

VAMEIN COMPANY PROFILE

SUMMARY



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ABOUT VAMEIN DE ESPAÑA S.A.

About us



- VAMEIN DE ESPAÑA, S.A. was founded in 1970 by Mr. Aurelio Almodóvar.
- Family owned company for over 50 years.
- Designs and Manufactures of butterfly valves and actuators.
- Capacity to manufacture more than 60,000 valves per year.
- Location:

Industrial park of Tres Cantos - Madrid - Spain.























GENERAL DESCRIPTION OF METAL BUTTERFLY VALVES

Butterfly valves features

A butterfly valve is a type of flow control device, typically used to regulate a fluid flowing through a section of pipe. A flat circular plate (Disc) is positioned in the center of the pipe. The plate has a rod (Shaft) through it connected to an actuator on the outside of the valve. Rotating the actuator turns the plate either parallel or perpendicular to the flow. Unlike a ball valve, the plate is always present within the flow, therefore a pressure drop is always induced in the flow regardless of valve position. Only two components are in contact with the fluid: disc and seat.

A butterfly valve is from a family of valves called quarter turn valves. The "butterfly" is a metal disc mounted on a rod. When the valve is closed, the disc is turned so that it completely blocks off the passageway. When the valve is fully open, the disc is rotated a quarter turn so that it allows unrestricted passage. The valve may also be opened incrementally to regulate flow.

Butterfly valves are of robust design, light weight and volume, and very effective on isolating lines for its quick and safe operation.













Butterfly valves features



Our product range covers an extensive range and diameters in a wide range of materials to suit most process-media, suitable for either ON/OFF and control applications.

Our product range cover diameters from **DN50** up to **DN1200** (**2" up to 48"**) in standard execution. Nominal pressures up to **16 bar (225 psi)** in accordance with DIN, ISO, BS, ANSI, API, BS and JIS. Standard working temperature from **-15°C to +100°C** and higher depending on seat version.

The standard valve is a resilient seated used in non-corrosive and moderately corrosive applications.

The GALACTIC series is a fully PTFE Teflon® lined valve used in the most aggressive and corrosive applications.















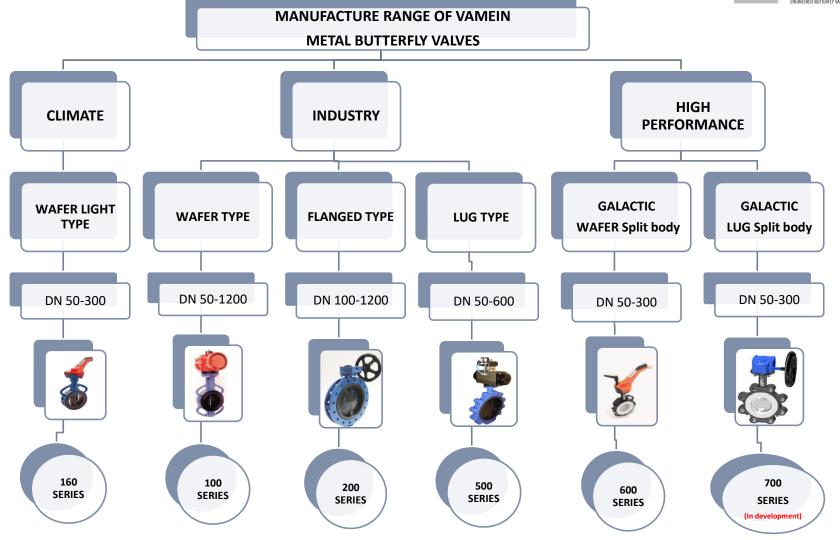




STANDARD MANUFACTURING RANGE

Standard manufacture range





Climate Series Wafer Light Type: SERIE 160



The metal butterfly valves Serie 160 can be used universally as shut-off or control valves. The easy installation of the valve between pipe flanges warrants dependable operation and sealing. The aluminum valve body of the Serie 160 means that it is lightweight, a special advantage in transport and installation. The butterfly valves are equipped for manual operation with a hand lever or gears; they are, however also available with electric or pneumatic actuators. Retrofitting is possible at any time, even for built-in valves.

