

ΣXOTICATM VALVES

FAST-TRACK MANUFACTURER
OF CORROSION RESISTANT,
HIGH-ALLOY VALVES



ABOUT EXOTICA VALVES™

Exotica Valves™ is a Spanish manufacturer of exotic, nickel-alloy corrosion-resistant valves.

We produce gate, globe, check, ball, butterfly, needle, foot and plug valves, as well as strainers and sight glasses.

We design, manufacture, test and certify our own valves and offer a streamlined production process. We specialize in the fast-track manufacture of nickel-alloy and other exotic material valves, with deliveries of down to 4 weeks.

Our firm is an accredited corporate party to the Special Register for External Trade Operators in Defense and Dual-use Material issued by the Spanish Ministry of Commerce. The accreditation authorizes our company to obtain export licenses for valves made of dual-use alloys monitored through European Union Regulation EC 428/2009.

PRODUCT RANGE

| Product | Size range | Class range | End types | Materials |
|----------------------------------|-------------|-------------|-----------|--|
| Gate valves | ¼" to 48" | 150 | RF | A182 F22, F44, F51, F53 F55, F60, F61, F62, F91 F310S, F317, F321 & F347 |
| Globe valves | ¼" to 36" | 300 | RTJ | 254 SMO |
| Check valves: Swing check | ½" to 48" | 600 | FF | 904L AL-6XN® |
| Lift check: Piston & ball | ¼" to 2" | 900 | NPT | Alloy 20 Alloy 31 |
| Ball valves | 1/2" to 36" | 1500 | SW | Duplex Hastelloy® |
| Metal-seated ball valves | ¼" to 8" | 2500 | SW | Incoloy® Inconel® |
| Butterfly valves | ½" to 48" | 4500 | BW | Monel® |
| Needle valves | ¼" to 2" | API 5000 | | Nickel and Copper-Nickel Super Duplex |
| Plug valves | ¼" to 36" | API 10000 | | Titanium and Tantalum® |
| Foot valves | ¼" to 4" | API 15000 | | Zirconium |
| Strainers | ¼" to 18" | API 20000 | | |
| Sight Glasses | ¼" to 4" | | | |
| Double Block and Bleed valves | ¼" to 8" | | | |

DESIGN OPTIONS

Cryogenic extension

Stem and bonnet extensions for cryogenic service can be manufactured into the design of most of our gate, globe, ball and plug valves for -196°C operation and below:



Lantern ring

Lantern rings improve lubrication of the valve packing, and can aid purging the stem from abrasives and chemicals. They are inserted between the packing turns and opposite to a grease injector.

Bellow seal stem packing

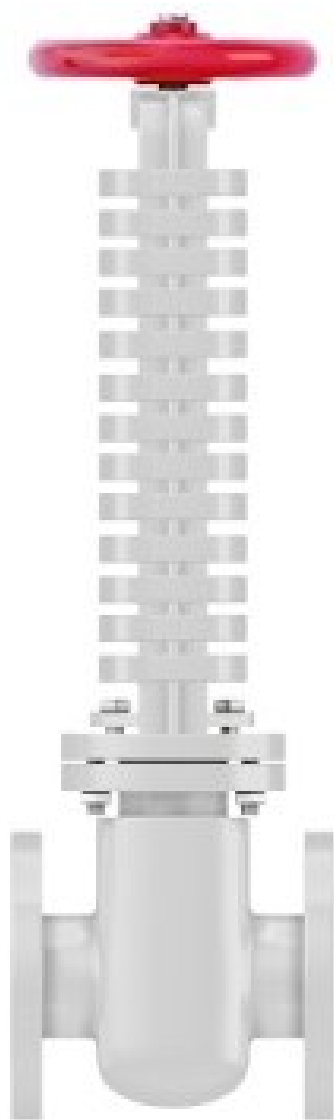
Our bellow seal valves offer hermetic tightness around the stem to prevent leakage of the toxic, aggressive process mediums into the atmosphere.

Exotica Valves™ currently recommends the use of bellow seal valves for acrylonitrile, ammonia, argon, benzene, carbon dioxide, chlorine, freon, helium, hydrogen bromide, hydrofluoric acid (HF acid), nitrogen, phosgene, liquid potassium, liquid sodium, sulfuric acid, titanium tetrachloride and vinyl chloride.

DESIGN OPTIONS

Fin-type heat dissipation bonnet

Fin-type heat dissipation stem and bonnet extensions can be manufactured into the design of most of our Incoloy® 800, 800H, 800HT and 825 gate, globe, ball and plug valves .



