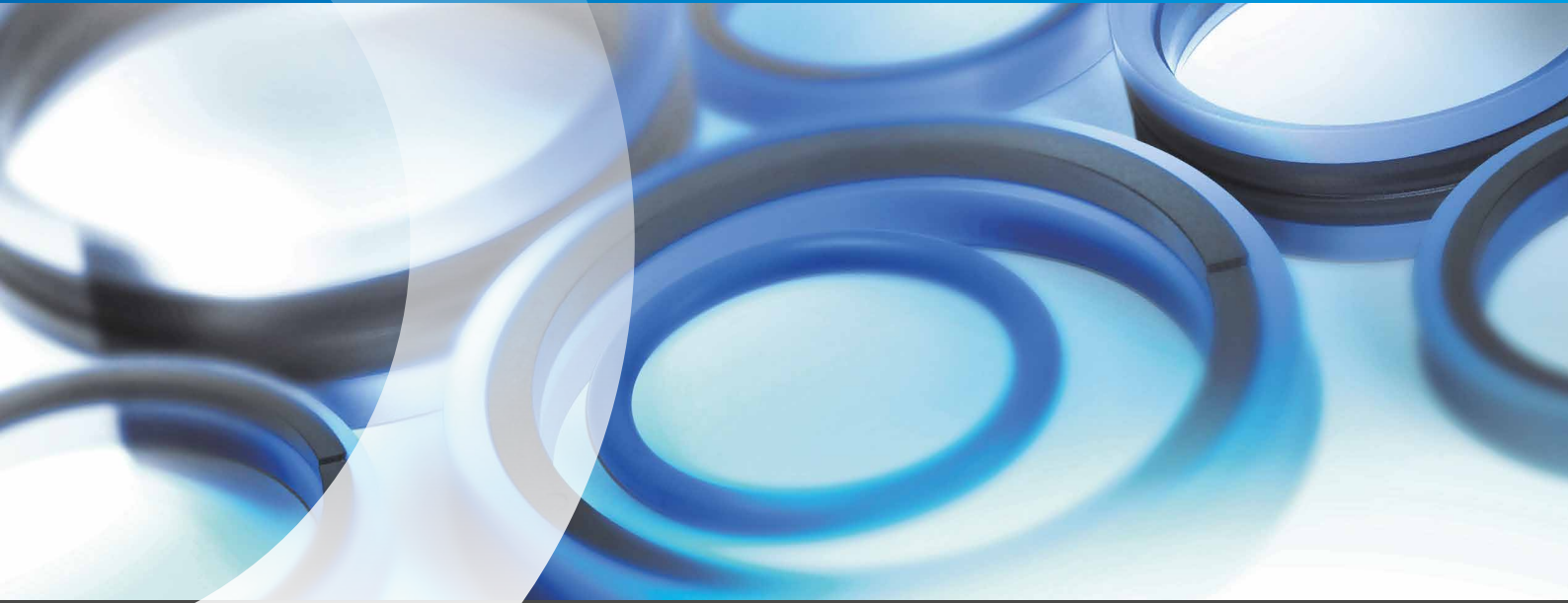


AUTOMOTIVE | AERONAUTICS | BEVERAGES & FOODS | FLUID ENGINEERING | MOBILE HYDRAULICS

FRANCEJOINT

SEALING SYSTEMS

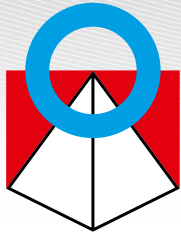


INDUSTRIAL
SEALING



Site n°1: Compression Molding – Injection Molding
– Water Jet Cutting – Finition – Quality Control – Logistics

Site N°2: Administrative Area – Research & Development – Machining – Tooling



FRANCEJOINT
SEALING SYSTEMS

Since 1981, FRANCE JOINT – SEALING SYSTEMS has been designing, manufacturing and distributing seals and precision rubber parts for its customers for whom quality is a determining factor.

