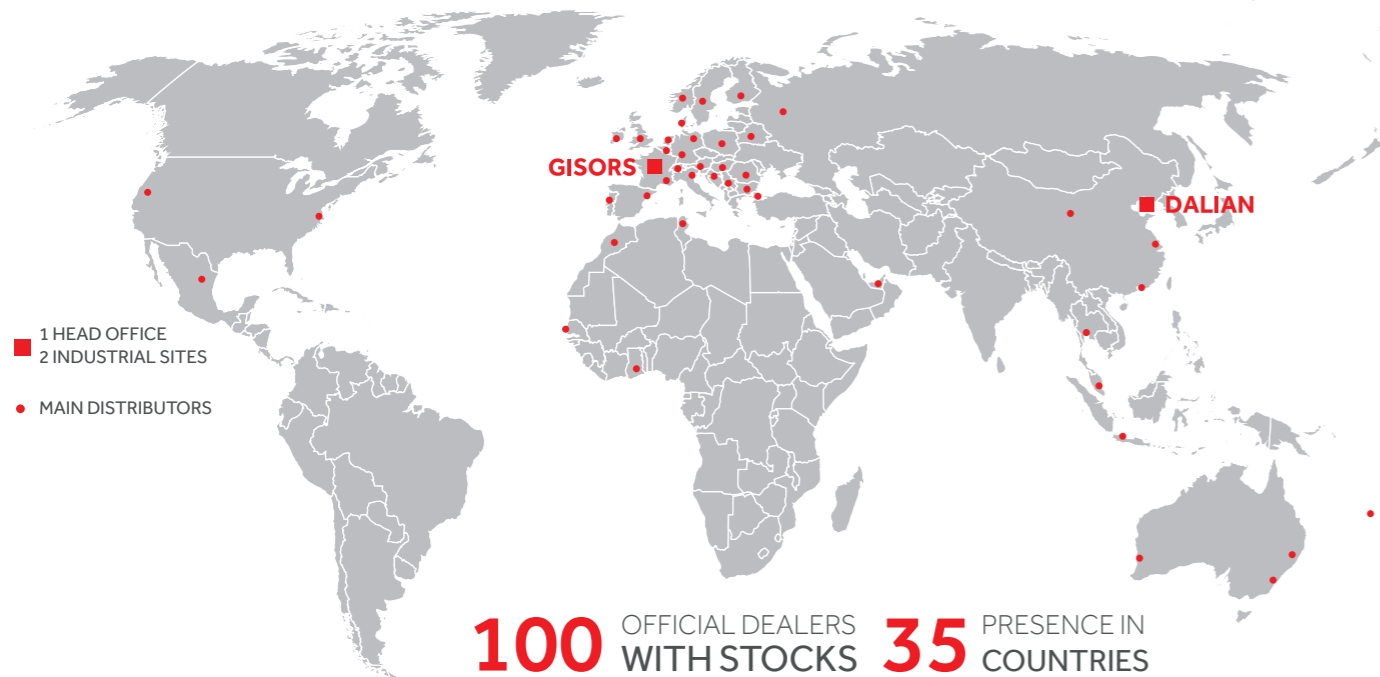


Meca-inox

BALL VALVES

HIGH QUALITY BALL VALVES

BORN IN FRANCE, WORLDWIDE AVAILABLE



Since 1967, MECA-INOX has manufactured ball valves and is a European leading signature for high quality ball valves dedicated to Chemistry, Pharma & Cosmetic, Cryogenic fluids, Food & Beverage and Industry with more than 3 million valves installed all over the world and 150 000 ball valves yearly production. Expert in stainless steel and carbon steel ball valves technology, 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. From our industrial sites of Gisors (France) and Dalian (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.

meca-inox.com



LNG SOLUTIONS

Small & Mid Scale Equipment



EN-2018

MECA-INOX

1, rue de la Croix des Maheux
F-95031 CERGY-PONTOISE CEDEX
T. +33 1 78 47 80 00
infos@meca-inox.com

A BRAND OF GROUP
Meca-inox
SINCE 1955

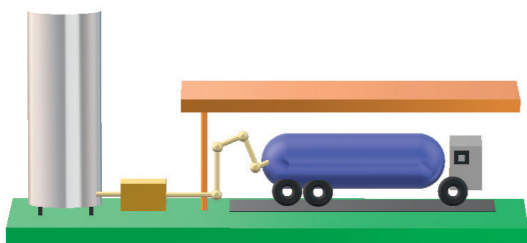
Meca-inox

BALL VALVES

Designer & Producer of **high performance ball valves** since more than **50 years**, Meca-Inox is a leading supplier of LNG valves for Small & Mid Grid applications.

