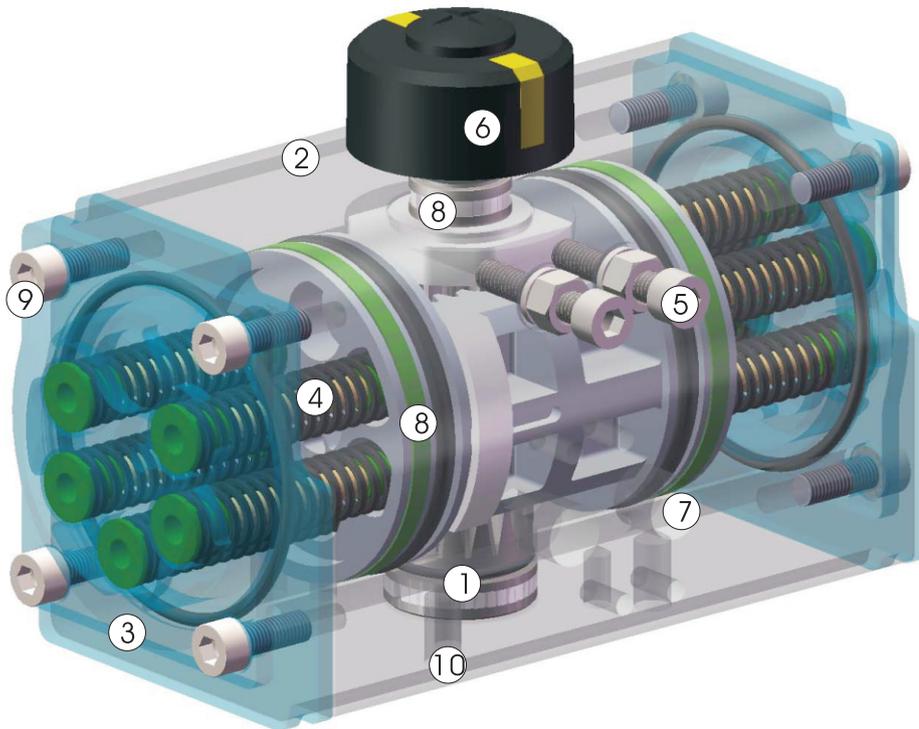


Pneumatic Actuator

BT Series



BTD / BTS Series Of New Valve Pneumatic Actuator



BTD/BTS new rack and pinion pneumatic actuator by the zhejiang KST company combines the latest technology at home and abroad, through the three-dimensional model of innovation and optimization of CAD design, beautiful shape compact, modern styling; and adopt practical new materials, new processes, so that the product quality, more reliable; more standard selection of more affordable; products fully meet the latest international standards, technical specifications, to meet current and future needs.

① Dual piston rack and pinion design of symmetric structures, rapid and smooth movement, high precision, high output power by a simple change in the direction of the piston assembly positions available anti-rotation.

② High quality extruded aluminum alloy cylinder block, by precision machining the hole and the external surface of hard anodized (anodic oxidation under special circumstances + Teflon coating), longer life, low friction coefficient.

③ Integrated design, all the double acting and single-function actuator models have the same cylinder and end caps, easily removed by installing a spring or spring to change the mode of action.

④ Combined pre-spring break Hean whole group, whether in the assembly process or use on-site in both convenient and safe to install or change the

⑤ The external side of the two single independent adjustment screw has been number of springs. installed in the valve for the actuator is precisely to facilitate, control valve open and valve closed position, For the whole trip conditioned office is also configured in two cover a longer adjustment screws.

⑥ Multi-position indicator, on-site visual instructions, consistent with VDI/VDE3845, NAMUR standard slot, the output can be installed and all the accessories, such as limit switch box, electric positioner, position sensor (Pepperl and Fuchs, Turck).

⑦ Gas source interface line NAMURstandard, direct safety plaquesNAMUR standard solenoid valve.

