indra
VALVES - ITALY

BALL VALVES

EXCELLENCE, RELIABILITY, PERFORMANCE

INDEX

COMPANY

WHO WE ARE

Set up in 1987 in Italy, near Milan, Indra is 100% Italian manufacturer of valves, mainly ball and needle, instrumentation manifold and interlocking manifold SIL 4 for HIPPS systems.

1987
Established that year

80.000
Yearly Production Valves & Manifold

90
Employees

460
Projects acquired in recent years

- 1987 — Establishment date
- 2019 — Bunker for high pressure test
- 2020 — Cryogenic test tank
- 2021 — New machinery & equipment
- 2022 — 35th Company Anniversary
- 2023 — New machinery & equipment
- 2024 — New test bench

IN HOUSE
PRODUCTION PROCESS

All the production phases are carried out in-house assuring a total process control.

ENGINEERING & DESIGN

01

MACHINING

02

QUALITY CONTROL & NDT's

03

ASSEMBLING

04

HIGH PRESSURE TEST BUNKER

05

SYSTEM CERTIFICATIONS

UNI EN ISO 9001:2015
UNI ISO 45001:2018
UNI EN ISO 14001:2015

BALL VALVES

A complete range of ball valves in various configuration and diameters, from integral monobloc versions, double block & bleed and split body characterized by:

- 100% EU raw materials
- High temperature and cryogenic application
- Hydrogen service
- Ammonia & Severe Services
- Soft and metalseated design
- Manual operated or actuated
- Integral or Bolted Body

Oil&Gas

Petrochemical

Hydrogen

Off-Shore Platforms

BALL VALVES
PRODUCT OVERVIEW

DBB and DB Ball Valves:

Designed for critical applications demanding the highest safety, DBB (Double Block and Bleed) ball valves integrate two independent block valves into a single compact body. The integrated bleed valve allows for controlled depressurization and venting of the internal cavity, making maintenance operations safer and more efficient. Compared to using separate valves, the DBB design reduces footprint, weight, and potential leak points, simplifying installation and lowering overall system costs.

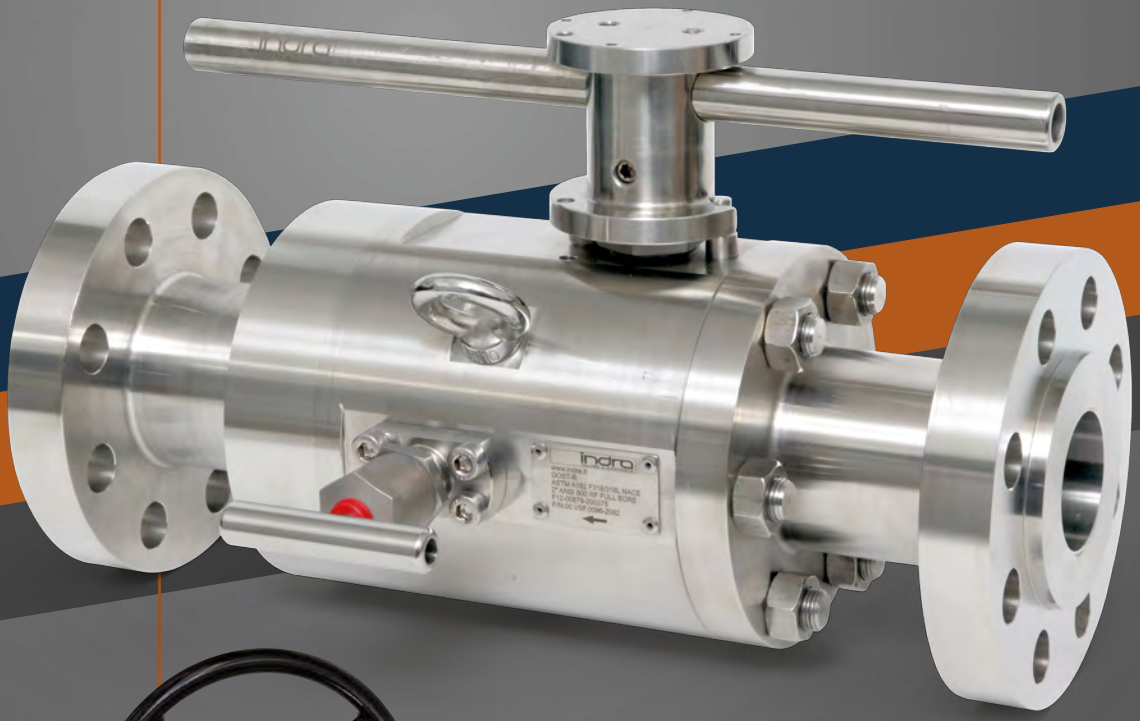
These Compact Ball Valves offer the same advantages of the split body design, are internally equipped with a double seal and particularly suitable for applications with space constrain like Off-Shore platforms or FPSO and also available without Bleed (DB) in a wide range of size, rating, materials and type.

