary union or industrial valve manufacturers

Stakeholders (boilermaking, pipeworks, outsourced maintenance, etc.)

Petrochemicals

Pharmaceuticals

Power Generation

TECHINCAL ASSISTANCE ON CUSTOMER'S SITE

Site assistance carried out by sealing specialists

If our specialists are required on your premises, we assist you with:

- The assessment of the equipment with a replacement recommendation if necessary
- **Maintenance** (preventive or corrective)
- Training during installation
- Ongoing Service Contracts
- Project Review

GLOBAL MAINTENANCE

Our qualified technical team ensures and checks the quality of the equipment and sealing assemblies. We provide assistance during starting-up operations and documents actions to be implemented to optimise operation and reduce equipment downtime.

Our maintenances contracts associated or not with the supply of mechanical seals include, depending on the customers' requests, the following services:

- Assessment and diagnosis: increasing the reliability and optimising the equipment
- Inventory of equipment and installed seals
- Priority technical assistance within 48 hours
- Standardisation of mechanical seals and ancillary systems
- Training customer's technicians to ensure in-house rapid repairs
- ATEX directive: possible compliance, conversion and/or maintenance of original equipment

EQUIPMENT

Our evaluations, assessments, installations and reviews apply to any rotary equipment and machinery: pumps, reactors, agitators, filters, turbines, crushers, extruders, rotary unions, stirrers, mixers, etc.

PRIMARY MARKET PLACES

Our sealing solutions are represented in all industries by means of products that comply with the approvals or standards applicable to the operated equipment:

1935/2004

, etc.

ASSESSMENT

ASSESSMENT AND ADVICE

Our teams provide help and advice improve the performance of your sealing systems, reduce maintenance costs by increasing the interval period between scheduled maintenance periods. They are also authorised and regularly trained to handle the specific requirements of the industrial sectors in which they work, in particular as to the compliance with safety rules.

We offer other services such as the drafting of technical documents (calculation notes, projects, etc.), the complete adaptation of your equipment (shaft, flange, bearing) or validation tests.

EQUIPMENT

Pumps, reactors, agitators, filters, turbines, crushers, extruders, rotary unions, stirrers, mixers, etc.

Any type of valves

Bolted assemblies

PRIMARY MARKET PLACES

All industries

RECONDITIONINING OF MECHANICAL SEALS

A network of service, repair and reconditioning centres in France and abroad via subsidiaries.

We make this comprehensive service available to you to provide you with our know-how and advice as part of our constant endeavour to improve your systems.

ADVANTAGES

- Large stock of spare parts available in every service centre
- Extension of the lifetime of your equipment with retrofitting
- Reduced maintenance costs
- Training on the customer's premises or at our site

FEATURES OF THE SERVICE

Reconditioning your standard or specific mechanical seals, cartridge boxes, etc.

Advice on how to enhance the reliability of your sealing solutions

Assessment of your equipment

Upgrading your equipment to take account of changes in technological and environmental standards

Recommendation, helping with process improvements

Equipment identification by means of systematic marking of reconditioned seals providing full traceability

Carrying out static tests under pressure, with air, water or compatible fluid in the case of overhaul of stuffing boxes, double mechanical seals, pumps, agitators, etc.

Each mechanical seal is packaged in an individual box with customised label

Full traceability, history of all the operations that have been carried out

A free and detailed estimate of the cost of the various reconditioning operations

Assessment report with photos for any mechanical seal reconditioning operation.

THE MOST CONCERNED MARKETS

Food industry (production or processing)

Boilers

Chemicals

Cosmetics

Energy (nuclear, thermal, hydraulic)

Environment

Ore extraction and processing

Paper

Oil and Gas (exploration, production, storage, processing)

Pharmaceuticals

Pumping stations

Dying

Water treatment

Our Service Centres have all the necessary tools and equipment to carry out a comprehensive, safe and economic repair of all makes of mechanicals seals.

CUT GASKET MAKERS: KNOW-HOW

A national and international network of cut gasket manufacturers

FEATURES OF THE SERVICE

The main activity of cut gasket manufacturers is the cutting and distribution of gaskets in any material and shape. Groupe LATTY provides this service via partners, subsidiaries or at its production site.

Every cut gasket manufacturer has the required production tools such as cutting tables, manual or automatic presses, as well as high-performance numerical tools.

By virtue of the quality of Latty sheet gasket material, the leading buyers work on a basis of trust with the cut gasket manufacturers in the following sectors:

Food processing
Chemicals
Energy production
Petrochemicals
Aeronautics
Automobile

ADVANTAGES

- Quality of performance
- Quality of the products supplied
- Proximity service
- Traceability
- Prototypes, small and large series

SERVICES, STUDIES AND RESEARCH

The experience at the service of customers

Part of the manufactured products requires a specific study or tests due to the application or environment in which they are to be used. For these reasons, our technical services work every day in close collaboration with customers upstream of projects.

Studies and research may also be untertaken with manufacturers of rotary unions units or industrial valves and fittings in order to determine the most appropriate sealing solutions for the process or equipment.

FOCUS AND MARKETS

Reduction of fugitive emissions
Energy savings
Reduction of friction
Reduction of water consumption
Elimination of corrosion
Safety of persons and goods

EQUIPMENT

Our R&D department has numerous means at its disposal:

Test benches for packings

- Friction and endurance testing
- Thermal shock testing
- Specific high-pressure, high-temperature, high-speed test benches
- Chemical analysis
- Test on actual equipment (valves, pumps, etc.)
- Diverse pieces of equipment for failure analysis (chromatography, 3D electron microscope, etc.)

Test benches for mechanical seals

- Very high-speed, high-temperature, etc. testing
- Endurance testing
- Thermal shock testing

Test benches for rotary unions

- Testing of air-sealing, nitrogen-sealing, etc.

Test benches for gaskets

- Pressure and temperature testing
- Testing with gas or liquid
- Testing under presses or actual flangess

These resources are also made available to our customers for the manufacture of special products.

