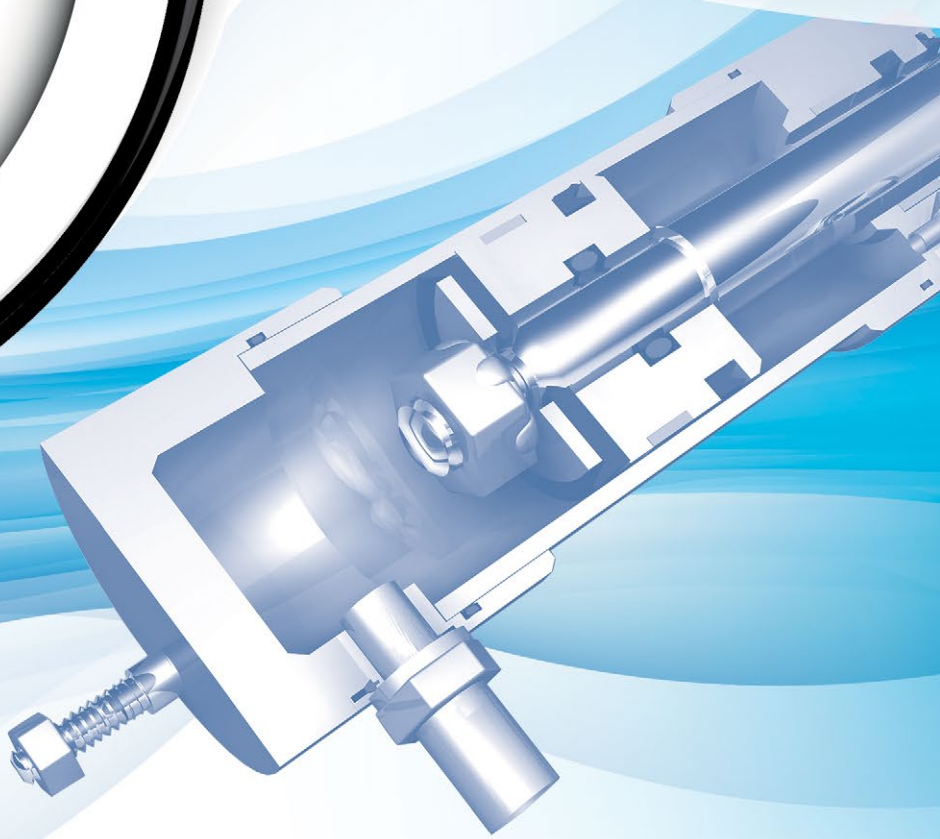
SEAL FRANCE
SEALING SOLUTIONS

HYDRAULIC & PNEUMATIC SEALING



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SUMMARY

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HYDRAULIC SEALS.....5
- Wipers.....5
- Rod seals.....9
- Piston seals.....13

PNEUMATIC SEALS.....18

GUIDING COMPONENTS.....20

FEATURES

The choice for the good sealing component is fundamental, it is according to the following elements:

- Working pressure expressed in bar (1Mpa= 10 Bar).
  (the information are indicated according to the permissible or recommended gap).
- Peak and operating temperature (expressed in C°).
- Speed operating (expressed in trs/mn or meter per second m/s for the rotation and in meter per second for the linear speed.
- Nature of the fluid to be sealed.
- Frequency of use.
- Machining tolerance.
- Surface finish (roughness RA µm).

MATERIALS

The most used materials for the fabrication of the sealing components are:

- NBR - Nitrile Butadiene Rubber.
- FPM or FKM - Fluorocarbon rubber.
- AU - Polyurethane.
- PTFE - Polytetrafluoroethylene.
- POM - Acetal resin.

The table below informs you of the temperature range and how the materials outlined may be used according to your choice.

Tableau 1 – Elastomer operating temperature

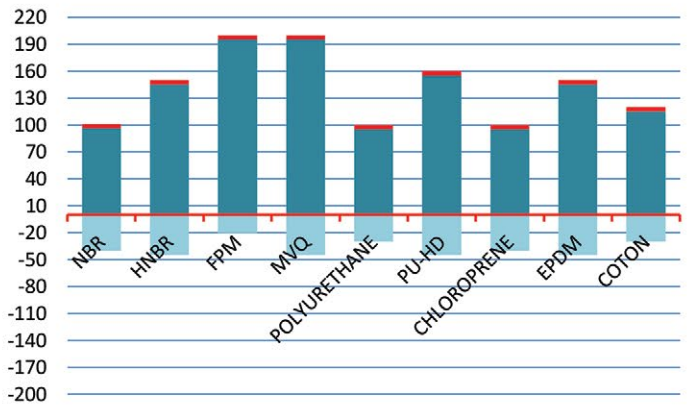


Tableau 2 – Plastic operating temperature

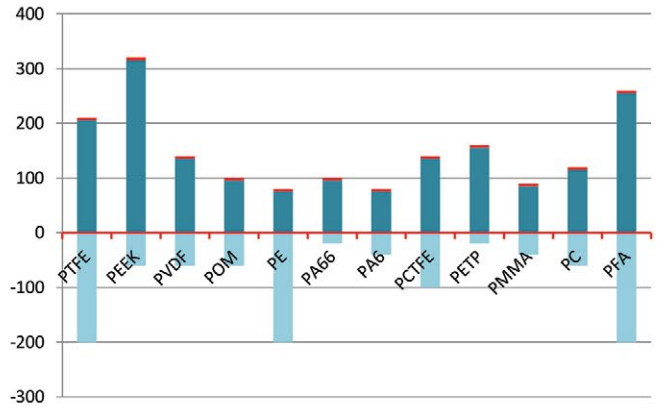


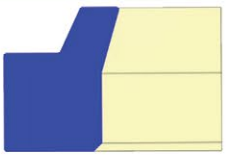
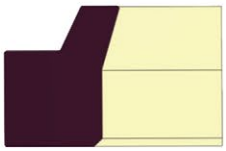
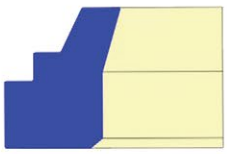
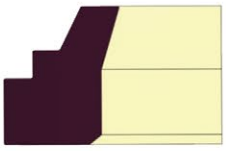
Table 3: Elastomers

Abbreviation	Material	Name	Temperature
NR	Rubber	Natural	-55°C à +80°C
IR	Rubber	Synthetic Isoprene	-55°C à +90°C
SBR	Rubber	Styrene butadiene rubber	-50°C à +100°C
IIR	Rubber	Butyl rubber	-30°C à +150°C
CIIR	Rubber	Chlorobutyl rubber	-50°C à +150°C
EPM	Rubber	Propylene	-50°C à +130°C
EPDM	Rubber	Ethylene Propylene Diene Monomer	-50°C à +150°C
NBR	Rubber	Nitrile butadiene rubber	-40°C à +100°C
HNBR	Rubber	Hydrogenated nitrile	-25°C à +150°C
CR	Rubber	Polychloroprene	-40°C à +100°C
ACM	Rubber	Acrylic/Ethylene Copolymer	-20°C à +150°C
FPM	Rubber	Fluorocarbon rubber	-20°C à +200°C
FFPM	Rubber	Perfluorocarbon rubber	-15°C à +300°C
VMQ	Rubber	Silicone (methyl vinyl)	-60°C à +250°C
FMQ	Rubber	Silicone (methyl fluor)	-60°C à +210°C
AU	Rubber	Polyurethane	-30°C à +95°C
EU	Rubber	Polyurethane	-30°C à +95°C
ECO	Rubber	Copolymer of epichlorohydrin	-40°C à +120°C
AEM	Rubber	Ethylene-acrylate rubber	-30°C à +150°C