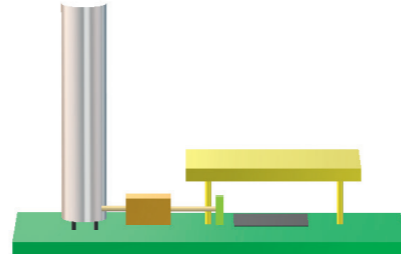
**More Than 25 000 Cryogenic Ball Valves for LNG
Produced & Installed Since 2010**

STORAGE, TRANSPORT, DISTRIBUTION



LNG Storage & Trucks Loading

- ✓ Tanks
- ✓ Pump Skids
- ✓ Loading Arms



LNG/CNG Fuel Stations

- ✓ Tanks & Vaporizers
- ✓ Pump Skids
- ✓ LNG Dispensers



LNG Trucks

- ✓ Automatic Shut-Off valves
- ✓ ADR/RID2017



ISO/UN Portable LNG Tanks

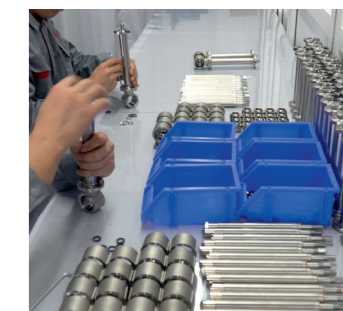
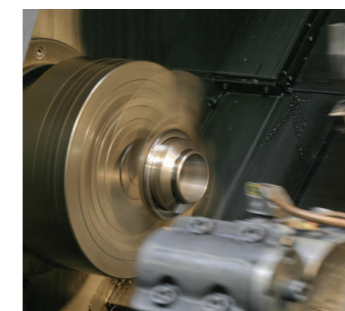
- ✓ Automatic Shut-Off valves
- ✓ Feeding Valves

Low Flow Restriction / High Quality Materials / Helium Tightness

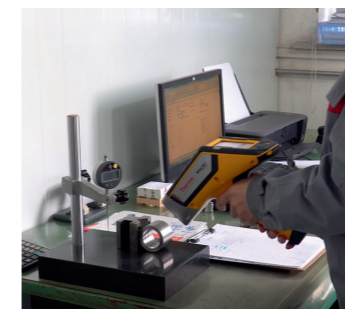
CUSTOMER REFERENCES

Air Liquide, BOC, Chart Group, Changlong, CIMC ENRIC, Cryolor, Cryostar, Cryovat, Engie, Eurotank, Sener, Vanzetti, Worthington Aritas...

