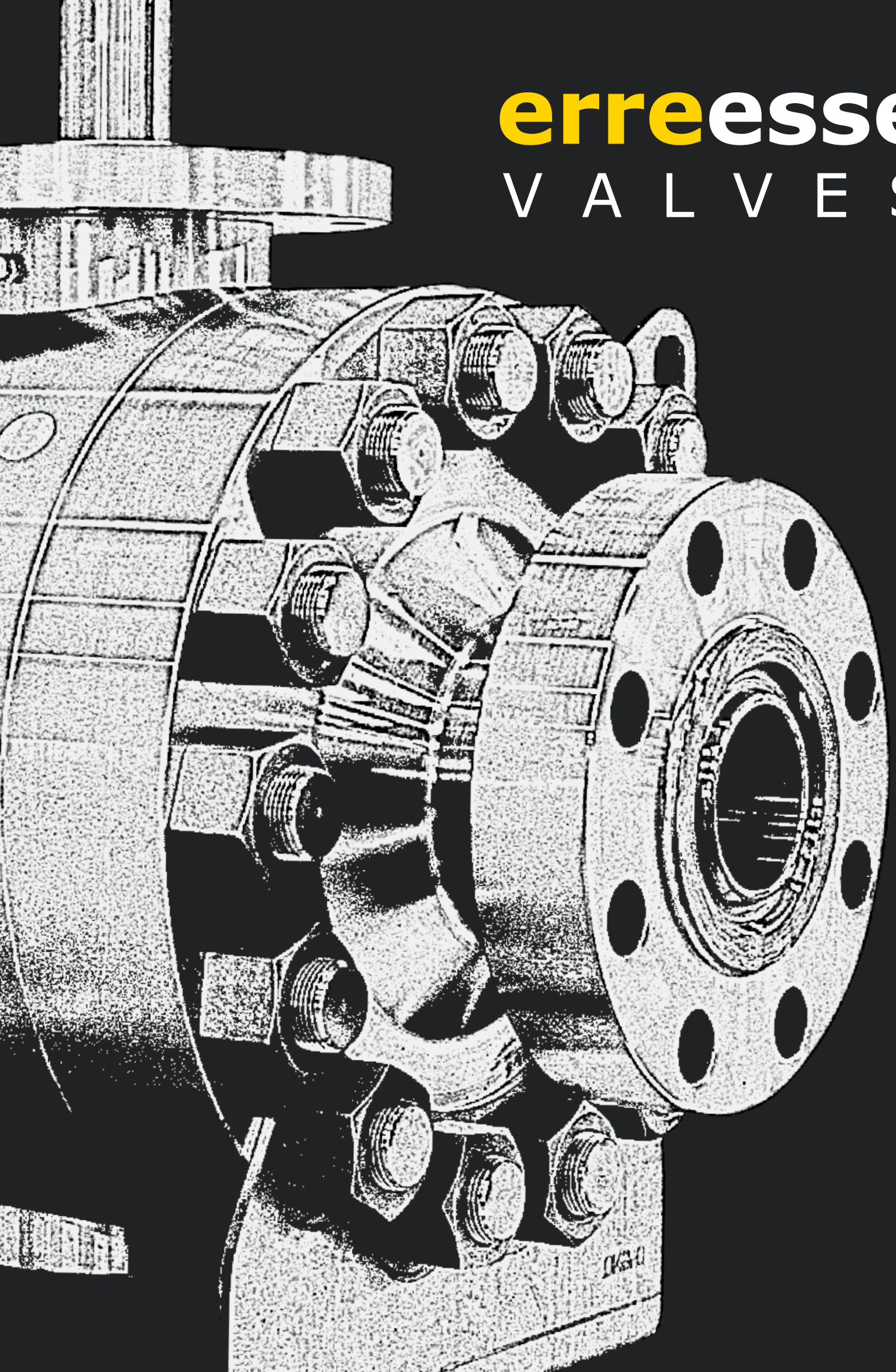


# erresse

## V A L V E S





Experienced manufacturer of Nickel Alloys, Duplex, Super Duplex, Titanium, Aluminum-Bronze, Stainless Steel & Carbon Steel High Performance Valves



ERREESSE, established in 2004, is a manufacturing company based in the Northern Italy, Grignasco, a nice town in the green Valsesia (Sesia Valley), along the enchanting Sesia River, 35 minutes far from Milano Malpensa.

Hard work, passion and smart attitude, always the best solution at the right time together with the development of new technologies, the know-how and the expertise of our team resulted in an ongoing success which makes us a reliable supplier. Our target and mission is to supply a high performance Italian product and a customized service committed to excellence and Customer Satisfaction.

ERREESSE offers a reliable combination of Made in Italy, short deliveries and API, ISO, PED & SIL accredited production range and in-house testing services which include Hyperbaric testing for subsea ball valves and Hydrostatic, Pneumatic and High Pressure Gas testing at cryogenic temperatures down to -196°C to elevated temperatures up to 660°C for topside ball valves.

**Proudly made in Italy**  
**Proudly made in Erreesse!**

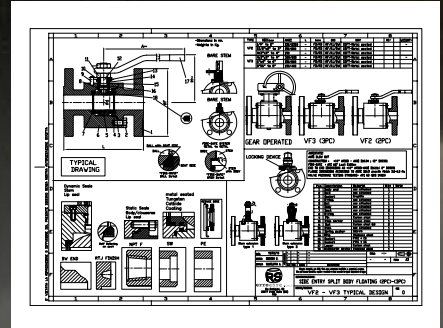


# ERREESSE Engineering & Production Team work to offer a continuous innovation and an improved valve range to meet the most critical applications

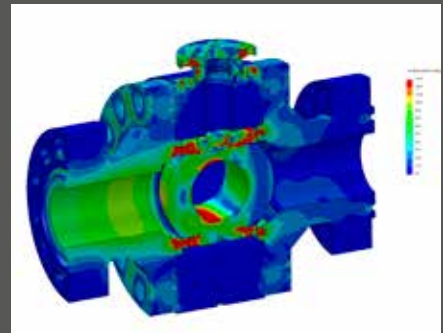
Each step of valve engineering and manufacturing can be validated using advanced software starting from a 3D model to **Finite Element Analysis** of loads, tensions and deformations and final **Stress** tests, according to the applicable International Standards. Such investigations allow daily check on different design conditions calculation sheets and continuous improvements in valves performance.

