EGE
INDUSTRIAL CONTROLS



ecoflo®-BV
Ball Valves

ecoflo®-BV

PNEUMATIC AND ELECTRIC BALL VALVES
PN10 to PN40 / ANSI 150 & ANSI 300



BV2 pneumatic ball valve
2-piece flanged body

ecoflo®-BV series pneumatic and electric ball valves are designed for the control of liquids and gases from size DN 15 (1/2") up to DN 300 (12"). Larger sizes are also available for specific use.

Designed either for 2-way or 3-way function, ball valves feature negligible pressure drop due to their construction allowing a full flow passage, use with fluids containing limited solid particles or use with viscous fluids.

Ball valves with 2-piece or 3-piece simple construction allow easy maintenance over a long working life, therefore preferred for industrial applications as well as for utility services.

Used mainly for on-off control applications, ball valves are also preferred for regulation service with limited control precision. As an option, V-ball control valves can be used for precise regulation needs (Please ask for separate documentation).

Produced in Turkey under ISO 9001:2008 Quality Assurance System, *ecoflo®-BV* series ball valves are used in almost all process industries like chemical and petrochemical plants, refineries, power plants, metallurgical mills, paper mills, food and pharmaceutical industries, water distribution networks, water treatment, as well as in machinery automation like textile, food and packaging.

General Features

- Design without obstruction against flow
- Simple construction allowing easy maintenance
- 2- way or 3- way design
- PTFE or metal seated versions
- DIN pressure classes of PN10, PN16, PN25 and PN40 or ANSI pressure classes of ANSI 150 and ANSI 300.
- Wafer type, threaded, flanged or welded connections
- Leakage Class IV, V or VI
- Materials and test certificates to international standards
- Process temperature range between -30....+220˚C. Consult for different ranges
- Provided with pneumatic or electric actuators
- Manuel override as standard for electric actuators, and as an option for pneumatic actuators
- Choice of analog or digital positioners of regulation service
- IP66 to IP68 protection, ex-proof models
- Ambient temperature range between -30...+60˚C
- Optional position switches, air solenoids, lock-up valves, boosters and other auxiliary accessories

WORKING CONDITIONS TO EN 22401				
Maximum Working Temperature °C	Maximum Body Working Pressure (bar)			
	PN16 Material Code		PN25 Material Code	PN40 Material Code
	GG-25	GGG-40/50	GGG-40/50	GS-C25 / WCB, 1.4571
-10 +120	16	16	25	40
200	13	13	20	35
250	11	12	18	32
300	10	11	16	28
350	-	10	15	24
400	-	-	-	21



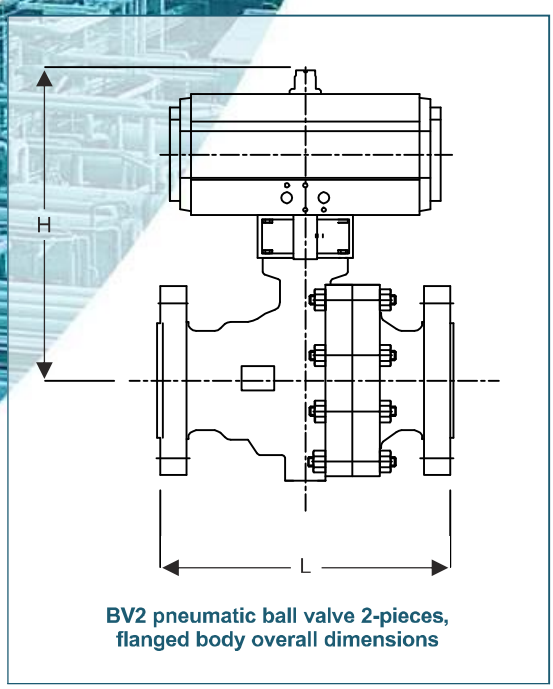
BV2 electric ball valve
2-piece flanged body with
DN80 PN40 RF

Maximum working temperature for each pressure class and the relavant maximum working pressure values are shown in “Working Conditions” tables according to DIN and ASME standards. Cast iron (GG-25) and ductile iron (GGG-40 or GGG-50) valves are suitable for mostly used industrial fluids like water, condensed water, steam, and air.
Cast steel (GS-C25 or WCB) bodied valves, however, are more appropriate for heavier working conditions where pressure shocks, high vibration or sudden temperature changes may occur.