Dimension range: **DN50-300 / 2"-12"**

Body: Aluminium EN AC-46000 Rilsan® coated

Standard working pressure: 16 bar (DN50-300)

Temperature range: -10 °C to +120 °C

Fields of Application:

- ✓ Water treatment
- ✓ Marine market (DNV-GL TA)
- ✓ Irrigation systems
- Swimming pools
- ✓ Agriculture
- ✓ Aquatic parks and aquariaums
- ✓ HVAC (Heat ,Ventilation, and Air Conditioning)





Light wafer Serie 160













Indutrial Series Wafer/LUG Type: SERIE 100/500



The metal butterfly valves Series 100/500 can be used universally as shut-off or control valves. The easy installation of the valve between pipe flanges warrants dependable operation and sealing.

Rilsan® coating up to **DN300 (12")** of the valve body and disc in ductile iron, provide corrosion protection category C5-M. These butterfly valves are also available in a standard version with a stainless steel (CF8M) or aluminum bronze (C95800) valve disc.

The butterfly valves are equipped for manual operation with a hand lever or gears; they are, however also available with electric or pneumatic actuators. Retrofitting is possible at any time, even for built-in valves.

Dimension range:

- Serie 500 DN 50-600 / 2"- 24"
- Serie 100 DN 50-1200 / 2"- 48"

Body: Ductile iron ASTM A395 Gr. 60-40-18 Standard working pressure:

16 bar (DN50-1200)

Temperature range:

- ✓ -15°C to +100°C depending on the seat version
- up to +80 °C at valve disc, Rilsan® coated















Lug Serie 500

Wafer Serie 100

Fields of Application:

- Water treatment and distribution
- Chemical industry
- Petrochemical plants
- ✓ Food industry
- ✓ Power/ Hydro electrical/ Nuclear plants
- Automotive industry
- ✓ Pharmaceutical
- Paper and pulp industry
- ✓ Marine market
- Gas distribution
- HVAC
- Minning & Cement



Indutrial Series Flanged Type: SERIE 200



The flanged type is a one piece body design with flanges to suit all standars (DIN, ANSI, BS, etc.). It also provides dead-end services capability with down stream piping removed. Its robust design makes it suitable for any application that requires a double flanged valve. It is used in industries fields as water treatment plants, pump stations, filtration systems, shipbuilding industry, etc.

Rilsan® coating up to **DN300 (12")** of the valve body and disc in ductile iron, provide corrosion protection **category C5-M**. These butterfly valves are also available in a standard version with a stainless steel (**CF8M**) or aluminum bronze (**C95800**) valve disc.

The butterfly valves are equipped for manual operation with a hand lever or gears; they are, however also available with electric or pneumatic actuators. Retrofitting is possible at any time, even for built-in valves.

Dimension range:

✓ DN 100-1200 / 4"- 48"

Drilling Standard: **DIN PN 10/16**, **ANSI 125/150 Lbs** Body: **Ductile iron ASTM A395 Gr. 60-40-18**

Standard working pressure:

√ 16 bar (DN100-1200)

Temperature range:

- √ -15°C to +100°C depending on the seat version
- ✓ up to +80 °C at valve disc, Rilsan® coated







Flanged Serie 200



DN800 ASME B16.47.150 #. SERIE B











High Performance Series PTFE lined Wafer Type: SERIE 600

This type of BuV design with PTFE liner and different disc-shaft single piece executions like stainless steel 1.4542 (17-4PH) without coating, and disc-shafts with PFA coating is the optimum against highly aggressive substances such as chlorine, hydrogen fluoride and sulphuric acid.

Dimension range:

✓ Serie 600 DN 50-300 / 2"-12"

Drilling Standard: Multiflanged DIN PN 10/16, ANSI 125/150 Lbs

Body: Investment casting Carbon Steel ASTM A216 Gr. WCB cataphoresis coated.

Shaft/Disc: 17-4PH uncoated (ref 621T) and 17-4PH PFA coated (ref 622T)

Standard working pressure:

- √ 16 bar (DN50-150)
- √ 10 bar (DN200-300)

Temperature range:

√ -30°C to +150°C depending on the working pressure.

Fields of Application:

- √ Chemical industry
- ✓ Petrochemical
- ✓ Pharmaceutical
- ✓ Pulp and paper
- √ Food industry
- ✓ Cosmetic industry
- √ Microelectronics
- ✓Semi-conductor (UPW)

Quality Certificates:

- ✓ The Teflon® used is in compliance with FDA 21 CFR 177.1550 and (EU) No. 10/2011
- ✓ Directives 2014/68/EU (PED) and 2014/34/EU (ATEX)



Spring return actuated













SERIE 621T



SERIE 622T

High Performance Series PTFE lined Wafer Type: SERIE 600



When the project require a very reliable product for the most demanding applications as: semiconductor, pharmaceutical and food/beverages business, among others, we offer our high Quality and International approved PTFE seated butterfly valve. Manufactured in our own facilities in Madrid, 100% Made in Spain.