Table 4 – Plastics

Material	Abbreviation	Name	Density	Temperature range in C°		Coefficient of thermal expansion 10(-5) XC°-1	Classification UL 94	Tensile strength	Flexural strength N/mm2	Hardness shore Rockwell	Coefficient of friction (COF)
POLYAMIDE 6	PA6	NYLON® 6/ERTALON 6 SA®	1,14	- 40	85	9	HB	60	55	D74	0,25 - 0,50
POLYAMIDE 6/6	PA6/6	NYLON® 6/6 ERTALON 6/6 SA®	1,14	- 30	95	7	HB	70	60	D80	0,25 - 0,50
CAST POLYAMIDE	PA6/6	CAST NYLON®	1,15	- 30	105	8	HB	65	60	D80	0,25 - 0,50
GLASS-FILLED POLYAMIDE	PA6/6 GF 30	GLASS-FILLED NYLON®	1,40	- 20	120	3	HB	150	200	D75	0,30 - 0,50
OIL FILLED POLYAMIDE	PA6 + OIL	OIL FILLED NYLON®	1,35	- 20	105	8	HB	70	80	M82	0,15 - 0,25
POLYAMIDE 12	PA12	RILSAN®	1,06	- 50	70	9	V2	40	50	D74	0,25
POLYACETAL	POM C	DELRIN®	1,42	- 50	115	8	HB	70	110	D74	0,25
POLYVINYL CHHLORIDE	PVC		1,45	- 20	60	8	-	50	80	D78	0,25 - 0,50
POLYETHYLENE	PEHD		0,94	- 50	80	18	HB	24	-	D60	0,20
POLYETHYLENE 500	PEHD 500		0,94	-100	80	18	HB	28	40	D66	0,15
POLYETHYLENE 1000	PEHD 1000		0,95	- 260	90	18	HB	22	27	D62	0,12
POLYETHYLENE 6000	PEHD 6000	CESTIDUR®	0,93	- 269	90	18	HB	-	-	D62	0,12
POLYETHYLENE TEREPHTALATE	PETP		1,38	- 20	115	7	HB	75	120	D84	0,20
COPOLYMER POLYPROPYLENE	PPC		0,92	- 10	100	11	HB	31	40	D70	0,30
POLYTETRAFLUORETHYLENE	PTFE	TEFLON®	2,10	- 200	200	12	VO	35	160	D50	0,10
POYETHERETHERCETHONE	PEEK		1,31	- 60	250	5	VO	92	170	D86	0,3
COPOLYMERE PERFLUROALKOXYETHYLENE *	PFA										

Non exhaustive list, these are guide values and could not engage the responsibility of Seal France.