APPROVALS OF SEALING SOLUTIONS ON INDUSTRIAL VALVES

The work of our R&D department focuses on:

- The research of any type of seal that withstands significant pressure and temperature variations
- Reducing friction
- Reducing fugitive emissions
- Developing solutions to meet the latest applicable requirements, standards and directives.
- Safety of persons and goods

ADVANTAGES

- Approvals delivered by external certified bodies
- Collaboration with sealing experts
- Energy savings resulting the selection of sealing solutions adapted to the customer's constraints: reduced friction coefficient, eliminated corrosion, suitability for contact with food, etc.
- Adapted training

EQUIPEMENTS

Our laboratory provides more than 15 test cells equipped with precision measuring instruments:

- Pressure: vacuum to 650 bar
- Temperature: -200°C to 650°C
- Several helium mass spectrometers to measure leaks.
- 5,500 kN press for flat gasket qualification tests under extreme pressure and temperature conditions

PRIMARY MARKET PLACES

Because of a relationship of trust with manufacturers, they turn to us to certify their equipment to the ISO 15848-1 standard.

- Control valves
- on-off valves
- Valves in dimensions 1'' to 10'' and in pressure classes ranging from 150 to 2,500 lbs

To date, we have obtained over 100 test reports confirming the approvals (available on request)

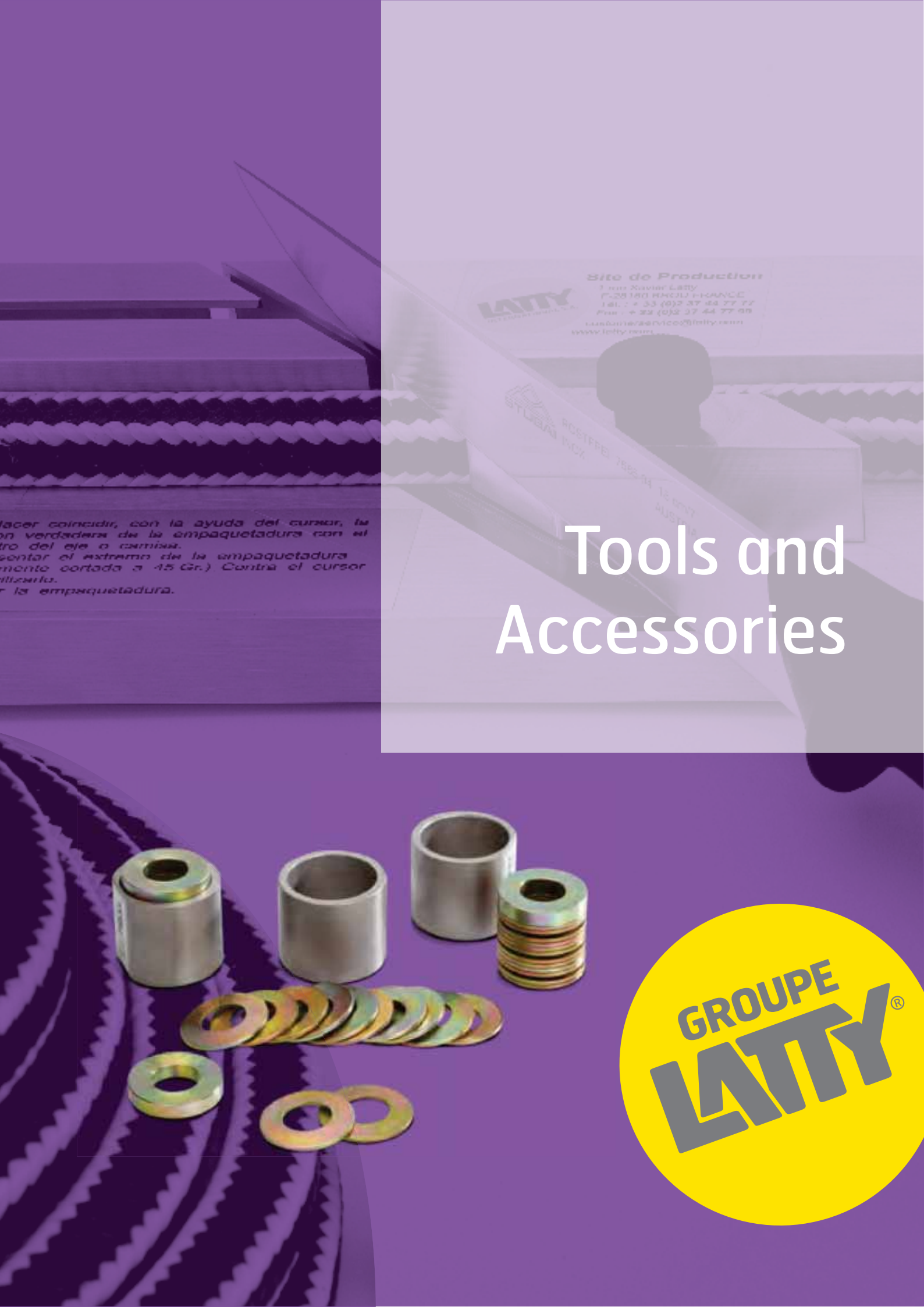
TRAINING (See page 202)

AIM: Understand the different leak occurrences in:

**Seals for rotary units:
mechanical seals and packings
for the dynamic sealing
of pumps or stirring processes.**

202

Tools and Accessories



TOOLS AND ACCESSORIES

We offer you a comprehensive range of tools to allow you easier maintenance works and time saving including:

- Packing extractors
- Motor-driven or manual machines to cut gaskets
- Packing-cutting tools
- Live Loading Systems
- Cutting tools boxes

All industries

Packing-cutting tool

PACKING-CUTTING TOOL

Ring-cutting tool and packing cutter for industrial sealing

RING AND PACKING-CUTTING TOOL

- ENHANCED RELIABILITY (DIMENSIONAL REPEATABILITY, CLEAN CUTS, ETC.)
- EASIER MAINTENANCE
- SAVES PACKING MATERIAL, REDUCES WASTE
- ROBUST AND EASY-TO-TRANSPORT TOOL

COMPOSITION

Ring-cutting tool and packing cutter: eases the cutting of packing rings to the exact length thus minimising cutting errors. Easy to use, dimensional reliability, clean cuts, time-saving and economical use.