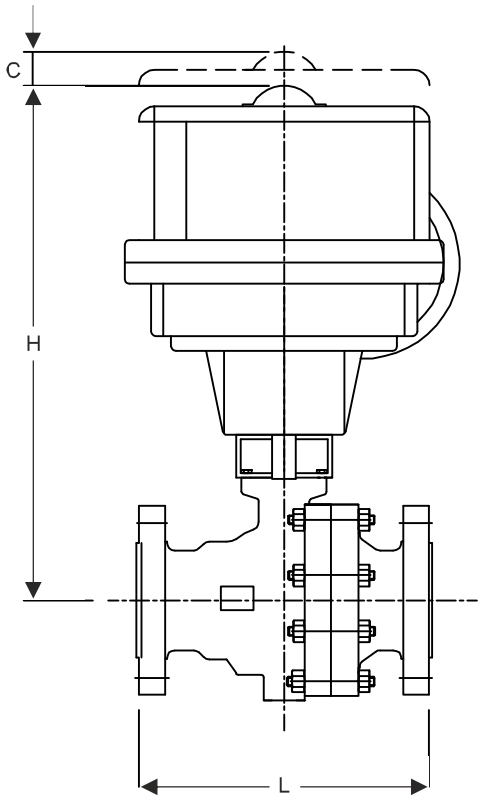
Stainless steel (AISI304, 316, 316L, 316Ti) valves and thermoplastic (PP, PVC, and alike) valves as well as fluoropolimer (PFA, PTFE) valves are preferred for aggressive or corrosive chemical fluids or for corrosive environment. Special exotic alloys are also available for more specific applications. One should consider the strongest possible working conditions while selecting a valve.

The torque value required to close or open a ball valve is depandent on valve size and pressure drop across valve, in other words, pressure difference between inlet and outlet of the valve. Typical actuator models corresponding to different valve sizes are given in “Technical Data” table, whereas these models may vary depending on valve pressure class and/or valve design.

WORKING CONDITIONS ANSI B16.34				
Maximum Working Temperature °C	Maximum Body Working Pressure (bar)			
	Class 150 Material Code		Class 300 Material Code	
	GS-C25 / WCB	CF8M	GS-C25 / WCB	CF8M
-29 +38	19,6	19,0	51,1	49,6
100	17,7	16,2	46,4	42,2
200	14,0	13,7	43,8	35,7
300	10,2	10,2	38,7	31,6
400	6,5	6,5	34,5	29,1
425	5,6	5,6	28,8	28,7
500	-	2,8	-	26,8
525	-	1,6	-	25,4



BV2 pneumatic ball valve 2-pieces, flanged body overall dimensions



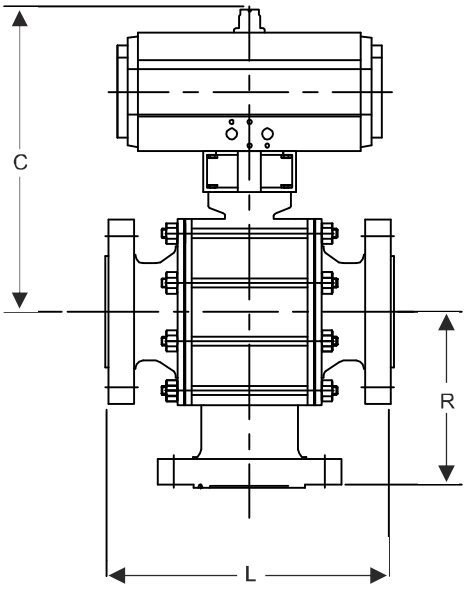
BV2 electric ball valve 2-pieces, flanged body overall dimensions

