



**天津市博雷阀门有限公司**  
TIANJIN BOLLEY VALVE CO. LTD.

AT SERIES PNEUMATIC  
ACTUATORS

AT 系列气动执行器



**建百年博雷阀门 创国际品牌**

BUILT IN ONE HUNDRED BOLLEY VALVE  
THE FAR EAST AND INTERNATIONAL BRAND

# COMPANY PROFILE

## 公司简介

天津市博雷阀门有限公司是一家集开发、生产、销售于一体的阀门公司，具有多年专业设计制造阀门丰富经验，技术力量雄厚，生产工艺先进，拥有现代化机械加工中心和检测设备。

公司主导产品有：闸阀、截止阀、蝶阀、球阀、止回阀、调节阀、减压阀、隔膜阀、旋塞阀、柱塞阀、疏水阀、安全阀、美标阀、水力控制阀等80多种品种、300多个系列、几千种规格。产品采用GB、JB、HG、API、ANSI、DIN、JIS、BS等国内外先进标准设计制造。通径从1/4"至96"(DN6-2400 mm)、压力从150LB至2500LB (2MPa-42MPa)、工作温度为-196℃至800℃。主要材质有灰铸铁、球墨铸铁、铜、碳素钢、不锈钢、合金钢、低温钢、铬钼钢、沉淀硬化钢及其他特殊钢材。阀门驱动方式有：手动、齿轮传动、电动、气动和液动；连接方式有：焊接、法兰、螺纹、对夹、卡套等系列产品。

多年来，公司产品广泛应用于电力、石油、化工、冶金、造纸、蒸汽、制药、燃气、环保、染料、供热、城建、污水处理等行业，产品已在全国各地享有盛誉，并远销东南亚国家和地区，深受广大客户好评。

Tianjin Bolley Valve Co., Ltd. is a collection development, production and sales of integrated valve company, has many years of professional design and manufacture of valves, rich experience, strong technical force, advanced production technology, with modern machining centers and testing equipment.

Our main products are: Gate Valve, Globe Valve, Butterfly Valve, Ball Valve, Check Valve, Control Valve, Relief Valve, Diaphragm Valve, Plug Valve, Plunger Valve, Drain Valve, Safety Valve, American Standard Valves, Hydraulic Control Valves and other 80 kinds of varieties, more than 300 series, thousands of specifications. The products are designed and manufactured by GB, JB, HG, API, ANSI, DIN, JIS, BS and other advanced standards at home and abroad. The diameter is from 1/4 "to 96" (DN6-2400mm), the pressure is from 150LB to 2500LB (2MPa-42MPa), and the working temperature is from -196℃ to 800℃. The main materials are cast iron, ductile iron, copper, carbon steel, stainless steel, alloy steel, low temperature steel, chrome molybdenum steel, precipitation hardening steel and other special steel. The valve drive methods are: manual, gear drive, electric, pneumatic and hydraulic; connection methods are: welding, flange, thread, pairs of clamps, clamps and other products.

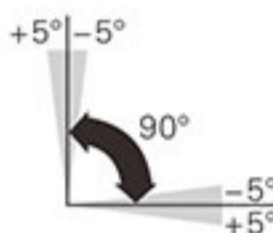
Over the years, the company's products are widely used in electric power, petroleum, chemical industry, metallurgy, papermaking, steam, gas, pharmaceutical, environmental protection, dyes, heating, urban construction, sewage treatment and other industries, products have been renowned throughout the country and exported to Southeast Asian countries and regions, well received by our customers.

**我们力求每一个环节都做到精益求精，  
争做控制系统行业之美好明天的领航者！**

We Strive To Achieve Excellence In Every Aspect,  
To Control System Of Industry Leader A Better Tomorrow!