TYPES OF INDUSTRIES

Item	Dimensions	Description
49060026	LI 200 - Shaft up to 110 mm	Packing section < 20 mm
49060027	LI 201 - Shaft up to 300 mm	Packing section < 30 mm
49060025	LI 25	Knife

Extractors

Flexible and rigid packing extractors

EASES PACKING EXTRACTION

- EASES MAINTENANCE OPERATIONS

COMPOSITION

These extractors have been designed to remove packing rings with cross-sections from 4 to 25 mm and over that are in use in valve glands, pumps, stirrers, mixers, etc. The size and robustness of LATTY international extractors enable quick removal of even the most inaccessible packing rings.

TYPES OF INDUSTRIES

Item	Dimensions	Description
49060040	FF4 - Packing section > 4 mm - Length 165 mm	2 Flexible Units
49060047	FD6 - Packing section > 6,35 mm - Length 190 mm	2 Flexible Units - 5 Removable ends
49060048	FD10 - Packing section > 10 mm - Length 280 mm	2 Flexible Units - 5 Removable ends
49060049	FD14 - Packing section > 13 mm - Length 370 mm	2 Flexible Units - 5 Removable ends
49060031	FF16 - Packing section > 16 mm - Length 480 mm	2 Flexible Units
49060032	FF20- Packing section >19 mm - Length 585 mm	2 Flexible Units
49060041	FF25 - Packing section > 25 mm - Length 762 mm	2 Flexible Units
49060050	RD6 - Packing section > 6,35 mm - Length 152 mm	2 Rigid Units - 5 Removable ends
49060051	RD10 - Packing section > 10 mm - Length 254 mm	2 Rigid Units - 5 Removable ends
49060052	RD14- Packing section > 13 mm - Length 356 mm	2 Rigid Units - 5 Removable ends
49060045	RF16 - Packing section > 16 mm - Length 457 mm	2 Rigid Units
49060046	RF20 - Packing section > 19 mm - Length 609 mm	2 Rigid Units
49060053	E6 Packing section > 6,35 mm	10 Removable ends
49060054	E10 Packing section > 10 mm	10 Removable ends
49060055	E14 Packing section > 14 mm	10 Removable ends

Manual cutting machine

GASKET-CUTTING TOOL: MANUAL MACHINE FOR CUTTING CIRCULAR INDUSTRIAL GASKETS

Gasket-cutting tool: manual machine for cutting circular industrial gaskets

EASES THE CUTTING OF CIRCULAR GASKETS

- EASIER MAINTENANCE
- RAPID IMPLEMENTATION

COMPOSITION

These machines are designed to accurately cut out circular gaskets in materials such as leather, rubber, plastic, felt, vulcanised fibre and PTFE with a thickness of up to approximately 8 mm. Its design enables to cut easily and rapidly without prior marking of any gasket in a wide range of diameters (80 to 1,250 mm). Delivered with an extra wheel.

TYPES OF INDUSTRIES

Item	Dimensions	Description
49060012	1240 x 220 x 300 mm	Weight 12,5 Kg
900001247		Wheel
21066		Graduated ruler
21071		Punch

Powered cutting machine

GASKET-CUTTING TOOL: POWERED MACHINE FOR CUTTING CIRCULAR INDUSTRIAL GASKETS

Gasket-cutting tool: powered machine for cutting circular industrial gaskets

EASES THE CUTTING OF CIRCULAR GASKETS

- FOR SMALL SERIES OF CIRCULAR GASKETS
- EASIER MAINTENANCE
- RAPID IMPLEMENTATION

COMPOSITION

These machines are designed to accurately cut out circular gaskets in materials such as leather, rubber, plastic, felt, vulcanised fibre and PTFE with a thickness of up to approximately 8 mm. Its design enables to cut easily and rapidly without prior marking of any gasket in a wide range of diameters (80 to 1,250 mm). Delivered with an extra wheel.

TYPES OF INDUSTRIES

Item	Dimensions	Description
49061222	1330 x 220 x 300 mm	Weight 15 Kg
900001247		Wheel
21066		Graduated ruler
21071		Punch

Tool box

GASKET-CUTTING TOOL: POWERED MACHINE FOR CUTTING CIRCULAR INDUSTRIAL GASKETS

Box with cutting tools for circular industrial gaskets

EASES THE CUTTING OF CIRCULAR GASKETS

- THE COMBINATION OF THE LARGE NUMBER OF PUNCHES OFFERS THE USER A WIDE RANGE OF POSSIBLE DIMENSIONS.
- EASY TO USE

COMPOSITION

Box of cutting tools including: die holder and 25 punches allow the user to cut circular gaskets from 3 to 50 mm (in increments of 2 mm from 4 mm upwards).

TYPES OF INDUSTRIES

Item	Dimensions	Description
49060013	for circular gaskets from 3 to 50 mm (in increments of 2 mm)	25 Punch

Live loading system

LIVE LOADING SYSTEMS (LLS)

Live loading systems (LLS)

TO CHECK THE PRECISE APPLICATION OF A GIVEN LOAD

- NO MORE MEASUREMENT TOOLS REQUIRED (TORQUE WRENCH, ETC.)
- SUITABLE FOR VALVES, LOW-SPEED ROTARY UNITS AND FLANGES
- INCREASES THE TIME INTERVAL BETWEEN MAINTENANCE OPERATIONS AND MINIMISES POLLUTANT EMISSIONS

COMPOSITION

Conventional applications for valves. Factory-preset cartridge. Easy installation. Exceptional quality of sealing for valve stems. With its vast range of mechanical seals, LATTY International can offer a solution which, combined with the LATTY Live Loading System, will solve the problem of leaking valve stems. With its special energy device, LATTY LLS applies the required load to be transmitted in order to offset the low volume losses that occur over time.

TYPES OF INDUSTRIES

TECHNICAL TABLES AND GLOSSARY

TYPES OF MECHANICAL SEALS

Design alternatives

For all models
Type U = Unbalanced
Type B = Balanced

CARTseal B 24810 : single mechanical seal cartridge.