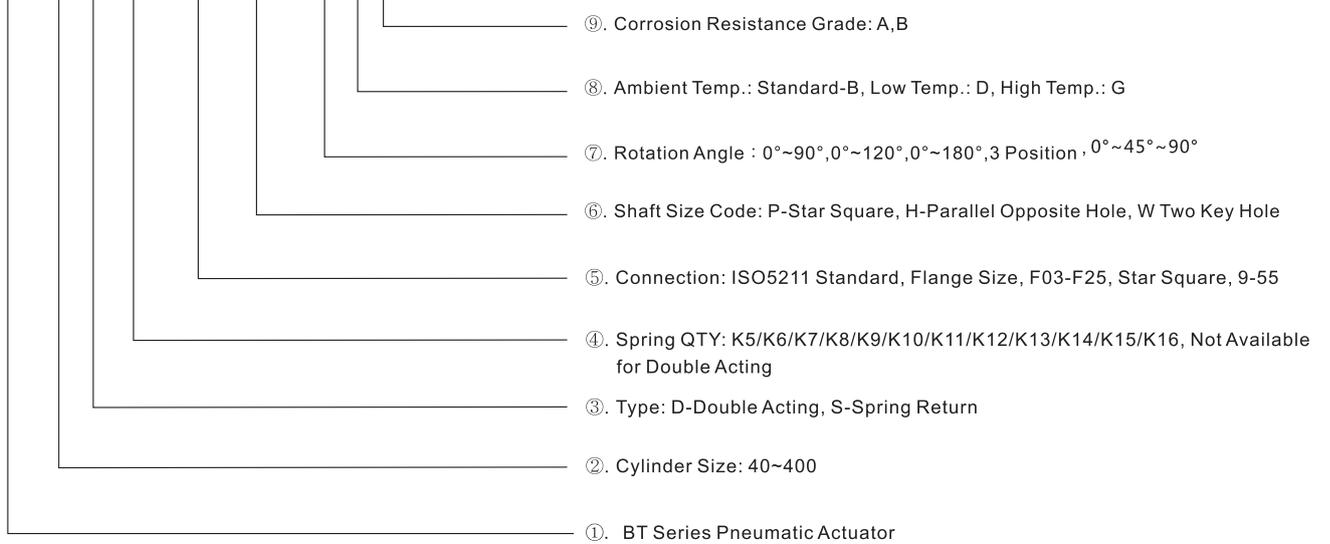
⑧ Rack on the back of the composite bearing and piston guide ring and the output shaft bearings to prevent metal on metal friction and increasing lubrication, so a low friction, long life.

⑨ All fasteners are stainless steel, long-term corrosion resistance.

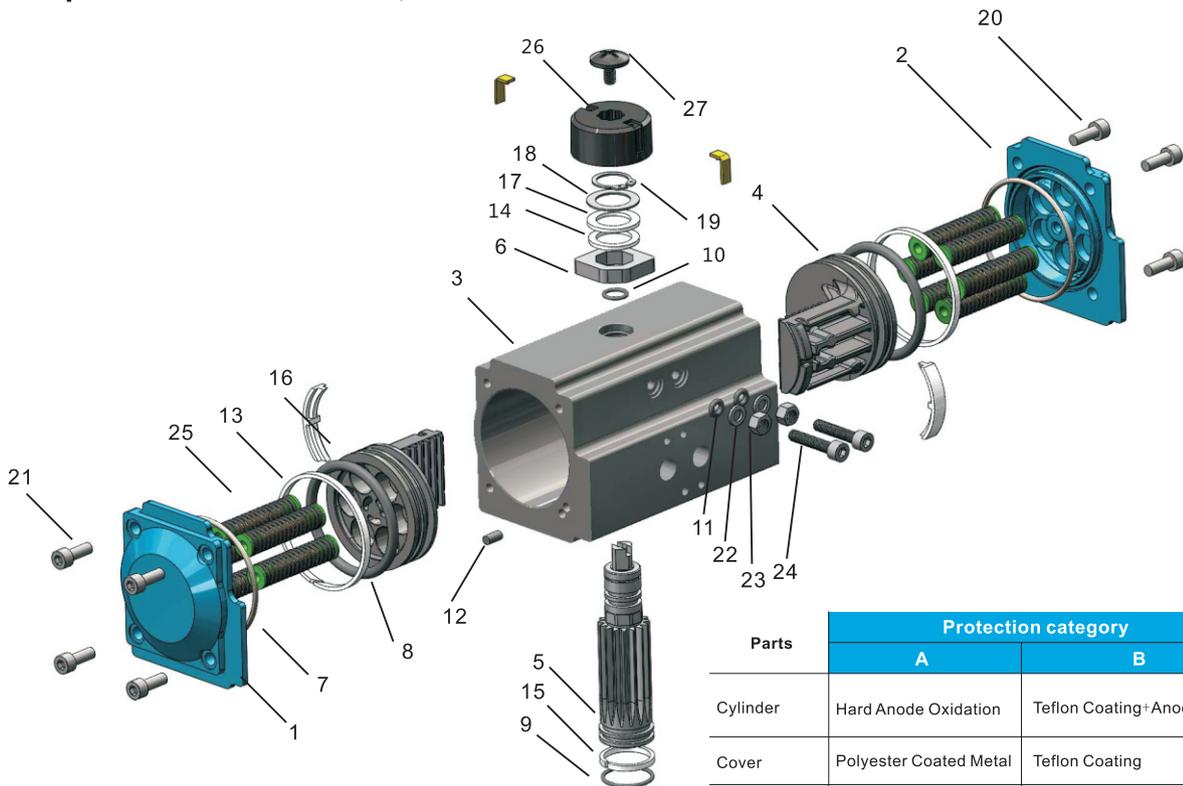
⑩ Connection part of the line with new international standard ISO5211, DIN3337 (F03-F25) makes products with interchangeable, versatile.

