

# Meca-inox

BALL VALVES

EN - 2018



[meca-inox.com](http://meca-inox.com)



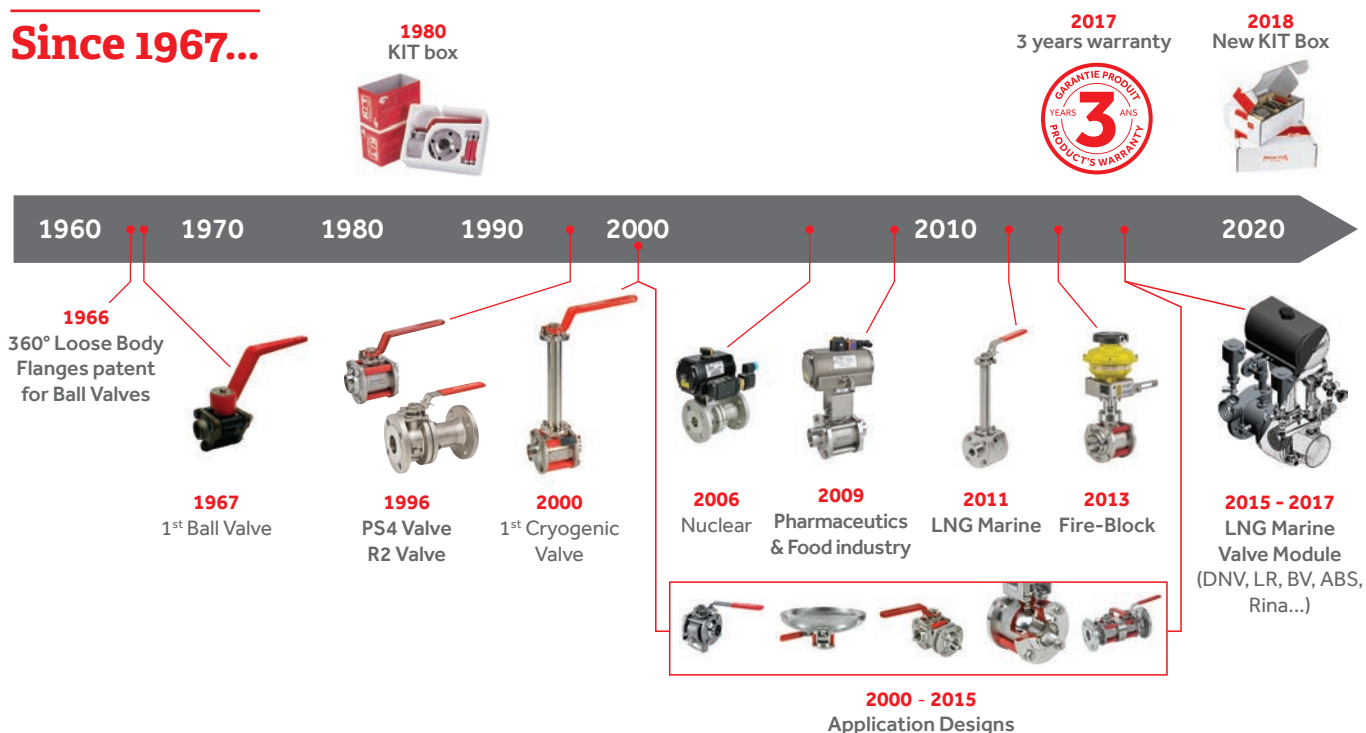
TÜVRheinland®  
**CERT**  
ISO 9001

# HIGH QUALITY BALL VALVES

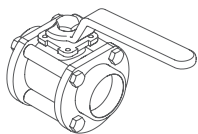
Expert in stainless steel and carbon steel ball valves technology since almost 50 years, we have developed over the years a complete products offer internationally recognized for its reliability, performance, and flexibility of use.

Combining high quality materials and our specific knowhow of design and manufacturing, our products meet the most stringent requirements.

