



Operation Instruction

■ Actuators ■ Positioner ■ Limit Switch



About us

"Metflow Engineers" (An ISO 9001- 2015 Co.) fast growing company and we focused to provide complete valve automation solution under one roof in pneumatic actuators as well as in electrical actuators with optional function as per client's requirement.

We have decade of experience in valve automation and we understand the client's requirement and provide the solution with low budget and high performance quality of valves and automation with guarantee of each products.

Our company is helping our customers with their valve automation requirement. Our automation product for valves are Pneumatic actuators, Electrical Actuators, Electro Pneumatic Valve positioner, Limit Switches and solenoid valve and our valve automation products are Pneumatic / Electrical Actuator operated Ball valves, Butterfly valves, Plug valves and Damper valve in different MOC with different end connection with different pressure rating.

Our all products are CE certified and we assure the quality to manufacture products as per national and international standards.

Vision

To be the leader in industrial valve automation globally.

Mission

Long lasting business relation with customer.

Providing technical online support through experienced team.

Day by day development in customized product to serve better.

To expand our network to provide quick and efficient local support.

Why Metflow ?

1. Prompt technical support by understanding of customer's need.
2. On time delivery.
3. Competitive price for best quality products.
4. International standards and CE, DAC, ROHS, IAF certification.
5. Decades of experience in valve automation.
6. Complete valve automation in pneumatic as well as electrical actuators.
7. Joining new customer globally.
8. Customized solution provider.

Quality Policy

"Metflow Engineers" launched high technological product like pneumatic / electrical actuator operated ball valve, butterfly valve, plug valve and damper valve and accessories like limit switch, positioner and solenoid valve etc.

We strive enhance customer satisfaction through high quality product delivered to customer through quality management system as per ISO 9001:2015 standards.

We compliance all statutory and regulatory requirements as well as customer requirement fulfilment.

Pneumatic Actuator

"Metflow Engineers" offers ISO 5211 pneumatic double acting / single acting actuator for 90 degree / 180 degree and 3 position actuator.

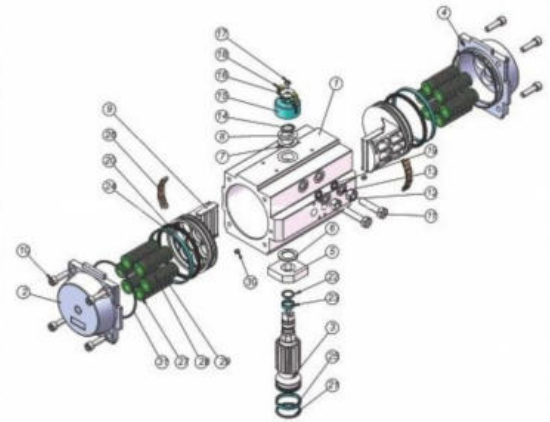
Features :

1. Indicator : The Indicator confirms to the VID/VIE3845 Namur Standard, which is convenient for installing limit switch, positioner and other accessories.
2. Output Shaft : The design of the one-body forging and pressing output shaft on nickel – plated alloy steel is in accordance with Namur, ISO 5211 and DIN 3337 standard.
3. Cylinder Block : It is made of high quality aluminium alloy extrusion, the surface is coated with hard arodc oxidation and Teflon coating.
4. End cover : Aluminium alloy die casting, surface with anodic hardening treatment and metal polyester coating.
5. Piston : Cast Aluminium with hard oxidation
6. Adjustment BOLT : Two independent adjustment bolt realize accurate adjustment within +-5 of the angle of the valve opening and closing.
7. Piston Ring : Use low friction and long life composite material, convenient repair and replace.
8. Seal : Use nitrile rubber under normal temperature, special seal is available according to the customer's requirement of high temperature and low temperature.
9. Air Conection : It complies with Namur Standard and can be directly mounted with NAMUR standard solenoid valve.



Item No.	Part Description	Material Quality	QTY
1	Body	Aluminium alloy	1
2	Left End Cap	Aluminium alloy	1
3	Drive Shaft	Alloy Steel	1
4	Right end cap	Aluminium alloy	1
5	OCTI-CAM	Alloy Steel	1
6	Thrust bearing (pinion top)	POM+PTFE	1
7	Thrust bearing	POM+PTFE	1
8	Thrust washer	Stainless steel	1
9	Piston	Aluminium alloy	2
10	Cap screw	Stainless steel	8
11	Stop top screw	Stainless Steel	2
12	Nut (stop screw)	Stainless Steel	2
13	Washer (stop screw)	Stainless Steel	2
14	Spring clip	Spring steel	1
15	Position indicator	Nylon	1
16	Indicator thrust bearing	Stainless steel	1

Item No.	Part Description	Material Quality	QTY
17	Cap screw	Stainless steel	1
18	Colour code	Nylon	2
19	"o" ring (stop screw)	NBR	2
20	"o" ring (piston)	NBR	2
21	"o" ring (pinion bottom)	NBR	1
22	"o" ring (pinion top)	NBR	1
23	Bearing (pinion top)	POM+PTFE	1
24	Bearing (pinion head)	POM+PTFE	2
25	Bearing (pinion bottom)	POM+PTFE	1
26	Wear band	Nylon	2
27	Spring seat	Nylon	24
28	Spring	High-carbon steel	12
29	Straining beam	Copper pipe	12
30	Plug	NBR	2
31	"o" ring (end cap)	NBR	2



OUTPUT TORQUE

Double acting output torque (nm)