Faced with tough competition among the big decision-makers of the industrial world, FRANCE JOINT has responded with innovation, research and development, experience in Best-Cost manufacturing, and a consistently high level of quality, thanks to certificates ISO 9001, IATF 16949, EN/AS 9100 and ISO 14001.

Today, FRANCE JOINT is working in close collaboration with its customers, meeting challenges head on with success. Automotive, Aeronautics, Mobile hydraulics, Beverages & Foods, Fluid engineering industries... every solution emerges from a uniquely individual partnership, constantly fostered and renewed.

Our prime objective, based on unrivalled quality, is to find the most suitable solutions for ensuring that

you will stand out in what has become an extremely competitive domain. Our position of excellence has led us since the birth of our company to acquire the tools necessary to anticipate and prevent risks and maximize our service; the ultimate objective being of course to help you keep ahead of developments in this more and more technological market.



AUTOMOTIVE



AERONAUTICS



BEVERAGES & FOODS



FLUID ENGINEERING



MOBILE HYDRAULICS



Compression molding



Injection molding



Machining / Tooling



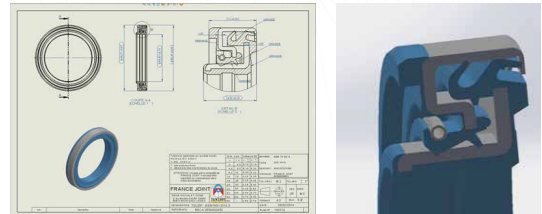
Logistics / Packaging

RESEARCH & DEVELOPMENT

Innovation, reliability, safety, minimization of risk: your expectations are our daily concern. To get from the idea to the finished product demands firm managerial control over a wide range of projects in addition to expertise in manufacturing.

FRANCE JOINT's contributors, who are as much inventors as technicians, get the best of fully automated, state-of-the-art technology that takes them from drawing-board to prototype and finally to assembly line. From writing specifications to putting on a major technical event through designing (3D Solidwrks software) and testing for validation and compliance, FRANCE JOINT engineering works hand in hand with you to find the best solutions guaranteeing the level of expected performance.

More than 1000 compounds integrating elastomers, PTFE materials, Polyurethane, or even thermoplastics, as many solutions vis-a-vis the new most complex requirements which will put you in pole position today so that we can all be winners tomorrow. FRANCE JOINT puts in place qualifications in order to examine the behavior of its seals according to various parameters intervening on frictions, pressures, temperatures, speeds, strokes, leakages...

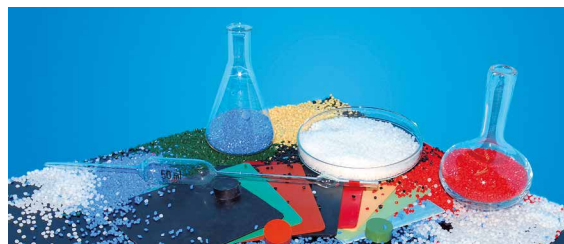


QUALITY IN OUR CONCERNS

Several certificates obtained, ISO 9001, IATF 16949, EN/AS 9100 and ISO 14001, testify to the quality department's commitment to constant progress at every level of the company, at all stages of the realization, particularly where continual improvement is what has made FRANCE JOINT the name it is today.

Ambitious with customer satisfaction a priority, FRANCE JOINT has thus obtained the most powerful methods (PPAP, AMDEC, value analysis, Audits, MRP, 8D analysis, SPC, R&R ...) in order to optimize simultaneously the capacity of machines and processes, operational manpower performances, organizational methods, and finally, product and financial results.

