

Catalogue

DYNAMIC SEALING

STATIC SEALING

VALVES

TOOLS AND ACCESSORIES

SERVICES



Designer for industrial sealing solutions

**GROUPE
LATTY®**

SUMMARY

Designer for industrial sealing solutions

SUMMARY

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**Quality
Innovation
Performance**



Designer for industrial sealing solutions

LATTY PRESENTATION

Innovated to last

GRUPE 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.

GRUPE 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 Lotty® 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 Lotty® 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 customdesigned, Groupe Lotty 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

... Worldwide

GRUPE LATTY's reputation goes beyond the borders of France with subsidiaries 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.

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.

Our subsidiaries and offices:

Argentina	India	United States
Belgium	Marocco	United-Kingdom
Brazil	Poland	West Africa
Chile	South Africa	
Germany	Spain	



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 benefited 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

GRUPE LATTY's main production site is located in Brou, in 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

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

-  Food processing: FDA , EC 1935/2004, 3A, EHEDG
-  Water: WRAS, KTW, ACS
-  Nuclear energy: PMUC, AECL, ASME, RCC-M
-  Fire test: API 607, API 689, API 589
-  Gas: DVGW
-  Oxygen: BAM, ATEX, SHELL, WHA
-  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.
- SAQR-ATEX certified workshop

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). These range are distributed via a network of service centers in France.



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

A photograph of industrial machinery, possibly a pump or valve assembly, with a yellow overlay on the right side. The machinery is metallic and features various pipes, bolts, and electrical connections. A yellow semi-transparent overlay covers the right half of the image, and a yellow circle containing the company logo is in the bottom right corner.

Industry

GROUPE
LATY[®]

Designer for industrial sealing solutions

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	18
Mining and quarrying	19
Chemicals	20
Oil and gas	21
Water treatment	22
Paper	23
Energy production	24
Pharmaceuticals	25
Shipbuilding	26
Other industries	27



Designer for industrial sealing solutions

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

- FDA, EC 1935/2004, EHEDG, 3A
- WRAS





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. 84-85)

SERVICES

- On-site repair/intervention
- Auxiliary system

APPROVALS & CERTIFICATIONS

-  ATEX
-  BAM, WHA
-  DVGW
-  TUV,





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, TUV, ISO, TOTAL

 BAM



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
- 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



FDA



WRAS, ACS





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

- Training 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 pecifically 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



AECL, PMUC





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

APPROVALS & CERTIFICATIONS

-  FDA
-  WRAS
-  ATEX

SERVICES

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



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 integrity between salt water and the ship by means of a static inflatable seal.

STRENGTHS

- Bulkhead mechanical seals
- 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





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

MECHANICAL SEALS & BRAIDED

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



Food
FDA, EC 1935/2004, 3A, EHEDG



Water
ACS, WRAS, KTW



Nuclear energy
API 624, 622, TUV, ISO, TOTAL



Fire test
API 689, 607, 589



Gas
DVGW



Explosive
ATEX, SAQR-ATEX



Nuclear energy
AECL, PMUC, ASME, RCC-M



Oxygen
BAM, WHA



ROTARY AND RECIPROCATING UNITS

Mechanical seals Base	28-31	SPECIFIC MECHANICAL SEALS	LATTYflon 3206 CE	110
MECHANICAL SEALS		Mechanical seals for process	LATTYflon 3207	111
LATTYseal U1000	32	Rotary unions	LATTYflon 4308	112
LATTYseal B1000	33	Cartridge box	SYNTHETIC	
LATTYseal U1112	34	Cartridge PECODY	LATTYtex 2761	114
LATTYseal U1212	35	Auxiliary systems	LATTYflon 7188	115
LATTYseal U6812	36		LATTYflon 2790 AL	116
LATTYseal B6812	37	BRAIDED PACKINGS	LATTYflon 2790	117
LATTYseal B17110 B	38 -39	GRAPHITE CORE	CARBON GRAPHITE	
LATTYseal B17210 B/HT	40 - 41	LATTYcore 3207 G	LATTYgraf T	118
LATTYseal B17110HT	42 - 43	LATTYcore 4788 G	LATTYgraf TSP	119
LATTYseal B10712 REV/REP	44	LATTYcore 4758 G	LATTYgraf 6745 NG	120
LATTYseal B10712 RIV/RIP	45	LATTYcore 7189 G	VEGETAL	
LATTYseal B18212	46	LATTYcore 5790 G	LATTYtex 14	122
LATTYseal B23112 -B23212	48- 49	ARAMID	LATTYflon 1779	123
CARTseal B22812	50-51	LATTYflon 4488		
CARTseal B23612	52-53	LATTYflon 4757		
CARTseal B23612 Q	54-55	LATTYflon 4758		
CARTseal B24610	56-57	LATTYtex 4777		
CARTseal B24610 Q	58-59	LATTYflon 4788		
CARTseal B24610 PP	60-61	LATTYflon 4789		
CARTseal B24610 PPQ	62-63	LATTYflon 5790		
CARTseal B24810 DB	64	LATTYflon 5790 S		
Spares KIT	65	PTFE		
LATTYseal B16660 A3	66-67	LATTYflon 3206	106	
LATTYseal B16670 A3	68-69	LATTYflon 3206 S	107	
LATTYseal B25	70	LATTYflon 3206 SO	108	
LATTYSealis	71			
LATTYmix RU 6812D	72			



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



Rotary and reciprocating units

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.

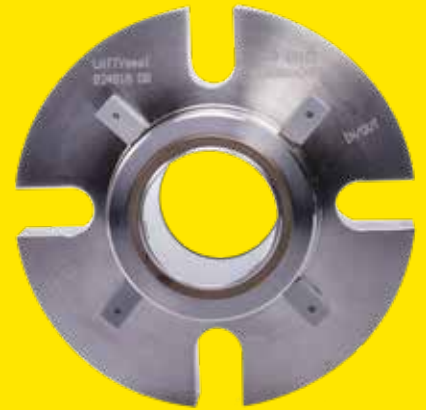
The basic principle is common to all mechanical seals: provide sealing efficiency between two moving faces, lubricated by a liquid film, the so-called primary sealing.

- 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



Food
FDA, EC 1935/2004



Water
WRAS



Explosive
ATEX

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)



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)

EC 1935-2004, FDA

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	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	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

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



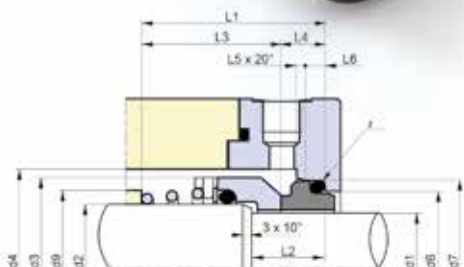
Single-seal

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)

EC 1935-2004, FDA

d1 nominal h6	d2 h6	d3 maxi	d4 mini	d6 H 11	d7 H 8	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

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)

EC 1935-2004, FDA

d1 nominal h6	d3	d4 mini	d6 H 11	d7 H 8	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

Correspondent to la norme NF EN 12756 - d8 (emmanchement serré) : 3mm de d1 18 to 35 - 4 mm de d1 38 to 100. r: 1,2 mm de d1 10 to 16 - 1,6 mm de d1 18 to 35- 2,5 mm de d1 38 to 100

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



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)

EC 1935-2004, FDA

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 (tight 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

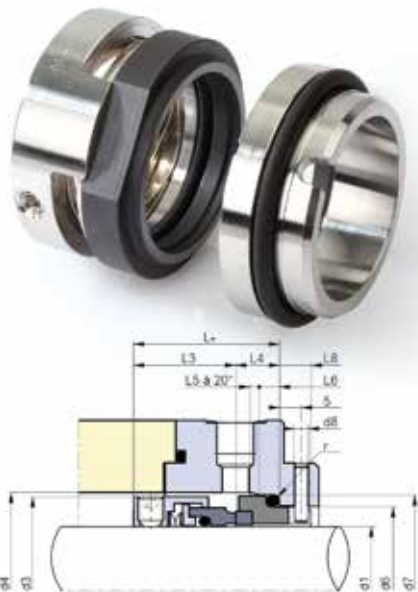
Single-seal

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 (ON REQUEST)

EC 1935-2004, FDA

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 (tight 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 100100

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



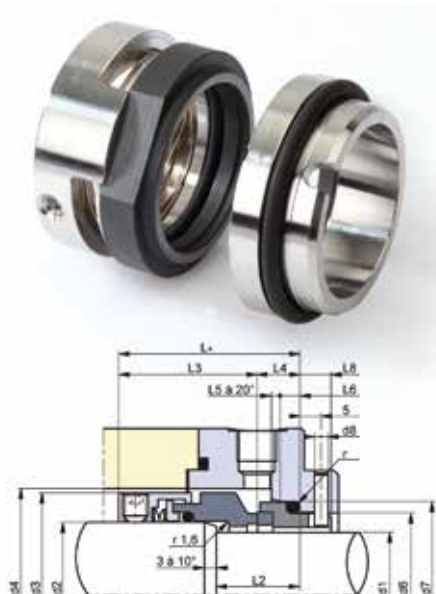
Single-seal

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)

EC 1935-2004, FDA

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	38,5	20	29,5	9	2	5	7,5
20	24	38	40	29	35	42,5	20	32,5	10	2	5	7,5
22	26	40	42	31	37	43,5	20	33,5	10	2	5	7,5
24	28	42	44	33	39	43,5	20	33	10,5	2	5	7,5
25	30	44	46	34	40	44,5	20	34	10,5	2	5	7,5
28	33	47	49	37	43	43,5	20	33	10,5	2	5	7
30	35	49	51	39	45	44,5	20	33	11,5	2	5	7,5
32	38	54	58	42	48	45,5	20	34	11,5	2	5	7,5
33	38	54	58	42	48	45	20	34	11	2	5	7,5
35	40	56	60	44	50	46	20	35	11	2	5	7,5
38	43	59	63	49	56	49,5	23	37,5	12	2	6	8,5
40	45	61	65	51	58	50	23	37,5	12,5	2	6	8,5
43	48	64	68	54	61	50	23	37,5	12,5	2	6	8,5
45	50	66	70	56	63	50	23	37,5	12,5	2	6	8,5
48	53	69	73	59	66	50	23	37,5	12,5	2	6	8,5
50	55	71	75	62	70	51,5	25	38	13,5	2,5	6	8
53	58	78	83	65	73	52,5	25	39	13,5	2,5	6	8
55	60	80	85	67	75	52,5	25	39	13,5	2,5	6	8
58	63	83	88	70	78	56	25	41,5	14,5	2,5	6	8
60	65	85	90	72	80	56	25	41,5	14,5	2,5	6	8
63	68	88	93	75	83	57	25	41,5	15,5	2,5	6	8
65	70	90	95	77	85	57	25	41,5	15,5	2,5	6	8
70	75	99	104	83	92	58,5	28	43	15,5	2,5	7	8
75	80	104	109	88	97	59,5	28	44	15,5	2,5	7	8,2
80	85	109	114	95	105	60	28	44	16	3	7	8
85	90	114	119	100	110	66	28	50	16	3	7	8
90	95	119	124	105	115	67	28	50	17	3	7	8
95	100	124	129	110	120	68	28	50	18	3	7	8
100	105	129	134	115	125	68	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 (tight 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.

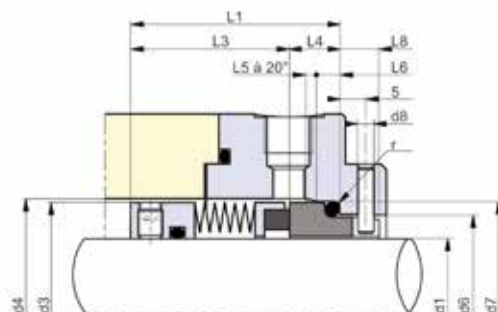
Single-seal

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)

EC 1935-2004, FDA

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 NFE 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 25to 55 - 2,5 mm for d1 58 to 100.

IMPERIAL VERSION

d1 nominal in	d1 nominal inches	d3	d4 mini	d6 H11	d7 H8	L1	L3	L4	L5 ± 0,1	L6 ± 0,1	L8
1"	1.000	1,457	1,535	1,339	1,575	1,626	1,252	0,374	0,079	0,197	0,295
1"1/8	1.125	1,685	1,764	1,535	1,772	1,665	1,252	0,413	0,079	0,197	0,295
1"1/4	1.250	1,811	1,969	1,654	1,890	1,724	1,311	0,413	0,079	0,197	0,295
1"3/8	1.375	1,937	2,094	1,732	1,969	1,850	1,437	0,413	0,079	0,197	0,295
1"1/2	1.500	2,063	2,220	1,929	2,205	1,890	1,437	0,453	0,079	0,236	0,335
1"5/8	1.625	2,185	2,343	2,126	2,402	1,890	1,437	0,453	0,079	0,236	0,335
1"3/4	1.750	2,311	2,469	2,205	2,480	1,890	1,437	0,453	0,079	0,236	0,335
1"7/8	1.875	2,437	2,594	2,323	2,598	1,953	1,500	0,453	0,079	0,236	0,335
2"	2.000	2,563	2,760	2,559	2,874	2,012	1,500	0,512	0,098	0,236	0,315
2"1/8	2.125	2,685	2,882	2,638	2,953	2,012	1,500	0,512	0,098	0,236	0,315
2"1/4	2.250	2,811	3,008	2,756	3,071	2,094	1,563	0,531	0,098	0,236	0,315
2"3/8	2.375	2,937	3,134	2,835	3,150	2,094	1,563	0,531	0,098	0,236	0,315
2"1/2	2.500	3,185	3,382	3,031	3,346	2,094	1,563	0,531	0,098	0,236	0,315
2"5/8	2.625	3,311	3,508	3,189	3,543	2,157	1,626	0,531	0,098	0,276	0,315
2"3/4	2.750	3,437	3,634	3,268	3,622	2,217	1,626	0,591	0,098	0,276	0,315
2"7/8	2.875	3,626	3,823	3,465	3,819	2,276	1,685	0,591	0,098	0,276	0,315
3"	3.000	3,752	3,949	3,465	3,819	2,276	1,685	0,591	0,098	0,276	0,315
3"1/8	3.125	3,874	4,071	3,740	4,134	2,343	1,752	0,591	0,118	0,276	0,315
3"1/4	3.250	4,000	4,197	3,937	4,331	2,382	1,752	0,630	0,118	0,276	0,315
3"3/8	3.375	4,126	4,323	3,937	4,331	2,382	1,752	0,630	0,118	0,276	0,315
3"1/2	3.500	4,252	4,449	4,134	4,528	2,504	1,874	0,630	0,118	0,276	0,315
3"5/8	3.625	4,374	4,571	4,331	4,724	2,504	1,874	0,630	0,118	0,276	0,315
3"3/4	3.750	4,500	4,697	4,331	4,724	2,504	1,874	0,630	0,118	0,276	0,315
3"7/8	3.875	4,626	4,823	4,528	4,921	2,504	1,874	0,630	0,118	0,276	0,315
4"	4.000	4,752	4,949	4,528	4,921	2,504	1,874	0,630	0,118	0,276	0,315

Complies with NFE 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

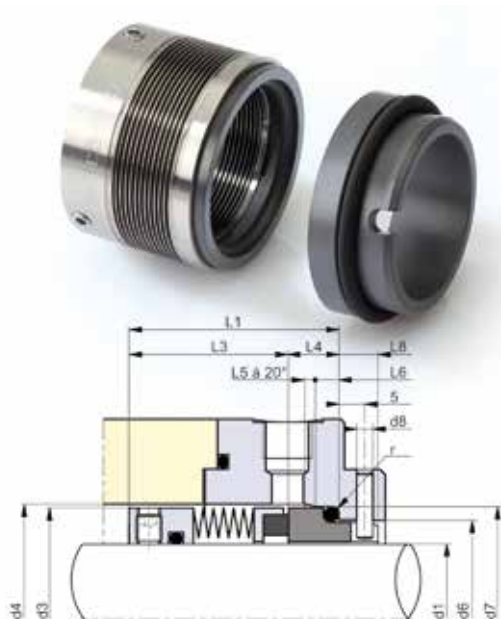


FLUIDS

All corrosive, abrasive and slightly clogging fluids

GUIDELINES, STANDARDS AND APPROVALS (ON REQUEST)

EC 1935-2004, FDA



d1 nominal h6	d3	d4 mini	d6 H 11	d7 H 8	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 NFE 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 25to 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 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



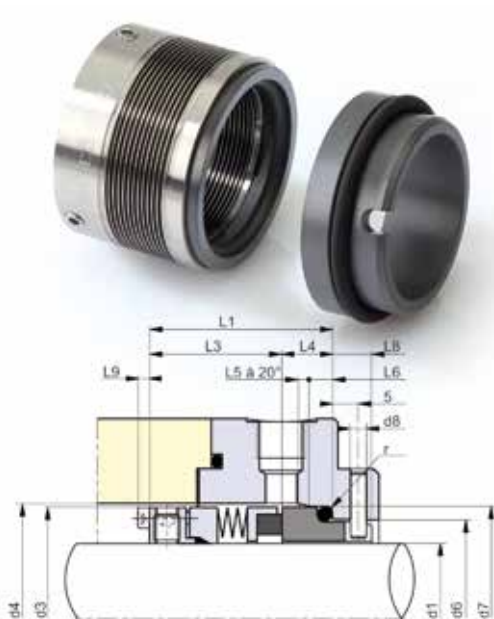
OPERATING PARAMETERS (NOT ASSOCIATED)

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 $T^{\circ} < 270^{\circ}\text{C}$, supplied for the friction face with FFKM O-ring. If $T^{\circ} > 270^{\circ}\text{C}$, 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 NFE 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 25to 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.

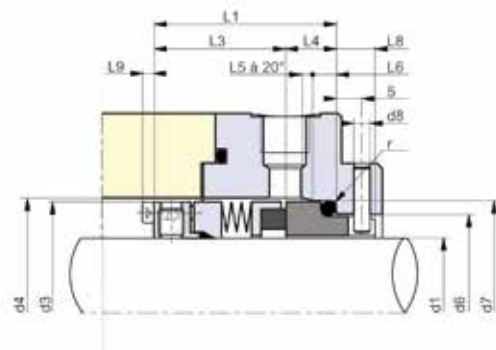
Single-seal

LATTYSEAL B 17110 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 $T < 270^{\circ}\text{C}$, supplied for the friction face with FFKM O-ring. If $T > 270^{\circ}\text{C}$, 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.

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 25to 55 - 2,5 mm for d1 58 to 100.