BV SERIES 2-PIECE BALL VALVES - TECHNICAL DATA

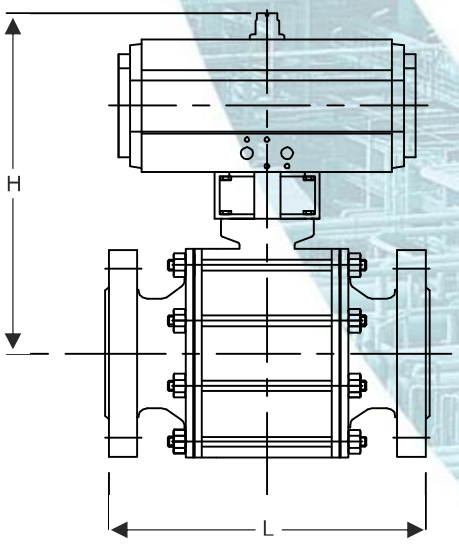
Size		Actuator Model		Installation Length			Height			Weight (kg)[7]	
DN	Inch	Pneumatic	Electric	L (mm)[1]	L (mm)[2]	L (mm)[3]	H (mm)[4]	H (mm)[5]	C (mm)[6]	A1[4]	A2[5]
15	1/2"	PA40	EA52	115	108	140	200	376	170	5	10
20	3/4"	PA40	EA52	120	118	152	205	378	170	6	15
25	1"	PA40	EA52	125	127	165	210	384	170	7	15
32	1 1/4"	PA50	EA52	130	140	178	230	394	170	15	20
40	1 1/2"	PA50	EA52	140	165	190	235	400	170	15	20
50	2"	PA63	EA67	150	178	216	240	409	170	15	20
65	2 1/2"	PA63	EA67	170	190	241	275	439	170	20	25
80	3"	PA80	EA102	180	203	283	325	550	170	20	25
100	4"	PA90	EA202	190	229	305	340	665	170	35	40
125	5"	PA110	EA502	325	356	381	415	685	250	65	80
150	6"	PA125	EA502	350	394	403	435	708	250	70	85
200	8"	PA150	EA702	400	457	502	510	779	250	110	120
250	10"	PA175	EA1002	450	534	568	560	815	250	205	210
300	12"	PA200	EA1002	500	610	648	650	915	250	330	320

*Weights may differ depending on design

(1) : PN16 / 25 / 40 body standards
(2) : ANSI 150 body standard
(3) : ANSI 300 body standard
(4) : With pneumatic actuator
(5) : With electric actuator
(6) : Clearance to remove actuator cover
(7) : Weights may differ depending on design



BV3 pneumatic ball valve
flanged body overall dimensions



BV2 pneumatic ball valve 3-piece,
flanged body overall dimensions

BV SERIES 3-PIECE PNEUMATIC BALL VALVES - TECHNICAL DATA

Size		Actuator Model	Height	Installation Length							Weight[6] (kg)
DN	Inch		H (mm)	L (mm)[1]	L (mm)[2]	L (mm)[3]	L (mm)[4]	L (mm)[5]	R (mm)[1]	R(mm)[4]	
15	1/2"	PA40	170	130	130	130	108	140	65	65	5
20	3/4"	PA40	175	150	150	150	118	152	75	70	6
25	1"	PA40	180	160	160	160	127	165	80	75	7
32	1 1/4"	PA50	190	180	180	180	140	178	90	80	10
40	1 1/2"	PA50	195	200	200	200	165	190	100	90	11
50	2"	PA63	205	230	230	230	178	216	115	110	17
65	2 1/2"	PA63	230	290	290	290	190	241	145	115	23
80	3"	PA80	300	310	310	310	203	283	155	140	35
100	4"	PA90	320	350	350	350	229	305	175	145	50
125	5"	PA110	395	400	400	400	267	403	175	155	78
150	6"	PA125	415	350	450	-	267	403	-	-	105
200	8"	PA150	510	400	550	-	292	419	-	-	180
250	10"	PA175	595	450	650	-	330	457	-	-	300
300	12"	PA200	770	500	-	-	-	-	-	-	350

