

BR SERIES SCOTCH YOKE ACTUATOR



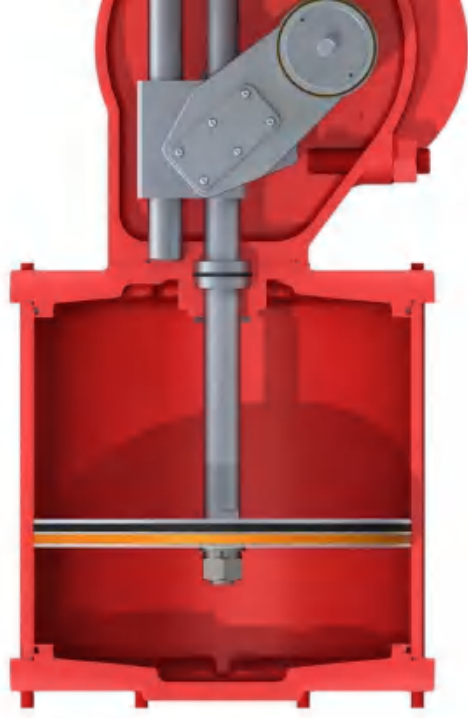
MOST ADVANCED BR SERIES PISTON PNEUMATIC ACTUATOR

- Meet the demand range of torque from 450N.M to 250000N.M
(For larger torque requirements, please consult Beier engineers)
- Output angle 0-100°



WORKING PRINCIPLE

- This series of actuators adopts dual-guide design, the piston runs smoothly and reliably, has the characteristics of large output torque, convenient installation and maintenance; through the sealing of the piston sealing ring, the air source pressure acts on the piston to generate movement, and drives the push rod to move left and right. The push rod is converted into an angular stroke movement by the fork joint. Equipped with a spring return device, it can meet the function of restoring movement through spring compression and recovery



MEET ALL KINDS OF ROTARY VALVES

- Butterfly valve
- Ball valve
- Eccentric plug valve



MULTIPLE TYPES OF OPTIONS

- Double-acting single air source cylinder structure
(Air source drive switch)
- Double acting double air source cylinder structure
(Air source drive switch)
- Single-acting single-air source cylinder structure
(Air actuated open or close and spring return)



MODULAR STRUCTURE DESIGN

- Manual operation device selection of screw type, bevel gear, hydraulic and other types
- Quick disassembly structure, convenient on-site maintenance
- Limiting device that can adjust the stroke, adjustment range: angle 60°--100

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LONG LIFE GUARANTEE

- The double-guided balance design effectively ensures the stability of the full stroke of the piston.
- Chrome-plated or Teflon surface treatment ensures that the surface of the cylinder is always smooth and the friction coefficient is extremely low, so that the sealing components have a long service life
- Fully sealed Housing structure design, reaching IP66 protection level
- The fork section structure that can withstand large thrust conversion is adopted, and the fork section and rotor are all hardened
- The sealing components are selected to meet the requirements of low temperature and high temperature environment to ensure the sealing performance at different ambient temperatures
- The high-stability spring return device ensures that the spring return thrust does not decrease with the increase of use time



HIGH SECURITY LEVEL DESIGN

- All-welded spring return cylinder device is adopted to solve the safety hazard of the spring end forever
- SIL3 level safety certification from TUV
- Use of high-quality sealing components



STRUCTURAL FEATURES SINGLE ACTING

Working pressure:

Air supply pressures available from 3Bar (43.5 Psi) up to 8Bar (116 Psi)

Output torque

Single acting: 450-125,000NMM (3,980-1,106,250 lbf-in)

Temperature range:

Standard type: -30 to 100°C (-22 to 212°F)

High temperature type: -20 to 160°C (-4 to 320°F)

Low temperature type: -60 to 160°C (-76 to 320°F)



1 Piston rod

Chrome-plated piston rod for extended service life

2

Cylinder

Cylinder body chrome or Teflon treatment

3

Piston seal

Double seal consisting of O-rings and sliding guides prevents metal friction between piston and cylinder

4

Round roller sleeve

Uses rounded roller sleeves to reduce friction between fork and pin for minimal wear

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MANUAL CONFIGURATION

In many valve/actuator applications, manual mechanisms are often required. In the state of loss of air, we can manually open or close the valve with a manual mechanism. Beier has a variety of optional manual mechanisms to meet customer needs.

Optional manual mechanism includes screw manual, gear manual, hydraulic manual.



Cylinder Module



Housing module



Spring Module



Spring Module + Bevel Gear Manual



Spring Module +Hydraulic Module



Spring Module + Screw Manual

- BR series scotch yoke actuator is composed of various modules, which can be combined in different combinations according to different functional requirements
- For special or other customized products, please consult Beier engineers

STRUCTURAL FEATURES DOUBLE ACTING



Working pressure:

Air supply pressures available from 3Bar (43.5 Psi)
up to 8Bar (116 Psi)

Output torque:

Double acting: 1400-250,000NM (12,390-2,212,500 lbf-in)

Temperature range:

Standard type: -30 to 100°C (-22 to 212°F)

High temperature type: -20 to 160°C (-4 to 320°F)

Low temperature type: -60 to 160°C (-76 to 320°F)



1 Piston rod

Chrome-plated piston rod for extended service life.

2 Cylinder

Cylinder body chrome or Teflon treatment.