Model preparation

BT-160 S-K10 F10/12 P27-90-B-A



Components And Materials, Corrosion

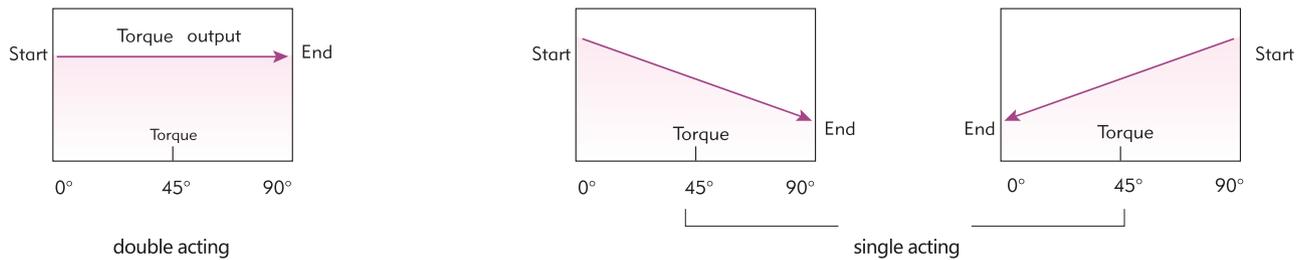


Parts	Protection category	
	A	B
Cylinder	Hard Anode Oxidation	Teflon Coating+ Anode Sclerosis
Cover	Polyester Coated Metal	Teflon Coating
Output shaft	Carbon Steel Electroless Nickel Plating	Electroless Nickel Plating Or Stainless Steel
Use Occasion	General Situation	General Occasions Or Low Concentrations Of Acidic Environment

Pneumatic Actuator BT Series

Part Number	Each number	Part Name	Standard Materials	Selected Materials
01	1	Left Cover	Aluminum Die Casting	Stainless steel
02	1	Right Cover	Aluminum Die Casting	Stainless steel
03	1	body	Aluminum extrusion	Stainless steel
04	2	Piston	Aluminum Die Casting	----
05	1	Output shaft	Carbon Steel	Stainless steel
06	1	Cam adjustment	Carbon Steel	----
07 *	2	O-ring (cover)	NBR	Fluorine or silicone rubber
08 *	2	O-ring (Piston)	NBR	Fluorine or silicone rubber
09 *	1	O-ring (output shaft bottom)	NBR	Fluorine or silicone rubber
10 *	1	O-ring (output shaft at the top)	NBR	Fluorine or silicone rubber
11 *	2	O-ring (adjusting screw)	NBR	Fluorine or silicone rubber
12 *	2	Plug (Cylinder)	NBR	Fluorine or silicone rubber
13 *	2	Bearing (Piston)	POM	----
14 *	1	Bearing (output shaft at the top)	POM	----
15 *	1	Bearing (output shaft bottom)	POM	----
16 *	1	Guide with Bearing (Piston back)	POM	----
17 *	2	Thrust bearings (output shaft)	POM	----
18	2	Gasket (output shaft)	Stainless steel	----
19	1	Flexible file ring	Spring steel	----
20	8	Cover bolt	Stainless steel	----
21	8	Cover Gasket	Stainless steel	----
22	2	Gasket	Stainless steel	----
23	2	Nut	Stainless steel	----
24	2	Adjustment bolt	Stainless steel	----
25	5-16	Spring Components	Alloy spring steel	----
26	1	Position indicator	POM	----
27	1	Screw of indicator	POM	----

Torque Diagram



Double Acting Operation

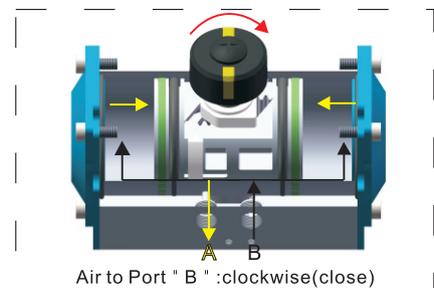
Selection of double acting actuators

The suggested safety factor for double acting actuators under normal working conditions is 20%-30%

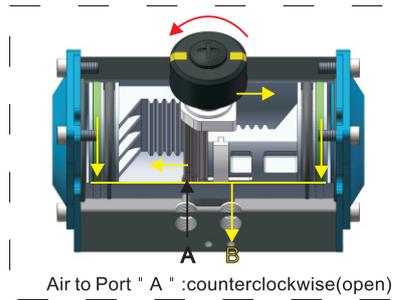
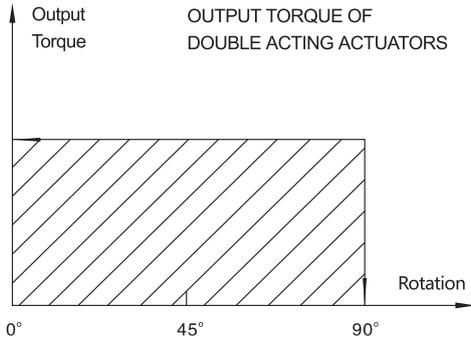
Example:

- The torque needed by valve=100 N.m
- The torque considered safety factor $100 \times (1+30\%) = 130 \text{ N.m}$
- Air Supply=5 Bar

According to double acting torque table, we can choose the minimum model is BT-105D.