## Since 1967...



## Today



**150,000**  
VALVES PRODUCED PER YEAR



**3,000,000**  
INSTALLED IN THE WORLD

## Our main Certifications



2014/68/UE - DESP - module H  
 2010/35/CE - TPED  
 2014/34/UE - ATEX  
 « T.A Luft » part. 3.18.4  
 ISO5208 Leakable rate A  
 ISO10497/API607/API6FA (Fire)  
 EN1626, EN12567 (Cryo)  
 CE1935-2004, EN14432, ADR/RID2017  
 Marine BV, DNV, Lloyd's, ABS, RINA

## OUR WORLDWIDE FOOTPRINT

*From our industrial sites of Gisors in France and Dalian in China, our teams can support you anywhere in the world. Our network of distributors provide an optimal availability of our valves and equipment for your international projects.*



BALL VALVES BORN IN FRANCE

WORLDWIDE AVAILABLE

**+100** OFFICIAL DEALERS  
WITH STOCKS

**35** PRESENCE IN  
COUNTRIES

# OUR MAIN MARKETS

*Dedicated to demanding process and for the resolution of technical problems, our valves are used and recommended in many industries.*



## CHEMISTRY

Plastic Synthesis, Fertiliser Production, Paint Chemistry, Perfumes... since more than 50 years.

**VALVES FOR STRONG ACIDS**  
**GAS TIGHTNESS  $10^{-5}$  MBAR/L.S<sup>-1</sup>**  
**ADR/RID 2017 - EN14432 VALVES**  
**HIGH-RELIABILITY ISOLATION VALVES**



## FOOD INDUSTRY

Sodas, Brewery, Sugar, Oil, Chocolate, Flavours... since more than 35 years.

**FDA & CE1935 MATERIALS**  
**FULL COMPONENTS TRACEABILITY**  
**GAS, STEAM, LIQUID & POWDER**  
**STEAM JACKET VALVES**



## INDUSTRIAL GAS

Since 15 years serving leaders of industrial gases (N<sub>2</sub>, O<sub>2</sub>, CO<sub>2</sub>, He...)

**EN12300 100% DEGREASED VALVES**  
**CRYOGENIC EN1626**  
**ADR/RID 2017 - TPED - EN14432 VALVES**  
**FDA & CE1935 MATERIALS**



## PHARMA & BIO TECH

Reactors, clean fluids, sampling and injection units.

**USP CLASS VI & FDA SEATS**  
**1.4435 LOW FERRITE BALL & ENDS**  
**FULL TRACEABILITY OF COMPONENTS**  
**ALLOY 22 VALVES**

# THEY TRUST US

AIR LIQUIDE, AKZO-NOBEL, ARKEMA, BASF, BAYER, BOEHRINGER, BOC, CARGILL, CHART, CRISTAL UNION, CRYOSTAR, DANONE, DRT, FIRMENICH, GEA, GIVAUDAN, GSK, HENKEL, LINDE, L'OREAL, MANE, MARS CHOCOLAT, MERCK, MESSER, NESTLE, NOVARTIS, ORIL, PPG, PROCTER & GAMBLE, ROQUETTE, SANOFI, SOLVAY, SPX, TETRA PAK, TORAY, WÄRTSILÄ, YARA ...



## LNG

Fuel Stations, Stationary Tanks, Tank Trailers, ISO Tanks... since more than 10 years.

**EN12567 CERTIFIED VALVES**  
**ISO10497 FIRE CERTIFIED VALVES**  
**AUTOMATIC SHUT-OFF VALVES**  
**FULL COMPONENT TRACEABILITY**



## MARINE

LNG Fuel Ships, LNG Tankers, LNG Floating Storages...

**DIVERTOR FOR TANK SAFETY VALVES**  
**BUNKERING VALVES MODULE**  
**NITROGEN FLUSHING UNITS**  
**TYPE APPROVAL ABS, BV, DNV, LR, RINA...**



## ENERGY

Cooling circuits, Heating circuits, Heat generation, cogeneration.

**QC EDF-UTO VALVES**  
**SEISMIC RATING**  
**DOUBLE BLOCK & BLEED VALVES**  
**FULL COMPONENT TRACEABILITY**



## INDUSTRIAL APPLICATIONS

Painting line, industrial refrigeration, water desalination, water treatment plant, since more than 30 years.

**FLUSH VALVES**  
**DOUBLE BLOCK & BLEED VALVES**  
**HIGH RELIABILITY VALVES**  
**LOW MAINTENANCE COSTS**

# OUR VALVES SERVING YOUR PROCESSES

Stainless steel, carbon steel, manual valves, pneumatic and electric actuators, high quality polymer soft seats from cryogenic to high temperature...



