

PRODUCT DESCRIPTION

Flanged unidirectional knife gate valve for flow sharp regulation
Cast body composed by two parts bolted together with inside reducing flow pass
Face to face dimension according to CMO standard.
Arrow in the body pointing the flow direction

GENERAL APPLICATIONS

The VI knife gate valve is mainly used in the paper industry and goes located at the first stage of the paper machine, where clean paper pulp is supplied to the machine to manufacture the paper itself.

The normal paper pulp concentration in which this type of valve works is around 2.5 – 3%
Its body inside design reduces the flow pass allowing a sharper regulation.

TECHNICAL DATA

Standard manufacturing sizes:

From DN80 up to DN300

Working pressures:

From DN 50 to DN 125: 10 (kg/cm²)

DN 150: 8 (kg/cm²)

DN 200: 7 (kg/cm²)

From DN 250 to DN 300: 5 (kg/cm²)

Flange connection drillings:

The standard flange connection is according to DIN PN10.

Other flange connections such as, ANSI 150, DIN PN6 – PN16 – PN25, British Standard, Australian Standard, JIS Standard, are available under request.

Applied Directives:

Directive 98/37/CE (machinery), **Directive 97/23/CE (PED: Group 2)**, Directive 94/9/CE (ATEX: Group II, Cat. 3 / Zones 2 and 22)

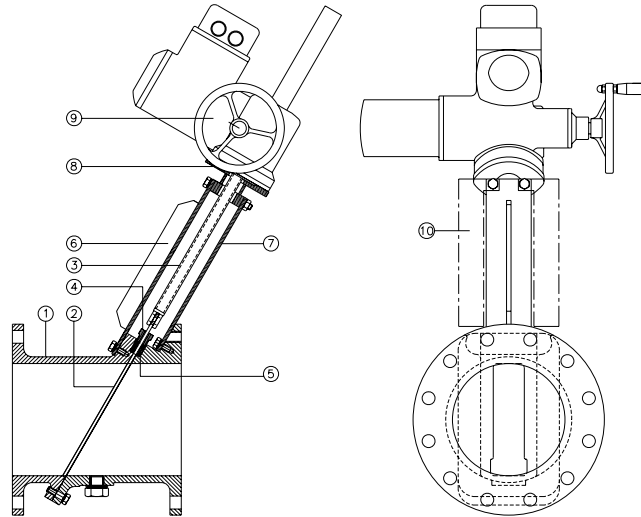
Quality Dossier: All valves are hydrostatically tested at CMO with water and CMO material and test certificates can be provided.

Body test pressure = Maximum rated pressure x 1,5

Seat test pressure = Maximum rated pressure x 1,1



STANDARD MANUFACTURING MATERIALS (OPTIONS 1 AND 2)



POS.	DESCRIPTION	OPTION 1	OPTION 2
1	BODY	GG25	CF8M
2	GATE	AISI304	AISI316
3	STEM	AISI303	AISI303
4	PACKING GLAND	ALUMINIUM	CF8M
5	PACKING	GREASSED COTTON	GREASSED COTTON
6	LONG SUPPORT	CARBON STEEL	CARBON STEEL
7	SHORT SUPPORT	CARBON STEEL	CARBON STEEL
8	BRIDGE	CARBON STEEL	CARBON STEEL
9	ACTUATOR		
10	SAFETY GUARDS	CARBON STEEL	CARBON STEEL

DESIGN FEATURES IN DETAIL

1) BODY

Flanged cast body composed by two parts bolted together with inside reducing flow pass

Reducing flow pass into the body inside allowing a sharper regulation of the fluid.

The internal design of the valve avoids any build up of solids on the sealing area.

The standard manufacturing materials are GG25 cast iron and CF8M stainless steel. Other materials like GGG50 nodular cast iron, A216WCB carbon steel and stainless steel alloys (AISI316Ti, Duplex, 254SMO, Uranus B6) under request. Cast iron or steel valves are painted as standard with 80 microns anticorrosive protection of EPOXY (colour RAL 5015). Other anticorrosive protections available under request



2) GATE

The standard manufacturing materials are AISI304 stainless steel for cast iron body valve and AISI316 stainless steel for CF8M stainless steel body valve. Other materials or combinations can be supplied under request. The gate is polished in both sides. Several polishing grades, anti abrasion treatments and modifications are available to adapt the valve to the customer requirements.

3) SEAT

The seat of the VI model knife gate valve is metal to metal.

This seat construction does not include any resilient sealing and the estimated leakage (considering water) is 1.5% of the flow.

4) PACKING

As standard the packing is composed by three lines with an EPDM o-ring in the middle. It provides the tightness between the body and the gate and avoids any kind of leakage to the atmosphere.