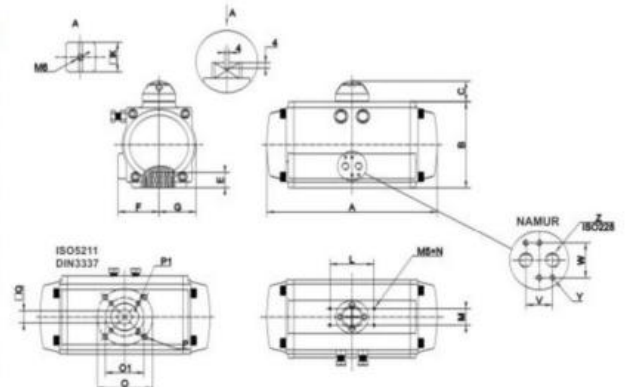
Model	2.0 Bar	2.5 Bar	3.0 Bar	4.0 Bar	4.5 Bar	5.0 Bar	5.5 Bar	6.0 Bar	7.0 Bar	8.0 Bar
PT052D	8	10	12	16	18	20	22	24	28	32
PT063D	15	18	22	29	33	36	40	44	51	58
PT075D	20	25	30	40	45	50	55	60	70	80
PT083D	31	39	47	63	70	78	86	94	111	125
PT092D	45	56	68	90	102	113	124	135	158	181
PT105D	66	83	99	132	149	165	182	198	231	264
PT125D	100	125	150	200	226	251	276	301	351	401
PT140D	171	214	256	342	385	427	470	513	596	684
PT160D	266	332	399	532	598	665	731	798	931	1064
PT190D	420	532	638	851	958	1064	1170	1277	1490	1702
PT210D	532	665	798	1064	1197	1330	1463	1596	1862	2128
PT240D	769	962	1154	1539	1731	1924	2116	2308	2693	3078
PT270D	1170	1462	1750	2339	2632	2924	3216	3509	4094	4579
PT300D	1526	1908	2289	3052	3434	3815	4197	4578	5341	6104
PT350D	2285	2856	3427	4570	5141	5712	6283	6854	7997	9139
PT400D	3256	4070	4884	6512	7326	8140	8954	9768	11396	13024

Single Action Output Torque (Spring Return) (Nm)

Actuator Model	Spring Quantity	Air Pressure Torque													
		4 Bar		5.0 Bar		6.0 Bar		7.0 Bar		8.0 Bar		Spring Return Torque			
		0° Start	90° End	0° Start	90° End	0° Start	90° End	0° Start	90° End	0° Start	90° End	0° Start	90° End		
PT052S	10	7.4	3.6	11.5	6.7	15.5	11.6	19.5	15.6	/	/	/	/	12.4	8.5
PT063S	10	1.4	8.2	22.8	15.6	30	22.8	37.3	30.1	44.7	37.4	20.9	37.4	20.9	13.7
PT075S	10	19	11.1	28.8	21.2	39	31.2	49.1	41.2	59.1	51.2	29	21.1		
PT083S	10	31	16.6	46.7	32.3	62.4	48	78.1	63.7	93.8	79.3	46	31.6		
PT092S	10	43.6	21.5	66.2	44.1	88.8	66.7	111.3	89.2	134	11.8	68.7	46.7		
PT105S	10	68.9	33.4	102	66.5	135.1	99.6	161.8	123.1	201.2	165.7	98.4	63.3		
PT125S	10	96	44	146	94	196	144	247	194	297	245	157	105		
PT140S	10	170	84	226	169	314	255	427	340	512	426	258	172		
PT160S	10	253	115	386	248	519	381	652	514	785	647	417	279		
PT190S	10	451	233	664	446	877	658	1090	871	1302	1084	618	400		
PT210S	10	514	304	780	570	1046	836	1312	1102	1578	1368	760	550		
PT240S	10	718	431	1103	816	1488	1201	1872	1586	2257	1970	1108	821		
PT270S	10	1220	767	1805	1352	2390	1937	2974	2521	3560	3107	1572	1119		
PT300S	10	1430	695	2355	1693	2956	2221	3719	2984	4482	3747	2122	1460		
PT350S	10	1963	787	3105	1929	4247	3071	5390	4214	6532	5356	3405	2346		
PT400S	10	3012	1025	4640	2653	6268	4281	7895	5908	9523	7536	4938	3149		

Dimensions and Connection (mm)

Model	PT052	PT063	PT075	PT083	PT092	PT105	PT125	PT140	PT160	PT190	PT210	PT240	PT270	PT300	PT350	PT400
ISO Flange	F03/F05	F05/F07	F05/F07	F05/F07	F07/F10	F07/F10	F10/F12	F10/F12	F14	F14	F16	F16	F15	F16/F25	F16/F25	F16/F25
A	154	176	188	211	244	277	310	394	458	523	526	602	718	780	920	940
B	73	89	101	110	118	135	157	175	198	232	257	289	326	350	410	466
C	25	25	25	25	25	25	39	39	39	39	39	39	39	39	39	39
E	13	17	17	20	20	25	27	30	30	38	38	50	50	50	50	50
F	41	47	53	57	60	64	75	75	86	103	113	130	147	174	195	260
G	30	36	43	47	50	58	67	75	86	103	113	130	147	162	190	260
L	80	80	80	80	80	80	80	130	130	130	130	130	130	130	130	130
M	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30
N	4-M5x9	4-M5x9	4-M5x9	4-M5x9	4-M5x9	4-M5x9	4-M5x9	4-M5x9	4-M5x9	4-M5x9	4-M5x9	4-M5x9	4-M5x9	4-M5x9	4-M5x9	4-M5x9
O	50	70	70	70	102	102	102	125	125	140	140	165	165	165	254	254
P	4-M8x9	4-M8x12	4-M8x12	4-M8x12	4-M10x15	4-M10x15	4-M12x18	4-M12x18	4-M16x24	4-M16x24	4-M20x25	4-M20x25	4-M20x25	4-M20x25	4-M20x25	4-M20x25
Q1	36	50	50	50	70	70	70	102	102	—	—	—	—	165	165	—
P1	4-M5x8	4-M6x9	4-M6x9	4-M6x9	4-M8x12	4-M8x12	4-M8x12	4-M8x15	—	—	—	—	—	4-M20x25	4-M20x25	—
Q	11	14	14	17	17	22	22	27	27	36	36	46	46	46	46	46
V	24	24	24	24	24	24	24	24	24	24	24	24	40	40	40	40
W	36	36	36	36	36	36	36	36	36	36	36	45	45	45	45	45
Y	4-M5x9	4-M5x9	4-M5x9	4-M5x9	4-M5x9	4-M5x9	4-M5x9	4-M5x9	4-M5x9	4-M5x9	4-M5x9	4-M6x10	4-M6x10	4-M6x10	4-M6x10	4-M6x10
Z	G1/4"	G1/4"	G1/4"	G1/4"	G1/4"	G1/4"	G1/4"	G1/4"	G1/4"	G1/4"	G1/4"	G1/4"	G1/2"	G1/2"	G1/2"	G1/2"