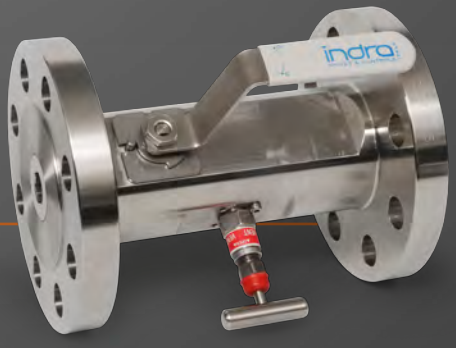
BALL VALVES
PRODUCT OVERVIEW

SBB and SB Ball Valves:

SBB (Single Block and Bleed) ball valves are compact valves that integrate a main ball valve for blocking flow and one or more bleed valves for releasing pressure or taking samples. They offer advantages such as reduced footprint, costs, and leaks, increased safety, and simplified maintenance.

These ball valves are also available without Bleed (SB) and in a wide range of size, rating, materials and type.

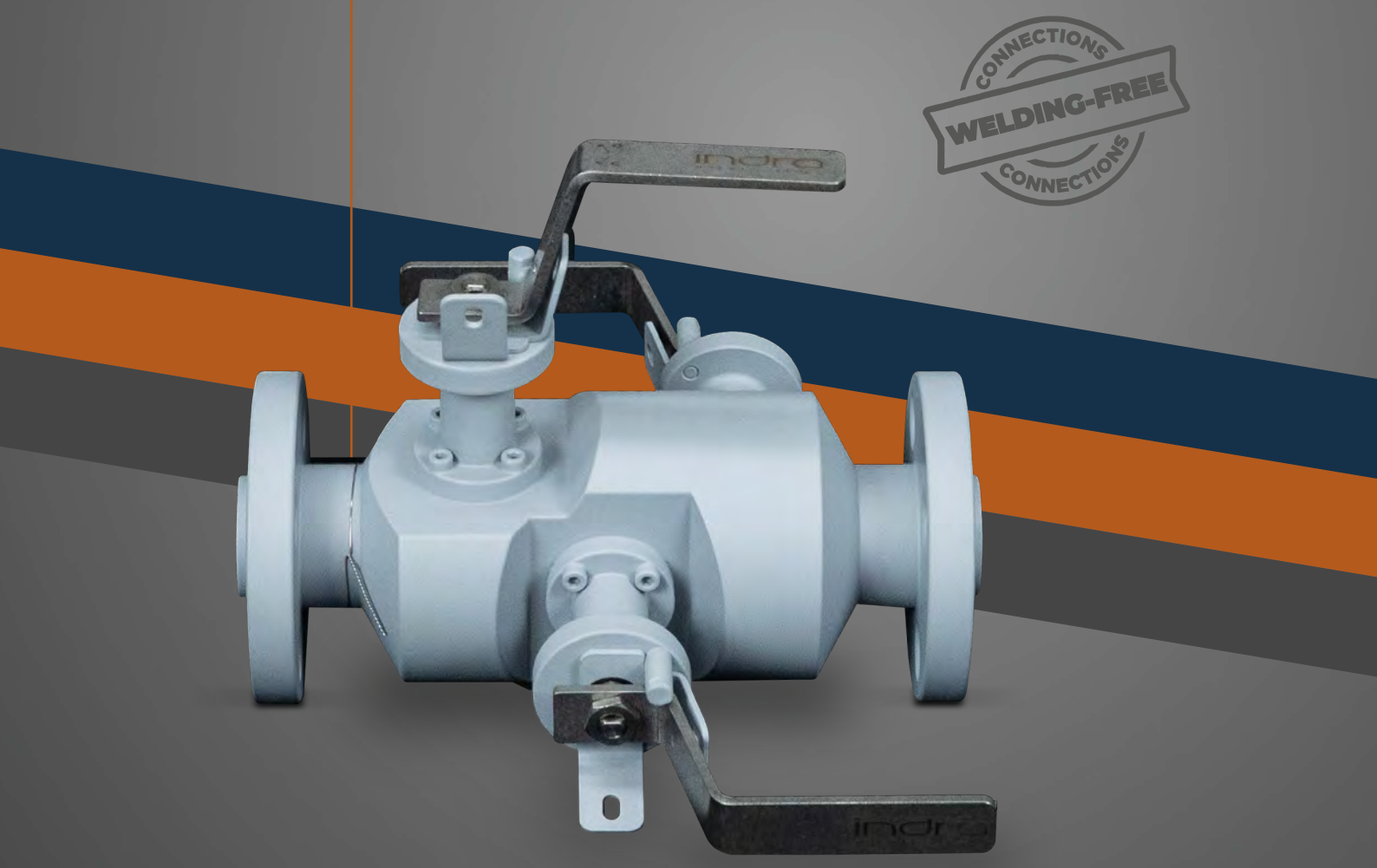




BALL VALVES
PRODUCT OVERVIEW

Integral DBB Ball Valves:

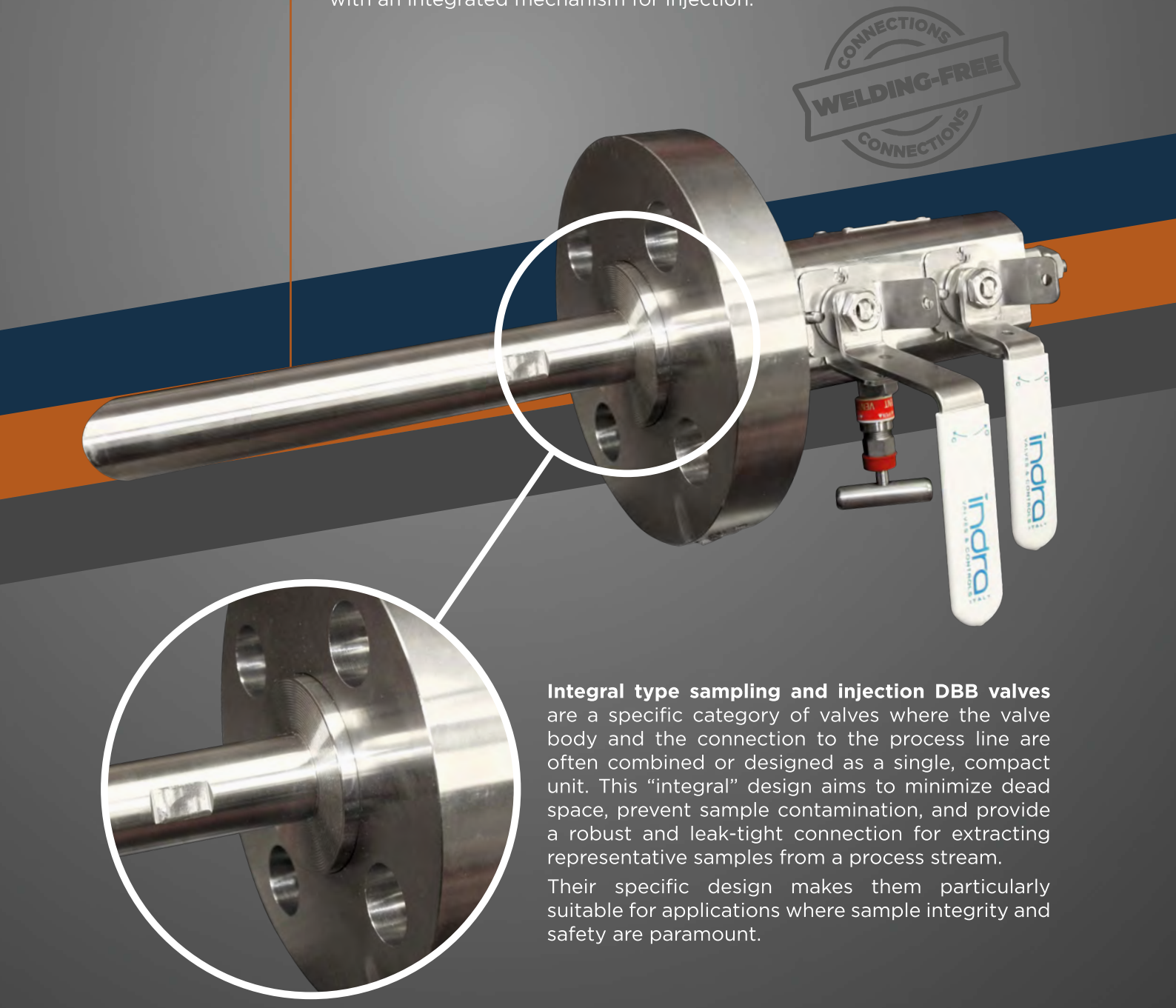
Designed to offer maximum safety, the monolithic design eliminates the flanged connections of the valve body, significantly reducing any risk of leakage to the external environment.
These Compact Ball Valves offer the same advantages of the split body design, are internally equipped with a double seal and particularly suitable for applications with space constrain like Off-Shore platforms or FPSO.



