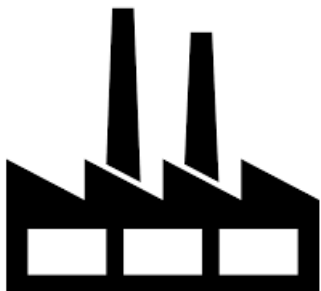




Engineered Sealing Systems

Mechanical Industry



Facts & Figures

Offices and Warehouse:

Rho (MI), Italia

Year of establishment:

1968

Ownership:

Fatigati family

Employees:

30

Associated companies:

1

Turnover 2022:

≈ € 9,0 mio



Quality Management System



MANAGEMENT SYSTEM CERTIFICATE

Certificate no.: CERT08910-2001-AG-ML-SINCERT Initial certification date: 18 July 2001 Valid: 24 July 2021 – 23 July 2024

This is to certify that the management system of
PANTECNICA S.p.A.
Via Magenta, 77/14 A - 20017 Rho (MI) - Italy

has been found to conform to the Quality Management System standard:
ISO 9001:2015

This certificate is valid for the following scope:
Design and trade, also under own trademark, of anti-vibration Systems, fluid seal systems and technical industrial items (IAF 29, 14, 17)

Place and date:
Vimercate (MB), 04 February 2022



ACCREDIA
CONFERMAZIONE ACCREDITAMENTO

For the issuing office:
DNV - Business Assurance
Via Energy Park, 14 - 20871 Vimercate (MB) - Italy

Claudia Baricelli
Claudia Baricelli
Management Representative

Lack of fulfillment of conditions as set out in the Certification Agreement may render this Certificate invalid.
ACCREDITED UNIT: DNV Business Assurance Italy S.r.l., Via Energy Park, 14 - 20871 Vimercate (MB) - Italy - TEL: +39 03 99 9105 - www.dnv.it



MANAGEMENT SYSTEM CERTIFICATE

Certificate no.: 119562-2012-AG-ITA-ACCREDIA Initial certification date: 19 July 2012 Issue Date: 19 July 2021 Expiry Date: 18 July 2024

This is to certify that the management system of
PANTECNICA S.p.A.
Via Magenta, 77/14 A - 20017 Rho (MI) - Italy

has been found to conform to the Quality Management System standards:
EN 9120:2018 and ISO 9001:2015
(technically equivalent to AS9120B and SJAC9120:A)

and has been audited in accordance with the requirements of EN 9104-001:2013 and ACCREDIA Technical Regulation RT-18.

Type of certification structure: Single Site

This certificate is valid for the following scope:
Parts and materials marketing for aviation, space and defense industry.
Commercializzazione di parti e materiali per l'industria aeronautica, dello spazio e della difesa.

IAF Sector(s) : 29, 14, 17

Place and (re-)issue date:
Vimercate (MB), 16 July 2021



ACCREDIA
CONFERMAZIONE ACCREDITAMENTO

For the accredited unit:
DNV - Business Assurance
Via Energy Park, 14 - 20871 Vimercate (MB) - Italy

Zeno Beltrami
Zeno Beltrami
Management Representative

Lack of fulfillment of conditions as set out in the Certification Agreement may render this Certificate invalid.
ACCREDITED UNIT: DNV Business Assurance Italy S.r.l., Via Energy Park, 14 - 20871 Vimercate (MB) - Italy - TEL: +39 03 99 9105 - www.dnv.it

Clusters & Assotiations



ASSOLOMBARDA
Confindustria Milano, Monza e Brianza, Lodi



Who we are what we do

Technical and application engineering consultancy for the design, development, production and supply of systems and components for the isolation and damping of vibrations and impacts in any type of industrial application, in addition to some specialized civil environments, and fluid sealing systems and components, also with a certification of materials and process systems



**Sealing and Antivibration
Solutions**

Fluids sealing solutions



Rotary Shaft Seals

For any operating condition, heavy or not, with pressure, speed and temperature .