DN08 → DN200 | PN16 → PN100  
-196°C (GAZ) → +280°C

316L BALLS AND STEMS  
CE1935/2004 FOOD CONTACT CERTIFIED SEALS  
VALVE BODY IN 316L AND CARBON STEEL

## 3 PIECE VALVES MANUALS | ACTUATED

RANGES	SEATS	TEMPERATURE RANGE @ DP 1BAR	FLUIDS
PS4	PTFE 2 <sup>nd</sup> GENERATION	-50°C TO +190°C	ACIDS, BASES, SOLVENTS, ALCOHOL, GAS ...
PZ4	PTFE 20% PEEK	-30°C TO +280°C	STEAM, OIL, WARM CHEMICAL PRODUCTS, BITUMEN...
PP4	PEEK	-30°C TO +280°C	CONCENTRATED ACIDS, OIL CRACKING...
PN4	TFM1600® PTFE	-50°C TO +190°C	ALL FOODSTUFFS COMPONENTS, WHITE STEAM, PURE WATER ...
PH4	TIVAR 1000 PEHD	-80°C TO +100°C	WATER AND GAS UNDER RADIANT, ATMOSPHERE, MEDICAL OXYGEN...
PS4 PG (DRILLED BALL)	PTFE 2 <sup>nd</sup> GENERATION	-50°C TO +190°C	LIQUID CO <sub>2</sub> ...
PY4 (DRILLED BALL)	TF3215 PTFE + CARBON	-50°C TO +200°C (-196°C GAS)	LIQUID CO <sub>2</sub> , COLD GAS <-50°C ...

SEALING PERFORMANCE	PS4	PZ4	PP4	PN4	PH4	PS4 PG	PY4
EN12266-1 « Classe A »	OK	OK	OK	OK	OK	OK	OK
TA Luft « Classe BH » (Hélium)	OK	OK	OK	OK	-	OK	OK
Functional EN1626 / -50°C	-	-	-	-	-	-	OK

**CHEMISTRY / FOOD & DRINK / PHARMA / INDUSTRIAL GAS / ENERGY / INDUSTRY**

## DESIGNER'S & MANUFACTURER'S WARRANTIES

### Reliability & quality

- ✓ Mechanical parts designed for 1,000,000 cycles (0 → PN)
- ✓ Fully traceable materials and components
- ✓ ISO9001 quality system
- ✓ PED 2014/68/EU – module H

### Storage & installation

- ✓ KIT Box packaging since 1980 (2018 evolution : 100% recyclable)
- ✓ 360° loose body flanges since 1967 (reduced fitting time -30%)

### Performance & service life

- ✓ Self-compression spring washers (belleville washers)
- ✓ Fully traceable sealing parts
- ✓ EN12266-1 "class A" tightness even after 2,500 actuations
- ✓ Helium tightness 10-5 mbar/l.S-1

### Availability & maintenance

- ✓ All ends machined in our workshops
- ✓ Permanent stock of more than 50,000 components and valves
- ✓ Permanent stock of spare parts

More than 4,000 products combinations available.



DN08 → DN125 | PN15 → PN100  
-196°C → +200°C

316L STAINLESS STEEL BODY

## CRYOGENIC VALVES

MANUALS | ACTUATED

RANGES	SEATS	CHARACTERISTICS	FLUIDS
PY4 I CY (DRILLED BALL)	TF3215(R) PTFE + CARBON	Body seals : PTFE Long screws PTFE RED spacers	LIQUID NITROGEN, OXYGEN, ARGON, HELIUM...
		<b>FUNCTIONAL EN1626 : 2008 (-196 ° C / DP MAX 40 BAR AND 10 BAR) CERTIFIED SEALS CE1935 / 2004 FOOD CONTACT</b>	
PY4 I CY SF (DRILLED BALL)	TF3215 PTFE + CARBON	Fire-Safe Design Body seals : Graphite Distance piece Stainless steel threaded Short screws	LNG
		<b>CERTIFIED EN12567 : 2000 PART A &amp; B (-196°C / DP MAX 40BAR AND 30BAR) CERTIFIED FIRE ISO10497 / API607 / API6FA</b>	
SEALING PERFORMANCE		PY4 I CY	PY4 I CY SF
EXTERNAL TIGHTNESS HELIUM < 10-5 mbar/l.s-1		OK	OK
IN LINE TIGHTNESS HELIUM < 10-3 mbar/l.s-1		OK	OK