IMPERIAL VERSION

d1 nominal in	d1 nominal inches	d3	d4 mini	d6 H11	d7 H8	L1	L3	L4	L5 ± 0,1	L6 ± 0,1	L8	L9
1"	1.000	1,563	1,642	1,339	1,575	2,059	1,685	0,374	0,079	0,197	0,295	0,126
1"1/8	1.125	1,685	1,764	1,535	1,772	1,976	1,563	0,413	0,079	0,197	0,295	0,126
1"1/4	1.250	1,811	1,969	1,654	1,890	1,976	1,563	0,413	0,079	0,197	0,295	0,126
1"3/8	1.375	1,937	2,094	1,732	1,969	2,165	1,752	0,413	0,079	0,197	0,295	0,126
1"1/2	1.500	2,169	2,327	1,929	2,205	2,205	1,752	0,453	0,079	0,236	0,335	0,165
1"5/8	1.625	2,295	2,453	2,126	2,402	2,205	1,752	0,453	0,079	0,236	0,335	0,165
1"3/4	1.750	2,421	2,579	2,205	2,480	2,205	1,752	0,453	0,079	0,236	0,335	0,165
1"7/8	1.875	2,543	2,701	2,323	2,598	2,205	1,752	0,453	0,079	0,236	0,335	0,165
2"	2.000	2,669	2,866	2,559	2,874	2,264	1,752	0,512	0,098	0,236	0,315	0,165
2"1/8	2.125	2,795	2,992	2,638	2,953	2,264	1,752	0,512	0,098	0,236	0,315	0,165
2"1/4	2.250	2,921	3,118	2,756	3,071	2,406	1,874	0,531	0,098	0,236	0,315	0,165
2"3/8	2.375	3,043	3,240	2,835	3,150	2,406	1,874	0,531	0,098	0,236	0,315	0,165
2"1/2	2.500	3,185	3,382	3,031	3,346	2,406	1,874	0,531	0,098	0,236	0,315	0,165
2"5/8	2.625	3,311	3,508	3,189	3,543	2,406	1,874	0,531	0,098	0,276	0,315	0,165
2"3/4	2.750	3,437	3,634	3,268	3,622	2,465	1,874	0,591	0,098	0,276	0,315	0,165
2"7/8	2.875	3,626	3,823	3,465	3,819	2,465	1,874	0,591	0,098	0,276	0,315	0,189
3"	3.000	3,752	3,949	3,465	3,819	2,465	1,874	0,591	0,098	0,276	0,315	0,189
3"1/8	3.125	3,874	4,071	3,740	4,134	2,465	1,874	0,591	0,118	0,276	0,315	0,189
3"1/4	3.250	4,000	4,197	3,937	4,331	2,504	1,874	0,630	0,118	0,276	0,315	0,189
3"3/8	3.375	4,126	4,323	3,937	4,331	2,504	1,874	0,630	0,118	0,276	0,315	0,189
3"1/2	3.500	4,252	4,449	4,134	4,528	2,504	1,874	0,630	0,118	0,276	0,315	0,189
3"5/8	3.625	4,374	4,571	4,331	4,724	2,504	1,874	0,630	0,118	0,276	0,315	0,189
3"3/4	3.750	4,500	4,697	4,331	4,724	2,504	1,874	0,630	0,118	0,276	0,315	0,189
3"7/8	3.875	4,626	4,823	4,528	4,921	2,504	1,874	0,630	0,118	0,276	0,315	0,189
4"	4.000	4,752	4,949	4,528	4,921	2,504	1,874	0,630	0,118	0,276	0,315	0,189

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

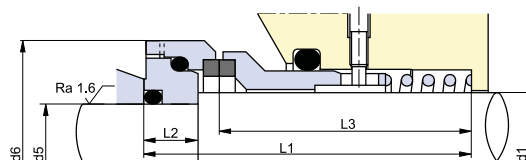
Dynamic sealing through complete, balanced mechanical seal

FOR HIGHLY ABRASIVE OR VISCOUS FLUIDS

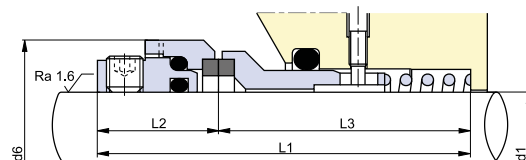
- STATIONARY MECHANICAL SEAL WITH SINGLE PROTECTED SPRING
- SURFACE TREATMENT IS POSSIBLE TO INCREASES SEAL LIFE EXPECTANCY
- AVAILABLE WITH EXTERNAL SCREWED SPRING (REV) OR EXTERNAL PINCHED SPRING (REP), INTERNAL SCREWED SPRING (RIV) OR INTERNAL PINCHED SPRING (RIP)



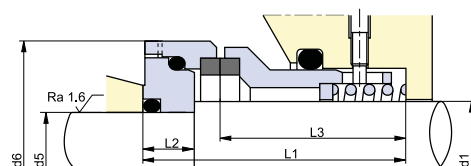
▼ LATTYSEAL B 10712 REP



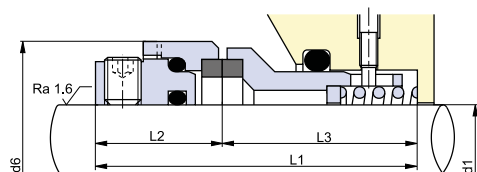
▼ LATTYSEAL B 10712 REV



▼ LATTYSEAL B 10712 RIP



▼ LATTYSEAL B 10712 RIV



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)

EC 1935-2004, FDA

Single-seal

LATTYSEAL B 10712 REV/REP

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	REP		REV		L3	L4 ±0,1	L5 ±0,1	L6 -0 -0,5	L7 ±0,1	L8 ±0,1
										L1 ±1	L2 ±0,1	L1 ±1	L2 ±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

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	RIV		RIP		L3	L4 ±0,1	L5 ±0,1	L7 ±0,1	L8 ±0,1
									L1 ±1	L2 ±0,1	L1 ±1	L2 ±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.

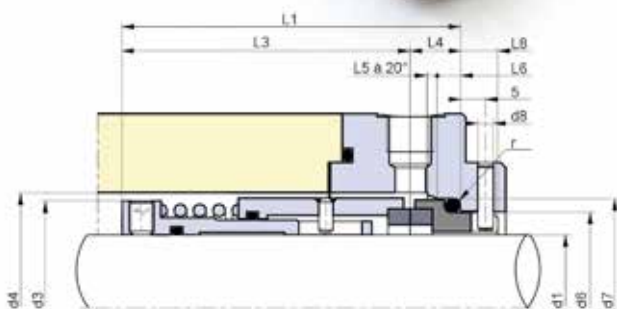
Single-seal

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)

EC 1935-2004, FDA

d1 nominal h6	d3	d4 mini	d6 H 11	d7 H 8	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 (tight 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

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



TRAININGS

AIM: Understand the different leak occurrences in:

Seals for rotary units:

- mechanical seals and packings
- for the dynamic sealing
- of pumps or stirring processes.



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REFURBISHMENT OF YOUR MECHANICAL SEALS

Our service centres have all the necessary repair and reconditioning tools and equipment (ultrasonic bath, milling machine, lathe, biological degreasing fountain, grinding machine, lapping machine, surface evenness inspection, dimensional inspection...) in order to extend the lifetime of your equipment with retrofitting, lower maintenance costs



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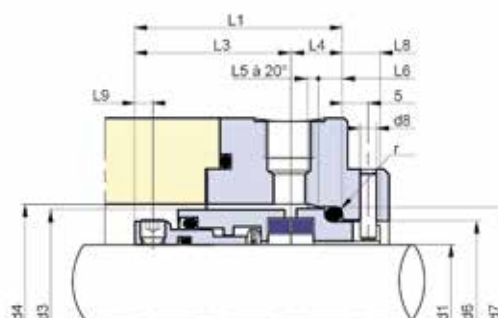
Single-seal

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

EC 1935-2004 (on request), FDA (on standard)

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"	1,339	1,142	1,378	0,118	1,476	1,122	0,354	0,079	0,197	0,295	0,138
0.875	7/8"	1,417	1,220	1,457	0,118	1,476	1,122	0,354	0,079	0,197	0,295	0,138
1	1"	1,535	1,339	1,575	0,118	1,575	1,201	0,374	0,079	0,197	0,295	0,138
1.125	1 1/8"	1,732	1,535	1,772	0,118	1,673	1,260	0,413	0,079	0,197	0,295	0,138
1.25	1 1/4"	1,811	1,654	1,890	0,118	1,673	1,260	0,413	0,079	0,197	0,295	0,138
1.375	1 3/8"	1,929	1,732	1,969	0,118	1,673	1,260	0,413	0,079	0,197	0,295	0,138
1.5	1 1/2"	2,126	1,929	2,205	0,157	1,772	1,319	0,453	0,079	0,236	0,335	0,157
1.625	1 5/8"	2,323	2,126	2,402	0,157	1,772	1,319	0,453	0,079	0,236	0,335	0,157
1.75	1 3/4"	2,402	2,205	2,480	0,157	1,772	1,319	0,453	0,079	0,236	0,335	0,157
1.875	1 7/8"	2,520	2,323	2,598	0,157	1,772	1,319	0,453	0,079	0,236	0,346	0,157
2	2"	2,717	2,559	2,874	0,157	1,870	1,358	0,512	0,098	0,236	0,315	0,157
2.125	2 1/8"	2,795	2,638	2,953	0,157	1,870	1,358	0,512	0,098	0,236	0,315	0,157
2.25	2 1/4"	3,071	2,756	3,071	0,157	2,067	1,535	0,531	0,098	0,236	0,315	0,197
2.375	2 3/8"	3,150	2,835	3,150	0,157	2,067	1,535	0,531	0,098	0,236	0,315	0,197
2.5	2 1/2"	3,346	3,031	3,346	0,157	2,067	1,535	0,531	0,098	0,236	0,315	0,197
2.625	2 5/8"	3,465	3,189	3,543	0,157	2,067	1,535	0,531	0,098	0,276	0,323	0,197
2.75	2 3/4"	3,543	3,268	3,622	0,157	2,362	1,772	0,591	0,098	0,276	0,323	0,197
2.875	2 7/8"	3,898	3,465	3,819	0,157	2,362	1,772	0,591	0,098	0,276	0,323	0,197
3	3"	3,937	3,465	3,819	0,157	2,362	1,772	0,591	0,098	0,276	0,323	0,197
3.125	3 1/8"	4,094	3,740	4,134	0,157	2,362	1,772	0,591	0,118	0,276	0,315	0,197
3.25	3 1/4"	4,291	3,937	4,331	0,157	2,362	1,732	0,630	0,118	0,276	0,315	0,197
3.375	3 3/8"	4,331	3,937	4,331	0,157	2,362	1,732	0,630	0,118	0,276	0,315	0,197
3.5	3 1/2"	4,488	4,134	4,528	0,157	2,559	1,929	0,630	0,118	0,276	0,315	0,197
3.625	3 5/8"	4,685	4,331	4,724	0,157	2,559	1,929	0,630	0,118	0,276	0,315	0,197
3.75	3 3/4"	4,685	4,331	4,724	0,157	2,559	1,929	0,630	0,118	0,276	0,315	0,197
3.875	3 7/8"	4,882	4,528	4,921	0,157	2,559	1,929	0,630	0,118	0,276	0,307	0,197
4	4"	4,961	4,528	4,921	0,157	2,559	1,929	0,630	0,118	0,276	0,307	0,197

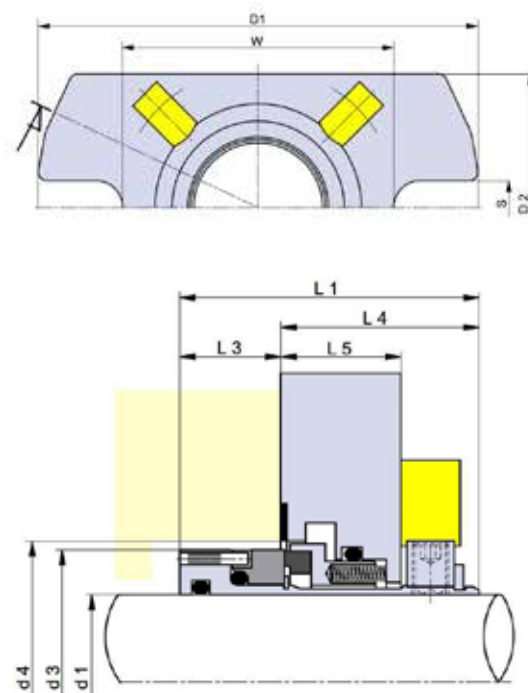
Single-seal

CARTSEAL B22812

High-performance cartridge seal

FACTORY-PRESET MECHANICAL SEAL

- ALLOWING HIGH ROTATION SPEED EVEN WITH SHAFTS WITH SLIGHT ANGULAR OFFSET
- EASY INSTALLATION THANKS TO TWO WIDE SLOTS IN THE FLANGE
- ATEX APPROVALS



OPERATING PARAMETERS (NOT ASSOCIATED)

Pressure : 15 bar
Temperature : -20 °C to 180°C
Speed : 15 m/s

COMPOSITION

Friction faces : U6 B V: Silicon carbide / resin-impregnated carbon / FKM O-ring or U6 U6 V: Silicon carbide / silicon carbide / FKM O-ring (on request)

Mechanical seal with flush (feeding device for the faces) Factory-preset mechanical seal, there is no setting required during installation. No repositioning of the setting clamps prior to starting up. Simple, fast and easy installation. Imperial version available. The new mechanical seal CARTseal B 22812 is approved ATEX. For centrifugal pumps, volumetric pumps, vertical and horizontal agitators, mixers

TYPES OF INDUSTRIES



FLUIDS

All corrosive, abrasive and slightly clogging fluids

GUIDELINES, STANDARDS AND APPROVALS

ATEX (on request)

Single-seal

CARTSEAL B22812

High-performance cartridge seal

METRIC VERSION

d1 nominal h6	d3	d4 mini	d4 maxi	L1	L3	L4	L5	L6	D1	D2	S	W
25	40	41	51	50	17	33	20	10	103	57	12,5	58
28	43	44	52	50	17	33	20	10	103	58	12,5	59
30	45	46	56	50	17	33	20	10	103	62	12,5	63
32	47	48	57	50	17	33	20	10	108	63	12,5	64
33	48	49	57	50	17	33	20	10	108	63	12,5	64
35	50	51	61	50	17	33	20	10	113	67	12,5	68
38	55	58	66	50	17	33	20	10	124	72	12,5	73
40	57	60	68	50	17	33	20	10	123	74	14,7	75
43	60	63	70	50	17	33	20	10	131	76	14,7	77
45	62	65	73	50	17	33	20	10	140	79	14,7	80
48	65	68	75	50	17	33	20	10	140	81	14,7	82
50	67	70	78	50	17	33	20	10	149	84	14,7	85
53	70	73	78	50	17	33	20	10	149	87	14,7	88
55	72	75	83	50	17	33	20	10	148	89	18	90
60	77	85	91	50	17	33	20	10	155	98	18	98
65	82	90	98	50	17	33	20	10	163	105	18	105
70	87	95	108	50	17	33	20	10	178	115	18	115

IMPERIAL VERSION

d1 nominal h6	d3	d4 mini	d4 maxi	L1	L3	L4	L5	L6	D1	D2	S	W	
1"	1.000	1.575	1.614	2.008	1.969	0.669	1.299	0.787	0.394	4.055	2.244	0.492	2.283
1" 1/8	1.125	1.772	1.811	2.205	1.969	0.669	1.299	0.787	0.394	4.055	2.441	0.492	2.480
1" 1/4	1.250	1.850	1.890	2.244	1.969	0.669	1.299	0.787	0.394	4.252	2.480	0.492	2.520
1" 3/8	1.375	1.969	2.008	2.402	1.969	0.669	1.299	0.787	0.394	4.449	2.638	0.492	2.677
1" 1/2	1.500	2.165	2.283	2.598	1.969	0.669	1.299	0.787	0.394	4.882	2.835	0.492	2.874
1" 5/8	1.625	2.362	2.480	2.756	1.969	0.669	1.299	0.787	0.394	5.157	2.992	0.579	3.031
1" 3/4	1.750	2.441	2.559	2.874	1.969	0.669	1.299	0.787	0.394	5.512	3.110	0.579	3.150
1" 7/8	1.875	2.559	2.677	2.953	1.969	0.669	1.299	0.787	0.394	5.512	3.189	0.579	3.228
2"	2.000	2.756	2.874	3.071	1.969	0.669	1.299	0.787	0.394	5.866	3.425	0.579	3.465
2" 1/8	2.125	2.835	2.953	3.268	1.969	0.669	1.299	0.787	0.394	5.827	3.504	0.709	3.543
2" 3/8	2.375	3.031	3.346	3.583	1.969	0.669	1.299	0.787	0.394	6.102	3.858	0.709	3.858
2" 1/2	2.500	3.228	3.543	3.858	1.969	0.669	1.299	0.787	0.394	6.417	4.134	0.709	4.134
2" 3/4	2.750	3.425	3.740	4.252	1.969	0.669	1.299	0.787	0.394	7.008	4.528	0.709	4.528

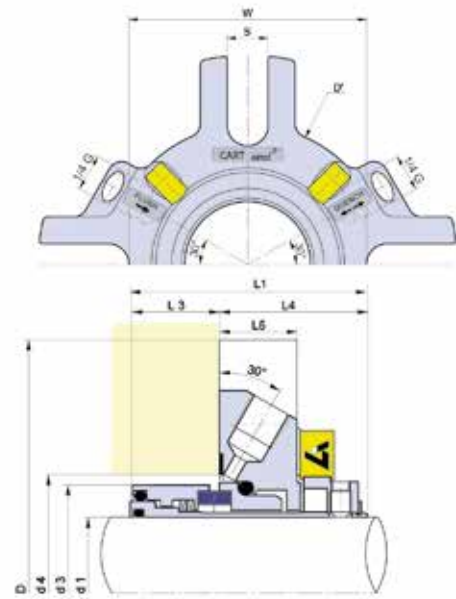
Cartridge version

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)

EC 1935-2004, FDA

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"	1,654	1,811	2,205	2,677	0,945	1,732	0,906	4,134	3,268	0,492	2,480
1.125	1"1/8	1,850	2,008	2,402	2,677	0,945	1,732	0,906	4,528	3,346	0,492	2,677
1.25	1"1/4	1,929	2,283	2,598	2,677	0,945	1,732	0,906	4,921	3,543	0,492	2,874
1.375	1"3/8	2,126	2,283	2,598	2,756	1,024	1,732	0,906	4,921	3,543	0,492	2,874
1.5	1"1/2	2,323	2,480	2,756	2,795	1,063	1,732	0,906	5,236	3,740	0,579	3,031
1.625	1"5/8	2,520	2,677	2,953	2,795	1,063	1,732	0,906	5,551	3,937	0,579	3,228
1.75	1"3/4	2,520	2,756	3,071	2,776	1,043	1,732	0,906	5,906	4,016	0,579	3,346
1.875	1"7/8	2,717	2,953	3,268	2,854	1,122	1,732	0,906	5,906	4,213	0,709	3,543
2	2"	3,071	3,346	3,583	2,953	1,220	1,732	0,906	6,181	4,843	0,709	3,858
2.125	2"1/8	3,071	3,346	3,583	2,953	1,220	1,732	0,906	6,181	4,843	0,709	3,858
2.25	2"1/4	3,268	3,543	3,858	2,913	1,181	1,732	0,906	6,496	5,039	0,709	4,134
2.375	2"3/8	3,268	3,543	3,858	2,913	1,181	1,732	0,906	6,496	5,039	0,709	4,134
2.5	2"1/2	3,465	3,740	4,252	2,913	1,181	1,732	0,906	7,087	5,197	0,709	4,528
2.625	2"5/8	3,898	4,094	4,646	3,287	1,358	1,929	1,102	7,480	5,630	0,709	5,079
2.75	2"3/4	3,898	4,094	4,646	3,287	1,358	1,929	1,102	7,480	5,630	0,709	5,079

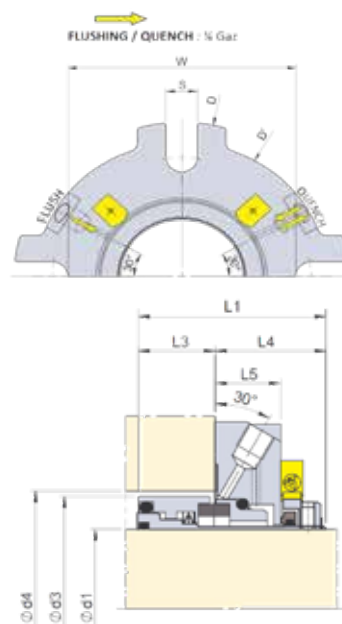
Cartridge version

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)

EC 1935-2004, FDA

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"	1,654	1,811	2,205	2,677	0,945	1,732	0,906	4,134	3,268	0,492	2,480
1.125	1"1/8	1,850	2,008	2,402	2,677	0,945	1,732	0,906	4,528	3,346	0,492	2,677
1.25	1"1/4	1,929	2,283	2,598	2,677	0,945	1,732	0,906	4,921	3,543	0,492	2,874
1.375	1"3/8	2,126	2,283	2,598	2,756	1,024	1,732	0,906	4,921	3,543	0,492	2,874
1.5	1"1/2	2,323	2,480	2,756	2,795	1,063	1,732	0,906	5,236	3,740	0,579	3,031
1.625	1"5/8	2,520	2,677	2,953	2,795	1,063	1,732	0,906	5,551	3,937	0,579	3,228
1.75	1"3/4	2,520	2,756	3,071	2,776	1,043	1,732	0,906	5,906	4,016	0,579	3,346
1.875	1"7/8	2,717	2,953	3,268	2,854	1,122	1,732	0,906	5,906	4,213	0,709	3,543
2	2"	3,071	3,346	3,583	2,953	1,220	1,732	0,906	6,181	4,843	0,709	3,858
2.125	2"1/8	3,071	3,346	3,583	2,953	1,220	1,732	0,906	6,181	4,843	0,709	3,858
2.25	2"1/4	3,268	3,543	3,858	2,913	1,181	1,732	0,906	6,496	5,039	0,709	4,134
2.375	2"3/8	3,268	3,543	3,858	2,913	1,181	1,732	0,906	6,496	5,039	0,709	4,134
2.5	2"1/2	3,465	3,740	4,252	2,913	1,181	1,732	0,906	7,087	5,197	0,709	4,528
2.625	2"5/8	3,898	4,094	4,646	3,287	1,358	1,929	1,102	7,480	5,630	0,709	5,079
2.75	2"3/4	3,898	4,094	4,646	3,287	1,358	1,929	1,102	7,480	5,630	0,709	5,079

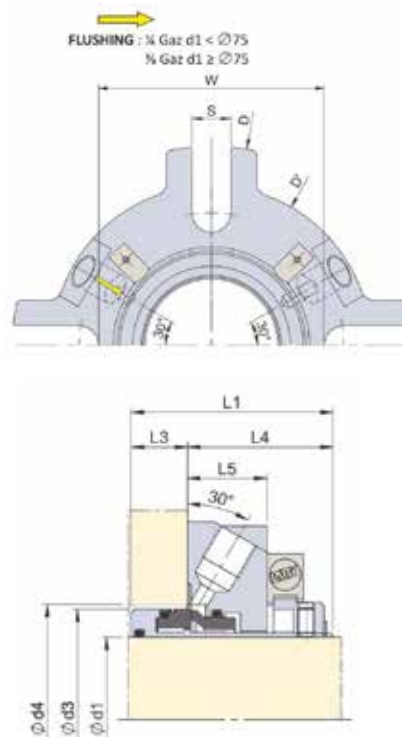
Cartridge version

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 HIGHROTATION 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 : Gaz - L6 : Flushing ports position

TYPES OF INDUSTRIES



FLUIDS

All corrosive, abrasive and slightly clogging fluids.