The packing is located in an easily accessible place and can be changed without dismantling the valve from the pipeline.

Several types of packing can be supplied according to the different applications in which the valve can be located as follows:

GREASED COTTON (Recommended for hydraulic services)

This packing is made with cotton threads and has impregnated both the inside and the outside with tallow. It is manufactured by the solid system. It is a packing for general use in hydraulic services for pumps as well as for valves.

$$P(\text{bar}) = 10 / T = 100^{\circ}\text{C} \text{ PH} = 6-8$$

DRY COTTON

This packing is made with cotton threads. It is manufactured by the solid system. This is a packing only for solid products.

$$P(\text{bar}) = 0.5 / T = 100^{\circ}\text{C} \quad \text{PH} = 6-8$$

COTTON + P.T.F.E.

This packing is made with cotton threads and has the inside and outside impregnated with P.T.F.E. It is manufactured by the solid system. It is a packing for general use in hydraulic services for pumps as well as for valves.

$$P(\text{bar}) = 30 / T = 120^{\circ}\text{C} \text{ PH} = 6-8$$

P.T.F.E. LUBRICATED

It is made of PTFE filament threads which are impregnated using vacuum with a dispersion of PTFE and a special lubricant which helps the work at high speed.

It is braided by the diagonal system. Suitable for valves and pumps working with nearly all the fluids, specially the more corrosives, including concentrated oils and oxidants. It is also suitable for fluids with solid contents.

$$P(\text{bar}) = 100 / T = -200+270^{\circ}\text{C} \quad \text{PH} = 0-14$$

5) SPINDLE (STEM)

The spindle (stem) of the CMO valve is made of stainless steel 18/8. This provides a high resistance and long corrosion resistant life.

The valve design can be with rising or non rising stem construction. When rising stem construction is manufactured a stem protection hood is supplied that protects the stem from dust and dirty and, at the same time, keeps the stem lubricated.

6) PACKING GLAND

The packing gland gives the possibility to apply a uniform pressing force on the packing to ensure the tightness of the packing. As standard cast iron body valves include aluminium packing gland and stainless steel body valves include CF8M stainless steel packing gland.

7) ACTUATORS

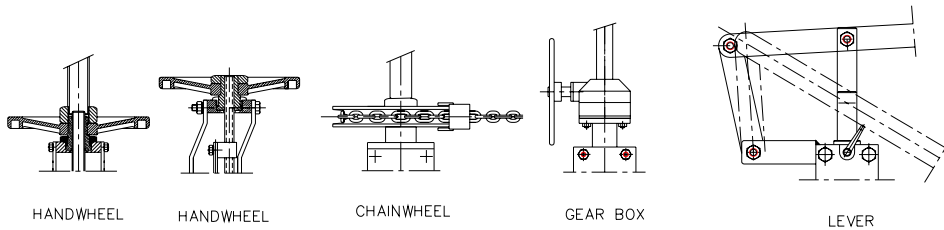
All kind of actuators can be supplied with the advantage that CMO design is completely interchangeable.

The design gives the possibility to the customer to change the actuators by their own. Normally there is no need of any extra mounting kit and in the cases that it is necessary CMO provides it.

ACTUATORS

The following actuators are available:

MANUAL ACTUATORS



HANDWHEEL

HANDWHEEL
(NON RISING SPINDLE)

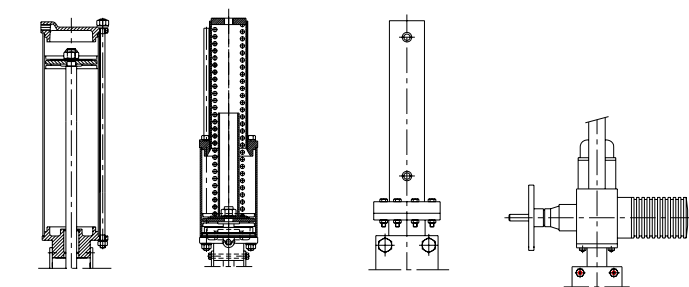
CHAINWHEEL

GEAR BOX

LEVER

(*)NOTE: CHAINWHEEL AND GEAR BOX ALSO AVAILABLE
NON RISING STEM DESIGN

OTHER TYPES OF ACTUATORS



PNEUMATIC D/A

PNEUMATIC S/A

HYDRAULIC

ELECTRIC

(*)NOTE: SINGLE ACTING ACTUATOR AVAILABLE WITH
WITH SPRING TO CLOSE OR SPRING TO OPEN
DESIGN.

(*)NOTE: ALL AUTOMATED VALVES ARE SUPPLIED WITH
SAFETY GUARDS COVERING THE GATE MOVEMENT AREA.