*Weights may differ depending on design

(1) : PN16 body standart
(2) : PN25 body standart
(3) : PN40 body standart
(4) : ANSI 150 body standart
(5) : ANSI 300 body standart
(6) : Weights may differ depending on design



BV2 pneumatic ball valve
2-piece, flanged body

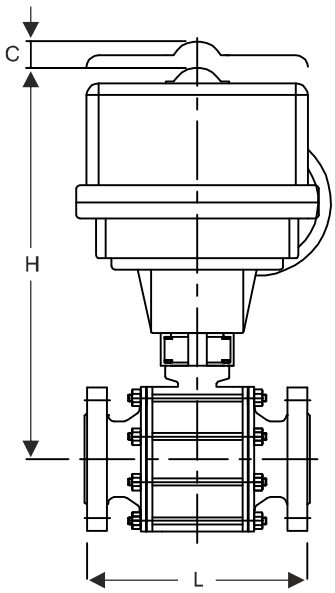


BV2 pneumatic ball valve
3-piece, threaded body

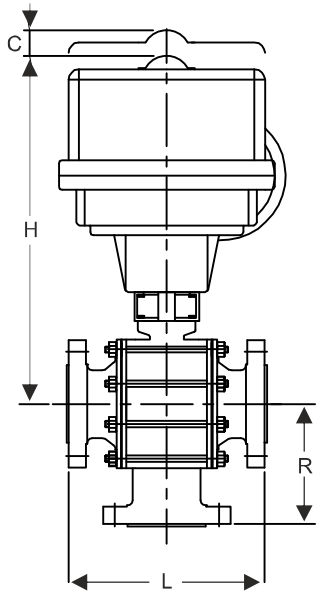
PNEUMATIC BALL VALVES ORDERING CODE

Model	Design	Body Material	Size	Connections	Ball Material	Actuator	Control Mode	Options
ecoflo®	**BV2** : 2-Way	**0** : AISI316	15	**W** : Wafer	**0** : AISI316	**H** : Hand Wheel	**0** : On-Off	**0** : None
	BV3 : 3-Way	**01** : St. Steel, PTFE Coated	20	**0** : Welded	**6** : AISI 304	**PA40**	**PP** : P/P Positioner	**L** : Manual Operation (lever)
	VBV : V-Ball	**1** : Bronze	25	**1** : Threaded	**7** : PVC	**PA50**	**IP** : I/P Positioner	**GB** : Manual Override (gearbox)
		3 : GG-25 Cast Iron	32	**F0** : Flanged PN10	**X** : Other	**PA63**		**SA** : Single Acting
		4 : GGG40/50 Ductile Iron	40	**F1** : Flanged PN16		**PA80**		**NO** : Normally Open
		5 : GS-C25 / WCB Cast Steel	50	**F2** : Flanged PN25		**PA90**		**LS2** : 2 Limit Switches
		51 : Steel, PTFE Coated	65	**F3** : Flanged PN40		**PA110**		**PT** : V/mA feedback
		6 : AISI 304	80	**F4** : Flanged ANSI 150		**PA125**		**SV32** : 3/2-way Air Solenoid valve
		7 : PVC	100	**F5** : Flanged ANSI 300		**PA150**		**SV52** : 5/2-way Air Solenoid valve
		X : Other	125	**SF** : Special		**PA175**		**SVN32**: 3/2 Namur Type Air Solenoid Valve
			150	**X** : Other		**PA200**		**SVN52**: 5/2 Namur Type Air Solenoid Valve
			200			**PA250**		**MS** : Metal Seated
			250			**PA300**		**X** : Other
			300			**PA350**		
						SRA : Special Type		

Sample ordering code: *ecoflo*-**BV2**-0-15-1-PA40-0-0-LS2 (2-way pneumatic ball valve, AISI316 body and ball, DN 15 (1/2") threaded connections, with PA40 actuator, on-off operation, with 2 limit switches)