3 Piston seal

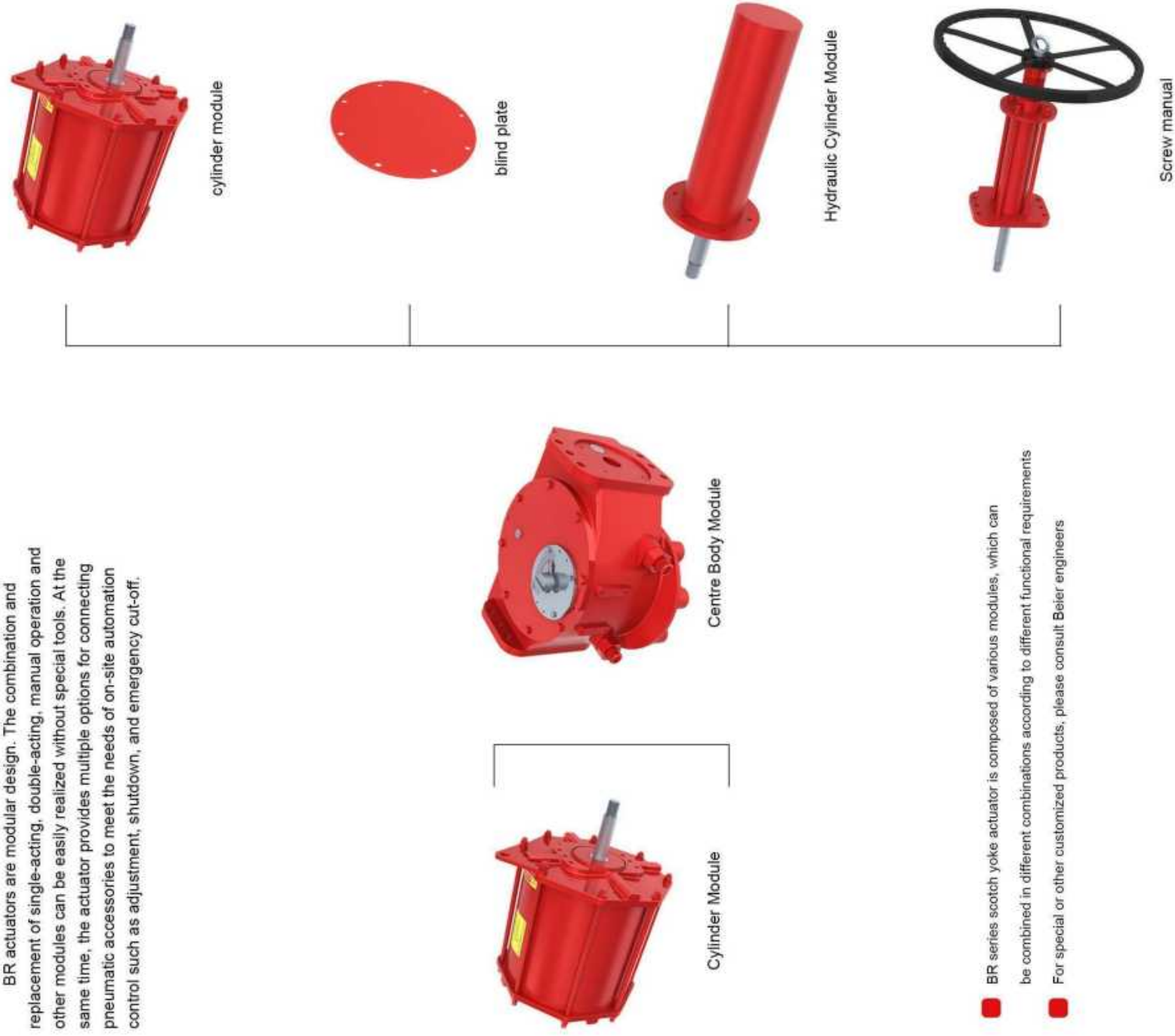
Double seal consisting of O-rings and sliding guides prevents metal friction between piston and cylinder.

4 Round roller sleeve

Uses rounded roller sleeves to reduce friction between fork and pin for minimal wear.

MODULAR DESIGN

BR actuators are modular design. The combination and replacement of single-acting, double-acting, manual operation and other modules can be easily realized without special tools. At the same time, the actuator provides multiple options for connecting pneumatic accessories to meet the needs of on-site automation control such as adjustment, shutdown, and emergency cut-off.



- BR series scotch yoke actuator is composed of various modules, which can be combined in different combinations according to different functional requirements
- For special or other customized products, please consult Beier engineers

SINGLE-ACTING ACTUATOR TORQUE TABLE - AIR TO OPEN TYPE

N.M

Model	Spring torque						Air supply pressure																	
	0.4						0.5						0.6						0.7					
	ETC	RTC	BTC	BTO	RTO	ETO	BTO	RTO	ETO	BTO	RTO	ETO	BTO	RTO	ETO	BTO	RTO	ETO	BTO	RTO	ETO			
BR2A20SO	636	393	954	777	304	459	1130	483	812	1484	660	1166	1837	837	1519									
BR2A25SO	994	615	1490	1214	475	717	1766	754	1269	2318	1031	1821	2870	1308	2373									
BR2A28SO	1246	771	1869	1523	595	900	2216	946	1592	2908	1294	2285	3601	1641	2977									
BR2A32SO	1679	1039	2519	1939	744	1099	2843	1202	2003	3747	1657	2908	4652	2111	3812									
BR2B28SO	1828	1131	2742	2234	873	1320	3250	1387	2336	4265	1897	3351	5280	2406	4367									
BR2B32SO	2453	1523	3694	2843	1092	1612	4169	1763	2938	5496	2430	4265	6822	3096	5591									
BR2B35SO	2856	1767	4294	3491	1365	2063	5077	2167	3649	6664	2964	5236	8251	3760	6823									
BR2B40SO	3730	2308	5595	4559	1782	2694	6632	2830	4767	8704	3872	6839	10776	4911	8911									
BR2B45SO	4721	2921	7082	5770	2256	3409	8393	3582	6032	11016	4900	8655	13638	6215	11278									
BR3B50SO	5829	3606	8743	7124	2785	4210	10362	4422	7448	13601	6050	10686	16839	7674	13924									
BR2C45SO	6438	3982	9657	7868	3076	4649	11445	4884	8226	15022	6682	11803	18598	8475	15379									
BR2C50SO	7948	4917	11923	9714	3797	5740	14130	6030	10155	18545	8250	14571	22961	10463	18987									
BR2C55SO	9617	5950	14426	11754	4595	6946	17098	7297	12289	22441	9982	17632	27784	12661	22975									
BR2C60SO	11445	7080	17168	13989	5469	8266	20348	8684	14625	26706	11880	20984	33064	15068	27342									
BR2C70SO	15136	9364	22705	18500	7232	10932	26910	11484	19341	35319	15711	27751	43728	19927	36160									