◆ Operating Conditions:

1. Operating media  
Dry or lubricated air, or the non-corrosive gases  
The maximum particle diameter must less than 30 um
2. Air supply pressure  
The minimum supply pressure is 2 Bar  
The maximum supply pressure is 8 Bar
3. Operating temperature  
Standard:  $-20^{\circ}\text{C} \sim +80^{\circ}\text{C}$  ( $-4^{\circ}\text{F} \sim +176^{\circ}\text{F}$ ) NBR O-ring  
Low temperature:  $-40^{\circ}\text{C} \sim +80^{\circ}\text{C}$  ( $-40^{\circ}\text{F} \sim +176^{\circ}\text{F}$ ) Silicone O-ring  
High temperature:  $-20^{\circ}\text{C} \sim +160^{\circ}\text{C}$  ( $-4^{\circ}\text{F} \sim +320^{\circ}\text{F}$ ) Viton O-ring
4. Travel adjustment  
Have adjustment range of  $\pm 5^{\circ}$  for the rotation at  $0^{\circ}$  and  $90^{\circ}$
5. Application  
Either indoor or outdoor



◆ Operating Type:

Double acting and spring return



Air supply connection is designed in accordance with NAMUR standard to install solenoid valves.

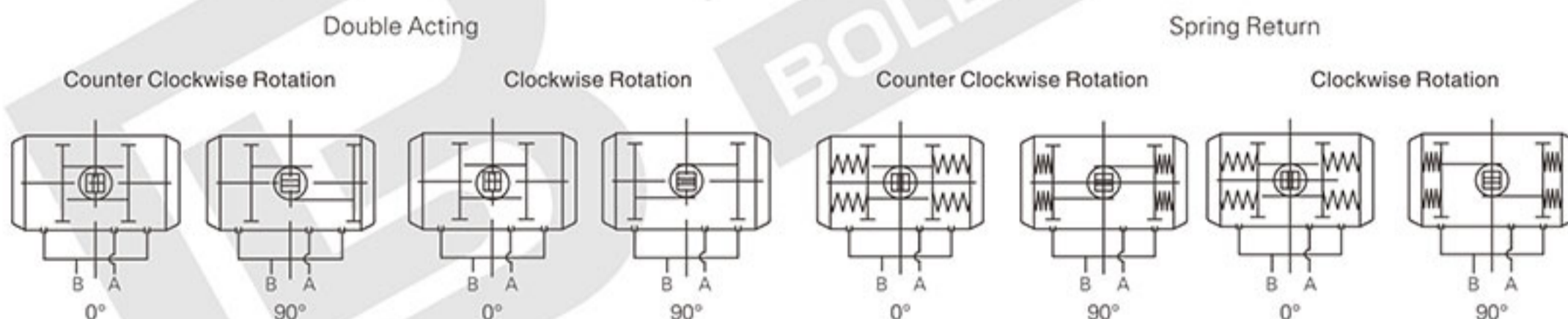


The Namur drive pinion and the Namur top mounting connection permit direct installation of accessories such as limit switch box and positioner.

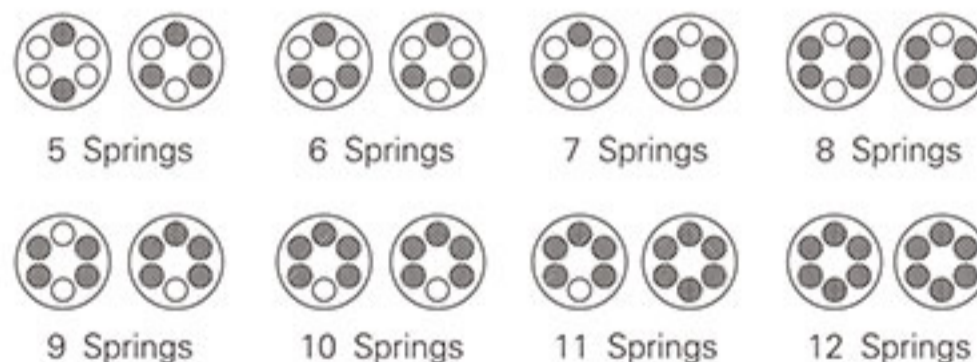


Bottom mounting connection is designed in accordance with ISO5211 and DIN3337 standards for direct mounting with valve gear boxes or mounting brackets.