Our manufacturing program includes nickel alloys, duplex, super duplex, titanium, aluminum-bronze, 6-molibdenum, stainless steel and carbon steel metal and soft seated **On/Off, Control & Transfer Ball Valves in Top entry and Side entry constructions, with Split, Fully Welded, Multiple way, Modular or Integral dual ball (DBB) body** engineered to withstand and exceed the high risk industry applications in the Oil & Gas, Petrochemical, Chemical, Marine, LNG Onshore & Offshore Industry, on topside and subsea installations worldwide.

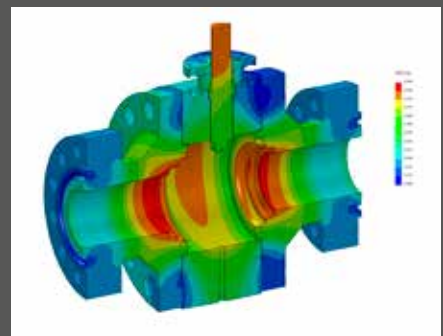
Specific models are also available to suit corrosive and severe abrasive services in sandy, slurry, fouling, scaling and solidifying conditions for Mining and Drilling Industry.



Example of typical drawing



Example of Finite Element Analysis Stress Analysis



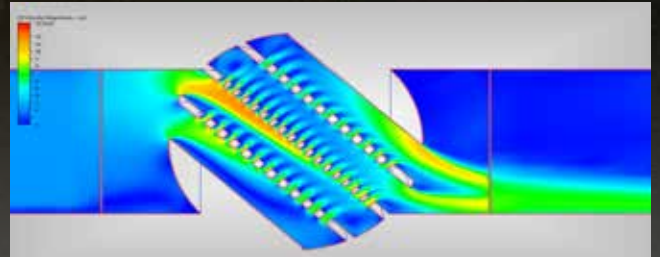
Example of Finite Element Analysis Deformation Analysis



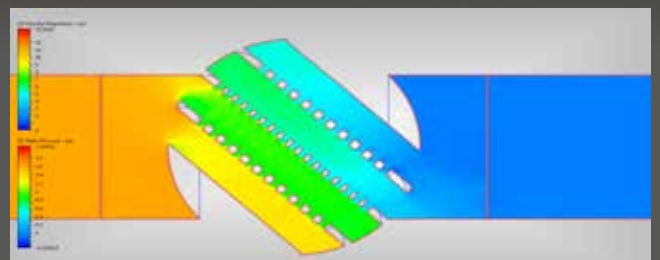
Example of 3D Top Entry model



Example of Control Ball Valves  
(with trim)

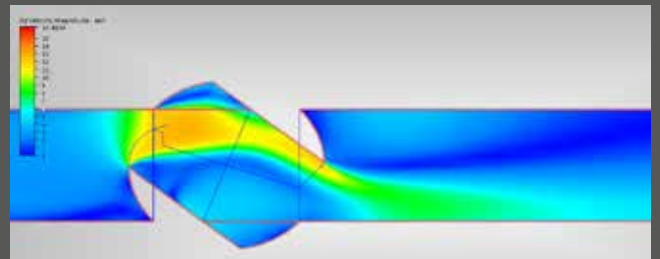


CFD Velocity profile

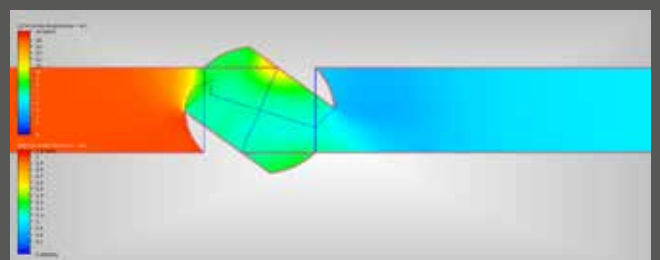


CFD Pressure profile

Example of Control Ball Valves  
(without trim)



Velocity profile



Pressure profile



Example of 3D ball & trim





A ball valve is a device with a spherical obturator engineered to regulate the flow of a fluid by opening, closing, transferring or just obstructing the port through it



Ball valves have a straight configuration and are suitable for many process services in the Oil & Gas, LNG, Chemical, Petrochemical, Power Generation, Marine & Offshore Industry, starting from drilling, mining and extraction to refining, petrochemistry, final transportation and pipeline distribution.

ERRESSE production range includes Trunnion ball valves, Floating ball valves and Needle monoflange valves.

#### **Trunnion Ball Valves**

---

#### **Floating Ball Valves**

---

#### **Needle Valves**

---



## Trunnion Ball Valves

Trunnion ball valves have the obturator bounded by trunnions which do not allow axial displacements of the ball itself in the flow direction; line pressure compresses the seat onto the ball, the contact between surfaces generates the valve sealing. Trunnion standard construction ensures automatic cavity relief in case of overpressure in the body cavity; these valves can be selected for a wide range of applications with no specific limits to sizes and pressures.

ERREESSE production range includes control valves with V-port and Cage Ball design which are designed according to IEC 534/ISA S75 and meet API 6D, API 6A and other International valve design Standards.



### Side Entry

- Split body
- Fully welded body
- Modular body (DBB)
- Control valve



### Top Entry

- Bolted bonnet
- Modular body (DBB)
- Control valve
- Rising stem non-contact
- Eccentric ball non-contact