SINGLE-ACTING ACTUATOR TORQUE TABLE - AIR TO CLOSE TYPE

N.M

Model	Spring torque						Air pressure (Mpa)																	
	0.4						0.5						0.6						0.7					
	BTO	RTO	ETO	ETC	RTC	BTC	BTO	RTO	ETO	ETC	RTC	BTC	BTO	RTO	ETO	ETC	RTC	BTC	BTO	RTO	ETO	ETC	RTC	BTC
BR2A20SC	954	393	636	459	304	777	812	483	1130	1166	660	1484	1519	837	1837									
BR2A25SC	1490	615	994	717	475	1214	1269	754	1766	1821	1031	2318	2373	1308	2870									
BR2A28SC	1869	771	1246	900	595	1523	1592	946	2216	2285	1294	2908	2977	1641	3601									
BR2A32SC	2519	1039	1679	1099	744	1939	2003	1202	2843	2908	1657	3747	3812	2111	4652									
BR2B28SC	2742	1131	1828	1320	873	2234	2336	1387	3250	3351	1997	4265	4367	2406	5280									
BR2B32SC	3694	1523	2463	1612	1092	2843	2998	1763	4169	4265	2430	5496	5591	3096	6822									
BR2B35SC	4284	1767	2856	2063	1385	3491	3649	2167	5077	5236	2964	6664	6823	3760	8251									
BR2B40SC	5595	2308	3730	2694	1782	4559	4767	2830	6632	6839	3972	8704	8911	4911	10776									
BR2B45SC	7082	2921	4721	3409	2256	5770	6032	3582	8393	8655	4900	11016	11278	6215	13638									
BR3B50SC	8743	3606	5829	4210	2785	7124	7448	4422	10362	10686	6050	13601	13924	7674	16839									
BR2C45SC	9657	3982	6438	4649	3076	7868	8226	4884	11445	11803	6682	15022	15379	8475	18598									
BR2C50SC	11923	4917	7948	5740	3797	9714	10155	6030	14130	14571	8250	18545	18987	10463	22961									
BR2C55SC	14426	5950	9617	6946	4595	11754	12289	7297	17098	17632	9982	22441	22975	12661	27784									
BR2C60SC	17168	7080	11445	8266	5469	13989	14625	8684	20348	20984	11880	26706	27342	15068	33064									
BR2C70SC	22705	9364	15136	10932	7232	18500	19341	11484	26910	27751	15711	35319	36160	19927	43728									

■ The above actuator torques are all output torques within 0-90° rotation angle

■ BTO/RTO/ETO/BTC/RTC/ETC are all abbreviations for switch state

Represents opening initial force/opening minimum operating force/starting

in-position force/closing initial force/closing minimum operating force/closing in-position force

■ For larger torque requirements, air consumption and other details, please consult our engineer

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DOUBLE-ACTING ACTUATOR TORQUE TABLE - SINGLE CYLINDER TYPE

N.M

Model

Air pressure (Mpa)

Model	0.4						0.5						0.6						0.7					
	BTO&ETC	RTO&RTC	ETO&BTC	BTO&ETC	RTO&RTC	ETO&BTC	BTO&ETC	RTO&RTC	ETO&BTC	BTO&ETC	RTO&RTC	ETO&BTC	BTO&ETC	RTO&RTC	ETO&BTC	BTO&ETC	RTO&RTC	ETO&BTC	BTO&ETC	RTO&RTC	ETO&BTC			
BR2A20D	1413	707	1413	1766	883	1766	2120	1060	2120	1060	2120	2473	1236	2473	1236	2473	1236	2473	2473	1236	2473			
BR2A25D	2208	1104	2208	2760	1380	2760	3312	1656	3312	1656	3312	3864	1932	3864	1932	3864	1932	3864	3864	1932	3864			
BR3A28D	2769	1385	2769	3462	1731	3462	4154	2077	4154	2077	4154	4847	2423	4847	2423	4847	2423	4847	4847	2423	4847			
BR3A32D	3618	1809	3618	4522	2261	4522	5426	2713	5426	2713	5426	6331	3165	6331	3165	6331	3165	6331	6331	3165	6331			
BR2B28D	4062	2031	4062	5077	2539	5077	6093	3046	6093	3046	6093	7108	3554	7108	3554	7108	3554	7108	7108	3554	7108			
BR2B32D	5306	2653	5306	6632	3316	6632	7958	3979	7958	3979	7958	9285	4642	9285	4642	9285	4642	9285	9285	4642	9285			
BR2B35D	6347	3173	6347	7933	3967	7933	9520	4760	9520	4760	9520	11107	5553	11107	5553	11107	5553	11107	11107	5553	11107			
BR3B40D	8290	4145	8290	10362	5181	10362	12434	6217	12434	6217	12434	14507	7253	14507	7253	14507	7253	14507	14507	7253	14507			
BR3B45D	10491	5246	10491	13114	6557	13114	15737	7868	15737	7868	15737	18360	9180	18360	9180	18360	9180	18360	18360	9180	18360			
BR3B50D	12953	6476	12953	16191	8096	16191	19429	9715	19429	9715	19429	22667	11334	22667	11334	22667	11334	22667	22667	11334	22667			
BR2C45D	14306	7153	14306	17883	8942	17883	21459	10730	21459	10730	21459	25036	12518	25036	12518	25036	12518	25036	25036	12518	25036			
BR2C50D	17663	8831	17663	22078	11039	22078	26494	13247	26494	13247	26494	30909	15455	30909	15455	30909	15455	30909	30909	15455	30909			
BR2C55D	21372	10686	21372	26715	13358	26715	32058	16029	32058	16029	32058	37401	18701	37401	18701	37401	18701	37401	37401	18701	37401			
BR2C60D	25434	12717	25434	31793	15897	31793	38152	19076	38152	19076	38152	44510	22255	44510	22255	44510	22255	44510	44510	22255	44510			
BR3C70D	33636	16818	33636	42046	21023	42046	50455	25227	50455	25227	50455	58864	29432	58864	29432	58864	29432	58864	58864	29432	58864			

