

## Wafer butterfly valve with actuator



**TDJ1/TDJ2-...-DN... Series**

**TBV-...-D/X.V/X.mA Series**

**DN: 50- 600**

**Torque: 50 N.M-4000N.M**

### Application

Wafer butterfly valve with actuator are widely used in many industrial areas: petroleum, chemical, electric power, metallurgy, energy, building materials, preparation, paper, water treatment, food processing, ship building and BAS, etc. They are small, light, nice appearance, precise structure, waterproof, antitrust, no need to oil and can be installed in any directions.

They are suitable for different power supply: AC24V, AC110V, AC220V, AC380V, DC24V, DC220V, and the output time is 5s, 15s, 30s and 60s, also they can meet different caliber valves requirements in different application.

### Name of valve

Body material	Valve type
Ductile cast iron + Nylon11 clading	TDJ1...DN50-600

### Name of actuator

On-off actuator	Proportional actuator 0-10VDC	Proportional actuator 4-20mA
TBV...D 50 N.M-4000 N.M	TBV...X.V 50 N.M-4000 N.M	TBV...X.mA 50 N.M-4000 N.M

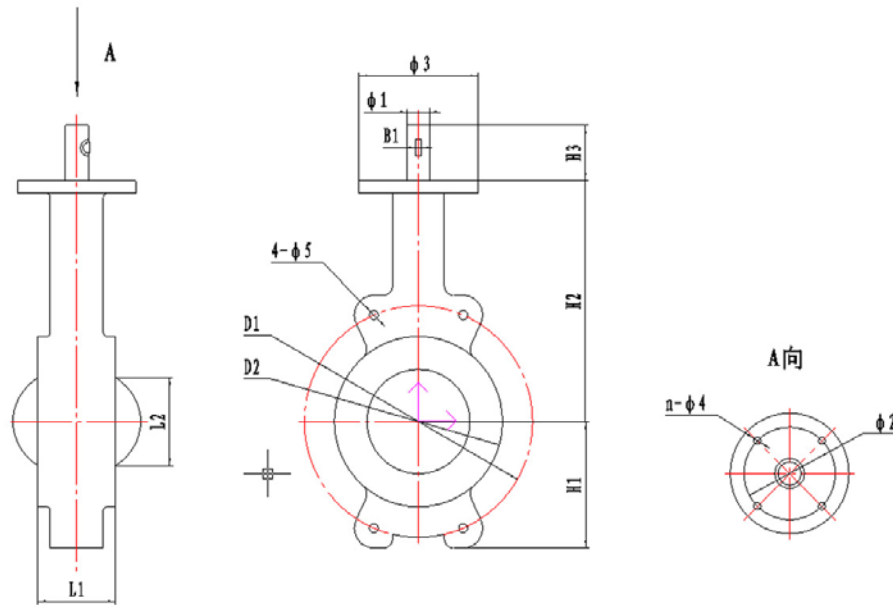
## Valve Body

<b>Description</b>	<b>Body</b>	DN50 ~ DN150: Grey cast iron DN200 ~ DN600: Ductile cast iron
	<b>Seat</b>	Ethylene Propylene Diene Monomer (EPDM)
	<b>Disc</b>	Ductile cast iron + Nylon11 clading / 304 stainless steel
	<b>Axe</b>	416 Stainless steel
	<b>Seal gasket</b>	Ethylene Propylene Diene Monomer (EPDM) seals
	<b>Media</b>	Water or the other media without oil in it
	<b>Media Temperature</b>	-10°C ~ +80°C for grey cast iron -10°C ~ +130°C for ductile cast iron
	<b>Connect with the pipe</b>	Clamp

## **Cv Value of the butterfly valve**

Type	caliber	Cv value of the Valve opening angle								90° opening Cv value
		10°	20°	30°	40°	50°	60°	70°	80°	
TDJ1/J2-50	DN50	0.1	5	12	24	45	64	90	125	135
TDJ1/J2-65	DN65	0.2	8	20	37	65	98	144	204	220
TDJ1/J2-80	DN80	0.3	12	22	39	70	116	183	275	302
TDJ1/J2-100	DN100	0.5	17	36	78	139	230	364	546	600
TDJ1/J2-125	DN125	0.8	29	61	133	237	392	620	930	1022
TDJ1/J2-150	DN150	2	45	95	205	366	605	958	1437	1579
TDJ1/J2-200	DN200	3	89	188	408	727	1202	1903	2854	3136
TDJ1/J2-250	DN250	4	151	320	694	1237	2047	3240	4859	5340
TDJ1/J2-300	DN300	5	234	495	1072	1911	3162	5005	7507	8250
TDJ1/J2-350	DN350	6	338	715	1549	2761	4568	7230	10844	11917
TDJ1/J2-400	DN400	8	464	983	2130	3797	6282	9942	14913	16388
TDJ1/J2-450	DN450	11	615	1302	2822	5028	8320	13168	19752	21705
TDJ1/J2-500	DN500	14	791	1674	3628	6465	10698	16931	25396	27908
TDJ1/J2-600	DN600	22	1222	2587	5605	9989	16528	26157	39236	43116