Electrical Actuators

PRODUCT DETAILS

PTL Series are compact, intelligent quarter turn electric actuators for the accurate control of valves with torques up to 2000 N.m. PTL is designed for on/off or modulating control of butterfly, ball, rotary plug valves or dampers in a wide range of heavy industrial, chemical and petrochemical plants, water treatment plants, on and offshore. It can be driven by 380V/110V AC power or 24V/110V DC power, inputs 4-20 mA current signal or 0-10V DC voltage signal as control signal. (CE certificate approved).



On / Off Actuator



Modulating Electric Actuator

Actuator Cover	Aluminium alloy, waterproof level: IP67, or NEMA 4/6
Power supply	110/220V AC, 1 Phase; 380/440V AC, 3 Phase; 50/60 HZ, $\pm 10\%$
Power supply of Control	110/220V AC, 1 Phase; 50/60HZ, $\pm 10\%$
Motor	Squirrel-cage Asynchronous Motor
Limit Switch	2" on/off, SPDT, 250V AC, 10A
Auxiliary Limit Switch	2" on/off, SPDT, 250V AC, 10A
Stroke	90° $\pm 10^\circ$ Option: 0°-270°
Failure Protection Temperature	Internal thermal protection; On: 120°C + 5°C, off: 97°C $\pm 15^\circ\text{C}$
Indicator	Continuous position indicate
Manual Operation	Mechanical handle (option: handwheel)
Self-lock Device	Self-lock by worm and worm gear
Mechanical Limit	External adjusting bolts (2 pieces)
Heater and Thermostat	7-10W (110/220V AC), Anti-condensation
Connecting hole	M18 (2pieces)
Ambient Temperature	-20°C ~+70°C
Lubrication	Aluminum-base grease (EP, type)
Material	Steel, Aluminum alloy, Aluminum bronze, Poly carbonate
Ambient Humidity	Max 90% RH
Anti-vibration	X Y Z 10g, 0.2-34HZ, 30 minutes
External Coating	Dry powder, Epoxy polyester

TECHNICAL DATA

Model	Max output torque	Operating time to 90°C		Motor (W)		Single-phase rated current (A)					Weight Kg	
		AC	DC	AC	DC	AC110V	AC24V	AC220V	AC380V	DC24V		DC220V
PTL-003	30	30	/	8	/	/	/	0.2	/	/	/	2.1
PTL-005	50	30	10	10	15	2.2	0.48	0.24	0.15	1.2	0.15	3.4
PTL-010	100	30	10	16	25	3	0.64	0.32	0.25	1.6	0.2	4.6
PTL-015	150	30	10	23	25	3.8	0.68	0.35	0.25	1.6	0.2	4.6
PTL-020	200	30	15	40	40	5	0.9	0.48	0.25	2.6	0.3	11
PTL-040	400	30	15	60	60	5	0.9	0.48	0.25	2.6	0.3	11.8
PTL-060	600	30	15	90	70	8.5	2	0.92	0.45	4.5	0.5	12
PTL-100	1000	40	25	130	100	9	2.2	1	0.48	5.0	0.6	12.5
PTL-200	2000	40	25	160	100	9.8	2.6	1.1	0.51	5.0	0.6	12.5

OHQ Series are explosion-proof, intelligent quarter turn electric actuators for the accurate control of valves with torques upto 2000 N.m. OHQ explosion-proof is designed for on/off or modulating control of butterfly, ball, rotary plug valves or dampers in a wide range of heavy industrial, chemical and petrochemical plants, on and offshore. It can be driven by 380V/220V/110V AC power or 24V/110V DC power, inputs 4-20mA current signal or 0-10V DC voltage signal as control signal (CE and EX certificates apprc



On / Off type



Intelligent control type



Modulating type

TECHNICAL DATA

Model	Max output torque	On-Off time 60/50HZ	MAX bore size	F-class Motor	Rated Current (A) 50HZ				Handwheel Turn	Weight Kg
					Single Phase		Three Phase			
					110V	220V	380V	440V		
OHQ-005	50	18/22	φ20	20	1.10/0.95	0.55/0.54	0.3/0.3	N/A	10	7.5
OHQ-010	100	18/22	φ20	20	1.10/0.95	0.55/0.54	0.3/0.3	N/A	10	7.5
OHQ-015	150	21/25	φ22	40	1.67/1.67	0.89/0.85	0.31/0.31	0.30/0.31	11	17.3
OHQ-020	200	21/25	φ22	40	1.67/1.67	0.89/0.85	0.31/0.31	0.30/0.31	11	17.3
OHQ-040	400	26/31	φ35	90	1.85/1.86	0.92/0.92	0.35/0.35	0.34/0.34	13.5	22
OHQ-060	600	26/31	φ35	120	3.65/3.62	1.60/2.20	0.60/0.59	0.59/0.58	13.5	23
OHQ-080	800	31/37	φ45	180	4.10/4.10	2.15/2.20	0.85/0.85	0.79/0.79	16.5	29
OHQ-120	1200	31/37	φ45	180	4.20/4.10	2.35/2.30	0.87/0.87	0.81/0.81	16.5	29
OHQ-200	2000	93/112	φ65	180	4.10/4.10	2.15/2.20	0.85/0.85	0.79/0.79	49.5	75



