双精阀门集团
SHANGHAI SHUANGJING VALVE GROUP CO., LTD

Expansion Type Butterfly Valve

膨胀式蝶阀



SOJN 上海双精阀门集团有限公司
SHANGHAI SHUANGJING VALVE GROUP CO., LTD

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产品参数
Product parameters

连接方式 Connection method	对夹式 Coupled type
公称直径 Nominal diameter	2"(50mm)-14"(350mm)
法兰标准 Flange standard	EN1092 PN10/PN16　ASME B16.5 CLASS150
结构长度 Structural length	GB/T12221　API609
密封压力 Sealing pressure	PN:0.4MPa
温度范围 Temperature range	-60℃~200℃（随实际应用和制造材料不同） -60℃ to 200℃ (varies depending on actual application and manufacturing materials)
驱动方式 Drive mode	气动（5.5bar） Pneumatic (5.5 bar)
适用介质 Applicable medium	粉、颗粒等固体介质 Powder, granules and other solid media



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工作原理
Working principle

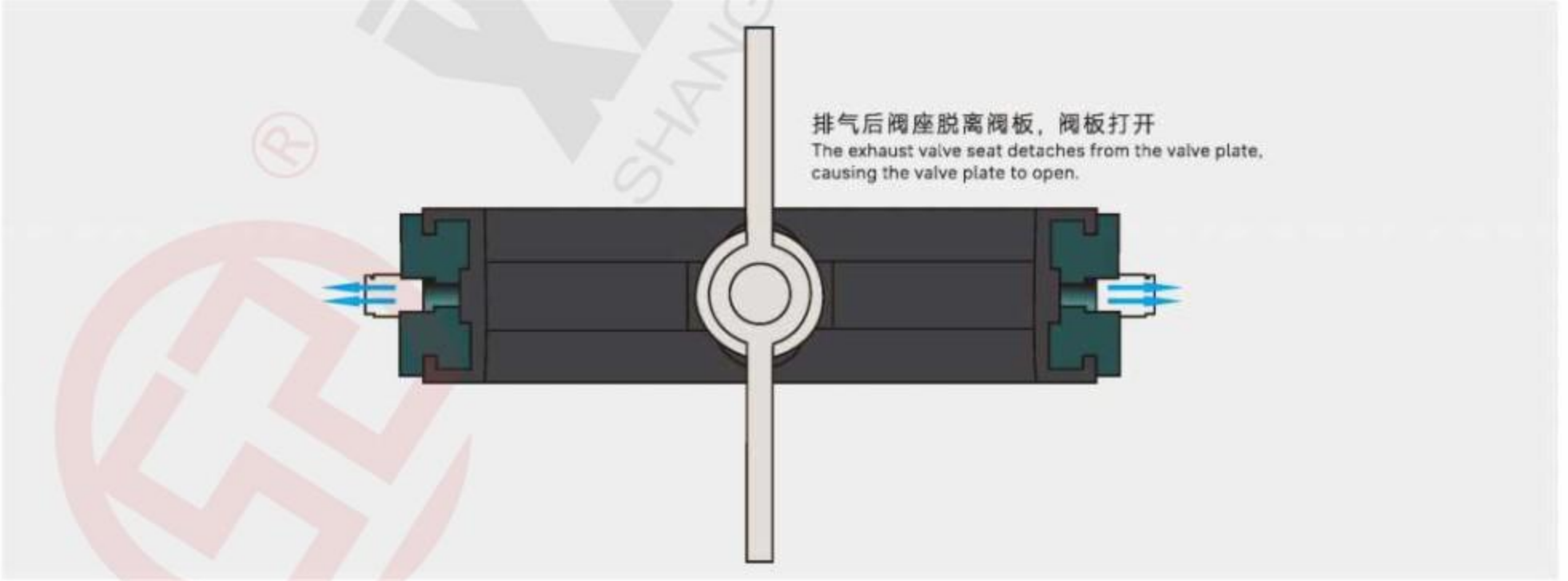
蝶阀未充气的，阀板与阀座处于脱离状态（如下图）
The butterfly valve is not inflated. The valve plate and the valve seat are in a disengaged state (as shown in the figure below).



蝶阀充气后，阀座对阀板进行挤压形成密封（如下图）
After the butterfly valve is inflated, the valve seat presses against the valve plate to form a seal (as shown in the figure below)



蝶阀打开时通过模块控制气路会先把挤压阀座的气排掉后阀板开启，减小了阀座与阀板的摩擦（如下图）
When the butterfly valve is opened, the gas path is controlled by the module. First, the gas that has compressed the valve seat is discharged, and then the valve plate opens.
This reduces the friction between the valve seat and the valve plate (as shown in the figure below).