## Diagram of the valve and the dimension



Specification		H1	H2	H3	H4	D1	D2	Φ1	Φ2	Φ3	Φ4	Φ5	L1	L2	B1	B	n-M	Weight
mm	inch																	
50	2	70	130	30	22	125	92	12.6	57	70	4-6.7	18	42.6	32	3	9	4-M16	2.1
65	2.5	76	143	30	22	145	106	12.6	57	70	4-6.7	18	45.6	47	3	9	4-M16	2.4
80	3	89	155	30	22	160	122	12.6	57	70	4-6.7	18	45.6	65	3	9	4-M16 8-M16	2.6
100	4	104	170	30	-	180	150	15.78	70	90	4-10	18	51.6	91	5	-	8-M16	4.5
125	5	120	190	30	-	210	177	18.95	70	90	4-10	18	55.6	112	5	-	8-M16	6.8
150	6	132	210	30	-	240	204	18.95	70	90	4-10	23	55.6	146	5	-	8-M20	8.3
200	8	167	243	39	-	295	260	22.13	89	115	4-14	23	59.6	194	5	-	8-M20 12-M20	13
250	10	202	282	39	-	350 355	314	28.48	89	115	4-14	23 26	67.6	242	8	-	12-M20 12-M24	18.8
300	12	239	310	39	-	400 410	370	31.65	108	140	4-14	23 26	77.6	292	8	-	12-M20 12-M24	29
350	14	265	345	39	-	460 470	422	31.65	108	140	4-14	23 26	79	325	10	-	16-M20 16-M24	41
400	16	297	377	72	-	515 525	473	33.15	159	197	4-21	26 30	105	380	10	-	16-M24 16-M27	61
450	18	331	412	72	-	565 585	526	38	159	197	4-21	26 30	112	428	10	-	20-M24 20-M27	79
500	20	361	440	82	-	620 650	577	41.2	165	210	4-22	26 33	129	474	10	-	20-M47 20-M30	128
600	22	562	459	82	-	725 770	683	50.7	165	210	8-18	30 36	152	573	16	-	20-M27 20-M33	188

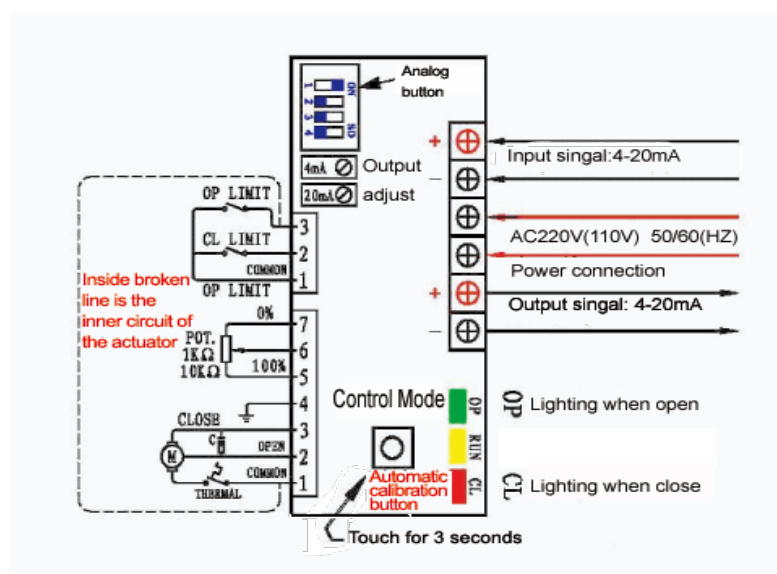
## Proportional actuator

Description	Power supply	220±15%VAC
	Input/output signal	0-10VDC/4-20mA
	Torque	50N.M - 4000N.M
	Withstand voltage	1500V
	Turning angle	90°C
	Environment temperture	-10°C~ +60°C
	Protection	Motor protection against overheat
	Handle operate	With manule
	Installation angle	Any angle
	Box material	Aluminum alloy
Water proof	IP-68	