Pressure seal bonnet

Our pressure seal design serves to improve the body-bonnet seal as pressure increases. We offer pressure seal designs from Class 900 upwards.

As pressure rises in bolted bonnet designs, the body and bonnet tend to separate at their joint, decompressing the gasket and allowing the process medium to seep out. However, pressure seal valves compress the body-bonnet gasket as pressure increases.

Drip collar

Drip trays collars reduce ice accumulation on extended bonnets and impede damage to lagging.

API 600 TRIM CHART

| Trim Number | Material | Seat | Disc | Backseat | Stem |
|-------------|------------------|----------|----------|----------|----------|
| 1 | 410 | 410 | 410 | 410 | 410 |
| 2 | 304 | 304 | 304 | 304 | 304 |
| 3 | F310 | 310 | 310 | 310 | 310 |
| 4 | Hard 410 | Hard 410 | 410 | 410 | 410 |
| 5 | Hardfaced | Stellite | Stellite | 410 | 410 |
| 5A | Hardfaced | Ni-Cr | Ni-Cr | 410 | 410 |
| 6 | 410 and Cu-Ni | Cu-Ni | Cu-Ni | 410 | 410 |
| 7 | 410 and Hard 410 | Hard 410 | Hard 410 | 410 | 410 |
| 8 | 410 and HF | Stellite | 410 | 410 | 410 |
| 8A | 410 and HF | Ni-Cr | 410 | 410 | 410 |
| 9 | Monel | Monel | Monel | Monel | Monel |
| 10 | 316 | 316 | 316 | 316 | 316 |
| 11 | Monel and HF | Stellite | Monel | Monel | Monel |
| 12 | 316 and HF | Stellite | 316 | 316 | 316 |
| 13 | Alloy 20 | Alloy 20 | Alloy 20 | Alloy 20 | Alloy 20 |
| 14 | Alloy 20 and HF | Stellite | Alloy 20 | Alloy 20 | Alloy 20 |
| 15 | 304 and HF | Stellite | Stellite | 304 | 304 |
| 16 | 316 and HF | Stellite | Stellite | 316 | 316 |
| 17 | 347 and HF | Stellite | Stellite | 347 | 347 |
| 18 | Alloy 20 and HF | Stellite | Stellite | Alloy 20 | Alloy 20 |

DESIGN SPECIFICATIONS

Exotica Valves™ manufactures its valves in strict accordance with the following standards:

| AMERICAN STANDARD | BRITISH STANDARD | ITEM DESCRIPTION |
|-------------------|---|--|
| API 600 | BS1414 (Gate Valve) BS1873 (Globe Valve) | Shell wall thickness and general valve design specifications |
| API 594 | BS1868 (Check Valve) | |
| ANSI B16.34 | BS1560 | Pressure temperature ratings |
| ANSI B16.10 | BS2080 | Face-to-face dimensions, End-to-end dimensions |
| ANSI B16.5* | BS1868 | End flange dimensions, Gasket contact facing |
| ANSI B16.25 | BS1414 (Gate Valve) BS1873 (Globe Valve) BS1868 (Check Valve) | Welding end dimensions |
| ASME B31.1 | | ASME Code for pressure piping, B31.1 power piping |
| ASME B31.3 | | ASME Code for pressure piping, B31.3 process piping |

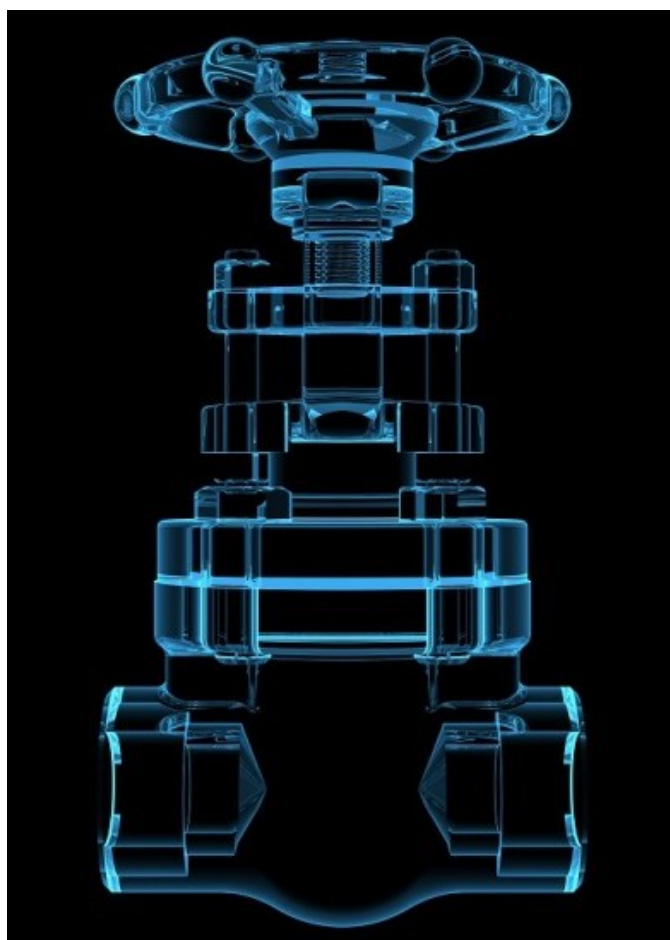
*Valves 26" and larger according to ANSI B16.47 Series A (MSS SP-44) and Series B (API 605).

