



2014 EDITION

609A对夹式蝶阀 609A Wafer Butterfly Valve

■控制装置法兰 Driving device flange

可以配用手柄、蜗轮蜗杆传动、电动或气动控制装置。
Can be used in handles, gear operators, electric or pneumatic actuators.

■轴套 Bushing

减小转动力矩，支撑阀杆，并使其与阀体有效分离，减小阀杆的磨损。
Reduced riving to rque, support stem, and effectively sepa rate it with valve body, reduce wear of stem.

■阀板轴孔端面 Surface of disc axle hole

经过抛光处理，与阀座精密配合。
Through treatment of polishing, precisely fit with seat.

■高精度阀板外缘 High precision disc external profile

实现气密性试验零泄漏要求，启闭力矩小，延长阀座使用寿命。
Reach the requirement of bubble-tight, small start and stop to rque, longer usage life of seat.

■阀杆密封 Stem seal

阀杆密封不易变形，从而避免了通常的阀杆泄漏现象。
Stem is not easy to be distorted, eliminating possible leakage in stem.

■连接键 Strong precision key

精度高，强度大，适用于手柄及其它控制装置的安装。
Give possible attachment for manual lever or actuator.

■高精度锥销 Precision taper pin

牢固连接阀杆与阀板，具有防振脱特点，且易于更换。
Ensure positive vibration proof. Stem to disc connection. Easily field replaceable.

■整体阀杆结构 Integral stem design

整体性好，便于控制阀板启闭。
Ensures dependable and positive disc control.

■侧密封 Side seal

无需法兰垫圈
With no need of flange gasket.

■靠背阀座 Backed seat

具有不脱落、抗拉、防泄漏、更换方便等特点。
Non-collapsible, stretch-resistant and leakage proof. Easily field replaceable.



■适用压力 Applicable Pressure: PN1.0~1.6MPa

■适用规格 Applicable Size: DN50~1200

■适用温度 Applicable Temperature: -10°C~150°C

■主体材质 Body material: 铸铁、球墨铸铁、碳钢、不锈钢、铝青铜
Cl, DI, Carbon steel, Stainless steel, Al-bronze

天津塘沽瓦特斯阀门有限公司
TIANJIN TANGGU TWT VALVE CO., LTD.

www.twtvalve.com

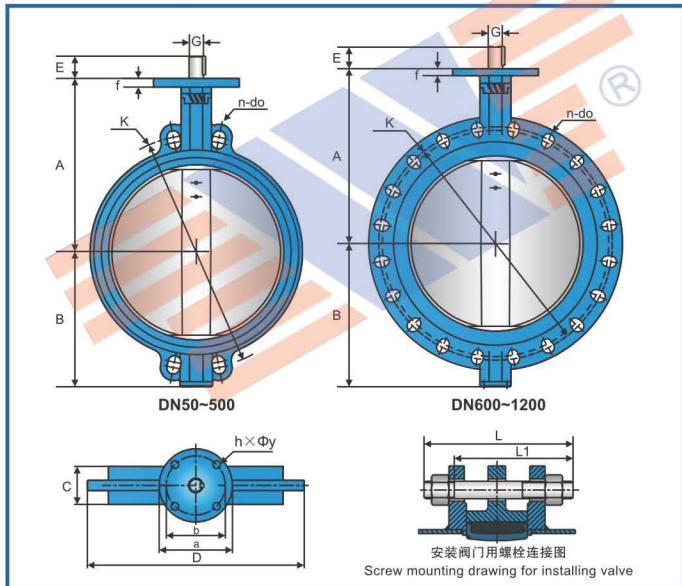
对夹式蝶阀 · 技术参数

Wafer Butterfly Valve Technical Parameters



对夹式蝶阀 · 外形尺寸

Wafer butterfly Valve Dimensions



流量曲线

Curve of Flow Rate

注：流量特性曲线表示阀门开启程度和流量的关系，一般蝶阀适合用于流量控制，当阀门开启角度在30°以下时，不推荐用于控制流量。

Note: Performance curve of flow volume means the relationship between open degree of valve and flow volume. Normally butterfly valve suitable to use in control flow. When valve's open degree under 30°, not recommend to use in flow volume control.

