

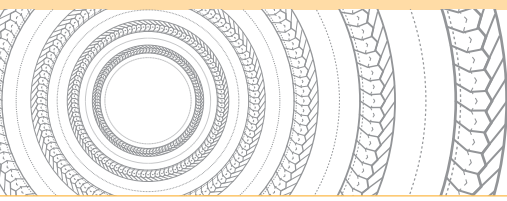


BRAIDED PACKINGS & RINGS

# LATTYflon 7189



**Braided packing  
for rotary units,  
harsh environments  
and slurries**



# LATTYflon 7189

## BRAIDED PACKINGS & RINGS

A packing particularly appropriate for harsh environments.



The LATTYflon 7189 packing is made of:

- ▶ on the edges, phenolic composite yarns, each single yarn being impregnated with PTFE using our exclusive Filcoat-process,
- ▶ on friction faces, polyacrylic yarns, each single yarn being impregnated with PTFE using our exclusive Filcoat-process,
- ▶ graphite yarns in the core, which provides excellent elastic recovery properties.

Moreover, the packing is re-impregnated with the latest generation mix during the plaiting operation, thereby further reducing friction.



### Advantages

- ▶ Withstands slurries
- ▶ Easy to fit
- ▶ Little retightening required after installation
- ▶ Supple and strong
- ▶ Very good elastic recovery
- ▶ Can be used under a lantern ring
- ▶ Easy to cut
- ▶ Does not heat up much
- ▶ Little or no wear of shaft sleeve
- ▶ Optimised maintenance time
- ▶ Reduced running-in time
- ▶ Preformed packing rings



### Applications (all fluids)

- ▶ Rotary units
- ▶ Pumps
- ▶ Sewage water treatment
- ▶ Sewage sludge
- ▶ Irrigation
- ▶ Pumping of river water
- ▶ Mining
- ▶ Quarries
- ▶ Sugar processing
- ▶ Pulp and paper

### Parameters (not associated)

- ▶ Temperature: < 260°C
- ▶ Pressure: 200 bars
- ▶ Speed: < 20m/s
- ▶ pH: 1-13



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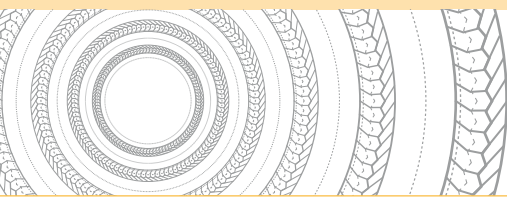


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# LATTYflon 3206 / AL / CE

## BRAIDED PACKINGS & RINGS

### PTFE packings for rotary units

#### Characteristics

##### ▶ LATTYflon 3206

Packing made of 100% PTFE silk yarns, impregnated during braiding operation with inert lubricant. Available in square sections from 4 to 20 mm (available on request as preformed rings).

##### ▶ LATTYflon 3206 AL

Packing made of 100% PTFE silk yarns, impregnated during braiding operation with a mix of PTFE and inert lubricant. Available in square sections from 5 to 20 mm (available on request as preformed rings).

Approvals: ACS, FDA

##### ▶ LATTYflon 3206 CE

Packing made of 100% PTFE silk yarns, impregnated during braiding operation with a mix of PTFE and inert lubricant. Available in square sections from 5 to 20 mm (available on request as preformed rings).

Approvals: CE 1935 / 2004

#### Advantages

- ▶ Compatible with food
- ▶ Perfect chemical inertness
- ▶ Very low friction coefficient

#### Industries

- ▶ Food processing
- ▶ Chemicals
- ▶ Pharmaceuticals

#### Fluids

- ▶ Chemically aggressive

#### Equipments

- ▶ Rotary
- ▶ Valves and fittings

#### Parameters (not associated)

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



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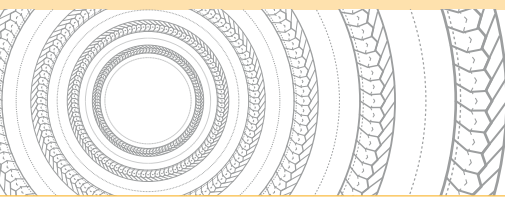
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# LATTYflon 3206 S / SO

## BRAIDED PACKINGS & RINGS



**LATTYflon 3206 S**  
Chemically inert packing,  
dedicated to static applications



**LATTYflon 3206 SO**  
Packing dedicated to oxygen  
and food applications

### Characteristics

- ▶ Packing made of 100% PTFE silk yarns, impregnated during braiding operation with a mix of PTFE.