Special features:

- One single piece, blow out proof disc-shaft made of martensitic precipitation hardened stainless steel grade 17-4PH (high strength and hardness material).
- Backliner piece to protect the hard liner (PTFE) against the edge of the disc. Available in wide range of chemical resistance materials as: silicone and Viton®.
- Full tightness (**Zero Leackage**) according to International standards ISO 5208 and API 598, tested in our facilities with water and air.
- Two packages for primary and secondary shaft sealing.
- Perfect mechanical fixation between the PFA and disc thanks to the disc's holes that allow to PFA be overmoulded.
- PFA overmoulded partially along the shaft increasing the corrosion protection together with the collar of the liner.



Series 600/700 for high purity processes



Serie 700 Prototype for clean rooms



17-4 PH PFA overmoulded shaft/disc single piece

High Performance Series PTFE lined Wafer Type: SERIE 600



PTFE seats manufactured by Isostatic Moulding.

Reason: In case of compression moulding the pressure acts only in linear direction and does not provide enough pressure for the compactness of the material. Material moulded under compression is pervious and will permeate more, providing lower corrosion resistance.

In Isostatic Moulding PTFE is moulded under very high pressure and pressure is applied on the components from all direction making component very compact and impervious and thus **provides better corrosion resistance**.

Regarding raw materials used:

Our virgin PTFE seats are used is made from grade 807 NX of Chemours and PFA lining provided on the disc is of Dyneon. These are one of the expensive materials used by us which provides excellent thermal resistance, corrosion resistance and also has very good mechanical properties in terms of molecular weight, Tensile and Elongation properties, hardness etc.

Maximum protection on bodies with Nyflon®

Nyflon® is a co-deposit of electroless nickel and PTFE (Teflon©) that is applied in a 20 microns layer on the bodies substrate to provide it with high lubricity and anti-adhesion. Nyflon® provides exceptional corrosion resistance due to the high phosphorous Ni base coat and the hydrophobic nature of the PTFE co-deposit.



DN100 Nyflon® coated body



FEATURES OF VAMEIN CONCENTRIC DESIGN METAL BUTTERFLY VALVES

Why us?



The butterfly valve made by VAMEIN DE ESPAÑA, S.A. has all the advantages of these types of valves as well as a full warranty for the user as it is manufactured abiding the most strict quality standards and top quality raw materials majority **cast in Spain and Europe**.

★ Our company:

- We are a factory with more than 50 years history
- Products : Metal Butterfly Valves
- Certificates: ISO/ PED/ ATEX/ TYPE APPROVAL/ DVGW/ ACS
- Supply projects: drinking water, food, mining, irrigation, swimming pools, aggregates, pharmacy, chemical, petrochemical, HVAC for industry and nuclear sectors, naval defense, ship buildings, data centers, among others.

★ Cooperation Ways:

- OEM Production (With your logo, nameplate)
- Project Support (We give project authorization letter to support your tenders)

★ Our Strengths:

- Total and permanent watertightness up to 16 bar for all sizes up to DN1200 48".
- Due to the design with no pins, screws or keys and narrow machining tolerances of its components all parts of the valve are interchangeable.
- · Extreme low and constant operating torque.
- · Anti Blow-out proof shaft by retention bushing.
- Shaft end by square according to ISO 5211.
- Rilsan coated body (Polyamide 11) with thickness minimum 200 µm and corrosion protection category C5-M according to ISO 12944.
- Potable EPDM formula ACS (France) approved as standard for all sizes.
- All Valves tested in house according to ISO 5208 (EN 12266-1) Zero Leakage.
- Individual vacuum packaging up to DN300 12", with external label including serial number, construction materials, working conditions, etc.
- · Total traceability of all valve components.
- · Have huge stocks with best delivery time.



STANDARD MATERIALS

Standard materials for rubber seated valves

✓ BODY:

Ductile Iron A395 / Aluminium Gr. AC46000.

✓ DISC:

Ductile Iron A395 / Stainless Steel Gr. CF8M / Aluminium Bronze Gr. C95800.

✓ SHAFT:

Stainless Steel AISI 420 / AISI 316.

✓ SEAT:

Potable EPDM / High Temperature EPDM / Anti-abrasive Natural Rubber / NBR / Hypalon / Silicone / Viton / DVGW EPDM .

