

MODEL 3V-4V

DOC. 3V-4V.05/08

PRODUCT DESCRIPTION

Flanged 3 way and 4 way valve.
One piece integral cast body with bolted cap at the top and internal plug.
Face to face dimension according CMO standard.

GENERAL APPLICATIONS

The 3V and 4V valves are appropriate for liquids with dry content. They are specially designed to be used in the Paper Industry for paper stock handling.

TECHNICAL DATA

Standard manufacturing sizes:

From DN50 up to DN300 (bigger sizes under request)

Working pressures:

From DN50 to DN125: 10 (kg/cm²)

DN150 : 8 (kg/cm²)

DN200: 7 (kg/cm²)

From DN250 to DN300: 5 (kg/cm²)

From DN350 to DN400: 4 (kg/cm²)

Available designs:

On the 3V model valve:

- L shaped flow pass
- T shaped flow pass

On the 4v model valve:

- L shaped flow pass
- Straight flow pass

Actuators:

- Manual gear box
- Manual lever
- Pneumatic double acting actuator
- Pneumatic single acting actuator
- Electric actuator

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.

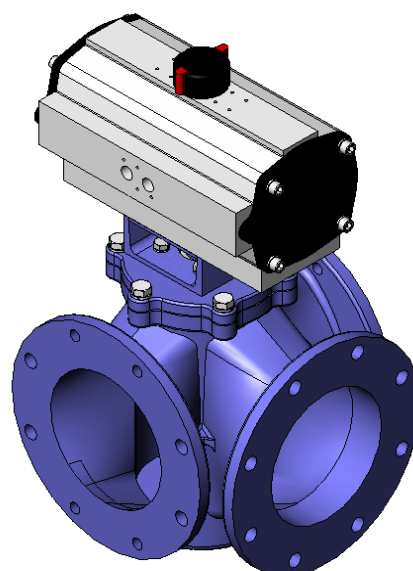
Applied Directives:

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



C.M.O.

Amategui Aldea 142, 20400 Txarama-Tolosa (SPAIN)

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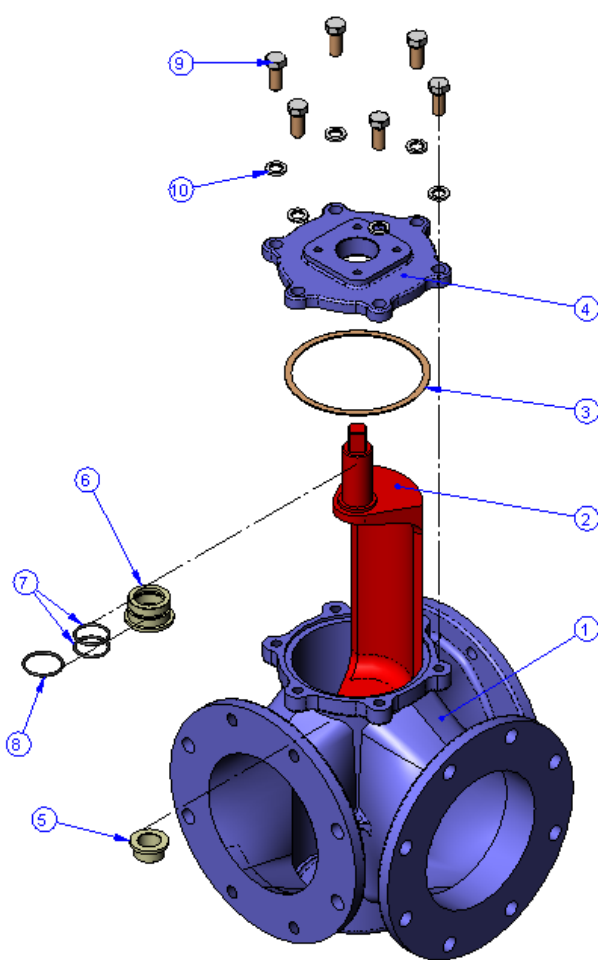
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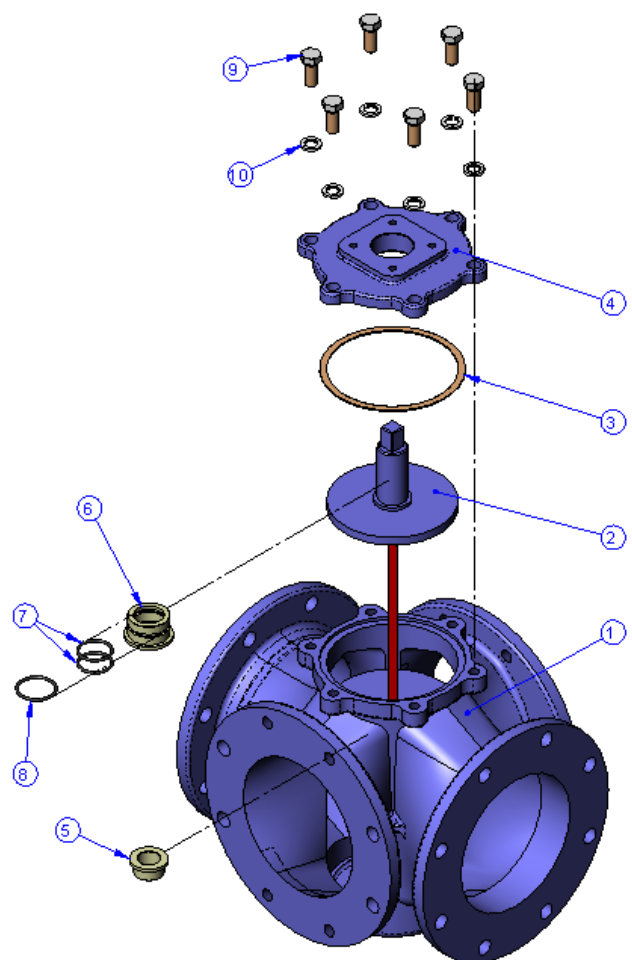
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STANDARD MANUFACTURING MATERIALS (OPTIONS 1 AND 2)