The single cartridge mechanical seal allows for quick and simple installation as the seal is factory set. A number of variants allow for either plain glands or flush, quench and drain connections.

This makes the installation procedure easier, faster, more reliable and less expensive.

CARTseal B 24810 DB : double mechanical seal cartridge

Cartridge assemblies are also available as double and tandem versions. This assembly provides for these two types of operation. This adaptation is particularly recommended to seal products for which no leakage is allowed. These assemblies may also be used in vacuum applications.

Same installation as for CARTseal B24810

LATTYseal U 1000 : mechanical seal with conical spring, dependent on direction of rotation

The use of a conical spring drives the rotary part in rotation through the tightening of the spring coil in contact with the shaft.

There are consequently two types of springs:
'R' for clockwise rotation, as seen from the motor side
'L' for anti-clockwise rotation, as seen from the motor side

LATTYseal 6812 : mechanical seal with spring washers, independent of the direction of rotation

The spring washer allows us to design more compact seals. The drive in rotation is secured by cup point set screw emcombrent.

LATTYseal B 18212 : mechanical seal with cylindrical spring, independent of the direction of rotation

The cylindrical spring is non-clogging in fibrous or viscous products. Assembly tolerance for the compression value of + and – 2 mm possible.

LATTYseal B 23212 : mechanical seal with protected spring washers, independent of the direction of rotation

The spring washer is protected from the product by the dynamic seal. The mechanical seal may be used with viscous or clogging products.

LATTYseal B 17 B : mechanical seal with edge welded metal bellows, independent of the direction of rotation

Alone, it ensures the following three functions: the load required for the permanent contact of the 2 faces, the drive of the face of the rotary part, sealing between the drive ring and the rotary part.

It is used mainly with viscous products that are conveyed at high temperature, up to 220°C and above, with graphite-based gaskets.

LATTYseal B 166 A3 : external mechanical seal, independent of the direction of rotation

This design is chosen mainly for aggressive fluid applications. It uses exotic materials that are compatible with the fluids to be sealed. Howver, these mechanical seals are limited in inverted pressure.

TYPES OF MECHANICAL SEAL ASSEMBLIES

The figures below show rotary (dynamic) mechanical seals but they are also available as stationary seals.

For all models
Type U = Unbalanced
Type B = Balanced

"Dead end" single assembly API plan 2

Principle:

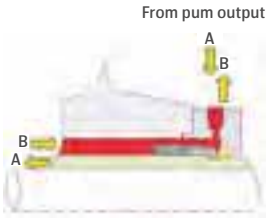
• The seal is immersed in the fluid to be sealed without circulation.
• Pressure < 1 MPa (< to 10 bar)
• Speed: 1,500 to 3,000 tr/min.

Properties of the fluid to be sealed

• where there are no vaporising pressure problems;
• where there is no hazard and no emission to the atmosphere.

This is the most widespread type of assembly.

Single assembly with flush (circulation) – API plan 11



Principle:

This type of assembly enables the circulation of the fluid to be sealed with three possible flow directions:

1- from the pump discharge to the mechanical seal and return to the back of the impeller (circulation A); the fluid may be filtered and/or cooled beforehand;

2 - from the back of the impeller to the mechanical seal and return to the pump suction (circulation B);

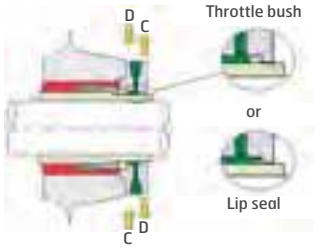
3 -from an external source to the back of the impeller (circulation A).

Properties of the fluid to be sealed

• where there is a vaporising pressure problem (circulation A ensures the stuffing box pressurisation);

• where there is no hazard and without emission to the atmosphere

Single assembly with quench (rinsing) API plan 62



Principle:

• Quenching consists in the circulation of another pressureless fluid from an external source (steam, water, etc.); it ensures the cleaning and the evacuation of deposits to the atmospheric side.

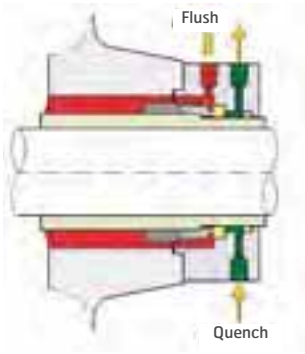
• When using a liquid (circulation C), the circulation will preferably be from bottom to top in order to ensure the filling of the cavity.

• However, in the case of a gas (circulation D) that may become liquid (water vapour), circulation from top to bottom is advisable in order to collect condensates.

Properties of the fluid to be sealed:

• The same as for a "dead end" single assembly, yet with a fluid to be sealed that can form deposits on the atmospheric side and/or represent a polluting hazard (for example, coking-sensitive petroleum products and crystallising products).

Assembly with flush and quench API plan 11, 52, 62



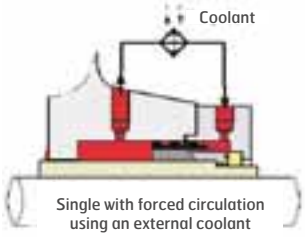
Principle:

• This type of assembly combines the two types of operation above: flushing and quench.

Properties of the fluid to be sealed:

• where there is a vaporising pressure problem;
• that can form deposits on the atmospheric side

Single assembly with forced circulation through external coolant API plan 23



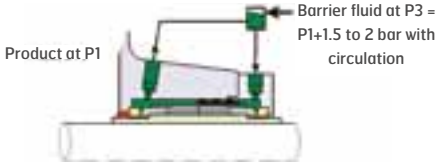
Principle:

This assembly allows for circulation, using an axial or radial pumping device incorporated to the seal, of the fluid to be sealed by an external coolant.

Properties of the fluid to be sealed:

• Liquids that are pumped close to their vaporising temperature (for example boiler feed water water).