DIN 3760 - 3761



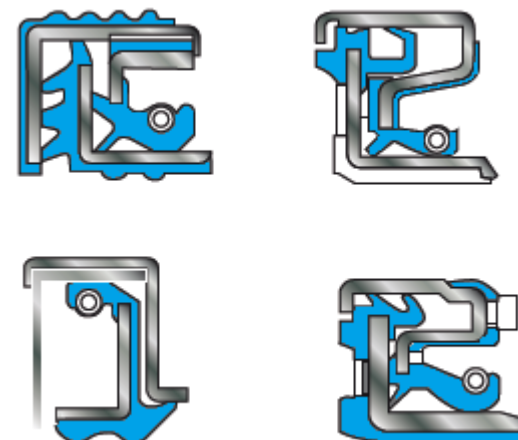
- For rotary applications
- Standard and custom solutions
- For any Industrial and Naval sector

WR 35-36-37



CASSETTE SEAL

- For any Industrial and Off-Road sector



Axial rotary seals HIRSCHMANN[®]

Axial rotary seals for any operating condition with low pressure, speed and temperature.

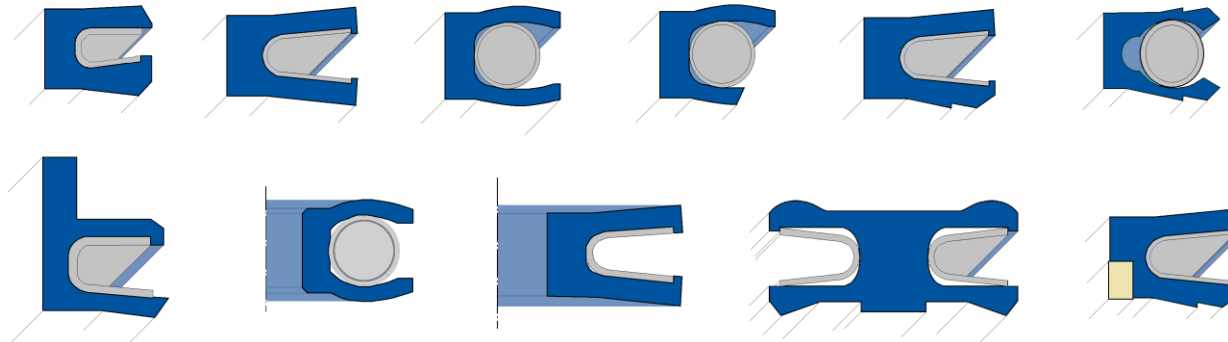
- **For rotary application**
- No wear of the shaft and no particular finished required of the same
- Low friction
- Reduced influence on sealing of the dynamic run-out
- Temperatures from -40°C up to +200°C
- Speed up to 30 m/s



PTFE Energized Seals SPRINGFLON[®]

For severe operating conditions due to: chemical aggression, temperature, pressure, speed and/or lubrication absence.

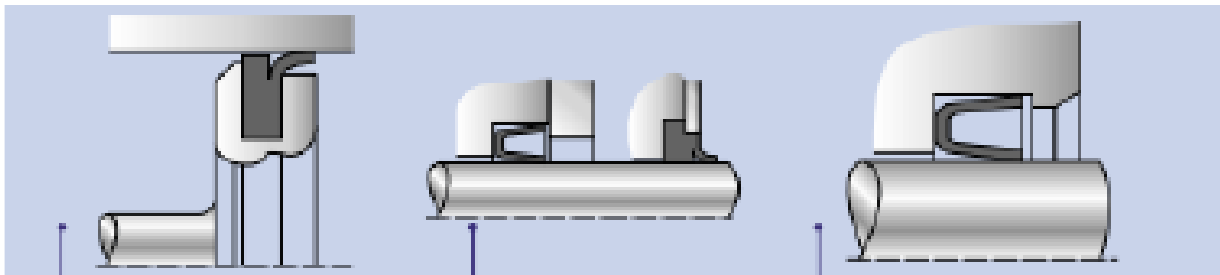
- For static, linear, rotary and rototraslating applications
- Low coefficient of dynamic friction.
- Standard and custom solutions
- Standard spring in AISI 304, other materials on request
- Temperature from -95°C to +280°C
- Pressure up to 70MPa
- Speed up to 2,5m/s (rotating) / up to 15m/s (linear)



PTFE MEMORY[®] Seals

For operating conditions due to: chemical aggression,
temperature, pressure, speed and/or lubrication absence.