BV2 electric ball valve 3-piece, flanged body overall dimensions



BV3 electric ball valve flanged body overall dimensions

BV SERIES 3-PIECE ELECTRIC BALL VALVES - TECHNICAL DATA

Size		Actuator Model	Height		Installation Length							Weight[7] (kg)
DN	Inch		H (mm)	C (mm)[1]	L (mm)[2]	L (mm)[3]	L (mm)[4]	L (mm)[5]	L (mm)[6]	R (mm)[2]	R(mm)[5]	
15	1/2"	EA52	350	170	130	130	130	108	140	65	65	10
20	3/4"	EA52	360	170	150	150	150	118	152	75	70	11
25	1"	EA52	370	170	160	160	160	127	165	80	75	12
32	1 1/4"	EA52	390	170	180	180	180	140	178	90	80	14
40	1 1/2"	EA52	400	170	200	200	200	165	190	100	90	15
50	2"	EA67	415	170	230	230	230	178	216	115	110	20
65	2 1/2"	EA67	425	170	290	290	290	190	241	145	115	26
80	3"	EA102	465	170	310	310	310	203	283	155	140	38
100	4"	EA202	490	170	350	350	350	229	305	175	145	55
125	5"	EA502	650	250	400	400	400	267	403	175	155	100
150	6"	EA502	680	250	350	450	-	267	403	-	-	120
200	8"	EA702	735	250	400	550	-	292	419	-	-	195
250	10"	EA1002	780	250	450	650	-	330	457	-	-	205
300	12"	EA1002	850	250	500	-	-	-	-	-	-	315

(1) : Clearance to remove actuator cover
(2) : PN16 body standart
(3) : PN25 body standart
(4) : PN40 body standart
(5) : ANSI 150 body standart
(6) : ANSI 300 body standart
(7) : Weights may differ depending on design



BV2 electric ball valve
reduced bore, flanged body



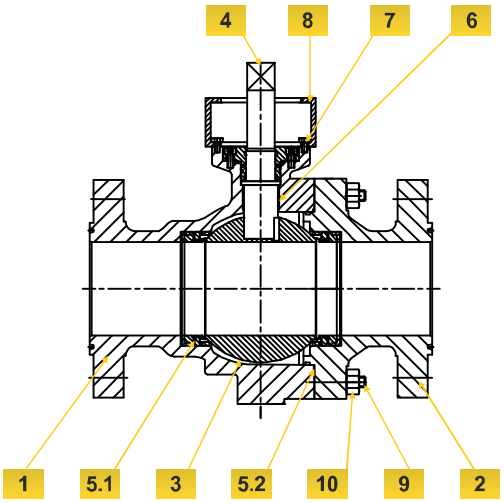
BV3 3-way electric ball valve
reduced bore, flanged body

ELECTRIC BALL VALVES ORDERING CODE

Model	Design	Body Material	Size	Connections	Ball Material	Actuator	Control Mode	Options
ecoflo®	**BV2** : 2-Way	**0** : AISI316	15	**W** : Wafer	**0** : AISI316	**EA20** : (20 N.m)	**0** : On-Off	**0** : None
	BV3 : 3-Way	**01** : St. Steel, PTFE Coated	20	**0** : Welded	**6** : AISI 304	**EA35** : (35 N.m)	**1** : Linear/Equal % Floating Cont.	**GB** : Potentiometer Feedback
	VBV : V-Ball	**1** : Bronze	25	**1** : Threaded	**7** : PVC	**EA52** : (52 N.m)	**2** : Linear/Equal % 4-20 mA	**PT** : V /mA feedback
		3 : GG-25 Cast Iron	32	**F0** : Flanged PN10		**EA60** : (60 N.m)	**3** : Linear/Equal % 2-10 VDC	**LS1** : 1 Limit Switch
		4 : GGG40/50 Ductile Iron	40	**F1** : Flanged PN16		**EA67** : (65 N.m)		**LS2** : 2 Limit Switches
		5 : GS-C25 / WCB Cast Steel	50	**F2** : Flanged PN25		**EA100** : (100 N.m)		**MS** : Metal Seated
		51 : Steel, PTFE Coated	65	**F3** : Flanged PN40		**EA102** : (130 N.m)		**X** : Other
		6 : AISI 304	80	**F4** : Flanged ANSI 150		**EA202** : (250 N.m)		
		7 : PVC	100	**F5** : Flanged ANSI 300		**EA502** : (500 N.m)		
		X : Other	125	**SF** : Special Flange		**EA702** : (700 N.m)		
			150	**X** : Other		**EA1002** : (1000 N.m)		
			...			**(r) AB**		
			300			**SRA** : Special Type		