**BAR MACHINED SINGLE-PIECE EXTENSIONS (WELD-FREE)**  
**100% DEGREASED VALVES ACCORDING TO EN12300 CRITERIA <50mg/m<sup>2</sup>**



DN15 → DN200 | PN16 → PN40  
-50°C → +280°C

316L BALLS AND STEMS  
VALVE BODY IN 316L AND CARBON STEEL

## 2 PIECE VALVES

MANUALS | ACTUATED

RANGES	SEATS	TEMPERATURE RANGE @ DP 1BAR	FLUIDS		
R2S	PTFE 2 <sup>nd</sup> GENERATION	-50°C TO +210°C	ACIDS, BASES, SOLVENTS, ALCOHOL, GAS ...		
R2Z	PTFE 20% PEEK	-30°C TO +280°C	STEAM, OIL, WARM CHEMICAL PRODUCTS, BITUMEN...		
R2P	PEEK	-30°C TO +280°C	CONCENTRATED ACIDS, OIL CRACKING...		
R2H	PTFE 2 <sup>nd</sup> GENERATION	-50°C TO +210°C	FIRE-SAFE VALVE FLAMMABLE GASES & LIQUIDS		
SEALING PERFORMANCE		R2S	R2Z	R2P	R2H
EN12266-1 « Classe A »		OK	OK	OK	OK

**DESIGN DIN LONG PATTERN & DIN SHORT PATTERN**  
**CHEMISTRY / FOOD & DRINK / ENERGY / INDUSTRY**

# APPLICATION VALVES

## CLEAN FLUIDS



**PN4 I**  
Ra 0,4 internal  
USP Class VI seats  
CE1935

Clean steam, ingredients,  
food...

## REGULATION



Chemical  
Cryogenic  
V30° or V60° ball

Temperature control,  
progressive opening...

## CORROSION



304L, 316L,  
904L  
Alloy 22, Duplex  
Super Duplex

Nitric Acid, SIP/CIP,  
Water Desalination...

## TANK BOTTOM



Low retention  
zone  
Body CIP  
CE1935

Storage tanks,  
food reactors...

## THERMAL FLUIDS



**PJ4 I**  
Ammonia,  
Silicone Oils  
-80°C / +190°C

Industrial refrigeration,  
conditioning, freeze dryer...

## FLUSH MOUNTING



CE1935  
Sampling,  
scraping sleeve

Food & pharma lines, sugar,  
painting...

## MULTI-FUNCTION MODULES

Our project teams are able to design unique solutions by combining our technologies to fulfill your technical specifications.

### Steam Valve Module



- ✓ Actuated Double Block & Bleed
- ✓ Actuated Purge Valve

### Natural Cold Gas valve module



- ✓ Nitrogen injection valve (flushing)
- ✓ Pressure sensors

### LNG Transfer Valve Module



- ✓ Nitrogen injection valve (flushing)
- ✓ Pressure sensors
- ✓ Position sensors
- ✓ Safety valves
- ✓ 100% Actuated



## STEAM JACKET



25bar  
jacket, Water,  
Steam, Oil  
CE1935

Temperature management,  
chocolate, caramel, bitumen...

## MULTI WAYS



L, T & X Ball  
Mixing  
Switching

Line switch, mixing ...

## FIRE-BLOCK SYSTEM



Energy free spring  
shut-off  
Activation by cable  
& fuse 90°C

Tanks of LNG, Alcohol,  
Solvents...

## FILTER, CHECK VALVE, SIGHT GLASS



Same  
dimensions  
as 3PCS valve

Depollution after welding,  
anti-reverse, visualisation

## DOUBLE BLOCK& BLEED



Standards  
Valves' Body  
Double  
isolating

Steam lines, dangerous and  
pollutants liquids ...

## DIVERTOR COUPLING



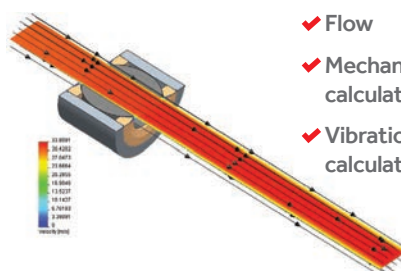
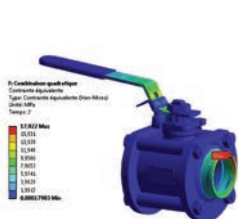
T & L ball  
Safety valves  
supports

Industrial Gas, LNG,  
petrochemicals...