### Advantages

- ▶ Very low friction coefficient
- ▶ Perfect chemical inertness
- ▶ Dry packing

### Industries

- ▶ Chemicals
- ▶ Pharmaceuticals

### Dimensions

- ▶ Available in square sections from 4 to 25.4 mm.
- ▶ Other dimensions on request
- ▶ On request, available as preformed rings.

### Parameters (not associated)

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



### Characteristics

- ▶ Packing made of 100% PTFE silk yarns, impregnated with PTFE, then treated to ensure perfect oxygen compatibility.

### Advantages

- ▶ Dedicated to oxygen application
- ▶ Very low friction coefficient
- ▶ Perfect chemical inertness

### Industries

- ▶ Food processing
- ▶ Water treatment
- ▶ Pharmaceuticals

### Dimensions

- ▶ Available in square sections from 5 to 20 mm.
- ▶ Other dimensions on request
- ▶ On request, available as preformed rings.

### Parameters (not associated)

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

### Certifications

- ▶ BAM
- ▶ EC 1935/2004
- ▶ FDA
- ▶ TÜV VDI 2440

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designed for one purpose

# LATTY<sup>®</sup>flon 3260 LM

brings secure stem sealing  
with rapid response  
to modulating control valves

Operating parameters (non associated)

Temperature	300°C / 572°F
Pressure	300 bar / 4,350 psi
pH	0 – 14

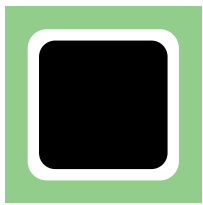
Examples of associated parameters

	Temperature	Pressure
Steam	285°C / 550°F	80 bar / 1,160 psi
Water	200°C / 392°F	200 bar / 2,900 psi

*eliminates  
hesitations, juddering,  
delays,  
due to low power/seal  
friction ratio*



# LATTY<sup>®</sup>flon 3260 LM



The EDF sought a new solution to control valve stem sealing problems. The eventual result was required to be non-asbestos, to operate under difficult conditions requiring high resilience, high strength, low hysteresis, low friction and inertia to chemical

attack. After much initial investigation and experimentation, LATTYflon 3260 LM was conceived.

The final design of this advanced packing consists of a core of plaited PTFE impregnated carbon yarn within a sleeve finely braided from PTFE impregnated and

lubricated PTFE yarn. The carbon yarn core provides the resilience, recovery and dimensional stability so necessary to a good seal, is a heat dissipator and is unaffected by chemicals except for the most aggressive oxidants. The lubricated PTFE sleeve, also chemically inert, protects the carbon core and provides a very low coefficient of friction.

This combination, according to exhaustive laboratory and field tests by the EDF, has produced the best modulating control valve seal yet seen. More robust and more durable than V-rings, with low friction but without a high rate of thermal expansion, with PTFE combination packing.

## Details of the tests made in the EDF laboratories are:

Fluid	Demineralised Water	Demineralised Water
Ring	Ø19.05 × Ø31.75 mm	Ø30 × Ø46 mm
Pressure	200 bar / 2,900 psi	90 bar/1,305 psi
Temperature	200°C / 392°F	280°C / 536°F
Stroke	50 mm	50 mm
Speed	1 mm/s	1 mm/s
Cycles	122,000	196,000
Pressure applied	1.5 × line pressure	1.5 × line pressure
Anti-extrusion rings	No	Yes
Leak	None measurable	None measurable
Stem travel	12.2 km / 7.58 miles	19.6 km / 12.18 miles

In addition, during 1988 and 1989, over a period of more than 18 months, LATTYflon 3260 LM operated in "sensitive" control valves in the turbine circuits (secondary area) of four different PWR power plants on saturated steam at:

Pressures between 55 and 70 bar      Anti-extrusion rings being applied in each case for maximum security.  
Temperatures between 270 and 285°C

As a result of the excellent reports received from the plants plus the test results above, **the EDF has approved LATTYflon 3260 LM for use in the secondary areas of all their nuclear plants.**

## ADDITIONAL POINTS OF INTEREST

### Friction of seal against stem

Calculated from tests and operating experience as daN/cm<sup>2</sup> of contact surface per 100 daN/cm<sup>2</sup> of applied load the factor for:

- Expanded graphite is 10
  - LATTYflon 3260 LM 1.5 to 2
- bringing an improvement of the order of 5:1.

### Pressure applied to gland

Due to the different deformation and resilience characteristics of the two products, LATTYflon 3260 LM will form a seal at a lower effective applied load than that needed for expanded graphite. The EDF, however, have standardised on 1.5 × line pressure regardless of which of the two types of seal is used.