GUIDELINES, STANDARDS AND APPROVALS (STANDARD)

EC 1935-2004, FDA, ACS, ATEX

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	24	105	95	12.5	58
28	43	44	52	61	17	44	24	105	99	12.5	59
30	45	46	56	61	17	44	24	105	99	12.5	63
32	47	48	57	61	17	44	24	110	101	12.5	64
33	48	49	57	61	17	44	24	110	101	12.5	64
35	50	51	61	61	17	44	24	115	102	12.5	68
38	55	58	66	61	17	44	24	125	105	12.5	73
40	57	60	68	61	17	44	24	125	110	14.7	75
43	60	63	70	61	17	44	24	133	113	14.7	77
45	62	65	73	61	17	44	24	141	115	14.7	80
48	65	68	75	61	17	44	24	141	118	14.7	82
50	67	70	78	61	17	44	24	150	120	14.7	85
53	70	73	81	61	17	44	24	150	123	14.7	88
55	72	75	83	61	17	44	24	150	125	18	90
60	80	85	91	61	17	44	24	157	134	18	98
65	85	90	98	61	17	44	24	165	137	18	105
70	90	95	108	61	17	44	24	180	142	18	115
75	100	104	118	73	20	53	29	190	162	18	129
80	105	109	124	73	20	53	29	195	167	18	135
85	110	114	128	73	20	53	29	200	172	20	137
90	115	119	135	73	20	53	29	205	177	20	146
95	120	124	138	73	20	53	29	210	182	20	149
100	126	129	144	73	20	53	29	215	187	20	155

IMPERIAL VERSION

d1 nominal h6	d3	d4 mini	d4 maxi	L1	L3	L4	L5	D	D'	S	W	
1"	1	1.575	1.614	2.008	2.402	0.669	1.732	0.945	4.134	3.740	0.492	2.283
1"1/8	1.125	1.772	1.811	2.205	2.402	0.669	1.732	0.945	4.134	3.898	0.492	2.480
1"1/4	1.25	1.850	1.890	2.244	2.402	0.669	1.732	0.945	4.331	3.976	0.492	2.520
1"3/8	1.375	1.969	2.008	2.402	2.402	0.669	1.732	0.945	4.528	4.016	0.492	2.677
1"1/2	1.5	2.165	2.283	2.598	2.402	0.669	1.732	0.945	4.921	4.252	0.492	2.874
1"5/8	1.625	2.362	2.480	2.756	2.402	0.669	1.732	0.945	5.236	4.449	0.579	3.031
1"3/4	1.75	2.441	2.559	2.874	2.402	0.669	1.732	0.945	5.551	4.528	0.579	3.150
1"7/8	1.875	2.559	2.677	2.953	2.402	0.669	1.732	0.945	5.551	4.646	0.579	3.228
2"	2	2.756	2.874	3.189	2.402	0.669	1.732	0.945	5.906	4.843	0.579	3.465
2"1/8	2.125	2.835	2.953	3.268	2.402	0.669	1.732	0.945	5.906	4.921	0.709	3.543
2"1/4	2.25	3.071	3.268	3.543	2.402	0.669	1.732	0.945	6.181	5.197	0.709	3.819
2"3/8	2.375	3.150	3.346	3.583	2.402	0.669	1.732	0.945	6.181	5.276	0.709	3.858
2"1/2	2.5	3.346	3.543	3.858	2.402	0.669	1.732	0.945	6.496	5.394	0.709	4.134
2"5/8	2.625	3.465	3.661	3.937	2.402	0.669	1.732	0.945	6.496	5.512	0.709	4.213
2"3/4	2.75	3.543	3.740	4.252	2.402	0.669	1.732	0.945	7.087	5.591	0.709	4.528
2"7/8	2.875	3.937	4.094	4.646	2.874	0.787	2.087	1.142	7.480	6.378	0.709	5.079
3"	3	3.937	4.094	4.646	2.874	0.787	2.087	1.142	7.480	6.378	0.709	5.079
3"1/8	3.125	4.134	4.291	4.882	2.874	0.787	2.087	1.142	7.677	6.575	0.709	5.315
3"1/4	3.25	4.331	4.488	5.039	2.874	0.787	2.087	1.142	7.874	6.772	0.787	5.394
3"3/8	3.275	4.331	4.488	5.039	2.874	0.787	2.087	1.142	7.874	6.772	0.787	5.394
3"1/2	3.5	4.528	4.685	5.315	2.874	0.787	2.087	1.142	8.071	6.969	0.787	5.748
3"5/8	3.625	4.724	4.882	5.433	2.874	0.787	2.087	1.142	8.268	7.165	0.787	5.866
3"3/4	3.75	4.724	4.882	5.433	2.874	0.787	2.087	1.142	8.268	7.165	0.787	5.866
4"	4	4.961	5.079	5.669	2.874	0.787	2.087	1.142	8.465	7.362	0.787	6.102

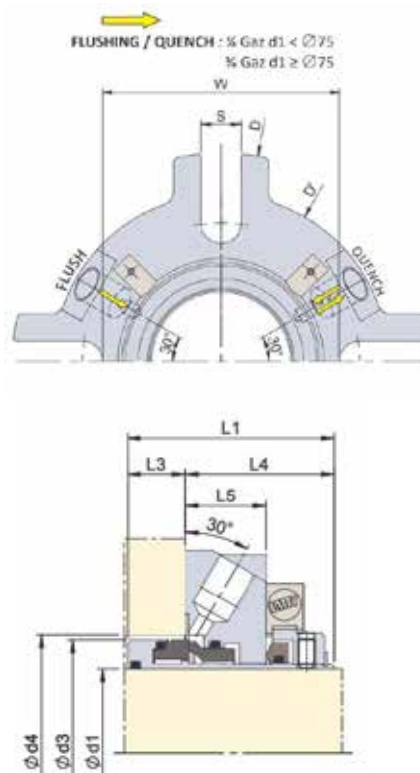
Cartridge version

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 : 1/4 Gaz
QUENCH : 1/4 Gaz

TYPES OF INDUSTRIES



FLUIDS

All corrosive, abrasive and slightly clogging fluids

GUIDELINES, STANDARDS AND APPROVALS (STANDARD)

EC 1935-2004, FDA, ACS, ATEX

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
75	100	104	118	73	20	53	29	190	162	18	129
80	105	109	124	73	20	53	29	195	167	18	135
85	110	114	128	73	20	53	29	200	172	20	137
90	115	119	135	73	20	53	29	205	177	20	146
95	120	124	138	73	20	53	29	210	182	20	149
100	126	129	144	73	20	53	29	215	187	20	155

IMPERIAL VERSION

d1 nominal h6	d3	d4 mini	d4 maxi	L1	L3	L4	L5	D	D'	S	W	
1"	1	1.575	1.614	2.008	2.402	0.669	1.732	0.945	4.134	3.740	0.492	2.283
1"1/8	1.125	1.772	1.811	2.205	2.402	0.669	1.732	0.945	4.134	3.898	0.492	2.480
1"1/4	1.25	1.850	1.890	2.244	2.402	0.669	1.732	0.945	4.331	3.976	0.492	2.520
1"3/8	1.375	1.969	2.008	2.402	2.402	0.669	1.732	0.945	4.528	4.016	0.492	2.677
1"1/2	1.5	2.165	2.283	2.598	2.402	0.669	1.732	0.945	4.921	4.252	0.492	2.874
1"5/8	1.625	2.362	2.480	2.756	2.402	0.669	1.732	0.945	5.236	4.449	0.579	3.031
1"3/4	1.75	2.441	2.559	2.874	2.402	0.669	1.732	0.945	5.551	4.528	0.579	3.150
1"7/8	1.875	2.559	2.677	2.953	2.402	0.669	1.732	0.945	5.551	4.646	0.579	3.228
2"	2	2.756	2.874	3.189	2.402	0.669	1.732	0.945	5.906	4.843	0.579	3.465
2"1/8	2.125	2.835	2.953	3.268	2.402	0.669	1.732	0.945	5.906	4.921	0.709	3.543
2"1/4	2.25	3.071	3.268	3.543	2.402	0.669	1.732	0.945	6.181	5.197	0.709	3.819
2"3/8	2.375	3.150	3.346	3.583	2.402	0.669	1.732	0.945	6.181	5.276	0.709	3.858
2"1/2	2.5	3.346	3.543	3.858	2.402	0.669	1.732	0.945	6.496	5.394	0.709	4.134
2"5/8	2.625	3.465	3.661	3.937	2.402	0.669	1.732	0.945	6.496	5.512	0.709	4.213
2"3/4	2.75	3.543	3.740	4.252	2.402	0.669	1.732	0.945	7.087	5.591	0.709	4.528
2"7/8	2.875	3.937	4.094	4.646	2.874	0.787	2.087	1.142	7.480	6.378	0.709	5.079
3"	3	3.937	4.094	4.646	2.874	0.787	2.087	1.142	7.480	6.378	0.709	5.079
3"1/8	3.125	4.134	4.291	4.882	2.874	0.787	2.087	1.142	7.677	6.575	0.709	5.315
3"1/4	3.25	4.331	4.488	5.039	2.874	0.787	2.087	1.142	7.874	6.772	0.787	5.394
3"3/8	3.275	4.331	4.488	5.039	2.874	0.787	2.087	1.142	7.874	6.772	0.787	5.394
3"1/2	3.5	4.528	4.685	5.315	2.874	0.787	2.087	1.142	8.071	6.969	0.787	5.748
3"5/8	3.625	4.724	4.882	5.433	2.874	0.787	2.087	1.142	8.268	7.165	0.787	5.866
3"3/4	3.75	4.724	4.882	5.433	2.874	0.787	2.087	1.142	8.268	7.165	0.787	5.866
4"	4	4.961	5.079	5.669	2.874	0.787	2.087	1.142	8.465	7.362	0.787	6.102

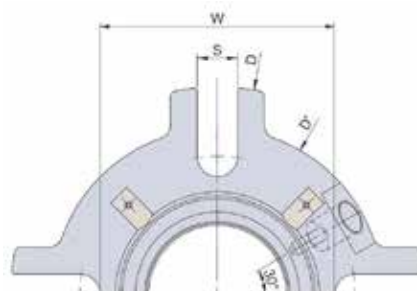
Cartridge version

CARTSEAL B 24610 PP

Dynamic sealing through single cartridge seal

VERSION BALANCED 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
Delivered with FKM gasket (v4) or EPDM (E1)

TYPES OF INDUSTRIES



FLUIDS

All corrosive, abrasive and slightly clogging fluids

GUIDELINES, STANDARDS AND APPROVALS (STANDARD)

EC 1935-2004, FDA, ACS, ATEX

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
75	100	104	118	73	20	53	29	190	162	18	129
80	105	109	124	73	20	53	29	195	167	18	135
85	110	114	128	73	20	53	29	200	172	20	137
90	115	119	135	73	20	53	29	205	177	20	146
95	120	124	138	73	20	53	29	210	182	20	149
100	126	129	144	73	20	53	29	215	187	20	155

IMPERIAL VERSION

d1 nominal h6	d3	d4 mini	d4 maxi	L1	L3	L4	L5	D	D'	S	W	
1"	1	1.575	1.614	2.008	2.402	0.669	1.732	0.945	4.134	3.740	0.492	2.283
1"1/8	1.125	1.772	1.811	2.205	2.402	0.669	1.732	0.945	4.134	3.898	0.492	2.480
1"1/4	1.25	1.850	1.890	2.244	2.402	0.669	1.732	0.945	4.331	3.976	0.492	2.520
1"3/8	1.375	1.969	2.008	2.402	2.402	0.669	1.732	0.945	4.528	4.016	0.492	2.677
1"1/2	1.5	2.165	2.283	2.598	2.402	0.669	1.732	0.945	4.921	4.252	0.492	2.874
1"5/8	1.625	2.362	2.480	2.756	2.402	0.669	1.732	0.945	5.236	4.449	0.579	3.031
1"3/4	1.75	2.441	2.559	2.874	2.402	0.669	1.732	0.945	5.551	4.528	0.579	3.150
1"7/8	1.875	2.559	2.677	2.953	2.402	0.669	1.732	0.945	5.551	4.646	0.579	3.228
2"	2	2.756	2.874	3.189	2.402	0.669	1.732	0.945	5.906	4.843	0.579	3.465
2"1/8	2.125	2.835	2.953	3.268	2.402	0.669	1.732	0.945	5.906	4.921	0.709	3.543
2"1/4	2.25	3.071	3.268	3.543	2.402	0.669	1.732	0.945	6.181	5.197	0.709	3.819
2"3/8	2.375	3.150	3.346	3.583	2.402	0.669	1.732	0.945	6.181	5.276	0.709	3.858
2"1/2	2.5	3.346	3.543	3.858	2.402	0.669	1.732	0.945	6.496	5.394	0.709	4.134
2"5/8	2.625	3.465	3.661	3.937	2.402	0.669	1.732	0.945	6.496	5.512	0.709	4.213
2"3/4	2.75	3.543	3.740	4.252	2.402	0.669	1.732	0.945	7.087	5.591	0.709	4.528
2"7/8	2.875	3.937	4.094	4.646	2.874	0.787	2.087	1.142	7.480	6.378	0.709	5.079
3"	3	3.937	4.094	4.646	2.874	0.787	2.087	1.142	7.480	6.378	0.709	5.079
3"1/8	3.125	4.134	4.291	4.882	2.874	0.787	2.087	1.142	7.677	6.575	0.709	5.315
3"1/4	3.25	4.331	4.488	5.039	2.874	0.787	2.087	1.142	7.874	6.772	0.787	5.394
3"3/8	3.275	4.331	4.488	5.039	2.874	0.787	2.087	1.142	7.874	6.772	0.787	5.394
3"1/2	3.5	4.528	4.685	5.315	2.874	0.787	2.087	1.142	8.071	6.969	0.787	5.748
3"5/8	3.625	4.724	4.882	5.433	2.874	0.787	2.087	1.142	8.268	7.165	0.787	5.866
3"3/4	3.75	4.724	4.882	5.433	2.874	0.787	2.087	1.142	8.268	7.165	0.787	5.866
4"	4	4.961	5.079	5.669	2.874	0.787	2.087	1.142	8.465	7.362	0.787	6.102

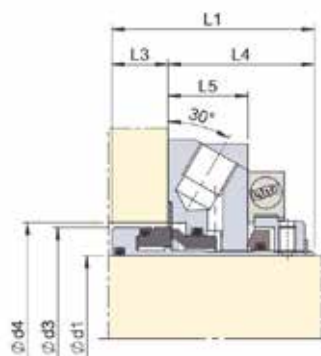
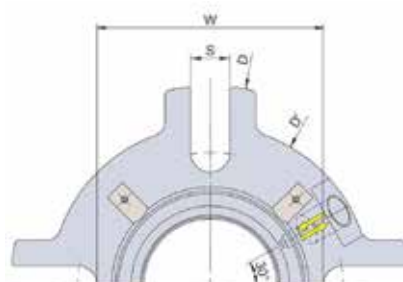
Cartridge version

CARTSEAL B 24610 PPQ

Dynamic sealing through single cartridge seal

VERSION 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 : ¹/₄ Gaz Delivered with FKM gasket (v4) or EPDM (E1)

TYPES OF INDUSTRIES



FLUIDS

All corrosive, abrasive and slightly clogging fluids

GUIDELINES, STANDARDS AND APPROVALS (STANDARD)

EC 1935-2004, FDA, ACS, ATEX

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
75	100	104	118	73	20	53	29	190	162	18	129
80	105	109	124	73	20	53	29	195	167	18	135
85	110	114	128	73	20	53	29	200	172	20	137
90	115	119	135	73	20	53	29	205	177	20	146
95	120	124	138	73	20	53	29	210	182	20	149
100	126	129	144	73	20	53	29	215	187	20	155

IMPERIAL VERSION

d1 nominal h6	d3	d4 mini	d4 maxi	L1	L3	L4	L5	D	D'	S	W	
1"	1	1.575	1.614	2.008	2.402	0.669	1.732	0.945	4.134	3.740	0.492	2.283
1"1/8	1.125	1.772	1.811	2.205	2.402	0.669	1.732	0.945	4.134	3.898	0.492	2.480
1"1/4	1.25	1.850	1.890	2.244	2.402	0.669	1.732	0.945	4.331	3.976	0.492	2.520
1"3/8	1.375	1.969	2.008	2.402	2.402	0.669	1.732	0.945	4.528	4.016	0.492	2.677
1"1/2	1.5	2.165	2.283	2.598	2.402	0.669	1.732	0.945	4.921	4.252	0.492	2.874
1"5/8	1.625	2.362	2.480	2.756	2.402	0.669	1.732	0.945	5.236	4.449	0.579	3.031
1"3/4	1.75	2.441	2.559	2.874	2.402	0.669	1.732	0.945	5.551	4.528	0.579	3.150
1"7/8	1.875	2.559	2.677	2.953	2.402	0.669	1.732	0.945	5.551	4.646	0.579	3.228
2"	2	2.756	2.874	3.189	2.402	0.669	1.732	0.945	5.906	4.843	0.579	3.465
2"1/8	2.125	2.835	2.953	3.268	2.402	0.669	1.732	0.945	5.906	4.921	0.709	3.543
2"1/4	2.25	3.071	3.268	3.543	2.402	0.669	1.732	0.945	6.181	5.197	0.709	3.819
2"3/8	2.375	3.150	3.346	3.583	2.402	0.669	1.732	0.945	6.181	5.276	0.709	3.858
2"1/2	2.5	3.346	3.543	3.858	2.402	0.669	1.732	0.945	6.496	5.394	0.709	4.134
2"5/8	2.625	3.465	3.661	3.937	2.402	0.669	1.732	0.945	6.496	5.512	0.709	4.213
2"3/4	2.75	3.543	3.740	4.252	2.402	0.669	1.732	0.945	7.087	5.591	0.709	4.528
2"7/8	2.875	3.937	4.094	4.646	2.874	0.787	2.087	1.142	7.480	6.378	0.709	5.079
3"	3	3.937	4.094	4.646	2.874	0.787	2.087	1.142	7.480	6.378	0.709	5.079
3"1/8	3.125	4.134	4.291	4.882	2.874	0.787	2.087	1.142	7.677	6.575	0.709	5.315
3"1/4	3.25	4.331	4.488	5.039	2.874	0.787	2.087	1.142	7.874	6.772	0.787	5.394
3"3/8	3.275	4.331	4.488	5.039	2.874	0.787	2.087	1.142	7.874	6.772	0.787	5.394
3"1/2	3.5	4.528	4.685	5.315	2.874	0.787	2.087	1.142	8.071	6.969	0.787	5.748
3"5/8	3.625	4.724	4.882	5.433	2.874	0.787	2.087	1.142	8.268	7.165	0.787	5.866
3"3/4	3.75	4.724	4.882	5.433	2.874	0.787	2.087	1.142	8.268	7.165	0.787	5.866
4"	4	4.961	5.079	5.669	2.874	0.787	2.087	1.142	8.465	7.362	0.787	6.102

Cartridge version

CARTSEAL B 24810 DB

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 HIGHROTATION 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). Delivered with FKM gasket (v4) or EPDM (E1)

TYPES OF INDUSTRIES



FLUIDS

All corrosive, abrasive and slightly clogging fluids.

