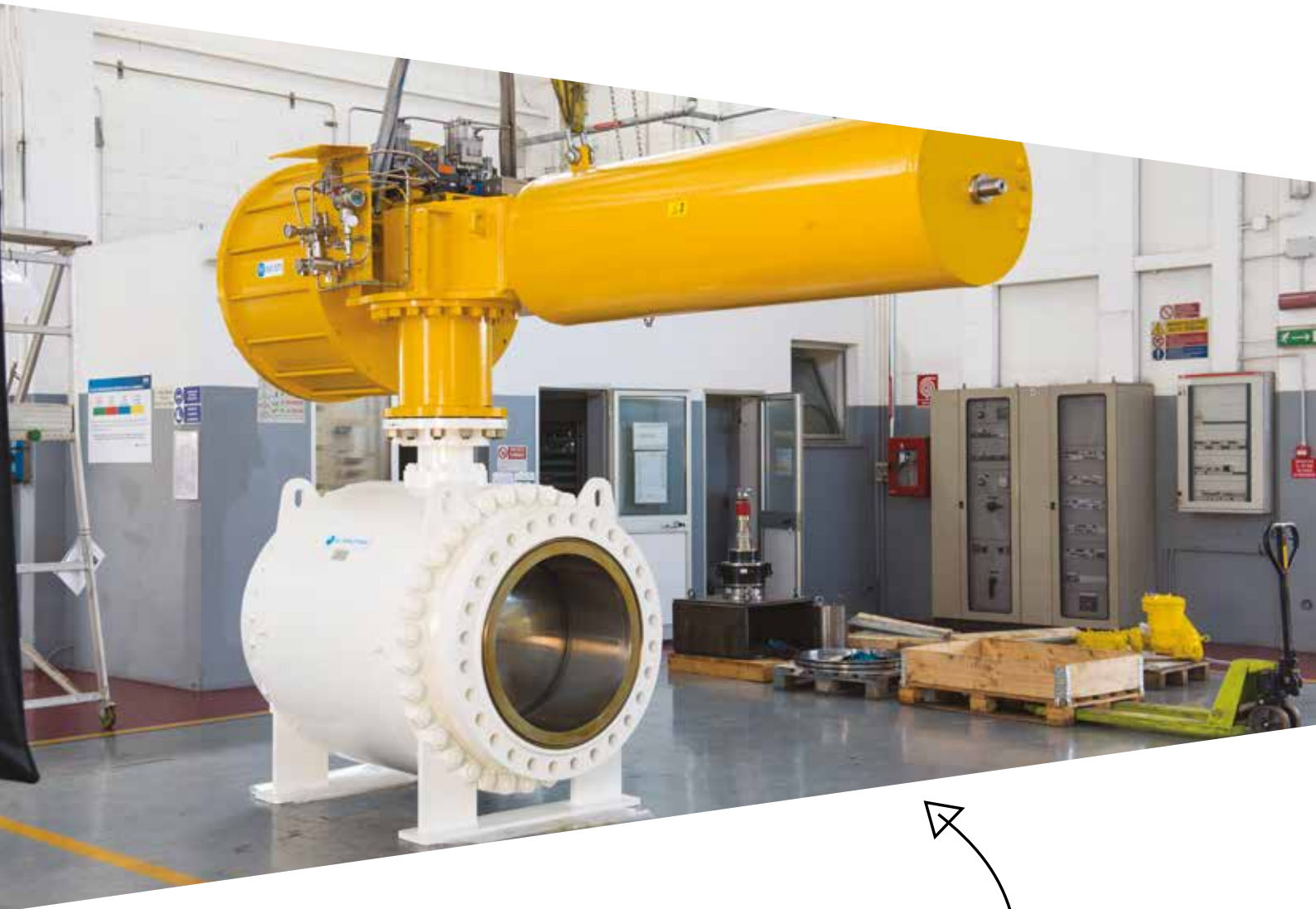


Mechanical HIPPS



↖
Made in Italy

High Integrity Pressure Protection System

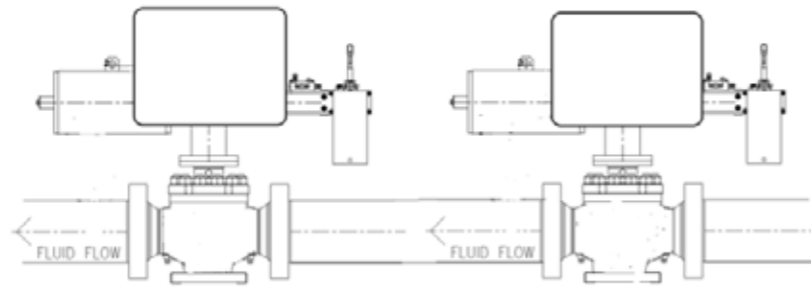
 IMI CCI

 IMI STI

 IMI TRUFLO ITALY

Mechanical HIPPS

Mechanical HIPPS is a complete safety system that operates in applications without an electric power source. The technology comes in two variations: Self-actuated pneumatic, when instrument air/gas supply is available. Self-contained hydraulic, with locally installed oil tank and manual pump.



HIPPS systems are a series of components, specifically engineered to isolate the source of dangerous high pressure instead of relieving the excess flow, in the case of an overpressure event. HIPPS is an independent and reliable Safety Instrumented System that is designed with high integrity as per established ANSI/ISA and IEC standards, in order to equal or exceed the safety performance of conventional safety valves.

Key features

- > No electric power needed
- > Quick closing
- > Designed according to API 6D or 6A
- > No pressure drop across the valve
- > Can be used on piggable lines
- > Bi-directional flow

Benefits over electronic HIPPS

- > Pressure in the process line is used as an actuating signal to close the HIPPS valve.
- > Installation in area where no electric power is available (e.g. platforms and pipelines).
- > Lower cost compared to full solution with dedicated electronic logic solver.

Applications

- > Well Control, flow-lines (reduced wall thickness)
- > Inlet of separators and Slug Catchers
- > Pressure let down stations
- > Gas Injection Compressor Facilities
- > Reduced Flare Systems
- > Where flaring/venting is not possible
- > Loss of cooling medium / power in downstream processes like propane circuit, refrigeration circuits, distillation columns, amine re-boilers.