DOUBLE-ACTING ACTUATOR TORQUE TABLE - DOUBLE CYLINDER TYPE

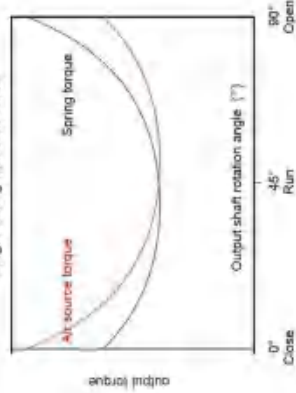
N.M

Model

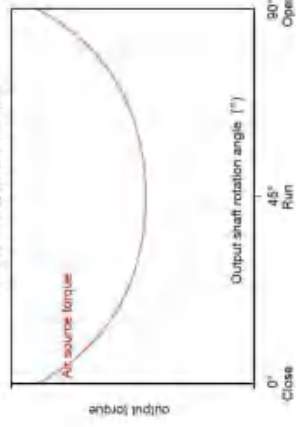
Air pressure (Mpa)

Model	0.4						0.5						0.6						0.7					
	BTO&ETC	RTO&RTC	ETO&BTC	BTO&ETC	RTO&RTC	ETO&BTC	BTO&ETC	RTO&RTC	ETO&BTC	BTO&ETC	RTO&RTC	ETO&BTC	BTO&ETC	RTO&RTC	ETO&BTC	BTO&ETC	RTO&RTC	ETO&BTC	BTO&ETC	RTO&RTC	ETO&BTC			
BR3A20PD	2826	1414	2826	3533	1766	3533	4239	2120	4239	2120	4239	4946	2473	4946	2473	4946	2473	4946	4946	2473	4946			
BR3A25PD	4416	2208	4416	5520	2760	5520	6623	3312	6623	3312	6623	7727	3864	7727	3864	7727	3864	7727	7727	3864	7727			
BR3A28PD	5539	2770	5539	6924	3462	6924	8308	4154	8308	4154	8308	9694	4846	9694	4846	9694	4846	9694	9694	4846	9694			
BR3A32PD	7235	3618	7235	9044	4522	9044	10853	5426	10853	5426	10853	12662	6331	12662	6331	12662	6331	12662	12662	6331	12662			
BR3B28PD	8124	4062	8124	10155	5077	10155	12186	6093	12186	6093	12186	14217	7108	14217	7108	14217	7108	14217	14217	7108	14217			
BR3B32PD	10811	5306	10811	13264	6632	13264	15917	7958	15917	7958	15917	18570	9285	18570	9285	18570	9285	18570	18570	9285	18570			
BR3B35PD	12693	6347	12693	15867	7933	15867	19040	9520	19040	9520	19040	22212	11106	22212	11106	22212	11106	22212	22212	11106	22212			
BR3B40PD	16579	8290	16579	20724	10362	20724	24869	12434	24869	12434	24869	29014	14507	29014	14507	29014	14507	29014	29014	14507	29014			
BR2C45PD	28612	14307	28612	35766	17883	35766	42919	21460	42919	21460	42919	50072	25036	50072	25036	50072	25036	50072	50072	25036	50072			
BR2C50PD	35325	17663	35325	44156	22078	44156	52988	26494	52988	26494	52988	61819	30909	61819	30909	61819	30909	61819	61819	30909	61819			
BR3C55PD	42743	21372	42743	53429	26715	53429	64115	32057	64115	32057	64115	74802	37401	74802	37401	74802	37401	74802	74802	37401	74802			
BR3C60PD	50868	25434	50868	63585	31793	63585	76302	38151	76302	38151	76302	89019	44510	89019	44510	89019	44510	89019	89019	44510	89019			