GUIDELINES, STANDARDS AND APPROVALS (STANDARD)

EC 1935-2004, FDA, ACS, ATEX



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)

EC 1935-2004, FDA, ACS, ATEX

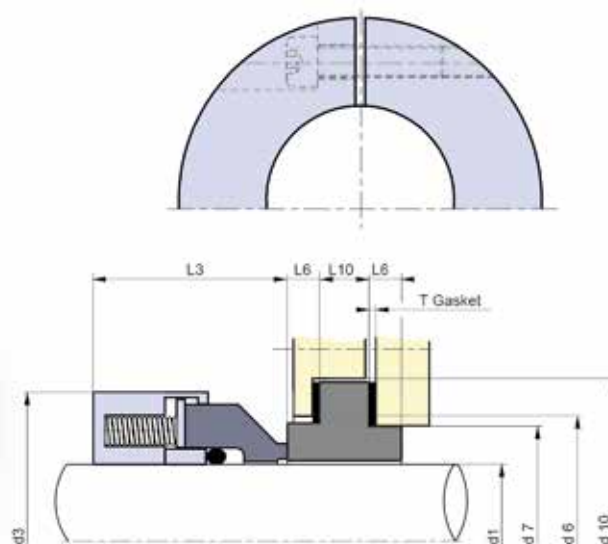
Single-seal

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)

EC 1935-2004, FDA, ATEX

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	1,732	1,476	1,437	1,890	1,496	0,189	0,315	0,031
0.875	7/8	1,890	1,594	1,563	2,008	1,496	0,189	0,315	0,031
1.000	1"	2,047	1,713	1,687	2,126	1,496	0,189	0,315	0,031
1.125	1 1/8	2,165	2,028	2,000	2,559	1,496	0,315	0,433	0,063
1.250	1 1/4	2,362	2,165	2,125	2,677	1,496	0,315	0,433	0,063
1.375	1 3/8	2,441	2,283	2,250	2,795	1,496	0,315	0,433	0,063
1.500	1 1/2	2,559	2,539	2,500	3,071	1,496	0,315	0,433	0,063
1.625	1 5/8	2,677	2,657	2,625	3,189	1,496	0,315	0,433	0,063
1.750	1 3/4	2,835	2,795	2,750	3,307	1,496	0,315	0,433	0,063
1.875	1 7/8	2,953	2,913	2,875	3,425	1,654	0,315	0,433	0,063
2.000	2"	3,071	3,150	3,125	3,819	1,654	0,374	0,563	0,063
2.125	2 1/8	3,150	3,287	3,250	3,937	1,654	0,374	0,563	0,063
2.250	2 1/4	3,268	3,406	3,375	4,055	1,654	0,374	0,563	0,063
2.375	2 3/8	3,386	3,524	3,500	4,173	1,654	0,374	0,563	0,063
2.500	2 1/2	3,543	3,661	3,625	4,331	1,654	0,374	0,563	0,063
2.625	2 5/8	3,858	3,780	3,750	4,449	1,654	0,374	0,563	0,063
2.750	2 3/4	3,858	3,898	3,875	4,567	1,654	0,374	0,563	0,063
2.875	2 7/8	4,134	3,976	3,937	4,606	1,654	0,374	0,563	0,063
3.000	3"	4,134	4,094	4,063	4,764	1,654	0,374	0,563	0,063
3.250	3 1/4	4,291	4,528	4,500	5,197	1,654	0,374	0,563	0,063
3.500	3 1/2	4,724	4,783	4,750	5,433	1,654	0,374	0,563	0,063
3.750	3 3/4	4,921	5,039	5,000	5,669	1,654	0,374	0,563	0,063
4.000	4"	5,118	5,276	5,250	5,945	1,654	0,374	0,563	0,063

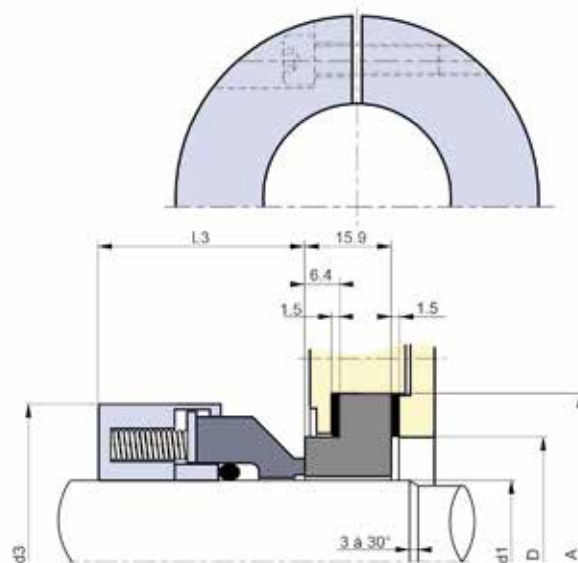
Single-seal

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 resinimpregnated carbon (B1) ceramic-impregnated carbon (V

TYPES OF INDUSTRIES



FLUIDS

All highly corrosive, abrasive and slightly clogging fluids.

GUIDELINES, STANDARDS AND APPROVALS (ON REQUEST)

EC 1935-2004, FDA, ATEX

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	1,969	1,496	1,988	1,575
1.000	1"	2,047	1,496	2,146	1,634
1.125	1"1/8	2,165	1,496	2,264	1,772
1.250	1"1/4	2,362	1,496	2,382	1,890
1.375	1"3/8	2,441	1,496	2,461	2,008
1.500	1"1/2	2,559	1,496	2,776	2,264
1.625	1"5/8	2,677	1,496	2,894	2,382
1.750	1"3/4	2,835	1,496	3,150	2,520
1.875	1"7/8	2,953	1,654	3,268	2,638
2.000	2"	3,071	1,654	3,524	2,756
2.125	2"1/8	3,150	1,654	3,780	2,894
2.250	2"1/4	3,268	1,654	3,898	3,012
2.375	2"3/8	3,386	1,654	3,917	3,071
2.500	2"1/2	3,543	1,654	4,134	3,268
2.625	2"5/8	3,858	1,654	4,272	3,386
2.750	2"3/4	3,858	1,654	4,528	3,465
2.875	2"7/8	4,134	1,654	4,646	3,583
3.000	3"	4,134	1,654	4,823	3,701
3.125	3"1/8	4,291	1,654	5,197	3,839
3.250	3"1/4	4,291	1,654	4,823	3,957
3.375	3"3/8	4,488	1,654	4,823	4,075
3.500	3"1/2	4,724	1,654	4,941	4,213
3.625	3"5/8	4,724	1,654	5,256	4,331
3.750	3"3/4	4,921	1,654	5,197	4,469
4.000	4"	5,118	1,654	6,201	4,724

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

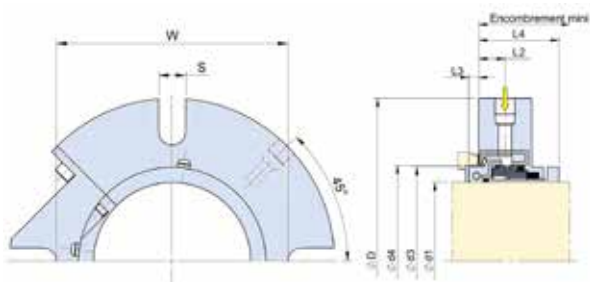
Flange, sleeve, screw: stainless steel 316 (1.4401)
Spring: hastelloy C
O-ring : FKM
Face of stationary fit: carbon or silicon carbide
Face of rotary fit: silicon carbide

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 single cartridge seal robust solution aimed for slurry pump applications

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.
- IMPERIAL VERSION ON REQUEST



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), nickelimpregnated 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.

Cartridge mixer DIN 28138

LATTYMIX RU 6812D

Sealing for stainless steel

DOUBLE CARTRIDGE MIXER SEAL DIN 28138

- STANDARD DOUBLE CARTRIDGE, FACTORY BUILT, TESTED AND PRESET READY TO BE INSTALLED
- SEALED FOR LIFE BEARINGS
- NO SETTING CLIPS NEEDED



OPERATING PARAMETERS (NOT ASSOCIATED)

Pressure : vacuum to < 8 bars in tank
Temperature : -40°C to +200°C
Speed : 5 m/s

COMPOSITION

Faces on product side: Silicon carbide (SiC) / Silicon carbide (SiC)
Faces on atmosphere side: Carbon (C) / Silicon carbide (SiC), (version Silicon carbide (SiC) / Silicon carbide (SiC) on request),
Secondary seals: Fluorocarbon (FFKM perfluoroelastomer on request)
Metal parts: Stainless steel 316L (DIN 1.4404)
Springs: Stainless steel

TYPES OF INDUSTRIES



FLUIDS

Powder, gas, steam, toxic / non-toxic fluids

APPROVALS

ATEX zone 1 and 2, temperature class T3/T4 depending on the process temperature,
FDA and EC 1935/2004 in standard version,
DIN 28136 for steel vessels,
DIN 28138 for mechanical seals,
DIN 28141 for flange connections,
DIN 28154 for shaft / box interfaces.

SHAFT DIAMETERS (MM)

40, 50, 60, 80, 100, 125 (other on request)



d3 h6 nominal	d1	n x d2.1	d2.2	d4	d5	d7	d11	a*	k3	h*	L1*	L2*	A	h2*	h3*	B	h4.1*	C	h4.2*
40	90	4 x 18	M16	110	M12	38	48	122	145	187.5	27	41	G 3/8	18	45	G 3/8	78.5	G 1/8	102
50	150	8 x 18	M16	176	M12	48	58	132	210	139.5	27	41	G 3/8	18	45	G 3/8	82.5	G 1/8	106
60	150	8 x 18	M16	176	M12	58	68	142	210	206.5	27	41.5	G 3/8	18	45	G 3/8	90	G 1/8	113.5
80	150	8 x 22	M20	204	M16	78	88	177	240	227	27	42	G 1/2	21	48	G 1/2	101.5	G 1/8	128
100	171	8 x 22	M20	234	M16	98	108	215	270	255.5	30	43	G 1/2	22	52	G 1/2	120	G 1/8	146.5
125	195	8 x 22	M20	260	M20	120	135	295	295	268.5	37	42	G 1/2	31.5	68.5	G 1/2	131	G 1/8	158

REFURBISHMENT OF YOUR MECHANICAL SEALS

Our service centres have all the necessary repair and reconditioning tools and equipment (ultrasonic bath, milling machine, lathe, biological degreasing fountain, grinding machine, lapping machine, surface evenness inspection, dimensional inspection...) in order to extend the lifetime of your equipment with retrofiting, lower maintenance costs



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TRAINING

AIM: Understand the different leak occurrences in:

Seals for rotary units:

- mechanical seals and packings
- for the dynamic sealing
- of pumps or stirring processes.



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PRESENTATION

SOLUTION

Designer for industrial sealing solutions

MECHANICAL SEAL FOR

Process pumps	75
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Auxiliary systems	86



Rotary and reciprocating units

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 or WRAS (on request)

OEM MECHANICAL SEAL ARE DISTRIBUTED BY :

MECASEAL – GROUPE LATTY

2 impasse du Crachet
59193 ERQUINGHEM LYS - FRANCE
Tel : +33 3(0)3 20 77 12 89
customer.service@mecaseal.com

MECANETANCHE - GROUPE LATTY

174, rue des Saules Z.I. Le Chapelier
38110 SAINT-JEAN DE SOUDAIN - FRANCE
Tel. +33 (0)4 74 97 01 09
customer.service@mecanetanche.com



Rotary unions

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 test 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

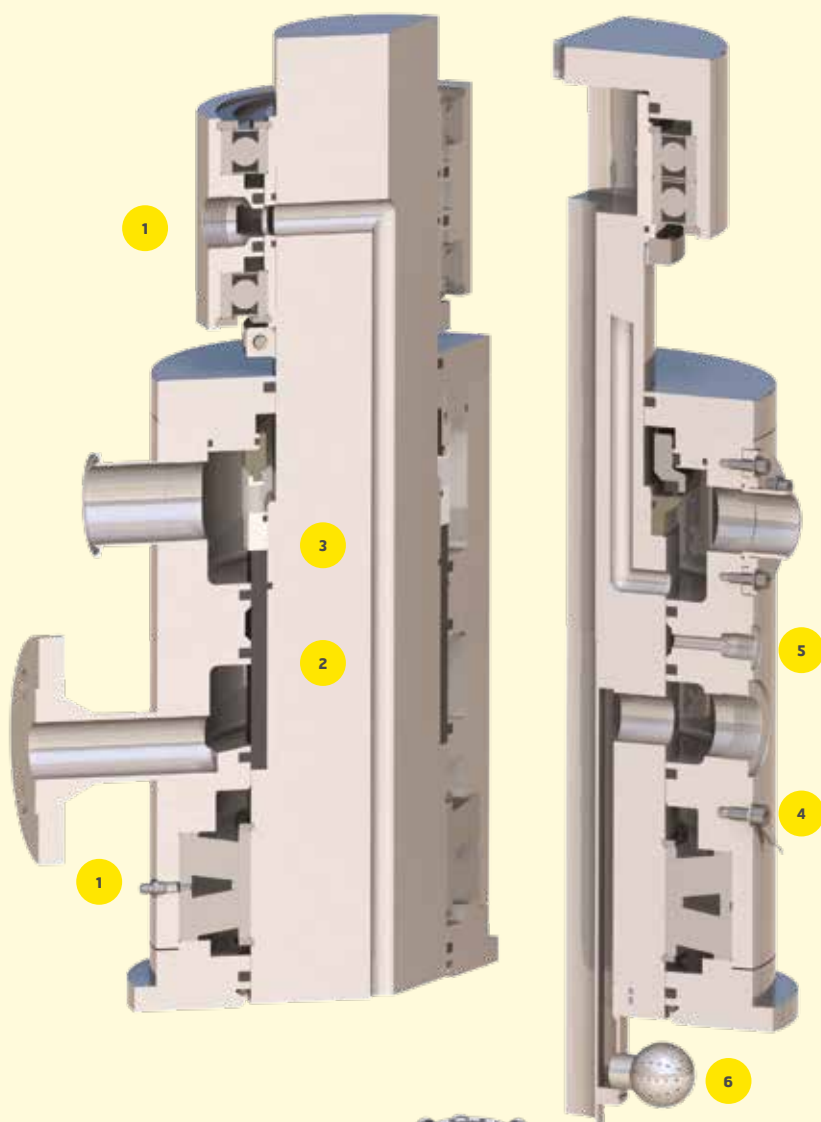
APPROVALS (on request)

EHEDG, FDA, EC 1935/2004, ACS, ATEX, WRAS

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:** (or steam) is injected through openings to create an asepsis 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.



FRICION 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.

Cartridge box

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, EC 1935/2004, ATEX and SAQR-ATEX
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.

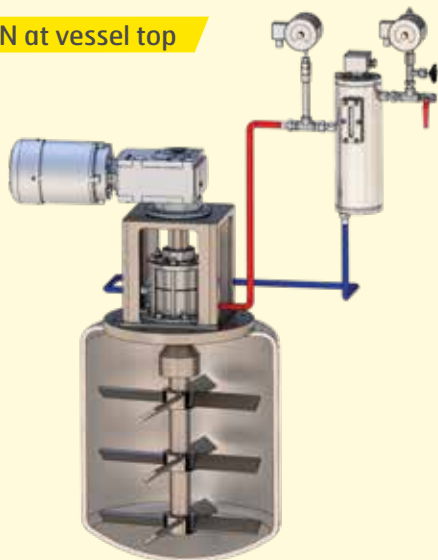
Our service and repair centres de services, our on-site technical assistance complement our expert mission. Moreover, we have a SAQR-ATEX workshop in France.



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

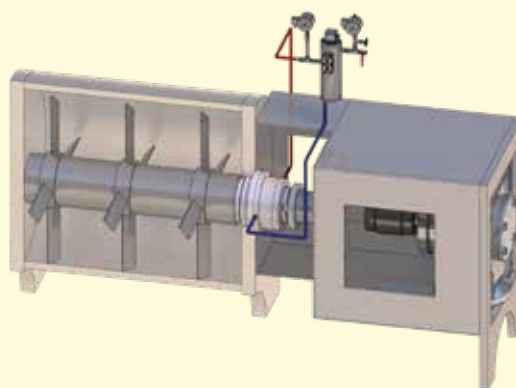
AGITATION at vessel bottom of filter-drier



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



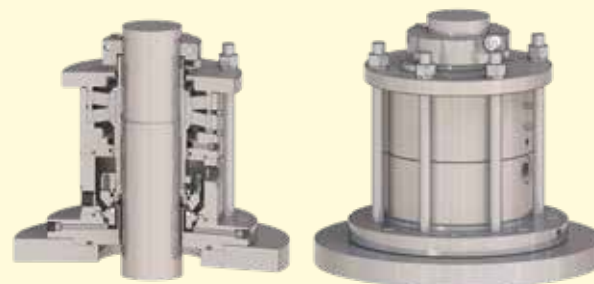
AGITATION AT VESSEL TOP



Single, dry mechanical seal without friction seal

Series LATTYseal B 16 A3 and LATTYseal B 16 A4

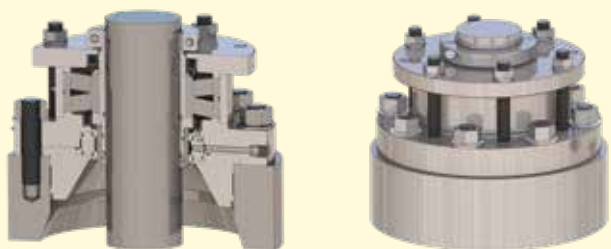
Mechanical seal installed outside the vessel, thus making access and setting easier. It allows dry operation, with negative pressures < 6 bar (87PSI). May be supplied as cartridge with or without ball bearing. The A4 version is recommended for radial motions (0.2 mm)



Single, dry mechanical seal, with friction seal

Series LATTYseal RB 4000 and friction seal

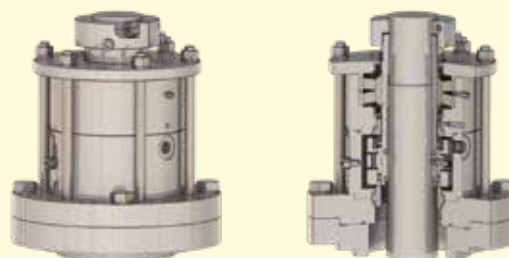
Double cartridge assembly with gas cooling. The design is based on a mechanical seal (negative pressure possible) for process side. The secondary sealing is provided with friction seal combined with a coated bearing surface. Lower height requirement. Large number of options possible. The assembly is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

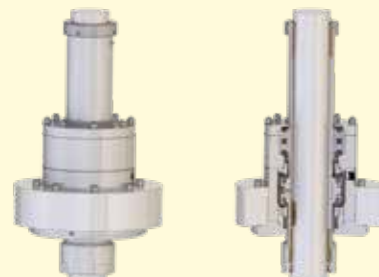
The choice is determined by the types of equipment, the speed conditions, the process and applies to sterile applications with reduced retention areas. These mechanical seals run with a process-compatible barrier fluid. A pressure above 1.5 to 2 bar should be maintained at all times. Pressure and temperature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

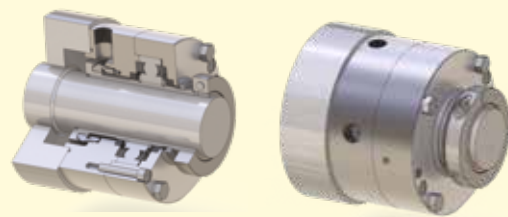
**HORIZONTAL or lateral agitation****Double lubricated mechanical seal**

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, an 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:

