



# ROMYNOX

SPECIALIZED IN HIGH PURITY COMPONENTS

# Meca-inox

BALL VALVES

Fast Focused Flexible Friendly

# INTRODUCTION



## Vision and mission

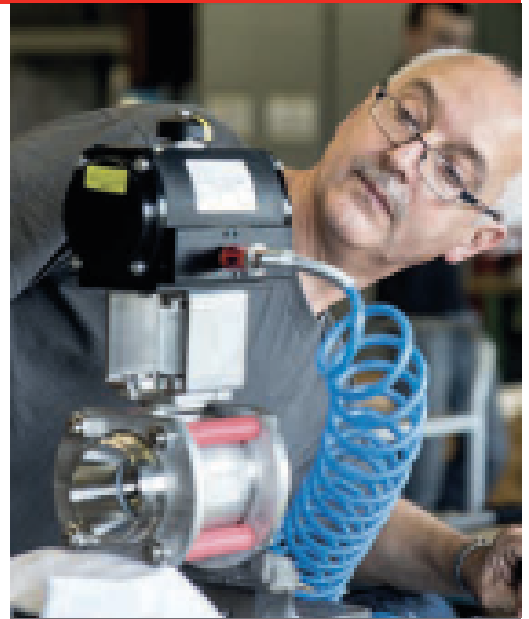
MECA-INOX is a **French Manufacturer of high performance ball valves** dedicated to the most demanding markets : chemistry, food industry, pharma industrial gases, LNG...

Thanks to the capacity and adaptability of its factory, **MECA-INOX adapts to all customer requests** : from a few valves for industrial equipment to more than 10000 valves for giga factories.

## Quality

MECA-INOX has been ISO9001 certified for nearly 30 years by TUV Rheinland. The quality controls applied at all stages of the process guarantees the reliability, durability and traceability of the brand's valves.

The R & D teams work closely around common tools and design guides to ensure a constant level of performance of their products. Their central quality system has been ISO 9001 certified since 1994. It is the base of their performance on regulated markets such as maritime LNG.



## History

MECA-INOX company was created in 1955 in France. Producing mechanical parts in stainless steel since its beginnings. In 1966, its creator invented and patented the first ball valve with loose body flanges. One year later, Meca-Inox launched its first ball valve with loose flanges. Today MECA-INOX Europe has its head office in Cergy (close to Paris) and its factory in Gisors, Normandy.



# ROMYNOX

Fast Focused Flexible Friendly



## ROMYNOX mission and vision

Being **fast, focused, flexible and friendly** are the core values of ROMYNOX which we try to live up to every day. Whether we're helping a client, partner, supplier or a colleague, it should always happen.

## About

We are ROMYNOX. The most **innovative, reliable, transparent, knowledgeable and sustainable partner** for process solutions in the (bio)pharmaceutical industry.

**Since 2009** we have grown into a supplier of products, knowledge and solutions, helping customers all over the world.



**FAST** - Quick response



**FOCUSED** - Experts on the job



**FLEXIBLE** - Customized service



**FRIENDLY** - Personal service

# APPLICATIONS AND INDUSTRIES



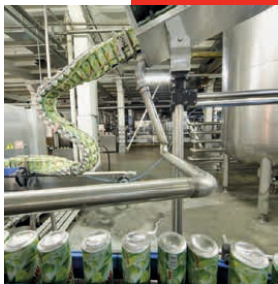
## Cryogenic

Based on 15 years experience in cryogenic ball valves for Industrial Gases, MECA-INOX has been supplying LNG market high quality ball valves since 2010. Their range of LNG flow control solutions is covering low flow restriction manual and actuated isolating valves, 3-way diverting valves, multi valves skids, automatic shut-off valves and certified valves for transport and marine applications. **Their ball valve solutions are dedicated to your cryogenic and gaseous fluids management with minimal pressure drop and optimized tightness.**



## Semi-conductor

MECA-INOX has developed special stainless steel ball valves with a high leak-tightness for clean dry air systems (CDA). The **MECA-INOX PN4 and PN4-DB ball valves are designed for CDA systems and both have a high leak tightness with a TA-air helium leak test up to 10<sup>9</sup>-.**



## Food

As food security is under an ever-stricter control, similarly applied valves. The MECA-INOX ball valves meet these strict requirements and are therefore increasingly applied for processes in the food industry. **Their 3-piece ball valves, manual or actuated, are used on many utilities** (Water, steam, air, caustic soda, ...) involved in the process of rinsing, drying, cleaning. They are also found on the storage, mixing lines and transfers of products not subject to bacterial growth.



## Pharmaceutical

MECA-INOX 2-piece and 3-piece ball valves, manual or actuated, are used on many fluids (alcohol, acids, solvents, ...) involved in the process of developing active ingredients. They are found in pharmaceutical workshops on "clean utilities" (purified water, steam clean, filtered air, thermal fluids...)