DBB Sampling and Injection - Integral Type valves:

Sampling DBB Valves are used for sampling purpose and further analysis of the process. The sampling can be performed while the process is pressurized and in operation at its normal design conditions.

Injection DBB Valves are specialized process valves designed for the safe and controlled introduction of chemicals or other media into a process stream. They combine the critical safety features of a traditional DBB valve with an integrated mechanism for injection.



Integral type sampling and injection DBB valves are a specific category of valves where the valve body and the connection to the process line are often combined or designed as a single, compact unit. This “integral” design aims to minimize dead space, prevent sample contamination, and provide a robust and leak-tight connection for extracting representative samples from a process stream.

Their specific design makes them particularly suitable for applications where sample integrity and safety are paramount.

BALL VALVES
PRODUCT OVERVIEW

API 6A Ball Valves:

API 6A ball valves are a specific type of ball valve designed and manufactured to meet the rigorous standards outlined in **API Specification 6A: "Specification for Wellhead and Christmas Tree Equipment."** This standard, published by the American Petroleum Institute (API), is a cornerstone for equipment used in the upstream oil and gas industry, particularly at the wellhead for controlling and containing high pressures and fluid flows.

Indra API 6A valves are built to handle exceptionally high pressures, ranging from **2,000 psi up to 15,000 psi,** and a wide range of temperatures. They are essential for applications where conventional valves would fail due to the intense pressure and thermal demands.

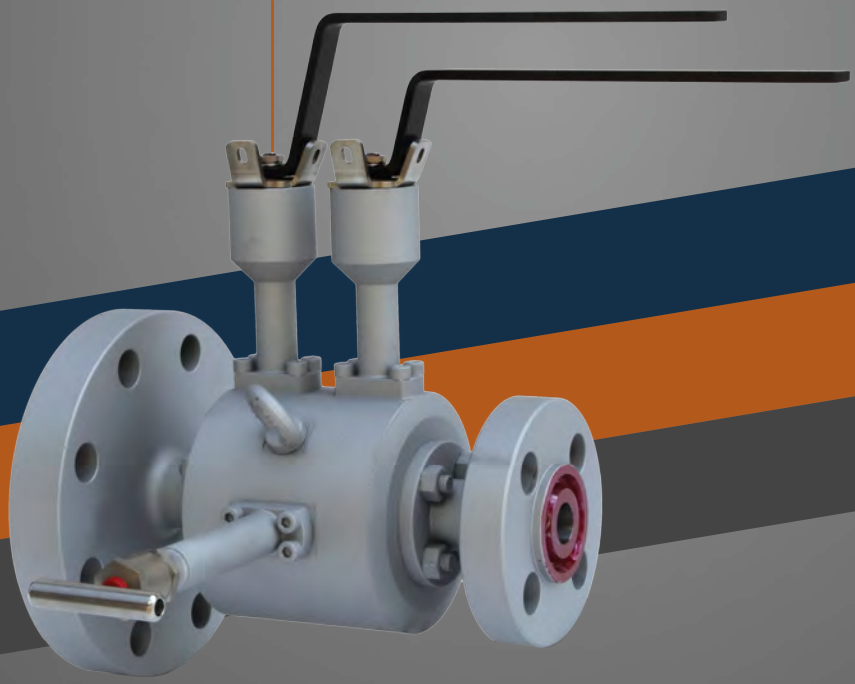
Indra API 6 A Ball Valves are available in all the design configurations as SB, SBB, DB and DBB, Floating and Trunnion types.

