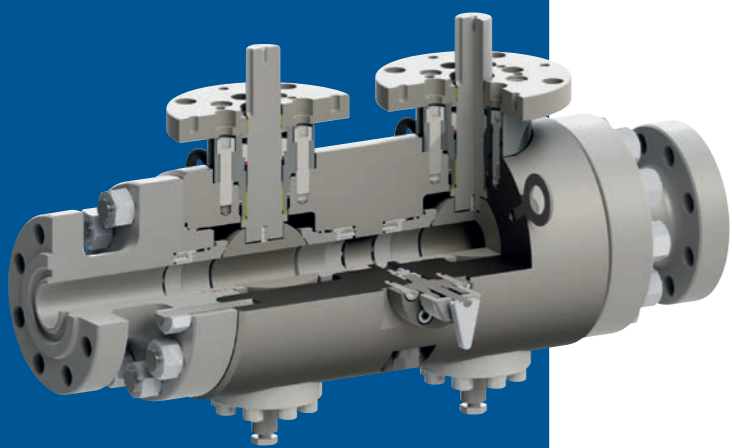


## Certifications

ISO 9001:2008  
PED Directive  
(module H) 97/23/EC  
BV MODE II Scheme  
API 6A  
API 6D  
API 6DSS  
API 600  
IEC 61508  
Atex Directive  
94/9/EC  
GOST R



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# DOUBLE BLOCK AND BLEED VALVES



specially engineered valves  
for the oil and gas and power generation industries

## Who we are

FLUITEK ORSENIGO VALVES started out ball valves manufacturing for the Oil and Gas industry in 1993 with the Orsenigo brand.

Friulco Spa started its own production of cast steel valves for the energy and petrochemical industry in 1990.

Their paths crossed in 2012 with the acquisition of Friulco by FLUITEK ORSENIGO VALVES.

This combined wealth of experience, know-how and resources is now integrated in the new reality of FLUITEK ORSENIGO VALVES, with manufacturing facilities and headquarters located in the North of Italy.