PROFILE	DESIGNATION	MATERIAL	TEMPERATURE	PRESSURE (BAR)	V (m/s)
	RS	PU	-30°C +95°C	.....	0,5
	RS	NBR	-30°C +100°C	.....	0,5
	RS1	PU	-30°C +95°C	.....	0,5
	RS1	NBR	-30°C +100°C	.....	0,5
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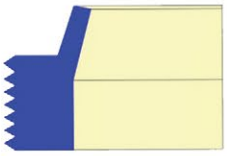
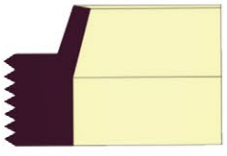
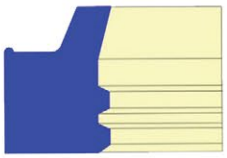
	RST	PU	-30°C +95°C	.....	0,5
	RST	NBR	-30°C +100°C	.....	0,5
	RS6	PU	-30°C +95°C	.....	0,5
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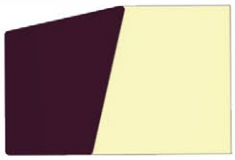
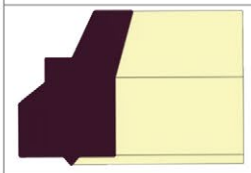
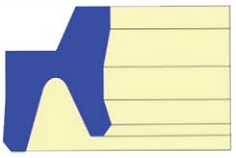
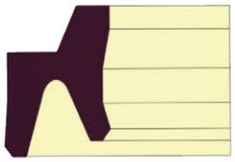
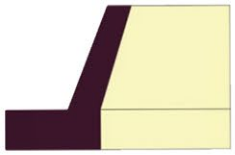
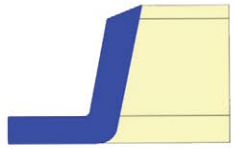
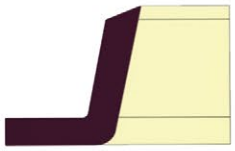
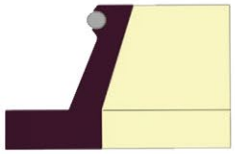
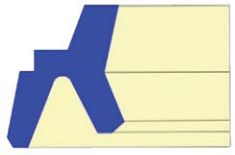
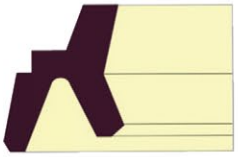
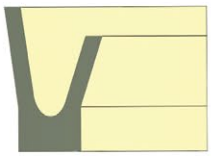
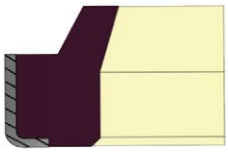
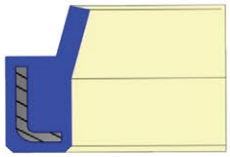
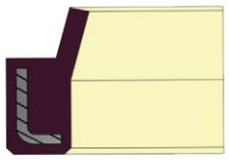
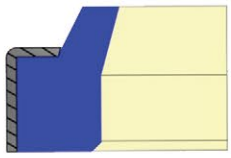
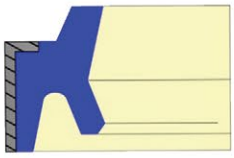
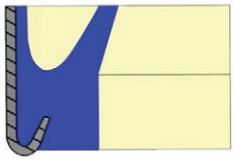
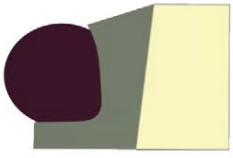
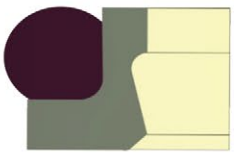
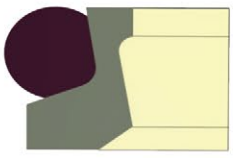
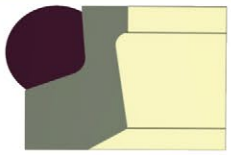
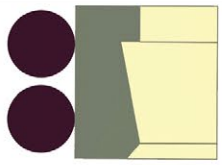
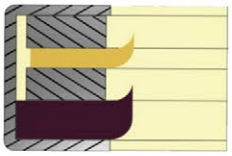
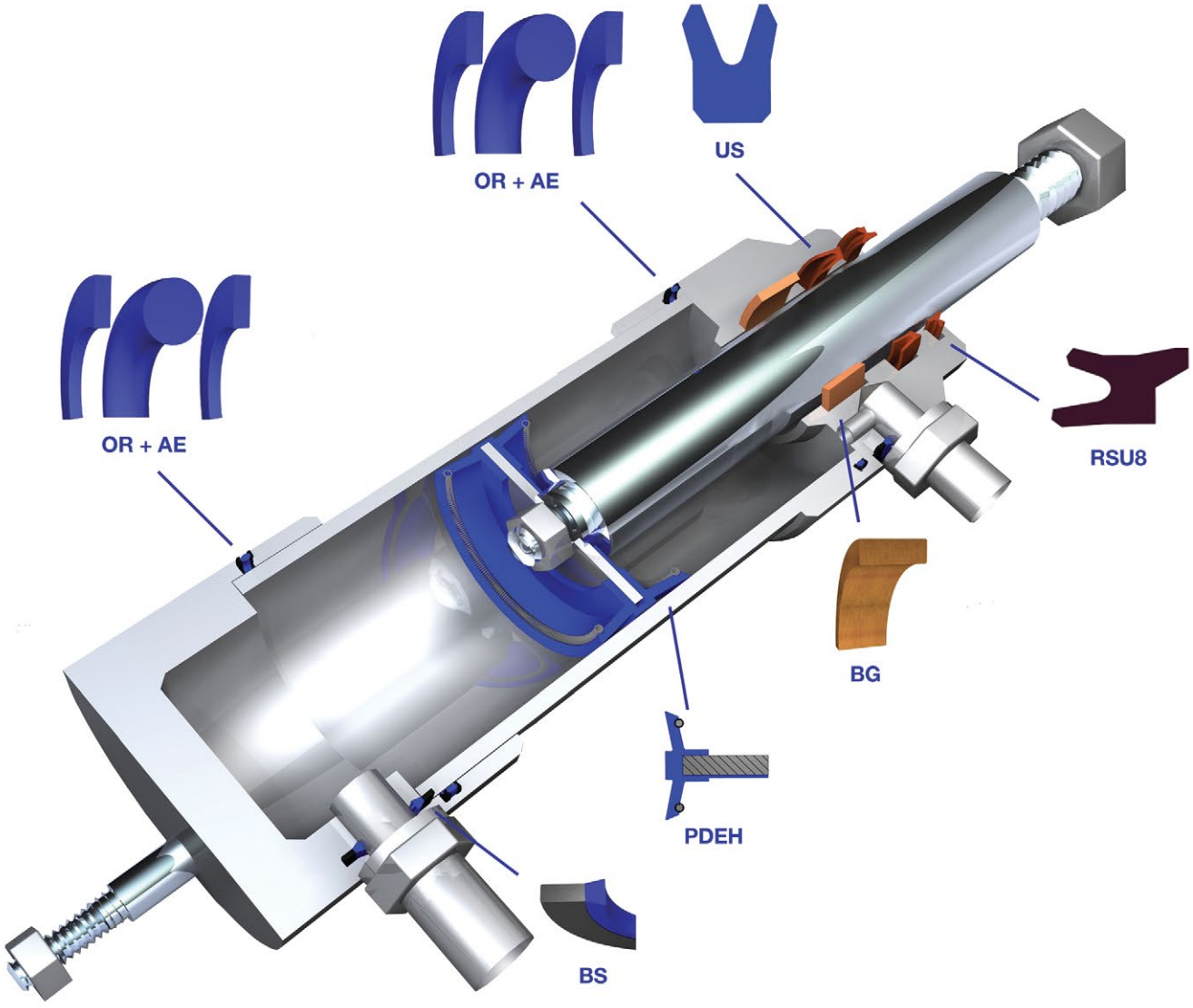
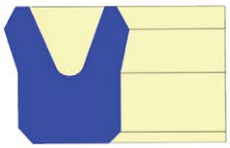
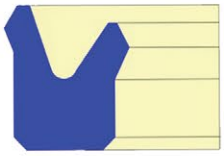
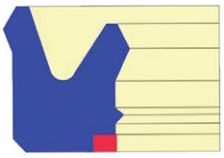
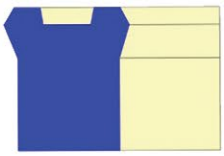
PROFILE	DESIGNATION	MATERIAL	TEMPERATURE	PRESSURE (BAR)	V (m/s)
	RWB	NBR	-30°C +100°C	.....	0,5
	RW1	NBR	-30°C +100°C	.....	0,5
	RSU8	PU	-30°C +95°C	10	0,5
	RSU8	NBR	-30°C +100°C	10	0,5
	CHA	NBR	-30°C +100°C	1	0,5
	CHAF	PU	-30°C +95°C	2	0,5
	CHAF	NBR	-30°C +100°C	1	0,5
	CHAR	NBR SPRING	-30°C +100°C	10	0,5
	A17	PU	-30°C +95°C	10	1
	A17	NBR	-30°C +100°C	10	1

PROFILE	DESIGNATION	MATERIAL	TEMPERATURE	PRESSURE (BAR)	V (m/s)
	RW	PA12	-50°C +70°C	.....	4
	RM	NBR STEEL	-30°C +100°C	.....	0,5
	RMN	PU (STEEL INSERT INSIDE THE PRODUCT)	-30°C +95°C	.....	0,5
	RMN	NBR (STEEL INSERT INSIDE THE PRODUCT)	-30°C +100°C	.....	0,5
	RM	PU STEEL	-30°C +95°C	.....	0,5
	RMU	PU STEEL	-30°C +95°C	.....	0,5
	RU	PU STEEL	-30°C +95°C	.....	0,5
	RCT	PTFE OR NBR	-30°C +110°C (*)	.....	15
	RCT2	PTFE OR NBR	-30°C +110°C (*)	.....	15
	RCT5	PTFE OR NBR	-30°C +110°C (*)	.....	15

PROFILE	DESIGNATION	MATERIAL	TEMPERATURE	PRESSURE (BAR)	V (m/s)
	RCT500	PTFE NBR	-30°C +110°C (*)	.....	15
	RCTD	PTFE NBR	-30°C +110°C (*)	.....	5
	RWS	NB BRASS STEEL	-40°C +120°C	.....	1