- 3V -



- 4V -

	DESCRIPTION	GG25	CF8M
1	BODY	GG25	CF8M
2	DISTRIBUTOR	AISI 304	CF8M / AISI-316
3	BED JOINT	CARDBOARD	CARDBOARD
4	COVER	GG25	CF8M
5	LOWER SOCKET	RCH 1000	RCH 1000
6	UPPER SOCKET	RCH 1000	RCH 1000
7	INSIDE O-RING	NITRILE	NITRILE
8	OUTSIDE O-RING	NITRILE	NITRILE
9	SCREW	5.6 ZINC	A-4
10	WASHER	5.6 ZINC	A-4

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DESIGN FEATURES IN DETAIL

1) BODY

Flanged one piece mono block cast body with a bolted cap at the top manufactured in the same material of the body. The standard manufacturing sizes with cast construction are from DN50 up to DN300. On bigger sizes the manufacturing of the body is by welding (fabricated) with reinforcement ribs to provide the necessary strength and withstand the maximum rated pressure.

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 are available under request.

2) PLUG

The inside plug of the valve is manufactured with cast construction and it is machined to provide a proper contact surface with the body.

The standard manufacturing materials are CF8 stainless steel for cast iron body valve and CF8M stainless steel for CF8M stainless steel body valve. Other materials or combinations can be supplied under request.

As standard, the plug is guided by a nylon gasket or bearing located in the bottom of the body that avoids the jamming of the plug inside of the body and allows a free rotation.

Depending on the working media and the customer request the material of this bearing can be changed to PTFE, bronze or other alternative materials.

3) SEAT

The seat design of the 3V and 4V valves metal to metal and there is not any soft sealing between the body and the plug. That means that the valve does not provide 100% shut off when it is fully closed.

The estimated leakage of the metal / metal seat of this valve (considering water as working media) is around 1.5% of the flow.

When the valve is working with paper stock with 4% of concentration, or higher than that, the metal to metal seat of the valve can provide 100% shut off thanks to the machining of both (body and plug) contact surfaces.

7) ACTUATORS

Several actuators are available for operation of the 3V and 4V valves, as follows:

- Manual gear box
- Manual lever
- Pneumatic double acting actuator
- Pneumatic single acting actuator
- Electric actuator

ACCESSORIES

Several types of accessories are available, such as:

Mechanical Limit Switches, Inductive Switches and Positioners

Limit switches for punctual valve position indication and positioners for continuous valve position indication.