## SERVICES & BENEFITS

Our engineers and technicians drive all your requests for calculation notes, simulations and specific certifications (application standards, maritime ...).

### Simulations & Calculations



- ✓ Flow
- ✓ Mechanical calculations
- ✓ Vibrations calculations

### On-site interventions



- ✓ Installation training
- ✓ Maintenance training



- ✓ Operational analysis



- ✓ Servicing supervision

## 2 INDUSTRIAL SITES : 7,000 m<sup>2</sup>

With more than 5,000 m<sup>2</sup> of Production and Assembly and 2,000 m<sup>2</sup> of Offices and Testing areas, our two industrial sites operate in synergy around 3 common pillars :

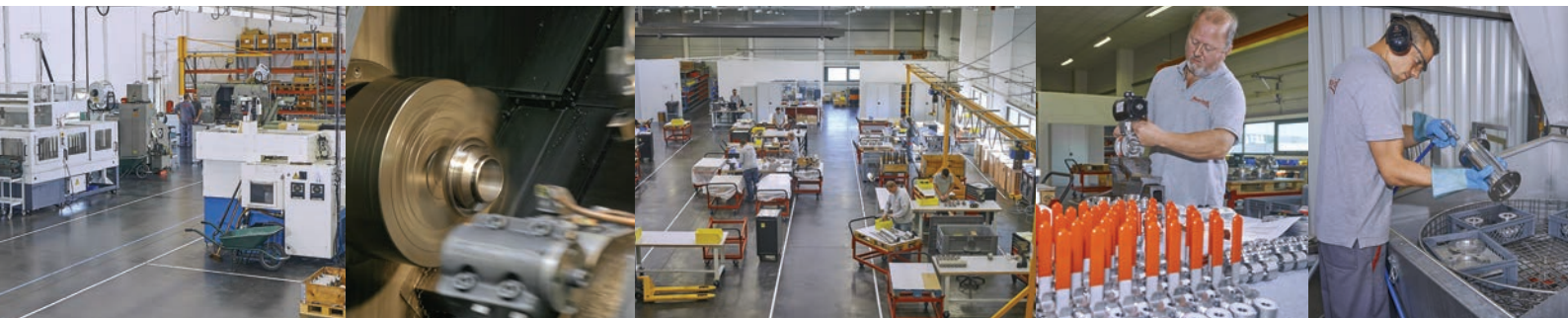
**RESEARCH & DEVELOPMENT, PRODUCTION and QUALITY SYSTEM.**



**GISORS FRANCE**



**DALIAN CHINE**



### RESEARCH & DEVELOPMENT

The R & D teams work closely around common tools and design guides to ensure a constant level of performance of our products.