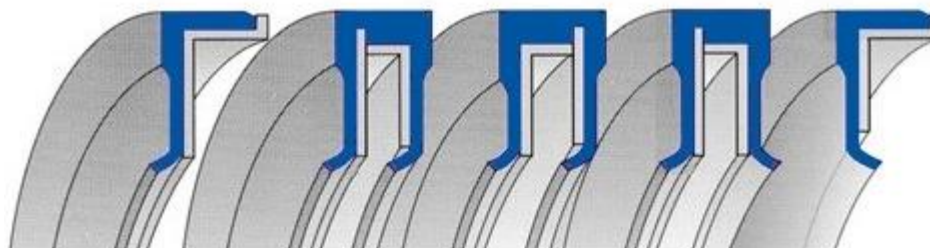
- For linear applications or slow rotary motions.
- Preformed seal to ensure constant contact preload.
- Low coefficient of dynamic friction.
- Standard and custom solutions
- Temperature from -40°C to +220°C
- Pressure up to 2MPa
- Speed up to 1m/s (rotating) / up to 15m/s (linear)



DOMSEL[®] Rotary Seals

For severe operating conditions with concomitance of pressure and speed.

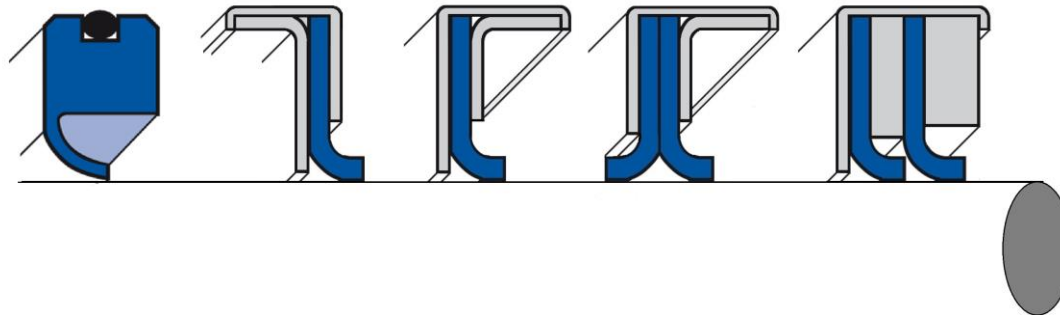
- **For rotary applications**
- No tension spring
- Low coefficient friction
- Elastomers: NBR-HNBR-EPDM-VMQ-FKM-FFKM
- 7 profiles
- Dimensions up to 380mm
- Temperatures from -40°C to +300°C
- Pressure up to 1.5MPa
- Speed up to 32 m/s



PTFE Rotary Seals RADIAFLON[®]

For severe operating conditions due to: chemical aggression, temperature, pressure, speed and/or lubrication absence.

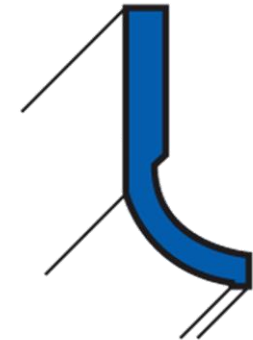
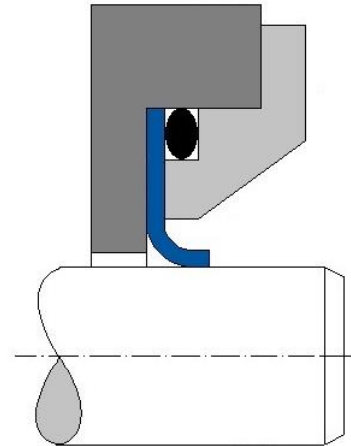
- **For rotary applications**
- Very low dynamic coefficient of friction.
- Standard and custom solutions
- Standard case in AISI 304, other materials on request
- Temperature from -60°C to +220°C
- Pressure up to 2.0MPa
- Speed < 30 m/s



PTFE Rotary Shaft Lips SHAFTLIP

For working or assembly conditions with limited space and with presence of:
chemical aggression, temperature, pressure, speed and/or lubrication absence..