(*) temperature -30°C + 200°C with OR. FPM



PROFILE	DESIGNATION	MATERIAL	TEMPERATURE	PRESSURE (BAR)	V (m/s)
	US	PU	-30°C +95°C	400	0,5
	UT	PU	-30°C +95°C	400	0,5
	UTL	PU	-30°C +95°C	400	0,5
	UTLI	PU POM	-30°C +95°C	500	0,5
	UTS	PU	-30°C +95°C	400	0,5
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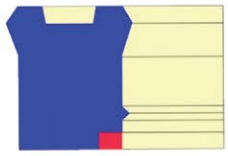
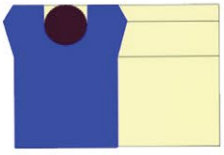
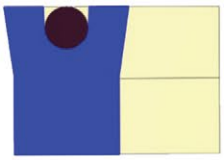
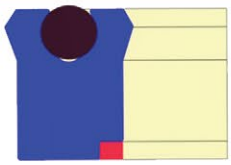
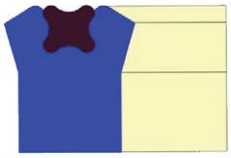
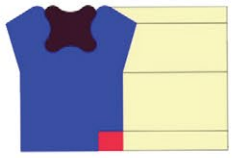
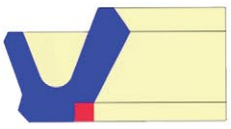
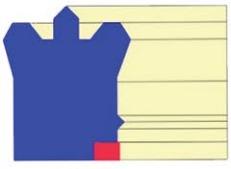
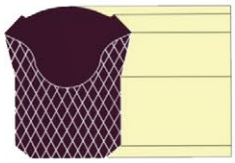
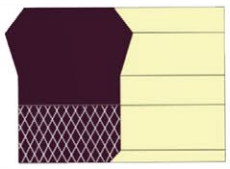
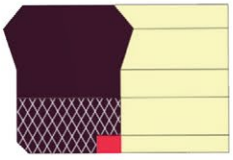
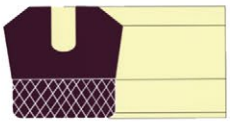
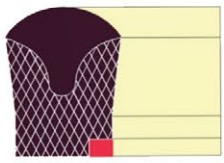
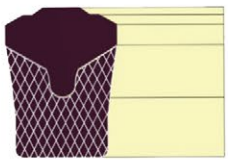
	UTSLI	PU POM	-30°C +95°C	500	0,5
	UTO	PU NBR	-30°C +95°C	400	0,5
	UTOS	PU NBR	-30°C +95°C	400	0,5
	UTOP	PU NBR	-30°C +95°C	400	0,5

ROD SEALS

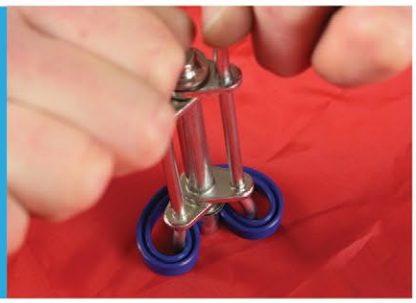
SINGLE ACTING - CLOSED HOUSING

PROFILE	DESIGNATION	MATERIAL	TEMPERATURE	PRESSURE (BAR)	V (m/s)
	UTOI	PU POM NBR	-30°C +95°C	500	0,5
	UTQ	PU NBR	-30°C +95°C	400	0,5
	UTQI	PU POM NBR	-30°C +95°C	500	0,5
	UBR	PU	-30°C +95°C	400	0,5
	UBRI	PU POM	-30°C +95°C	500	0,5
	UT320	PU POM	-30°C +95°C	500	0,5
	UT621	PU POM NBR	-30°C +95°C	500	0,5
	BGO	NBR FABRIC	-30°C +110°C	250	0,5
	BH	NBR FABRIC	-30°C +110°C	220	0,5
	BHI	NBR FABRIC	-30°C +110°C	400	0,5

PROFILE	DESIGNATION	MATERIAL	TEMPERATURE	PRESSURE (BAR)	V (m/s)
	BQ2	NBR FABRIC	-30°C +110°C	250	0,5
	BH3	NBR FABRIC	-30°C +110°C	250	2
	BH18	NBR FABRIC	-30°C +110°C	500	0,15
	BHI19	NBR FABRIC POM	-30°C +110°C	600	0,15
	BH15	NBR FABRIC	-30°C +110°C	300	0,15
	CTSE	PTFE OR NBR	-30°C +110°C (*)	500	15

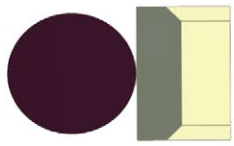
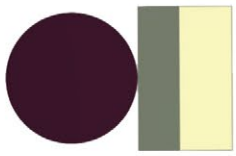
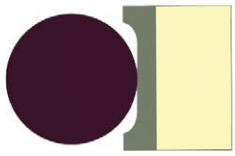
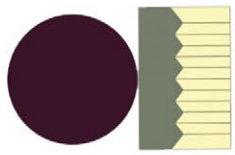
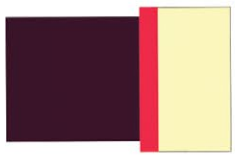
(*) temperature -30°C +200°C with OR.FPM

MOUNTING PLIER FOR U SEAL



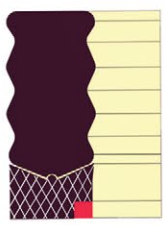
ROD SEALS

COMPOSITE SERIE - DOUBLE ACTING - CLOSED HOUSING

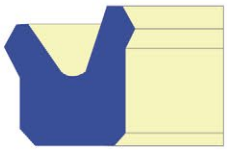
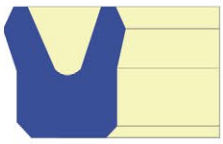
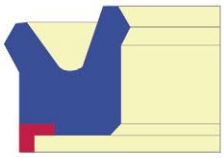
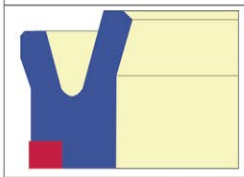
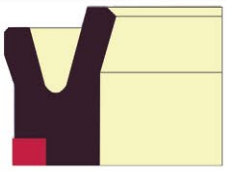
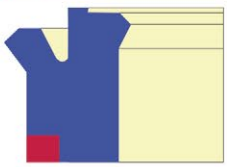
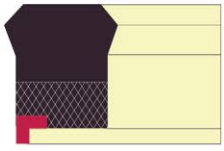
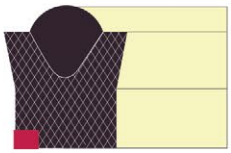
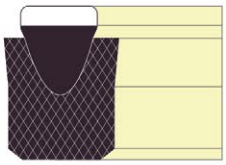
PROFILE	DESIGNATION	MATERIAL	TEMPERATURE	PRESSURE (BAR)	V (m/s)
	CTDE	PTFE NBR	-30°C +110°C (*)	500	15
	CFMI	PTFE NBR	-30°C +110°C (*)	400	0,4
	CRT	PTFE NBR	-30°C +110°C (*)	400	15
	CRTS	PTFE CARBON NBR	-30°C +100°C (*)	320	1
	JCF	PA6 NBR	-20°C +100°C	400	0,8