Multi turn Linear Actuator for Gate Valve, Globe Valve, Knife edge Gate Valve

Actuator Cover	Waterproof level IP67/68 or NE/MA 4/6	
Motor	Squirrel-cage Asynchronous Motor	
Limit Switch	1 * on/off, SPDT, 250VAC 10A	
Auxiliary Switch Set	1 * on/off, SPDT, 250VAC 10A	
Torque Switch	1 * on/off, SPDT, 250VAC 10A	Except OHQ-005/OHQ-010
Stroke	90° $\pm 10^\circ$	Option 0°-270°
Failure Protection Temperature	Internal thermal protection; On 115°C $\pm 5^\circ\text{C}$, off: 97°C $\pm 5^\circ\text{C}$	
Indicator	Continuous position indicator	
Manual Operate	Mechanical clutch, operate with handwheel	
Self-lock Device	Self-lock by worm and worm gear	
Mechanical Stops	External adjusting bolts (2 piece)	
Heat and Thermostat	7-10W (110/220V AC)	
Connecting hole	PF 3/4" (2 pieces)	
Ambient Temperature	-20°C ~+70°C	
Lubrication	Aluminum-base grease (EP type)	
Material	Steel, Aluminum alloy, Aluminum bronze, Polycarbonate	
Ambient Humidity	Max 90% RH	
Anti-vibration	X Y Z 10g, 0.2-34HZ, 30 minutes	
External Coating	Dry powder, Epoxy polyester, high anti-corrosion	

YT-1000 Electro-Pneumatic Valve Positioner

GENERAL

The YT-1000 Series Positioner, mounted on a pneumatic actuator, moves the actuator by receiving DC 4~20mA signals from a controller. Also the function of detecting and returning the actuator displacement provides accurate positioning in response to DC 4~20mA signals.

The YT-1000 Series Electro-pneumatic positioner can be used with both spring return and double acting actuators.

FEATURES

- High anti-vibration (non effective in 5~200Hz)
- The linking of air duct is perforated form, convenient for the linking in all direction.
- Convenient for the transform of positive action and counteraction.
- 1/2split range available by simple adjustments without changing parts.
- Simple structure for feedback connection.
- Economical energy saving.



YT-1000R+DOME+PTM



YT-1000R+DOME



YT-1000R+L/S (ext.)+PTM



YT-1000R+PTM (ext.)

TECHNICAL DATA

Description	Model	YT-1000L		YT-1000R	
		Linear		Rotary	
		Single	Double	Single	Double
Input signal		4~20mA DC			
Impedance		250 ± 15Ω			
Supply pressure		1.4~77kgf/cm ² (20~100psi)			
Stroke		10~150 mm		0~90°	
Air connection		PT (NPT)1/4			
Gauge connection		PT (NPT)1/8			
Conduit		PF1/2 (G1/2)			
Explosion proof		Exdm II B(C)T6 Exia II BT6			
Protection		IP66			
Ambient temperature		-20°C~70°C(-4~158°F)			
Linearity		±1%F.S. ±2%F.S.			
Hysteresis		±1%F.S.			
Sensitivity		±0.2%F.S. ±0.5%F.S.			
Repeatability		±0.5%			
Air consumption		3LPM (Sup=1.4kgf/cm ² , 20psi)			
Flow capacity		80LPM (Sup=1.4kgf/cm ² , 20psi)			
Material		Aluminum alloy			
Weight		2.7kg (6lb)		2.8kg(6.2lb)	

ORDERING SYMBOLS

YT-1000 ■ ■ ■ ■ ■

	Actuator	Acting type	Explosion proof	Lever type		Pilot valve vent	Option
				Linear	Rotary		
YT-1000	L Linear	S Single	M Exdm II BT6	① 10~40mm	① M6x40L	① < 90cm ²	(0)None
		D Double	C Exdm II CT6	② 40~70mm	② M6x63L	② 90~180cm ²	①+PTM(Internal)
	R Rotary		I Exia II BT6	③ 70~100mm	③ M8x40L	③ > 180cm ²	②+PTM(External)
			N Non-Explosion	④ 100~130mm	④ M8x63L		③+L/S(Internal)
				⑤ 130~150mm	⑤ NAMUR		④NAMUR ⑤+PTM+L/S(Internal)



Compact Electro Pneumatic Valve Positioner



Linear Electro Pneumatic Valve Positioner



Smart Positioner



METFLOW ENGINEERS
THE COMPLETE SOLUTION

Email: metflowengineers@gmail.com

Valve Position Monitor APL-2, 3, 4, 5N Series

FEATURES

- Solid and flexible design
Aluminum die-casting housing and powder coating.
- Bolts on visual position indicator
- Quick-view
Spring loaded splined cam.
No need to adjust again after initial setting.
Easy setting without tool
- Dual cable entries
No worry to loose bolts while cover open.
Spring loaded cover bolts (APL-5N)
- Easy mounting bracket
NAMUR standard stainless steel shaft and bracket.