	部件 Component	材质	Material
DN50~350	阀体 Body	铸铁/球墨铸铁/铝青铜/不锈钢/碳钢	CI, DI, Al-bronze, Stainless steel, Carbon steel
	轴套 Bushing	润滑青铜/复合F4	Lubricated bronze, PTFE
	转轴 Shaft	不锈钢	Stainless steel
	阀座 Seat	橡胶	Rubber
	阀板 Disc	球墨铸铁/铝青铜/不锈钢	DI, Al-bronze, Stainless steel
	圆锥销 Taper pin	不锈钢	Stainless steel
	O型圈 O-ring	橡胶	Rubber
	键 Key	45	45
DN400~1200	阀体 Body	铸铁/球墨铸铁/铝青铜/不锈钢/碳钢	CI, DI, Al-bronze, Stainless steel, Carbon steel
	螺钉 Hex. bolt	碳钢	Carbon steel
	O型圈 O-ring	橡胶	Rubber
	底端盖 End plate	碳钢/不锈钢	Carbon steel, Stainless Steel
	轴套 Bushing	润滑青铜/复合F4	Lubricated bronze, PTFE
	阀座 Seat	橡胶	Rubber
	转轴 Shaft	不锈钢	Stainless steel
	阀板 Disc	球墨铸铁/铝青铜/不锈钢	DI, Al-bronze, Stainless steel
圆锥销 Taper pin	不锈钢	Stainless steel	
键 Key	45	45	

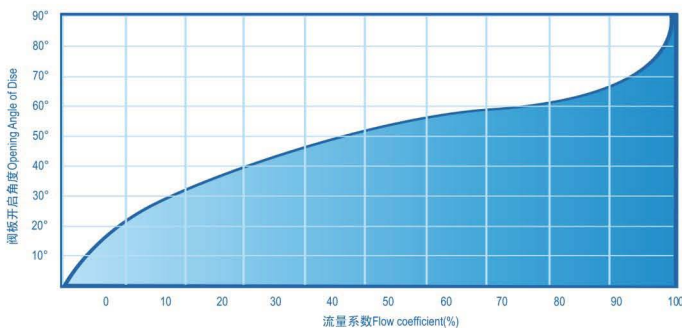
注：上表中列材质为常规配置，如有特殊需要，请在合同中注明。
 Note: Materials indicated in above table are for common usage, please give clear declaration in your contract if the re is special need.

性能规范

1. 作为管路中调节或截断介质的设备。
2. 适用于手柄控制装置 (DN50~300)，蜗轮蜗杆、电动及气动控制装置。
3. 设计与制造标准符合 API 609。
4. 压力试验符合 API 598。
5. 结构长度符合 API 609。
6. 侧法兰标准符合 GB/T17241 中 PN1.0MPa、PN1.6MPa 及 ASME B16.1 125PSI。
7. 有关安装信息，请参见“安装与维护使用说明书”。

Technical Data

1. Equipment used in regulating or cutting off medium in pipeline.
2. Suitable for handles (DN50~300), Gear Operators, electric and pneumatic control actuators.
3. Standards of design and manufacture conform to API 609.
4. Pressure test conform to API 598.
5. Structure length meet to API 609.
6. Side flange standard meet to GB/T17241 of PN1.0MPa, PN1.6MPa and ASME B16.1 125PSI.
7. For installation information, please refer to "Operation manual of installation and maintenance".