### Multiple Way

- 3-way bolted bonnet
- 4-way bolted bonnet
- 6-way bolted bonnet



## Standard Features

Construction	One, two or three piece
Port	Reduced bore, full bore or fully piggable
Stem retention	Anti blow-out stem
Leakage rate	ISO 5208
Antistatic device	Included, the ball valve design includes an electric conductive connection between the internal parts of the ball valve and the body, providing the anti-static function.
Pressure relief	Automatic cavity relief to prevent overpressure in body cavity (self-relieving seats)
Sealing	Bi-directional, Double block & bleed (DBB) with sealing in both directions (DIB-1&2 upon request) Metal seated with Tungsten, Chrome Carbide or STELLITE coatings Primary metal secondary soft (PMSS) with differential hardness between the ball and seat to prevent galling of the substrate Soft seated with thermoplastic polymers (Nylon, PEEK, PCTFE), special polymers upon request Elastomers FKM, HNBR, EPDM O-Rings, special elastomers upon request
Drain	Drilled and threaded connections for all sizes, welded upon request
Vent	Drilled and threaded vent connections for sizes $\geq$ DN150 (6") < DN150 upon request, welded upon request
Stem grease injectors	Included for all sizes
Seat grease injectors	Included for sizes $\geq$ DN150 (6"), < DN150 upon request
Lifting points	Included for sizes $\geq$ DN150 (6") or on valves of 250 kg min
Support feet	Included for sizes $\geq$ DN150 (6") or on valves of 250 kg min
Stem extension	Upon request
Valve operation	Lever, Gear box or Actuator with position indicator and locking device
Material testing	Pressure containing & controlling parts to EN 10204 3.1 Materials in Sour Service according to NACE MR0175, MR0103, ISO 15156 Non-destructive testing (NDT) to API 6D, ASME B16.34
Valve testing	Hydrostatic & pneumatic testing to API 6D, ASME B16.34, ISO 5208, API 6A, ISO 10423 (others upon request), Hyperbaric testing according to API 6DSS upon request

## Technical Data

Design	API 6D, API 6DSS, API 6A, ASME B16.34, ISO 14313, ISO 10423, ISO 17292
Design pressure	ASME B16.34, EN 1092-1, ISO 17292
Body wall thickness	ASME B16.34, ASME VIII Div. I, ISO 17292
Face to Face	API 6D, ASME B16.10 Long pattern
Temperature range	-196° to 1100°C (-320,8°F to 2012°F)
Pressures range	PN20 (ANSI 150) to PN420 (ANSI 2500)
Size range	DN15 (1/2") to DN1800 (72")
End connections	ASME B16.5 $\leq$ DN600 (24") Flanged RF,FF,RTJ MSS-SP-44 = DN550 (22") Flanged RF,FF,RTJ ASME B16.47 A $\geq$ DN650 (26") Flanged RF,FF,RTJ ASME B16.25 Butt-Weld BW Clump (HUB), EN1092-1, Norsok L-005, Gost 12815-80

## Approvals

Safety Integrity Level	SIL 3
Fire Safe	API 607, API 6FA, BS 6755, ISO 10497-5
Area Classification	ATEX 94/9/EC
Pressure Equipment Directive	PED 97/23/EC
Fugitive Emission	ISO 15848/1
Construction	API 6D, API 6DSS

## Valve size range

Standard	2.5	6	10	16	20	25	40	50	63	64	100	138	150	160	207	250	320	345	400	420	690	775	1035
API 60 / API 6DSS	-	-	-	-	ASME 150	-	-	ASME 300	-	ASME 400	ASME 600	-	ASME 900	-	-	ASME 1500	-	-	-	ASME 2500	-	-	-
ASME B16.34	-	-	-	-	ASME 150	-	-	ASME 300	-	-	ASME 600	-	ASME 900	-	-	ASME 1500	-	-	-	ASME 2500	-	ASME 4500	-
API 6A / API 17D	-	-	-	-	-	-	-	-	-	-	-	API 2000	-	-	API 3000	-	-	API 5000	-	-	API 10000	-	API 15000
Size (inch)																							
1/2"																							
3/4"																							
1"																							
1 1/2"																							
2"																							
3"																							
4"																							
6"																							
8"																							
10"																							
12"																							
14"																							
16"																							
18"																							
20"																							
22"																							
24"																							
26"																							
28"																							
30"																							
32"																							
36"																							
38"																							
40"																							
42"																							
44"																							
46"																							
48"																							
50"																							
52"																							
54"																							
56"																							
60"																							
62"																							
72"																							



## Floating Ball Valves

Floating ball valves have the obturator free from axial constraints supported between two soft inserts; under pressure the ball compresses the downstream soft insert to allow sealing; these valves are recommended for use in clean services with limited sizes and rating. ERREESSE production range offers a wide selection of models and constructions suitable for use in chemical, hydrocarbon and critical process industry applications.



### Side Entry & Top Entry

- Threaded body
- Split body
- Seal welded body
- Modular body (DBB)



## Needle Valves

Needle valves have no ball and are mainly used for flow metering and damping pressure fluctuations as instrument valves. These valves are designed to replace conventional multi-valve installations into a single manifold reducing leaking points and allowing easy and quick installations in vertical or either in horizontal positions with considerable cost savings.

### Monoflange

- DBB Mono OS&Y Needle Anti Tamper



## Standard Features

Construction	One, two or Three piece	
Port	Reduced bore, full bore or fully piggable	
Stem retention	Anti blow-out stem	
Leakage rate	ISO 5208	
Antistatic device	Included, the ball valve design includes an electric conductive connection between the internal parts of the ball valve and the body, providing the anti-static function.	
Pressure relief	Not foreseen on valve models ≤ ANSI 600 soft seated	Self-relieving seats on metal seated valves or upon request
Sealing	Bi-directional Metal seated with Tungsten or Chrome Carbide coatings Soft seated with thermoplastic polymers (RPTFE, Nylon, PEEK, PCTFE), special polymers upon request Elastomers FKM, HNBR, EPDM O-Rings, special elastomers upon request	
Drain	Upon request	
Vent	Upon request	
Stem grease injectors	Upon request	
Seat grease injectors	Upon request	
Lifting points	Upon request	
Support feet	Upon request	
Stem extension	Upon request	
Valve operation	Lever, Gear box or Actuator with position indicator and locking device	
Material testing	Pressure containing & controlling parts to EN 10204 3.1 Materials in Sour Service according to NACE MR0175, MR0103, ISO 15156 Non-destructive testing (NDT) to API 6D, ASME B16.34	
Valve testing	Hydrostatic & pneumatic testing to API 6D, ASME B16.34, ISO 5208 (other upon request)	

## Technical Data

Design	API 6D, API 6DSS, ASME B16.34, ISO 14313, ISO 17292
Design pressure	ASME B16.34, EN 1092-1, ISO 17292
Body wall thickness	ASME B16.34, ASME VIII Div. I, ISO 17292
Face to Face	API 6D, ASME B16.10 Long pattern
Temperature range	-196° to 1100°C (-320,8°F to 2012°F)
Pressures range	PN20 (ANSI 150) to PN420 (ANSI 2500)
Size range	DN15 (1/2") to DN150 (6")
End connections	ASME B16.5 Flanged RF,FF,RTJ ASME B16.25 Butt-Weld BW ASME B16.11 Socket-Weld SW ASME B36.10 Plain-End PE ASME B1.20.1 Threaded NPT (F/M)

