



BR Series Pneumatic Actuator

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Pneumatic Actuator

BR Pneumatic actuators with double acting and single acting (spring return), two separated cylinder, double piston, Scotch Yoke type drives, suitable for big size cylinder body, large driving torque, flexible and stable action; inwall of cylinder block and Piston-Liner plated with Hard Chromium, perfect wear-resistance, oilless lubricating bearings and guide rings are fitting with valve parts exchange based on reducing coefficient of friction, extending service life. The BR pneumatic actuator's driving torque with U type curve characteristic, is much suitable for large body size valves's open/close, adjusting, and 90 degree rotary service.

BEIER Pneumatic actuator improve your company's efficiency by stabilization, high precision.

Suitable for a wide scope of services

Driving torque's guarantee

High performance, High stability

Reserve the packaging of actuator



BR Series Pneumatic Actuator

Advantage

1. BR heavy loading actuator meet with the valves's shut-off and regulating working conditions demand, Through the symmetric or bias outputting torque.
2. BR actuator based on design of Modular, then meet with the assembly of single, double acting parts, additional yoke.
3. Actuator have replaceable bearings and high-performance anti-abrasion trims to ensure long service life. BR Series actuator have greater torque range and Suitable module structure, so that the selection and matching of large diameter valve becomes easy. Manufacture and assembly accordance with QA system in strict, ensure the products meet the design requirements, reliable and high quality

The Digital Torque Testin

All the model specifications of BR series actuators taken the restricted area of testing and analysis, the BR Series Actuator provide torque diagram, shows details that the output force of the actuator on the scope of the related travel. This means that in addition to rely on torque diagram, can be based on the valve torque requirements to ensure the output torque of the actuator, choosed the most appropriate actuator which could perfect matched valve torque characteristics. According to the actual service of demand, these actual measured output torques can't be offered by many other manufacturers.



Type elongation range

BEIER under the service condition, select optimal actuator by elongation range. the symmetric and bias outputting torque designed to meet a variety of torque requirements of angle travel valves.

Through the symmetric and bias outputting torque.

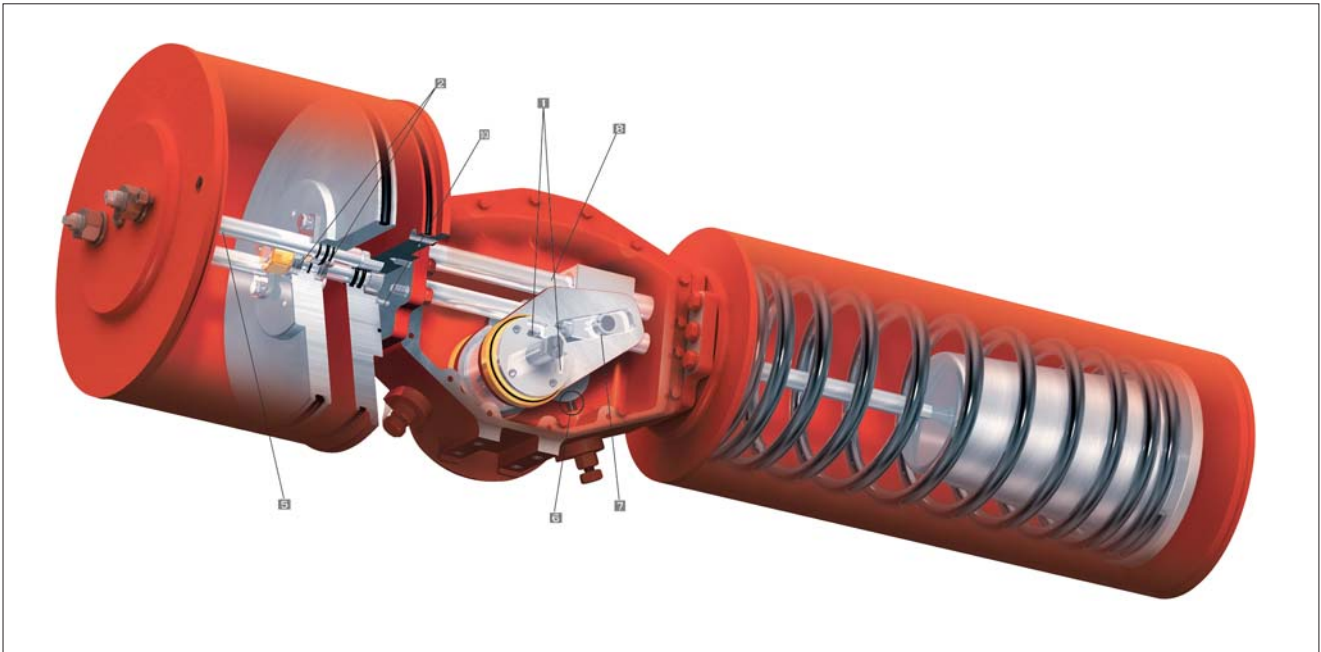
The wide scope of the actuator type and outputting torque ensure choosed the most economical actuator.