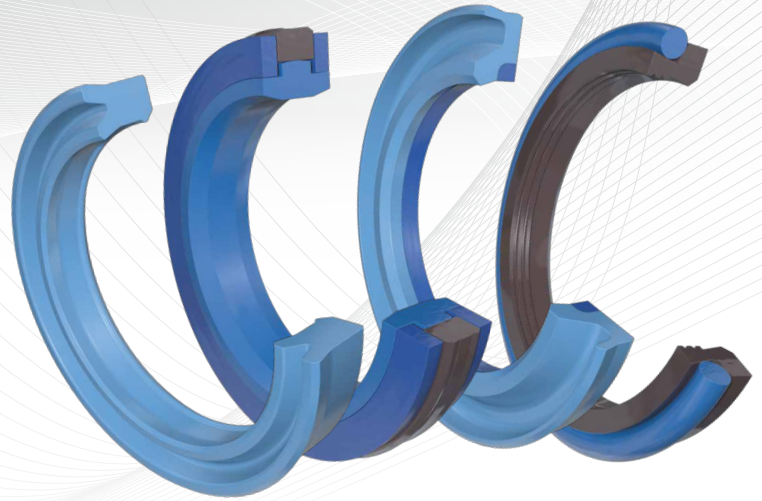
FRANCE JOINT guarantees the best technology and pursues its daily objectives of a "Zero defects" production, through physico chemical controls (rheometer, spectrometer, durometer...), through dimensional and final aspects (unit controlling equipment, 3D camera ...). This is because the search for competitiveness is as important as the search for continuous improvement.



3D test device



FLUID POWER SEALS



There are many sealing systems, from the most simple to the most complex, depending on the different scopes of application and designed for all types of machinery.

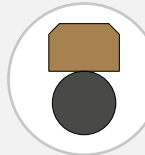
Properly defining the functional parameters is an essential step in choosing a sealing system and the materials to be favored; since each profile and material are designed to meet very specific workloads that are different from one hydraulic or pneumatic system to another.

Clearly by working closely with its clients, FRANCE JOINT actively takes part in development projects through its expertise and recommendations in choosing sealing components.

HYDRAULIC PROFILES Piston Seals



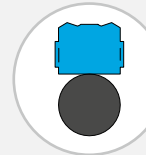
BECA 336



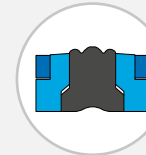
BECA 500



BECA 512



BECA 520

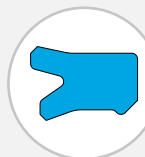


BECA 579

HYDRAULIC PROFILES Rod Seals



BECA 150



BECA 231/B



BECA 316



BECA 322



BECA 340

HYDRAULIC PROFILES Wiper Seals



BECA 461



BECA 470



BECA 473



BECA 475

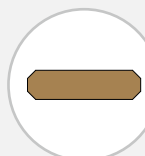


BECA 482

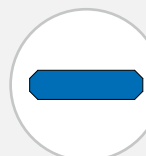
HYDRAULIC AND PNEUMATIC PROFILES Wear Rings



BECA 005

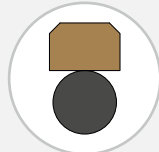


BECA 006



BECA 007

PNEUMATIC PROFILES
Piston Seals



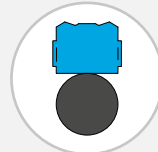
BECA 502



BECA 580



BECA 584

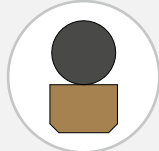


BECA 590

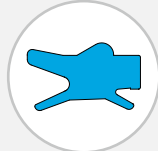


PKC

PNEUMATIC PROFILES
Rod Seals



BECA 153



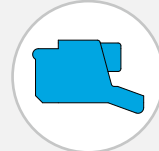
BECA 384



BECA 385



BECA 380



BECA 390

PNEUMATIC PROFILES
Wiper Seals



BECA 417



BECA 461



BECA 480

A complete
sealing
program.

Sealing systems, items that are decisive to the proper functioning of hydraulic or pneumatic devices, sealing systems must meet increasingly precise technical requirements:

- PREVENTING LEAKAGES
- RESISTING WEAR
- RESISTING FLUIDS IN CONTACT
- RESISTING TEMPERATURE PEAKS
- RESISTING PRESSURES
- RESISTING SPEEDS
- ONLY GENERATING MINOR FRICTION

In some fields of application, typically in heavy mobile hydraulics where requirements are very high, a single seal cannot handle all of the workload demanded; this is why FRANCE JOINT offers you full sealing systems.