对夹式蝶阀 · 外型尺寸 PN10 · PN16
Wafer Butterfly Valve Overall Dimension PN10 · PN16

单位 Unit: mm

规格 Size		A	B	C	D	E	G	K	n-Φ	a	b	f	h-Φy	重量 WT (kg)
PN10 · PN16 · ASME CL.125	50	140	80	43	98	32	12.6	125	4-Φ19	65	50	13	4-Φ6.7	2.5
	65	152	89	46	111	32	12.6	145	4-Φ19	65	50	13	4-Φ6.7	3.2
	80	159	95	45.21	127	32	12.6	160	8-Φ19	65	50	13	4-Φ6.7	3.6
	100	178	114	52.07	156	32	15.77	180	8-Φ19	90	70	13	4-Φ10.3	4.9
	125	190	127	55.5	184	32	18.92	210	8-Φ19	90	70	13	4-Φ10.3	7
	150	203	139	55.75	212	32	18.92	240	8-Φ23	90	70	13	4-Φ10.3	7.8
	200	238	175	60.58	268	45	22.1	295	8-Φ23	125	102	13	4-Φ14.3	13.2
	250	268	203	68	325	45	28.45	350	12-Φ23	125	102	13	4-Φ14.3	19.2
	300	306	242	76.9	375	45	31.6	400	12-Φ23	125	102	20	4-Φ14.3	32.5
PN10 · ASME CL.125	350	368	267	76.17	436	45	31.6	460	16-Φ23	125	102	20	4-Φ14.3	41.3
	400	400	312	102	488	51.2	33.15	515	16-Φ28	175	140	20	4-Φ20.6	61
	450	422	327	114	539	51.2	38	565	20-Φ28	175	140	20	4-Φ20.6	79
	500	480	360	130.28	593	64.2	41.15	620	20-Φ28	175	140	22	4-Φ20.6	128
	600	562	459	151.36	816	70.2	50.56	725	20-Φ31	210	165	22	4-Φ22.2	188
	700	624	520	163	895	66	55	840	24-Φ31	300	254	30	8-Φ18	284
	800	672	591	188	1015	66	55	950	24-Φ34	300	254	30	8-Φ18	368
	900	720	656	203	1115	118	75	1050	28-Φ34	300	254	34	8-Φ18	713
	1000	800	721	216	1230	142	85	1160	28-Φ37	300	254	35	8-Φ18	864
	1200	940	951	276	1485	150	120	1380	32-Φ40	415	356	35	8-Φ33	1605

注：表中的连接尺寸以PN1.0MPa为例，实际产品中DN50-300规格的K和n×Φ中尺寸包含了PN10，PN16和ASME CL.125三种法兰连接标准，DN350-600规格的K和n×Φ尺寸包含了PN10~16 ASME CL.125两种法兰连接标准。
 Note: Mounting size in the above table take PN1.0MPa as example, in actual product, K and n×Φ dimension in DN50-300 contain PN10, PN16 and ASME CL.125 three flange mounting standards, K and n×Φ dimension of DN350-600 contain PN1.0 and ASME CL.125 two flange mounting standards.

CV值—流量系数 (US-GPM@1ΔP) DN50 to DN1000 CV Valve-Flow Rate Coefficient

规格 Size	10°	20°	30°	40°	50°	60°	70°	80°	90°
50	0.1	5	12	24	45	64	90	125	135
65	0.2	8	20	37	65	98	144	204	220
80	0.3	12	22	39	70	116	183	275	302
100	0.5	17	36	78	139	230	364	546	600
125	0.8	29	61	133	237	392	620	930	1022
150	2	45	95	205	366	605	958	1437	1579
200	3	89	188	408	727	1202	1903	2854	3136
250	4	151	320	694	1237	2047	3240	4859	5340
300	5	234	495	1072	1911	3162	5005	7507	8250
350	5	338	715	1549	2761	4568	7230	10844	11917
400	8	464	983	2130	3797	6282	9942	14913	16388
450	11	615	1302	2822	5028	8320	13168	19752	21705
500	14	791	1674	3628	6465	10698	16931	25396	29908
600	22	1222	2587	5605	9989	16528	26157	39236	43116
700	36	1813	3639	6636	10000	14949	22769	34898	49500
800	45	2387	4791	8736	13788	20613	31395	48117	68250
900	60	3021	6063	11055	17449	26086	39731	60895	86375
1000	84	4183	8395	15307	24159	36166	55084	84425	119750
1200	106	5370	10741	19641	30690	46065	70587	107568	153450

CV=当阀门全开时，阀门两端压差为1磅/英寸²，流体用60°F的清水时，通过阀门的美加仑/分的流量数。
 CV=when valve entirely opened, pressure difference in both sides of valve will be 1 pound/inch², when fluid is 60°F clean water, flow volume of per gallon/min. flowing through valve.