**HF denotes Stellite® 6 or equivalent. Stellite® 6 is a registered tradename of Deloro Stellite.

NDT TESTING AND CERTIFICATION

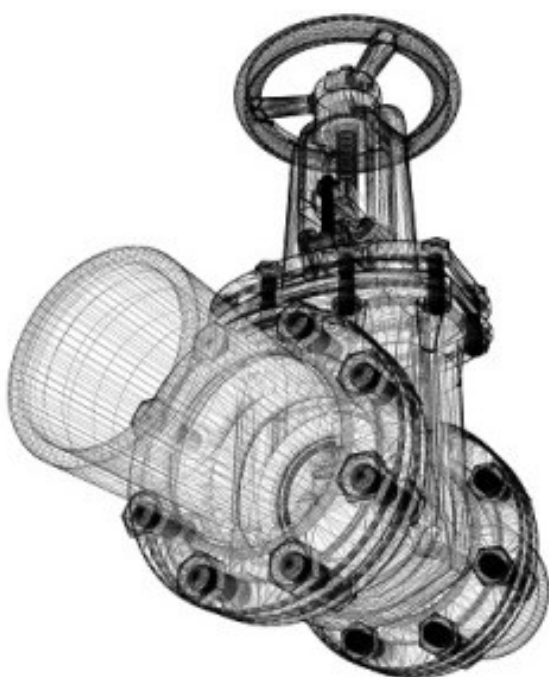
Exotica Valves™ can perform the following Non-Destructive Tests on its valves:

- FE Fugitive Emissions ISO 15848-1
- PMI Positive Material Identification
- DP/LP Dye/Liquid Penetrant Test
- MT Magnetic Particle Test
- RT Radiography
- Charpy V-Notch Impact Test
- UT Ultrasonic Test



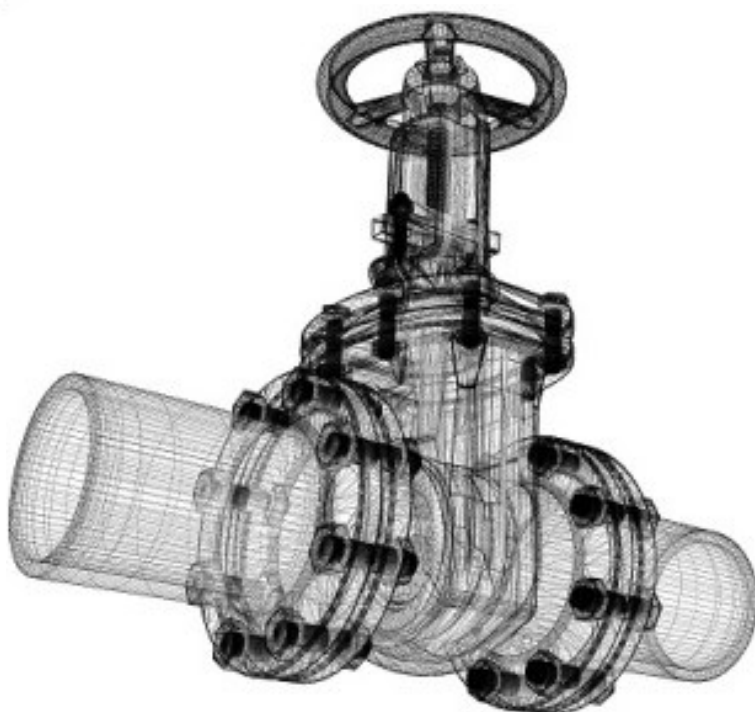
IN-HOUSE, PROPRIETARY DESIGN

At Exotica Valves™ we design our own valves in order to ensure the highest standard of integrity and quality.