### Anti-extrusion end rings

LATTYflon 3260 LM can be fitted alone in applications where:

Temperature < 200°C / 392°F  
Pressure < 200 bar / 2,900 psi

Should either parameter be exceeded, end rings are advisable to ensure against extrusion. Suitable end ring materials are LATTYgraf 6118 or LATTYgraf 6940.

Fluids other than water and steam LATTYflon 4758.

### Packing height

From tests and in practice it has been found that the ideal packing stack height including end rings is stem diameter plus 15 mm.

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**LATTY<sup>®</sup> international s.a.**

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**PACKINGS**

PREFORMED PACKING RINGS

# LATTYflon 3265 LM

**NEW**



## THE PACKING THAT SLIDES RATHER THAN RUBS

Friction coefficient reduced by more than 30%!



# LATTYflon 3265 LM

PACKINGS PREFORMED PACKING RINGS

## Friction reduced by more than 30%

Packing consisting of a braided core made from PTFE-impregnated carbon yarns and a sleeve made from cross-braided, impregnated and lubricated PTFE yarns. Its elastic composite structure ensures sealing efficiency with a low tightening torque, thus allowing reduced operating effort and minimum hysteresis while greatly improving fluid regulation, making it particularly suitable for regulating valves.

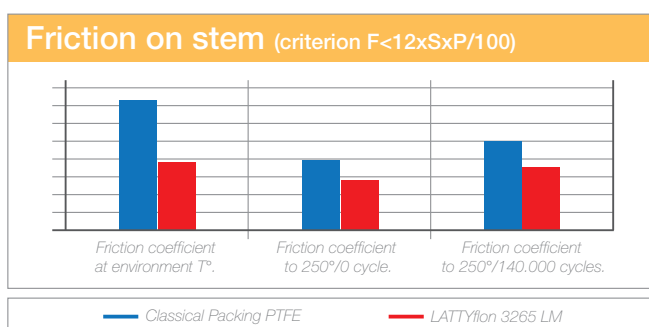


LATTYflon 3265 LM may be used as sealing rings in conjunction with LATTYgraf 6995 NG or LATTYgraf 6988 EF as anti-extrusion rings, complies with the requirements of ISO 15848-1, Class BH

Product	Temperature	Pressure	pH
LATTYflon 3265 LM	-100°C to +300°C	300 bar	0-14
	+285°C (steam)	80 bar	0-14

## Advantages

- Dedicated to the specific requirements of regulating valves
- Reduced operating effort, minimum hysteresis
- The corrosion inhibitor (exclusive LATTY process) durably protects the parts of the fitting
- Ready-to-use preformed rings: quick stuffing box implementation and replacement, reduced production downtime
- Reduced maintenance costs and increased equipment service life
- Multi-purpose: suitable for a large number of applications
- Made in France



## Homologations

- BAM (oxygen)
- TA-Luft: complies with the requirements of VDI 2440
- Standard ISO 15848-1, Class BH in industrial valves and fittings: Qualification measurement, tests and operating methods for Fugitive Emissions.

## Applications (all fluids)

- Control and regulating valve manufacturers
- Chemical industry
- Petrochemical industry
- Cryogenic applications
- Nuclear power plants