### Type and Parameters

Type	Power Supply	Torque	Stroke Time	input and output power rating of the actuator	Starting Current	Working Current	Weight (KG)
TBV-50-X.V/X.mA	220V	50 N.M	30 秒	30W/10W	0.25A	0.25A	2.8
TBV-100-X.V/X.mA	220V	100 N.M	30 秒	80W/23W	0.58A	0.5A	4.5
TBV-160-X.V/X.mA	220V	160 N.M	30 秒	110W/30W	0.72A	0.68A	6.7
TBV-250-X.V/X.mA	220V	250 N.M	30 秒	150W/45W	0.86A	0.8A	7.5
TBV-500-X.V/X.mA	220V	500 N.M	30 秒	300W/90W	1.38A	1.2A	7.8
TBV-1000-X.V/X.mA	220V	1000 N.M	50 秒	300W/90W	1.38A	1.2A	12
TBV-2000-X.V/X.mA	220V	2000 N.M	100 秒	300W/90W	1.38A	1.2A	12.8
TBV-4000-X.V/X.mA	220V	4000 N.M	150 秒	500W/150W	2.3A	2.0A	20

### Digram of proportional



## On-off actuator

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Description	Power supply	220±15%VAC
	Input/output signal	0-10VDC/4-20mA
	Torque	50N.M - 4000N.M
	Withstand voltage	1500V
	Turning angle	90°
	Environment temperture	-10°C~ +60°C
	Protection	Heat protection cover
	Handle operate	With manule
	Installation angle	Any angle
	Box material	Aluminum alloy
Water proof	IP-68	

### Type and Parameters

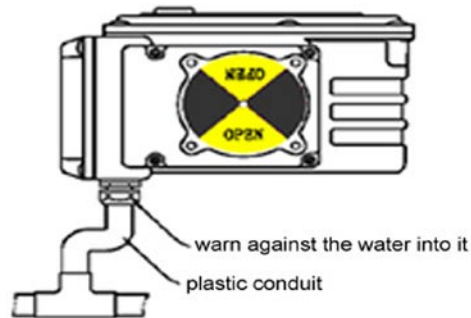
Type	Power Supply	Torque	Stroke Time (50HZ)	Motor F Class in/out	220V Start current	220V Working current	Weight (KG)
TBV-50-D	220V	50 N.M	30 sec	30W/10W	0.25A	0.25A	2.6
TBV-100-D	220V	100 N.M	30 sec	80W/23W	0.58A	0.5A	3.7
TBV-160-D	220V	160 N.M	30 sec	110W/30W	0.72A	0.68A	3.7
TBV-250-D	220V	250 N.M	30 sec	150W/45W	0.86A	0.8A	6.7
TBV-500-D	220V	500 N.M	30 sec	300W/90W	1.38A	1.2A	8.0
TBV-1000-D	220V	1000 N.M	50 sec	300W/90W	1.38A	1.2A	12
TBV-2000-D	220V	2000 N.M	100 sec	300W/90W	1.38A	1.2A	12
TBV-4000-D	220V	4000 N.M	150 sec	500W/150W	2.3A	2.0A	31



## 2. Wiring connection

1) Please use  $\Phi 6$ - $\Phi 11$  wire, and the cross section area of the single line should more than 1mm. Let the wire through wire-fixed device; then fix the wire on wiring terminal safely according to circuit diagram. Tighten the wire-fixed device to ensure the wire is locked.

2) When use electric wire conduit, water proof should be noticed, wire conduit should be lower than actuator to prevent the water flow along the wire into the actuators, please see the schematic diagram on the ri-ght.



3) Voltage of power supply: Please insure the voltage of power supply according to the brand or wire graph.

We can supply AC230V

4) Safety switch and short-circuit switch: the current should less than 2 to 3 times than normal current. But must use the safety switch and short-circuit switch.

## 3. Installation

### Notice

1) Put cover on actuator for avoiding sunshine made high temperature inside; or else, the parts will aging and shorten the service life.

2) Notice for indoor installation: keep enough space for wiring and manual device. In water splash environment the cover is needed. If it is No-explosion-proof products, do not install in the room with flammable and combustible gas.