Our design tools include Auto CAD®, Solid Edge® and Solid Works®, PDM®, Inventor®, and Finite Elements.

We develop and analyze our designs with linear and non-linear finite element analysis using ANSYS code and computational fluid dynamic analysis with CFX.



MODIFICATIONS

We perform the following post-manufacture modifications upon request, in case of late changes in our customer's requirements:

- Cryogenic extensions
- Change of stem, wedge, gaskets on gate, globe & check valves.
- We do not recommend changing ball/seats on ball valves; stems, however, can be exchanged for other materials.
- Modification from bolted bonnet to welded bonnet
- Bevel and worm gear installation
- Degreasing and cleaning for oxygen and special services



CONFLICT MINERALS POLICY

Exotica Valves™ is committed to purchase only those parts and products containing minerals that have been procured through a validated conflict-free supply chain, so as to avoid the use of minerals that have financed conflict in the covered countries, and we expect our suppliers to abide by the same standard. Exotica Valves™ is taking a variety of actions designed to assist in compliance with the conflict minerals rules. For example:

- We have identified, and will continue to identify, conflict minerals necessary for the production or the functionality of covered products that we sell;
- We have performed, and intend to continue to perform, supply chain due diligence in general accordance with the Organization for Economic Cooperation and Development's internationally recognized and established due diligence framework;
- We expect our direct suppliers to perform similar due diligence on the sources of conflict minerals in their supply chains, and expect them to require their own suppliers to do the same;
- Once a robust and validated conflict-free supply chain is established or a robust mineral tracing program is developed, we will expect our direct suppliers to procure only minerals using that validated supply chain, so as to avoid the use of minerals that have financed conflict in the covered countries; and
- In the event that a direct supplier is found to supply us with necessary conflict minerals that have not been procured through a validated supply chain or that are otherwise found to have financed conflict, we will take action such as recommending that such supplier seek alternative means of sourcing, or failing that, we will reassess the supplier relationship.

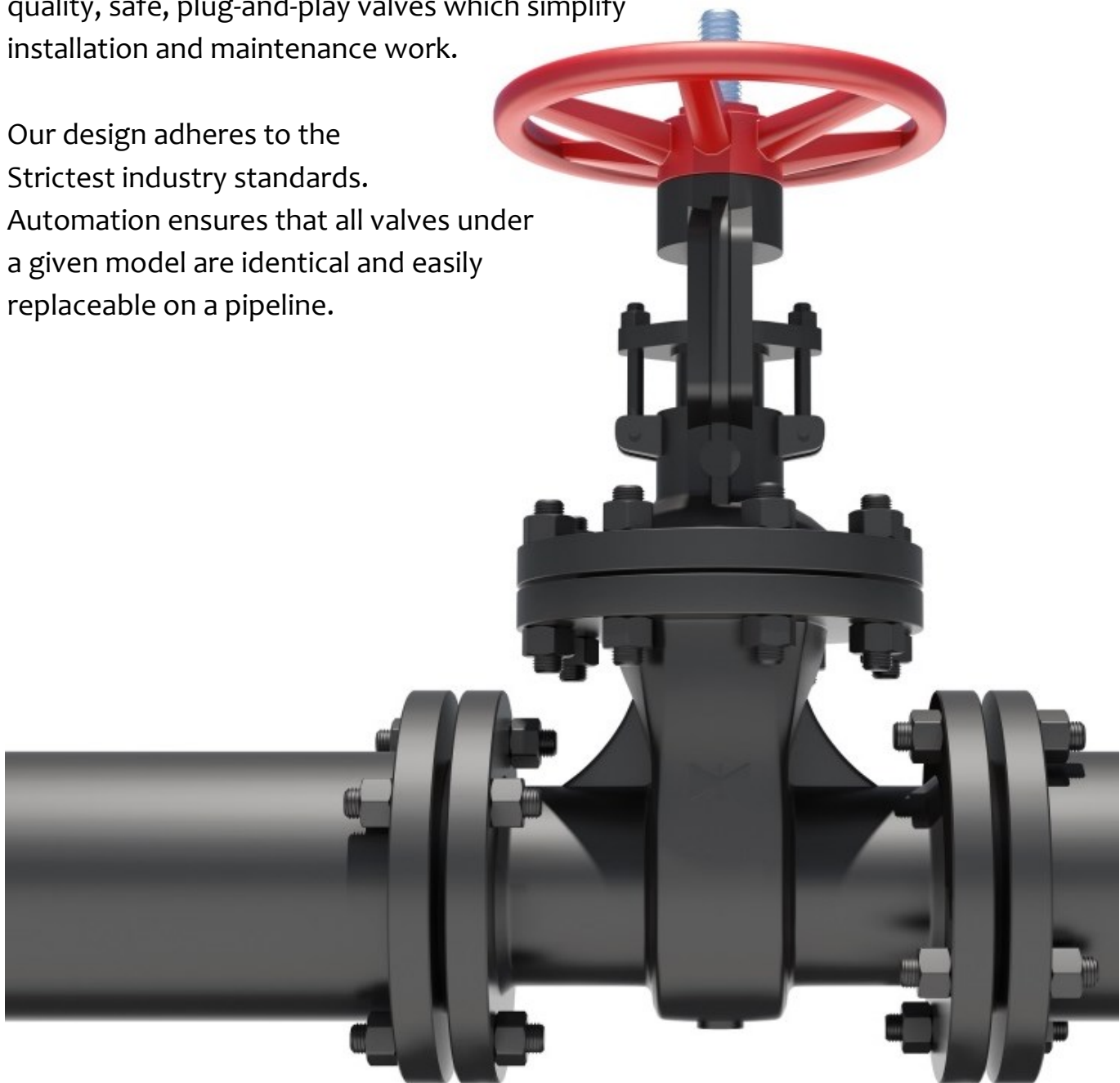
This Policy will be reviewed periodically to ensure ongoing suitability, and is in addition to our suppliers' basic obligations to comply with Exotica Valves™ standards.