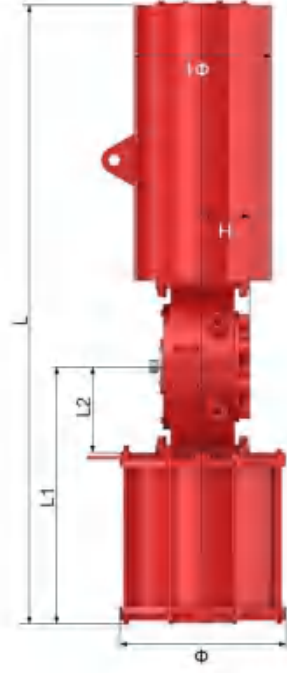
Single acting moment curve



Double acting moment curve

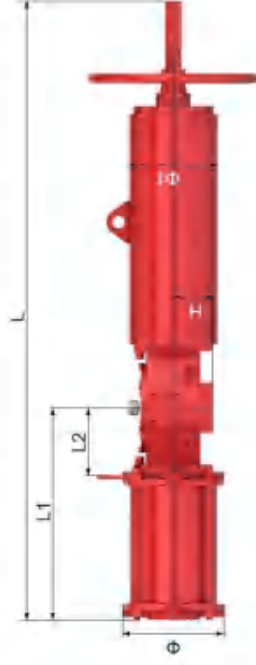


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DIMENSIONS AND CONNECTION DIMENSIONS OF SINGLE-ACTING ACTUATORS

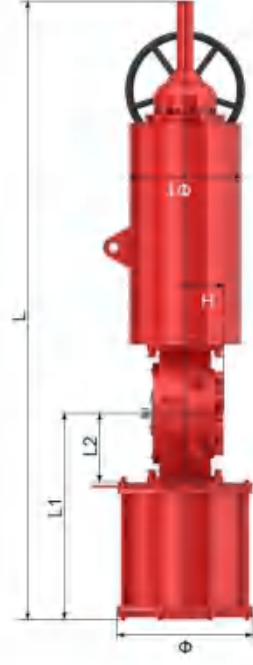
Model	L	L1	L2	Φ	H	A	B	C	Φ1	T	Air connection	Air consumption	Weight
BR2A20S	1250	520	115	295	97	80	75	125	219	235	G3/8"	11L	135kg
BR2A25S	1250	520	115	337	97	80	75	142	273	235	G1/2"	18L	175kg
BR2A28S	1250	520	115	367	97	80	75	155	299	235	G1/2"	22L	205kg
BR2A32S	1250	520	115	415	97	80	75	175	299	285	G1/2"	30L	235kg
BR2B28S	1680	690	180	367	128	120	110	155	325	370	G1/2"	32L	335kg
BR2B32S	1680	690	180	415	128	120	110	175	325	370	G1/2"	43L	340kg
BR2B35S	1680	690	180	445	128	120	110	208	325	370	G3/4"	50L	380kg
BR2B40S	1680	690	180	495	128	120	110	231	377	370	G3/4"	66L	445kg
BR2B45S	1660	675	180	540	128	120	110	270	426	370	G3/4"	83L	550kg
BR3B50S	1810	698	205	590	128	160	110	295	450	420	G3/4"	103L	665kg
BR2C45S	2180	883	260	540	158	168	150	270	508	530	G3/4"	114L	865kg
BR2C50S	2180	883	260	590	158	168	150	295	508	530	G3/4"	140L	915kg
BR2C55S	2180	883	260	640	158	168	150	320	580	530	G3/4"	170L	1065kg
BR2C60S	2180	883	260	690	158	168	150	345	580	530	G1"	202L	1150kg
BR2C70S	2180	883	260	780	158	168	150	390	580	530	G1"	275L	1300kg



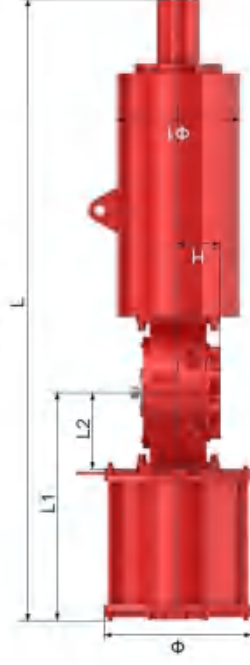
SINGLE-ACTING ACTUATOR CONNECTION SIZE (WITH SCREW TYPE MANUAL OPERATION)

Model	L	L1	L2	Φ	H	A	B	C	Φ1	Φ2	T	Air connection	Weight
BR2A20S-S	1520	520	115	295	97	80	75	125	219	450	235	G3/8"	155kg
BR2A25S-S	1520	520	115	337	97	80	75	142	273	450	235	G1/2"	195kg
BR2A28S-S	1520	520	115	367	97	80	75	155	299	600	235	G1/2"	225kg
BR2A32S-S	1520	520	115	415	97	80	75	175	299	600	285	G1/2"	255kg
BR2B28S-S	2020	690	180	367	128	120	110	155	325	600	370	G1/2"	350kg
BR2B32S-S	2020	690	180	415	128	120	110	175	325	600	370	G1/2"	360kg
BR2B35S-S	2020	690	180	445	128	120	110	208	325	600	370	G3/4"	405kg
BR2B40S-S	2020	690	180	495	128	120	110	231	377	700	370	G3/4"	480kg
BR2B45S-S	2000	675	180	540	128	120	110	270	426	700	370	G3/4"	605kg
BR3B50S-S	2115	698	205	540	128	160	110	270	426	700	420	G3/4"	715kg

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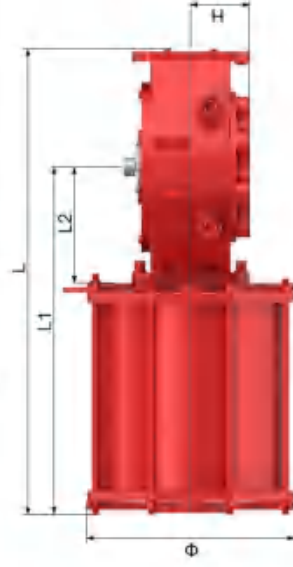

DIMENSIONS AND CONNECTION DIMENSIONS OF SINGLE-ACTING ACTUATOR (WITH GEAR MANUAL)