✓ SPECIAL MATERIALS ON REQUEST (non-exhaustive list):

Bodies: Carbon Steel Gr. WCB / Stainless Steel CF8M / Aluminium Bronze Gr. C95800.

Discs: Super Duplex A995 Gr. 5 A (CE3MN) / Hastelloy C /

Super Austenitic Gr. CN3MN.

Shafts: Stainless Steel 904L / 316L / Monel K-500 / Titanium Gr. 2.



DN80 CF8M Body/Disc – Viton Seat

DN150 WCB Body – CE3MN Dics



DN80 C95800 Body - Hastelloy C Disc



DN300 White NBR seated valve



DN600 Red Silicone seated valve

Valve actuators

MANUAL

- Lever
- Gearbox

ELECTRIC

- 1-phase motor
- 3-phase motor

PNEUMATIC

- Double acting
- Spring return

HYDRAULIC

- **Double-acting**
- Single-acting

SPECIAL EXECUTION

- Operating column
- Extension spindle
- Chain wheel























COATINGS

Coatings

✓ BODIES:

- **DN50-300**: The body is coated (min. 200 μ m) with RILSAN® (**Polyamide 11**). Blue colour RAL 5005.
- From DN350: The body is painted (min. 120 μm) with Epoxy. Blue colour RAL 5005.





Rilsan coating

✓ DISCS:

- **DN50-300**: Coated (min. 200 μm) with RILSAN® (**Polyamide 11**). Black colour RAL 9011.
- From DN350: Epoxy painted (min. 120 μm) . Black colour RAL 9011.



Primer coating



Final epoxy coating





Rilsan coating video



DN800 Epoxy painted body and disc

Rilsan (polyamide 11) coating





September 17, 2015

Subject: Corrosion resistance of Rilsan® coating system

Based on our understanding, tests and evaluations of Rilsan $^{\otimes}$ coating system $^{(1)}$ till date, we hereby confirm that Rilsan $^{\otimes}$ coating system $^{(1)}$ should exhibit a good corrosion resistance.

Submitted to salt spray according to the norm ISO 12944, Rilsan® coating system $^{(1)}$ exhibits no blistering, no rust, no cracking nor flaking. The adhesion of the coating measured according Arkema's internal method is excellent (3.5 – 4, which corresponds to a value >5MPa according to the ISO 4624, adhesion method mentioned in the ISO 12944) and remained excellent after salt spray ageing.

So Rilsan® coating system (1) should be compliant with the corrosivity category C5-M, high durability class.

(1) the following Rilsan® coating systems have been evaluated:

Primgreen® LAT 12035 Rilsan® T white 1488 AC
Primgreen® LAT 12035 Rilsan® T black 7450 AC
Primgreen® LAT 12035 Rilsan® T grey 5161 MAC
Primgreen® LAT 12035 Rilsan® T blue 7443 MAC

These properties can be achieved only if the pre-treatment and coating procedures are conducted following Arkema recommendations (given as a separate document).

Please do not hesitate to contact us if further clarification is needed. With our best regards,

Jean-Yves LOZE

Rilsan® Fine Powders Market Development

The information contained in this document is based on trials carried out by our Research Centres and date selected from the literature, but shall in no event be held to constitute or imply any warranty, undertaking, express or implied commitment from our part. Our formal specifications define the limit of our commitment.

No liability whatsoever can be accepted by Arkema with regard to the handling, processing or use of the product or products concerned which must in all cases be employed in accordance with all relevant laws and/or regulations in force in the country or countries concerned.

ARKEMA CERDATO - SRDP 27470 Serquigny - France

Siège social : ARKEMA - 420, rue d'Estienne d'Orves - 92700 Colombes (France) Société anonyme au capital de 604 538 230 euros 319 632 790 RCS Nanterre - TVA Fr 3 23 19 632 790

www.arkema.com





SPECIAL EXECUTIONS

Special executions (upon request)

- ✓ Seat bonded to the body for vacuum service.
- ✓ Silicon free valve.
- ✓ Mirror polished stainless steel disc.
- ✓ Undercut disc to lower the torque.



Galactic valve DN250 with 17-4PH Mirror polished disc

- ✓ Special square shaft end dimension for DN350 and bigger sizes.
- ✓ Special painting according to the specifications of the Customer.
- ✓ Disc special coatings (Cataphoresis, Chromium & Nickel plated, Halar® ECTFE).