## Approvals

Safety Integrity Level	SIL 3
Fire Safe	API 607, API 6FA, BS 6755, ISO 10497-5
Area Classification	ATEX 94/9/EC
Pressure Equipment Directive	PED 97/23/EC
Fugitive Emission	ISO 15848/1
Construction	API 6D, API 6DSS

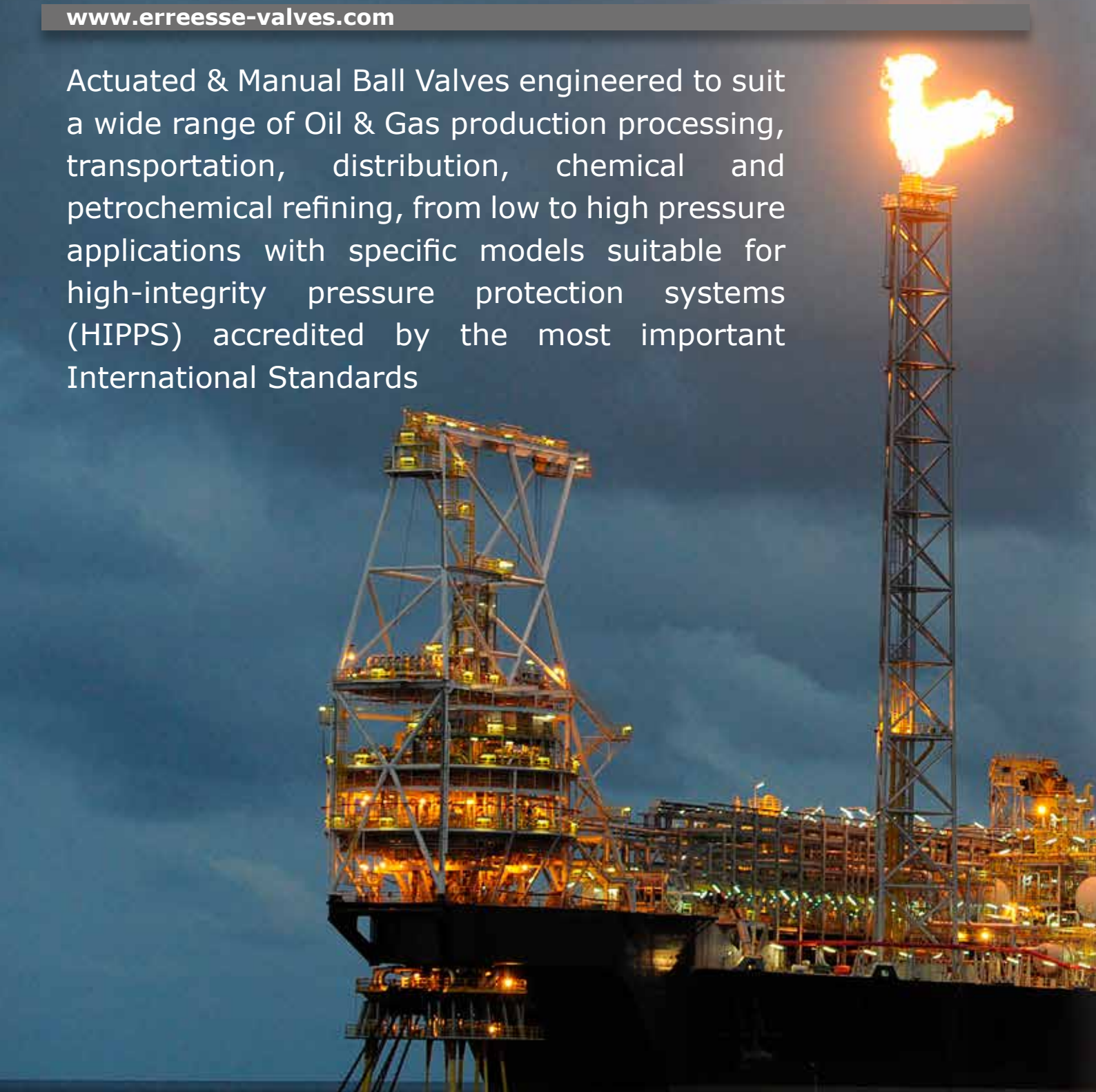
## Valve size range

	Bar (g)	2.5	6	10	16	20	25	40	50	63	84	100	138	150	160	207	250	320	345	400	420	690	775	1035
API 6D / API 6DSS		-	-	-	-	ASME 150	-	-	ASME 300	-	ASME 400	ASME 600	-	ASME 900	-	-	ASME 1500	-	-	-	ASME 2500	-	-	-
ASME B16.34		-	-	-	-	ASME 150	-	-	ASME 300	-	-	ASME 600	-	ASME 900	-	-	ASME 1500	-	-	-	ASME 2500	-	ASME 4500	-
API 6A / API 17D		-	-	-	-	-	-	-	-	-	-	-	API 2000	-	-	API 3000	-	-	API 5000	-	-	API 10000	-	API 15000
DIN		PN2,5	PN6	PN10	PN16	PN20	PN25	PN40	PN50	PN63	PN84	PN100	-	PN150	PN160	-	PN250	PN320	-	PN400	PN420	-	-	-
Size (inch)																								
1/2"		Available																						
3/4"																								
1"																								
1.1/2"																								
2"		Available																						
3"																								
4"																								
6"																								
8"		reduced bore only										see trimon mounted construction												

\*CLASS 800 RANGE (136 BAR) AVAILABLE UPON REQUEST



Actuated & Manual Ball Valves engineered to suit a wide range of Oil & Gas production processing, transportation, distribution, chemical and petrochemical refining, from low to high pressure applications with specific models suitable for high-integrity pressure protection systems (HIPPS) accredited by the most important International Standards



# erresse

## V A L V E S

### Split body valves

On/Off valves are engineered to regulate the flow by opening and closing the port, recommended on tight shut-off gas and liquid services



Control valves are engineered for those services where continuous pressure and flow rate regulation are required



ERRESSE Control Valves are mainly suitable for liquid, steam and gas applications in standard and severe services. Optimum cavitation, noise, choke and flashing control with very high capacity and high FL values in throttling service, low recovery trim with low cavitation potential, low vibrations and Self-Cleaning, Multipath and Low noise features.