Double assembly (back-to-back) API 53 A and 53 B



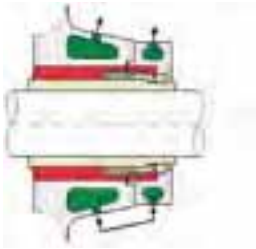
Principle:

This assembly enables the isolation of the fluid to be sealed from the atmosphere by means of a compatible auxiliary fluid with superior pressure (generally 2 to 5 bar). This barrier fluid should be clean, clear, compatible with the fluid to be sealed and hazardless. Pressurisation is secured by an external device (accumulator, compressed gas). The circulation is adapted to the operating conditions (natural circulation by thermosyphon, external pumps, built-in device, etc.).

Properties of the fluid to be sealed:

• Hazardous in contact with atmosphere (corrosive, toxic or explosive)
• close to its vaporising pressure or gaseous
• heavily loaded

Single seal with cooled or heated seal chamber and/or gland plate



Principle:

• The temperature of a thermostatically-controlled auxiliary liquid in the chamber of the stuffing box and/or of the bonnet enables the control of the temperature of the fluid to be sealed near the mechanical seal.

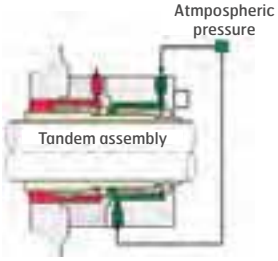
Properties of the fluid to be sealed:

Same as the ones above (with or without flushing and/or quench) which require:

• either cooling for the resistance of O-rings at high temperatures or to prevent the fluid to be sealed from vaporising
• or reheating to prevent the fluid to be sealed from massing.

This may require either flushing or the quench, or both.

Tandem assembly API plan 52 and 62

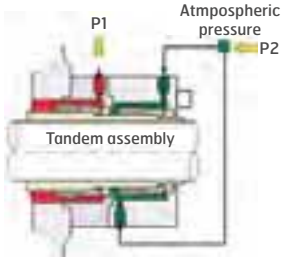


Principle:

• the isolation of the fluid to be sealed from the atmosphere by means of an auxiliary fluid with inferior pressure (generally to the atmospheric pressure)
• to have a clear, clean liquid, compatible with the fluid to be sealed and hazardless.

The circulation is adapted to the operating conditions (thermosyphon or built-in pumping device).

Tandem Pressurised tandem assembly API plan 53



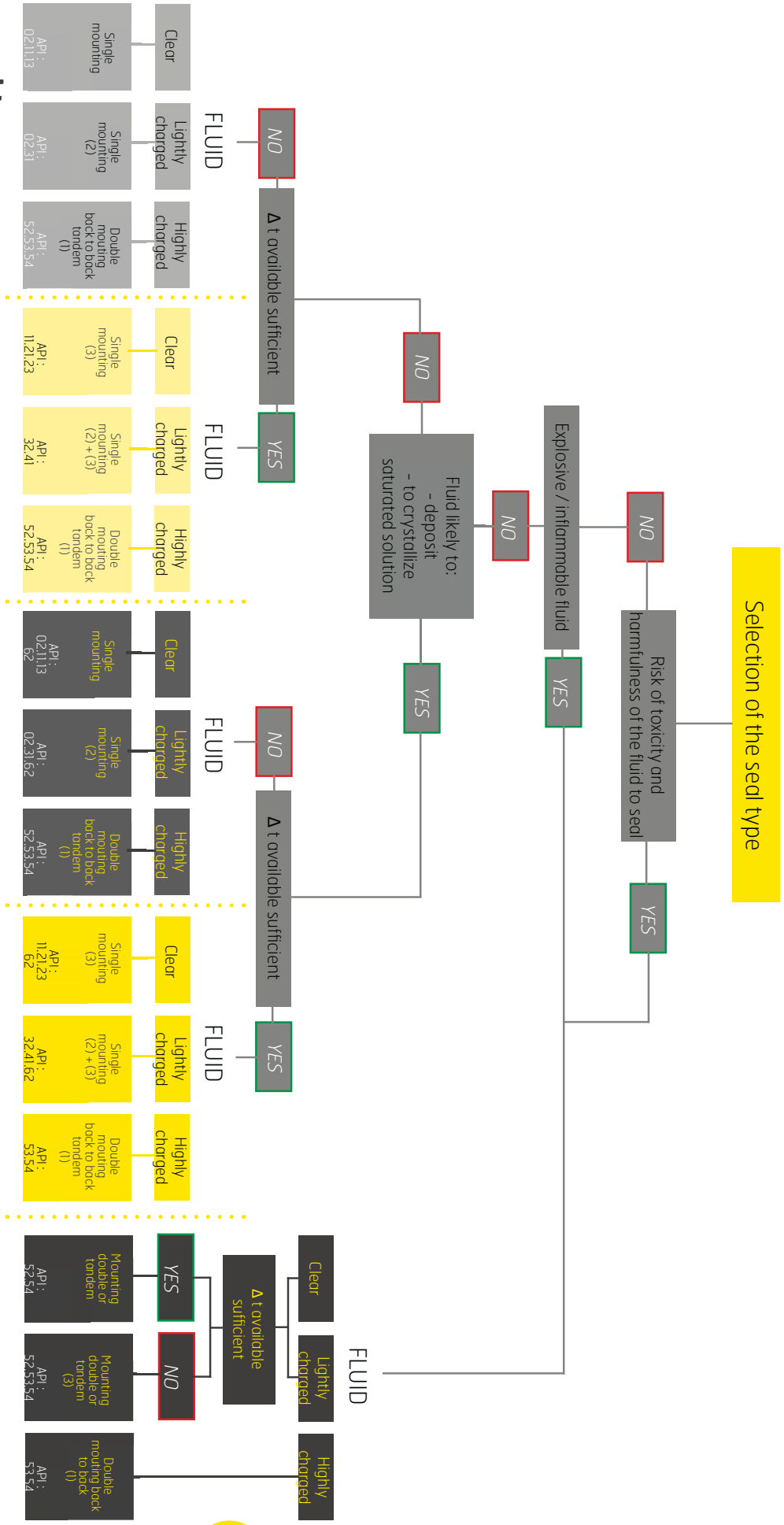
Principle:

This type of assembly is the same as the tandem assembly above, yet pressurised at a pressure P2 superior to pressure P1 of the fluid to be sealed. The mechanical seal on product side is provided with double balancing.