Pneumatic Actuator BT Series



* Pistons must be inverted to reverse actuator rotation

Spring Return Operation

Selection of single action actuators

Under normal operating conditions, a single actuator to consider the role of the safety factor of 30% -50%.

For example:

Valve required torque = 100N.m

Safety torque = $100 \times (1 + 30\%) = 130\text{N.m}$

according to single acting actuator output torque table, we can find AT-145S K10

Torque following

Implementation process $0^\circ = 216.8\text{N.m}$ air

Implementation process $90^\circ = 175.8\text{N.m}$ air

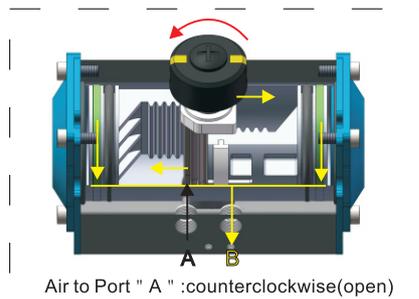
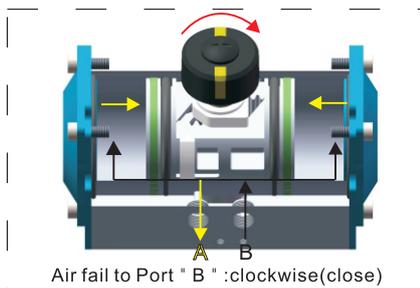
Spring stroke $0^\circ = 172\text{N.m}$

Spring stroke $90^\circ = 258\text{N.m}$

output Torque bigger than all our needs

Note:

Single action during the spring return actuators, actuator B hole ventilation does not affect actuator output torque.instead it's helpful of spring return



* Spring force makes the actuator clockwise when the air is exhausted at port " A "

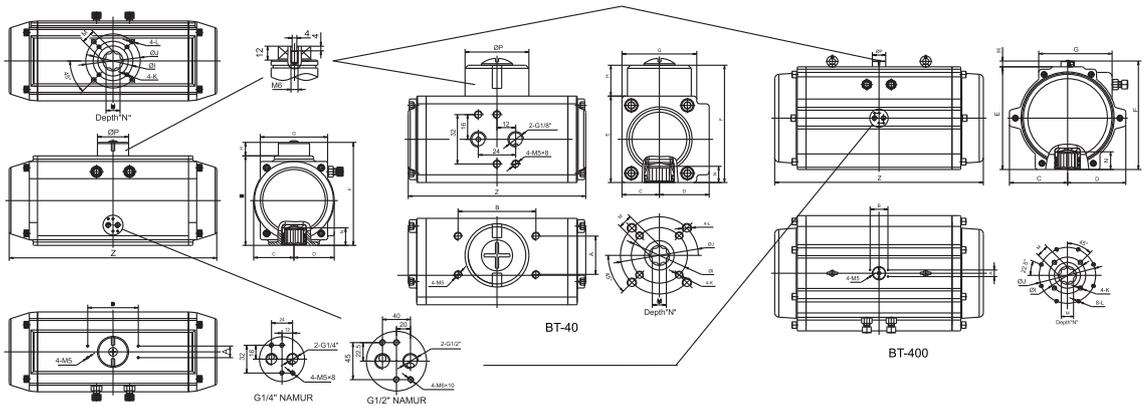
* When air fail to counterclockwise is required, the pistons must be inverted

Pneumatic Actuator BT Series

Double Acting Actuator Output Torque(Nm)

Model	Air supply pressure(Unit:Bar)								
	3bar	3.5bar	4bar	4.5bar	5bar	5.5bar	6bar	7bar	8bar
BT- 40D	5.7	6.7	7.6	8.6	9.5	10.5	11.4	13.3	15.2
BT- 52D	12.0	14.0	16.0	18.0	20.0	22.0	24.0	28.0	32.0
BT- 63D	21.0	24.5	28.0	31.5	35.0	38.5	42.0	49.0	56.0
BT- 75D	30.0	35.0	40.0	45.0	50.0	55.0	60.0	70.0	80.0
BT- 83D	45.7	53.3	61.0	68.6	76.2	83.8	91.4	106.7	121.9
BT- 92D	67.4	78.7	89.9	101.2	112.4	123.6	134.9	157.4	179.8
BT-105D	97.6	113.9	130.2	146.4	162.7	179.0	195.2	227.8	260.3
BT-125D	152.2	177.6	203.0	228.3	253.7	279.1	304.4	355.2	405.9
BT-140D	260.3	303.7	347.0	390.4	433.8	477.2	520.6	607.3	694.1
BT-160D	396.6	462.7	528.8	594.9	661.0	727.1	793.2	925.4	1057.6
BT-190D	639.3	745.9	852.4	959.0	1065.5	1172.1	1278.6	1491.7	1704.8
BT-210D	781.0	911.2	1041.4	1171.5	1301.7	1431.9	1562.0	1822.4	2082.7
BT-240D	1147.6	1338.8	1530.1	1721.3	1912.6	2103.9	2295.1	2677.6	3060.2
BT-270D	1742.9	2033.4	2323.8	2614.3	2904.8	3195.3	3485.8	4066.7	4647.7
BT-300D	2390.8	2789.3	3187.8	3586.2	3984.7	4383.2	4781.6	5578.6	6375.5
BT- 350D	3580	4176	4773	5369	5966	6563	7159	8352	9546
BT- 400D	5100	5950	6800	7650	8500	9350	10200	11900	13600