Model	L	L1	L2	φ	H	A	B	C	φ1	φ2	H1	T	Air connection	Weight
BR2A20S-G	1560	520	115	295	97	80	75	125	219	300	200	235	G3/8"	155kg
BR2A25S-G	1560	520	115	337	97	80	75	142	273	300	200	235	G1/2"	195kg
BR2A28S-G	1560	520	115	367	97	80	75	155	299	300	230	235	G1/2"	235kg
BR2A32S-G	1560	520	115	415	97	80	75	175	299	300	230	285	G1/2"	265kg
BR2B28S-G	2060	690	180	367	128	120	110	155	325	300	230	370	G1/2"	355kg
BR2B32S-G	2060	690	180	415	128	120	110	175	325	300	230	370	G1/2"	370kg
BR2B35S-G	2060	690	180	445	128	120	110	208	325	300	230	370	G3/4"	410kg
BR2B40S-G	2060	690	180	495	128	120	110	231	377	400	270	370	G3/4"	485kg
BR2B45S-G	2040	675	180	540	128	120	110	270	426	460	350	370	G3/4"	555kg
BR3B50S-G	2190	698	205	590	128	160	110	295	450	460	350	420	G3/4"	665kg
BR2C45S-G	2690	883	260	540	158	168	150	270	508	460	350	530	G3/4"	925kg
BR2C50S-G	2690	883	260	590	158	168	150	295	508	460	350	530	G3/4"	995kg
BR2C55S-G	2780	883	260	640	158	168	150	320	580	520	423	530	G3/4"	1215kg
BR2C60S-G	2780	883	260	690	158	168	150	345	580	520	423	530	G1"	1295kg
BR2C70S-G	2780	883	260	780	158	158	150	390	580	520	423	530	G1"	1445kg


DIMENSIONS AND CONNECTION DIMENSIONS OF SINGLE-ACTING ACTUATORS (WITH HYDRAULIC MANUAL OPERATION)

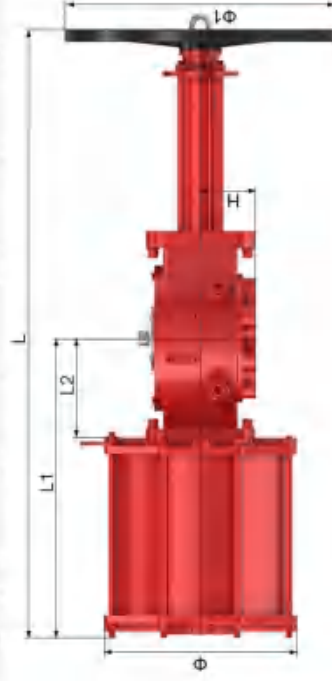
Model	L	L1	L2	φ	H	A	B	C	φ1	φ2	H1	T	Air connection	Weight
BR2B45S-H	1880	675	180	540	128	120	110	270	426	426	370	370	G3/4"	565kg
BR3B50S-H	1980	698	205	590	128	160	110	295	450	450	420	420	G3/4"	675kg
BR2C45S-H	2480	883	260	540	158	168	150	270	508	508	530	530	G3/4"	885kg
BR2C50S-H	2480	883	260	590	158	168	150	295	508	508	530	530	G3/4"	960kg
BR2C55S-H	2480	883	260	640	158	168	150	320	580	580	530	530	G3/4"	1100kg
BR2C60S-H	2480	883	260	690	158	168	150	345	580	580	530	530	G1"	1190kg
BR2C70S-H	2480	883	260	780	158	168	150	390	580	580	530	530	G1"	1340kg

For larger size or customized products, please consult our engineer



DIMENSIONS AND CONNECTION DIMENSIONS OF DOUBLE-ACTING ACTUATORS

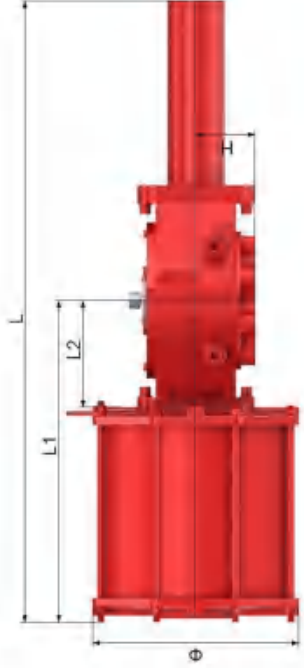
Model	L	L1	L2	Φ	H	A	B	C	T	Air connection	Air consumption	Weight
BR2A20D	679	520	115	295	97	80	75	125	235	G3/8"	11L	80kg
BR2A25D	679	520	115	337	97	80	75	142	235	G1/2"	18L	90kg
BR3A28D	729	545	140	367	97	80	75	155	285	G1/2"	22L	105kg
BR3A32D	729	545	140	415	97	80	75	175	285	G1/2"	30L	125kg
BR2B28D	929	690	180	367	128	120	110	155	370	G1/2"	32L	170kg
BR2B32D	929	690	180	415	128	120	110	175	370	G1/2"	43L	190kg
BR2B35D	929	690	180	445	128	120	110	208	370	G3/4"	50L	225kg
BR3B40D	979	715	205	495	128	160	110	231	420	G3/4"	66L	270kg
BR3B45D	956	698	205	540	128	160	110	270	420	G3/4"	83L	320kg
BR3B50D	956	698	205	590	128	160	110	295	420	G3/4"	103L	350kg
BR2C45D	1214	883	260	540	158	168	150	270	530	G3/4"	114L	470kg
BR2C50D	1214	883	260	590	158	168	150	295	530	G3/4"	140L	510kg
BR2C55D	1214	883	260	640	158	168	150	320	530	G3/4"	170L	555kg
BR2C60D	1214	883	260	690	158	168	150	345	530	G1"	202L	605kg
BR3C70D	1274	913	290	780	158	190	150	390	590	G1"	275L	735kg



DIMENSIONS AND CONNECTION DIMENSIONS OF DOUBLE-ACTING ACTUATORS (WITH SCREW-TYPE MANUAL OPERATION)