Properties of the fluid to be sealed:

• hazardous in contact with atmosphere (corrosive, toxic or explosive)
• close to its vaporising pressure or gaseous
• very heavily loaded

SELECTION OF MECHANICAL SEAL



(1) friction sides resistant to abrasion product side
(2) friction sides resistant to abrasion
(3) with device used to move away from vaporization point

SELECTION OF SEAL FACES DEPENDING ON THE TYPES OF FLUIDS TO BE SEALED

For clean or slightly abrasive product

Resin-impregnated hard carbon (B) / silicon carbide (U6)

For highly abrasive products

Silicon carbide (U6) / silicon carbide (U6)
Silicon carbide (U6) / tungsten carbide (U2)
Tungsten carbide (U2) / tungsten carbide (U2)

SELECTION	B / G2	B / U6	A / U6	U2 / U2	U6 / U2	U6 / U6
Wear resistance	●	●	○	◯	◯	◯
Shock resistance	●	●	●	○	●	●
Chemical resistance	●	◯	◯	○	○	◯
Thermal conductivity	◯	○	○	●	●	●
Dry-friction behaviour	○	○	○	●	●	●
Resistance to thermal shocks	◯	◯	◯	●	●	○
Non-corrosive clear fluid	◯	◯	◯	●	●	●
Corrosive clear fluid	●	◯	○	○	○	◯
Overheated water	●	○	◯	●	●	○
Little corrosive loaded fluid	●	●	○	◯	◯	◯
Corrosive loaded fluid	●	●	●	●	●	◯

SOLUTION

- ◯ Recommended
- ● Technically possible
- ○ Acceptable
- ● Not to be recommended

FRICTION MATERIALS

Stainless steel 1.4571	G2
Resin-impregnated carbon	B
Metal-impregnated carbon	A
Silicon carbide SiC produced by sintering	U6
Nickel-impregnated tungsten carbide	U2

APPROVALS BY PRODUCTS

	FOOD		POTABLE WATER			OXYGEN		GAS	FUGITIVE EMISSIONS	NUCLEAR	FIRE TESTING	
	FDA	CE 1935 /2004	WRAS	KTW	ACS	BAM GAZ	BAM LIQUIDE	DVGW	TÜV / TA Luft	PMUC	API607	API589
LATTYflon 84 L	X											
LATTYflon 94 L	X	X				X			X	X		
LATTYflon 95	X	X										
LATTYflon 97	X								X			
LATTYflon 2790		X*										
LATTYflon 2790 AL			X									
LATTYflon 3206 AL	X				X							
LATTYflon 3206 CE		X										
LATTYflon 3206 SO	X	X				X	X		X			
LATTYflon 3260 LM						X			X	X		
LATTYflon 3265 LM						X			X			
LATTYflon 3265 FR										X		
LATTYflon 4788										X		
LATTYflon 4789			X							X		
LATTYflon 5790		X*										
LATTYflon 5790 S		X*										
LATTYflon UNISEAL	X					X						
LATTYcarb 96			X	X		X		X	X			
LATTYgold 92			X	X		X		X	X	X		
LATTYgold 925										X		
LATTYgold 92 G2F										X		
LATTYgraf 6940						X	X				X	
LATTYgraf 6940 EF						X	X		X			X
LATTYgraf 6995 NG						X	X					
LATTYgraf 8945 BS										X		
LATTYgraf E						X	X					
LATTYgraf EBST										X		
LATTYgraf EF/EF4						X	X					
LATTYgraf EF NG						X	X		X			
LATTYgraf EFA			X			X						
LATTYgraf EFA BS										X		
LATTYgraf EFMC@											X	X
LATTYgraf REFLEX										X		
LATTYflex						X	X					

** Incidental food contact*

PACKING-RELATED GLOSSARY

A

• ARAMIDE: family of polymers used in a fibrous formula as stuffing packings. Aramid fibres are known for their outstanding resistance to abrasion, their high resistance to tensions and their characteristic dark yellow colour.

• AMBIENT TEMPERATURE: temperature of immediate surrounding environment.

• ANTI-EXTRUSION RING: a stuffing box ring used at one or both ends of a stuffing box assembly to prevent extrusion of the seal in the clearances between parts (also called «big ring»). See also «end ring» and «valve sealing ring».

• AXIAL: in the lengthwise direction of a stem or shaft.

B

• BEVEL CUT: angular cutting at the jointing point of a packing ring.

• BORE DIAMETER: dimension of the angular space into which the packing is inserted. Also called «stuffing box bore».

• BRAIDER (BRAIDING MACHINE): mechanical unit used to weave yarns to manufacture a packing.

C

• CAVITATION: term used to describe an undesired phenomenon that often occurs in pumps. This situation may occur in the pump head area where small vapour bubbles build up. As these small vapour bubbles move along the blades of the impeller to a higher-pressure area, they rapidly burst. This bursting or «implosion» of the bubbles is so rapid that it may be perceived as a rumble or a vibration. The forces resulting from cavitation may damage the pump head or even the whole seal.

• CENTRIFUGAL PUMP: a type of pump whose operation is based on the rotation of a pump head to generate a pressure and a subsequent flow.

• COLD FLOW: continuous and permanent deformation of a material that takes place as the result of prolonged compression or expansion at ambient or near ambient temperature.

• COMPRESSED HEIGHT: height of a packing ring or stuffing assembly after being compressed in the stuffing box.

• COMPRESSION-MOULDING: a a manufacturing process that involves the compression of a packing or flexible graphite placed into a mould cavity to form a ring.

• CORROSION INHIBITOR: component added to the stuffing that reduces or eliminate the risk of galvanic corrosion in the stuffing box. Corrosion inhibitors can be divided into two categories: passivators or anodic inhibitors.

• CUT RING ASSEMBLY: braided material cut as individual rings to the specific stem/box dimension and packaged as an assembly.