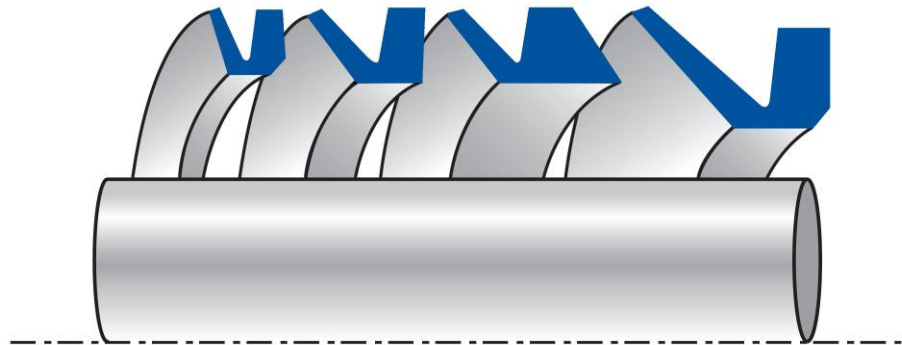
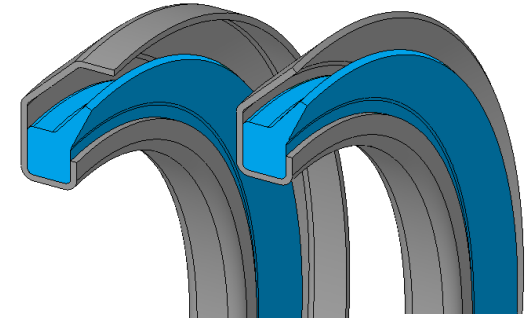
- **For rotary applications**
- Very low friction coefficient
- Special and customized solutions: multi-lip, single lip, lips with different thickness or preload.
- Temperature from -90°C to +260°C
- Pressure up to 2.5MPa.
- Peripheral speed > 35m/s.



V-SEAL[®] & AXIA-SEALS

Rotary scrapers in the presence of more or less aggressive fluids or solid contaminants, temperature and speed.

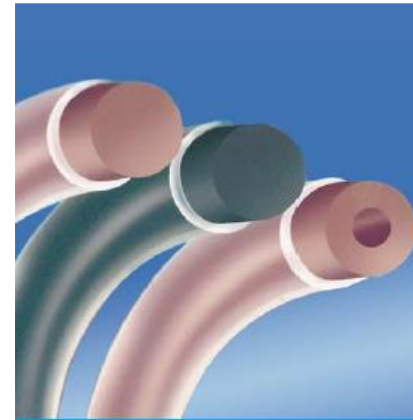
- **For rotary applications**
- Very low friction coefficient
- Elastomers: NBR-FKM-VMQ
- 3 profiles
- Dimensions up to 2000mm
- Temperature from -40°C to +200°C
- Pressure: none
- Speed: up to 18m/s



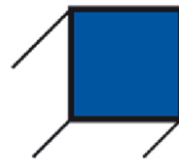
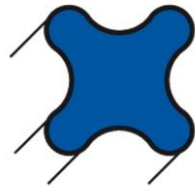
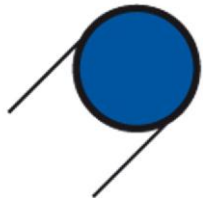
OR-FEP

Static seal in presence of aggressive fluids or gases and temperature.

- **For static applications**
- It combines the chemical and thermal resistance of PTFE with the elasticity of elastomers.
- Wide chemical and thermal operating range virtually inert to chemical aggression.
- Anti-adhesive sheath, absence of gluing with the surfaces in contact.
- Low vapor permeability and minimal hygroscopicity.
- Low compression-set exceeds the requirements of L-P389A and ASTM D-2166.
- Standard and metric sizes
- Can be used in existing site for OR conforming to AS568A standard
- Temperature from -60°C to +200°C (depending on the OR core)
- Pressure up to 15 MPa (after 5MPa with the aid of the Back-Up Ring)

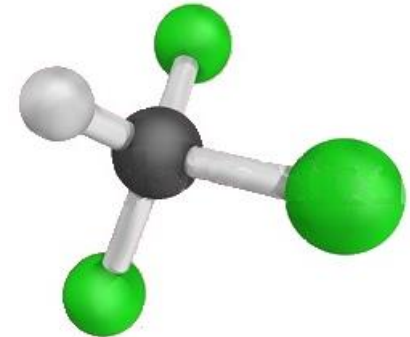
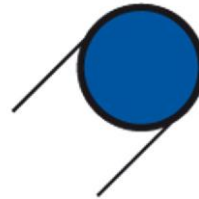