Dimensional Drawing



BT-52, BT-63, BT-75, BT-83, BT-92, BT-105, BT-125, BT-140
BT-140, BT-160, BT-190, BT-210, BT-240, BT-270, BT-300, BT-350

Dimension

Unit (mm)

Model	A	B	C	D	E	F	G	H	I	I-1	J	J-1	K	L	M	N	P	Z	Air
BT-40	25	50	24	32	56	76	48	20	36	F03	50	F05	M5×8	M6×10	9	10	42	110	1/8"
BT-52	30	80	30	42.5	72.4	92.4	50.5	20	36	F03	50	F05	M5×8	M6×10	11	14	42	150	1/4"
BT-63	30	80	36	47	88.5	108.5	69.5	20	50	F05	70	F07	M6×10	M8×13	14	18	42	171	1/4"
BT-75	30	80	42.5	53	100	120	78	20	50	F05	70	F07	M6×10	M8×13	14	18	42	186	1/4"
BT-83	30	80	46.5	57	109.5	129.5	86	20	50	F05	70	F07	M6×10	M8×13	17	21	42	206	1/4"
BT-92	30	80	50	58	117	137	90	20	50	F05	70	F07	M6×10	M8×13	17	21	42	265	1/4"
BT-105	30	80	57.5	64	135	155	104.5	20	70	F07	102	F10	M8×13	M10×16	22	26	42	272	1/4"
BT-125	30	80	67.5	74.5	157	187	120.5	30	70	F07	102	F10	M8×13	M10×16	22	26	62	304	1/4"
BT-140	30	80	75.5	75.5	174	204	125	30	102	F10	125	F12	M10×16	M12×20	27	32	62	395	1/4"
BT-160	30	130	87	87	198	228	143	30	102	F10	125	F12	M10×16	M12×20	27	32	80	462	1/4"
BT-190	30	130	103	103	232	262	172	30	/	/	140	F14	/	M16×25	36	40	80	552	1/4"
BT-210	30	130	113	113	257	287	194	30	/	/	140	F14	/	M16×25	36	40	80	556	1/4"
BT-240	30	130	130	130	292	322	230	30	/	/	165	F16	/	M20×30	46	50	80	630	1/4"
BT-270	30	130	147	147	331	361	253	30	/	/	165	F16	/	M20×30	46	50	80	750	1/2"
BT-300	30	130	161	172	354	384	290	30	/	/	165	F16	/	M20×30	46	50	90	772	1/2"
BT-350	30	130	190	190	410	440	334	30	165	F16	254	F25	M20×30	8-M16×25	46	50	90	860	1/2"
BT-400	30	130	262	262	466	496	330	30	165	F16	254	F25	M20×30	8-M16×25	55	72	90	938	1/2"

Pneumatic Actuator BT Series

Single Acting Actuator Output Torque(Nm)