◆ Working Principle:



Spring Positions of Spring Return Actuators



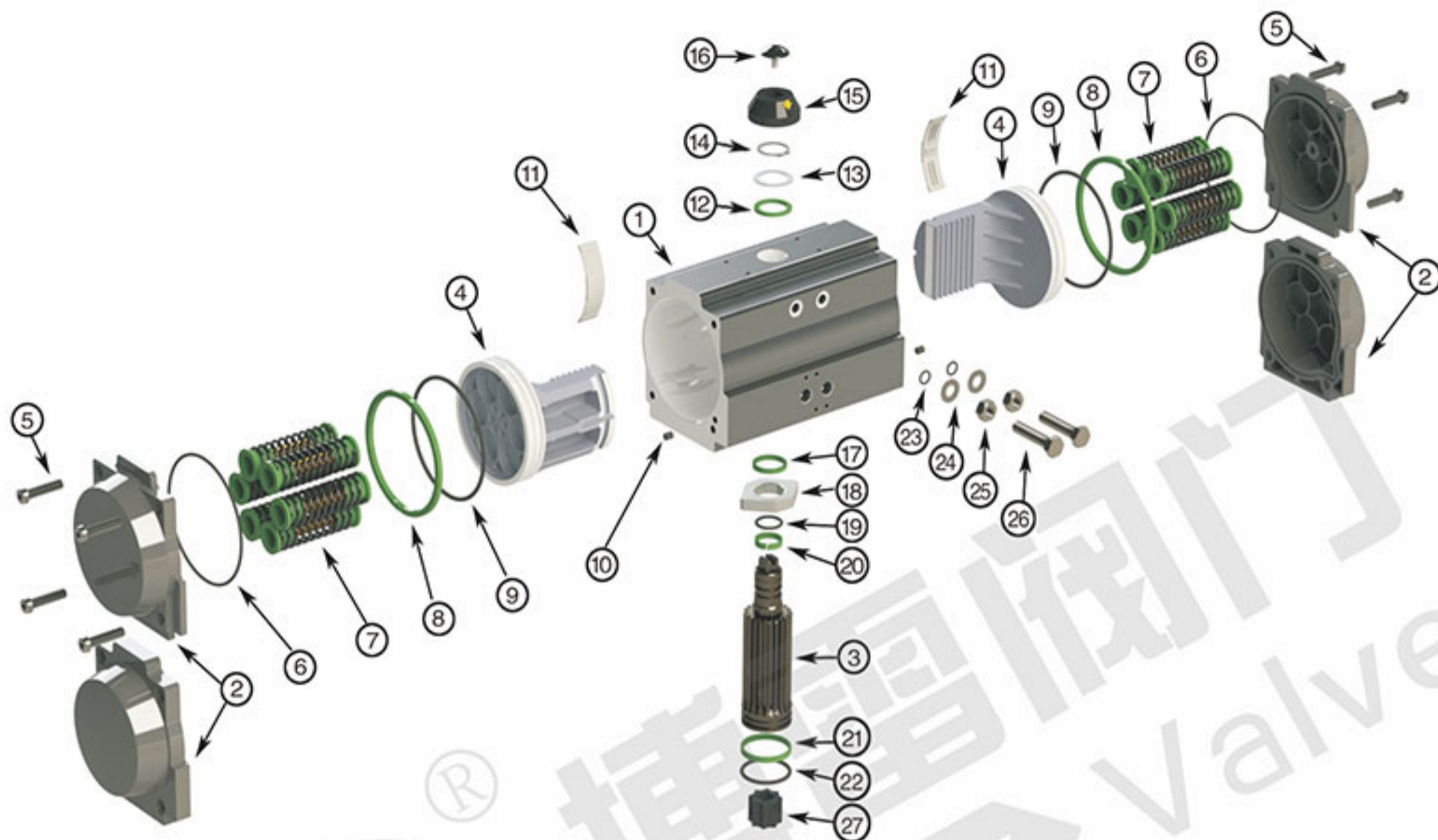
Old Type



New Type

# AT SERIES

## PNEUMATIC ACTUATORS

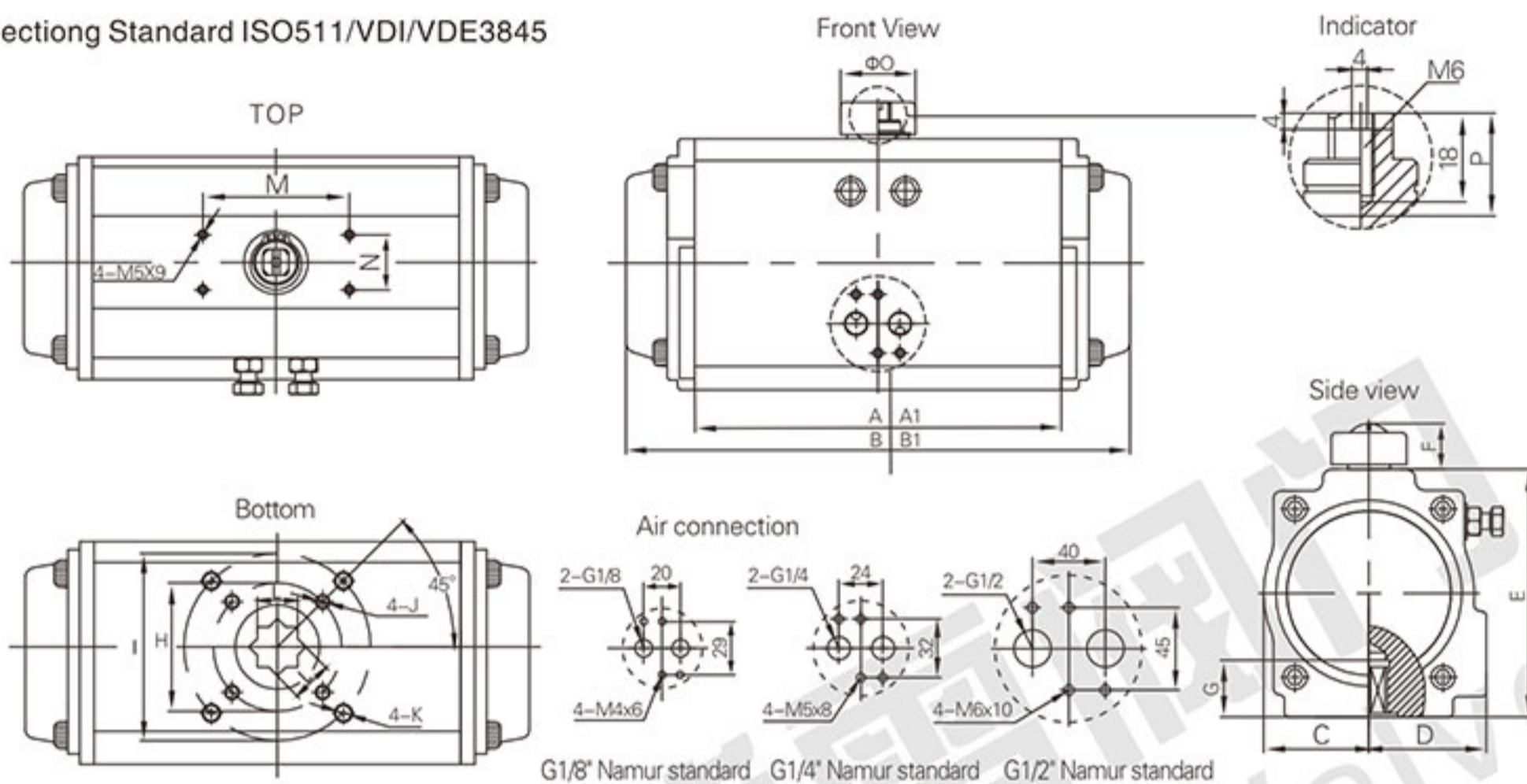


### ◆ Part list

No.	Description	Qty	Standard Material	Protection	Optional Material
1	Body	1	Extruded Aluminum Alloy	Hard Anodized Etc	
2	End Cap	2	Cast Aluminum		
3	Shaft	1	Carbon Steel	Nickel Plated	Stainless Steel
4	Piston	2	Cast Aluminum / Steel	Anodized/ Zinc Galvanized	Stainless Steel
5	Cap Screw	8	Stainless Steel		
6	O-ring(End Top)	2	NBR		Viton / Silicone
7	Spring	0~12	Spring Steel	Dip Coating	
8	Bearing	2	Engineering Plastics		
9	O-ring(Piston)	2	NBR		Viton / Silicone
10	Plug(Old Type)	2	NBR		Viton / Silicone
11	Guide	2	Engineering Plastics		
12	Outside Washer	1	Engineering Plastics		
13	Thrust Washer	1	Stainless Teel		
14	Spring Clip	1	Stainless Teel		
15	Indicator	1	Plastic		
16	Indicator Screw	1	Plastic		
17	Inside Washer	1	Engineering Plastics		
18	Cam	1	Alloy Steel		
19	O-ring(Shaft)	1	NBR		Viton / Silicone
20	Bearing(Top of Shaft)	1	Engineering Plastics		
21	Bearing(Bottom of Shaft)	1	Engineering Plastics		
22	O-ring(Bottom of Shaft)	1	NBR		Viton / Silicone
23	O-ring(Adjustment Screw)	2	NBR		Viton / Silicone
24	Washer	2	Stainless Steel		
25	Nut	2	Stainless Steel	Powder Polyester Painted etc	
26	Adjustment Screw	2	Stainless Steel		
27	Shaft Adapter	1	Sintered Alloy		