Model	L	L1	L2	Φ	H	A	B	C	Φ1	T	Air connection	Weight
BR2A20D-S	1250	520	115	295	97	80	75	125	300	235	G3/8"	105kg
BR2A25D-S	1250	520	115	337	97	80	75	142	300	235	G1/2"	120kg
BR3A28D-S	1300	545	140	367	97	80	75	155	300	285	G1/2"	135kg
BR3A32D-S	1300	545	140	415	97	80	75	175	300	285	G1/2"	155kg
BR2B28D-S	1570	690	180	367	128	140	110	155	400	370	G1/2"	210kg
BR2B32D-S	1570	690	180	415	128	140	110	175	400	370	G1/2"	220kg
BR2B35D-S	1570	690	180	445	128	140	110	208	400	370	G3/4"	265kg
BR3B40D-S	1620	715	205	495	128	162	110	231	500	420	G3/4"	310kg
BR3B45D-S	1620	698	205	540	128	162	110	270	500	420	G3/4"	360kg
BR3B50D-S	1620	698	205	590	128	162	110	295	500	420	G3/4"	395kg
BR2C45D-S	1900	883	260	540	158	168	150	270	600	530	G3/4"	525kg
BR2C50D-S	1900	883	260	590	158	168	150	295	600	530	G3/4"	575kg

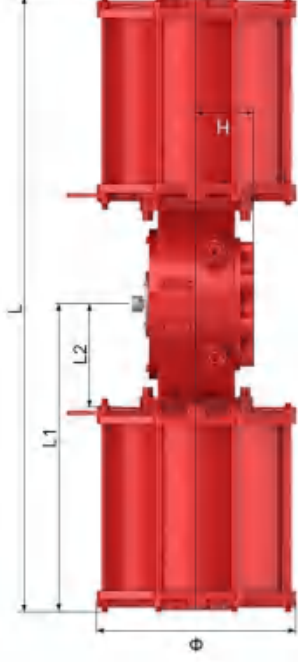
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DIMENSIONS AND CONNECTION DIMENSIONS OF DOUBLE-ACTING ACTUATORS (WITH HYDRAULIC MANUAL OPERATION)

Model	L	L1	L2	Φ	H	A	B	C	T	Air connection	Weight	mm
BR3B45D-H	1480	698	205	540	128	162	110	270	420	G3/4"	355kg	
BR3B50D-H	1480	698	205	590	128	162	110	295	420	G3/4"	385kg	
BR2C45D-H	1620	883	260	540	158	168	150	270	530	G3/4"	505kg	
BR2C50D-H	1620	883	260	590	158	168	150	295	530	G3/4"	560kg	
BR2C55D-H	1620	883	260	640	158	168	150	320	530	G3/4"	655kg	
BR2C60D-H	1620	883	260	690	158	168	150	345	530	G1"	705kg	
BR3C70D-H	1680	913	290	780	158	190	150	390	590	G1"	835kg	

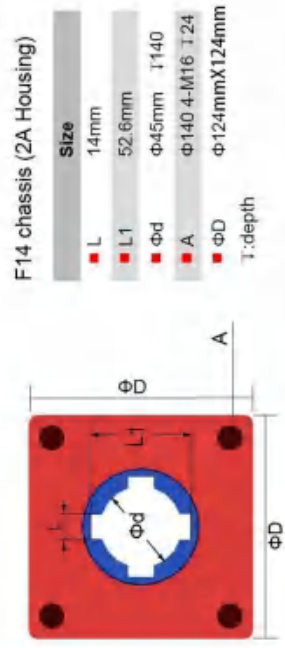
For larger-torque actuators or external dimensions with hand-operated mechanisms, please consult our engineers.



DIMENSIONS AND CONNECTION DIMENSIONS OF DOUBLE-ACTING ACTUATORS(DOUBLE CYLINDER DIMENSION DIAGRAM)

Model	L	L1	L2	Φ	H	A	B	C	T	Air connection	Air consumption	Weight	mm
BR3A20PD	1040	520	140	295	97	80	75	125	285	G3/8"	22L	135kg	
BR3A25PD	1040	520	140	337	97	80	75	142	285	G1/2"	35L	155kg	
BR3A28PD	1090	545	140	367	97	80	75	155	285	G1/2"	44L	165kg	
BR3A32PD	1090	545	140	415	97	80	75	175	285	G1/2"	59L	185kg	
BR3B28PD	1430	715	205	367	128	162	110	155	420	G1/2"	65L	265kg	
BR3B32PD	1430	715	205	415	128	162	110	175	420	G1/2"	87L	285kg	
BR3B35PD	1430	715	205	445	128	162	110	208	420	G3/4"	101L	365kg	
BR2C45PD	1766	883	205	540	158	168	150	270	420	G3/4"	132L	410kg	
BR3B40PD	1430	715	260	495	128	162	110	232	530	G3/4"	180L	575kg	
BR2C40PD	1766	883	260	500	158	168	150	235	530	G3/4"	227L	685kg	
BR3C50PD	1826	913	290	590	158	190	150	295	590	G3/4"	281L	830kg	
BR3C55PD	1826	913	290	640	158	190	150	320	590	G3/4"	340L	920kg	
BR3C60PD	1826	913	290	690	158	190	150	345	590	G1"	404L	1020kg	

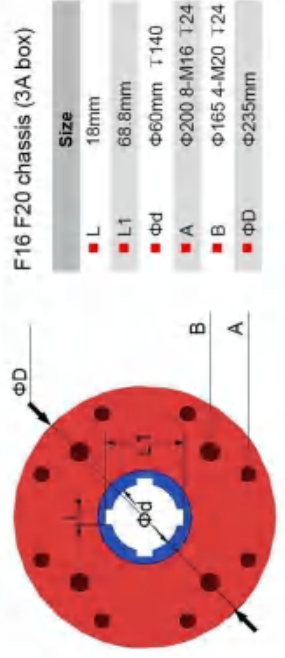
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F14 chassis (2A Housing)