APL-2N



APL-3N



APL-4N



APL-5N

STANDARD SPECIFICATION

Model	APL-2N Series	APL-3N Series	APL-4N Series	APL-5N Series
Enclosure	Weatherproof IP67/NEMA4 & 4X	Weatherproof IP67/NEMA4 & 4X	Weatherproof IP67/NEMA4 & 4X Explosionproof E EX d IIB T6	Weatherproof IP67/NEMA4 & 4X Explosionproof E EX d IIC T6
Cable entries	Two NPT 1/2"	Two NPT 1/2"	Two NPT 3/4"	Two NPT 3/4"
Ambient temperature	-20°e 80 °C	-20°e 80 °C	-20°e 80 °C	-20°e 80 °C
Terminal strips	8 points (0.08-2.5mm ²)	8 points (0.08-2.5mm ²)	8 points (0.08-2.5mm ²)	8 points (0.08-2.5mm ²)
Position indicator	0 ~ 90 (90 turn free join) closed : red open : yellow	0 ~ 90 (90 turn free join) closed : red open : yellow	0 ~ 90 (90 turn free join) closed : red open : yellow	0 ~ 90 (90 turn free join) closed : red open : yellow
Switches	Mechanical switch x2 proximity sensor x2	Mechanical switch x2 proximity sensor x2	Mechanical switch x2 proximity sensor x2	Mechanical switch x2 proximity sensor x2
Painting	Chromate Polyester powder coating (black)	Chromate Polyester powder coating (black)	Chromate Polyester powder coating (black)	Chromate Polyester powder coating (black)

OPTION SPECIFICATION

Model	APL-2N Series	APL-3N Series	APL-4N Series	APL-5N Series
Enclosure	Weatherproof IP68	Weatherproof IP68	Weatherproof IP68	Weatherproof IP68 Explosionproof E EX d IIB T6 Explosionproof E EX d IIC T6
Cable entries	Two PF1/2, PT1/2 M20, PG 13.5	Two PF1/2, PT1/2 M20, PG 13.5	FOUR PF3/4, PT 3/4	Two NPT 3/4 PT 3/4
Option temperature	—	-40°e 80 °C -20°e 150 °C	—	—
Terminal strips	—	16 points (0.08-2.5mm ²)	20 points (0.08-2.5mm ²)	—
Position indicator	three position closed : red open : green	three position closed : red open : green	three position closed : red open : green	three position closed : red open : green
Switches	— —	Mechanical switch x4 proximity sensor x4	Mechanical switch x4 proximity sensor x4	Mechanical switch x4 proximity sensor x4
Painting	Chromate Polyester powder coating (black)	Chromate Polyester powder coating (black)	Chromate Polyester powder coating (black)	Chromate Polyester powder coating (black)
Potentiometer	—	1k ohm. standard 5k ohm. 0-10k ohm	1k ohm. standard 5k ohm. 0-10k ohm	1k ohm. standard 5k ohm. 0-10k ohm
Current output Single unit	—	4~20mA DC 12.5 to 37VDC (24V typical)	4~20mA DC 12.5 to 37VDC (24V typical)	4~20mA DC 12.5 to 37VDC (24V typical)
Painting	Nylon others on request red, green, blue, yellow, silver	Nylon others on request red, green, blue, yellow, silver	Nylon others on request red, green, blue, yellow, silver	Nylon others on request red, green, blue, yellow, silver

Pneumatic / Electric actuator operated ball valve

MATERIALS

PART NAME	MATERIAL OPTION
Body	WCB / CF8 / CF8M / CF3M
End Connector	WCB / CF8 / CF8M / CF3M
Ball	CF8 / CF8M / CF3M
Ball Seat	PTFE / GFT
Stem Pin	AISI S.S. 304 / S.S. 316
Gland with Bush	S.S. 304
Body Seat	PTFE / CFT / GFT / PEEK / TFM
Stem Seat	PTFE / CFT / GFT / PEEK / TFM
Nut	M.S. / S.S.
Stud	M.S. / S.S.
Washer	M.S. / S.S.
Gland Fitting Bolt	S.S.
Actuator	STD

TECHNICAL STANDARDS

- Manufacturing Standard : BS 5351
- Face to Face : ANSI B16.10
- End Connection : Flanged Ends to ANSI B16.5 RF 150#
- Inspection And Testing Standard : BS 6755
- Fire Safe Design as per BS 6755 / API 607

KEY FEATURES

- Compact and simple construction provides ease in maintenance without disturbing insulations and piping.
- Easy Operation even under high pressure.
- Full circular passages.
- Easily replaceable PTFE seats & packing.
- Prolonged successful operation even under high pressure.

TEST PRESSURE 150# / 300#

TESTING	CLASS	BODY	SEAT
Hydraulic	150 #	425 psig	300 psig
Pneumatic	150 #	-----	100 psig
Hydraulic	300 #	1100 psig	800 psig
Pneumatic	300 #	-----	100 psig

DIMENSIONS

(All dimensions are in mm)

MODEL	Valve Size (MM)	Screwed L	Flanged 150#								
			L1	ØT	f	Port	ØR	ØF	ØJ	N	K:PCD
PTBV - 15	15	64	108	8	2	13	34.9	90	15.9	4	60.3
PTBV - 20	20	70	117	8.9	2	19	42.9	100	15.9	4	69.9
PTBV - 25	25	88	127	96	2	25	50.8	110	15.9	4	79.4
PTBV - 32	32	105	140	11.2	2	32	63.5	115	15.9	4	88.9
PTBV - 40	40	114	165	12.7	2	38	73	125	15.9	4	98.4
PTBV - 50	50	130	178	14.3	2	49	92.1	150	19.05	4	120.7
PTBV - 65	65	170	190	15.9	2	62	104.8	180	19.05	4	139.7
PTBV - 80	80	200	203	17.5	2	74	127	190	19.05	4	152.4
PTBV - 100	100	210	229	22.3	2	100	157.2	230	19.05	8	190.5
PTBV - 125	125	-	254	22.3	2	125	185.7	255	22.2	8	215.9
PTBV - 150	150	-	267	23.9	2	150	215.9	280	22.2	8	241.3
PTBV - 200	200	-	292	27	2	201	269.9	345	22.2	8	298.5

OPTIONAL ACCESSORY

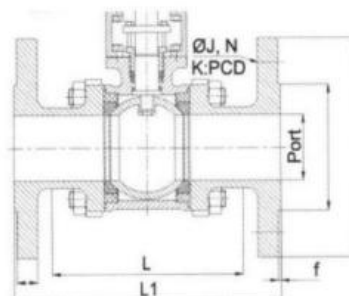
- On / Off Indicator
- Namur standard 5/2 & 3/2 way Solenoid Valve in all standard coil voltage (Flame proof solenoid coil on request)
- Pneumatic & Electro Pneumatic valve positioner.
- Decutchable manual over ride.
- Limit switch for on / off indication at panel board.
- FRL Set with pressure gauge.
- Volume Booster
- Air Lock Valve.
- Quick Exhaust Valve.