◆ Appearance & Connection Dimension

Connecting Standard ISO511/VDI/VDE3845



G1/8" Namur standard G1/4" Namur standard G1/2" Namur standard

Model		A	A1	B	B1	C	D	E	F	G	H	I	J	K	L	M	N	ΦO	P	Air Supply	Weight	
BAT32	DA	90	90	112	112	23.5	23.5	45	26	12	F03	/	4-M5x8	/	9x9	50	30	34	20	G1/8"	0.55	
	SR																				/	
BAT40	DA	93	93	123	123	23.5	33	60	26	12	F03	F05	4-M5x8	4-M6x10	11x11	50	30	34	20	G1/8"	0.66	
	SR																					0.74
BAT52	DA	120	108	145	145	30	41	72	26	15	F03	F05	4-M5x8	4-M6x10	11x11	80	30	34	20	G1/4"	1.2	
	SR																					1.3
BAT63	DA	140	125	169	169	46	46	89	26	15	F05	F07	4-M6x10	4-M8x12	14x14	80	30	34	20	G1/4"	1.9	
	SR																					2.1
BAT75	DA	140	128	201	201	42	52	100	26	15	F05	F07	4-M6x10	4-M8x12	14x14	80	30	34	20	G1/4"	2.8	
	SR																					3.1
BAT83	DA	160	147	209	209	46	55	109	26	15	F05	F07	4-M6x10	4-M8x12	14x14 17x17	80	30	34	20	G1/4"	3.2	
	SR																					3.7
BAT92	DA	193	168	242	242	51	57.5	117	26	20	F05	F07	4-M6x10	4-M8x12	17x17	80	30	41	20	G1/4"	4.6	
	SR																					5.2
BAT105	DA	200	186	275	275	58	64	134	26	25	F07	F10	4-M8x12	4-M10x16	22x22	80	30	41	20	G1/4"	6.1	
	SR																					7.1
BAT125	DA	230	207	332	332	67.5	70	157	36	25	F07	F10	4-M8x12	4-M10x16	22x22	80	30	62	30	G1/4"	9.5	
	SR																					10.9
BAT140	DA	290	268	385	400	76	77	174	36	30	F10	F12	4-M10x16	4-M12x20	27x27	130	30	62	30	G1/4"	13.7	
	SR																					15.7
BAT160	DA	340	308	450	455	87.5	87.5	199	38	30	F10	F12	4-M10x16	4-M12x20	27x27	130	30	62	30	G1/4"	20.5	
	SR																					23.6
BAT190	DA	390	390	507	507	103	103	232	38	40	/	F12	/	4-M12x20	36x36	130	30	79	30	G1/4"	31.1	
	SR																					35.3
BAT210	DA	390	390	562	562	113	113	257	38	40	/	F12	/	4-M12x20	36x36	130	30	79	30	G1/4"	41.8	
	SR																					46.6
BAT240	DA	430	430	646	646	129	129	293	38	52	/	F16	/	4-M20x24	46x46	130	30	79	30	G1/4"	62.4	
	SR																					72.4
BAT270	DA	510	510	722	722	146	146	333	38	52	/	F16	/	4-M20x24	46x46	130	30	79	30	G1/4"	86.3	
	SR																					98.3
BAT300	DA	579	579	825	825	162	173	354	38	52	/	F16	/	4-M20x24	46x46	130	30	79	30	G1/2"	103	
	SR																					143
BAT350	DA	580	580	866	866	190	195	410	38	52	/	F16	/	4-M20x24	46x46	130	30	79	30	G1/2"	144	
	SR																					188
BAT400	DA	-	-	924	924	258	258	464	38	60	/	F25	/	8-M16x24	55x55	130	30	79	30	G1/2"	289	
	SR																					360

Note: The weights of SR model are included 12 springs.  
A and B items for old type, A1 and B1 items for new type.