Special Elastomers for ORING – X-RING – Q-RING[®]



- **NBR**: continuous service between **-30°C to +100°C**; good resistance to oils, mineral, vegetable and animal fats, hydrocarbons and gases.
- **HNBR**: continuous service between **-30°C to +150°C**; good resistance to mineral, animal and vegetable oils and fats, aliphatic hydrocarbons, diesel oil, ozone, low acidity gas, diluted acids and bases.
- **EPDM**: continuous service between **-45°C to +150°C** (peaks +175°C), resistant to aging, ozone, hot water and steam; compatible with organic and inorganic acids. Special formulations for EMC applications
- **VMQ**: continuous service between **-60°C to +200°C** (peaks +230°C), high impermeability to gases, excellent resistance to oxygen and ozone. Good behavior with: hot air, inert gases, vegetable and animal fats and oils. Special for EMC applications
- **FVMQ**: continuous service between **-60°C to +175°C**; impermeable to gases, high resistance to oxygen and ozone, aromatic mineral oils, aliphatic hydrocarbons, toluene, benzene, diesel oil, diluted acids and bases. Special formulations for EMC applications
- **FKM - peroxide**: service up to **+230°C**, special formulations for low temperatures, good resistance to bases and acids.

FFKM (perfluoroelastomers) ELAFLUOR[®] for ORING



- **ELAFLUOR[®]** is an FFKM that combines the excellent chemical and thermal properties of PTFE with the best elasticity and compressive deformation resistance of elastomers.
- **ELAFLUOR[®]** is normally used in all those applications where it is required that the seals meet extreme standards for Temperature and Chemical Compatibility.
- **ELAFLUOR[®]** is a range of FFKM that offer significant and cost-effective improvements in those applications where other elastomers or thermoplastics are used. The improvement in duration and the consequent savings on operating costs compensate for the higher initial cost.
- **ELAFLUOR[®]** is available with a wide range of O-Rings covering all standard dimensions with diameters up to 2000 mm. Possibility of producing parts according to customer drawings.

PTFE Composite Seals for ACTUATORS

Composite sealing systems for any kind oleopneumatic applications

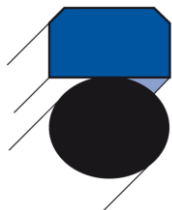
AXIAFLON®

For ROD and PISTON in linear applications with:

P: up to 80MPa

V: up to 15m/s

T: from -45°C to +200°C



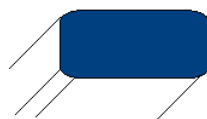
SLYDFLON®

Guides in PTFE and Composites for applications with:

V: up to 15m/s

T: from -60°C to +200°C

Static load up to 100N/mm²



WIPEFLON®

Scrapers for linear movements with:

V: up to 15m/s

T: from -45°C up to +200°C



ROTAFLON®

For rotating applications systems with:

P: up to 30MPa

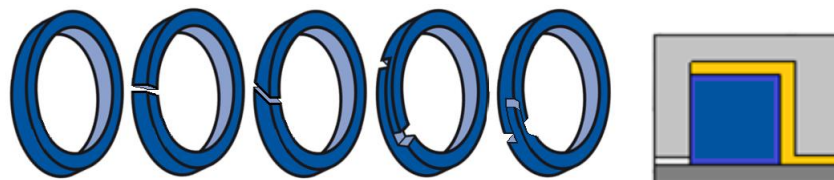
V: up to 2m/s

T: from -45°C to +200°C



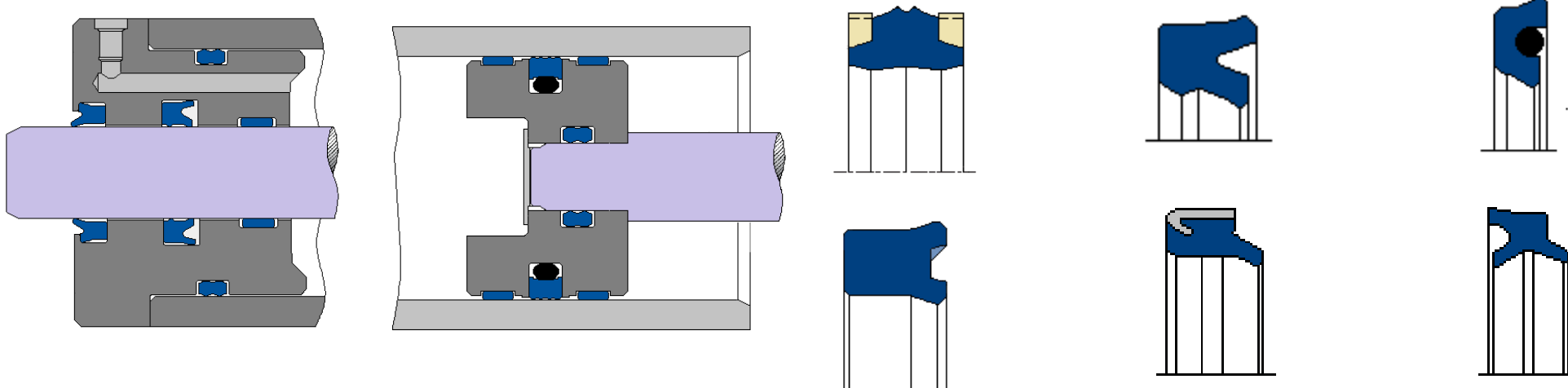
PISTON RING

In applications with high value of PxV (up to 10 MPa x m/s)



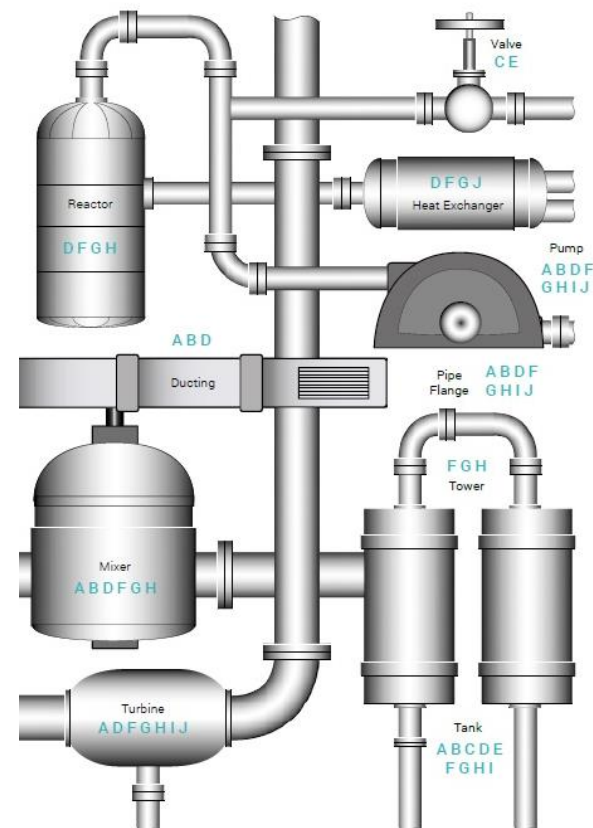
Oleopneumatic Sealing Systems

RU: polyurethane scrapers and seals for linear motions with:
P: up to 40MPa – V: up to 1m/s – T: from -35°C to +100°C



ePTFE KWO[®] gaskets

Properties of PTFE	Performance of ePTFE
High chemical & thermal resistance	High adaptability
Flame retardant	Superior resistance to creep and cold flow
Physiologically inert	Density from 0.6 to 1.0 g/cm ³
Low coefficient of friction	High creep resistance
Biocompatibility	No caking onto flange



ePTFE Guarnizioni Piane

- A Universal Tape F Premium
- B Universal Tape HD
- C Universal Tape R
- D CellFlon Tape
- E CellFlon Tape R
- F MultiTex Tape

ePTFE Guarnizioni in Fogli

- G MultiTex Sheet
- H CellFlon Sheet Blue
- I CellFlon Sheet Brown

ePTFE Guarnizioni ad Anello

- J MultiTex Ring

ePTFE KWO[®] flat gaskets

e-PTFE KWO[®] the quick universal sealing solution for applications up to 250°C

- Sealing tapes and cords for joints in pure 100% expanded PTFE with mono or multi-directional structure suitable for any industrial sectors
- Available in 9 types of tapes and cords
- For use on flanges, equipment housings, reactors and ventilation systems in the presence of temperature and pressure.