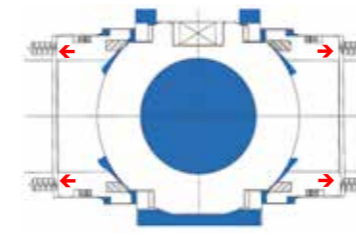
SIL certification

The Mechanical HIPPS complies with IEC61508/511 international standards for the Safety Integrity Level (SIL)
 SIL Certification based on IEC61511 and IEC61508 Route 2H
 Assessment of the reliability data for the entire element according to 7.4.4.3.3 of IEC 61508:
 SIL2 – HIPPS composed by one valve only
 SIL3 – HIPPS composed by two valve in series

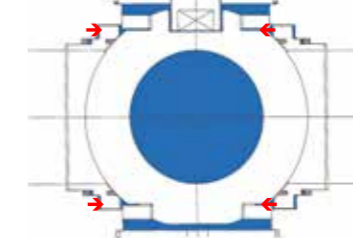
Valve selection - IMI Truflo Italy Ball Valve



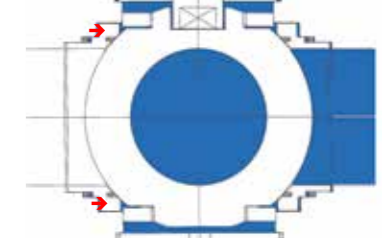
- > Soft, metal or composite seated
- > Two or three piece body
- > Bi-directional tight shut-off
- > Double block & bleed
- > Fire safe and fire tested
- > Bolted or fully welded construction
- > Low operating torque design
- > Wide range of materials and sizes
- > Trunnion mounted with spring energized seats
- > Anti-blowout stem design
- > Suitable for above ground or below ground installation



Self relieving seats



Double piston effect seats



SPE/DPE configuration

API6D	4"	4"	4"	6"	6"	6"	8"	8"	8"	10"	10"	10"	12"	12"	12"
	ANSI 900	ANSI 1500	ANSI 2500	ANSI 900	ANSI 1500	ANSI 2500	ANSI 900	ANSI 1500	ANSI 2500	ANSI 900	ANSI 1500	ANSI 2500	ANSI 900	ANSI 1500	ANSI 2500
API6A	2.1/16"	2.1/16"	3.1/8"	3.1/8"	4.1/16"	4.1/16"	5.1/8"	5.1/8"							
	API 5000	API 10000	API 5000	API 10000	API 5000	API 10000	API 5000	API 10000							

Other sizes are available on request

Actuation selection - IMI STI RT Series Actuators

Pneumatic self-actuated: Simple mechanical solution without electric/electronic devices, typically suitable up to SIL2 or SIL3 in single or double valve configuration respectively. It is possible to add a PST function installing locally a low consumption electronic device that could be powered by solar energy.