# AT SERIES

## PNEUMATIC ACTUATORS



03/04

### ◆ Double Acting Output Torque In Nm

Model	Input Air Supply Pressure (Unit: Bar)						
	2	3	4	5	6	7	8
BAT32DA	3	5	6	8	9	11	12
BAT40DA	4.8	7.1	9.6	11.9	14.3	16.7	19.1
BAT52DA	8.1	12.1	16.2	20.1	24.2	28.2	32.3
BAT63DA	14.3	21.4	28.5	35.6	42.7	49.8	56.7
BAT75DA	20	30.2	40.3	50.4	60.4	70.5	80.6
BAT83DA	30.9	46.3	61.8	77.1	92.5	108	123.5
BAT92DA	44.2	66.3	88.4	110.5	133	154.8	176.7
BAT105DA	65.8	98.8	131.6	164.5	197.4	230.4	263.2
BAT125DA	102.6	153.9	205.2	256.5	307.8	359.1	410.4
BAT140DA	175.5	263.2	351	438.7	526.3	614.2	702.1
BAT160DA	267.4	401	534.9	668.8	801.8	935.8	1069.7
BAT190DA	450.4	646	861.7	1078.3	1293	1507.7	1723.3
BAT210DA	526.3	789.5	1052.6	1314.8	1578.9	1842.1	2105.2
BAT240DA	773.3	1160	1546.6	1933.3	2319.9	2706.6	3093.2
BAT270DA	1174.2	1761.3	2348.4	2935.5	3522.6	4109.7	4696.8
BAT300DA	1610.8	2416.2	3221.6	4027.1	4832.5	5637.9	6443.3
BAT350DA	2411.8	3617.6	4823.5	6029.4	7235.3	8441.1	9647.1
BAT400DA	3256	4884	6512	8140	9768	11396	13024