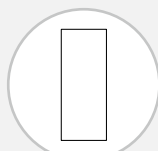
All of these sealing systems designed for heavy rod applications are based on the following configuration: a buffer seal, a secondary seal, a wiper seal and wear rings; with regard to the piston part: a piston seal and wear rings.



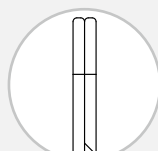
HYDRAULIC AND
PNEUMATIC PROFILES
Back-up Rings



BECA 008



BECA 011



BECA 012

STANDARD OIL SEALS



We can find them in many areas of application such as in industrial transmissions, in reducers, in hydraulic motors, in pumps, in compressors, etc.

Very widely used nowadays to seal rotary shafts while maintaining the fluids (oil, grease) in the rotating system, standard oil seals generally comprise a cylindrical metal frame coated in rubber to encourage static sealing, a sealing lip fitted with a spring to ensure static and dynamic sealing, and in some cases one or more protective dust lips preventing the penetration of pollution.

FRANCE JOINT's 30 years of experience in innovating and listening to its market now sets the company apart through the reliability of a cutting edge range and customised technical solutions to respond to competitiveness and anticipation of needs. In particular FRANCE JOINT has a full range of standard oil seals, with a portfolio managing over 2,500 different references.

ROTATING PROFILES Shaft Oil Seals



TC



SB



SCW



TCW



TBCW



TCHP



TCJ



TC4P



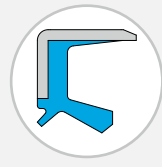
TA2



OKA



DC



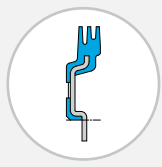
KB



VC



BECA 804



OKB5L3



BECA 741



BECA 862



BECA 120VA



BECA 131

CASSETTE, COMBI AND FACE SEALS



CASSETTE SEALS

Cassette seals, generally constituted of wear sleeve, a sealing lip with spring and several anti-dust lips integrated into a labyrinth system for protection against external pollution, are distinguished by greater reliability and longevity of the system. Furthermore, their friction surface, rectified and finished in advance, requires no maintenance of the shaft upon their replacement.

COMBI SEALS

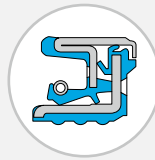
Combi seals, inseparable entities linked by metal frames comprising standard types SC / TC / DC shaft seals and polyurethane anti-pollution deflectors, are particularly appreciated for their ability to combat pollution. This part in polyurethane, playing the role of barrier against external impurities, through its material and its design, enables greater reliability of the combi seal.

FACE SEALS

Face seals or Floating seals are characterised by two identical metal friction seals fitted one against the other and centred in their groove by two elastomer components exercising uniform axial pressure between the seal and the housing. The first metal seal remains static in its housing while the other, rotating, seals by friction between the two components in contact.



PROFILES Cassette Seals



UA17



UA18



UA03



UA16A

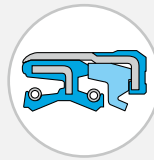
PROFILES Combi Seals



COMB1

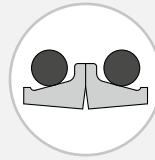


COMB3



COMB4

PROFILES Face Seals



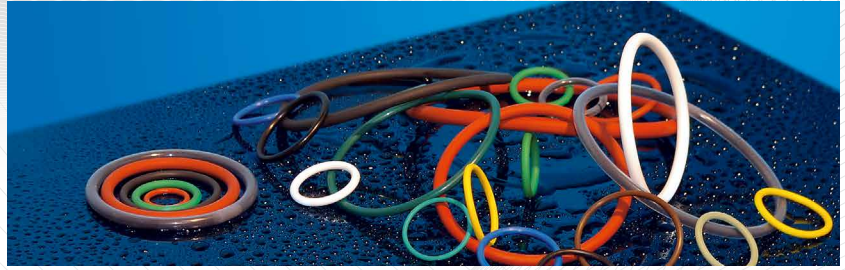
BECA 830



BECA 831

O'RINGS

Our BECA 010 O-rings are sealing components, characterized in being annular and having a circular section.