**Compact design**



**Floating constructions**



**Special alloys & constructions  
for high risk industry applications**



**Primary Isolation with  
single block constructions**



**Valves for chemical injection with check valve and quill**

## Modular, Integral Block and Bleed Valves and DBB, two valves in one

High performance valves engineered and manufactured to provide a compact and reliable alternative to multiple instrument valve systems, reducing leak paths and saving installation and maintenance costs



ERREESSE Modular valves, Integral Block and Bleed Valves (EEMUA182) and Double block and bleed assemblies (DBB) are reliable solutions for isolation systems, pressure level and flow measurements, instrument drain for tanks and pipes, chemical injection and sampling systems in low and high pressures widely used where cost, weight and space saving are valve selecting factors, maintaining high quality performance expectations: two ball valves, independently operable, in a single bolted body, with an intermediate needle valve for venting service. The modular design is an approach that subdivides a system into smaller parts (modules) that can be independently operated and then used to drive multiple functionalities.







## Top entry valves, in-line maintenance solution

Special valve constructions to allow easy on-site maintenance and disassembly with quick access to ball and seats for inspection and repair



ERREESSE Top Entry valves are suitable for compression and re-injection systems, transmission pipelines, metering skids, Pig-launchers and receiving stations, Off-Shore and On-Shore platforms, gas storage and separations systems suitable for a wide range of high risk industry applications from severe abrasive and slurry to high temperature and cryogenic services, from subsea and LNG plants to topside installations.

Top Entry non-contact valves (Rising stem and Eccentric ball type) are suitable for gas processing plants where frequent cycling and tight shut-off are required.

ERREESSE Top Entry valves can be welded directly onto the pipeline or to the manifold assembly.

## Fully welded valves

Fully welded constructions are a preferable solution when no maintenance is required on above ground or below ground buried pipeline installations





## Industry applications

The application and the process fluid characteristics are the main factors in selecting a valve type and valve construction materials: clean fluids generally allow a wide range of valves and materials, while for dirty fluids and high risk industry applications the choice is limited to few valve types and selected materials. ERREESSE production range offers a wide selection of valves suitable for Topping and Subsea installations



### High Temperature

**121° to 1100°C (249,8° to 2012°F)**

Heating to boiling points, catalytic and hydro-treatments are some of the refining processes necessary to separate crude oil into storable fractions like marketable oils and condensate; most of these processes take part at high temperatures, from 121°C to 1100°C (249,8°C to 2012°F). ERREESSE production range offers valves engineered to withstand and exceed high temperature applications with specific constructions and duly selected materials.



### Low Temperature

**0° to -50°C (32° to -58°F)**

When Natural Gas has to be separated into fractions or treated to protect equipment from contaminants (acids), first stage of sweetening and acid removal take part at 0° to -50°C (32° to -58°F) before gas liquefaction stage; propane or a mixture with other gases in small quantities is the cooling element.



### Cryogenic

**-51° to -196°C (-59,8° to -320,8°F)**

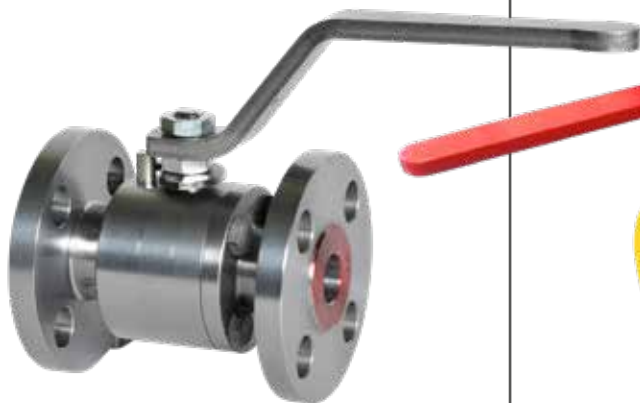
When Natural Gas has to be separated into fractions or treated to protect equipment from contaminants (acids), sweetening and acid removal at -51° to -196°C (-59,8° to -320,8°F), are the final stage to do that, starting from liquefaction to sub-cooling stages, with pure or mixed refrigerants (methane, nitrogen) as cooling elements.



## Utility

### 0° to 120°C (32° to 248°F)

Instrument air, diesel oil, lube oil, demineralized water, steam, nitrogen and other produced gas are considered as clean services for utility applications: low pressure applications, on topside above ground and below ground installations, from 0° to 120°C (32° to 248°F), carrying standard non corrosive and clean fluids, free from solid particles or aggressive contaminants, providing just a service to main processes.



## Corrosive & Dirty

### Aggressive and solid contaminants

Corrosion is a gradual loss of material by chemical or physical reaction with the process fluid; depending on concentration, temperature and pressure drop the exposed to fluid surfaces can be seriously damaged impairing the performance of the valve, unless the correct valve type and materials are selected.

ERRESSE valve ranges includes special models suitable for severe abrasive, slurry, scaling, fouling and solidifying services.



## High Pressure

Design pressure from 20 bar(g) to 1035 bar(g), in combination with other service conditions in hydrocarbon processes, refining and petrochemistry, determines ball valve construction and material selection.





## Subsea Ball Valves

Valves engineered to meet the most critical and hostile conditions in the subsea environment and underwater installations





ERRESSE Subsea ball valves have been designed to meet the most critical and hostile conditions in the subsea environment and underwater installations at extreme pressures and high levels concentrations of H<sub>2</sub>S, CO<sub>2</sub> or solid particles.

These valves are engineered to meet API 6DSS & API 17D Standards for Subsea installations down to 3000m (10000ft) water depth; they can be manufactured in different constructions, with bolted body Side entry or Top entry and Fully welded body, to suit the most demanding Customer specifications. ERRESSE Subsea ball valves can be supplied complete with subsea gearbox or actuator and customized ROV couplings (horizontal or vertical). In-house hyperbaric testing can be performed upon request.





## Certifications & Quality Assurance.

All activities are conducted to meet the requirements of ISO 9001 as fundamental of our Quality Management System

ERREESSE ball valves are designed to meet the Fire Safe requirements according to API 607, API6FA and ISO 10497 and Fugitive Emission according to ISO 15848/1. Qualification tests covering the whole production range have been witnessed by independent inspectors.