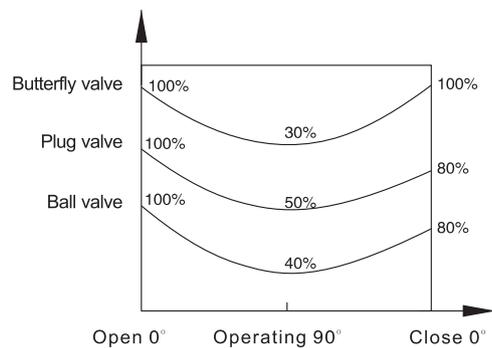
Model	Air pressure		Spring Torque																Spring Torque						
	Spring Q.ty	2.5bar		3.0bar		3.5bar		4.0bar		4.5bar		5.0bar		5.5bar		6.0bar		7.0bar		8.0bar		0° Start	90° End		
		0° Start	90° End	0° Start	90° End	0° Start	90° End	0° Start	90° End	0° Start	90° End	0° Start	90° End	0° Start	90° End	0° Start	90° End	0° Start	90° End						
BT-52S	5	5.7	3.8	7.7	5.8	9.7	7.8	11.7	9.8	13.7	11.8	15.7	13.8	17	14.6	18.1	13.4	21.3	18.1	24.4	20.9	6.2	4.3		
	6	5	2.6	6.1	4.6	9	6.6	11	8.6	13	10.6	15	12.6	17	14.6	18.1	13.4	21.3	18.1	24.4	20.9	7.4	5		
	7																						8.6	5.9	
	8																						9.9	6.7	
	9																						11.1	7.6	
	10																						12.4	8.5	
	11																						13.7	9.3	
	12																						14.8	10.2	
	BT-63S	5	10.7	7.1	14.2	10.6	17.7	14.1	21.2	17.6	24.7	21.1	28.2	24.6	30.3	26	32.4	23.9	38.1	32.3	43.7	37.2	10.4	6.8	
		6	9.3	5	12.8	8.5	16.3	12	19.8	15.5	23.3	19	26.8	22.5	28.9	23.9	32.4	23.9	31.1	21.8	36.7	30.2	12.5	8.2	
		7																					14.6	9.6	
		8																					16.7	10.9	
9																						18.8	12.3		
10																						20.9	13.7		
11																						22.9	15		
12																						24.9	16.4		
BT-75S		5	14.5	10.5	19.5	15.5	24.5	20.5	29.5	25.5	34.5	30.5	39.5	35.5	42.3	37.6	45.2	34.7	53.1	46.8	59.6	51.1	14.5	10.5	
		6	12.3	7.6	17.3	12.6	22.3	17.6	27.3	22.6	32.3	27.6	37.3	32.6	42.3	37.6	45.2	34.7	53.1	46.8	59.6	51.1	17.4	12.7	
		7																					20.3	14.8	
		8																					23.2	16.9	
	9																					26.1	19		
	10																					29	21.1		
	11																					31.9	23.2		
	12																					34.7	25.3		
	BT-83S	5	19.0	10.4	26.7	18.1	34.3	25.7	45.2	38	52.8	45.6	60.4	53.2	64.8	56.2	69.3	51.6	81.4	69.9	93.4	80.5	23	15.8	
		6																					27.6	19	
		7																					32.2	22.1	
		8																					36.8	25.3	
9																						41.4	28.5		
10																						46	31.6		
11																						50.6	34.8		
12																						55.2	38		
BT-92S		5	32.8	21.7	44.1	33	55.4	44.3	66.6	55.5	77.9	66.8	89.1	78	101.9	88.1	111.9	90.3	128.4	111.9	142.3	117.9	34.4	23.3	
		6	28.1	14.9	39.4	26.2	50.7	37.5	61.9	48.7	73.2	60	84.4	71.2	95.6	82.4	102.2	75.5	120.1	102.4	137.8	111.1	41.2	28	
		7																					48.1	32.7	
		8																					55	37.3	
	9																					61.9	42		
	10																					68.7	46.7		
	11																					75.6	51.4		
	12																					82.5	56		
	BT-105S	5	49.7	32.1	66	48.4	82.3	64.7	98.6	81	114.8	97.2	131.1	113.5	141	119.9	147	110.1	150.9	110.1	177.2	149.1	49.2	31.6	
		6	43.3	22.2	59.6	38.5	75.9	54.8	92.2	71.1	108.4	87.3	124.7	103.6	134.7	110.1	147	110.1	150.9	110.1	177.2	149.1	59.1	38	
		7																					68.9	44.3	
		8																					78.7	50.6	
9																						88.6	56.9		
10																						98.4	63.3		
11																						108	69.6		
12																						118	75.9		
BT-125S		5	74.8	47.8	100.2	73.2	125.6	98.6	151	124	176.3	149.3	201.7	174.7	216.1	185.1	231.4	169.1	271.2	230.2	311.9	264.9	79	52	
		6	63.8	32.8	89.2	58.2	114.6	83.6	140	109	165.3	134.3	190.7	159.7	216.1	185.1	231.4	169.1	271.2	230.2	311.9	264.9	81	63	
		7																					110	73	
		8																					125	84	
	9																					141	94		
	10																					157	105		
	11																					173	115		
	12																					189	125		
	BT-140S	5	130.9	87.9	174.3	131.3	217.7	174.7	261	218	304.4	261.4	347.8	304.8	374.2	322.2	411	311.9	400.6	296.2	393.3	311.9	264.9	129	86
		6	113.9	61.9	157.3	105.3	200.7	148.7	244	192	287.4	235.4	330.8	278.8	357.2	296.2	400.6	296.2	400.6	296.2	493.3	311.9	264.9	155	103
		7																					181	120	
		8																					206	137	
9																						232	155		
10																						258	172		
11																						284	189		
12																						310	206		
BT-160S		5	190.5	122.5	256.6	188.6	322.7	254.7	388.8	320.8	454.9	386.9	521	453	559.1	477.1	611.4	477.1	611.4	477.1	752.2	611.4	477.1	208	140
		6	162.5	80.5	228.6	146.6	294.7	212.7	360.8	278.8	426.9	344.9	493	411	531.1	435.1	597.2	435.1	611.4	477.1	752.2	611.4	250	166	
		7																					292	198	
		8																					333	223	
	9																					375	251		
	10																					417	279		
	11																					459	307		
	12																					500	335		
	BT-190S	5	333	224	440	331	546	437	653	544	759	650	866	757	933	802	1011	802	1119	900	1346	1149	309	200	
		6	293	162	400	269	506	375	613	482	719	588	826	695	933	802	1011	802	1119	900	1346	1149	371	240	
		7																					433	280	
		8																					495	320	
9																						557	360		
10																						618	400		
11																						680	440		
12																						742	480		
BT-210S		5	376	271	506	401	636	531	767	662	897	792	1027	922	1102	976	1277	1011	1346	1149	1752	1423	380	275	
		6	321	195	451	325	586	455	712	586	842	716	972	846	1047	900	1177	900	1277	1011	1588	1399	456	330	
		7																					532	385	
		8																					608	440	
	9																					684	495		
	10																					760	550		
	11																					836	605		
	12																					912	660		
	BT-240S	5	547																						