Hydraulic self-contained system: No external hydraulic supply is necessary. Opening by manual pump. Similarly to the self-actuated solution, a PST functionality can be added by means of a low consumption electronic device that could be powered by solar energy.

- > Double acting or spring return modular design
- > Totally sealed weatherproof housing provides complete protection for all moving parts
- > Housing is manufactured in carbon steel material without any cast/grey/ductile iron or aluminum parts
- > Scotch yoke mechanism available in both canted or symmetrical executions
- > Chromium plated guide bar to absorb transversal forces
- > Bushings are made of high-strength bronze alloy (other materials on application)
- > Electroless nickel plated cylinder to minimise friction and prevent corrosion.
- > Multiple lifting lugs ideally located to balance center of gravity for safe lifting
- > Position indicator provided with VDI/VDE 3845 NAMUR drive slot
- > ISO 5211 flange connection
- > An integral or declutchable manual hand-wheel or hydraulic hand pump available on request
- > Full stainless steel cylinder, index and valve adaptation available on request



Materials

Other material options are available on request.

API6D			
	Body/closure	Ball/seat (seat seal)	Stem
	ASTM A350 LF2	410 SS (PEEK)	410 SS
	ASTM A350 LF2 + Inc. 625 weld overlay (3mm) on seats area	316 SS (PEEK)	22Cr DSS
	ASTM A350 LF2 + Inc. 625 full weld overlay (3mm)	22Cr DSS (PEEK)	25Cr SDSS
	ASTM A182 F316	25Cr SDSS (PEEK)	UNS N07718
	ASTM A182 F51	UNS N08825 (PEEK)	UNS N06625
	ASTM A182 F53/F55	UNS N06625 (PEEK)	
	UNS N08825		
	UNS N06625		

API6A			
	Body/closure	Ball/seat (seat seal)	Stem
	ASTM A350 LF2	410 SS (PEEK)	410 SS
	ASTM A350 LF2 + Inc. 625 weld overlay (3mm) on seats area	316 SS (PEEK)	22Cr DSS
	ASTM A350 LF2 + Inc. 625 full weld overlay (3mm)	22Cr DSS (PEEK)	25Cr SDSS
	ASTM A182 F51	25Cr SDSS (PEEK)	UNS N07718
	ASTM A182 F53/F55	UNS N08825 (PEEK)	UNS N06625
	UNS N06625	UNS N06625 (PEEK)	

Sales Contacts

See website or contact our global e-mail address for your local sales team if not listed.

imicci.sales@imi-critical.com

Americas

imiccisales.americas@imi-critical.com

IMI CCI RSM
California
USA
Tel: +1 949 858 1877

IMI Critical Engineering

Lakeside, Solihull Parkway
Birmingham Business Park
Birmingham B37 7XZ
United Kingdom

Tel: +44 (0)121 717 3700
Fax: +44 (0)121 717 3701

www.imi-critical.com

Asia-Pacific

imiccisales.apac@imi-critical.com

IMI Critical Singapore
Singapore
Tel: +65 6653 7000

Greater China

imiccisales.china@imi-critical.com

IMI Critical Greater China
Shanghai
PR China
Tel: +86 21 3973 8000

India

imiccisales.india@imi-critical.com

IMI CCI SriCity
Andhra Pradesh
India
Tel: +91 85 7639 8000

Europe

imiccisales.europe@imi-critical.com
imitruffloitaly.sales@imi-critical.com

IMI CCI Austria
Wien
Austria
Tel: +43 1 869 27 40

IMI CCI United Kingdom
Manchester
UK
Tel: +44 (0)161 655 1680

IMI Trufflo Italy
Piacenza
Italy
Tel: +39 0523 766111

Middle East and Africa

imiccisales.mea@imi-critical.com

IMI Critical MEA
Dubai
United Arab Emirates
Tel: +971 4 807 3111