They have been used for many years in the industrial world as a simple, efficient and economic solution for static and dynamic applications, not requiring any maintenance or adjustment. By choosing the right quality and keeping strictly to the assembly instructions, they can be used at high pressures, speeds and temperatures.

Manufactured from a wide variety of materials, all our O-rings are designed to cope with the most diverse outside solicitations: temperature, nature of the fluids with which they come into contact, applied pressure levels, etc ... including ACM, AEM, CR, EPDM, FFKM, FKM/ FPM (Viton), FMVQ, HNBR, NBR, NR, SBR, PU (Polyurethane), Durilon PTFE, ...



BECA 010

CALCULATOR



This tool is complete, free of charge and easy to access. The O-ring computer covers every type of seal and is drawn up to the ISO 3601:2008 standard.

It offers free and independent parameter setting up of any sealing system with clear recommendations to guide users toward an optimum seal design.

It is simple to use, offering a possibility of quickly defining the right seal or seals for the desired application. It covers the entire range of existing FRANCE JOINT tools, offering a fast and accurate way of setting up the parameters of nonstandard complementary sizes; simplified searching for the dimensional standards of O-rings is also a way of choosing between various types of seals and incorporates the possibility of PDF saving or print-out, results are displayed in a concentric and eccentric position (fill groove, squeeze, compression, elongation, ...).

SEAL KITS

Custom-made sealing kits, an enhanced and unique effectiveness.



In the world of Replacement Parts (or the Aftermarket), custom-made kits are the main components of consumption. All manufacturers of industrial vehicles, hydraulic and pneumatic equipments, presses, robotics, etc.

Over 3,000 sealing kits according to customers specifications have been developed and customised, including a full range of seals

The confirmed trust of the market leaders recognises the highly qualitative approach of FRANCE JOINT and its comprehensive management of the whole manufacturing process (elastomer compression molding, thermoplastic injection molding, machining of noble materials and tools and other integrated technologies).

WE BRING YOU DAILY:

- **Source of confidentiality**, each custom-made sealing kit is aimed at a single client, via FRANCE JOINT's knowledge of everyone's specificities and technical constraints.
- **The customization of the kits** stands out right up to the packaging (with barcode, client's logo and all information required for full traceability).
- Complete **interchangeability**; FRANCE JOINT's expertise thus makes it possible to replace equivalent sealing systems with those of same quality performance.
- FRANCE JOINT meets each of your requirements at a **very reasonable cost**, regardless of your needs, **and offers a solution - rare on the market these days** - to the imperatives of maintenance of machines of very old generations, which lament sealing joints now neglected owing to their quantitative weakness. FRANCE JOINT undertakes to supply these products.
- The manufacture of its own tools confers a unique expertise on FRANCE JOINT, notably in **the creation of specific seals** or rubber products with complex shapes, and for ANY CUSTOM MADE TOOL, according to the requirements of each of its clients, and parts profiles adapted to each drawing or sample provided.
- As manufacturer, but also integrated storage centre and logistics platform, FRANCE JOINT guarantees a **remarkable responsiveness**, regardless of the volumes, thus assuring the efficiency of the after-sales of each of its clients with regard to their distribution networks.

SEAL LITS CUSTOMIZATION

CONTROLE QUALITE N°	
REF. P.J.	REF. AMP.
DIMENSION:	N° LOT.
	CURE DATE.
	CONTROLEUR.
QUANTITE:	
COMMANDE:	
REF. CLIENT:	

YOUR LOGO		QUA
		COM
		REF



GENUINE PARTS	
CODE ARTICLE: 878000654	
878000654	



PRECISION PARTS

Being ambitious to do more, FRANCE JOINT guarantees a high technical level.

- HIGH PRECISION
- SMALL AND LARGE SIZES
- COMPLEX STRUCTURAL SHAPES
- LONG SERVICE LIFE

FRANCE JOINT supplies affordable and optimized sealing solutions for complex applications through its:

Precision mouldings

ACM, AEM, EPDM, FFKM, FKM, FVMQ, HNBR, NBR, ...