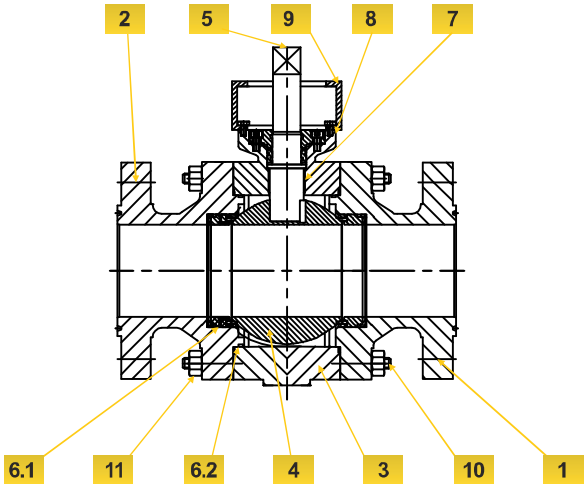
Sample ordering code: *ecoflo*-**BV2**-0-25-F1-0-EA20-0-0-LS2 (electric 2-way ball valve, AISI316 body and ball, DN 25 PN16 flanged connections, with EA 20 actuators, on-off operation, with 2 limit switches)

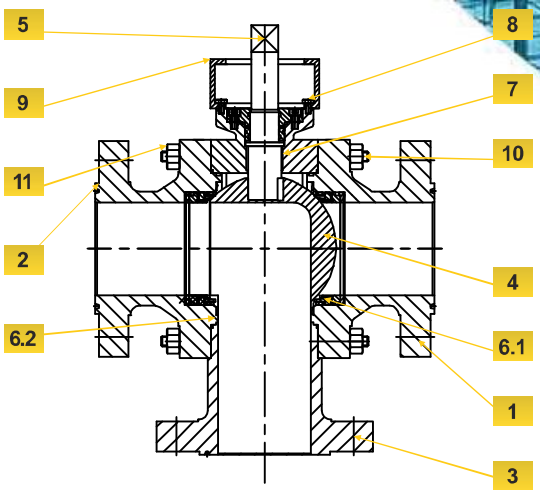
2-PIECE DESIGN



Part No	Part Name	Material
1,2	Left Body, Right Body	GG-25, GGG-40/50, GS-C25, WCB AISI304 / 316
3	Ball	AISI304 / 316
4	Shaft	AISI316
5,1	Ball Seats	PTFE, METAL
5,2	Body Seat	PTFE
6	Packing	PTFE
7	Gland	C.STEEL / ST. STEEL
8	Mounting Bracket	C.STEEL / AISI304
9,10	Body Bolts & Nuts	C.STEEL / AISI304