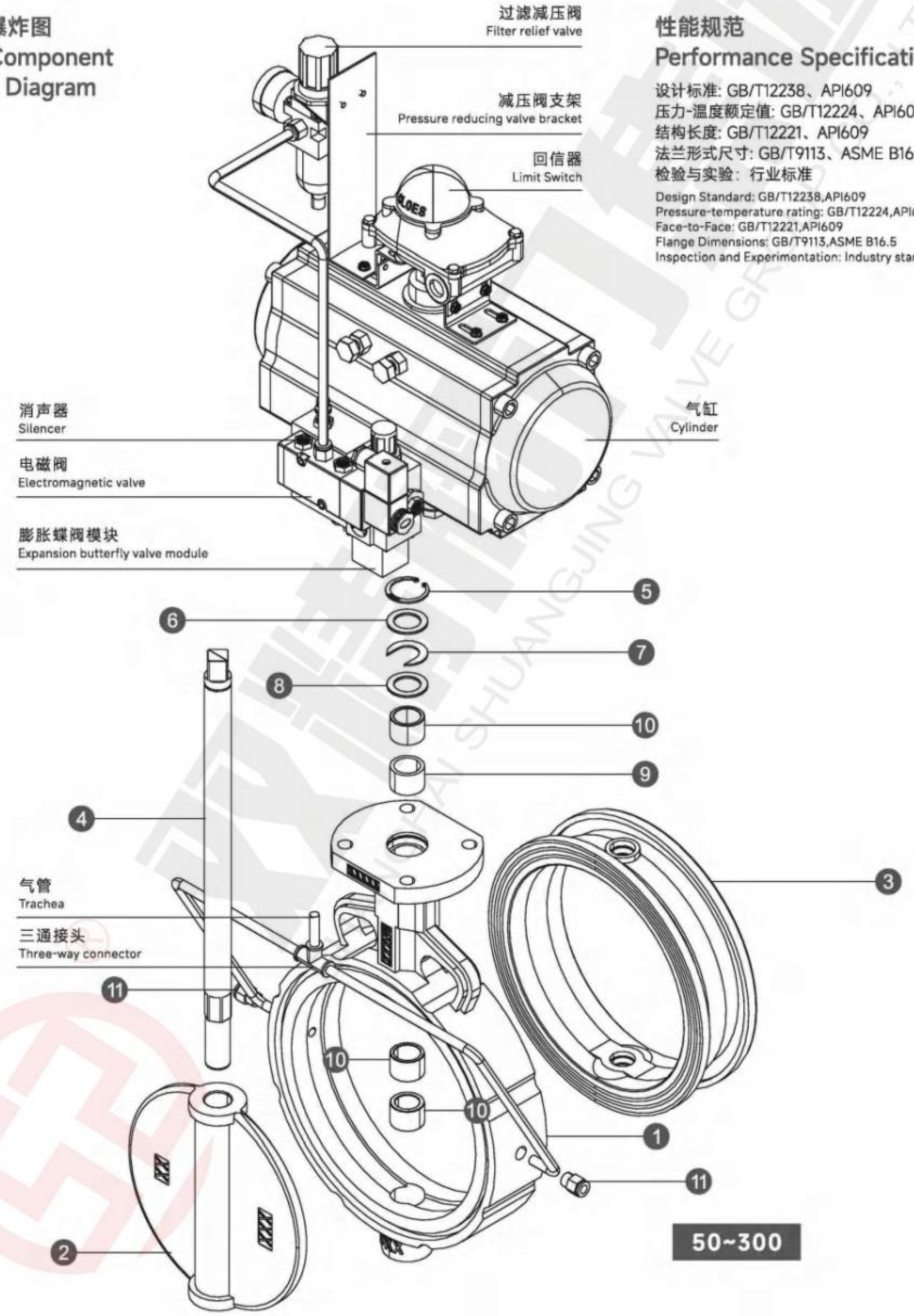
注：膨胀蝶阀的出厂前经过准确无误的调试，未经厂家许可不得擅自调节压力值和拆解产品零部件！
Note: The expansion butterfly valve has been accurately debugged before leaving the factory.
Without the manufacturer's permission, it is strictly prohibited to adjust the pressure value or disassemble the product components!