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Solenoid valves

For air distribution into pneumatic actuators

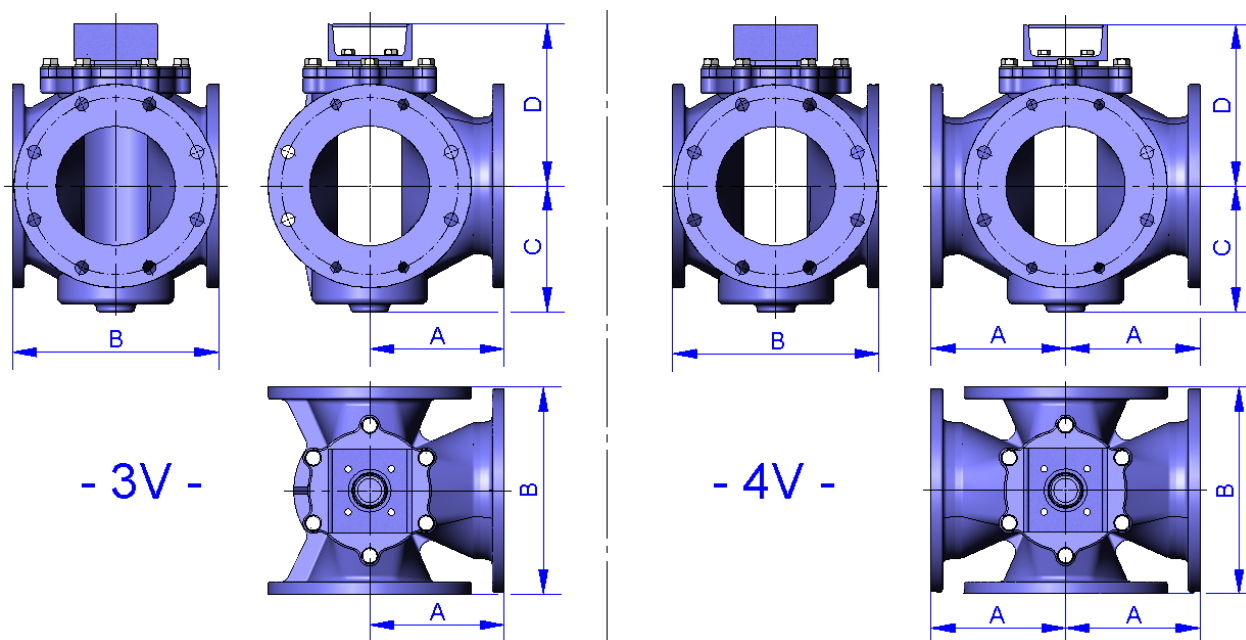
Connection electrical boxes, electrical wiring and pneumatic piping

Completely assembled units with all accessories can be supplied.

Mechanical locking device

Allows the locking of the valve in a fixed position during long periods

GENERAL DIMENSIONS



- 3V -

- 4V -

DIMENSIONS				
DN	A	B	C	D
80	137.5	200	128	193
100	162.5	250	128	193
125	200	290	145	210
150	200	290	171	231
200	225	345	210	269
250	272.5	415	257	328
300	287.5	470	294	358
350	317.5	530	343	404
400	360	610	375	449

NOTE: Bigger sizes under request.

Dimensions and drawings without obligation. CMO S.L. reserves, at any moment, the right of their modification at its own discretion and without any previous notice.

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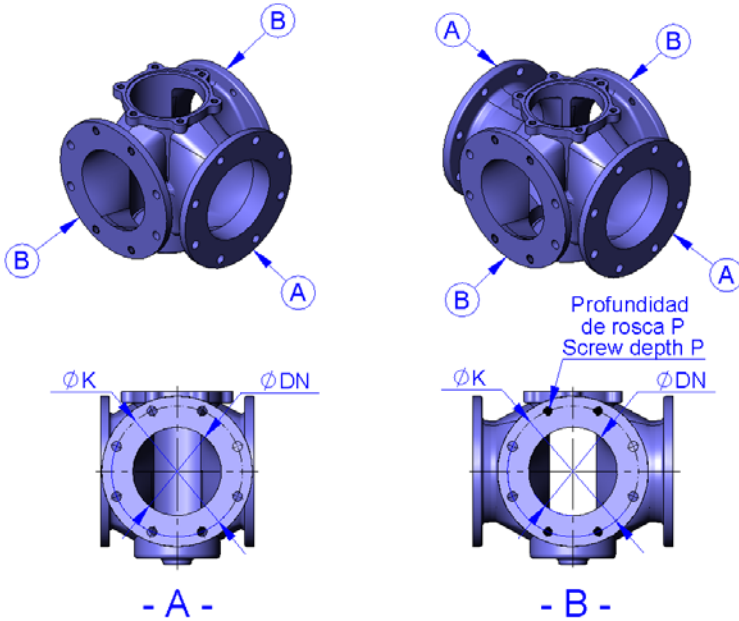
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z ▶ Threaded holes