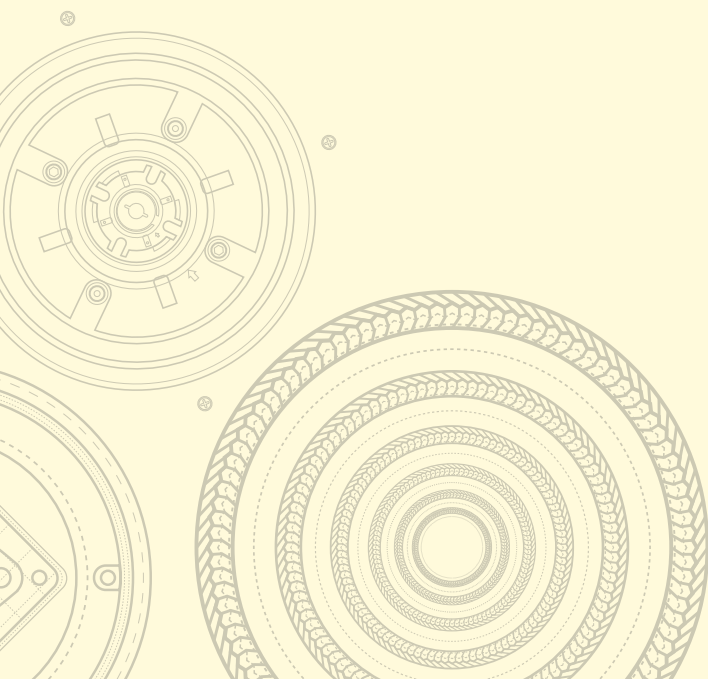
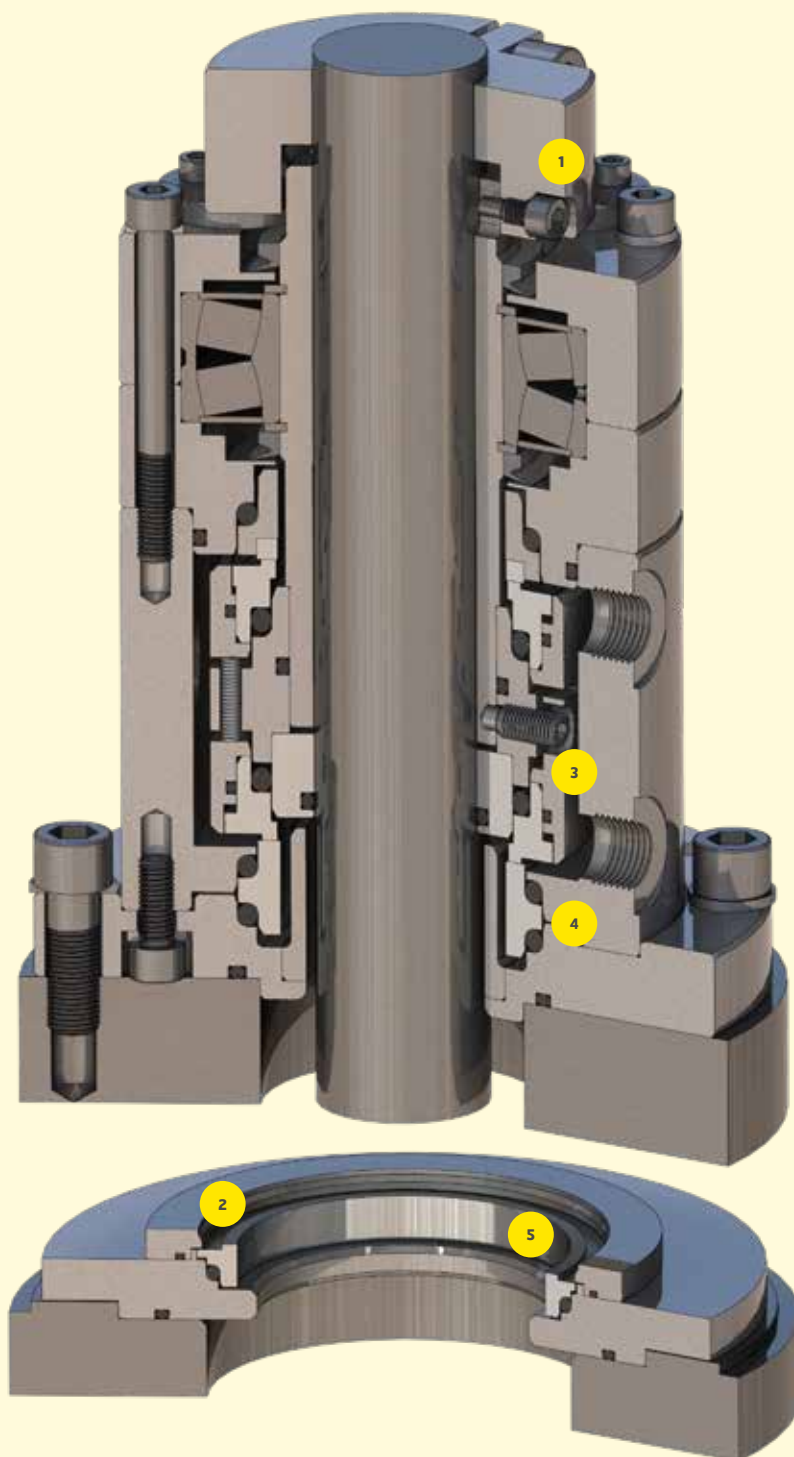
Temperature = 250 °c (482 °F) – with cooling flange

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.

ADVANTAGES

- **Coating:** chromium 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.

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.

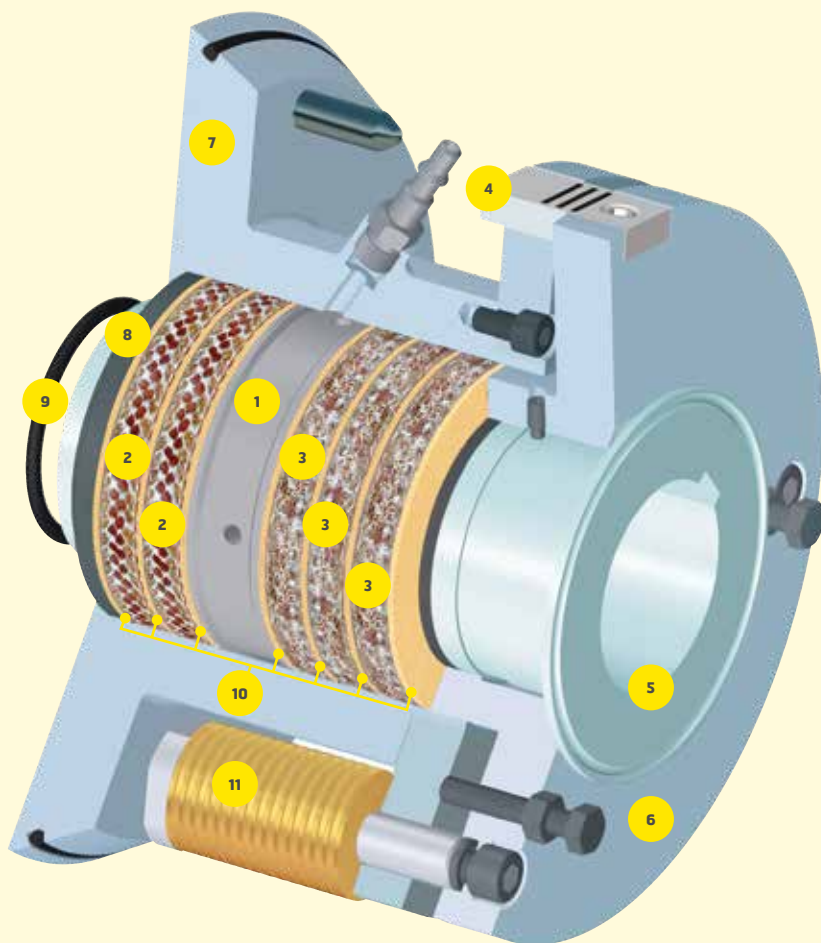
PECODY is both ergonomic and compact, which facilitates access for assembly, disassembly and maintenance operations, including in areas where access is difficult.

APPROVALS (on request)

ATEX, FDA, EHEDG, EC 1935/2004

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 explosionproof head



Auxiliary systems

AUXILIARY SYSTEMS FOR MECHANICAL 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

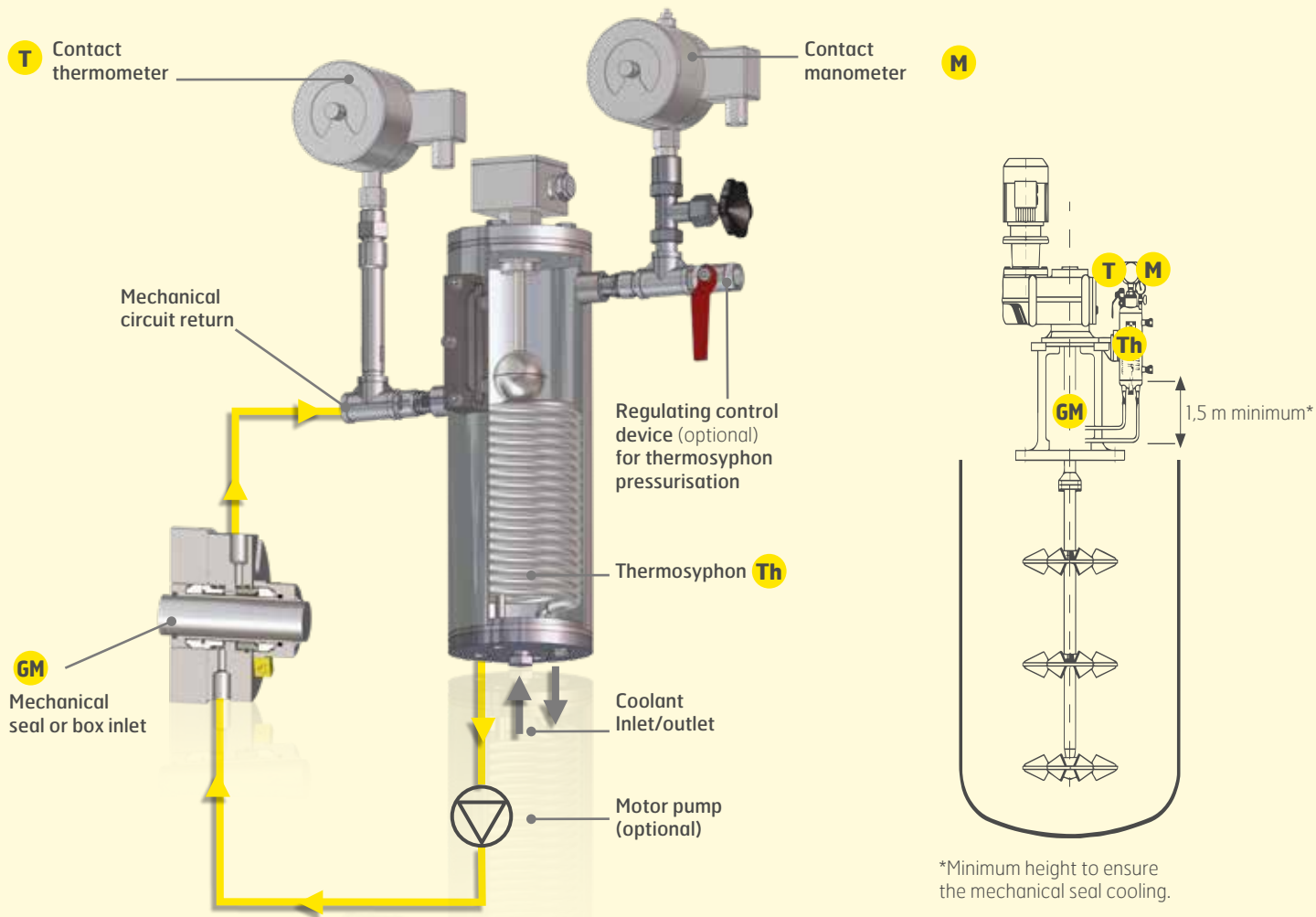


LATTY SEAL FLOW METER WITH PRESSURIZING VALVE FOR DOUBLE MECHANICAL SEAL

Latty seal flow meter is designed for applications where uninterrupted seal water flow is required. Adequate seal water flow for cooling and lubrication result in water savings, energy savings, reduced maintenance, and extended life of seals. The Latty seal flow meter is compatible with all the seal types. The robust modular construction and many accessories make it very flexible

- Optimizes water consumption
- Controls and monitors water flow and pressure in mechanical seals
- Prevents and indicates failures of the braids and mechanical seals.
- Detects and locates problems in the pipes
- Optional alarms available

Auxiliary systems



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

Graphite core			
LATTYcore 3207 G	92	LATTYflon 3206 SO	108
LATTYcore 4788 G	93	LATTYflon 3206 AL	109
LATTYcore 4758 G	94	LATTYflon 3206 CE	110
LATTYcore 7189 G	95	LATTYflon 3207	111
LATTYcore 5790 G	96	LATTYflon 4308	112
		Synthetic	
Aramid		LATTYtex 2761	114
LATTYflon 4488	98	LATTYflon 7188	115
LATTYflon 4757	99	LATTYflon 2790 AL	116
LATTYflon 4758	100	LATTYflon 2790	117
LATTYtex 4777	101	Carbon graphite	
LATTYflon 4788	102	LATTYgraf T	118
LATTYflon 4789	103	LATTYgraf TSP	119
LATTYflon 5790	104	LATTYgraf 6745 NG	120
LATTYflon 5790 S	105	Vegetal	
PTFE		LATTYtex 14	122
LATTYflon 3206	106	LATTYflon 1779	123
LATTYflon 3206 S	107		



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

Braided packings

PACKINGS FOR DYNAMIC SEALING

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.



Braided packings

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 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 emissions.

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



Food
FDA, EC 1935/2004, 3A,
EHEDG



Water
ACS, WRAS, KTW



Fugitive emissions
API 624, 622, TUV, ISO,
TOTAL



Fire test
API 689, 607, 589



Gas
DVGW



Explosive
ATEX, SAQR-ATEX



Nuclear energy
AECL, PMUC, ASME,
RCC-M



Oxygen
BAM, WHA

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.

Packing with graphite core

LATTYCORE 3207 G

Packing suitable for aggressive environments in dynamic sealing applications.

PACKING SUITABLE FOR AGGRESSIVE ENVIRONMENTS

- GRAPHITE PTFE BRAID WITH GRAPHITE CORE, WITH MORE ELASTICITY
- MORE TIME BETWEEN RETIGHTENING OPERATIONS AND OPTIMUM SEALING EFFICIENCY UNDER LOW CLAMPING FORCE
- REDUCES FRICTION, BENEFIT FROM SIGNIFICANT WATER AND ENERGY SAVINGS
- INCREASES THE TIME INTERVAL BETWEEN TWO MAINTENANCE OPERATIONS



OPERATING PARAMETERS (NOT ASSOCIATED)

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

COMPOSITION

Packing with graphite core, made of 100% PTFE lubricated silk yarns impregnated with silicone, graphite. Available in preformed length of packing, on request

TYPES OF INDUSTRIES



FLUIDS

All type of fluids except abrasive fluids

Item	Dimensions	Description
900026040	□ 8 mm	15 m / 1,6 Kg
900026041	□ 9,5 mm	12 m / 1,9 Kg
900026042	□ 10 mm	12 m / 2,12 Kg
900026043	□ 12 mm	11 m / 2,53 Kg
900026044	□ 12,7 mm	11 m / 2,88 Kg
900026045	□ 14 mm	10 m / 3,17 Kg
900026046	□ 15 mm	10 m / 3,90 Kg
900026047	□ 16 mm	10 m / 4,02 Kg
900026048	□ 18 mm	10 m / 4,93 Kg
900026049	□ 19 mm	10 m / 5,93 Kg
900026050	□ 20 mm	10 m / 5,85 Kg
900026051	□ 22 mm	10 m / 6,79 Kg
900026052	□ 25,4 mm	10 m / 9,41 Kg

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

The weights given for information are not contractual.



Packing with graphite core

LATTYCORE 4788 G

Braid for rotary applications with aggressive fluids

ARAMID PACKING, VERY HIGH MECHANICAL PROPERTIES

- SILICONE-FREE PACKING
- MORE TIME BETWEEN RETIGHTENING OPERATIONS
- MORE ELASTICITY PROVIDED BY GRAPHITE
- OPTIMUM SEALING EFFICIENCY UNDER LOW CLAMPING FORCE
- REDUCES FRICTION, BENEFIT FROM SIGNIFICANT WATER AND ENERGY SAVINGS



OPERATING PARAMETERS (NOT ASSOCIATED)

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

COMPOSITION

Silicone-free packing with a core made of 100%-aramid fibres, each single yarn being impregnated with PTFE using our exclusive «Filcoat»-process, then re-impregnated with a PTFE mix during braiding operation. Available in preformed length of packing , on request

TYPES OF INDUSTRIES



FLUIDS

Slurry fluids

Item	Dimensions	Description
900025953	□ 8 mm	15 m / 1,47 Kg
900025954	□ 9,5 mm	12 m / 1,57 Kg
900025955	□ 10 mm	12 m / 1,83 Kg
900025956	□ 12 mm	11 m / 2,29 Kg
900030508	□ 12,5 mm	10 m / 2,86 Kg
900025957	□ 12,7 mm	11 m / 2,52 Kg
900025958	□ 14 mm	10 m / 2,87 Kg
900025959	□ 15 mm	10 m / 3,34 Kg
900025960	□ 16 mm	10 m / 3,80 Kg
900025961	□ 18 mm	10 m / 4,53 Kg
900025962	□ 19 mm	10 m / 5,08 Kg
900025963	□ 20 mm	10 m / 5,71 Kg
900025964	□ 22 mm	10 m / 6,68 Kg
900025965	□ 25,4 mm	10 m / 8,47 Kg

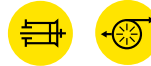
Packing with graphite core

LATTYCORE 4758 G

Braid for rotary applications with aggressive fluids

ARAMID GRAPHITE CORE BRAID, FOR SLURRY FLUIDS

- SILICONE-FREE PACKING
- REDUCES FRICTION, BENEFIT FROM SIGNIFICANT WATER AND ENERGY SAVINGS
- MORE TIME BETWEEN RETIGHTENING OPERATIONS AND OPTIMUM SEALING EFFICIENCY UNDER LOW CLAMPING FORCE
- INCREASES THE TIME INTERVAL BETWEEN TWO MAINTENANCE OPERATIONS



OPERATING PARAMETERS (NOT ASSOCIATED)

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

COMPOSITION

Silicone-free packing with a compound graphite core and corners made of 100% aramid yarns impregnated yarn by yarn with PTFE using our exclusive «Filcoat»-process, friction faces with 100% lubricated PTFE, then re-impregnated with a PTFE mix during braiding operation. Available in preformed length of packing , on request

TYPES OF INDUSTRIES



FLUIDS

Slurry fluids

Item	Dimensions	Description
900026058	□ 8 mm	15 m / 1,37 Kg
900026059	□ 9,5 mm	12 m / 1,56 Kg
900026060	□ 10 mm	12 m / 1,88 Kg
900026061	□ 11 mm	11 m / 1,99 Kg
900026062	□ 12 mm	11 m / 2,34 Kg
900026063	□ 12,7 mm	11 m / 2,56 Kg
900026064	□ 14 mm	11 m / 3,07 Kg
900026065	□ 16 mm	11 m / 3,63 Kg
900026066	□ 18 mm	10 m / 4,54 Kg
900026067	□ 19 mm	10 m / 4,98 Kg
900026068	□ 20 mm	10 m / 5,54 Kg
900030768	□ 22 mm	10 m / 6,53 Kg
900026069	□ 25,4 mm	10 m / 8,76 Kg

The maximum temperature, pressure and speed parameters specified in this document can not be combined
 The weights given for information are not contractual.



Packing with graphite core

LATTYCORE 7189 G

Packing with graphite core, for slurry and very difficult environments.

A PACKING PARTICULARLY APPROPRIATE FOR HARSH ENVIRONMENTS

- CAN BE USED WITHOUT A LANTERN
- MORE TIME BETWEEN RETIGHTENING OPERATIONS AND OPTIMUM SEALING EFFICIENCY UNDER LOW CLAMPING FORCE
- REDUCES FRICTION, BENEFIT FROM SIGNIFICANT WATER AND ENERGY SAVINGS
- INCREASES THE TIME INTERVAL BETWEEN TWO MAINTENANCE OPERATIONS



OPERATING PARAMETERS (NOT ASSOCIATED)

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

COMPOSITION

LATTYcore 7189 G is made of mixed glass and thermosetting organic fiber yarns, each yarn being impregnated throughout with PTFE, mixed glass and polyacrylic yarns. Available in preformed length of packing, on request

TYPES OF INDUSTRIES



FLUIDS

Slurry fluids



Item	Dimensions	Description
900015133	□ 6 mm	20 m / 0,89 Kg
900013745	□ 8 mm	15 m / 1,40 Kg
900015447	□ 9,5 mm	12 m / 1,00 Kg
900013746	□ 10 mm	12 m / 1,80 Kg
900024686	□ 11 mm	11 m / 2,40 Kg
900013643	□ 12 mm	11 m / 1,70 Kg
900013747	□ 12,7 mm	11 m / 20 Kg
900013728	□ 14 mm	10 m / 2,30 Kg
900023402	□ 15 mm	10 m / 3,36 Kg
900013552	□ 16 mm	10 m / 2,90 Kg
900015448	□ 18 mm	10 m / 3,70 Kg
900013560	□ 19 mm	10 m / 4,24 Kg
900014501	□ 20 mm	10 m / 4,63 Kg
900017539	□ 22 mm	10 m / 6,38 Kg
900013642	□ 25,4 mm	10 m / 7,47 Kg
900028231	□ 28 mm	10 m / 7,51 Kg
900021110	□ 30 mm	10 m / 7,66 Kg
900028230	□ 32 mm	10 m / 8,03 Kg

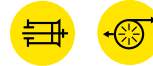
Packing with graphite core

LATTYCORE 5790 G

Aramid carbon graphite synergy: strong, durable and reliable braid.