(*) temperature -30°C +200°C with OR.FPM

ROD PACKING / SINGLE ACTING - OPEN HOUSING

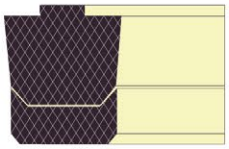
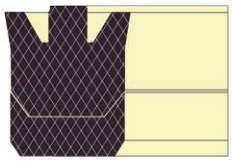
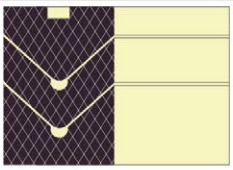
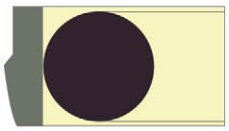
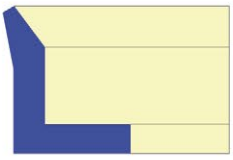
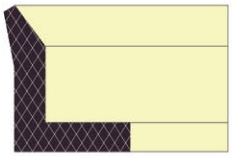
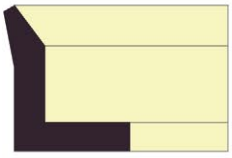
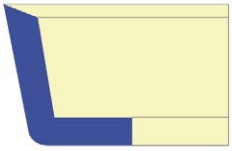
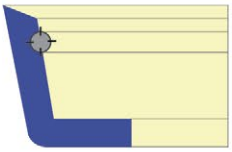
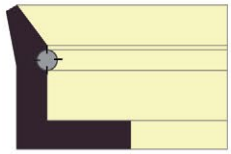
	CH5	NBR FABRIC	-30°C +110°C	500	0,5
	CH7	NBR FABRIC	-30°C +110°C	500	0,5
	PSE	NBR FABRIC POM	-30°C +110°C	700	0,5

SINGLE ACTING - OPEN HOUSING AND CLOSED HOUSING

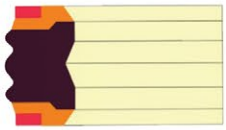
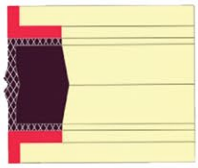
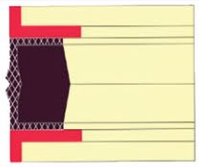
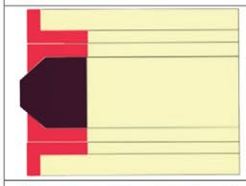
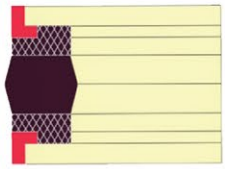
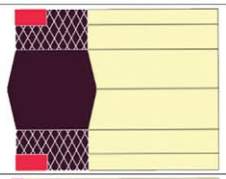
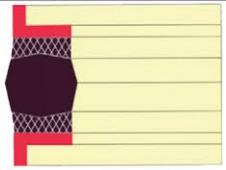
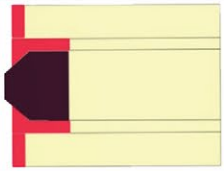
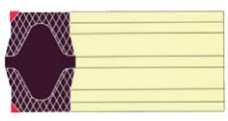
PROFILE	DESIGNATION	MATERIAL	TEMPERATURE	PRESSURE (BAR)	V (m/s)
	UP	PU	-30°C +95°C	400	0,5
	US	PU	-30°C +95°C	400	0,5
	UPW	PU POM	-30°C +95°C	500	0,5
	UPI	PU POM	-30°C +95°C	400	0,5
	UPI	NBR POM	-30°C +100°C	250	0,5
	UP18	PU POM	-30°C +95°C	400	0,5
	UP18	NBR POM	-30°C +100°C	250	0,5
	PR (retaining clips)	POM			
	BW	NBR FABRIC POM	-30°C +110°C	400	0,5
	BGU	NBR FABRIC	-30°C +110°C	700	0,5
	PNG	NBR FABRIC POM	-30°C +110°C	250	0,5

PISTON SEALS

SINGLE ACTING - OPEN HOUSING AND CLOSED HOUSING

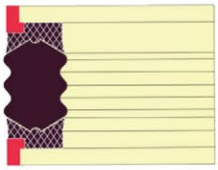
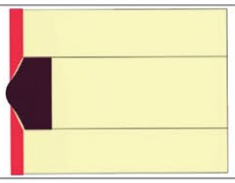
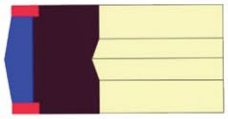
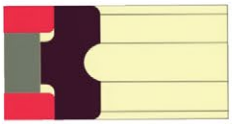
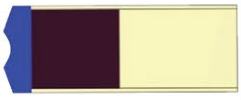
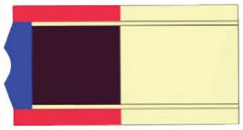
PROFILE	DESIGNATION	MATERIAL	TEMPERATURE	PRESSURE (BAR)	V (m/s)
	SFD	NBR FABRIC	-30°C +110°C	700	0,5
	C18	NBR FABRIC	-30°C +110°C	700	1
	CH3	NBR FABRIC	-30°C +110°C	400	0,5
	CPSE	NBR PTFE	-30°C +110°C (*)	500	15
	CAL H	PU	-30°C +95°C	12	0,5
	CAL	NBR FABRIC	-30°C +110°C	250	0,5
	CAL	NBR	-30°C +100°C	10	0,5
	CALT	PU	-30°C +95°C	12	0,5
	CALR	NBR SPRING	-30°C +100°C	10	0,5
	CALR	PU SPRING	-30°C +95°C	12	0,5

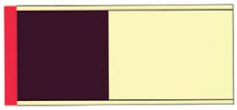
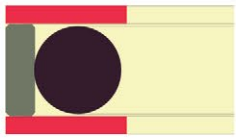
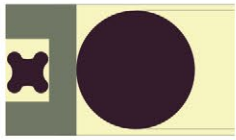
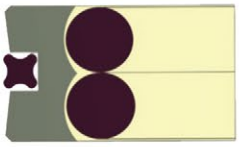
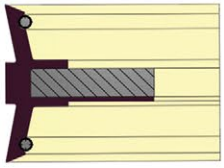
(*) temperature -30°C +200°C with OR.FPM

PROFILE	DESIGNATION	MATERIAL	TEMPERATURE	PRESSURE (BAR)	V (m/s)
	JPM JPL JPSJ JPSG	NBR PE POM	-30°C +100°C	400	0,5
	JPM AI	NBR PE POM	-30°C +100°C	400	0,5
	JSM ≥ 50 mm	NBR FABRIC POM	-30°C +100°C	400	0,5
	JSM2 ≤ 50 mm	NBR FABRIC POM	-30°C +100°C	400	0,5
	JP64	NBR PE	-30°C +100°C	100	0,5
	JTDE JPW	NBR FABRIC POM	-30°C +100°C	500	0,5
	JTDE AI	NBR FABRIC PE	-30°C +100°C	500	0,5
	JPWL	NBR FABRIC POM	-30°C +100°C	500	0,5
	JP50	NBR PE	-30°C +100°C	100	0,5
	JP58 AI	NBR FABRIC POM	-30°C +110°C	400	0,5