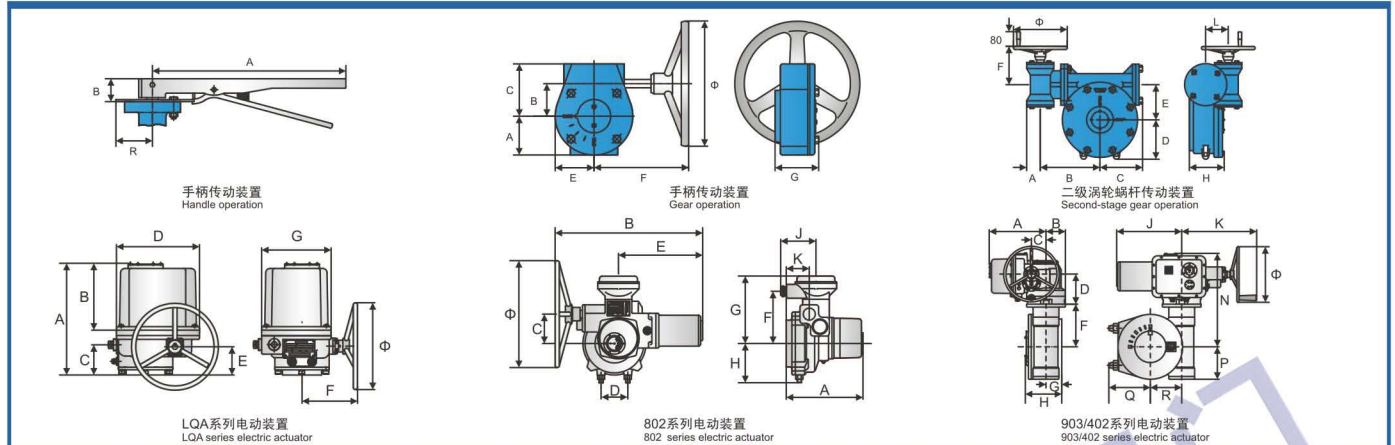
CV=Q(G/ΔP)^{1/2} 式中：Q=最大流量（美加仑/分） CV=Q(G/ΔP)^{1/2} Whereas: G=Specific gravity, clean water will be 1.0
 G=比重（水=1） Q=Max. flow rate
 ΔP=压力降（磅/英寸²） ΔP=Pressure difference, lb/in²

C=当阀门全开时，阀门两端压差为100KPa(1Kg/cm²)，流体用常温清水时，某给定行程的流量以m³/h计，介质密度取Kg/m³的流量数值(m³)。CV=1.17C
 C=The valve CV is the flow rate(m³/h) of pure water at normal temperature passing through the valve when the valve disc is fully opened and the pressure differential between the two ends of the valve is 100Kpa(1Kg/cm²) CV=1.17C