PACKINGS FOR ROTARY UNIT APPLICATIONS, HIGH MECHANICAL RESISTANCE

- RESPECTS THE SHAFT THANKS TO THE SYNTHETIC THREADS OF THE BRAID
- REDUCES FRICTION, BENEFIT FROM SIGNIFICANT WATER AND ENERGY SAVINGS
- MORE TIME BETWEEN RETIGHTENING OPERATIONS AND OPTIMUM SEALING EFFICIENCY UNDER LOW CLAMPING FORCE
- INCREASES THE TIME INTERVAL BETWEEN TWO MAINTENANCE OPERATIONS



OPERATING PARAMETERS (NOT ASSOCIATED)

- Pressure : 100 bar
- Temperature : -200 °C to 260°C
- Speed : < 5 m/s
- pH : 2 - 13

COMPOSITION

Silicone-free packing, with graphite core, made of synthetic yarns and fibres based on aramid, the yarns being impregnated to the core with a lubricant using our exclusive «Filcoat»-process prior to braiding operation. The combination of the mechanical properties of aramid with the calorific evacuation properties of carbon gives this braid unrivalled performance. Available in preformed length of packing , on request

TYPES OF INDUSTRIES



FLUIDS

Slurry fluids

Item	Dimensions	Description
900026084	□ 8 mm	12 m / 1,16 Kg
900026085	□ 10 mm	9 m / 1,41 Kg
900026086	□ 12 mm	9 m / 2,14 Kg
900026087	□ 12,7 mm	9 m / 2,49 Kg
900026088	□ 14 mm	6 m / 2,04 Kg
900026089	□ 16 mm	6 m / 2,42 Kg
900027815	□ 18 mm	6 m / 3,10 Kg
900026090	□ 20 mm	6 m / 3,66 Kg

*** Made to order**

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The weights given for information are not contractual.



TRAINING (see page 208)

AIM: Understand the different leak occurrences in:

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



208

PACKING-CUTTING TOOLS (see page 200)

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

200

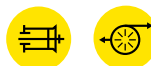
Aramid packing

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**

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The weights given for information are not contractual.



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

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099

DYNAMIC SEALING
BRAIDED PACKING

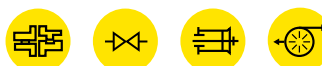
Aramid packing

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 siliconefree 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

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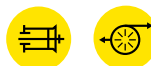
Aramid packing

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

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0101

DYNAMIC SEALING
BRAIDED PACKING

Aramid packing

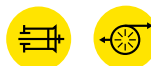
LATTYFLON 4788

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

0

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

PMUC

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

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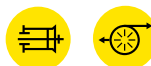
Aramid packing

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 foodquality lubricant during braiding operation.

TYPES OF INDUSTRIES



FLUIDS

Slurries fluids

GUIDELINES, STANDARDS AND APPROVALS

PMUC, WRAS

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

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0103

DYNAMIC SEALING
BRAIDED PACKING

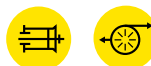
Aramid packing

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 : -200 °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)

EC 1935/2004

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**

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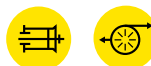
Aramid packing

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 : -200 °C to 260 °C
 Speed : < 5 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)

EC 1935/2004

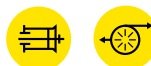
PTFE packing

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**

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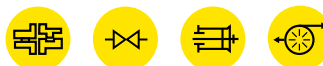
PTFE packing

LATTYFLON 3206 S

Tresse pour applications statiques

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

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0107

DYNAMIC SEALING
BRAIDED PACKING

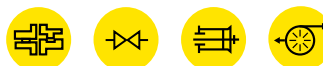
PTFE packing

LATTYFLON 3206 SO

Oxygen-compatible packing

PRODUCTS DEDICATED TO OXYGEN-TYPE APPLICATIONS

- VERY LOW FRICTION COEFFICIENT
- PERFECT CHEMICAL INERTNESS



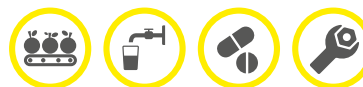
OPERATING PARAMETERS (NOT ASSOCIATED)

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

BAM, EC 1935/2004, FDA, TUV

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**

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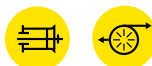
PTFE packing

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

ACS, FDA

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

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The weights given for information are not contractual.

0109

DYNAMIC SEALING
BRAIDED PACKING

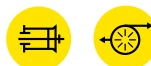
PTFE packing

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

EC 1935/2004

*** Made to order**

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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

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*
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PACKING-CUTTING TOOLS (see page 200)

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

200

FLEXIBLE AND RIGID PACKING EXTRACTORS (see page 201)

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



201

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

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

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0115

DYNAMIC SEALING
BRAIDED PACKING

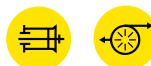
Synthetic packing

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

WRAS

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

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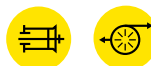
Synthetic packing

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 reimpregnated during braiding operation with a mix of PTFE and inert lubricant.

TYPES OF INDUSTRIES



FLUIDS

All types of fluids

GUIDELINES, STANDARDS AND APPROVALS (SUR DEMANDE)

EC 1935/2004

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

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0117

DYNAMIC SEALING
BRAIDED PACKING

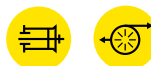
Carbon graphite packing

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

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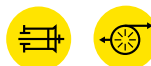
Carbon graphite packing

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**

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0119

DYNAMIC SEALING
BRAIDED PACKING

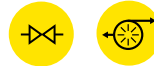
Carbon graphite packing

LATTYGRAF 6745 NG

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

HIGH-TEMPERATURE PACKING UP TO 600°C

- IT CONTAINS AN INHIBITOR (EXCLUSIVE LATTY PROCESS) TO PROVIDE THE VALVE COMPONENTS GOOD PROTECTION.
- FOR ROTARY UNITS AND INDUSTRIAL VALVES AND FITTINGS
- BRAID AVAILABLE BY THE METER OR IN PRE-FORMED LENGTHS



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 reimpregnated 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

AECL

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

TRAINING (see page 208)

AIM: Understand the different leak occurrences in:

Seals for rotary units:

- mechanical seals and packings
- for the dynamic sealing
- of pumps or stirring processes.



PACKING-CUTTING TOOLS (see page 200)

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

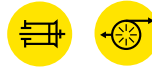
Vegetal packing

LATTYTEX 14

Packing for cold water for dynamic sealing

PACKING FOR COLD WATER FOR DYNAMIC SEALING

- WATER APPLICATIONS UP TO 60°C



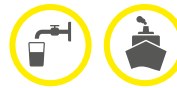
OPERATING PARAMETERS (NOT ASSOCIATED)

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

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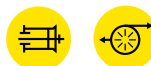
Vegetal packing

LATTYFLON 1779

Anti-rot packing

VEGETAL 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

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0123

DYNAMIC SEALING
BRAIDED PACKING

Range of gaskets

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



Food

FDA, EC 1935/2004, 3A, EHEDG



Water

ACS, WRAS, KTW



Fugitives emissions

API 624, 622, TUV, ISO, TOTAL



Fire test

API 689, 607, 589



Gas

DVGW



Explosive

ATEX, SAQR-ATEX



Nuclear industry

AECL, PMUC, ASME, RCC-M



Oxygen

BAM, WHA



STATIC RANGE / STATIC SEALING

Summary	125	PTFE		ELASTOMER	
CARBON ARAMID		LATTYflon 84 L	136	LATTY E 48Z11 LY1700	154
LATTYcarb 96	126	LATTYflon 94 L	137	MINERAL	
LATTYcarb 96 G2F	127	LATTYflon 95	138	HEPHAISTOS 2000 G	156
LATTYcarb 965	128	LATTYflon 97	139	HEPHAISTOS 2000 T	157
ARAMID		LATTYflon UNISEAL	140		
LATTYgold 32	130	LATTYflon MULTISEAL	141		
LATTYgold 32R	131	GRAPHITE			
LATTYgold 92	132	LATTYgraf EFA	142	 Rotary Pumps	 Reciprocating Pumps
LATTYgold 92 G2F	133	LATTYgraf HPML	143	 Insulation	 Valves
LATTYgold 925	134	LATTYgraf E	144	 Static Applications	
LATTYgold 5 ACID	135	LATTYgraf E1	145		
		LATTYgraf E2 (adhesif)	146		
		LATTYgraf EFI	147		
		LATTYgraf EBST	148		
		Autoclaves packing rings	149		
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-  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

BAM, TUV, WRAS

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	1,5 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	1,5 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	1,5 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

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

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

TOOLS FOR MAINTENANCE

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 202)

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

- REFERENCE: LI 12



202

ELECTRICAL CUTTER FOR CIRCULAR GASKETS (see page 203)

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



203

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

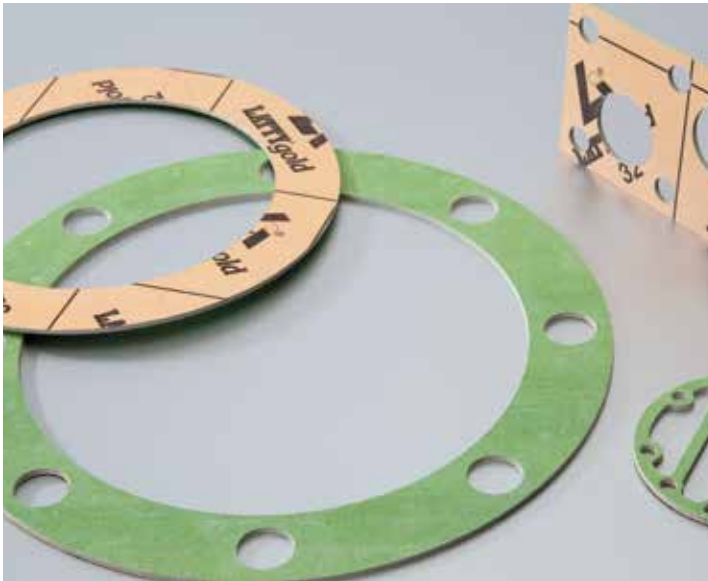
Gasket material made of synthetic fibres bonded together with a mix of NBR-SBR elastomers.

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

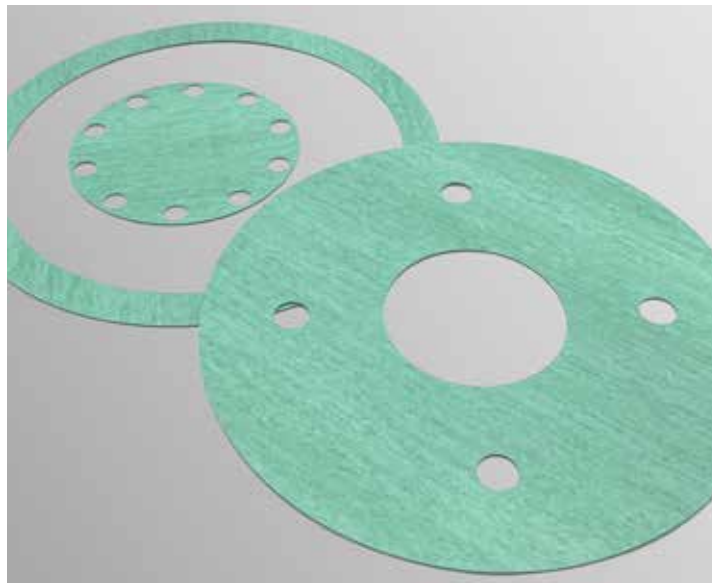
ARAMID

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
900021947	2 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

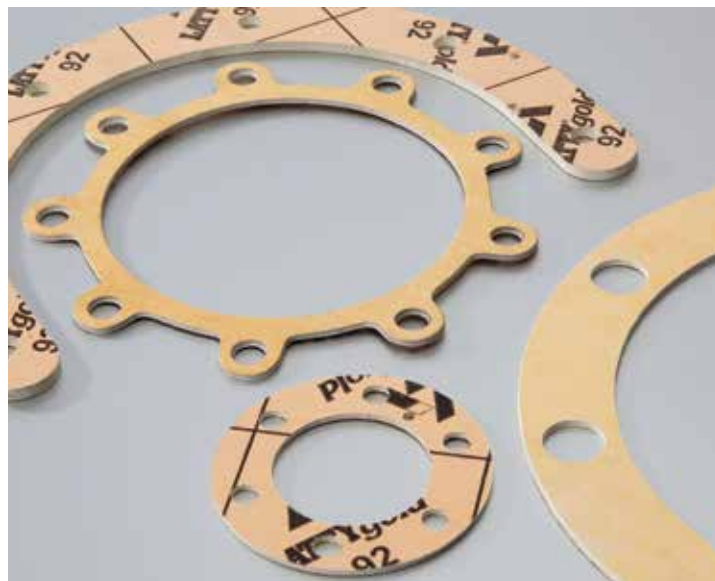
ARAMID

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

BAM, DVGW, PMUC, TUV, WRAS, EC 1935/2004

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
2141151	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

PMUC

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

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

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
- 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 resistant 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

FDA

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

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

BAM, EC 1935/2004, FDA, PMUC

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



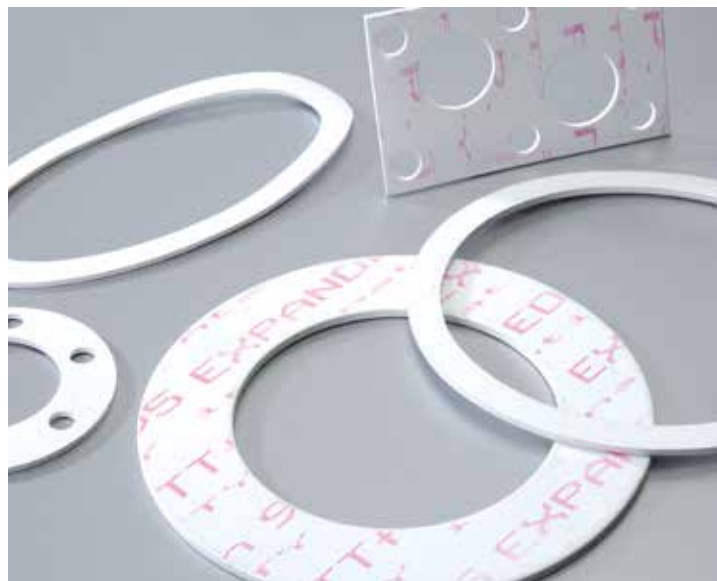
PTFE

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

EC 1935/2004, FDA

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

* Made order
 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

FDA, TUV

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

PTFE

LATTYFLON UNISEAL

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

COMPOSITION

100% PTFE to structure 100%-pure PTFE extruded gasket with micro-fibrous structure. Selfadhesive. Withstands chemicals

TYPES OF INDUSTRIES



FLUIDS

All types of fluids

GUIDELINES, STANDARDS AND APPROVALS

FDA, BAM

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

PTFE

LATTYFLON MULTISEAL

Self-adhesive, 100%-PTFE gasket for static sealing

GENERAL-PURPOSE, ADHESIVE, 100%-PTFE GASKET

- THERMAL, MECHANICAL AND CHEMICAL RESISTANCE (EXCLUDING MOLTEN ALKALI METALS)
- SUITABLE FOR IRREGULAR, DAMAGED OR CORRODED SURFACES AND SHAPES AS WELL AS FOR THE MOST FRAGILE GLASS-LINED, ENAMELLED
- HIGH COMPRESSIBILITY



OPERATING PARAMETERS (NOT ASSOCIATED)

Pressure : 200 bar
Temperature : -100 °C to 260 °C
pH : 0 - 14

COMPOSITION

100%-PTFE extruded gasket with microfibrinous structure for flat sealing. Supplied as continuous adhesive tape.

TYPES OF INDUSTRIES



FLUIDS

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

GUIDELINES, STANDARDS AND APPROVALS

FDA



Item	Dimensions	Description
900027414	□ 28 x 5 mm	10 m
900027413	□ 40 x 5 mm	10 m
900027412	□ 10 x 3 mm	12 m
900027411	□ 3 x 1,5 mm	15 m
900027410	□ 12 x 4 mm	15 m
900027409	□ 14 x 5 mm	15 m
900027408	□ 20 x 7 mm	15 m
900027407	□ 50 x 1 mm	15 m
900027406	□ 5 x 2 mm	20 m
900027405	□ 7 x 2,5 mm	20 m
900027403	□ 25 x 1 mm	25 m
900027404	□ 28 x 5 mm	25 m

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

BAM, WRAS



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



Graphite

LATTYGRAF HPML

Graphite multi-layer high pressure seal.

GRAPHITE MULTI-LAYER HIGH PRESSURE SEAL

- EXCELLENT CHEMICAL AND THERMAL RESISTANCE,
- THE INSERTION OF STAINLESS STEEL SHEETS IMPROVES PRESSURE RESISTANCE, AND FACILITATES HANDLING AND SEAL CUTTING
- ITS HIGH CREEP RESISTANCE MAKES IT POSSIBLE TO USE IT AT HIGH PRESSURES AND TEMPERATURES.



OPERATING PARAMETERS (NOT ASSOCIATED)

Pressure : 250 bar
Temperature : -200°C to +550°C (oxidising atmosphere)
-200°C to +700°C (inert atmosphere)

COMPOSITION

Natural expanded graphite based seal sheet, carbon content > 99%, Includes multiple stainless steel inserts and is impregnated with an oxidation inhibitor

TYPES OF INDUSTRIES

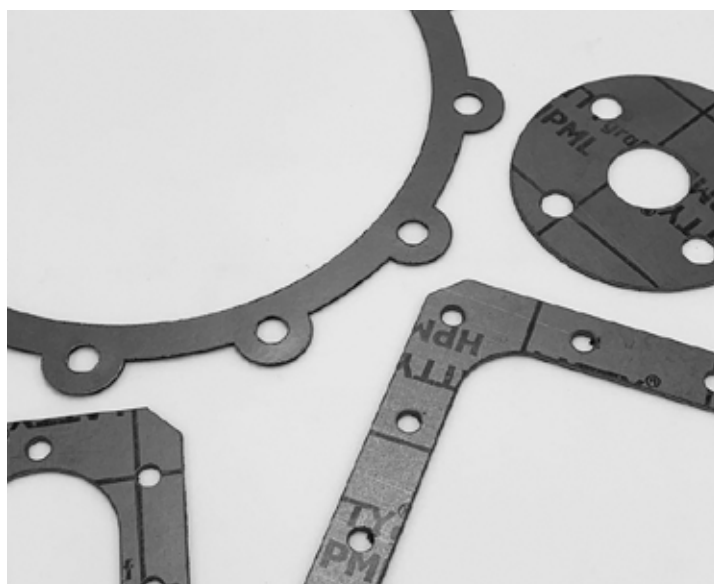


FLUIDS

Water, steam, gas, very high, very low temperature & high pressure applications

GUIDELINES, STANDARDS AND APPROVALS

API 6FB, DVGW, OXYGEN AND LIQUID SERVICE



Item	Dimensions	Description
900029188	1,5 mm	1 m x 1 m
900029189	2 mm	1 m x 1 m
900029190	3 mm	1 m x 1 m
900029193	1,5 mm	1,5 m x 1,5 m
900029194	2 mm	1,5 m x 1,5 m
900029195	3 mm	1,5 m x 1,5 m

**Other dimensions on request
The maximum temperature, pressure and speed parameters specified in this document
can not be combined.*

Graphite

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

BAM

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

Graphite

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 selflubricating 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

Graphite

LATTYGRAF E2 ADHESIF

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 : 0°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 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

Graphite

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

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

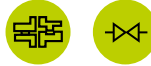
Graphite

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

BAM, ISO, PMUC, TUV

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

Temperature : -200 °C to 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

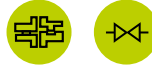
Graphite

LATTYGRAF REFLEX

High-performance, high-temperature, high-pressure graphite gasket

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

PMUC

Graphite

LATTYPACK 960

Gasket for industrial boilers

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

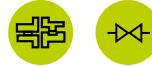
ELASTOMER SEAL

LATTY-E 48Z11 LY 1700

Elastomer seal based on EPDM

QUALIFIED FOR IRRADIATIONS UP TO 1700 KGY

- MEETS THE CHEMICAL SPECIFICATION OF THE PMUC
- HIGH RESISTANCE FOR IRRADIATIONS. QUALIFICATION CARRIED OUT WITH GAMMA RAYS DOSE UP TO 1700 KGY
- GOOD RESISTANCE TO WEATHERING, NITROGEN, OXYGEN, HYDRAULIC FLUIDS OF PHOSPHATE ESTER-TYPE, POLAR SOLVENTS (WATER, ALCOHOLS, GLYCOLS, KETONES), STEAM, DETERGENTS



OPERATING PARAMETERS (NOT ASSOCIATED)

Temperature :

- De -40°C to 100°C in air (extended operating period) in dynamic application and approx. -65°C in static application
- De -40°C to 150°C in air (limited operating period) in dynamic application and approx. -65°C in static application
- De -40°C to 140°C in water (extended operating period)
- De -40°C to 170°C in water or steam (operating period)

COMPOSITION

The elastomer seal E48Z11LY1700 meets the chemical specifications of PMUC (products and materials usable in nuclear power stations) with values of halogen and sulphur content below 200 ppm (according to GDL procedure D5710/ESD/1990/000295/001)

TYPES OF INDUSTRIES



GUIDELINES, STANDARDS AND APPROVALS

PMUC

TOOLS FOR MAINTENANCE

CUTTING TOOLS BOXES (see page 204)

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



204

TRAINING

TRAINING (see page 208)

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.