BALL VALVES
PRODUCT OVERVIEW

High-Temperature Ball Valves:

High-temperature ball valves are specialized industrial valves engineered to reliably control the flow of fluids (liquids, gases, or slurries) at elevated temperatures, typically exceeding **200°C (392°F)** and often reaching up to **500°C (932°F)** or even higher in extreme cases.

Unlike standard ball valves, which use soft sealing materials that degrade at high heat, high-temperature ball valves are designed with specific materials and construction features to maintain their integrity and sealing capability under thermal stress.



High-temperature versions typically feature **metal-to-metal seating.** The ball and seats are precisely machined from hardened metals, often coated with highly durable and heat-resistant materials such as T**ungsten Carbide Coating (TCC) and Chromium Carbide Coating (CCC).**

LOW TEMPERATURE &

CRYOGENICS

CRYOGENIC VALVES are specialized mechanical devices designed to control the flow of fluids at extremely low temperatures, typically below -196°C (-320,8°F). These valves are crucial components in various industries that handle liquefied gases such as:

- **Liquefied Natural Gas (LNG)**
- **Liquid Nitrogen (LIN)**
- **Liquid Oxygen (LOX)**
- **Liquid Helium**

Cryogenic valves are engineered with specific design features and materials to withstand the extreme conditions and ensure safe and efficient operation.

Indra Cryogenic Valves are available in all design configurations, Floating and Trunnion types, the side entry is one piece integral and split body.

CERTIFICATIONS

Low Temperature Isolating valves for LNG: EN ISO 28921-1 and EN ISO 28921-2
Fugitive emission: ISO 15848, API 641
Fire Safe Certification: API 607, ISO 10497, API6FA

HYDROGEN

BALL VALVES FOR HYDROGEN SERVICE are specifically engineered to safely and effectively control the flow of hydrogen gas across a wide range of pressures and temperatures. Hydrogen, with its unique properties like small molecular size and potential for embrittlement of certain materials, demands specialized valve design and material selection compared to standard ball valves used for other fluids.

Indra Hydrogen service Ball Valves are available in all design configurations, Floating and Trunnion Types.

TECHNICAL FEATURES PROVIDED BY INDRA, AS MINIMUM:

FUGITIVE EMISSION CERTIFICATION:

ISO-15848 Part 1 (type approval)
ISO -15848 Part 2 (production certification)

GAS TESTED

BALL VALVES

DATA BOX

PRODUCT	DESIGN				SIZE RANGES										RATING										TYPE										MATERIALS					CERTIFICATIONS				APPLICATIONS						PRODUCT
	SINGLE BALL - SB	DOUBLE BLOCK - DB	SINGLE BLOCK & BLEED - SBB	DOUBLE BLOCK & BLEED- DBB	1/2	3/4	1	1 1/2	2	3	4	6	8 RB	API 6A up to 2 1/16	PN 6	ANSI 150 (PN 10-16)	ANSI 300 (PN 25-40)	ANSI 600 (PN 63-100)	ANSI 900	ANSI 1500	ANSI 2500	800 LBS	6.000 PSI	API 6A up to API 15.000	THREADED	WELDING ENDS	THREADED/WELDING END	HUB	FLANGED	FLANGED/THREADED	FLOATING	TRUNNION	INTEGRAL	SAMPLING/INJECTION	SPLIT BODY	CARBON STEEL (ASTM A105N/A350 LF2)	STAINLESS STEEL SS 316	DUPLEX	SUPER DUPLEX	INCONEL 825/625/718	PED (DN >25)	FIRE SAFE	FUGITIVE EMISSION (ISO 15848-1/2)	CRN	OIL & GAS	REFINING & PETROCHEMICAL	LNG & CRYOGENIC	HYDROGEN	CCS	MARINE & NAVY	
590 - FxF																																															**590** - FxF
591 - MxF																																															**591** - MxF
593 - BWxBW																																															**593** - BWxBW
594 - PExF																																															**594** - PExF
595 - BWxF																																															**595** - BWxF
596 - SWxF																																															**596** - SWxF
597 - FLxF																																															**597** - FLxF
598 - FLxFL																																															**598** - FLxFL
599 - FxF																																															**599** - FxF
690 - FxF																																															**690** - FxF
691 - MxF																																															**691** - MxF
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698 - FLxFL																																															**698** - FLxFL
790 - FxF																																															**790** - FxF
791 - MxF																																															**791** - MxF
793 - BWxBW																																															**793** - BWxBW
794 - PExF																																															**794** - PExF
795 - BWxF																																															**795** - BWxF
796 - SWxF																																															**796** - SWxF
797 - FLxF																																															**797** - FLxF
798 - FLxFL																																															**798** - FLxFL
890 - FxF																																															**890** - FxF
891 - MxF																																															**891** - MxF