A COMPLETE MANAGEMENT OF ALL PRODUCTION STAGES



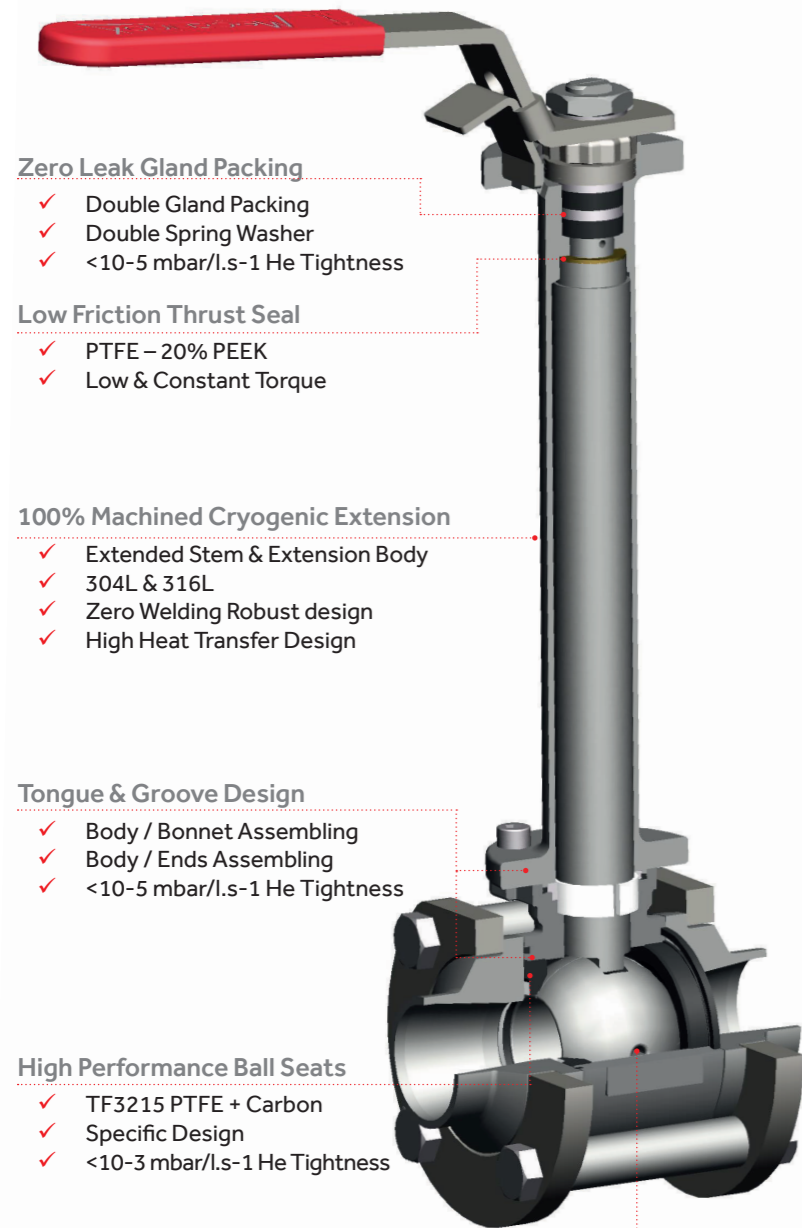
**In House Machining / Certified Cleaning Process
Assembling Room / Quality Control
Internal Cryogenic & Helium Tests Laboratory**



CERTIFICATIONS & PERFORMANCES

ISO9001, 2014/68/UE – DESP – module H, 2010/35/CE – TPED, ISO5208 Leakage rate A, ISO10497/ API607/API6FA (Fire Resistance), EN12567-2000, BS6364 ...

3 PCS BALL VALVES WITH CRYOGENIC EXTENSIONS



Zero Leak Gland Packing

- ✓ Double Gland Packing
- ✓ Double Spring Washer
- ✓ <10-5 mbar/l.s-1 He Tightness

Low Friction Thrust Seal

- ✓ PTFE – 20% PEEK
- ✓ Low & Constant Torque

100% Machined Cryogenic Extension

- ✓ Extended Stem & Extension Body
- ✓ 304L & 316L
- ✓ Zero Welding Robust design
- ✓ High Heat Transfer Design

Tongue & Groove Design

- ✓ Body / Bonnet Assembling
- ✓ Body / Ends Assembling
- ✓ <10-5 mbar/l.s-1 He Tightness

High Performance Ball Seats

- ✓ TF3215 PTFE + Carbon
- ✓ Specific Design
- ✓ <10-3 mbar/l.s-1 He Tightness

Ball Up Stream Relief Hole

- ✓ No Overpressure Build up

Body Size Full bore	Extension* (mm)	Operating Torque** (N.m)
DN10 & DN15 ¼" & ½"	157,0	<12
DN20 & DN25 ¾" & 1"	188,0	<26
DN32 & DN40 1 ¼" & 1 ½"	211,5	<86
DN50 2"	209,0	<158
DN65 & DN80 2 ½" & 3"	214,0	<172
DN100 4"	216,0	<301

* Standard machined extension length, longer extensions on demand
 ** Max Operating Torque @ -196°C / Max Pressure Class

Ends

- ✓ DN08 (1/4") to DN125 (5")
- ✓ BW, SW, NPT, BSP, Flange...
- ✓ 304L & 316L

Actuation

- ✓ Lockable Lever
- ✓ Gear Box
- ✓ Pneumatic Actuator
- ✓ Electric Actuator



EN DESIGN



ASME DESIGN



Valve Body	Assembling	Gland Packing Body Seals Bonnet Seal
1.4409 – CF3M Casting	Short Bolts + Threaded 316L Spacers	Graphite