208

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

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

SEALING SOLUTIONS DEDICATED TO INDUSTRIAL VALVES

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

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

CERTIFICATIONS

-  **Food**
FDA, EC 1935/2004, 3A, EHEDG
-  **Water**
ACS, WRAS, KTW
-  **Fugitives emissions**
API 624, 622, TUV, ISO, TOTAL
-  **Fire test**
API 689, 607, 589
-  **Gas**
DVGW
-  **Explosive**
ATEX, SAQR-ATEX
-  **Nuclear**
AECL, PMUC, ASME, RCC-M
-  **Oxygen**
BAM, WHA



INDUSTRIAL VALVES

A UNIQUE SOLUTION FOR EACH VALVE	160-161	CARBON GRAPHITE			
SOLUTIONS FOR ENERGY PRODUCTION	162-163	LATTYgraf 6940	178	ARAMID	
SOLUTIONS FOR OIL AND GAZ INDUSTRY	164-165	LATTYgraf 6940 EF	179	LATTYflon 4758	194
		LATTYgraf 6118	180	LATTYgold 92	195
		LATTYgraf 6988 EF	181	ELASTOMER	
		LATTYgraf 6960	182	LATTY E 48Z11 LY1700	196
		LATTYgraf 6995 NG	183		
		LATTYgraf 8945 BS	184		
PACKING		GRAPHITE			
LATTYpack CONTROL	166	Graphite rings	186	 Rotary Pumps	 Reciprocating Pumps
LATTYpack CONTROL NUC	167	LATTYgraf REFLEX	187	 Insulation	 Valves
LATTYpack VALVE	168	LATTYgraf S	188	 Static Applications	
LATTYpack VALVE NUC	169	LATTYgraf HPML	189		
LATTYpack OIL	170	LATTYgraf EFNG	190		
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PTFE		LATTYgraf 9110	193		
LATTYflon 3265 FR	172				
LATTYflon 3265 LM	173				
LATTYflon 3206 S	174				
LATTYflon 3206 SO	175				
LATTYflon 94L	176				



* 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.

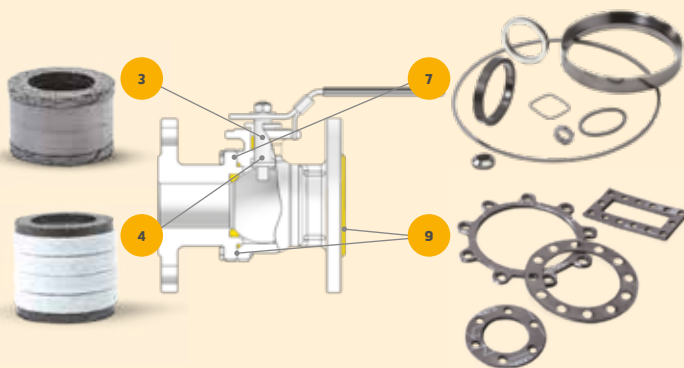
Sealing solution

A UNIQUE SOLUTION FOR EACH VALVE

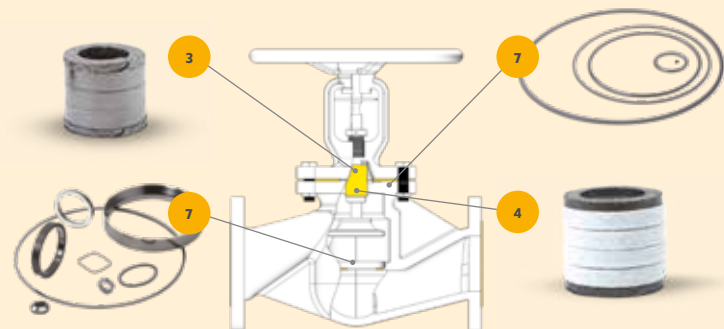
We have developed in particular products that meet the requirements for the valve industry and designed sealing solutions for:

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

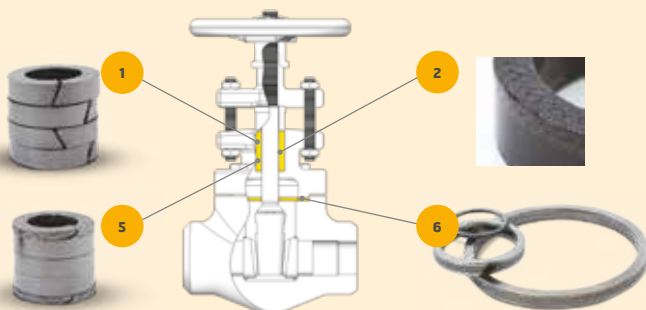
BALL VALVE



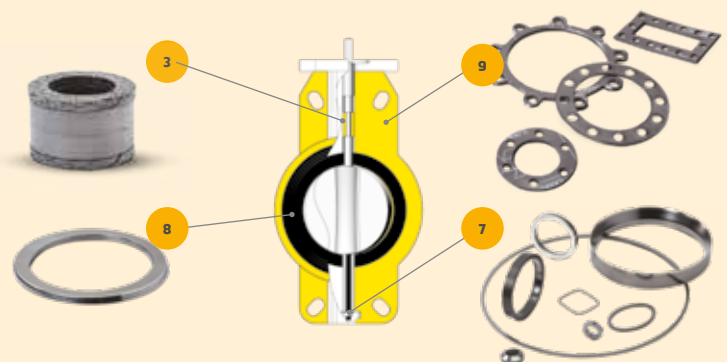
GLOBE VALVE



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 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 temperature variations (-200°C / +450°C)

9 LATTYgraf HPML

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

COMPRESSED, PREFORMED, 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, timesaving 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 to ISO 15848-1, API 622, 624 or 641

Valves

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.

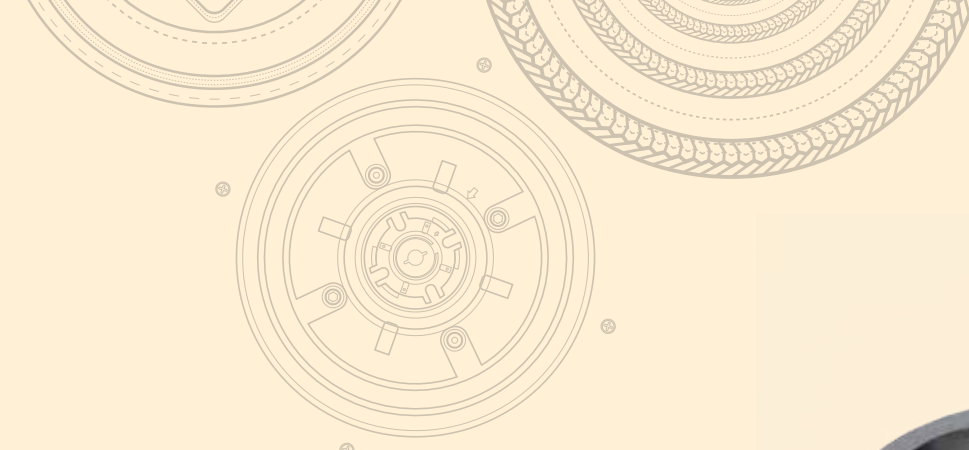
INDUSTRIES

Nuclear
Thermal/gas-fired combined cycle
power plants
Hydraulic

APPROVALS

AECL, 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-E 48Z11 LY 1700

The different forms of EPDM-based elastomer seals are radiation resistant. These seals have been developed for nuclear applications and are approved for irradiations use up to 1700 KGy. They are suitable for dynamic or static sealing.

Bagues Autoclaves

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



Valves

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

- **Food**
FDA, EC 1935/2004, 3A, EHEDG
- **Water**
ACS, WRAS, KTW
- **Fugitives Emissions**
API 624, 622, TUV, ISO, TOTAL
- **Fire test**
API 689, 607, 589
- **Gas**
DVGW
- **Explosive**
ATEX, SAQR-ATEX
- **Nuclear**
AECL, PMUC, ASME, RCC-M
- **Oxygen**
BAM, WHA

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).

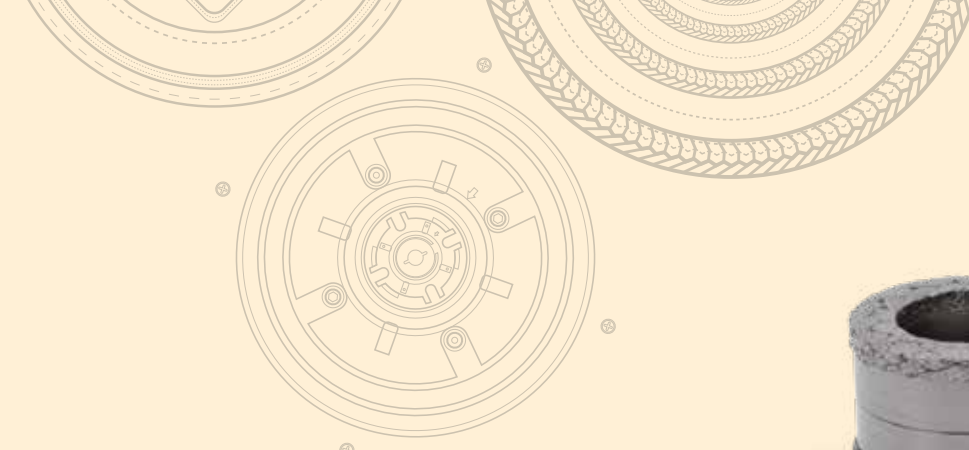
CRYOGENICS

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 antiextrusion 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

LATTYpack VALVE

Graphite rings for on/off valves. Packing consisting of compressed expanded graphite rings and compressed antiextrusion 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 HPML

Natural expanded graphite based seal sheet, carbon content > 99%, includes multiple stainless steel inserts and is impregnated with an oxidation inhibitor

LATTYgraf 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



Packing PTFE / Carbon

LATTYPACK CONTROL

Reduction of friction in your industrial fittings

FRICION REDUCED BY MORE THAN 30%

- PROVIDES OUTSTANDING SEALING EFFICIENCY UNDER LOW CLAMPING FORCE
- VERY LOW FRICTION COEFFICIENT AND VERY GOOD ELASTIC RECOVERY
- INTENDED PRIMARILY FOR CONTROL VALVES



OPERATING PARAMETERS (NOT ASSOCIATED)

Pressure : 400 bar
Temperature : -100°C to 300°C
Speed : < 1 m/s
pH : 0-14

COMPOSITION

Packing consisting of preformed PTFE/carbon or expanded graphite rings and anti-extrusion rings

TYPES OF INDUSTRIES



FLUIDS

All types of fluids

GUIDELINES, STANDARDS AND APPROVALS

ISO 15848-1



Packing PTFE / Carbon

LATTYPACK CONTROL NUC

Reduction of friction in your industrial fittings

NUCLEAR VERSION - RESISTANCE TO RADIATION UP TO 4,000 KGy

- SAFETY AND SECURITY OF NUCLEAR INSTALLATIONS AND EMPLOYEES
- SAVING TIME FOR THE REQUALIFICATION OF THE MATERIAL
- REDUCED DOSIMETRY FOR OPERATORS
- FRICTION REDUCTION OF MORE THAN 70%.
- PROVIDES OUTSTANDING SEALING EFFICIENCY UNDER LOW CLAMPING FORCE



OPERATING PARAMETERS
(NOT ASSOCIATED)

Pressure : 400 bar maximum
 Temperature : up to 310°C
 Speed : < 1 m/s
 pH : 0 - 14

COMPOSITION

Compressed PTFE rings with core made of carbon yarns and Compressed high purity, Inconel reinforced, anti-extrusion rings up to PMUC requirements

Packings qualified under accident conditions (MQCA⁽¹⁾), for control valves or on-off valves in categories K1, K3ad and K3⁽²⁾
Reduced time for CNPE⁽³⁾ requalification as a result of exclusive, very low friction, manufacturing processes.

TYPES OF INDUSTRIES



FLUIDS

All types of fluids

GUIDELINES, STANDARDS AND APPROVALS

PMUC

(1) MQCA: Qualified Materials at Accidental Conditions (2) K1 : category of equipment qualification in accident conditions inside the reactor building, K3 = category of equipment qualification in accident conditions outside the reactor building, K3AD = K3 + earthquakes and irradiation (3) CNPE: Nuclear Power Plant Electricity Generation



Packing graphite

LATTYPACK VALVE

Reduction of friction in your industrial fittings

FRICTION REDUCED BY MORE THAN 30%

- CONTAINS A CORROSION INHIBITOR THAT DURABLY PROTECTS THE COMPONENTS OF THE VALVES AND FITTINGS
- WITHSTANDS VERY SIGNIFICANT TEMPERATURE OR PRESSURE VARIATIONS

OPERATING PARAMETERS
(NOT ASSOCIATED)

Pressure : 80 to 450 bar
 Temperature : -100°C to 450°C
 Speed : < 1 m/s
 pH : 0-14

COMPOSITION

Packing consisting of expanded graphite rings and preformed anti-extrusion rings. Contains a corrosion inhibitor and withstands very significant temperature or pressure variations

TYPES OF INDUSTRIES



FLUIDS

All types of fluids

GUIDELINES, STANDARDS AND APPROVALS

ISO 15848-1

Packing graphite

LATTYPACK VALVE NUC

Reduction of friction in your industrial fittings

NUCLEAR VERSION - RESISTANCE TO RADIATION UP TO 4,000 KGY

- SAFETY AND SECURITY OF NUCLEAR INSTALLATIONS AND EMPLOYEES
- SAVING TIME FOR THE REQUALIFICATION OF THE MATERIAL
- REDUCED DOSIMETRY FOR OPERATORS
- FRICTION REDUCTION OF MORE THAN 30%.
- PROVIDES OUTSTANDING SEALING EFFICIENCY UNDER LOW CLAMPING FORCE



OPERATING PARAMETERS (NOT ASSOCIATED)

Pressure : 400 bar maximum
Temperature : up to 450°C
Speed : < 1 m/s
pH : 0 - 14

COMPOSITION

Compressed high-purity expanded graphite rings and Compressed high purity, Inconel reinforced, anti-extrusion rings, up to PMUC requirements

Packings qualified under accident conditions (MQCA⁽¹⁾), for control valves or on-off valves in categories K1, K3ad and K3⁽²⁾
Reduced time for CNPE⁽³⁾ requalification as a result of exclusive, very low friction, manufacturing processes.

TYPES OF INDUSTRIES



FLUIDS

All types of fluids

GUIDELINES, STANDARDS AND APPROVALS

PMUC

(1) MQCA: Qualified Materials at Accidental Conditions (2) K1 : category of equipment qualification in accident conditions inside the reactor building, K3 = category of equipment qualification in accident conditions outside the reactor building, K3AD = K3 + earthquakes and irradiation (3) CNPE: Nuclear Power Plant Electricity Generation

Packing graphite

LATTYPACK OIL

Reduction of friction in your industrial fittings

FRICION REDUCED BY MORE THAN 30%

- CONTAINS A CORROSION INHIBITOR FOR UNLIMITED STUFFING-BOX PROTECTION
- RINGS/ KIT SET AT YOUR OWN EQUIPMENT DIMENSION
- THE LOWEST FRICTION COEFFICIENT AVAILABLE TODAY



OPERATING PARAMETERS (NOT ASSOCIATED)

Pressure : 450 bar
Temperature* : 450°C (oxydising atmosphere)
650°C (non oxydising)
pH : 0-14

COMPOSITION

LATTYPack OIL is a packing for stuffing boxes, consisting of die formed expanded graphite rings and anti-extrusion rings which provide outstanding sealing efficiency under low clamping force, a very low friction coefficient and excellent elastic recovery.

TYPES OF INDUSTRIES



FLUIDS

All types of Fluids

GUIDELINES, STANDARDS AND APPROVALS

API 622 (2018, 3rd edition), 624 and 641,
API 589 and 607,
ISO 15848-1 BH 425°C C03,
TA LUFT VDI 2440,
SHELL MESC SPE 85/203-204

*Valve in-line

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



Packing graphite

LATTYPACK OIL

For fast maintenance with the same low emission guarantees

FAST AND INDEPENDENT MAINTENANCE

- CONTAINS PASSIVE CORROSION INHIBITORS THAT PROVIDE UNLIMITED STEM PROTECTION
- IN COMPLIANCE WITH THE LEAK DETECTION AND REPAIR - LDAR METHOD
- MAXIMUM STOCK HOLDING REDUCTION WITH ONLY ONE GRADE OF PACKING REQUIRED ACROSS THE SITE



OPERATING PARAMETERS (NOT ASSOCIATED)

Pressure : 450 bar
 Temperature* : 450°C (oxydising atmosphere)
 650°C (non oxydising)
 pH : 0-14

COMPOSITION

Packing made of expanded graphite with inconel reinforcement with a graphite mix and doped with a friction enhanced agent.

TYPES OF INDUSTRIES



FLUIDS

All types of fluids

GUIDELINES, STANDARDS AND APPROVALS

API 622

Item	Dimensions	Weight
900032127	□ 4 mm	1 Kg
900032128	□ 5 mm	1 Kg
900032129	□ 6 mm	1 Kg
900032130	□ 6,3 mm	1 Kg
900032131	□ 8 mm	3 Kg
900032132	□ 9,5 mm	3 Kg
900032133	□ 10 mm	3 Kg
900032134	□ 11 mm	3 Kg
900032135	□ 12 mm	3 Kg
900032136	□ 12,7 mm	3 Kg
900032137	□ 14 mm	5 Kg

Other dimensions on request

*Valve in-line

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

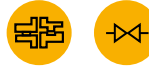
PTFE packing

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

PMUC

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

ISO, TUV, BAM

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

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

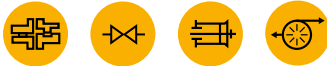
PTFE packing

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

BAM, EC 1935/2004, FDA, TUV

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

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

PTFE

LATTYFLON 94 L

General-purpose aramid sheet material 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

BAM, EC 1935/2004, FDA, PMUC

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

Test and measurement laboratory for manufacturer's valve approvals (see page 214)

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

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

Our equipment complies with the existing regulations relative to fugitive emissions, fire and oxygen tests.

To date, we have performed over 100 certifications with validation by certified organizations, on equipment such as



214

- Control valves,
- On/off valves,
- Valves in dimensions 1" to 10" and in pressure classes ranging from 150 lbs (20 bar) to 2,500 lbs (420 bar)

TRAINING

TRAINING (see page 208)

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.



208

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

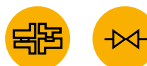
Carbon graphite packing

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
- COMBINED WITH LATTYGRAF E FOR PETROCHEMICAL 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 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

API, BAM

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 FOR FUGITIVE EMISSIONS APPLICATIONS

- REDUCED FRICTION
- FOR HIGH-PERFORMANCE AND HIGH-TEMPERATURE APPLICATIONS
- COMBINED WITH LATTYGRAF EF4 FOR FUGITIVE EMISSIONS 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

API, BAM, TUV

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 / 0,210 Kg
62782	□ 9,5 mm	9 m / 0,250 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 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)
- COMBINED WITH LATTYGRAF E2P FOR PETROCHEMICAL APPLICATIONS



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 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 (NONOXIDISING 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

ISO 15848-1 classe BH, TUV

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

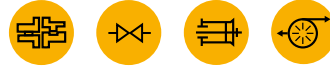
Carbon graphite packing

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 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 highpurity 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

BAM, ISO, TUV

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

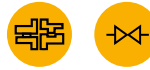
Graphite packing

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 40 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

PMUC

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

SERVICES

ON-SITE INTERVENTION

Our team of specialists carries out expert appraisals and diagnoses of the sealing efficiency of your equipment.