### ◆ Single Acting Output Torque In Nm

Model	Spring Qty	Air Supply Pressure												Output Torque Spring		
		3Bar		4Bar		5Bar		6Bar		7Bar		8Bar		0°	90°	
		0°	90°	0°	90°	0°	90°	0°	90°	0°	90°	0°	90°			
Start	End	Start	End	Start	End	Start	End	Start	End	Start	End	Start	End			
BAT52SR	5	8.8	7.3	13.0	11.6									5.4	4.0	
	6	8.0	6.3	12.2	10.5	16.5	14.8							6.5	4.7	
	7	8.2	5.2	11.5	9.4	15.7	13.7	20.0	17.9					7.6	5.5	
	8	6.4	4.1	10.7	8.3	14.9	12.6	19.2	16.8	23.4	21.1			8.6	6.3	
	9			9.9	7.3	14.1	11.5	18.4	15.8	22.6	20.0	26.9	24.3	9.7	7.1	
	10			9.1	6.2	13.3	10.4	17.6	14.7	21.8	18.9	26.1	23.2	10.8	7.9	
	11					12.5	9.4	16.8	13.6	21.0	17.9	25.3	22.1	11.9	8.7	
	12					11.8	8.3	16.0	12.5	20.3	16.8	24.5	21.0	13.0	9.5	
	BAT63SR	5	15.7	12.5	23.1	20.0									9.9	6.8
		6	14.3	10.5	21.8	18.0	29.3	25.5							11.9	8.1
		7	13.0	8.5	20.4	16.0	27.9	23.5	35.4	31.0					13.9	9.5
		8	11.6	6.5	19.1	14.0	26.6	21.5	34.0	29.0	41.5	36.5			15.9	10.8
9				17.7	12.0	25.2	19.5	32.7	27.0	40.2	34.5	47.6	42.0	17.9	12.2	
10				16.4	10.0	23.8	17.5	31.3	25.0	38.8	32.5	46.3	40.0	19.9	13.6	
11						22.5	15.5	30.0	23.0	37.5	30.5	44.9	38.0	21.9	14.9	
12						21.1	13.5	28.6	21.0	36.1	28.5	43.6	36.0	23.9	16.3	
BAT75SR		5	27.0	21.6	39.3	34.0									15.5	10.2
		6	24.9	18.5	37.3	30.9	49.7	43.3							18.6	12.2
		7	22.9	15.5	35.3	27.8	47.6	40.2	60.0	52.6					21.7	14.2
		8	20.9	12.4	33.2	24.7	45.6	37.1	58.0	49.5	70.4	61.8			24.8	16.2
	9			31.2	21.6	43.6	34.0	56.0	46.4	68.3	58.7	80.7	71.1	27.8	18.3	
	10			29.2	18.5	41.6	30.9	53.9	43.3	66.3	55.7	78.7	68.0	30.9	20.3	
	11					39.5	27.8	51.9	40.2	64.3	52.6	76.6	64.9	34.0	22.3	
	12					37.5	24.7	49.9	37.1	62.2	49.5	74.6	61.8	37.1	24.4	
	BAT83SR	5	33.8	27.2	50.1	43.4									21.5	14.9
		6	30.9	22.9	47.1	39.1	63.3	55.3							25.8	17.8
		7	27.9	18.6	44.1	34.8	60.4	51.0	76.6	67.3					30.1	20.8
		8	24.9	14.3	41.2	30.5	57.4	46.7	73.6	63.0	89.9	79.2			34.4	23.8
9				38.2	26.2	54.4	42.4	70.7	58.7	86.9	74.9	103.1	91.1	38.7	26.7	
10				35.2	21.9	51.5	38.1	67.7	54.4	83.9	70.6	100.2	86.8	43.0	29.7	
11						48.5	33.8	64.7	50.1	81.0	66.3	97.2	82.5	47.3	32.7	
12						45.5	29.5	61.8	45.8	78.0	62.0	94.2	78.2	51.6	35.6	
BAT92SR		5	48.0	39.5	71.3	62.8									30.3	21.8
		6	43.7	33.5	66.9	56.7	90.2	80.0							36.3	26.1
		7	39.3	27.4	62.6	50.7	85.8	73.9	109.1	97.2					42.4	30.5
		8	34.9	21.4	58.2	44.6	81.5	67.9	104.7	91.2	128.0	114.4			48.4	34.9
	9			53.8	38.6	77.1	61.8	100.4	85.1	123.6	108.4	146.9	131.6	54.5	39.2	
	10			49.5	32.5	72.8	55.8	96.0	79.0	119.3	102.3	142.6	125.6	60.6	43.6	
	11					68.4	49.7	91.7	73.0	114.9	96.3	138.2	119.5	66.6	47.9	
	12					64.0	43.7	87.3	66.9	110.6	90.2	133.8	113.5	72.7	52.3	