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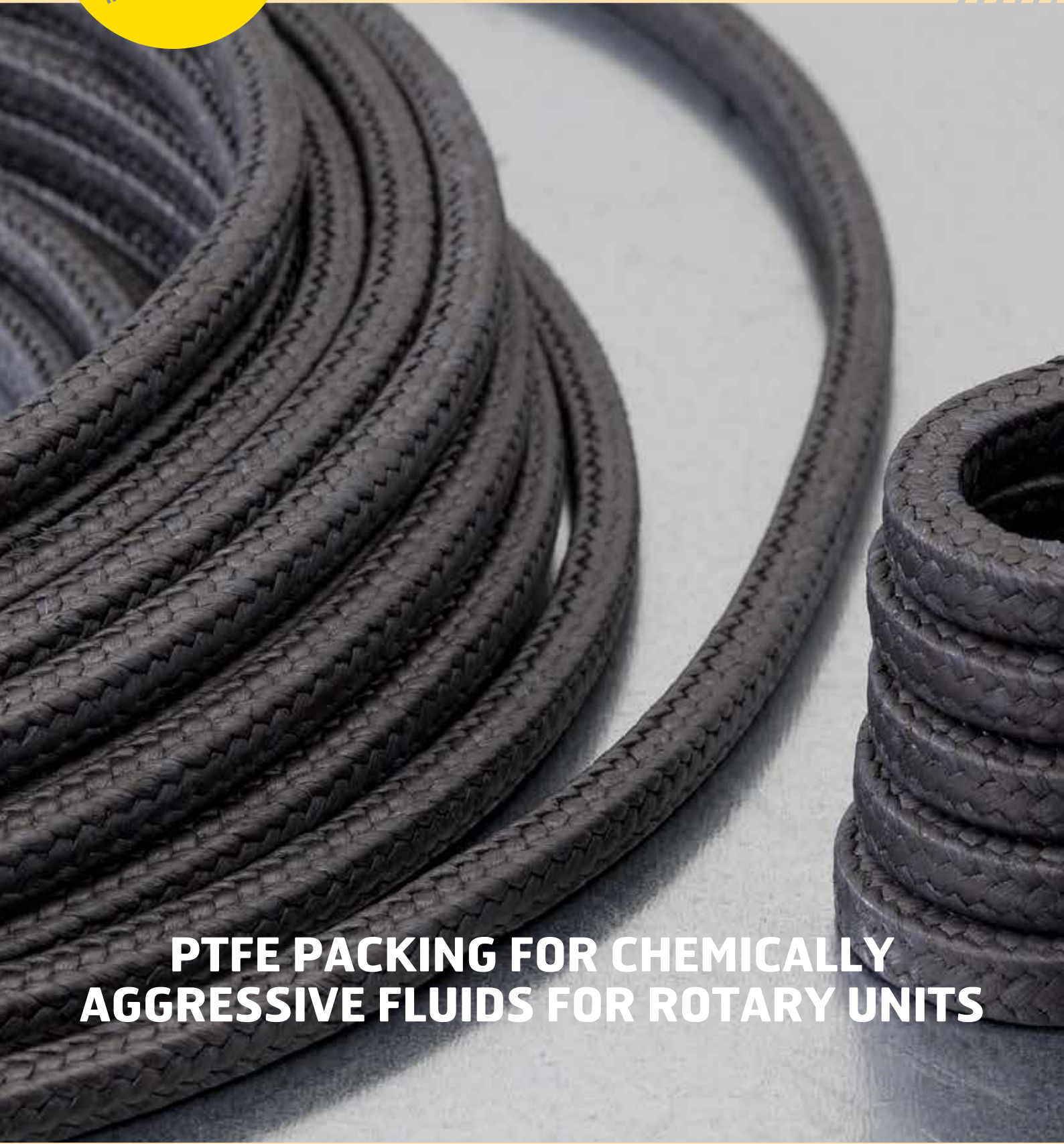
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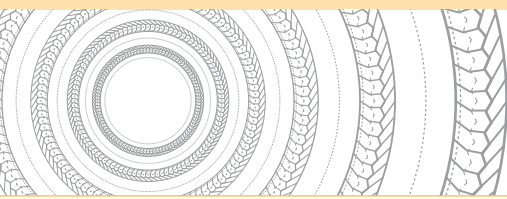
BRAIDED PACKINGS & RINGS

# LATTYflon 4308



**PTFE PACKING FOR CHEMICALLY  
AGGRESSIVE FLUIDS FOR ROTARY UNITS**





# LATTYflon 4308

## BRAIDED PACKINGS & RINGS

### PTFE packing for applications on rotary pumps with chemically aggressive fluids

#### Characteristics

- ▶ Packing made of PTFE filaments, impregnated with a PTFE/graphite mix. The PTFE yarn provides ideal chemical inertness. The highly pure graphite enhances the thermal and electrical conductivity of the packing, thus stabilising its general behaviour and providing outstanding sealing efficiency.
- ▶ The materials used guarantee a very low friction coefficient and high lubrication level.

#### Advantages

- ▶ Chemical inertness
- ▶ High resistance to chemical aggressions
- ▶ High heat dissipation
- ▶ Outstanding heat transfer coefficient
- ▶ High electrical conductivity
- ▶ Withstand high speed
- ▶ Low friction coefficient
- ▶ Self-lubricating

#### Equipments

- ▶ Rotary
- ▶ Rotary units

#### Industries

- ▶ Petrochemicals
- ▶ Chemicals

#### Fluids

- ▶ Chemically aggressive
- ▶ All non-abrasive fluids

#### Parameters (not associated)

- ▶ Temperature: -200°C to +300°C
- ▶ Pressure: 0 to 110 bar
- ▶ Speed: < 26 m/s
- ▶ pH: 1 to 14

#### Dimensions

- ▶ Available in square sections from 4 to 25.4 mm\*
- ▶ On request, available as preformed rings.

*\*Other dimensions on request*



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