- ✓ Certified EN12567/2000 - Up to 40 bars
- ✓ Functional EN1626/-196°C - Up to 40bars
- ✓ Certified ISO10497/API607/API6FA

Valve Body	Assembling	Gland Packing Body Seals Bonnet Seal
1.4404 – 316L Machined	Short Bolts + Direct Body Screwing	PTFE Or Graphite

- ✓ Conform to ASME B1634 Class 300

EUROPEAN REFERENCE BALL VALVES

FOR PERFORMANCE & RELIABILITY

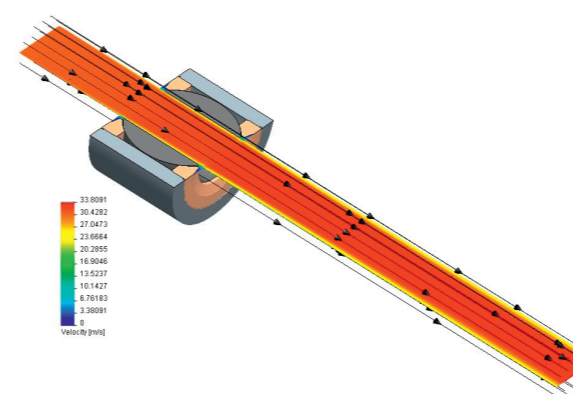


Design

- ✓ Loose Body Flanges (Meca-Inox Patent 1966)
- ✓ All Ends Produced In House
- ✓ Low Flow Restriction
- ✓ Easy Mounting (-30% time)

Performances

- ✓ High Performance PTFE Modified Gland Packing
- ✓ EN12266-1 "Class A"
- ✓ Helium Tightness 20°C < 10-5 mbar/l.s-1
- ✓ 2 to 5 Times Lower Pressure Drop than Globe Valves



Reliability

- ✓ Self Compressed Gland by Spring Washers
- ✓ 100% Machined Extended Stem & Extended Body
- ✓ Low & Constant Operating Torques

Maintenance

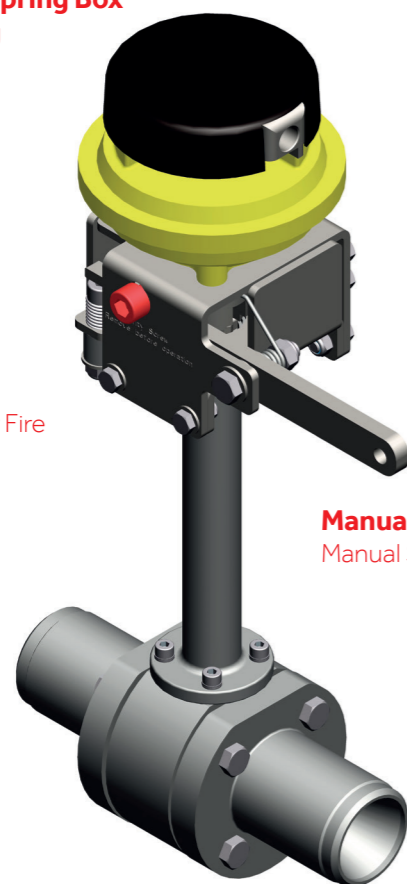
- ✓ Spare Kits of Seals Permanent Stock
- ✓ Valve Body KIT
- ✓ Easy Disassembling (MTTR <5minutes)

AUTOMATIC SHUT-OFF VALVE « FIRE-BLOCK »