DN200 Halar coated disc



DN350 Halar coated disc



Painting system AFNOR 466



DN400 Super Duplex RIsan coated disc



DN250 CF8M Mirror polished disc



QUALITY: KEY TO SUCCESS

Quality: Key to success



In order to have full control over our product, VAMEIN manufactures in its own facilities the main components of the butterfly valves. For this we have the most modern manufacturing machines and CNC that allow consistent quality and accuracy. The assembly of the various components is done by highly experienced and leak testing machines are made in benches. So the whole process can GUARANTEE valve - MANUFACTURING - ASSEMBLY - TESTS, overseen by a system of

quality assurance in accordance with the highest standards.

Current certificates:

- Quality Systems EN ISO 9001:2015
- PED 2014/68/EU
- ATEX 2014/34/EU
- **DNV GL Type Approval**
- Drinking water:
 - ACS
 - **DVGW**
- Quality identification materials: each body, disc and liner is identified with its code number to have a perfect quality traceability of the materials used for their production. Thus with the Heath Number our Quality Assurance Department obtain a perfect traceability of the quality of materials, enabling them to know at any time the chemical composition and mechanical properties.
- Descriptive label on both the valve body and plastic bag, including maximum pressure, temperature range, body, disc, shaft and seat materials, serial number and year of manufacture.

Individual heat shrink wrap packaging up to DN300.



ISO 5208 Leakage test bench



Component traceability



Individual packaging



Code: 515V Body: A395 Size: Disc: CF8M DN350 Max. Press.: 150Lbs Shaft: 1.4021 Serial: 21/0766 Liner: VITON

Plastic bag label

SEAT:VITON SHAFT: 1.4021

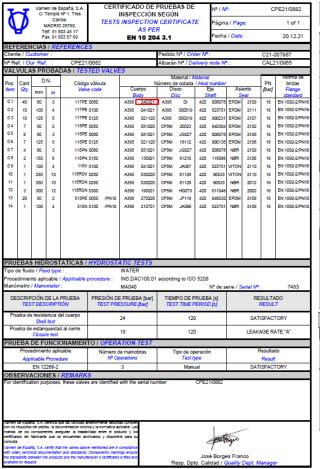
FLANGE: ANSI 150 MAX.PRESS: 150Lbs TEMP.: -20°C+150°C **CODE: 515V**

SERIAL: 21/0766 YEAR: 2021

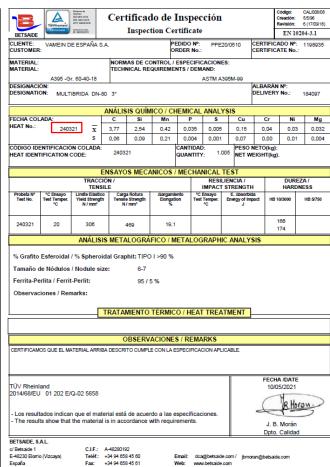
Body valve label made in high performance PVC

Quality: Example of Certificates we can provide





EN 10204 3.1 Include: heat numbers of each component and tests resullts.



EN 10204 3.1 of each component: body, seat, disc and shaft.



PED and ATEX Declarations.

Quality: Other certificates



VNEW APPROVALS AND DECLARATIONS OF COMPLIANCE FOR DIFFERENT SEATS RAW MATERIALS (Check availability and prices)

✓ DECLARATIONS OF COMPLIANCE FOR RAW MATERIALS:

- •NITRILE GAS "NB-70-549". Formula that has been developed to be used in gas installations and pipelines, and meets the requirements according standard EN-549 A2.
- •NITRILE GAS "NB70-682". Formula for elastomers to be used in facilities that transport gas and hydrocarbon fluids, and meets the requirements according standard EN-682.
- •"EPDM-70 FDA". Formula developed to be used in contact with food according FDA regulation "Code of Federal Regulations 21 CFR. Part 177 Subpart C Section 177.2600".
- •SILICONE formula "S-75 Red", suitable for use in contact with food according FDA regulation "Code of Federal Regulations 21 CFR. Part 177 Subpart C Section 177.2600".
- ✓NACE MR0175/ISO15156:2015 Corrosion Resistant Alloys for grade AISI 316 shafts.
- ✓NORSOK M-650 Qualification of manufacturers of special materials for grades CF8M (Austenitic) and CE3MN (Sup. Duplex) discs.



SUCCESSFUL PROJECTS

Some facilities with Vamein products



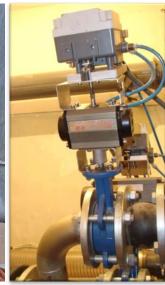


















Questions?

Thanks-Gracias-Grazie-Merci-Danke-Kiitos-Takk-Dziękuję