

GATE VALVES

PARALLEL SLIDE PRESSURE SEAL BONNET



An example: 14" F91 gate manual gear operated, design temperature: 590°C design pressure: 276 bar (intermediate between 2500# and 4500#)

FLUITEK ORSENIKO VALVES has very extended experience in manufacturing this type of valve. They are an alternative to the traditional flex wedge type gate valves. The disc is in two halves, spring loaded, that seat on parallel seat rings. The disc "slides" in contact with the seats, hence the name. The advantages of this product versus the traditional wedge type product are:

- The disc never blocks in closed position (phenomenon that may occur with a wedge type that has been closed with the line in temperature and opened when the line is cold).
- The opening/closing torque is much lower than a corresponding wedge type valve, resulting in less expensive actuation systems.
- The "sliding" feature keeps dirt away from the seating surfaces.

The double spring loaded disc has the tendency to trap working fluid in the body cavity when the valve is closed. This results in the need of pressure equalizing system between the body cavity and the upstream line. This is obtained with internal equalizing hole or external equalizing line. Should it be necessary to maintain a bi-directional operation feature, the equalizing system can be obtained with an external by-pass and equalizing system with two bypass valves. This allows a warm-up bypass feature (two open bypass valves) and pressure equalizing system in one or the opposite direction by opening one bypass valve and keeping the other in the closed position.

Design codes and overall configuration, including stem-to-disc connection are the same than the flex wedge type gate valves. Cast body construction and forged body construction are both available. Materials range from carbon steel to low alloy steel, to austenitic stainless steel, to nickel alloys. Packing systems are based on graphite material, but ceramic fiber yarn packing sets are also available for temperature exceeding 600°C. Materials are either to ASTM/ASME standards or to EN standards, either harmonized or calculated to design conditions.

Pressure classes (per ANSI standard) are normally ranging from 900# to 1500# to 2500#. Class 4500# is also theoretically possible, but normally not requested by the market. Size range depends on pressure class requirements, FLUITEK ORSENIKO VALVES having no limits in relation to market requirements.

The forged body construction allows FLUITEK ORSENIKO VALVES to supply this product with dimensions and pressure classes out of standard, designed to the specific requirements of the customer (temperature, pressure, size of the line) without any dimensional limitation.



The table shows a typical example of gates class 1500#. Sizes are indicated, but not limited to, the most used range.

CHARACTERISTICS - ANSI 1500#					
Nominal Size [inches]	Pressure Class	Bone diameter [mm]	Face to face [mm]	From center line to top of actuator mounting flange [mm]	Total weight [kg]
2"	1500	47	216	329	32
3"	1500	70	315	426	46
4"	1500	92	406	505	87
6"	1500	130	559	630	213
8"	1500	178	711	686	321
10"	1500	222	864	939	750
12"	1500	260	991	1056	1156
14"	1500	289	1067	1258	1664
16"	1500	330	1194	1281	1782
18"	1500	370	1346	1604	2933
20"	1500	416	1473	1760	3590
24"	1500	480	1625	1830	4725