D

• DEFLECTION: shaft deviation (generally on a mixer or on a pump) due to rotary mechanical load. A long shaft that is not held by bearings is more subjected to deflection than a short shaft or a shaft that is firmly held in position by bearings.

• DENSITY RATIO OF THE MASS OF A BODY TO ITS VOLUME (expressed in g/cm3 or lb/ft3). Flexible graphite compression-moulded rings are often manufactured at a specific density.
• DISCHARGE PRESSURE: fluid pressure on pump discharge side (or outlet) where the fluid flows out of the volute.

E

• ECCENTRICITY: distance between the centre of the shaft axis and the centre of the stuffing box through which it passes.

• ELASTIC WASHER: washer made of conical disc used to load a packing gland.

• EMISSIONS: release of gaseous or liquid pollutants as a result of leaks in equipment such as flange, pump or valve. This term is frequently used in reference to volatile organic compounds monitored by government agencies. They are usually expressed in ppmv (parts per million by volume) or simply ppm (parts per million).

• END RING: ring used at the top or bottom end of a stuffing box assembly; which is usually used as scraper ring and/or anti-extrusion ring. See also «anti-extrusion ring», «valve sealing ring» and «scraper ring».

• ENVIRONMENT: it is the fluid to be sealed.

• EXTRUSION: distortion, under pressure, of a part of the packing rings within the clearance areas between the metal parts in contact.

F

• FPM: abbreviation for «Feet Per Minute», measure of rotary shaft surface speed.

• FRICTION COEFFICIENT: factor that is empirically determined and used to estimate the friction force generated by the seal on a valve stem.

• FUGITIVE EMISSIONS: leak of liquid or gas from equipment that may be transitional, of random nature or intermittent.

G

• GALVANIC CORROSION: it is an electrochemical reaction that may occur between a metal and a chemically more noble material, for example another metal, carbon or graphite. When two material are immersed in a conducting solution called electrolyte, a galvanic cell is formed, which generates a current between the two materials. Unlike the less noble material (called anode) that corrodes, the more noble material (cathode) does not.

• GASKET SPACER: it is a gasket material cut to fit into a stuffing box between two packing rings. The gasket spacers may be used to protect the system against abrasive particles, to increase the resistance to pressure of some sealing assemblies or to reduce the fluid flow through the packing.

• GLAND PIN: threaded rod or eye bolt prolonged from the equipment box to which the packing gland is fastened to compress a stuffing assembly. See also «valve body».

L

• LANTERN RING: ring added to a stuffing assembly to facilitate the injection of an external flushing liquid in the stuffing box. This ring is usually made of metal or plastic.

• LEAKAGE RATE: quantity of fluid flowing though (or around) a packing seal within a given time.

• LEAKAGE: release of gases or liquids from equipment.

• LLS : Live Loading System. A process using a spring mechanism on the bolts of the packing gland to maintain the load.

N

• NON-COMPRESSED HEIGHT: height of a packing ring or stuffing assembly before being compressed in the stuffing box.

O

• OEM: abbreviation for «Original Equipment Manufacturer».

• OVA : abbreviation for «Organic Vapor Analyzer», a device used to measure the concentration in volatile organic compounds (VOC) near a stuffing box, a flange or a seal. An OVA is sometimes called a «sniffer» or «sniffer sensor».

P

• PACKING CHAMBER: distance between the stem or shaft surface and the bore of the stuffing box. The packing chamber of the stuffing box (x) may be calculated by means of the following equation: x = (OD-ID)

• Packing extractor: a corkscrew-like tool to remove the packing rings from the stuffing box.

• PACKING GLAND: part that projects inside a stuffing box to compress a packing assembly or ring.

• PACKING GLAND FOLLOWER: the space into which the seal is inserted. Also called «stuffing box».

• PACKING SEAL: deformable material used to prevent or limit the passing of a pressurised fluid between the surfaces that move in relation to each other.

• PACKING: yarns or filaments woven to form a plain or hollow structure. The reinforcement pattern of a packing may be round (double packing), square (single-crossing pattern) or lattice-like (interlaced). Packings may have a round, square or rectangular cross section.

• PASSIVATOR: a type of galvanic corrosion inhibitor added to the packing material that builds up a protective coating in order to stop the transfer of electrons and prevents galvanic reaction.

• pH: measure expressing the acidity or alkalinity of a solution. In the pH scale, a neutral solution (neither acidic nor basic) has a pH equal to 7. Solutions with a pH under 7 are considered to be acidic. The lower the pH value, the more acidic the solution. Solutions with a pH over 7 are considered to be basic.

• PISTON: a cylindrical part with uniform diameter used to transmit a thrust (as in a hydraulic cylinder) or generate a pressure and a subsequent flow (as in a reciprocating pump).

• Psi: abbreviation for «Pounds per Square Inch», a pressure unit.

• PTFE: abbreviation for «polytetrafluoroethylene», a polymer possessing outstanding chemical resistance. PTFE dispersion is used as a coating for a number of packings. Certain kinds of packings are manufactured from PTFE fibres.

• PUMP HEAD (or impeller): a component of a centrifugal pump that generates a pressure and a subsequent flow when rotating.

• PUMP SHAFT: the metal stem linking the rotor of a pump to the motor.

Q

• QUARTER-TURN VALVE: a valve that is totally open or closed following a 90° rotation of the stem.

R

• RADIAL CLEARANCE: measured distance travelled by a shaft in radial direction.

• RADIAL EXPANSION: capacity of a seal to move in the radial direction of the stuffing box when it is compressed.

• RADIAL: in the direction perpendicular to the axis of the shaft.

• RECIPROCATING MOVEMENT: back-and-forth motion of shaft in the direction of its longitudinal axis.

• RECIPROCATING PUMP: a type of pump whose operation is based on a reciprocating motion of a piston or series of pistons to generate a pressure and a subsequent flow.

• RINSING LIQUID: cleaning liquid (usually water) injected through a rinsing opening to remove solid particles from the stuffing box area in order to reduce wear due to abrasion. A rinsing liquid also enables the cooling of the stuffing box in the case of an application with higher temperatures or air circulation in a pump for a suction application.