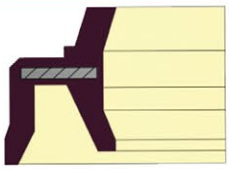
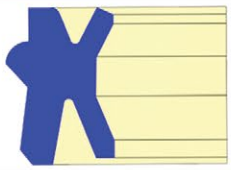
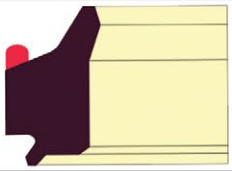
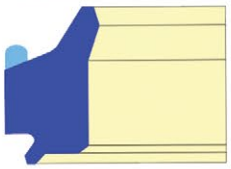
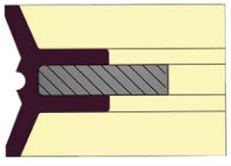
PISTON SEALS

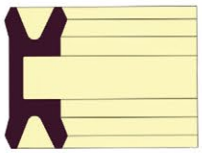
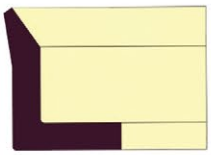
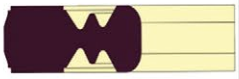
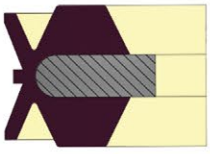
DOUBLE ACTING

PROFILE	DESIGNATION	MATERIAL	TEMPERATURE	PRESSURE (BAR)	V (m/s)
	JPDE	NBR FABRIC POM	-30°C +100°C	700	0,5
	JP56	NBR FABRIC	-30°C +100°C	300	0,5
	JP65	NBR POM	-30°C +100°C	140	0,5
	JTR	NBR POM	-30°C +100°C	400	0,5
	JPU4	NBR POM PU	-30°C +100°C	400	0,5
	JPHD	NBR POM PTFE	-30°C +100°C	500	0,5
	JPSW	NBR PTFE	-30°C +100°C	500	1,5
	PGU	NBR PU	-30°C +95°C	320	0,5
	PGU AI	NBR PU POM	-30°C +95°C	400	1
	CRPS	NBR PTFE	-40°C +100°C (*)	500	15

PROFILE	DESIGNATION	MATERIAL	TEMPERATURE	PRESSURE (BAR)	V (m/s)
	CPDE	NBR PTFE	-40°C +100°C (*)	500	16
	CFMA	NBR PTFE	-40°C +100°C (*)	400	0,4
	JCM	PA6 NBR	-20°C +100°C	400	0,8
	CRP	NBR PTFE	-30°C +100°C (*)	350	15
	CPS	NBR PU	-40°C +100°C	250	0,8
	CPO	NBR PU	-40°C +95°C	250	0,8
	CPDE AI	NBR PTFE POM	-30°C +100°C (*)	400	1,5
	CPQ	NBR PTFE	-30°C +100°C (*)	400	2
	CPQ5	NBR PTFE	-30°C +100°C (*)	600	3
	PDEH	NBR STEEL SPRING	-30°C +100°C	40	0,25

(*) temperature -30°C +200°C with OR.FPM

PROFILE	DESIGNATION	MATERIAL	TEMPERATURE	PRESSURE (BAR)	V (m/s)
	RUP	NBR	-30°C +100°C	16	1
	RUD	PU	-30°C +95°C	12	1
	RUE	PU	-30°C +95°C	12	1
	RAP	NBR	-30°C +100°C	16	2
	RAH	PU	-30°C +95°C	16	2
	USN	NBR	-30°C +100°C	120	0,25
	USM	NBR	-30°C +100°C	120	0,25
	UTN	NBR	-30°C +100°C	80	0,25
	UPN	NBR	-30°C +100°C	120	0,25
	PDEP + STEEL	NBR	-30°C +100°C	10	1

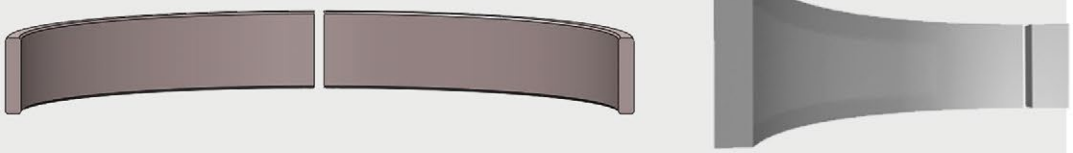
PROFILE	DESIGNATION	MATERIAL	TEMPERATURE	PRESSURE (BAR)	V (m/s)
	SPK	NBR	-20°C +100°C	12	1
	SPR	NBR	-20°C +100°C	12	1
	PZ	NBR	-20°C +100°C	16	1
	CL	NBR	-30°C +100°C	10	0,5
	SKD	NBR	-20°C +100°C	10	1
	PPDUO	NBR STEEL	-20°C +100°C	10	10

GUIDING COMPONENTS

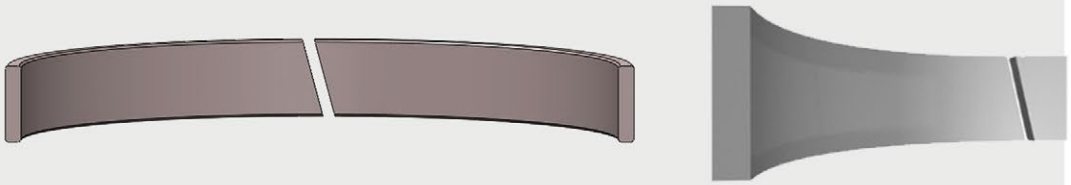
PROFILE	DESIGNATION	MATERIAL	TEMPERATURE	PRESSURE (BAR)	V (m/s)
	BGCG	Carbon graphite-filled PTFE	Guiding tape (in meters)	-40°C +200°C	15
	SGCG	Carbon graphite-filled PTFE	Machined or preform wear rings	-40°C +200°C	15
	SGA	ACETAL RESIN	Machined or preform wear rings	-30°C +100°C	0,5
	SGAC	ACETAL RESIN	Machined or preform wear rings	-30°C +100°C	0,5
	BGRP	IMPREGNATED POLYESTER RESIN	Guiding tape (in meters)	-30°C +120°C	1
	SGRP	IMPREGNATED POLYESTER RESIN	Machined or preform wear rings	-30°C +120°C	1
	BG	PTFE filled + bronze 40%	Guiding tape (in meters)	-40°C +200°C	15
	SGP	PTFE filled + bronze 40%	Machined or preform wear rings	-40°C +200°C	15
	SG3	PTFE filled + bronze 40%	Machined wear rings	-40°C +200°C	.....
	SG4	PTFE filled + bronze 40%	Machined wear rings	-40°C +200°C	.....