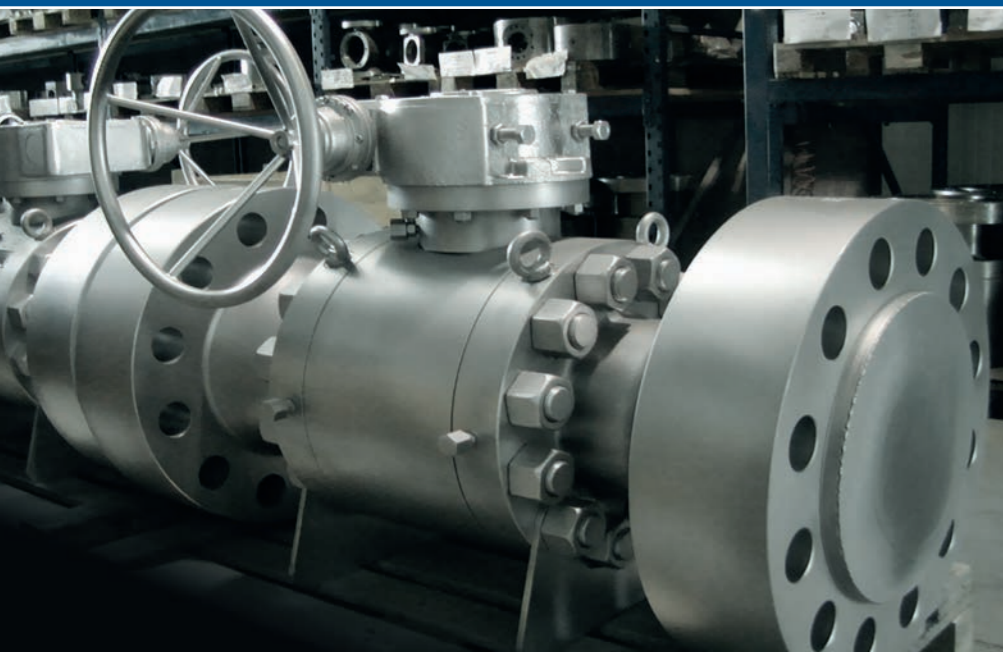


## Engineering

FLUITEK ORSENIGO VALVES mission consists in providing quick and effective answers to its customers' needs. Our problem solving approach is developed through the engineering of solutions and the product manufacturing, coupled with our knowledge and study of materials. FLUITEK ORSENIGO VALVES Engineering Organizations consists of a Product Development and the Engineering Department. The first is dedicated to research on materials and processes and the design and development of new solutions. The second is focused on product engineering with 15 people involved including engineers, designers, product specialists.

### Fluidynamic computerized analysis

FLUITEK ORSENIGO VALVES can perform thermo-fluidynamic analysis on its products by means of a computerized calculation system (CFD, computational fluid dynamics). Valve design and construction details are improved with the use of virtual modeling techniques and "what-if" simulations. Data concerning pressure and velocity values, forces acting on the surfaces, temperatures and all the main physical variables can be provided to the customers. Our computer analysis included static, dynamic and thermal analysis.



## Quality

The main quality controls carried out by FLUITEK ORSENIGO VALVES are:

### Dimensional Inspection

All necessary equipment in house  
Faro measuring arm.  
Zeiss Bridge-type 3D Measuring Machine

### Non Destructive Testing

MT: Magnetic particles examination  
PT: Dye penetrant examination  
UT: Ultrasonic examination  
RT: Radiographic Examination Capability of shooting on site, x-ray films development and reading in house [ASME reference plates]

### Pressure Test To

API598 - ISO 5208 - BS 6755 - API 6A - API 6D - ASME B16.34 - EN 12266 - 1  
High Pressure Hydraulic Shell test  
High Pressure Hydraulic Back Seat test  
High Pressure Hydraulic Seat test  
Low Pressure Pneumatic Seat test  
Functional test

### Tests equipment:

- 4 Hydraulic & Pneumatic horizontal testing unit for valves DN 1/2" to 16", up to class 4500#
- 3 Hydraulic & Pneumatic vertical testing unit for valves DN 2" to 16", up to class 600#
- 1 Hydraulic & Pneumatic horizontal testing unit for valves DN 10" to 48", up to class 4500#

- 2 Hydraulic & Pneumatic horizontal testing unit for valves DN 1/2" to 4", up to class 10000#
- 1 Hydraulic & Pneumatic horizontal testing unit for valves DN 2,1/2" to 20", up to class 1500#
- 1 Hydraulic & Pneumatic horizontal testing unit for valves DN 2,1/2" to 24", up to class 1500#
- 2 Hydraulic & Pneumatic horizontal testing unit for valves DN 6" to 36", up to class 2500#

### Chemical Analysis

PMI: Positive material identification  
Mass spectrometer 16 channels

### Mechanical Tests

Hardness test  
Charpy-V impact test

### Micrographic analysis

#### Available also:

Fugitive emission test (helium/nitrogen)  
Cryogenic test  
Corrosion test  
Cleanliness for oxygen application  
Fire Safe tests  
High pressure gas tests  
Tensile test (including hot tensile)  
Hyperbaric Test for subsea application  
Torque test