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产品零件爆炸图
Product Component Explosion Diagram



性能规范
Performance Specifications

设计标准: GB/T12238、API609
压力-温度额定值: GB/T12224、API609
结构长度: GB/T12221、API609
法兰形式尺寸: GB/T9113、ASME B16.5
检验与实验： 行业标准

Design Standard: GB/T12238,API609
Pressure-temperature rating: GB/T12224,API609
Face-to-Face: GB/T12221,API609
Flange Dimensions: GB/T9113,ASME B16.5
Inspection and Experimentation: Industry standard

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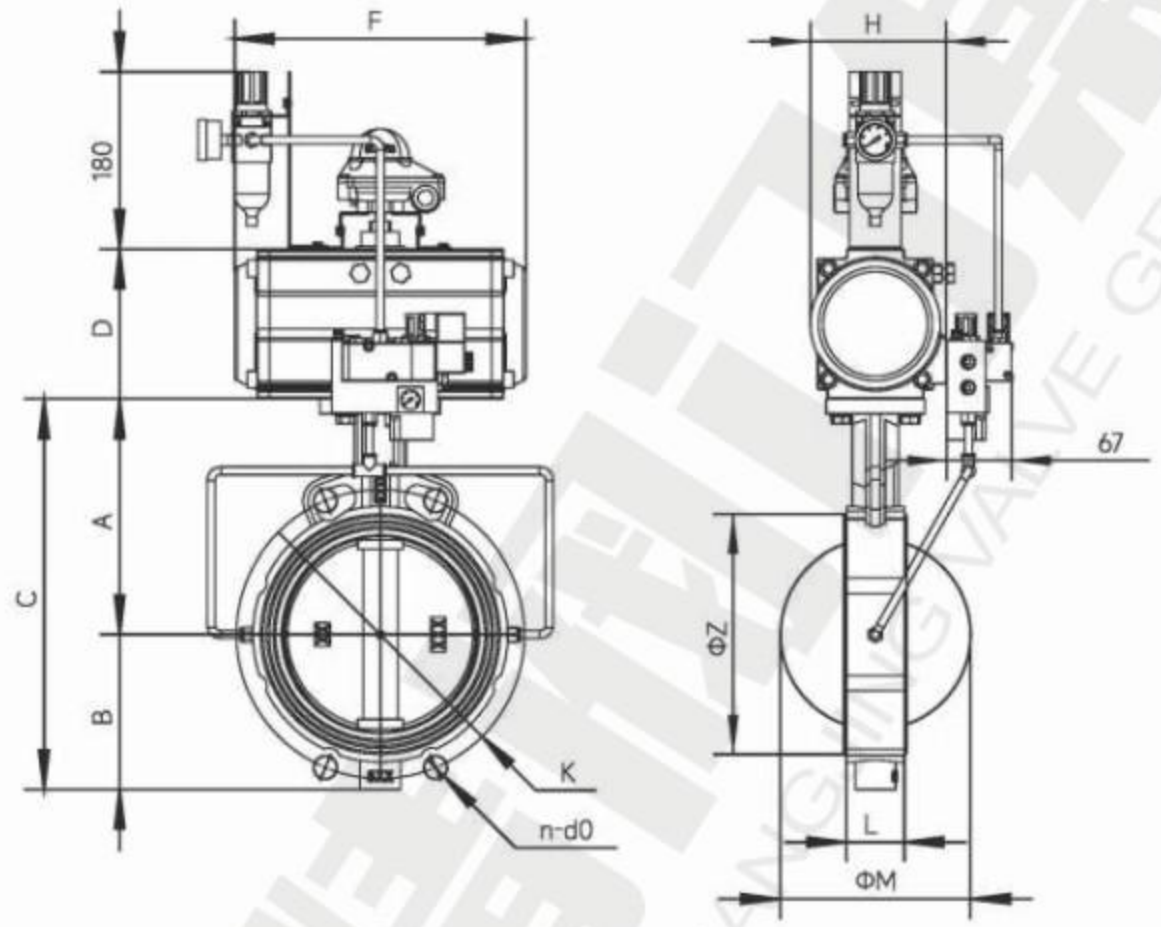
材质说明及部件材料表
Material Description and Component Material List