QUALITY

Exotica Valves™ runs a strict Quality Policy and Valve Quality Assurance programme, as per ISO 9001:2008.

"Durable quality" is a concept deeply engrained in our procedures and training. We manufacture exquisite quality, safe, plug-and-play valves which simplify installation and maintenance work.

Our design adheres to the Strictest industry standards. Automation ensures that all valves under a given model are identical and easily replaceable on a pipeline.



HOW TO ORDER

For a Gate valve 2" 300# RF Carbon Steel body, Monel® trim the figure number would be:

| 1 | 2 | 3 | 4 | 5 | 6 | 7 |
|-------|------|-------|------|------|------|-------|
| GXT | 2 | 300 | R | CS | MON | MON |
| Valve | Size | Class | Ends | Body | Trim | Seats |

1. Valve

| | | |
|-------------------------|---|-------|
| Gate | = | GXT |
| Globe | = | GXL |
| Swing check | = | CXK-S |
| Piston check | = | CXK-P |
| Ball check | = | CXK-B |
| Dual Plate check | = | CXK-D |
| Butterfly | = | BXF |
| Ball valves | = | BXV |
| Metal seated ball valve | = | BXV-M |
| Needle | = | NXD |
| Plug | = | PXA |
| Foot | = | FXT |
| Strainers | = | SXT |
| Sight Glasses | = | SXG |
| Double Block & Bleed | = | DXB |

2. Size

Size is stated as-is, e.g., ½" = 1/2 and 8" is 8.

3. Class

Class should be stated as is. For example, Class 150 is "150", and Class 2500 is "2500", and API5K is "5000". API classes are stated as API 5000 = "5K", API 10000 = "10K", API 15000 = "15K" and API 2000 = "20K".

4. End type

| | | |
|-----|---|---|
| RF | = | R |
| RTJ | = | T |
| SW | = | S |
| NPT | = | N |
| BW | = | B |

5, 6 and 7. Body, trim and seats

| | | |
|---|---|-------|
| F5, F9, F11, F22, F44, F51, F53, F55, F60, F61, F62 & F91 | = | As-is |
| F310, F317, F321 & F347 | = | As-is |
| 254 SMO | = | 254 |
| 904L | = | 904 |
| AL-6XN® | = | AL6 |
| Alloy 20 | = | A20 |
| Alloy 31 | = | A31 |
| Duplex | = | DSS |
| Hastelloy® | = | HST |
| Incoloy® | = | INY |
| Inconel® | = | INL |
| Monel® | = | MON |
| Super Duplex | = | SDS |
| Titanium & Tantalum | = | TTM |
| Zirconium | = | ZIR |

WE DEEPLY VALUE OUR CUSTOMERS' CONFIDENCE IN OUR PRODUCTS



PETRONAS



gasNatural
fenosa



SULZER

ExxonMobil



FLUOR®

CONTACT US

Visit <http://bit.do/ExoticaValves> for our address and driving directions or click on the map:



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