## Chemical

MECA-INOX ball valves are in use from basic chemicals to fine chemicals through the specialty chemicals. Flanged ball valves and 3-piece ball valves, manual or actuated, are used in the chemical process development of large polymers (polyethylene, ethylene oxide, ethylene amine ...). These products meet the new requirements of the Fire Safety Standard ISO 10497 on the fire performance. Otherwise they are Chartered TA-Luft (fugitive emissions) and in accordance with ATEX 94/9/EC (Explosive Atmosphere).



# BALL VALVES

MECA-INOX valves are recognized for their **reliability, durability and performance**.

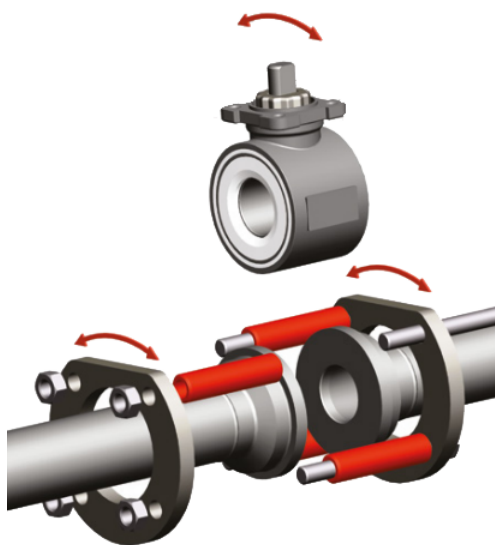
Thanks to its design and regulatory expertise, its manufacturing know-how, they propose valves that meet the requirements of the most demanding markets : chemistry, food industry, pharma & biotech, also industrial gasses, LNG, nuclear ... and now hydrogen.

- All the mechanical parts are designed for 1 million cycles (from 0 bar to PN max).
- Furthermore all the material and components are fully traceable.



MECA-INOX is a High performance ball valve designer and manufacturer.

	PS4	PN4	PZ4	PY4	PY4CY
Body seat	TFM1600	TFM1600	PTFE+20% PPEK	TF3215 (PTFE +Carbon)	TF3215 (PTFE +Carbon)
Temperature range	-50 ; + 190	-50 ; + 190	-50 ; +280	-50 ; + 190	0 ; - 196
Seat	PTFE	PTFE	PTFE	PTFE	PTFE
Steam thrust seat	20% PEEK PTFE	20% PEEK PTFE	20% PEEK PTFE	20% PEEK PTFE	20% PEEK PTFE
Suitable for	until +190°C	until +190°C	until +280°C	until -50°C	until -190°C



30 % time saved on installation

## THE 360° LOOSE BODY FLANGE: A UNIQUE CONCEPT FROM MECA-INOX

The unique concept of Meca Inox is the revolving connection components. Making the installation quick and easy.



**RELIABILITY** - Mechanical parts are designed for 1 million cycles (from 0 bar to PN max).



**MODULARITY** - 4,000 combinations with customer connections and actuation options are possible.



**PERFORMANCE** - En 12266 -1 class A tightness after 2,500 actuations.

Each piece is guaranteed for **3** years.

# CONNECTIONS

Each ball valves can be delivered with multiple set of connections : Butt weld, Socket weld, Thread (NPT and BSP), Flanged, Triclamp ends, Orbital welding, DIN 11851, Compression fittings. Each of them can come with full bore or reduced bore.



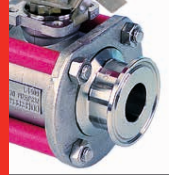
BUTT WELD



ORBITAL WELDING



SOCKET WELD



TRICLAMP END



FLANGED



THREAD (NPT AND BSP)

# MANUAL CONTROL

## The steam extension



Made of stainless steel. Can be welded on pipe insulation to get the handle more accessible. The top of its extension is similar to the valve ISO to flange.

## The Stainless steel lockable handle



With short or long neck, is equipped with a lockage system. Also available in carbon.



## The Stainless steel handwheel



With locking device available in two sizes.

## The extended handle



Available from DN 10 till 150.

## The operation safety Dead man



That switches into safety position as soon as the operator releases the handle.

# MECA-INOX PY4CY-CRYOGENIC



Temperature : 0 ; - 196

The PY4CY ball valve is specialized for cryogenic conditions. It is used for liquid nitrogen and the LNG-market. Thanks to its extended stem it can be used at a minimum temperature of -196°C. The stem allows the valves to be used even if the pipeline is frozen. The ball valve has an upstream pressure relief hole for excessive valve cavity pressure in a closed position.