PTL MODEL ELECTRIC ACTUATOR

- Type : On / Off type
- Voltage : 24v, 36v, 110v, 220v, 380v, 415v
- Protection : IP 67
- L N Key type manual over ride.
- In Built Position monitor

Options available.

- Hand wheel type manual over ride
- Modulating type with LCD
- Intelligent control for remote/local operation
- Explosion Proof - OHQ series.



DIMENSIONS

(All dimensions are in mm)

MODEL	Valve Size (MM)	Flanged 300#									
		L1	ØT	f	Port	ØR	ØF	ØJ	N	K:PCD	
PTBV - 15	15	140	12.7	2	13	34.9	95	15.9	4	66.7	
PTBV - 20	20	152	14.3	2	19	42.9	115	19.05	4	82.6	
PTBV - 25	25	165	15.9	2	25	50.8	125	19.05	4	88.9	
PTBV - 32	32	178	17.5	2	32	63.5	135	19.05	4	98.4	
PTBV - 40	40	190	19.1	2	38	73	155	22.2	4	114.3	
PTBV - 50	50	216	20.7	2	49	92.1	165	19.05	8	127	
PTBV - 65	65	241	23.9	2	62	104.8	190	22.2	8	149.2	
PTBV - 80	80	282	27	2	74	127	210	22.2	8	168.3	
PTBV - 100	100	305	30.2	2	100	157.2	255	22.2	8	200	
PTBV - 125	125	381	33.4	2	125	185.7	280	22.2	8	235	
PTBV - 150	150	403	35	2	150	215.9	320	22.2	12	269.9	



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Pneumatic / Electric actuator operated polypropylene ball valve

MATERIALS

PART NAME	MATERIAL OPTION
Body	Polypropylene
End Connector	Polypropylene
Ball	Polypropylene
Ball Seat	PTFE
Stem Pin	S.S. 304
Body Seat	PTFE
Adapter	S.S. 304
Stem 'O' Ring	NBR
Clamp	S.S. 304
Bolt	S.S. 304
Washer	S.S. 304
Temperature	110°C
Actuator	STD

ACCESSORIES

- On / Off Indicator
- Namur standard 5/2 & 3/2 way SOV in all standard coil voltage
- (Flame proof solenoid coil on request)
- Pneumatic & Electro Pneumatic valve positioner.
- Declutchable manual over ride.
- Limit switch for on / off indication at panel board.
- FRL Set with pressure gauge.
- Volume Booster
- Air Lock Valve
- Quick Exhaust Valve

KEY FEATURES

- Light Weight
- Low Cost
- Robust Design
- Corrosion resistant



TEST PRESSURE

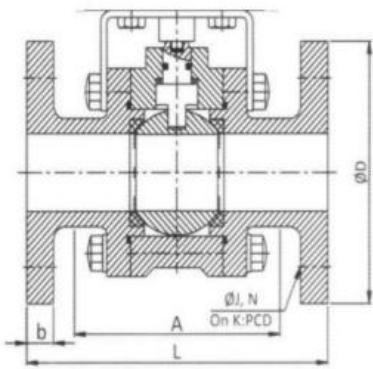
TESTING	BODY	SEAT
Hydraulic	200 PSI	150 PSI
Pneumatic		60 PSI

PTL MODEL ELECTRIC ACTUATOR

- Type : On / Off type
- Voltage : 24v, 36v, 110v, 220v, 380v, 415v
- Protection : IP 67
- L N Key type manual over ride.
- In Built Position monitor

Options available.

- Hand wheel type manual over ride
- Modulating type with LCD
- Intelligent control for remote/local operation
- Explosion Proof - OHQ series.



DIMENSIONS

(All dimensions are in mm)

MODEL	Size	Screwed	L	b	ØD	Øj	N	K-PCD
PPB - 15	15	127	130	16.5	96	15.9	4	60.3
PPB - 20	20	139	132	14.5	102	15.9	4	69.9
PPB - 25	25	150	152	18.5	121	15.9	4	79.4
PPB - 40	40	172	170	18.5	140	15.9	4	98.4
PPB - 50	50	209	209	22.5	165	19.05	4	120.7
PPB - 65	65	248	230	22.5	184	19.05	4	139.7
PPB - 80	80	250	254	24	203	19.05	4	152.4
PPB - 100	100	---	310	27	229	19.05	8	190.5
PPB - 150	150	---	477	28	305	22.5	8	241.3

Pneumatic / Electric actuator operated 3 way ball valve screwed / flanged end



MATERIALS

PART NAME	MATERIAL OPTION
Body	S.S 304 / S.S. 316
Ball	S.S. 304 / S.S. 316
Ball Seat	PTFE
Stem Pin	S.S. 304
Body Seat	PTFE
Mounting Pad :	ISO 5211
Adapter	S.S. 304
Stem 'O' Ring	Ptfe
Temperature	20°C to 85°C
End Connection	screwed / flanged / Tri Clover
Ports	L Port / T port
Size (Screwed)	15 mm to 50 mm
Size (Flanged)	15 mm to 150 mm