传动装置·外型尺寸

Actuator Technical Parameters

单位 Unit: mm



型号 Type	适用规格 Size	最大输出扭矩 Max. Torque Output (N·m)	电机功率 Motor Power(W)	90°旋转时间 Time for 90° turning(s)	A	B	C	D	E	F	G	H	J	K	N	P	Q	R	Φ	总重 Weight (kg)
3D-15	DN50-150				226.7	32														0.9
	DN200-300				359	50														2.3
	DN50-150				52	45	74		52	152.5	75							52	150	5.2
3D-50	DN200-250				75	62.75	101		75	250	86								300	13
3D-120	DN300-350				81	80	118		81	227	83								300	15
3D-30/250	DN400-500				56.5	178.5	121	115	104	174		125.5							300	56.9
3D-30/400	DN600				56.5	197.5	142	144	130	174		145.5							300	72.37
LQA5-1	DN50-80	50	16	15	255	154	70	191	65	126	160								200	17
LQA10-1	DN100	100	30	15	255	154	70	191	65	126	160								200	17
LQA20-1	DN125-150	200	60	15	255	154	70	191	65	126	160								200	17
LQA40-1	DN200	400	90	15	302	171	96	240	86	175	198								300	35
LQA80-1	DN250-300	800	180	15	302	171	96	240	86	175	198								300	35
802.10-1	DN50-100	100	30	15	250	420	79	82	253	156	213	110	132	62					220	35
802.20-1	DN125-150	200	60	15	250	420	79	82	253	156	213	110	132	62					220	35
802.60-1	DN200-300	600	180	15	287	552	110	101	330	196	254	156	134	86					360	55
802.120-1	DN350	1200	370	15	287	552	110	101	330	196	254	156	134	86					360	55
802.150-0.5	DN400-450	1500	370	30	287	552	110	101	330	196	254	156	134	86					360	55
802.250-1	DN500	2500	750	15	330	625	140	152	365	230	288	185	134	120					500	100
802.500-0.5	DN600	5000	750	30	330	625	140	152	365	230	288	185	134	120					500	100
802.1000-0.2	DN700-900	10000	750	75																
9033.60/4026	DN1000/PN10	1100	75	75	311	113	79	160		230	85	195	487	400	506	188	230	170	300	
9033.60/4026	DN1000/PN10	1100	50	50	311	113	79	160		230	85	195	487	400	506	188	230	170	300	
9033.60/4026	DN1000/PN10	1500	38	38	311	113	79	160		230	85	195	487	400	506	188	230	170	300	
9033.60/4026	DN1000/PN10	2200	25	25	311	113	79	160		230	85	195	487	400	506	188	230	170	300	
9034.90/4027	DN900/PN16	1500	75	75	334	150	98	172		280	105	228	508	450	563	232	255	202	400	
9034.90/4027	DN900/PN16	2200	50	50	334	150	98	172		280	105	228	508	450	563	232	255	202	400	
9034.90/4027	DN900/PN16	3000	38	38	334	150	98	172		280	105	228	508	450	563	232	255	202	400	
9034.120/4027	DN1200/PN10 DN1000/PN16	1500	75	75	334	150	98	172		280	105	228	508	450	563	232	255	202	400	
9034.120/4027	DN1200/PN10 DN1000/PN16	2200	50	50	334	150	98	172		280	105	228	508	450	563	232	255	202	400	
9034.120/4027	DN1200/PN10 DN1000/PN16	3000	38	38	334	150	98	172		280	105	228	508	450	563	232	255	202	400	
9034.120/4027	DN1200/PN10 DN1000/PN16	4000	25	25	334	150	98	172		280	105	228	508	450	563	232	255	202	400	
9035.250/4028	DN1200	3000	75	75	359	175	128	238		320	135	290	600	535	646	300	305	238	500	
9035.250/4028	DN1200	4000	50	50	359	175	128	238		320	135	290	600	535	646	300	305	238	500	
9035.250/4028	DN1200	5500	38	38	359	175	128	238		320	135	290	600	535	646	300	305	238	500	
9035.250/4028	DN1200	7500	25	25	359	175	128	238		320	135	290	600	535	646	300	305	238	500	

注: 1. LQA系列电动装置, 防护性能为IP54(GB4208-1998)不具备防爆功能。
 2. PN16 DN300用802.120-1
 3. 802系列电动装置基本型可用于户外, 防护性能为IP65(GB4208-1998); 另有防爆型, 如有需要, 请索取相关资料。
 4. 903系列电动装置基本型可用于户外, 防护性能为IP65(GB4208); 另有防水型, 如有需要, 请索取相关资料。
 5. 欲查询表中未列出的产品数据请与本公司联系。
 Note: 1. The protective class of LQA series electric actuator is IP54(GB4208-1998)without flame-proof capability.
 2. 802.120-1 is for PN16 and DN300
 3. Basic type of 802 series electric actuator can be used outdoors, protective class is IP65(GB4208-1998) Also have flame-proof type, please ask for relevant technical information if necessary.
 4. 903 series electric actuator can be used outdoor, the protective class of it is IP65(GB4208); also with water-proof type, please ask for detail information if necessary.
 5. Please contact technical department when you want to check date in the list.