Special service conditions request

BR Series actuator standard configured to meet the normal service conditions, For applicable to special service conditions, we have additional function modules - Manual-control functions, total fieldbus regulating, On / off control, emergency shut down (ESD) application and the fire safety design.

Namur interface aux based on NAMUR standards, in all of the BR Series actuator, the interface aux of shaft driving is same, conducive to the standard configuration and installation, reduce spare parts.

Features and advantages



1. Simple Actuator Device

The joke of BR Series actuator designed with two long keyway,so not only easy to assemble and can adjust the location of actuator according to changes of the pipeline, and simple arrangement to reduce maintenance and assembly time.

2. Cylinder Protection

BR series actuator has two output bearings on each side of the cylinder to protect the lateral deflection, to extend the service life of the cylinder, the replacement of components convenient and easy to assemble.

3. High Efficiency

BR series cylinder block was locked by guide pad. High-strength guide pin fitted with self-lubricating bearings to ensure efficient operations and improve the energy transferring from power source module to stem.

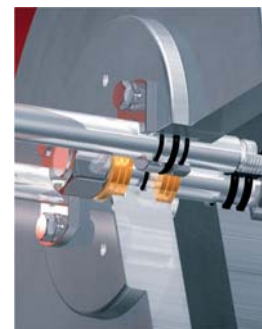
4. Anti-Corrosion

BR Series actuators have affixed four anti-corrosion materials to resist water, oil and chemical conditions, with excellent corrosion resistance and have been adopted by the ASTM B117 salt spray test to satisfy the condition of coastal and maritime applications.

5. Internal limiting stem

BR series power module has two built-in, high-strength alloy steel limiting stem, make cylinder guided,reduce internal friction.By the built-in limiting stem of cylinder,

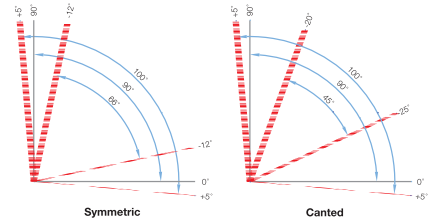
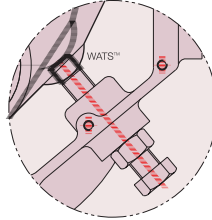
To achieve anti-corrosion and reduce the physical destruction effect,and extending the seal life of limiting stem.



Features and advantages

6 . WATSTM Wide Adjustable Stopper

The EP-Series offers an extended range of travel adjustment by utilizing a unique, patented yoke design. The yoke design, combined with two optional limit stop bolts in front of the drive module, allows travel to be adjusted from - 25 to +5 degrees. If greater travel adjustment is required an stroke adjuster can be fitted to extend the available range.



7.Replaceable bearings

Low-friction, permanently lubricated and high-performance bearings protect all components to ensure the smooth operation, to extending actuator service life.

8. Abrasion resistance

BR series actuator fitted with high strength and advanced surface treatment alloy steel guide pin, assembled with the self-lubricating bearings, made it have very strong anti-wear performance, and extended the service life of sliding Components.



9. Security Spring components

My company have designed security spring components to ensure operators safety in the installation and maintenance. It can only drives by the power module of spring.

10. Simple assembly

The main driving module of the actuator with a specially designed joint pin, to ensure that modules arranged simply and accurately, in the assembly and maintenance of the actuator.

Design and Construction

Versatility

BR Series module composed by the spring, power and driving modules, the module designed to enable the dismantling more convenient, quick and easy to make actuator from double acting into single acting. Actuator, have additional manual-control functions component. Modular design made the actuator could be modified accordingly on the condition not separated with the body.



Output torque

Double action Output torque

Unit N. m

Model	Double action Output torque				
	Air supply				
	0.3	0.4	0.5	0.6	0.7
BR A14	553	738	923	1107	1292
BR A16	723	964	1205	1446	1687
BR A20	1130	1507	1884	2260	2637
BR B20	1695	2260	2826	3391	3956
BR B25	2649	3532	4415	5298	6181
BR B28	3323	4430	5538	6646	7753
BR C28	4615	6154	7693	9231	10770
BR C32	6028	8038	10048	12057	14067
BR C36	7630	10173	12717	15260	17803
BR C40	9420	12560	15700	18840	21980
BR C45	11922	15896	19870	23844	27818