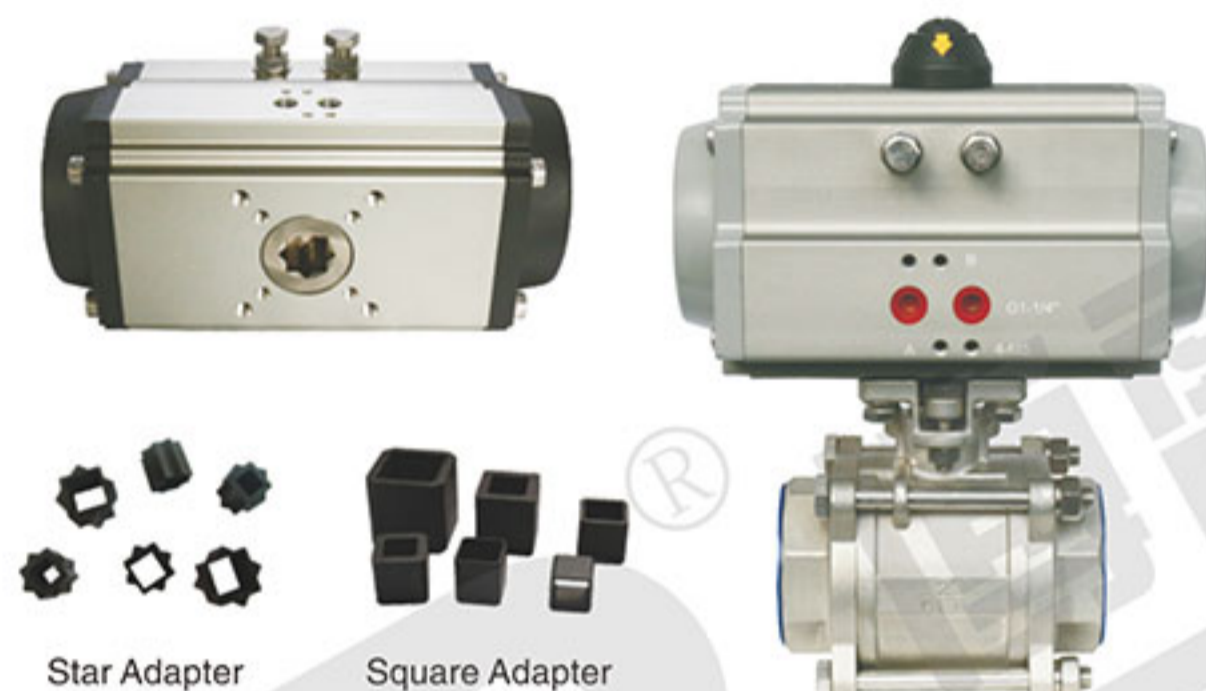


# AT SERIES PNEUMATIC ACTUATORS

## ◆ Air Consumption

Model		AT032	AT040	AT052	AT063	AT075	AT083	AT092	AT105	AT125	AT140	AT160	AT190	AT210	AT240	AT270	AT300	AT350	AT400
Cylinder Air Volume (L)	Open	0.04	0.08	0.1	0.2	0.3	0.5	0.7	1.2	1.5	2.4	3.1	4.3	5.8	10.0	14.5	23.8	35.1	52.6
	Close	0.05	0.11	0.2	0.3	0.5	0.8	1.1	1.8	2.3	3.8	4.9	6.9	9.5	15.2	21.4	29.7	46.3	36
Opening & Closing Time (Second)(A)	DA Open	0.1	0.1	0.2	0.3	0.3	0.4	0.5	0.7	0.9	1.2	1.5	2.0	2.7	3.5	4.0	8.0	10.0	10.0
	SR Close	0.1	0.1	0.2	0.3	0.4	0.5	0.6	0.8	1.1	1.4	1.7	2.2	3.2	4.0	4.5	10.0	12.0	13.0
	DA Open	0.1	0.1	0.3	0.3	0.4	0.5	0.7	0.9	1.2	1.5	1.8	2.4	3.5	4.1	4.5	7.0	8.0	8.0
	SR Close	0.2	0.2	0.3	0.4	0.5	0.6	0.9	1.1	1.4	1.8	2.1	2.8	4.0	4.6	5.0	8.0	9.0	9.0

## ◆ Mounting Configurations: Valve Interface & Actuator



Size	ISO5211	Options		
32	F03(9x9)	/		
40	F03/F05(11x11)	11x9	11x7	
52	F05/F07(11x11)	11x9	11x7	
63	F05/F07(14x14)	14x11	14x9	
75	F05/F07(14x14)	14x11	14x9	
83	F05/F07(14x14/17x17)	14x11	14x9 / 17x14	17x11
92	F05/F07(17x17)	17x14	17x11	
105	F07/F10(22x22)	22x19	22x17	22x14
125	F07/F10(22x22)	22x19	22x17	22x14
140	F10/F12(27x27)	27x22	27x19	22x17
160	F10/F12(27x27)	27x22	27x19	22x17
190	F12(36x36)	36x27	36x22	36x19
210	F12(36x36)	36x27	36x22	36x19
240	F16(46x46)	46x36		
270	F16(46x46)	46x36		
300	F16(46x46)	46x36		
350	F16(46x46)	46x36		
400	F25(55x55)	/		

## ◆ Top Mount Interface



Namur (VDI/VDE 3845) mounting configuration of all types of top mounted accessories.

Size	Height
32	50x30-H26
40	50x30-H26
52	80x30-H26
63	80x30-H26
75	80x30-H26
83	80x30-H26
92	80x30-H26
105	80x30-H26
125	80x30-H36
140	130x30-H36
160	130x30-H38
190	130x30-H38
210	130x30-H38
240	130x30-H38
270	130x30-H38
300	130x30-H38
350	130x30-H38
400	130x30-H38



**天津市博雷阀门有限公司**  
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