PE = PLAIN END
BW = BUTT WELD
SW = SOCKET WELD

FL = FLANGED
M = MALE THREAD
F = FEMALE THREAD

- TEMPERATURE RANGE: from -196°C up to +650°C

BALL VALVES

DATA BOX

PRODUCT	DESIGN				SIZE RANGES										RATING									
	SINGLE BALL - SB	DOUBLE BLOCK - DB	SINGLE BLOCK & BLEED - SBB	DOUBLE BLOCK & BLEED- DBB	1/2	3/4	1	1 1/2	2	3	4	6	8 RB	API 6A up to 2 1/16	PN 6	ANSI 150 (PN 10-16)	ANSI 300 (PN 25-40)	ANSI 600 (PN 63-100)	ANSI 900	ANSI 1500	ANSI 2500	800 LBS	6.000 PSI	API 6A up to API 15.000
893 - BWxBW																								
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895 - BWxF																								
896 - SWxF																								
897 - FLxF																								
898 - FLxFL																								
900 - FxF																								
901 - MxF																								
903 - BWxBW																								
904 - PExF																								
905 - BWxF																								
906 - SWxF																								
907 - FLxF																								
908 - FLxFL																								
910 - FxF																								
911 - MxF																								
913 - BWxBW																								
914 - PExF																								
915 - BWxF																								
916 - SWxF																								
917 - FLxF																								
918 - FLxFL																								

TYPE											MATERIALS					CERTIFICATIONS				APPLICATIONS						PRODUCT
THREADED	WELDING ENDS	THREADED/WELDING END	HUB	FLANGED	FLANGED/THREADED	FLOATING	TRUNNION	INTEGRAL	SAMPLING/INJECTION	SPLIT BODY	CARBON STEEL (ASTM A105N/A350 LF2)	STAINLESS STEEL SS 316	DUPLEX	SUPER DUPLEX	INCONEL 825/625/718	PED (DN >25)	FIRE SAFE	FUGITIVE EMISSION (ISO 15848-1/2)	CRN	OIL & GAS	REFINING & PETROCHEMICAL	LNG & CRYOGENIC	HYDROGEN	CCS	MARINE & NAVY	
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																										910 - FxF
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																										913 - BWxBW
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PE = PLAIN END
BW = BUTT WELD
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M = MALE THREAD
F = FEMALE THREAD

- FROM MODEL 900 TO 918 VENT WITH BALL VALVES
- TEMPERATURE RANGE: from -196°C up to +650°C

TAILOR MADE

INDRA “Tailor-made” refers to the design, engineering, and manufacturing of Ball Valves that are specifically adapted to the unique requirements of a customer or a particular application.
This process involves close collaboration between the customer and our technical team, which unfolds in the following phases:

- **In-depth Analysis of Customer Requirements**
- **Customized Design**
- **Selection of Specific Materials**
- **Special Configurations**
- **Customized Testing**
- **Integrated Automation Solutions**

Our tailor-made activity in the production of ball valves represents an advanced and customer-oriented engineering approach, which aims to provide valve solutions that not only meet but often exceed the customer expectations in terms of performance, reliability, and safety.