• RISING STEM VALVE: a valve in which the stem motion is only reciprocating, without rotation.

• RISING/ROTARY STEM VALVE: a valve in which the stem motion is both reciprocating and rotary, usually following a helical line.

• ROTARY: motion of a body spinning on an axis.

• Rpm: abbreviation for «revolutions per minute», a measure of rotation speed of a rotary shaft.

S

• SCRAPER RING: ring of a braided seal, used in combination with the flexible graphite rings in order to eliminate the graphite particles from the control stem and keep the graphite inside the stuffing box.

• SHAFT: the metal stem linking the head of a pump to the motor.

• SPOOL PACKING: braided packing supplied on a spool. (unlike sets of cut rings or compression-moulded rings)

• SQUARE PACKING: a type of packing manufacture that produces a supple, flexible squared-section packing. Also called «regular packing».

• STACKING HEIGHT:
1) height of all the rings in a stuffing assembly.
2) combined height of all components of a stack elastic washers used to load a stuffing assembly.

• STEM: metal rod that links the internal components of a valve to the control wheel, handle or actuator.

• STRONG OXIDANT A HIGHLY OXIDISING CHEMICAL. In packing applications, strong oxidants such as nitric and sulphuric acids cause packing alteration, in particular of carbon, graphite and cellulose fibres. PTFE are generally used in these applications for their resistance to oxidation.

• STUFFING BOX FORCE: quantity of force exerted on the packing assembly generally expressed in lb or N.

• STUFFING BOX LOAD: the quantity of load applied to a whole seal that may be expressed as a force (N, lb) or pressure (kPa, psi), which means it is necessary to mention the measurement units.

• STUFFING BOX PRESSURE: quantity of pressure applied to a packing assembly by the packing gland. Generally expressed in kPa or psi.

• Stuffing box: the space into which the seal is inserted. Also called packing gland.

• SUCTION PRESSURE: fluid pressure on pump suction side (or intake) where the fluid enters the volute.

• SURFACE CONDITION: measurement of surface roughness. Usually expressed in microinches or micrometers.

T

• TEXTURISATION: operations consisting in generating raised textures on a flexible graphite surface. Texturisation is applied to provide for better bonding between the flexible graphite layers and prevent the compression-moulded ring from coming off.

• THERMAL CONDUCTIVITY: measurement of the point from which a substance transfers thermal energy. High thermal conductivity is an advantage in pump seal applications where it is important to transfer the friction heat away out of the shaft/seal interface to prevent the seal from burning.

• THERMAL EXPANSION: increase in volume or dimensions of a material because of rise in temperature.

• TIGHTENING TORQUE: the torsion moment or force required (expressed in ft-lb or N-m) to cause nuts of a packing gland to rotate. The load exerted by a packing gland on the valve seal assembly may be expressed indirectly by a specific tightening torque.

V

• VERTICAL CUT: straight cutting at the jointing point of a packing ring.

• VOC: abbreviation for «volatile organic compounds».

Source : Guide for stuffing box used, established by Fluid Sealing Association and European Sealing Association.

MATERIAL MATCHING TABLE ACCORDING TO NF EN 12756

Descriptions	LATTY Code	NF EN 12756 Code
MATERIAL FOR FRICTION SURFACES – ROTARY PART / STATIONARY PART		
CARBONS		
Metal impregnated carbon	A	A
Resin impregnated carbon	B	B
Carbon graphite synthetic resin impregnation (FDA)	B1	B
Other carbons	-	C
CARBIDES (TUNGSTEN CARBIDE U, SILICON CARBIDE Q OTHER CARBIDES J)		
Tunsgsten carbide, Ni binder	U2	U2
Pure silicon carbide	U6	Q1
Silicon carbide - U3 Q2 silica free	U3	Q2
Silicon carbide and silicon carbon compound	U5	Q3
Carbon and silicon carbide compound, silicon on surface	U9	Q4
Other carbides	-	J
METALLIC OXIDES		
Aluminium oxide	V	V
Chromium oxide	W	W
Other metallic oxides	-	X
METALS		
Carbon-steel	D	D
Cr-steel (ferritic / martensitic steel)	E	E
CrNi-steel (austenitic steel)	F	F
CrNiMo-steel (austenitic steel)	G	G
Metals with carbide coating	-	H
Hard metal coating	-	K
Alloy with high nickel content	M	M
Bronze	N	N
Cr hardened cast steel	-	S
Other metals	T	T
PLASTIC MATERIALS (PTFE, REINFORCED Y, OTHER PLASTIC MATERIALS Z)		
PTFE, with fiberglass reinforcement	Y1	Y1
PTFE, with carbon reinforcement	Y4	Y4
Other plastic materials	Z	Z
Joint plat LATTY®flon 94 L	LATTYflon 94 L	LATTYflon 94 L
MATERIAL USED FOR FLEXIBLE PARTS		
ELASTOMERS, UNCOATED		
Butyl rubber	B	B
Ethylene-propylene rubber	E	E
Perfluorinated rubber	K / K2	K
Chloroprene rubber	-	N
Nitrile rubber	P	P
Silicone rubber	S	S
FKM	V	V
Other elastomers	-	X
ELASTOMERS, COATED		
Elastomers,coated with FEP	M6/M5	M
NON-ELASTOMER MATERIALS		
Graphite	-	G
PTFE	Y	T
Other non-elastomer materials	-	Y
MISCELLANEOUS MATERIALS		
Miscellaneous materials for flexible parts	-	U
MATERIALS USED IN OTHER PARTS SUCH AS SPRINGS, METAL BELLOWS (except mechanical seal flanges and sleeves)		
Carbon steel	D	D
Cr-steel	E	E
CrNi-steel	F	F
CrNiMo-steel	G	G
Alloy with high nickel content	M	M
Copper-tin alloy (bronze)	N	N
Other materials	T	T
Springs of hastelloy	T2	M

SUMMARY

ROTARY AND RECIPROCATING UNITS

STATIC SEALING

INDUSTRIAL VALVES

TOOLS AND ACCESSORIES

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* Subsidiaries or service centers with workshop for mechanical seals repair and repackaging.

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