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...


1966 360° Loose Body Flanges patent for Ball Valves
1967 1st Ball Valve
1969 PS4 Valve R2 Valve
1990 1st Cryogenic Valve
2000 2006 Nuclear
2009 Pharmaceuticals & Food industry
2011 LNG Marine
2013 Fire-Block
2015 - 2017 LNG Marine Valve Module (DNV, LR, BV, ABS, Rina...)

2000 - 2015 Application Designs

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 - T PED
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
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 (N₂, O₂, CO₂, 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...

3 PIECE VALVES
MANUALS | ACTUATED

RANGES | SEATS | TEMPERATURE RANGE (°C) | FLUIDS
--- | --- | --- | ---
PS4 | PTFE | -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 | -50°C TO +190°C | LIQUID CO₂...
PY4 (DRILLED BALL) | TFM3215 PTFE + CARBON | -50°C TO +200°C (-196°C GAS) | LIQUID CO₂, 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 » (Helmet) | 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

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/LS-1

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

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

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

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

Meca-inox SILVER METISHIELD
More than 4,000 products combinations available.

**CRYOGENIC VALVES**

**MANUALS | ACTUATED**

<table>
<thead>
<tr>
<th>RANGES</th>
<th>SEATS</th>
<th>CHARACTERISTICS</th>
<th>FLUIDS</th>
</tr>
</thead>
<tbody>
<tr>
<td>PY4 CY</td>
<td>TF3215(R)</td>
<td>Body seals : PTFE</td>
<td>LIQUID NITROGEN, OXYGEN, ARargon, HELIUM...</td>
</tr>
<tr>
<td>(DRILLED BALL)</td>
<td>PTFE + CARBON</td>
<td>Long screws PTFE RED spacers</td>
<td></td>
</tr>
<tr>
<td>PY4 CY SF</td>
<td>TF3215</td>
<td>Fire-Safe Design Body seals : Graphite Distance piece Stainless steel threaded Short screws</td>
<td>LNG</td>
</tr>
<tr>
<td>(DRILLED BALL)</td>
<td>PTFE + CARBON</td>
<td></td>
<td>CERTIFIED EN12567 : 2000 PART A &amp; B -196°C / DP MAX 40BAR AND 30BAR</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**SEALING PERFORMANCE**

<table>
<thead>
<tr>
<th></th>
<th>PY4 CY</th>
<th>PY4 CY SF</th>
</tr>
</thead>
<tbody>
<tr>
<td>EXTERNAL TIGHTNESS</td>
<td>HELIUM</td>
<td>&lt; 10-5 mbar/l.s-1</td>
</tr>
<tr>
<td>IN LINE TIGHTNESS</td>
<td>HELIUM</td>
<td>&lt; 10-3 mbar/l.s-1</td>
</tr>
</tbody>
</table>

**BAR MACHINED SINGLE-PIECE EXTENSIONS (WELD-FREE)**

100% DEGREASED VALVES ACCORDING TO EN12300 CRITERIA <50mg/m²

**2 PIECE VALVES**

**MANUALS | ACTUATED**

<table>
<thead>
<tr>
<th>RANGES</th>
<th>SEATS</th>
<th>TEMPERATURE RANGE @ DP 1BAR</th>
<th>FLUIDS</th>
</tr>
</thead>
<tbody>
<tr>
<td>R2S</td>
<td>PTFE</td>
<td>-50°C TO +210°C</td>
<td>ACIDS, BASES, SOLVENTS, ALCOHOL, GAS ...</td>
</tr>
<tr>
<td>R2Z</td>
<td>PTFE 20% PEEK</td>
<td>-30°C TO +280°C</td>
<td>STEAM, OIL, WARM CHEMICAL PRODUCTS, BITUMEN...</td>
</tr>
<tr>
<td>R2P</td>
<td>PEEK</td>
<td>-30°C TO +280°C</td>
<td>CONCENTRATED ACIDS, OIL CRACKING...</td>
</tr>
<tr>
<td>R2H</td>
<td>PTFE 2nd GENERATION</td>
<td>-50°C TO +210°C</td>
<td>FIRE-SAFE VALVE FLAMMABLE GASES &amp; LIQUIDS</td>
</tr>
</tbody>
</table>

**SEALING PERFORMANCE**

<table>
<thead>
<tr>
<th>R2S</th>
<th>R2Z</th>
<th>R2P</th>
<th>R2H</th>
</tr>
</thead>
<tbody>
<tr>
<td>OK</td>
<td>OK</td>
<td>OK</td>
<td>OK</td>
</tr>
</tbody>
</table>

**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
FILTER, CHECK VALVE, SIGHT GLASS

- 25bar jacket, Water, Steam, Oil CE1935
- Temperature management, chocolate, caramel, bitumen...
- Depollution after welding, anti-reverse, visualisation
- Same dimensions as 3PCS valve

MULTI WAYS

- L, T & X Ball Mixing Switching
- Line switch, mixing ...

STEAM JACKET

- 25bar jacket, Water, Steam, Oil CE1935
- Temperature management, chocolate, caramel, bitumen...
- Depollution after welding, anti-reverse, visualisation
- Same dimensions as 3PCS valve

DOUBLE BLOCK& BLEED

- Standards Valves' Body Double isolating
- Steam lines, dangerous and pollutants liquids ...

STEAM JACKET

- 25bar jacket, Water, Steam, Oil CE1935
- Temperature management, chocolate, caramel, bitumen...
- Depollution after welding, anti-reverse, visualisation
- Same dimensions as 3PCS valve

FIRE-BLOCK SYSTEM

- Energy free spring shut-off Activation by cable & fuse 90°C
- Tanks of LNG, Alcohol, Solvents...

L, T & X Ball Mixing Switching
- Line switch, mixing ...

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 calculations
- Mechanical calculations
- Vibrations calculations

On-site interventions

- Installation training
- Maintenance training
- Operational analysis
- Servicing supervision
2 INDUSTRIAL SITES: 7,000 m²

With more than 5,000 m² of Production and Assembly and 2,000 m² of Offices and Testing areas, our two industrial sites operate in synergy around 3 common pillars: RESEARCH & DEVELOPMENT, PRODUCTION and QUALITY SYSTEM.

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

OUR INTERNAL KNOWLEDGE

QUALITY IS THE HEART OF OUR BUSINESS
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...

Two divisions

BALL VALVES

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 RESPONSABILITY**

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.

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**Main figures**

- **€** TURNOVER DEVELOPMENT ........................................... +47% IN 7 YEARS  
  
- **💡** RESEARCH & DEVELOPMENT ........................................... 3% OF TURNOVER