PROFILE	DESIGNATION	MATERIAL	TEMPERATURE	PRESSURE (BAR)	V (m/s)
	SG5	PTFE filled + bronze 40%	Machined wear rings	-40°C +200°C	.....
	SG6	PTFE filled + bronze 40%	Machined wear rings	-40°C +200°C	.....
	SG7	PTFE filled + bronze 40%	Machined wear rings	-40°C +200°C	.....
	SG8	PTFE filled + bronze 40%	Machined wear rings	-40°C +200°C	.....

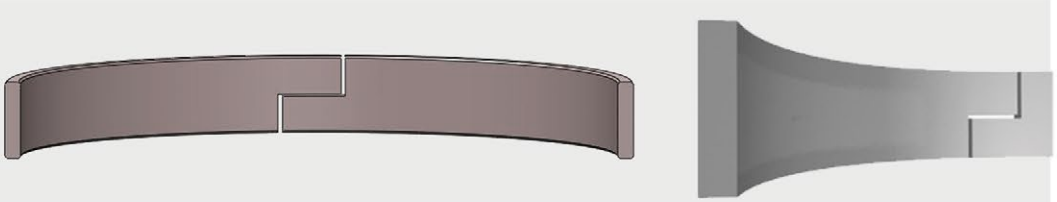
STRAIGHT CUT



ANGLE CUT



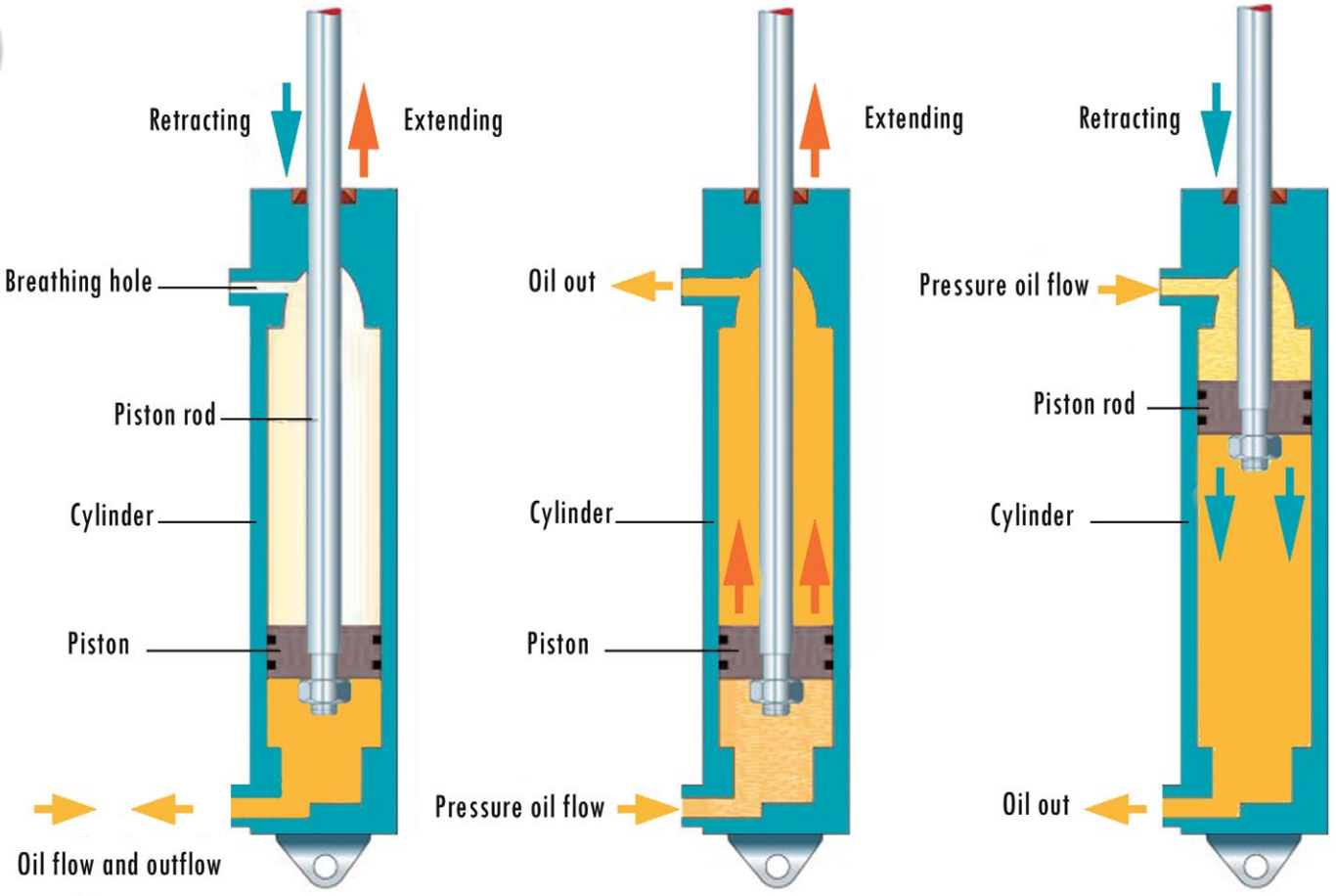
STEP CUT



All the guiding components are available in different materials as virgin PTFE, filled PTFE, Glass fiber filled PTFE and Mos2, Carbon, Graphite, POM, Polyamide, PEEK…

On request, others types of cuts (guiding band, wear rings, straight cut, angle cut of 45° or step cut…) can be made according to customer's specification.

PISTON SCHEMA



SINGLE ACTING CYLINDER

DOUBLE ACTING CYLINDER
(EXTENDING MOVEMENT)

DOUBLE ACTING CYLINDER
(RETRACTING MOVEMENT)

The information and the technical characteristics mentioned in our catalogue are average values and subjected to change without prior notice.
These are guide values and subjected to change without prior notice. It is not a guarantee and we recommend you to make a test, before the final application.

INFORMATION FORM
HYDRAULIC & PNEUMATIC SEALS

Date : __ /__ /____ Company: ..... Customer: ..... Account N°: .....

Name: ..... Position: .....

Phone: _____

Current need: ..... Annual need: .....

TYPE OF ASSEMBLY

Assembly:	Piston ☐	Rod ☐	Other ☐
Sealing:	Single acting ☐	Double acting ☐	
Housing:	Open ☐	Closed ☐	

APPLICATION

Hydraulic ☐ Pneumatic ☐
New ☐ Replacement ☐

MOVEMENT

Alernative ☐ Rotative ☐ Oscillating ☐ Static ☐ Facial ☐

Speed linear: ..... (m/s) Stroke length: min..... max.....

Rotative speed: ..... (trs/mn) Cycle number: ..... (mn)

TEMPERATURE

Continue: ..... (°C) Peak: ..... (°C)

FLUIDS IN CONTACT (inside)

Type: .....

AMBIANT ENVIRONMENT (outside)

Type: .....