Composite elastomer parts resulting from securely bonding elastomers to metals

Injected parts in thermoplastics PU, PA, PEHD1000, POM, ...

SLIDING BEARINGS

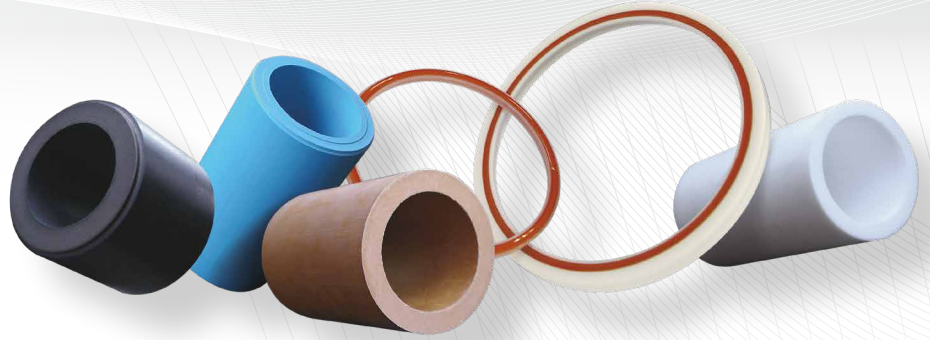
Cylindrical bushes interposed between a shaft and its housing, sliding bearing or dry bushes are designed to support, guide and facilitate the movement of rotating shafts.



Depending on the type of application and the parameters to be fulfilled in terms of speed, radial loads, axial loads, lubrication, friction etc., there are also derived products with many variants, both in the design of the bearing and in the material used for its manufacture: dry bearing with or without flange, thrust washers, strips, etc. The level of solicitation and the technical requirements to be fulfilled by the bearing will determine the choice of the material.

MACHINED SEALS

Faced with the ever more demanding requirements of the market in terms of technicality, timeframes, responsiveness and flexibility, the investment of FRANCE JOINT - SEALING SYSTEMS in a huge fleet of digitally controlled machines meets the specific needs of its clients. As each piece of information of the design is validated and then controlled by computer processing, the CAD transfer then permits the machining of any part in small, medium or large batches.



Machined filled PTFE seals

FRANCE JOINT's fleet of digitally controlled machines now comprises 4-axle machining centres and several digitally controlled towers, of 2 and 3 axles, some of which are exclusively dedicated to the machining of tools; this enables full vertical integration and therefore a perfect control of our production for both our injection moulded parts and our compression moulded parts.

Our 4-axle machining centres enable the machining of various technical parts of shapes from the simplest to the most complex. The digitally controlled towers, 2 and 3 axles, some equipped with paper rolls - thus favouring the establishment of material sketches - enable machining of seals of up to 500mm diameter in small, medium or large batches. In the case of larger dimensions, and in collaboration with its co-contractors, FRANCE JOINT can machine seals of up to 2.5 metres in diameter.

Among our huge variety of quality materials, we offer PEEK, PA, POM, UHMW-PE, PEHD1000, Virgin PTFE, PTFE filled with Bronze, Carbon, Ekonol, Graphite, Glass Fibre, ...

These high performing lines are set apart by a perfect control of the production so that tomorrow FRANCE JOINT will still and always remain your quality partner.



Machined phenolic seals

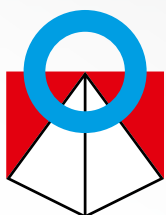


Machined rubber seals



www.francejoint.com

QUALITY & EXPERTISE
FOR YOUR SEALING NEEDS



FRANCEJOINT
SEALING SYSTEMS

FRANCE JOINT SAS

Zone Artisanale Le Mortier - B.P. 50009 - Cugand - 85613 Montaigu Cedex - France

Phone **+33 (0)2 51 42 13 76** - Fax **+33 (0)2 51 43 61 14**

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