## Certificates

PY4 CY design: EN1626  
 PY4 CY Fire Safe design: EN12567  
 ISO10497, API607 and API6FA  
 PED 97/23/CE T  
 A-Luft (fugitive emissions)

AD2000 Merkblatt  
 Options: ATEX 94/9/CE  
 p marking according to 2010/35/UE  
 TPED: certification ADR §1.8.7.6

# VALVES FOR SPECIFIC APPLICATIONS



## Full view sight glass valve:

This full view model offers a clear process visibility in sterile applications. It is 100% drainable, so free of dead legs. Prestressed cartridge. Efficient glass protection (glass protector in stainless steel). The PYREX glass gives a clear view and avoids the projection of drops on the walls.

## Check valve:

The check valve allows fluid (liquid or gas) to flow through it in only one direction. It is designed to prevent any flow reversal of fluids. The arrow marked on the body shows which way it must be installed. Vertical mounting is advised on an upward flow. In case of an horizontal mounting, the pressure difference between downstream and upstream to ensure sealing should be at least 1 bar.



## Filter valve:

A filtering valve that offers grades from 0.45mm for size DN10 to DN20, 0.8mm for size DN25 to DN50.

## Tank bottom valve :

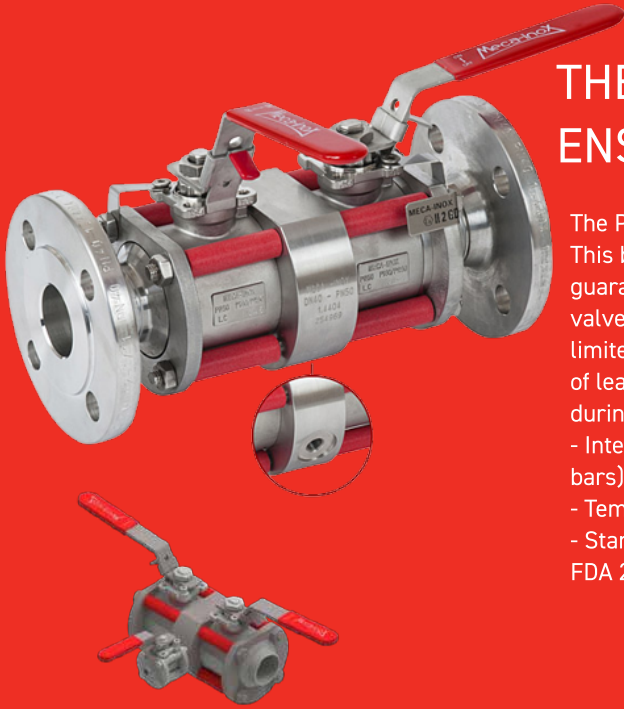
Meca Inox delivers two types of tank bottom valves: PS4 FC and PS4 FCSZ (with cavity fillers). The volume retention of a PS4 FCSZ valve is 10 times smaller than a standard valve with tank bottom T piping (e.g., the DN 32 volume retention is only 4 mL). Refer to the brochure to find out the different retention values.



## V-ball Valve :

This PZ4 V-ball valve works perfectly as a control valve in industrial flow control and monitoring. The V-Ball concept completes the PS4 range of three-piece ball valves : - a flow variation according to the opening angle (type V60 = 60°, type V30 = 30°), enabling a gradual, controlled flow to be obtained. - Completed with a pneumatic actuator and positioner (for opening angle adjustment). This product is compact and inexpensive compared to classic globe valves. Very suitable for chemical processes but also in cryogenic, pharmaceutical and food industry.





## THE DOUBLE BLOCK AND BLEED - ENSURE SAFETY OF YOUR OPERATORS :

The PS4 DBB is a modular build with various control levers and actuators. This ball valve provides safe isolation of lines during maintenance. It guarantees a total tightness on dangerous fluids with a double isolation (2 valves mounted in series). It allows to close & lock all valves in a single and limited area instead of manipulating 3 separate and distant valves. The Risk of leakages are avoided to protect operators and installations, particularly during equipment maintenance or cleaning on this line.

- Internal tightness : « classA » ace. to EN12266-1, < 10-3 mbar.L/s (He at 50 bars).
- Temperature range : from -50°C to +190°C
- Standard Compliance & norms: DESP 2014/68/UE (Cat 1 Pipe & Vessels), FDA 21CFR



## ACTUATORS AND ACCESSORIES

To make it SIMPLE, RELIABLE and FLEXIBLE, MECA-INOX has implemented optimal resources to offer a wide range of actuator configuration.

**SIMPLE:** MECA-INOX delivers complete assemblies of motorized ball valves with a full manufacturer guarantee according to customers specifications.

**RELIABLE:** Components have been designed to support stresses usually met in case of motorization.

**FLEXIBLE:** The technical experience of our teams ensures a quick reactivity to fulfill your enquiries and specifications.

We deliver, among other things:

- Actuators
- Switchboxes
- Sensors
- Control valves
- Mounting Kits
- Couplers
- Mounting brackets





**ROMYNOX**

CONNECTING  
HIGH PURITY  
PROCESSES