Advantages:

- easy to store
- for universal use
- easy to install
- ideal for large seals
- no waste



ePTFE KWO[®] sealing sheets

KWO[®] PTFE sheets the universal sealing solution for applications up to +250°C.

The sheets are suitable for all applications where high temperatures or aggressive fluids / gases are used. They can be used for flanged pipes according to DIN or ANSI standards, containers and glass lined systems



KWO[®] MultiTex[®]

100% multidirectional expanded ePTFE without pigments, inks or adhesives, suitable for clean food and pharmaceutical applications.



KWO[®] CellFlon[®] Sheet Blue

structured sheets with PTFE microspheres and hollow glass. For applications with limited bolt load or uneven flange. For sealing chemicals with pH (0-14).



KWO[®] CellFlon[®] Sheet Brown

structured sheets in PTFE and silica. For sealing chemicals with pH (0-14), including strong acids, hydrocarbons, steam, solvents or chlorine.



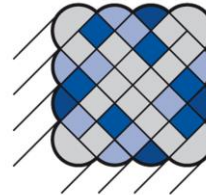
KWO[®] CellFlon[®] Sheet White structured sheets in PTFE and barium sulphate. For sealing chemicals with pH (0-14), including strong acids, hydrocarbons, steam, solvents and others.

For EMC applications are available solutions and sheets in dedicated VMQ and FVMQ

Packings WEBAK[®]

WEBAK[®] packings made with different materials and impregnants for all sealing problems

- **Rotary Pumps:**
 - Fluids with pH 0-14
 - Temperature from -200°C to +450°C (steam up to +650°C)
 - Pressure up to 25 MPa
 - Speed up to 25 m/s
- **Linear Pumps::**
 - Fluids with pH 0-14
 - Temperature from -200°C to +450°C (steam up to +650°C)
 - Pressure up to 25 MPa
 - Speed upto 2 m/s
- **Valves:**
 - Fluids with pH 0-14
 - Temperature from -200°C to +450°C (steam up to +650°C)
 - Pressure up to 30 MPa
 - Speed up to 1 m/s



Bellows - Diaphragms - Membranes

- In modified virgin PTFE or PTFE compound
- Resistant to chemicals
- Temperature between -60°C to +200°C
- Vacuum pressure up to > 6bar
- Produced from machine, from molding or from turning
- Special and Customized Executions
- **Employed in Food and Pharmaceutical processes such as:**
 - Filling systems with over 20mil. of shots
 - Pressurization valves filling m. (P up to 6bar - 10mil. cycles)
 - Food design purge valves (P up to 32bar - 4mm stroke - 10mil. Strokes)



"copyright by ElringKlinger
Engineered Plastics"

Warranty

1. WARRANTY

- 1.1 The content of this document refers expressly to «Pantecnica S.p.A. - Technical Documents Disclaimer - EN -Rev.01» published online, and it is provided for general information purposes only and should not be considered as a binding recommendation.
- 1.2 Pantecnica[®] does not assume any kind of responsibility, neither express nor implied, related to both the completeness and care of any type of Information contained and/or mentioned in this document, and the use that the Customer / User will do of the Information provided herein. Pantecnica[®] recommends to the Customer / User to obtain accurate guidance from experts in any specific scope of application to which the purchased Products are destined, possibly by carrying out appropriate verification tests on the specific suitability of the aforementioned Products.
- 1.3 Pantecnica[®] has tried to render the text accurate and informative, however, where it has not been expressly stated that the Information contained in this catalogue is based on specific experiences or laboratory tests, it must be understood that the Information are based on general experiences.
- 1.4 Given the wide range of possible applications and operating conditions, together with the imponderable factors involved, even of a human nature, Pantecnica[®] does not give any express or implicit guarantee regarding the durability of the Products nor the success of the application. Any assistance or advice from Pantecnica[®] commercial and technical support in choosing the Products does not in any way derogate from the foregoing, unless this was expressly and specifically provided for.

2. OPERATING CONDITIONS' LIMIT VALUES

- 2.1 The limit values referred to the operating conditions are correlated with each other and must never be reached simultaneously. They are in close relationship both with the correct choice of the Products with respect to the specific application, and with its correct assembly.

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