DN50-300

零件号 Part Number	零件名称 Part Name	材质 Material	材质代号 Material code
1	阀体/堵头 Valve body Bonnet/Plug	球墨铸铁 Machined cast iron	GGG40、GGG50、QT450、QT500
		铸钢 Cast steel	WCB、WCC、LCB、LCC、LC1
		不锈钢 Stainless steel	CF8、CF8M、CF3M、904L
		双相钢 Duplex steel	2205、2507 1.4469、1.4529
		哈式合金 Hawley alloy	C-276、C-22
		钛合金 Titanium alloy	TA2、TC4
		铝青铜 Aluminum bronze	C95400、C95800
		铝合金 Aluminum alloy	ADC12
2	阀板 Valve plate	球墨铸铁 Machined cast iron	DI、QT500
		不锈钢 Stainless steel	CF8、CF8M、CF3M、904L
		双相钢 Duplex steel	2205、2507 1.4469、1.4529
		哈式合金 Hawley alloy	C-276、C-22
		钛合金 Titanium alloy	TA2、TC4
		铝青铜 Aluminum bronze	C95400、C95800
		包胶 Gluing	EPDM、NBR、VITON
		衬氟 Fluoridated coating	PTFE
3	阀座 Valve seat	三元乙丙 Ethylene Propylene	EPDM
		丁腈橡胶 Diene Monomer	NBR
		氢化丁腈橡胶 Nitrile Rubber	HNBR
		硅橡胶 Hydrogenated Nitrile Rubber Silicone rubber	VMQ
		氟橡胶 Fluorine rubber	VITON
		氯丁橡胶 Chloroprene rubber	CR
		天然橡胶 Natural rubber	NR

零件号 Part Number	零件名称 Part Name	材质 Material	材质代号 Material code
3	阀座 Valve seat	丁基橡胶 Butyl rubber	IIR
		聚氨酯 Polyurethane	CPU、TPU
4	阀杆 Valve stem	不锈钢 Stainless steel	420、431、304、316、630、904L
		双相钢 Duplex steel	2205、2507 1.4469、1.4529
		蒙乃尔 Monel	K500
5	体卡簧 Body retaining ring	Q235/304	
6	上垫片 Upper gasket	Q235/304	
7	U型卡片 U-shaped card	Q235/304	
8	下垫片 Underlay gasket	Q235/304	
9	V型密封圈 V-shaped sealing ring	EPDM/NBR	
10	轴套 Axial sleeve	高分子复合/黄铜 Polymer composites/Brass	
11	进气接头 Intake connector	铜/304 Copper/304	
阀板表面处理 Surface treatment of the valve plate		电镀 Electroplating	PLT
		尼龙 Nylon	NYLON
		镜面抛光 Mirror polishing	Ra≤0.4μm
		氟塑料40 Fluoroplast 40	ETFE
		氟塑料30 Fluoroplast 30	ECTFE
		氧化铝 Aluminum oxide	AT13
		氧化锆 Zirconium oxide	8YSZ
		纳米陶瓷 Nanoceramic	N-AT13
		碳化钨 Tungsten carbide	WC

主要外形尺寸与连接尺寸
Overall and Connection Dimensions



DN50-300

DN	A	B	C	D	F	H	L	ΦZ	ΦM	双作用气缸 Double-acting cylinder	PN6		PN10		PN16		150LB		JIS 10K	
											K	n-d0	K	n-d0	K	n-d0	K	n-d0	K	n-d0
50	145	69	214	72	147	72	43	85	48	AT52	110	4-14	125	4-18	125	4-18	120.7	4-19	120	4-19
65	155	75	230	88	167	83	46	98	60	AT63	130	4-14	145	4-18	145	4-18	139.7	4-19	140	4-19
80	163	83	246	100	184	95	46	116	74	AT75	150	4-18	160	8-18	160	8-18	152.4	4-19	150	8-19
100	183	104	287	109	210	103	52	142	100	AT83	170	4-18	180	8-18	180	8-18	190.5	8-19	175	8-19
125	198	116	314	117	262	109	56	175	128	AT92	200	8-18	210	8-18	210	8-18	215.9	8-22	210	8-23
150	215	134	349	133	268	121	56	197	149	AT105	225	8-18	240	8-22	240	8-22	241.3	8-22	240	8-23
200	243	162	405	155	301	143	60	253	195	AT125	280	8-18	295	8-22	295	12-22	298.5	8-22	290	12-23
250	277	197	474	173	394	152	68	307	244	AT140	335	12-18	350	12-22	355	12-26	362.0	12-26	355	12-25
300	315	225	540	198	458	174	78	359	295	AT160	395	12-22	400	12-22	410	12-26	431.8	12-26	400	16-25

注：ΦM是阀板的外圆尺寸，ΦZ是阀座的外圆尺寸，(n-d0)中的n代表螺栓数量d0代表螺栓孔直径。
Note: ΦM is the outer diameter of the valve disc; ΦZ is the outer diameter of the valve seat; in (n-d0), n stands for the number of bolts and do stands for the bolt hole diameter.

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