- **ISO 45001 : 2018** Occupational Health and Safety Management Systems
- **ISO 14001 : 2015** Environmental Management System
- **ISO 9001 : 2015** for design, production and after sales of ball valves
- Pressure Equipment Directive Module H PED 2014/68/UE
- Safety Integrity Level SIL 3
- AtEx 2014/34/EU Directive for equipment and protective systems intended for use in potentially explosive atmosphere
- Specification for Pipeline Valves API 6D API 6A & Specification for Subsea Pipeline Valves API 6DSS
- TR CU 032 (Gost-R)

Each valve is identified by a Serial Number with relevant **EN 10204 3.1** material certificate for pressure containing and retaining parts and pressure test report.

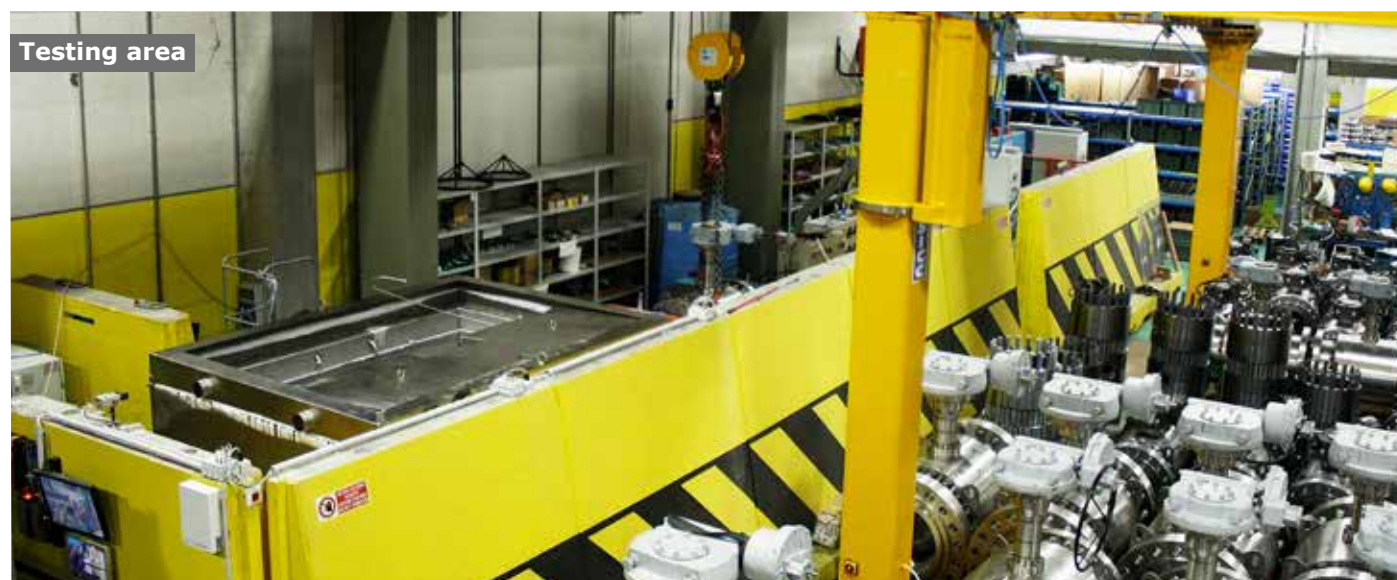
A Third Part inspector can witness every production activity, starting from raw material production to final test and issue a certificate in accordance with **EN 10204 3.2**.





# ERREESSE is a reliable combination of Made in Italy, short deliveries and in-house testing services

All inspections and tests are performed by qualified and experienced personnel in line with project specifications and data sheets in order to satisfy our Customers and their Commitments' expectations.



## Pressure & Functional Testing

The following tests are performed according to API 6D, API 6DSS, API 6A, API 17D, API 598, EN12266-1 or to Customer specific requirements:

- Hydrostatic testing
- Low pressure gas seat testing
- High pressure gas testing
- Cryogenic gas testing down to  $-196^{\circ}\text{C}$  ( $-320,8^{\circ}\text{F}$ )
- High temperature testing up to  $660^{\circ}\text{C}$  ( $1220^{\circ}\text{F}$ )
- Fugitive emission gas testing
- Antistatic testing
- Torque testing
- Cavity relief testing
- Double Block & Bleed (DBB) testing
- Double Isolation & Bleed (DIB-1, DIB-2) testing
- Hyperbaric qualification testing for subsea valves



## Non-Destructive Testing (NDT)



Hardness test

The following tests can be performed by 2nd Level EN473-ISO9712/SN-TC-1A Qualified personnel:

- **VT** (Visual testing)
- **UT** (Ultrasonic testing)
- **PT** (Penetrant testing)
- **MT** (Magnetic particle testing by Joke)
- **LT** (Leak testing)
- **PMI** (Positive Material Identification)
- **Hardness test**
- **Ferrite test**



Ferrite test



Ultrasonic testing



Fugitive Emission testing



Magnetic testing



Positive Material Identification



Penetrant testing

## Destructive Testing

Thanks to a strong cooperation with Chemical Laboratories the following tests can be performed according to Customer's and project specifications:

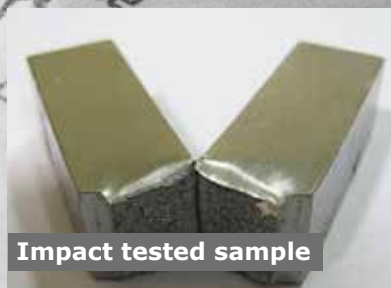
- **Mechanical and Impact** test down to  $-196^{\circ}\text{C}$
- **Chemical analysis check**
- **Corrosion tests**
- **Micro examinations**
- **Ferrite check**
- **Hydrogen-Inducted Cracking test (HIC)**
- **Sulphide Stress Corrosion Cracking (SSCC)**