Sizing Information And How To Order

Single Acting Actuator Output Torque(Nm)

Air pressure		Spring Torque																Spring Torque							
Model	Spring Qty	2.5bar		3.0bar		3.5bar		4.0bar		4.5bar		5.0bar		5.5bar		6.0bar		7.0bar		8.0bar		0° Start	90° End		
		0° Start	90° End	0° Start	90° End	0° Start	90° End	0° Start	90° End	0° Start	90° End	0° Start	90° End	0° Start	90° End	0° Start	90° End	0° Start	90° End						
BT-350S	5	1810	1281	2407	1878	3003	2474	3600	3071	4196	3667	4793	4264									1702	1173		
	6	1575	940	2172	1537	2768	2133	3365	2730	3961	3326	4558	3923	5155	4520	4180	5517	4180				2043	1408		
	7			1938	1197				2390	3727	2986	4324	3583	4921	4180	5517	4180					2383	1642		
	8					2299	1452	2896	2661	2049	3492	2645	4089	3242	4686	3839	5282	3839	6475	5628		2724	1877		
	9									3257	2305	3854	2902	4451	3499	5047	3499	6240	5288		7434	6482	3064	2112	
	10									3071	4196	3667	4793	4264	4921	4180	5517	4180				6006	4947	3405	2346
	11									3257	2305	3854	2902	4451	3499	5047	3499	6240	5288		7434	6482	3745	2581	
	12									3071	4196	3667	4793	4264	4921	4180	5517	4180				6006	4947	3405	2346
	BT-400S	7	2413	1370	3283	2220	4113	3070	4963	3920	5813	4770	6663	5620	7250	6058							2880	1837	
		8	2150	958	3000	1808	3850	2658	4700	3508	5550	4358	6400	5208	6988	5647	7838	5647				3292	2100		
		9	1888	547	2738	1397	3588	2247	4438	3097	5288	3947	6138	4797	6988	5647	7838	5647				3703	2362		
		10	1626	135	2476	985	3326	1835	4176	2685	5026	3535	5876	4385	6726	5235	7576	5235	9276	7785		4115	2624		
11				2213	574	3063	1424	3913	2274	4763	3124	5613	3974	6463	4824	7313	4824	9013	7374	10713	9074	4526	2887		
12						2801	1012	3388	1862	4501	2712	5351	3562	6201	4412	7051	4412	8751	6962	10451	8662	4938	3149		
13									1451	4238	2301	5088	3151	5938	4001	6788	4001	8488	6551	10188	8251	5349	3412		
14										3976	1889	4826	2739	5676	3589	6526	3589	8226	6139	9926	7839	5761	3674		
15												4563	2328	5413	3178	6263	3178	7963	5728	9663	7428	6172	3937		
16														5151	2766	6001	2766	7701	5316	9401	7016	6584	4199		

Sizing information and How to order



For example:
 Butterfly of the original maximum torque = 80N.m
 Opened torque $80 \times 30\% = 24\text{N.m}$
 Air pressure = 5Bar
 We can choose BT-125SK10

Air travel $0^\circ = 148\text{N.m} > 80\text{N.m}$
 Air travel $90^\circ = 96.7\text{N.m} > 24\text{N.m}$
 Spring stroke $90^\circ = 157\text{N.m} > 24\text{N.m}$
 Spring stroke $0^\circ = 105\text{N.m} > 80\text{N.m}$
 The above figures show opening meet of the butterfly valve

Operating type (Double acting and spring return)

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



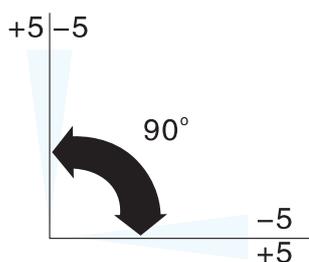
The Namur drive pinion and the Namur top mounting connection permit direct installation of accessories such as limitswitch box and positioner.