Working pressure: ..... Bar (10 Bar = 1 Mpa)

COMMENTS:

.....

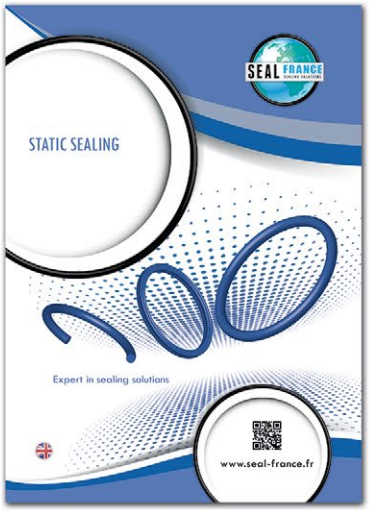
.....

.....

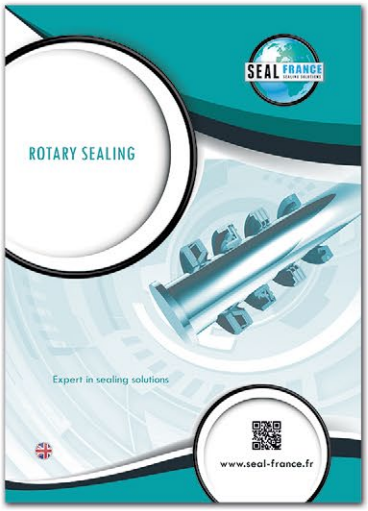
.....

By post: Seal France, 67 rue Ettoré Bugatti - 66000 Perpignan - FRANCE
Email address: contact@sealfrance.fr

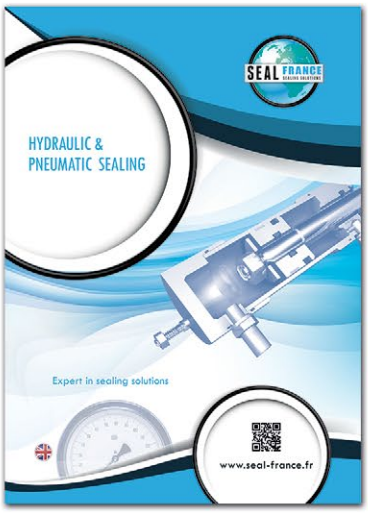
ALL OUR AVAILABLE CATALOGUES



STATIC SEALING



ROTARY SEALING



HYDRAULIC & PNEUMATIC SEALING

ASEPTIC SEALING

MACHINED PARTS

PRODUCTS RANGES

EXPERT IN SEALING SOLUTIONS FOR DISTRIBUTORS AND MANUFACTURERS

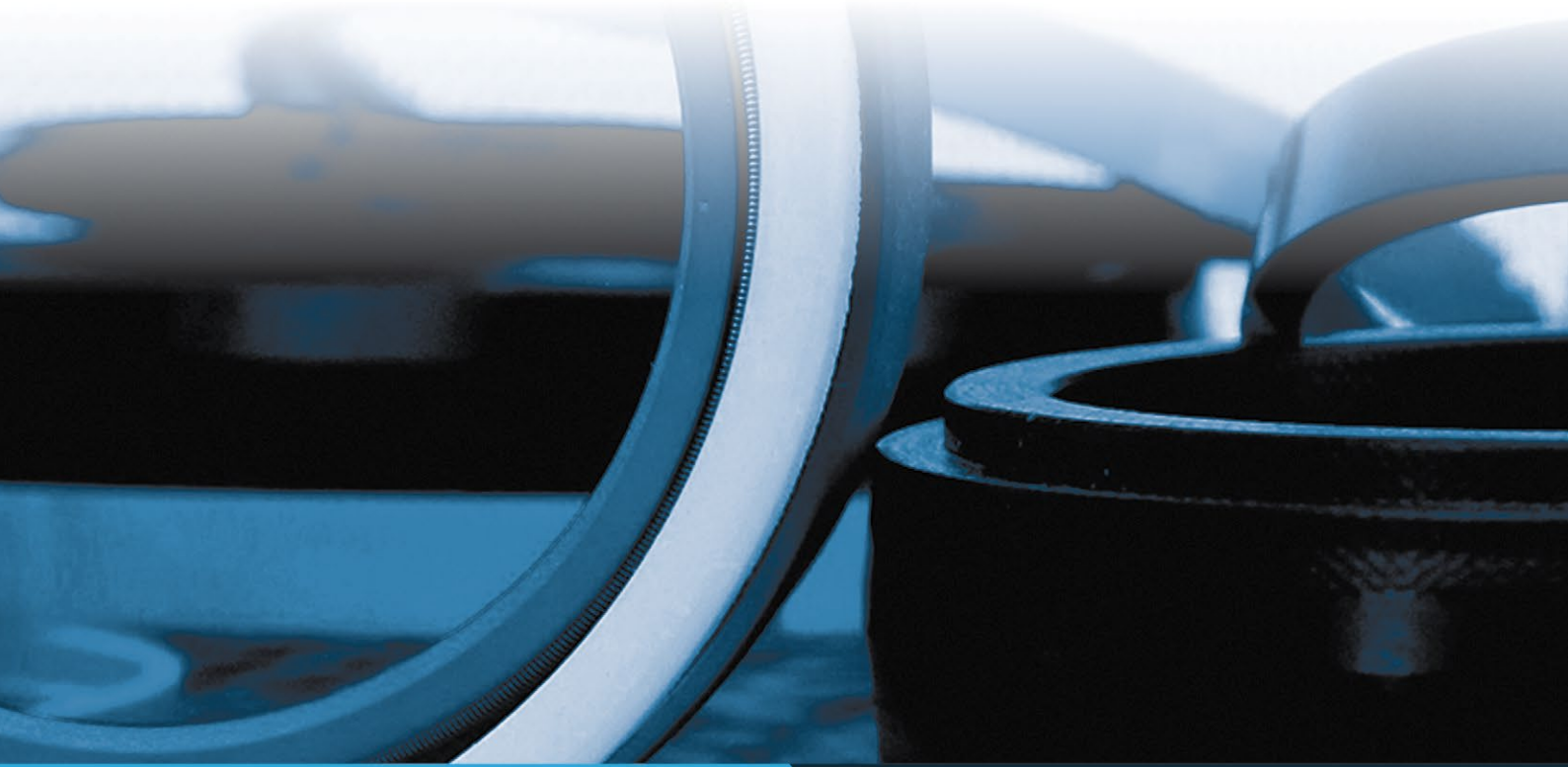
SEAL FRANCE is specialised in the sales and manufacturing of standard and customized sealing solutions. For over 20 years, our team of experts has advised, supported and provided technical assistance to its customers in a climate of trust. Thanks to its experience and know-how, SEAL FRANCE wishes to share its experience using appropriate tools adapted to your sealing systems.

A COMPLETE TRACEABILITY

Our materials are FDA, KTW, W270 or USP VI approved…

CUSTOM MANUFACTURING

For customized products, we propose you various methods of manufacturing to suit your needs.



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