ISO/UN LNG Portable Tank

Energy Free Spring Box
<0,1 sec closing

90°C Fuse Element
Automatic shut-off by Fire



Manual Lever
Manual Shut-off by cable

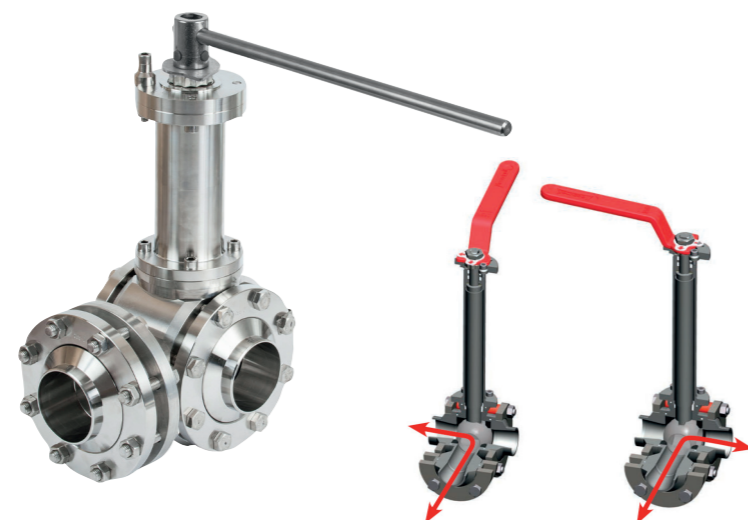
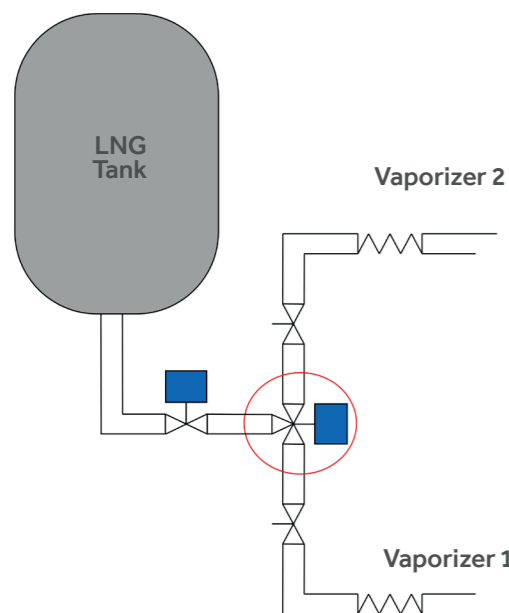


More than 1 000 in operations

- DN20 to DN50 lines
- Class PN10 / PN40
- Certified 1 300 actuations

3 WAYS SWITCH VALVE «3VLH»

LNG Vaporizers Feeding & LNG Distribution



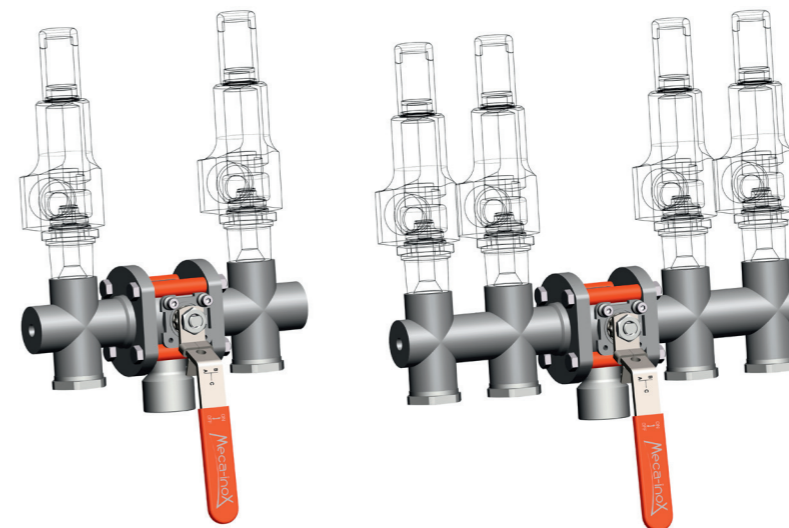
More than 250 units in operations

- DN08 to DN100 lines
- Class PN10 / PN40

1 valve to replace 2

3 WAYS CHANGEOVER VALVES « DIVERTOR »

Safety valves isolation for maintenance



NPT outlets for Safety Valves mounting
L & T ball available



More than 500 in operation

- DN20 to DN50
- Class PN10 / PN40

OTHER BALL VALVES IN PACKAGE



2 PCS Floating ball « FB »

- Class 150 – 300
- 2" to 8"
- Rating BS5361 / API6D



3 PCS Trunion ball « TSB »

- Class 150 – 300
- 4" to 8"
- Rating BS5361 / API6D



Top-Entry Floating & Trunion ball « TEV & TEV-f »

- Class 150 / 300 / 600 / 900 / 1500
- 2" to 12"
- Rating BS6364 / API6D



Partnership of 2 European Brands, Leaders in their Markets