Pneumatic / Electric actuator operated butterfly valve

TECHNICAL STANDARDS

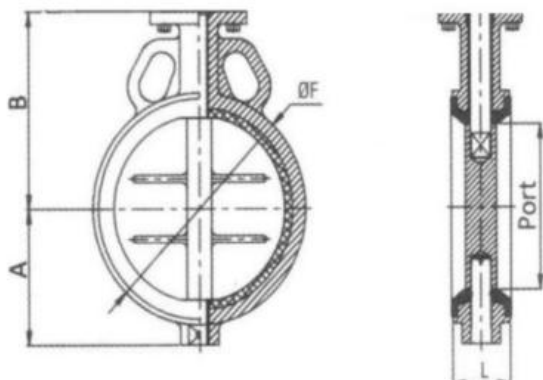
Manufacturing Standard : API 609 Category A/BS 5155 / C-504
 Face to Face : Short wafer as per ISO 5752 / API 609 Category A
 Top Flange Drilling : ISO 5211 Part II
 Inspection and Testing Standard : API 598 / BS 6755
 Flange standard conformity : ANSI 150, DIN Pn6 / 10, JIS 5K / 10K Bs10 Tab D & E, IS 6392 PN1.0/1.6

KEY FEATURES

- Integrally moulded seat liner on the body, which ensures excellent dimensional stability & guaranteed seat tightness.
- Seat liner extending on to the contact faces ensures perfect sealing and eliminates the need to separate flange gaskets.
- Narrow land disc ensures perfect sealing with least operating torque requirements.
- A fully universal body design ensures fitting of the valve between companion flanges of all popular standards (viz, ANSI, BS, DIN, JIS, IS etc.)
- The notch disc and band lever ensures locking of the valve in 8 intermediate position in addition to close and open position.
- Body casting made of superior FG 260 grade cast iron in to ensure additional strength.
- Valve disc made of stainless steel / ductile cast iron which enable protection against possible water hammer or pressure surges.
- A truly line size body bone to ensure maximum flow capacity with lowest pressure drop.

MATERIALS

PART NAME	MATERIAL OPTION
Design	Centric Disc Design Butterfly Valves
Body	CI (IS 210, Gr.FG 200/200) / ASTM A 216 WCB / ASTM A 351 CF8 / ASTM A 351 CF8M
Disc	CF 8 / CF8M / SGI
Seat	Nitrile / EPDM / Silicon
Shaft	AISI 410
Valve Type	Centric Disc Butterfly Valve with a single pcs rubber lined body.
Body Type	Short wafer (Sandwich between flanges)
Seat Type	Integral Molded with the body
End Connection	Wafer Sandwiched
Pressure Rating	PN 10 / PN 16
Oper. Temp. Range	-25°C to 120°C (Depending on Seat)
Seat leakage	Tight shut off



ACCESSORIES

- On / Off Indicator
- Namur standard 5/2 & 3/2 way SOV in all standard coil voltage (Flame proof solenoid coil on request)
- Pneumatic & Electro Pneumatic valve positioner
- Declutchable manual over ride.
- Limit switch for on / off indication at panel board
- FRL Set with pressure gauge.
- Volume Booster
- Air Lock Valve
- Quick Exhaust Valve

PTL MODEL ELECTRIC ACTUATOR

- Type : On / Off type
- Voltage : 24v, 36v, 110v, 220v, 380v, 415v
- Protection : IP 67
- L N Key type manual over ride.
- In Built Position monitor

Options available.

- Hand wheel type manual over ride
- Modulating type with LCD
- Intelligent control for remote/local operation
- Explosion Proof - OHQ series.



DIMENSIONS (All dimensions are in mm)

MODEL	Size (MM)	A	B	L	ØF	Port
PTBFV - 40	40	61	106	34	80	40
PTBFV - 50	50	65	121	44	95	50
PTBFV - 65	65	71	124	46	108	65
PTBFV - 80	80	80	130	46	124	80
PTBFV - 100	100	98.5	146.5	52	150	100
PTBFV - 125	125	112.5	162	56	186	125
PTBFV - 150	150	125	177	56	205	150
PTBFV - 200	200	152.5	202	60	258	200
PTBFV - 250	250	193	262	68	316	241
PTBFV - 300	300	218	287	78	365	286
PTBFV - 400	400	310	363	102	488	382
PTBFV - 450	450	340	388	114	540	433
LECTO - 500	500	370	425	127	600	476
LECTO - 600	600	449	495	154	695	590

Pneumatic / Electric actuator operated OFFSET disc Butterfly Valve

TECHNICAL STANDARDS

- Manufacturing Standard : Series 5150 (40NB to 600 NB) API 609 CATEGORY B
- Face to Face : API 609 Category B
- End Connection : ANSI B 16.5 # 150
- Inspection And Testing Standard : API 5985 / ANSI FCI 70-2
- Fire Safe Design : API 607
- Pressure Rating : ASME / ANSI B 16.34

KEY FEATURES

- Sleek size & space.
- Reduced Torque
- Low Weight
- Easy to maintain
- Can be used for vast range of operation.