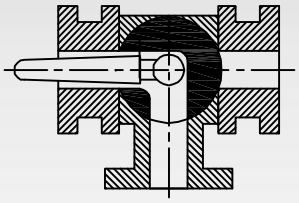
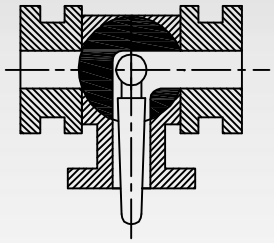
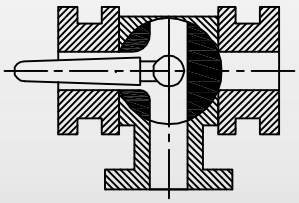
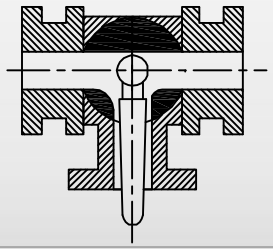
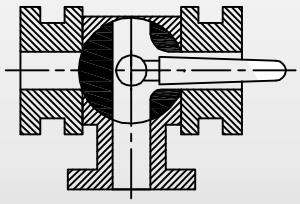
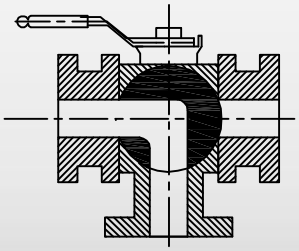
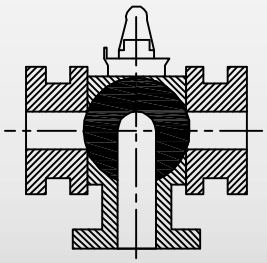
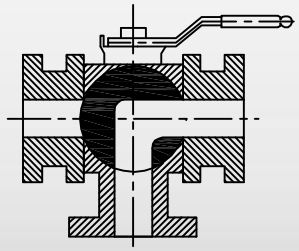
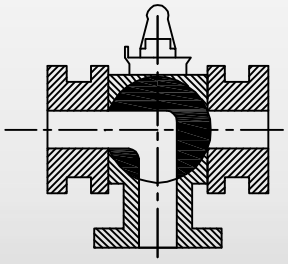
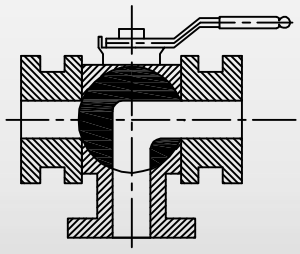
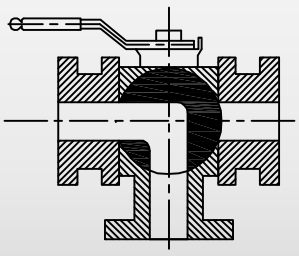
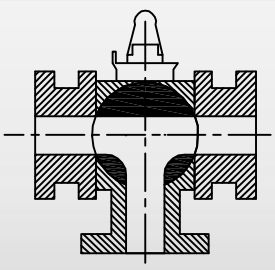
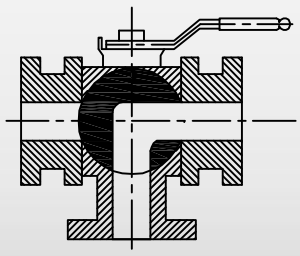
3-PIECE DESIGN





Part No	Part Name	Material
1, 2, 3	Outer Body, Outer Body, Center Body	GG-25, GGG-40/50, GS-C25, WCB, AISI304 / 316,
4	Ball	AISI304 / 316
5	Shaft	AISI316
6,1	Ball Seats	PTFE, METAL
6,2	Body Seats	PTFE
7	Packing	PTFE
8	Gland	C. STEEL / AISI304
9	Mounting Bracket	C. STEEL / AISI304
10. 11	Body Bolts & Nuts	C. STEEL / AISI304

FLOW SCHEMATICS FOR 3-WAY VALVES

	Position 1	Position 2	Position 3
Schematic 1 90° L-port horizontal			
Schematic 2 180° T-port horizontal			
Schematic 3 180° L-port horizontal			
Schematic 4 90° L-port vertical			
Schematic 5 180° T-port vertical			



İzmir Serbest Bölgesi (Izmir Free Zone), Menekşe Sok. No: 8 Menemen, Izmir, Türkiye
T : 0 (232) 842 6160 - F : 0 (232) 842 6171 www.egecontrols.com

EGE
ENDÜSTRİYEL KONTROL