### PRODUCTION

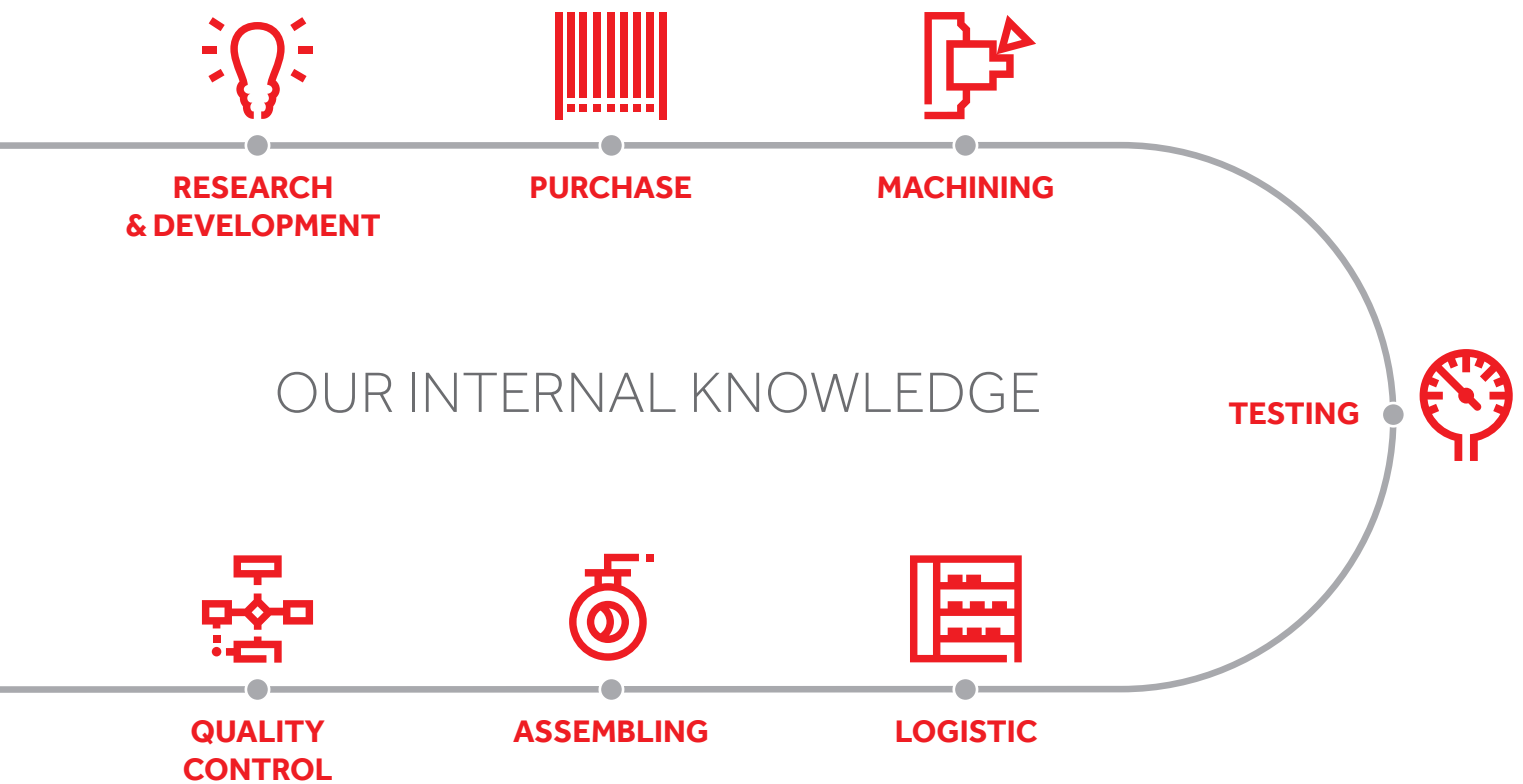
The synergies of production tools, the sharing of good practices and a central piloting allow us one of the best products availability and a recognized reliability.



### QUALITY SYSTEM

Our central quality system is ISO 9001 certified since 1994. It is the base of our performance on regulated markets as maritime LNG.

# A COMPLETE MANAGEMENT OF ALL PRODUCTION STAGES



## QUALITY IS THE HEART OF OUR BUSINESS



# WOMEN AND MEN OF TALENT

*Our teams: 140 women and men trained and experts of their trade.*

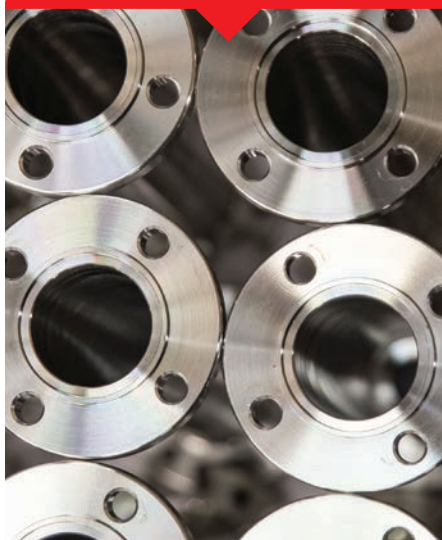


## COMMON VALUES

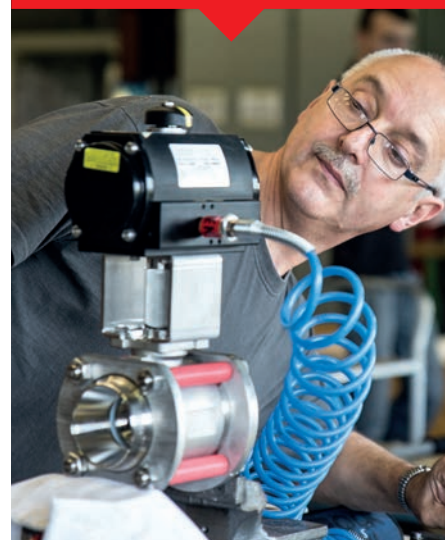
**Robust  
&  
Durable**



**Performance  
&  
Reliability**



**Adaptable  
&  
Innovative**



## FOCUSED ON OUR CUSTOMERS SUCCESS

*Our Sales Team answer all your technical and commercial demands with the support of our products & design experts.*