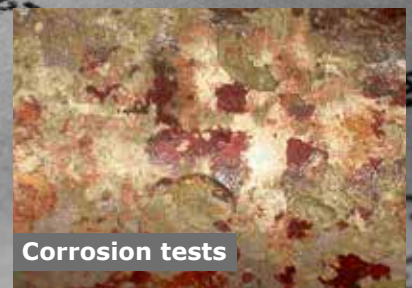
HIC & SSCC



Mechanical testing



Impact tested sample



Corrosion tests



## Cv calculations

<b>Cv Size</b>	<b>ASME 150</b>	<b>ASME 300</b>	<b>ASME 600</b>	<b>ASME 900</b>	<b>ASME 1500</b>	<b>ASME 2500</b>
1/2"	19	17	15	14	14	12
3/4"	42	37	33	30	30	27
1"	82	77	66	61	53	48
1,1/2"	218	207	184	164	164	146
2"	420	409	393	324	324	228
3"	1230	1108	1001	898	860	534
4"	2457	2129	1835	1784	1676	1120
6"	5294	5163	4539	4345	3807	2513
8"	10456	9613	8868	8457	7525	5311
10"	16317	15821	14362	14160	11141	8335
12"	26087	25311	22257	20741	17239	12328
14"	30384	28829	27632	25935	20375	-
16"	42374	40407	37157	34062	27703	-
18"	52499	51043	48562	42615	35155	-
20"	61094	60010	58682	55170	45506	-
24"	93248	93566	92523	86066	70272	-
26"	122964	117871	109297	95898	-	-
28"	131929	126883	118277	112620	-	-
32"	160361	180619	167221	-	-	-
36"	232773	218665	199104	-	-	-
3/4" x 1/2"	11	11	10	9	9	9
1" x 3/4"	21	20	19	19	18	18
1 1/2" x 1"	46	44	41	40	38	38
2" x 1 1/2"	144	142	131	128	126	91
3" x 2"	193	192	186	185	183	183
4" x 3"	565	521	458	438	424	415
6" x 4"	811	811	757	748	713	695
8" x 6"	2198	2108	2072	2045	2005	1965
10" x 6"	1850	1816	1804	-	-	-
10" x 8"	4576	4361	4382	4577	4302	4258
12" x 8"	3350	3138	3007	2978	-	-
12" x 10"	6778	6666	6228	7186	8437	-
14" x 12"	-	-	13358	13016	11383	-
14" x 10"	5823	-	-	-	-	-
16" x 14"	14354	-	15251	-	-	-
16" x 12"	-	-	-	-	8938	-
18" x 14"	9356	9099	8999	-	-	-
20" x 18"	-	36532	-	-	-	-
20" x 16"	17866	-	16331	15090	-	-
24" x 20"	-	27746	27223	25400	-	-
28" x 24"	-	-	-	26119	-	-

<b>Kv Size</b>	<b>ASME 150</b>	<b>ASME 300</b>	<b>ASME 600</b>	<b>ASME 900</b>	<b>ASME 1500</b>	<b>ASME 2500</b>
1/2"	17	15	13	12	12	11
3/4"	36	32	28	26	26	24
1"	71	66	57	53	46	41
1,1/2"	189	179	159	142	142	126
2"	363	353	340	281	281	198
3"	1064	959	866	777	744	462
4"	2126	1842	1588	1544	1450	969
6"	4579	4466	3926	3759	3293	2173
8"	9045	8316	7671	7316	6510	4594
10"	14115	13686	12424	12249	9338	7210
12"	22567	21895	19254	17942	14912	10664
14"	26284	24939	23903	22435	17625	-
16"	36656	34954	32143	29466	23964	-
18"	45415	44155	42008	36864	30411	-
20"	52850	51911	50763	47725	39365	-
24"	80665	80940	80124	74452	60789	-
26"	106371	101965	94548	82957	-	-
28"	114126	109760	102316	97422	-	-
32"	164672	156245	144654	-	-	-
36"	201361	189156	172235	-	-	-
3/4" x 1/2"	10	9	9	8	8	8
1" x 3/4"	18	18	16	16	16	16
1 1/2" x 1"	40	38	36	35	32	33
2" x 1 1/2"	124	123	113	111	109	78
3" x 2"	167	166	161	160	158	158
4" x 3"	489	451	396	379	367	359
6" x 4"	702	701	655	647	617	602
8" x 6"	1901	1823	1793	1769	1734	1700
10" x 6"	1600	1571	1560	-	-	-
10" x 8"	3959	3772	3791	3960	3722	3683
12" x 8"	2898	2714	2601	2576	-	-
12" x 10"	5863	5767	5474	6217	7299	-
14" x 12"	-	-	11555	11260	9847	-
14" x 10"	5037	-	-	-	-	-
16" x 14"	12417	-	13193	-	-	-
16" x 12"	-	-	-	-	7732	-
18" x 14"	8093	7871	7785	-	-	-
20" x 18"	-	31602	-	-	-	-
20" x 16"	15455	-	14127	13054	-	-
24" x 20"	-	24002	23549	21972	-	-
28" x 24"	-	-	-	22595	-	-



## Normative References

ERREESSE Valves can be engineered, designed, manufactured and tested according to the following International Standards:

**American Petroleum Institute (API):**

API 6A, API 6D, API 17D, API 6DSS, API 6FA, API 607, API 608, API 598

**American Society of Mechanical Engineers (ASME):**

ASME B1.20.1, ASME B16.5, ASME B16.10, ASME B16.11, ASME B16.25, ASME B16.34, ASME B16.47, ASME B31.3, ASME B31.4, ASME B31.8, ASME IX, ASME VIII (divisions 1 & 2)

**Manufacturers Standardization Society of the Valve and Fittings Industry, Inc. (MSS):**

MSS SP25, MSS SP43, MSS SP44, MSS SP45, MSS SP53, MSS SP54, MSS SP55, MSS SP58, MSS SP6, MSS SP61, MSS SP72, MSS SP82, MSS SP9, MSS SP93, MSS SP95

**British Standards Institute (BS):**

BS 1503, BS 1504, BS 1560, BS 2080, BS 4504, BS 5146, BS 5351, BS 6364, BS 6755, BS EN558, BS EN1503, BS EN1626, BS EN1983, BS EN5211, BS EN12266, BS EN12516, BS EN12567, BE EN12570, BE EN12627, BE EN12982

**International Organization for Standardization (ISO):**

ISO 5208, ISO 10423, ISO 10497, ISO 12490, ISO 13623, ISO 13628, ISO 14313, ISO 14723, ISO 15156-3, ISO 15590, ISO 15607, ISO 15609, ISO 15614-7, ISO 15848 (parts 1 & 2), ISO 17292