Our teams help and advise you to improve the performance of your sealing systems, reduce maintenance costs by increasing the interval period between interventions. 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.



209

TOOLS FOR MAINTENANCE

FLEXIBLE AND RIGID PACKING EXTRACTORS

These extractors have been designed to pull out the packings from section 4 to 25 mm which are fitted in stuffing boxes of valves, pumps, mixers, agitators, etc.



201

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

LATY 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

BAM, ISO, PMUC, TUV

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

PMUC

Graphite

LATTYGRAF S

Gasket specially designed for triple offset butterfly valves

JOINT POUR LES VANNES PAPILLON TRIPLE EXCENTRATION

- 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 to 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

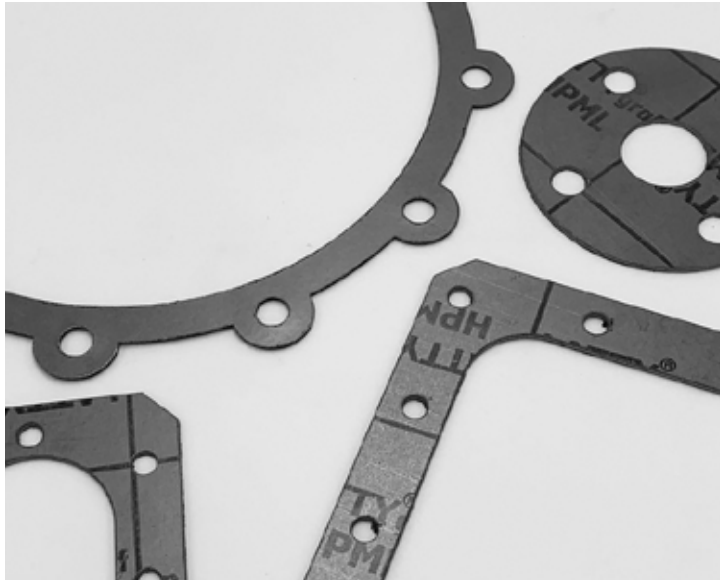
Graphite

LATTYGRAF HPML

Graphite multi-layer high pressure seal.

GRAPHITE MULTI-LAYER HIGH PRESSURE SEAL

- EXCELLENT CHEMICAL AND THERMAL RESISTANCE
- THE INSERTION OF STAINLESS STEEL SHEETS IMPROVES PRESSURE RESISTANCE, AND FACILITATES HANDLING AND SEAL CUTTING
- ITS HIGH CREEP RESISTANCE MAKES IT POSSIBLE TO USE IT AT HIGH PRESSURES AND TEMPERATURES.



OPERATING PARAMETERS (NOT ASSOCIATED)

Pressure : 250 bar
 Temperature : -200°C to +550°C (oxidising atmosphere)
 -200°C to +700°C (inert atmosphere)

COMPOSITION

Natural expanded graphite based seal sheet, carbon content > 99%, Includes multiple stainless steel inserts and is impregnated with an oxidation inhibitor

TYPES OF INDUSTRIES



FLUIDS

Water, steam, gas, very high, very low temperature & high pressure applications

GUIDELINES, STANDARDS AND APPROVALS

API 6FB, DVGW, OXYGEN AND LIQUID SERVICE

Item	Dimensions	Description
900029188	1,5 mm	1 m x 1 m
900029189	2 mm	1 m x 1 m
900029190	3 mm	1 m x 1 m
900029193	1,5 mm	1,5 m x 1,5 m
900029194	2 mm	1,5 m x 1,5 m
900029195	3 mm	1,5 m x 1,5 m

*Autres dimensions sur demande
 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

BAM, ISO

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

Graphite rings

LATTYGRAF EHT

High pure expanded graphite rings

VERY GOOD PERFORMANCE IN OXIDISING ENVIRONMENTS

- OXIDATION INHIBITOR GIVING IT A MASS LOSS OF LESS THAN 4% AT 650°C
- LOW COEFFICIENT OF FRICTION



OPERATING PARAMETERS (NOT ASSOCIATED)

Pressure : 400 bar
Temperature : -200°C to 600°C
(steam or non-oxidising environment)
< 450°C (oxidising environment)
pH : 0-14

COMPOSITION

Compressed sealing rings made of 99.85% pure 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

GUIDELINES, STANDARDS AND APPROVALS

BAM

Graphite rings

LATTYGRAF 9110

A new generation of pure, low-friction graphite

GUARANTEED FRICTION REDUCTION

- VERY GOOD PERFORMANCE UNDER VARIATIONS IN PRESSURE AND TEMPERATURE
- LOW OPERATING EFFORT



OPERATING PARAMETERS (NOT ASSOCIATED)

Pressure : 400 bar

Temperature : - 200 + 600° C. (steam or non-oxidising environment)
< 450° C. (oxidising environment)

pH : 0 - 14

COMPOSITION

Rings made of high purity expanded graphite, according to PMUC requirements.

TYPES OF INDUSTRIES



FLUIDS

All types of fluids

GUIDELINES, STANDARDS AND APPROVALS

PMUC

Aramid packing

LATTYFLON 4758

Packing for reciprocating, rotary or static applications

GOOD PERFORMANCE ON ABRASIVE FLUIDS

- SILICONE-FREE
- 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 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
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 by order

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

BAM, DVGW, PMUC, TUV, WRAS, EC 1935/2004

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.

ELASTOMER SEAL

LATTY-E 48Z11 LY 1700

Elastomer seal based on EPDM

QUALIFIED FOR IRRADIATIONS UP TO 1700 KGY

- MEETS THE CHEMICAL SPECIFICATION OF THE PMUC
- HIGH RESISTANCE FOR IRRADIATIONS. QUALIFICATION CARRIED OUT WITH GAMMA RAYS DOSE UP TO 1700 KGY
- GOOD RESISTANCE TO WEATHERING, NITROGEN, OXYGEN, HYDRAULIC FLUIDS OF PHOSPHATE ESTER-TYPE, POLAR SOLVENTS (WATER, ALCOHOLS, GLYCOLS, KETONES), STEAM, DETERGENTS



OPERATING PARAMETERS (NOT ASSOCIATED)

Temperature :

- De -40°C to 100°C in air (extended operating period) in dynamic application and approx. -65°C in static application
- De -40°C to 150°C in air (limited operating period) in dynamic application and approx. -65°C in static application
- De -40°C to 140°C in water (extended operating period)
- De -40°C to 170°C in water or steam (operating period)

COMPOSITION

The elastomer seal E48Z11LY1700 meets the chemical specifications of PMUC (products and materials usable in nuclear power stations) with values of halogen and sulphur content below 200 ppm (according to GDL procedure D5710/ESD/1990/000295/001)

TYPES OF INDUSTRIES



GUIDELINES, STANDARDS AND APPROVALS

PMUC

Test and measurement laboratory for manufacturer's valve approvals (see page 214)

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

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

Our equipment complies with the existing regulations relative to fugitive emissions, fire and oxygen tests.

To date, we have performed over 100 certifications with validation by certified organizations, on equipment such as



214

- Control valves,
- On/off valves,
- Valves in dimensions 1" to 10" and in pressure classes ranging from 150 lbs (20 bar) to 2,500 lbs (420 bar)

TRAINING

TRAINING (see page 208)

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.



208

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

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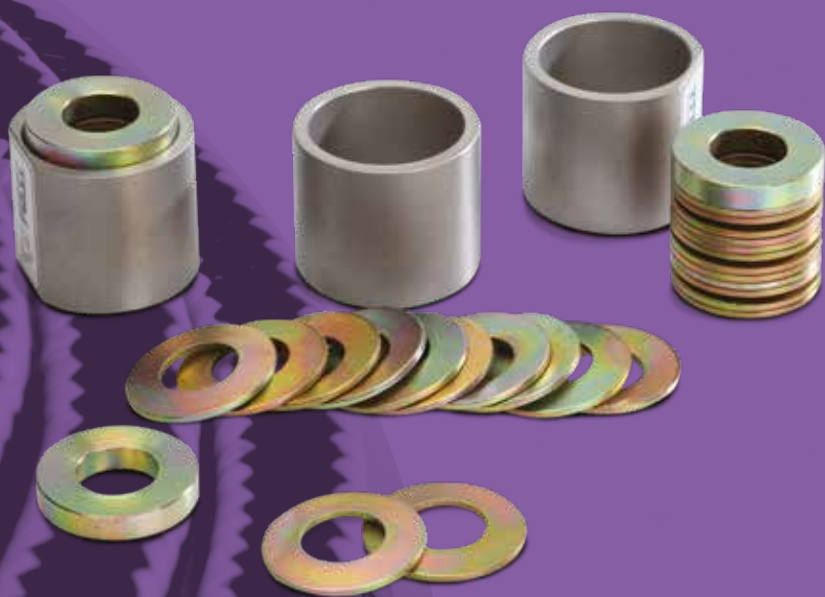


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AUSTRIA

Tools and Accessories



Designer for industrial sealing solutions

TOOLS AND ACCESSORIES

We offer you a comprehensive range of tools to allow you easier maintenance works and time saving including:

Packing-cutting tools	200
Packing extractors	201
Manual Gasket Cutting Machine	202
Electrical Gasket Cutting Machine	203
Cutting tools boxes	204
Live Loading Systems	205



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

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





Services



Designer for industrial sealing solutions

SERVICES

Our sealing expertise allows us to accompany you in your projects, make recommendations and manufacture your sealing solutions.

Technical training	208
On-site assistance	209
Assessment	210
Reconditioning	211
Cut Gasket Manufacture	212
Services, studies and research	213
Approvals of OEM equipment	214-215



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 facilities

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





TECHNICAL 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:

AECL, FDA, EC 1935/2004, EHEDG, ACS, 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

RECONDITIONING 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.

SAQR-ATEX-certified workshops



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 mechanical seals.

CERTIFICATION

SAQR-ATEX-certified workshops



Don't throw your mechanical seals away anymore...

Save by refurbishment !



Before



Before



After



After

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 undertaken 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 flanges

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

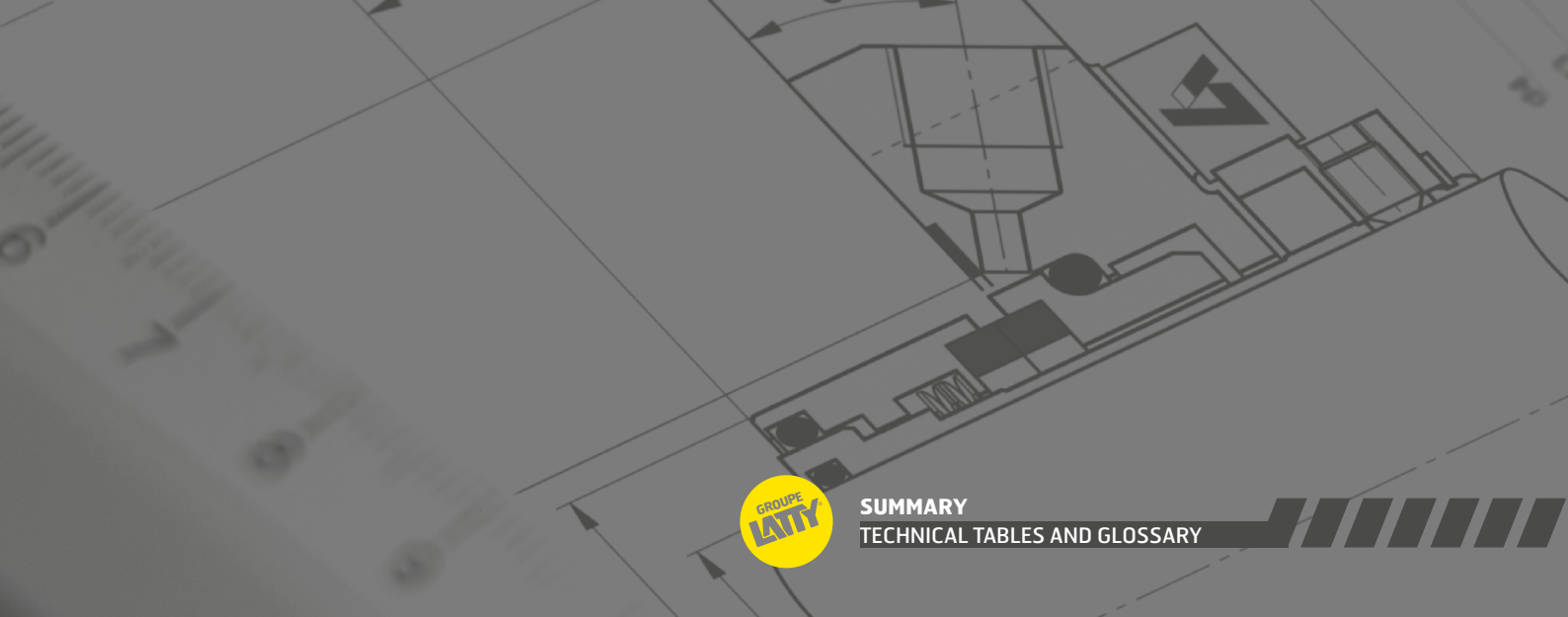
To date, we have obtained over 100 test reports confirming the approvals (available on request)



Designer for industrial sealing solutions

TECHNICAL TABLES AND GLOSSARY

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TYPES OF MECHANICAL SEALS

Design alternatives

For all models

Type U = Unbalanced

Type B = Balanced

CARTseal B 24610 : The single cartridge mechanical seal allows for quick and simple installation as the seal is factory set. When fitting, the user does not have to worry about the settings of the fitting, this has already been checked by LATTY.

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

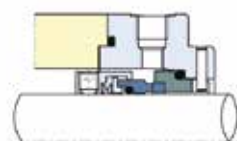
There are consequently two types of springs: 'R' for clockwise rotation, as seen from the motor side

'L' for anti-clockwise rotation, as seen from the motor side



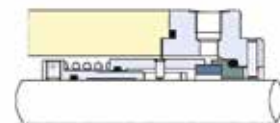
LATTYseal 6812 : mechanical seal with spring washers, independent of the direction of rotation

The spring washer allows us to design more compact seals. The drive in rotation is secured by cup point set screw emcombrent.



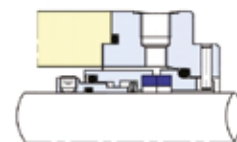
LATTYseal B 18212 : mechanical seal with cylindrical spring, independent of the direction of rotation

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

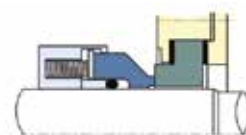
Alone, it ensures the following three functions: the load required for the permanent contact of the 2 faces, the drive of the face of the rotary part, sealing between the drive ring and the rotary part.



It is used mainly with viscous products that are conveyed at high temperature, up to 220°C and above, with graphitebased 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. However, these mechanical seals are limited in inverted pressure.

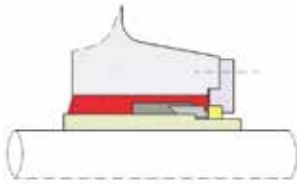


TYPES OF MECHANICAL SEAL ASSEMBLIES

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 :

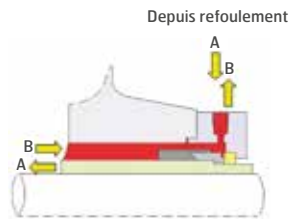
- The seal is immersed in the fluid to be sealed without circulation.
- Pressure < 1 MPa (< to 10 bar)
- Speed: 1,500 to 3,000 tr/min

Propriétés du fluide à étancher :

- 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 :

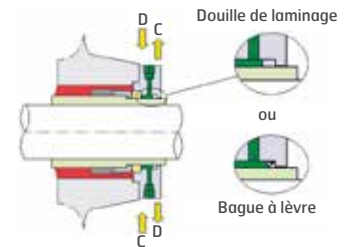
This type of assembly enables the circulation of the fluid to be sealed with three possible flow directions:

- 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.

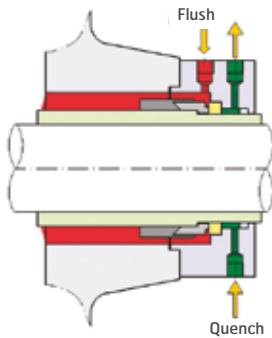
- When using a liquid (circulation C), the circulation will preferably be from bottom to top in order to ensure the filling of the cavity.

- 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



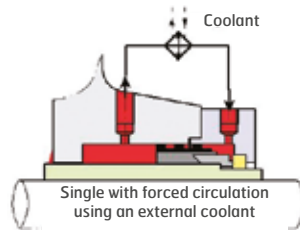
Principle:

- 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 ressure problem;
- that can form deposits on the atmospheric side

Single assembly with forced circulation through external coolant
API plan 23



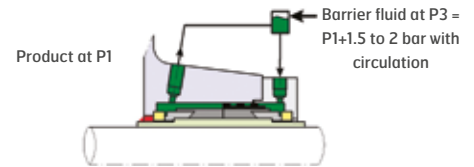
Principle:

- 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



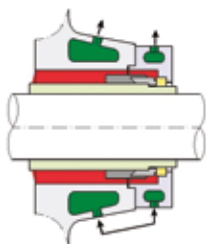
Principle:

- 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 and 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.

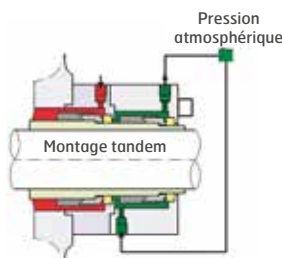
Properties of the fluid to be sealed:

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.

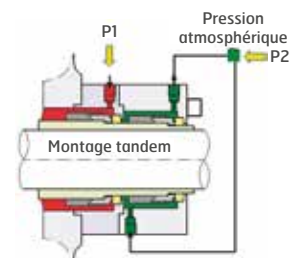
Tandem assembly
API plan 52 and 62



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 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)

	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	FUGITIVES EMISSIONS	NUCLEAR	FIRE TEST	
	FDA	EC 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 HPML								X				
LATTYgraf REFLEX										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 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 eliminates 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 materials 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 through (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 compressionmoulded 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
Resin impregnated carbon (FDA)	B1	B
Carbon for dry rubbing	C4	C
CARBIDES (TUNGSTEN CARBIDE U, SILICON CARBIDE Q OTHER CARBIDES J)		
Nickel-bonded tungsten carbide.	U2	U2
Silicon carbide produced by sintering.	U6	Q1
Silicon carbide produced by chemical reaction.	U3	Q2
Silicon carbide composite with graphite inlay.	U5	Q3
Carbon - silicon carbide composite, surface silicided.	U4	Q4
Silicon carbide processed by sintering with graphite inlay	U12 (SiC + Diamant)	J
METALLIC OXIDES		
Aluminium oxide	V	V
Aluminium 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/E1	E
Perfluorinated rubber	K / K2	K
Chloroprene rubber	-	N
Nitrile rubber	P	P
Silicone rubber	S	S
Fluorocarbon elastomer FKM / FDA.	V-V4	V
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

MECHANICAL SEALS

LATTYseal U1000	32
LATTYseal B1000	33
LATTYseal U1112	34
LATTYseal U1212	35
LATTYseal U6812	36
LATTYseal B6812	37
LATTYseal B17110 B	38 -39
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LATTYseal B10712 RIV/RIP	45
LATTYseal B18212	46
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CARTseal B23612	52-53
CARTseal B23612 Q	54-55
CARTseal B24610	56-57
CARTseal B24610 Q	58-59
CARTseal B24610 PP	60-61
CARTseal B24610 PPQ	62-63
CARTseal B24810 DB	64
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LATTYseal B16660 A3	66-67
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LATTYcore 4788 G	93
LATTYcore 4758 G	94
LATTYcore 7189 G	95
LATTYcore 5790 G	96

ARAMID

LATTYflon 4488	98
LATTYflon 4757	99
LATTYflon 4758	100
LATTYtex 4777	101
LATTYflon 4788	102
LATTYflon 4789	103
LATTYflon 5790	104
LATTYflon 5790 S	105

PTFE

LATTYflon 3206	106
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LATTYflon 3206 SO	108
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CARBON ARAMID

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ARAMID

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LATTYgold 92	132
LATTYgold 92 G2F	133
LATTYgold 925	134
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PTFE

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