*To track your orders and to guarantee your satisfaction, our Customer Service is your partner in our production sites.*



*“My relationship with our clients goes beyond the role of simple provider, they see us as a real partner, and we accompany them in the development of their markets.  
This relationship based on trust and long-term communication is a chance and a strength of Meca-Inox.”*

**DAVID MEYER**

SALES AREA MANAGER GERMANY / AUSTRIA / SWITZERLAND

## SUCCESS STORIES

### LNG

#### WÄRTSILÄ

SINCE 2015

Design, production and delivery of more than 50 Marine certified valve modules for LNG fuel ships : LNG Bunkering Modules, LNG Vapors Modules and DIVERTORS for coupling of LNG Tank safety valves.

### PHARMACY

#### BIOGEN

2016/2017

More than 5,000 PS4 valves delivered for the new plant of Soleure (France). Size DN08 to DN150, manual and actuated, for steam, solvents and utility fluids.

### AGRO-FOOD

#### FIRMENICH

2017

Delivery of 850 valves PN4, PZ4 and PS4 for the new plant of Zhangjiagang in China. Manual and actuated valves for lines and storages of fluids.

### INDUSTRIAL GASES

#### AIR LIQUIDE

2016

As part of the international ITER project based in France, more than 1,200 cryogenic and non cryogenic valves (PY4I, PY4ICY, PS4I) have been delivered for installation into the Cryogenics (Helium and Nitrogen) plant currently under construction.

# MECA-INOX GROUP

Independent group, created in 1955 by Mr Guy Beurel around the activity of production of mechanical parts in stainless steel. The Group has a stable shareholding majority-owned by its CEO Mr Hugues Beurel.

With a French managerial and industrial history, the Group invests regularly to open new markets in respect of its values.



## Hugues Beurel

CEO Meca-inox

« With more than 60 years' experience to draw on, each day brings new ambitions to help our customers succeed. Supported by its Executive Committee, Meca-Inox invests and innovates to build on its position as European Leader for high-technology ball valves, through its PREMIUM Client 2020 programme. »

Since 1955...

Creation by  
G. Beurel



1955

Plant of Le Coudray  
St Germer (France)



1967

Casablanca Office  
(Morocco)



1983

## Two divisions



### BALL VALVES

Main activity of the Group since 1967. International specialist recognized for design, production and sale of high performance ball valves for industrial processes.



### DISTRIBUTION

Multi technologies industrial valves and equipment distribution activity, in North Africa.

## Values and social commitments

### KNOWLEDGE AND TRAINING

Training and capitalization of knowledge are one of the **essential pillars** of the sustainability and excellence of a business. Nearly half of our employees are involved every year in training programs and we welcome permanently **a dozen apprentices in our services.**

### CULTURAL & SPORT PETRONAGE

From 2014, Meca-Inox supports the Foundation of the **Abbey de Royaumont** (France, Val d'Oise) through the **Committee Henry Goüin.** This action is involved in the conservation of one of the jewels of the French heritage and supports the creation of many musical projects. Meca-Inox also supports the Cergy-Pontoise Jokers ice hockey first team since 2015.

### DISABLED PERSONS INTEGRATION

Industrial partnership **since 2010 with ANRH Beauvais (ESAT)** with the creation of a workshop for assembly and packaging. This workshop, **certified ISO 9001**, employs **15 people in situation of disability** and their supervisors.

### CORPORATE SOCIAL RESPONSIBILITY

In line with our process of continuous improvement, all of this approach of Corporate Social Responsibility (CSR) is **evaluated from 2013 by EcoVadis audit firm.** Meca-Inox ranks in half top of industrial companies of the same sector of activity on the 4 rating criterias : **Environment, Social, Ethics of business and Relationship suppliers.**

Industrial Site  
in Dalian (China)



New group head Office  
in Cergy (France)



New production site  
in Gisors (France)



# 60 YEARS

2007

2010

2015

## Main figures



**TURNOVER DEVELOPMENT** .....

**+47%**  
**IN 7 YEARS**



**RESEARCH & DEVELOPMENT** .....

**3%**  
**OF TURNOVER**

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A BRAND OF GROUP

**Meca-inox**  
SINCE 1955