APPLICATION

- Hygienic Powder & Slurries specially in Pharmaceutical Industries
- Chemical And Dyeing Fluids in Textile Processing
- Brine Waters & Oils
- Steam / Air / Gas Lines



DIMENSIONS

(All dimensions are in mm)

MODEL	Size (MM)	L	H	Port	ØF
PSDV - 40	40	42	57	38	82
PSDV - 50	50	45	68.5	50.8	95
PSDV - 65	65	48	74.5	60.6	108
PSDV - 80	80	48	80	72	127
PSDV - 100	100	54	96	100	159
PSDV - 125	125	57	117	123	186
PSDV - 150	150	57	132	143	217
PSDV - 200	200	64	157	192	270
PSDV - 250	250	71	187	239	322
PSDV - 300	300	81	218	290	382
PSDV - 350	350	92	242	335	436
PSDV - 400	400	102	270.5	387.5	495
PSDV - 450	450	114	362	425	540
PSDV - 500	500	127	400	475	595

ACCESSORIES

- On / Off Indicator
- Namur standard 5/2 & 3/2 way SOV in all standard coil voltage (Flame proof solenoid coil on request)
- Pneumatic & Electro Pneumatic valve positioner
- Declutchable manual over ride
- Limit switch for on / off indication at panel board
- FRL Set with pressure gauge
- Volume Booster
- Air Lock Valve
- Quick Exhaust Valve

PTL MODEL ELECTRIC ACTUATOR

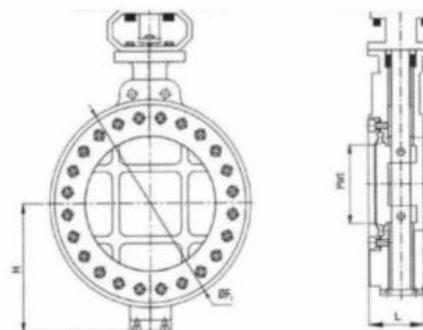
- Type : On / Off type
- Voltage : 24v, 36v, 110v, 220v, 380v, 415v
- Protection : IP 67
- L N Key type manual over ride.
- In Built Position monitor

Options available.

- Hand wheel type manual over ride
- Modulating type with LCD
- Intelligent control for remote/local operation
- Explosion Proof - OHQ series.

MATERIALS

PART NAME	MATERIAL OPTION
Design	Double Offset Disc Design
Body	WCB / CF8 / CF8M
Disc	CF8 /
Replaceable Seat	PTFE / GFT / CFT
Retainer	M.S. / S.S. 304 / 316
Shaft	S.S. 410 / S.S. 304 / 316
Gland Packing	PTFE / GFT / CFT
Retainer Bolt	Stainless Steel
Disc Pin	S.S. 304 / 316
Steam Plate	M.S. / S.S. 304 / 316
Shaft Bush	M.S. / S.S. 304 / 316
Bracket	S.S.
Plate Mounting	Namur Standard
Pressure Rating	ANSI 150 Class / ANSI 300 Class
End Connection	Wafer Sandwiched / Lug Type
Operating Temp.	-25°C to 240°C (Soft Seating) Above 240°C to 600°C On Reg. (Metal to Metal Seating)



Pneumatic / Electric actuator operated Aluminum Butterfly Valve

TECHNICAL STANDARDS

Manufacturing Standard : API 609 Category A/BS 5155 / MSS SP - 67 / C - 504

Face to Face : Short wafer as per ISO 5752 Tab 5 API 609 Category A

Top Flange Drilling : ISO 5211 Part II

Inspection and Testing Standard : API 598 / BS 6755 / FCI 70-2

Flange standard conformity : ANSI 150, DIN PN6 / 16

KEY FEATURES

- On / Off indicator
- Namur standard 5/2 & 3/2 way SOV in all standard coil voltage (Flame proof solenoid coil on request)
- Pneumatic & Electro Pneumatic valve positioner.
- Dec clutchable manual over ride.
- Limit switch for on / off indication at panel board.
- FRL Set with pressure gauge.
- Volume Booster.
- Air Lock Valve.
- Quick Exhaust Valve.

PTL MODEL ELECTRIC ACTUATOR

- Type : On / Off type
- Voltage : 24v, 36v, 110v, 220v, 380v, 415v
- Protection : IP 67
- L N Key type manual over ride.
- In Built Position monitor

Options available.

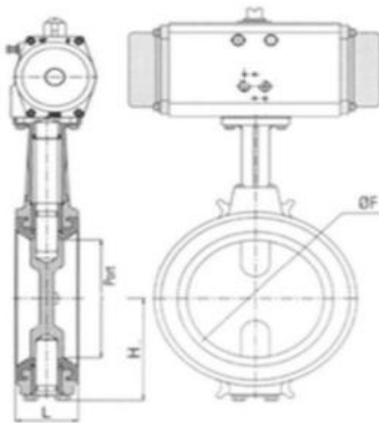
- Hand wheel type manual over ride
- Modulating type with LCD
- Intelligent control for remote/local operation
- Explosion Proof - OHQ series.

MATERIALS

PART NAME	MATERIAL OPTION
Body	Aluminum Pressure Die Cast
Disc	CF8 (S.S. 304)
Stem	AISI 410 / AIS 304
Shaft	AIS 410 / AISI 304
Seat	EPDM
Valve Rating	PN 10
Body Pressure	225 PSIG
Seat Pressure	165 PSIG
Temperature	140°C

KEY FEATURES

- Sleek size & space
- Reduced Torque
- Low Weight
- Easy to maintain
- Can be used for vast range of operation



DIMENSIONS (All dimensions are in mm)

MODEL	Size	Port	H	C	ØF
PABFV - 40	40	40	60	33	78
PABFV - 50	50	50	66	43	93
PABFV - 65	65	65	74	46	118
PABFV - 80	80	80	83	46	129
PABFV - 100	100	100	94	52	149
PABFV - 125	125	125	122	56	184
PABFV - 150	150	150	135	56	214
PABFV - 200	200	196	161	60	259

Pneumatic / Electrical actuator operated polypropylene Butterfly Valve



MATERIALS

PART NAME	MATERIAL OPTION
Body	Polypropylene
Disc	M.S. Powder Coated
Seating	Nitrile
Stem Pin	S.S. 410
Mounting Pad	M.S. fabricated
Stem O Ring	Nitrile
Temperature	20° C to 85° C
End Connection	Wafer type
Size	40 mm to 300 mm



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Government Of India
Ministry Of Commerce and Industry
Directorate General of Foreign Trade

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