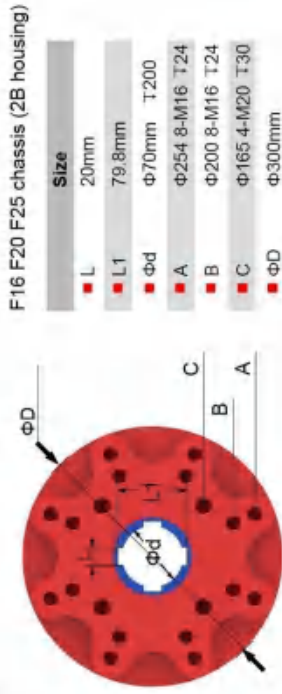
Size	
L	14mm
L1	52.6mm
φd	φ45mm T140
A	φ140 4-M16 T24
φD	φ124mmX124mm

T:depth



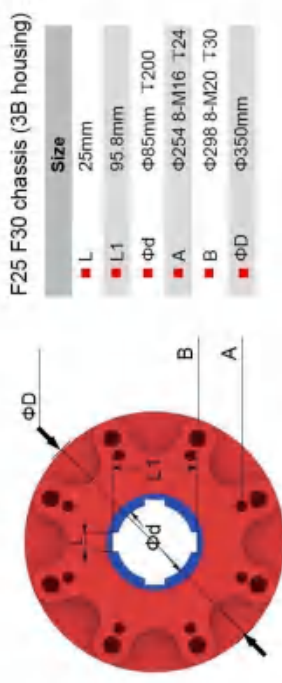
F16 F20 chassis (3A box)

Size	
L	18mm
L1	68.8mm
φd	φ60mm T140
A	φ200 8-M16 T24
B	φ165 4-M20 T24
φD	φ235mm



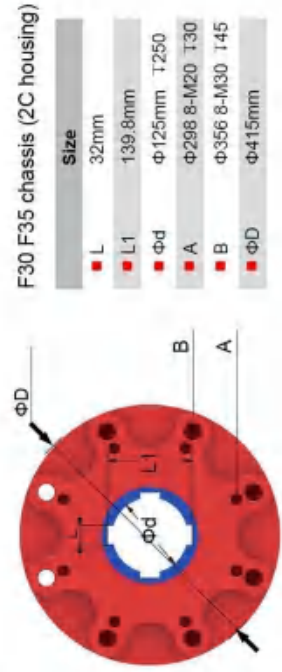
F16 F20 F25 chassis (2B housing)

Size	
L	20mm
L1	79.8mm
φd	φ70mm T200
A	φ254 8-M16 T24
B	φ200 8-M16 T24
C	φ165 4-M20 T30
φD	φ300mm



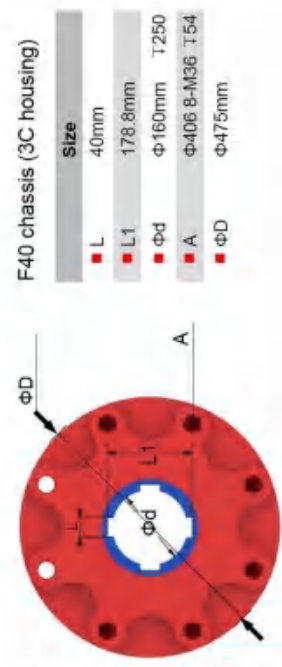
F25 F30 chassis (3B housing)

Size	
L	25mm
L1	95.8mm
φd	φ85mm T200
A	φ254 8-M16 T24
B	φ298 8-M20 T30
φD	φ350mm



F30 F35 chassis (2C housing)

Size	
L	32mm
L1	139.8mm
φd	φ125mm T250
A	φ298 8-M20 T30
B	φ356 8-M30 T45
φD	φ415mm



F40 chassis (3C housing)

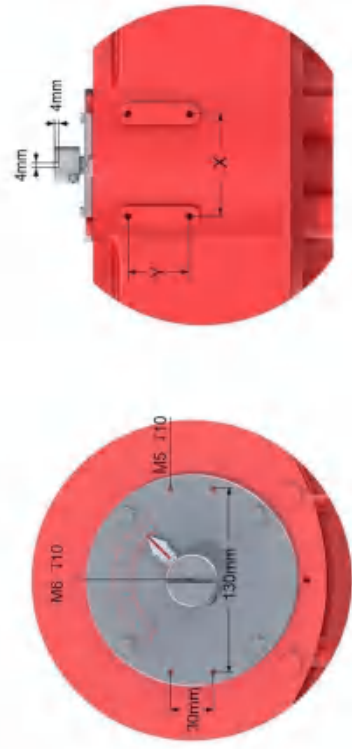
Size	
L	40mm
L1	178.8mm
φd	φ160mm T250
A	φ406 8-M36 T54
φD	φ475mm

The Housing model corresponds to the chassis model

Housing model	chassis model
2A	F14
3A	F16 / F20
2B	F16 / F20 / F25
3B	F25 / F30
2C	F30 / F35
3C	F40

Scotch yoke actuator Mounting Plate Dimensions

Model	X	Y	H	screw hole
2A	68	60	4	M8
3A	68	60	4	M8
2B	100	60	5	M8
3B	100	60	5	M8
2C	160	80	10	M12
3C	160	80	20	M12



For larger size or customized products, please consult Control Valve (Zhejiang) Co.,ltd engineer

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MODEL PREPARATION

Logo

Actuator Housing Type
 2A=Scotch yoke type 2A series
 3A=Scotch yoke type 3A series
 2B=Scotch yoke type 2b series
 3B=Scotch yoke type 3b series
 2C=Scotch yoke type 2c series
 3C=Scotch yoke type 3c series

Specification

16 35
 20 40
 25 45
 28 ...
 32

Action type

S = Single acting
 D=Double acting-single cylinder
 PD=Double acting-double cylinder

Pneumatic pattern

Double action without showing
 O=Air open
 C = air to close

Manual operation type

No manual operation without showing
 G=gear (single acting only)
 S=screw
 H=hydraulic



■ Stainless steel or other custom products, please consult our engineer

RELIABLE COMPACT STRUCTURE FOR HEAVY DUTY QUARTER TURN ACTUATOR