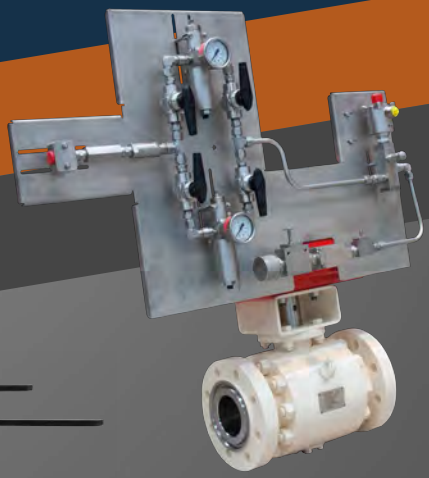
API 15.000 DBB
Hubbed Ends Valve

Twin Compact
DBB Valve

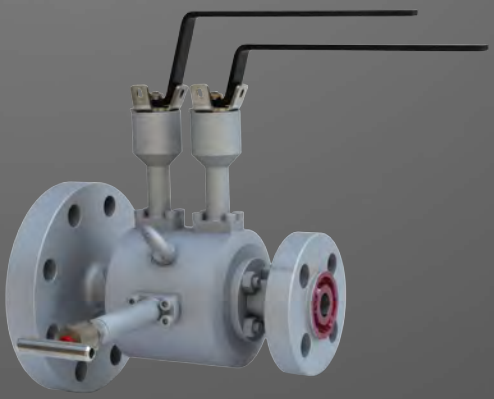
Multiway Hybrid
Manifold

Actuated Ball Valve

Integral Tubing
Connection Valve



Actuated Ball Valve



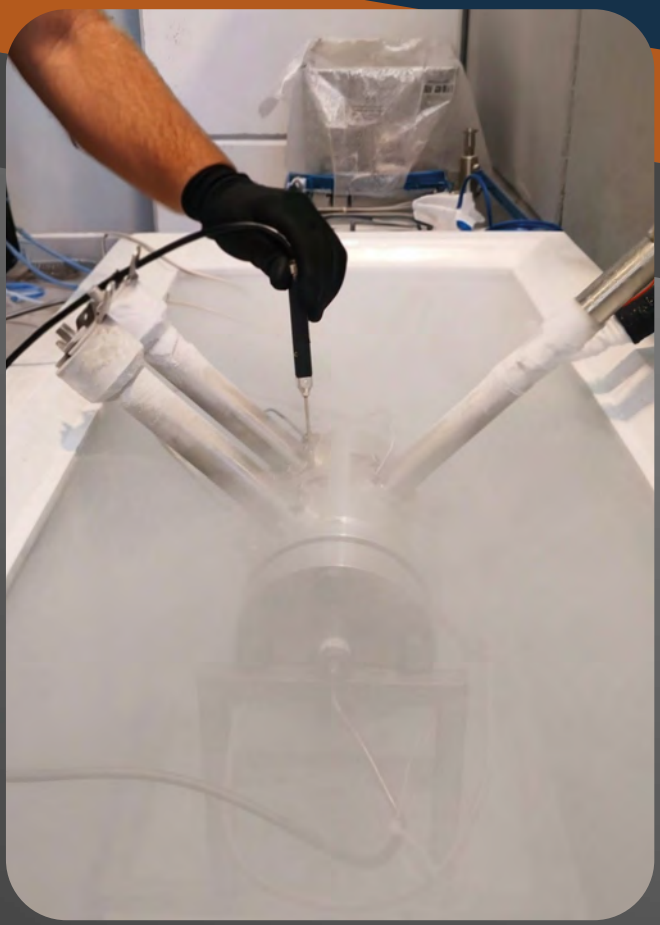
Customized Connection DBB
High Temperature Ball Valve

IN HOUSE TESTS

In-house product testing refers to the practice of Indra in conducting product validation and performance checks within internal facilities, using internal personnel and equipment.

Indra in-house product testing perform the following tests:

- Fugitive Emission
- TAT test
- PR2F Test
- Cryogenic Test
- High Temperature Test
- High Pressure Gas Test
- NDT's (PMI, UT, DP, MP and HRC tests)



Fugitive Emission Test: Production and Prototype

Climatic Chamber suitable for PR2F and TAT Tests

Cryogenic Test:
Production and Prototype

Bunker suitable for High Pressure Gas Tests:
up to 15.000 PSI

High Temperature Test:
up to 650°C

PRODUCT CERTIFICATIONS

ISO 10497–API 607–API 6FA
EN ISO 15848-1/ 15848-2
PED Directive 2014/68/EU
ATEX Directive 2014/34/EU

EAC-CU-TR 010/2011
EAC-CU-TR 012/2011
EAC-CU-TR 032/2013

CRN - Canada all provinces
IACS ed UNI EN 14141

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