Cylinder volume and gas consumption computation and weight

Model		BR A14	BR A16	BR A20	BR B20	BR B25	BR B28	BR C28	BR C32	BR C36
Cylinder volume L	Double action(A+B)	6.5	14.3	30.8	48.5	73	148.2	193.2	350	630
	Single action	3.25	7.15	15.4	24.2	36.5	74.1	96.1	175	315
Weight kg	Double action	48	82	170	195	325	600	800	1070	1580
	Single action	65	116	223	280	450	845	1070	1400	

Double action $V = (A+B) \{P+101.2\} / 98 \} M$

Single action $V = A \{P+101.2\} / 98 \} M$

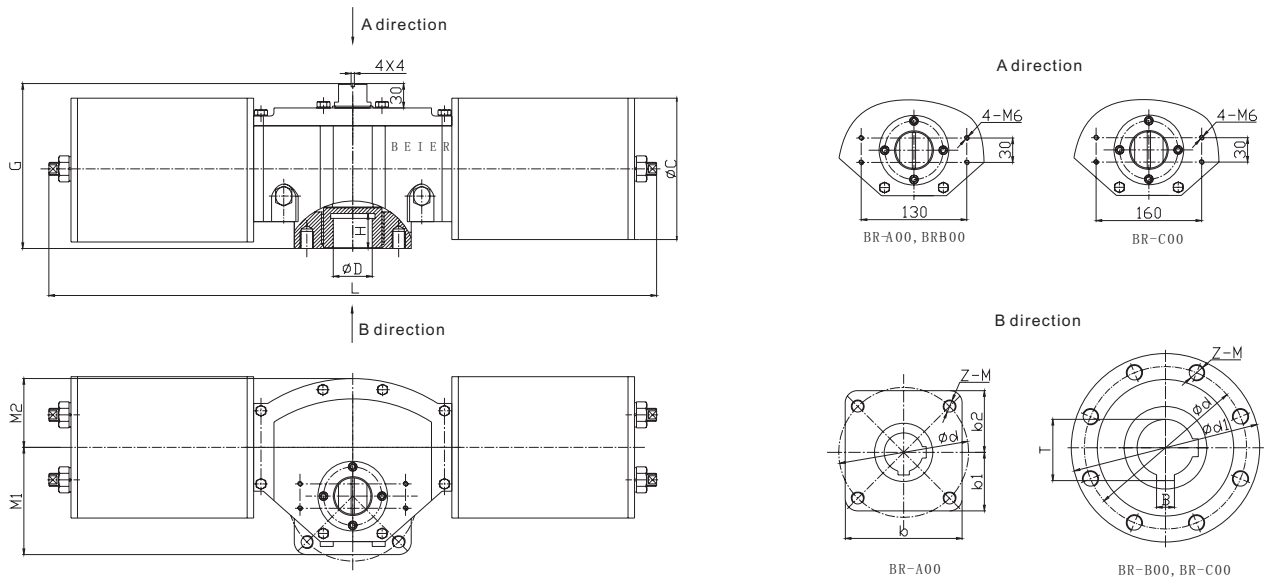
V : Gas consumption NL/min(N L/Min)

P : Air supply KpaG (Gauge pressure)

M : Each minute the times of piston round-trip

A、 B : Cylinder volume

External dimensions and connection dimensions



External dimensions and connection dimensions

Model	L	G	M1	M2	ΦC	ΦD	H	B	T	Φd	Φd1	b	b1	b2	Z-M1	Air connection
BR A14	786	203	85	132	152	48	43	14	52	140	/	144	72	76	4-M16	G 1/4
BR A16	786	203	85	132	172	48	43	14	52	140	/	144	72	76	4-M16	G 1/4
BR A20	786	203	85	132	212	48	43	14	52	140	/	144	72	76	4-M16	G 1/4
BR B20	1058	218	105	206	212	60	56	18	75	200	232	/	/	/	8-M16	G 3/8
BR B25	1058	218	105	206	266	60	56	18	75	200	232	/	/	/	8-M16	G 3/8
BR B28	1058	218	105	206	296	70	56	22	75	200	232	/	/	/	8-M16	G 3/8
BR C28	1360	260	140	300	296	105	106	28	111	300	350	/	/	/	8-M24	G 1/2
BR C32	1360	260	140	300	336	105	106	28	111	300	350	/	/	/	8-M24	G 1/2
BR C36	1360	260	140	300	376	105	106	28	111	300	350	/	/	/	8-M24	G 1/2
BR C40	1360	260	140	300	416	105	106	28	111	300	350	/	/	/	8-M24	G 1/2
BR C45	1360	260	140	300	466	105	106	28	111	300	350	/	/	/	8-M24	G 1/2



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