**American Society for Testing and Materials (ASTM):**

ASTM E94, ASTM E142, ASTM E165, ASTM E280, ASTM E446, ASTM 562, ASTM E709, ASTM G48

**National Association of Corrosion Engineers-Corrosion Resistant (NACE):**

NACE MR0175, NACE MR0103, NACE TM0187, NACE TM0284



Engineering



Standardization



Industry Applications

## ERREESSE Valves can be manufactured in the following materials:

### Carbon steel

ASTM A105, A105N

ASTM A216 WCB, WCC

ASTM A217 WC6, WC9, CW6, C12

ASTM A350 LF2, LF3, LF6

ASTM A352 LCB, LCC, LC3

ASTM A694 F52, F60, F65

### Stainless steel, Duplex, Super Duplex

ASTM A182 F11, F20, F22, F304/F304L, F316/F316L, F316H, F316Ti, F321, F347, F347H, F44

ASTM A182 F5, F51, F52, F53, F55

ASTM A182 F60, F65, F6A, F6B, F6NM F9, F91, FXM19

ASTM A276/A479 304/304L, 316/316L, 316H, 316Ti, 321, 347, 347H, 904L

ASTM A351 CK3MCuN, CA15, CF8, CF3, CF8M, CF3M, CG8M, CF8C

ASTM A479 S31254, S31803, S20910, S32750, S32760, S41000, S41400, S41300, S17400

ASTM A479 S31803, S32750, S32760, S20910, S41000, S41400, S41300, S17400

ASTM A739 B11, B22

### Nickel Alloys

ASTM N08825, N06625, N04400, N08020, N07750, N07718, N08926, N07725, N05500, Hastelloy C-276, Alloy 59

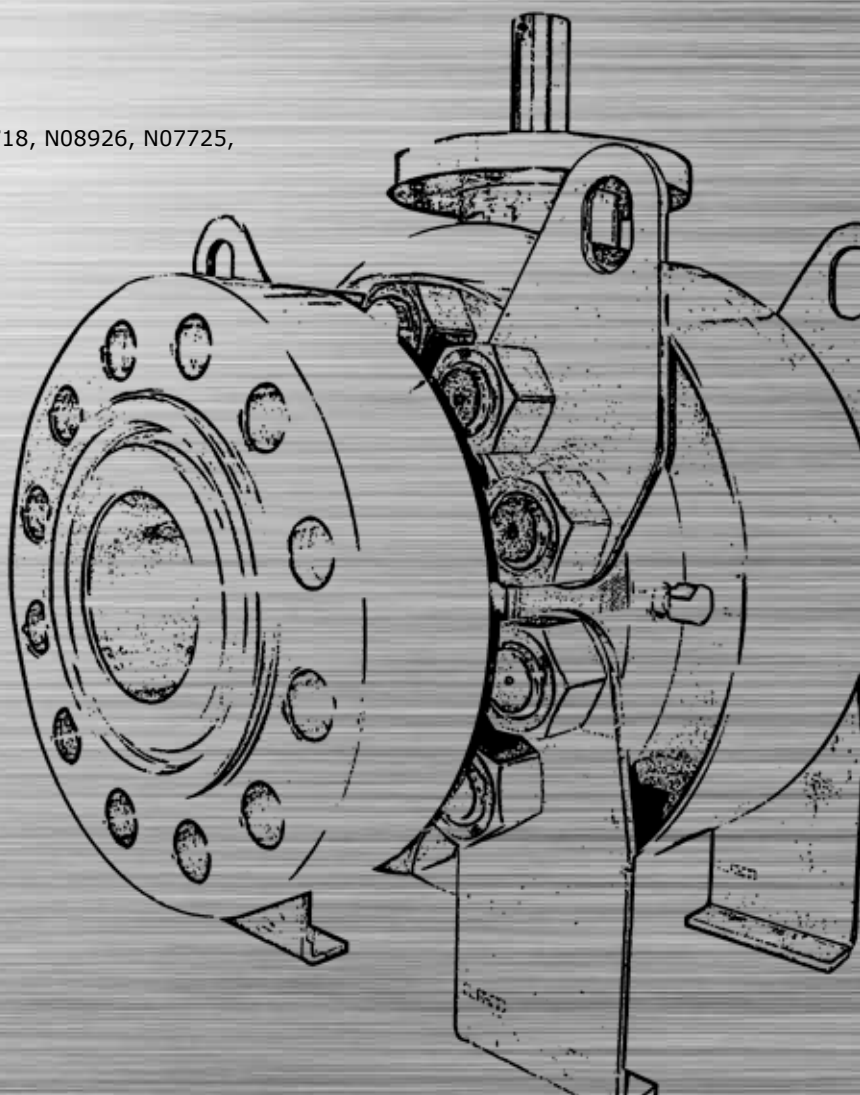
### Titanium

ASTM B348 (Gr. 2 & 5), ASTM B381 F2

### Bronze, Aluminum-Bronze

ASTM B148 UNS C95500, C95800, C63200, ASTM B62

Not listed materials are available upon request.





## Health, Safety & Environment

We desire to create a safe and healthy working environment and continuously work to achieve this

We desire to preserve the integrity and reputation of our company and help our employees to avoid misconduct; we have to ensure compliance with legal and regulatory requirements as well as with our internal policies and directives. We aim to act in an ethical and socially responsible manner within the laws, customs and traditions of the countries in which we operate.

Our ambition is to avoid negative environmental impacts, enhance positive effects and contribute to sustainable development. This applies to all our activities. It is our responsibility to ensure the health and safety of our employees and to safeguard the communities and environments in which we operate and live.



## Short deliveries

It is extremely important to reach the contractual delivery date to satisfy our Customers' and their Commitments expectations

ERREESSE has a valuable reputation on fast & on-time deliveries. Thanks to a wide range of raw materials stock, sourced by only selected and approved UE suppliers and to a large number of local machining and paint shops, we are in a position to provide a high quality Made in Italy product and a customized service in line to project requirements and specifications, at a reasonable short time.



MADE IN ITALY



ed. 01.2023

**erresse**  
VALVES



Via delle Betulle 8A/8B/8C, 28075 Grignasco (NO) - ITALY  
Main phone +39 0163 415901 - Fax +39 0163 415941  
ITALY - P.IVA/VAT no. 02168380026

e-mail: [sales@erresse-valves.com](mailto:sales@erresse-valves.com)  
website: [www.erresse-valves.com](http://www.erresse-valves.com)