### Qualified Personnel

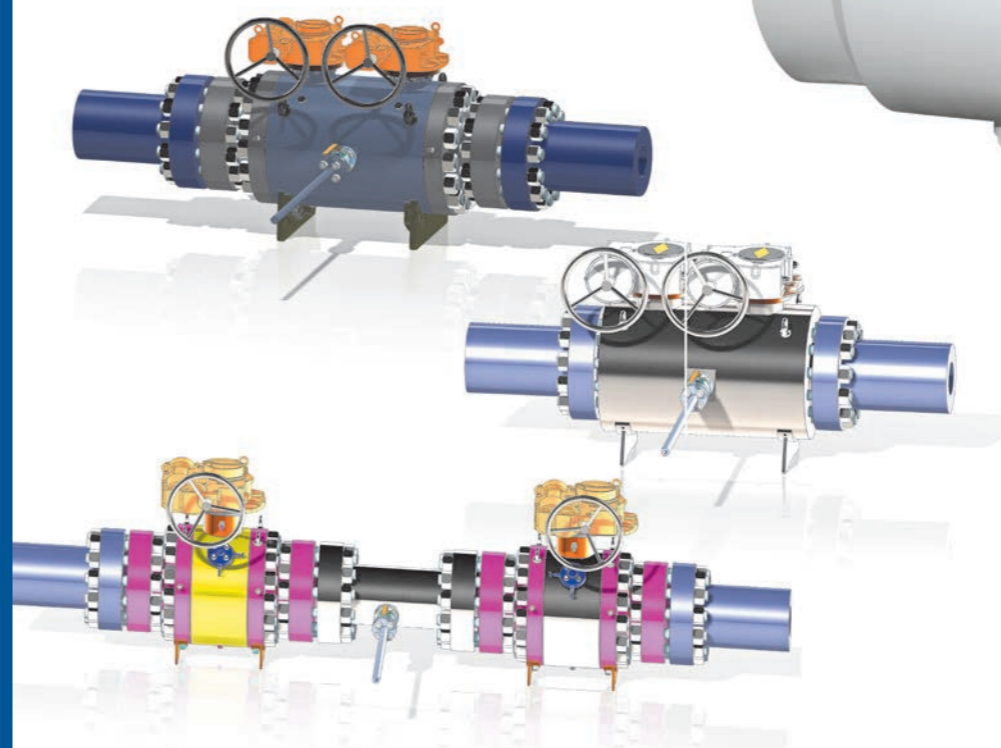
FLUITEK ORSENIGO VALVES personnel is qualified to carry out all the above mentioned controls. In particular, for Non Destructive Tests, FLUITEK ORSENIGO VALVES staff includes fully trained qualified and certified personnel in accordance with STN-TC-1A and EN 473 requirements.

# DOUBLE BLOCK AND BLEED VALVES

Our valves are designed and manufactured for a broad range of applications

## CHARACTERISTICS

- Range of designs, materials, sizes and pressure classes according to ASME, API, NACE specifications
- Fire safe according to BS6755/API 6FA/ API 607
- **Floating or Trunnion** mounted
- **Side entry** flanged or **Compact design** (special construction with pipeline bolts screwed into threaded blind holes machined into the valve body that allow a further **space and weight saving**)
- **Top Entry** construction available
- Design available for sizes up to 24" and pressure classes including ANSI 4500 and API 10000 psi. Larger sizes available upon request
- Full bore, suitable for **pigging** operations, or reduced bore
- Special constructions for **High and Low Temperature** (Cryogenic) available
- **Wide range of materials** for both body and internals, including: carbon steel, low alloy steels, stainless steels, Duplex, Superduplex, Ni-alloys and titanium
- **CRA Weld overlay** in dynamic or/and static seals pockets or **internal cladding** available
- Large **variety** of seat and stem **seals selection**
- **Self Relieving** and/or **Double Piston Seats** options available
- **Soft Seated** or **Metal Seated** construction
- Hardfacing/Coating: ENP, Tungsten and Chromium Carbide, Ceramic
- Any **Body Connection** to the in-between-bleed and any **accessory** can be provided **upon request** to suit service requirements



## BENEFITS

- SPACE AND WEIGHT SAVINGS
- COST SAVINGS
- NEGLECTIBLE PRESSURE DROP, NO TURBULENCE
- REDUCED LEAK POINTS
- REDUCED STRESSES FROM LOADING AND VIBRATION
- IMPROVED SAFETY IN OPERATIONS