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



Operating conditions:



1. Operating media
Dry or lubricated air, or the non-corrosive gases
The maximum particle diameter must less than $30 \mu\text{m}$
2. Air supply pressure
The minimum supply pressure is 2.5 Bar
The maximum supply pressure is 8 Bar
3. Operating temperature
Standard: $-20^\circ\text{C} \sim +80^\circ\text{C}$
Low temperature: $-40^\circ\text{C} \sim +80^\circ\text{C}$
High temperature: $-15^\circ\text{C} \sim +150^\circ\text{C}$
4. Travel adjustment
Have adjustment range of $\pm 5^\circ$ for the rotation at 0° and 90°
5. Application
Either indoor or outdoor

Air Consumption

Air Consumption

Model	Max. Pressure	Rotation Angle	Temp.	Lap No. For Each 1 Degree Stroke	Diameter	Cylinder Volume Close	Cylinder Volume Open	Open/Close Time Close	Open/Close Time Open	Weight	
BT-52S	Lubrication or dry of compressed air 8bar	(0°-90°) ± 5° or full itinerary 0°-90°	B(normal) NBR O-ring -20~+80°C G(High Temperature) Viton O-ring -15~+150°C D(Low Temperature) Silicone O-ring -40~+80°C	1/6	52	0.1	0.2	DA 0.6 SR 2.0	DA 0.6 SR 0.5	DA 1.30 SR 1.42	... 0.0095
BT-63S				1/6	63	0.2	0.3	DA 0.7 SR 2.0	DA 0.7 SR 1.0	DA 2.05 SR 2.25	... 0.0135
BT-75S				1/5	75	0.3	0.5	DA 0.8 SR 2.0	DA 0.7 SR 1.0	DA 2.65 SR 2.95	... 0.0210
BT-83S				1/5	83	0.5	0.8	DA 0.9 SR 2.5	DA 0.8 SR 1.0	DA 3.30 SR 3.70	... 0.0365
BT-92S				1/5	92	0.7	1.1	DA 1.0 SR 3.0	DA 1.0 SR 1.0	DA 4.55 SR 5.30	... 0.0600
BT-105S				1/4	105	1.2	1.8	DA 1.5 SR 3.0	DA 1.5 SR 1.0	DA 5.80 SR 6.70	... 0.0730
BT-125S				1/4	125	1.5	2.3	DA 2.0 SR 4.0	DA 2.0 SR 1.0	DA 8.95 SR 10.35	... 0.1100
BT-140S				1/4	140	2.4	3.8	DA 2.5 SR 4.0	DA 2.5 SR 1.0	DA 13.35 SR 15.35	... 0.1865
BT-160S				1/4	160	3.1	4.9	DA 4.0 SR 4.0	DA 3.0 SR 1.5	DA 19.20 SR 23.10	... 0.2695
BT-190S				1/4	190	4.5	7.3	DA 5.0 SR 5.0	DA 4.0 SR 3.0	DA 31.05 SR 36.80	... 0.4792
BT-210S				1/4	210	6.8	11.2	DA 5.0 SR 6.0	DA 5.0 SR 3.0	DA 39.00 SR 45.50	... 0.5001
BT-240S				1/4	240	10	15.2	DA 6.0 SR 12	DA 6.0 SR 4.0	DA 53.00 SR 64.00	... 0.9167
BT-270S				1/4	270	14.5	21.4	DA 8.0 SR 15	DA 8.0 SR 6.0	DA 76.00 SR 95.20	... 1.6000
BT-300S				1/4	300	23.8	29.7	DA 12 SR 18	DA 12 SR 8.0	DA 100.0 SR 128.2	... 2.3500
BT-350S				1/4	350	35.1	46	DA 14 SR 20	DA 14 SR 10	DA 186.0 SR 216.0	... 2.5001
BT-400S				1/4	400	52.6	56	DA 15 SR 25	DA 15 SR 12	DA 243.0 SR 279.0	... 3.0001

Air consumption rest with Supply. Air volume and Action cycle times,expressions

$$L/Min=Air\ volume(Air\ volume\ Opening+Air\ volume\ closing) \times [(Air\ Supply(Kpa)+101.3) \div 101.3] \times Action\ cycle\ times(/min)$$

Common aults and inspection, troubleshooting

Failure phenomenon	Inspection Items	Solution
Pneumatic valve can not move	1. When solenoid valve is normal, coil is burned or not, or whether solenoid valve core is blocked by foreign matter.	Solenoid valve replacement, replacement coils, remove stolen property.
	2. Test the pneumatic actuator separately with air supply, check whether sealing ring and cylinder is damaged.	Replace a bad ring and cylinder.
	3. Impurities in the valve blocks the valve core.	Remove impurities, replace damaged parts.
	4. The handle is in manual position.	change the handle to pneumatic position
Slow motion, crawling	1. Air supply pressure is not enough.	The increase of gas supply pressure (0.4-0.7Mpa)
	2. Output torque of pneumatic actuator is too small.	Increase the pneumatic actuator Production.
	3. Valve coil or other valve components are too tight.	Re-assembly adjustments.
	4. Air supply pipe is plugged and flow is too small.	Exclude plug, replace the filter cartridge.
Reply devices without signal	1. Short circuit or disconnection of power occurs.	Maintenance of power lines.
	2. Cam position inside the switch box is not accurate.	Adjust the cam to the correct location
	3. Micro switches is damaged.	Replacement Micro Switch