{ ▶ Drilled holes

ND	ΔP Kg/Cm ²	BORING JOINT												
		DIN PN-10						ANSI-150						
		A		B		M	P	ØK	A	B		R	P	ØK
		{	z	{		Métrico			{	z	{	UNC		
80	10	8	-	8	M 16	18	160	4	-	4	5/8"	18	152,4	
100	10	8	-	8	M 16	18	180	8	-	8	5/8"	18	190,5	
125	10	8	-	8	M 16	18	210	8	-	8	3/4"	18	215,9	
150	8	8	4	4	M 20	20	240	8	4	4	3/4"	20	241,3	
200	7	8	4	4	M 20	20	295	8	4	4	3/4"	20	298,4	
250	5	12	4	8	M 20	22	350	12	4	8	7/8"	22	361,9	
300	5	12	4	8	M 20	22	400	12	4	8	7/8"	22	431,8	
350	4	16	8	8	M 20	22	460	12	4	8	1"	22	476,2	
400	4	16	8	8	M 24	22	515	16	8	8	1"	22	539,7	

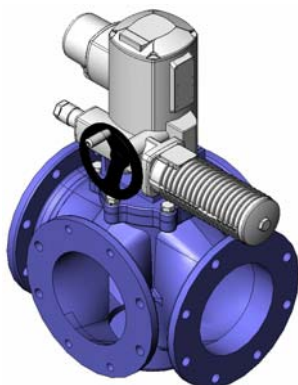
NOTE: Bigger sizes under request.

NOTE: Request about dimensions and actuators.

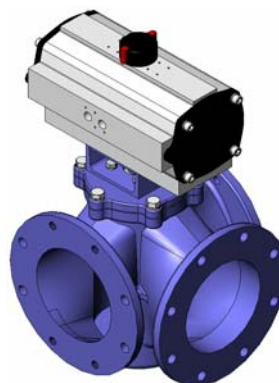


ACTUATORS

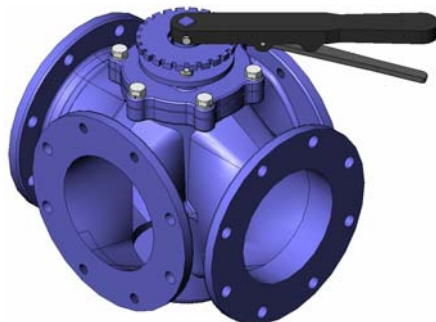
MOTOR



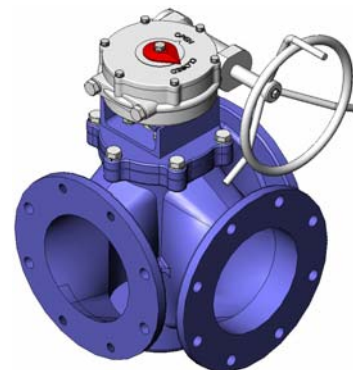
PNEUMATIC



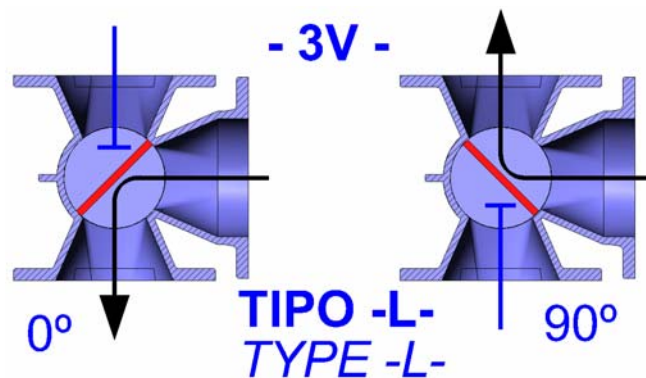
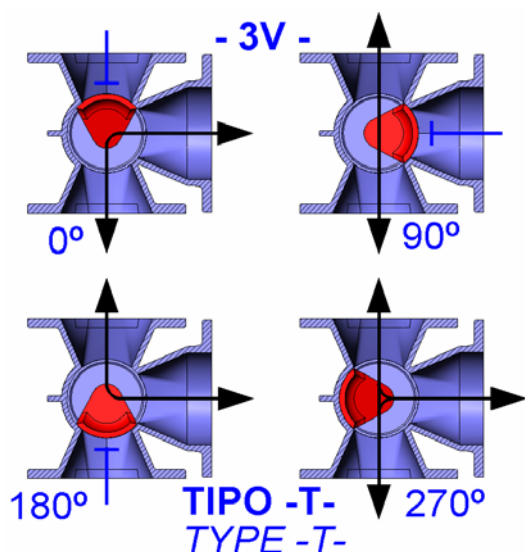
LEVER



SPUR GEAR



DISTRIBUTION OPTIONS





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