PNEUMATIC ACTUATOR

English / 中国语

- For quarter(90°) turn valve (ball v/v, butterfly v/v)
- A wide range of products from R32 to R300 for your selection
- Compliance with NAMUR and ISO standards enabling easy and simple fit with valves/accessories
- Anodizing (hard or soft) to enhance protection against scratches, contamination and corrosion
- Temperature range; -20℃~80℃ (option; -40℃~200℃)

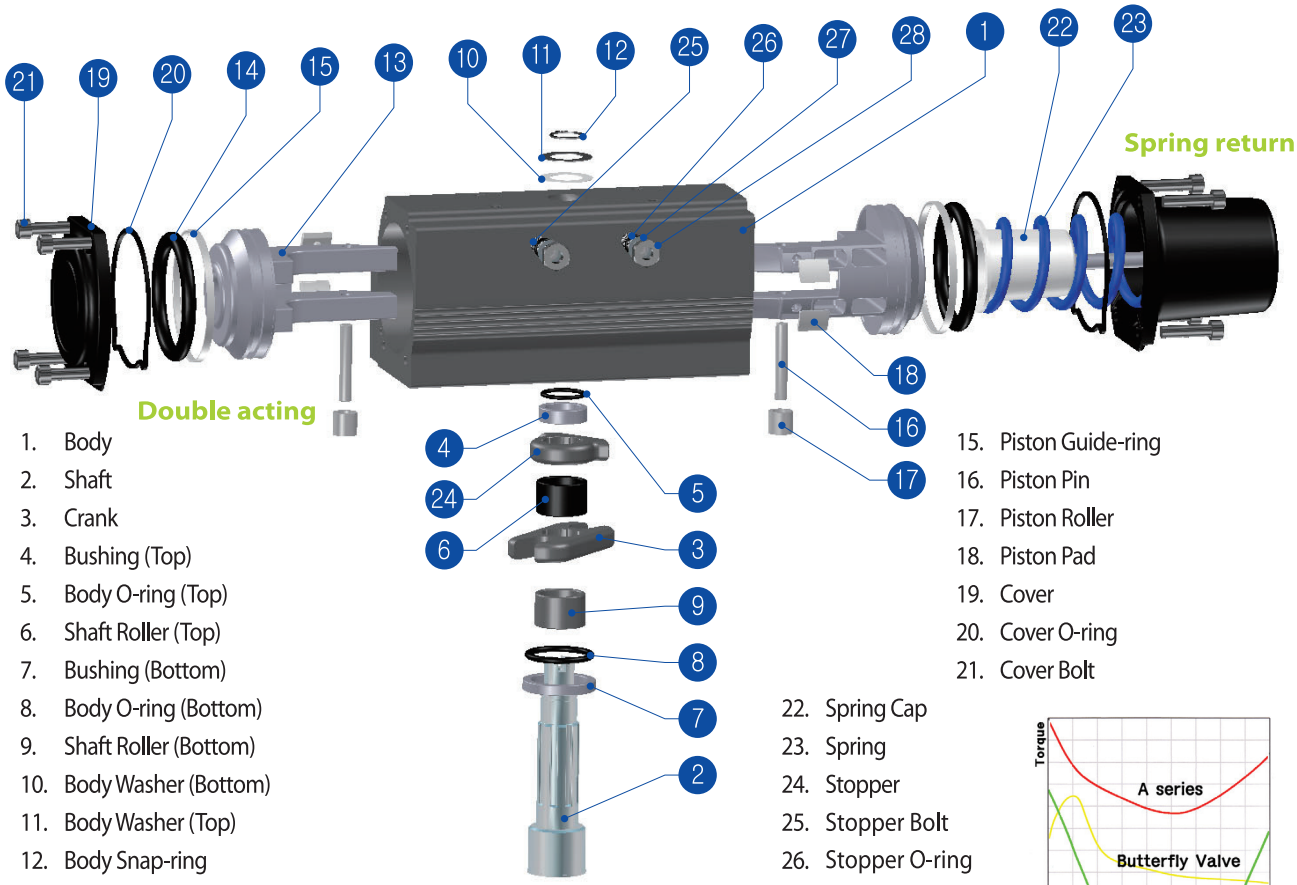
A series (scotch-yoke)

R series (rack&pinion)

Data book

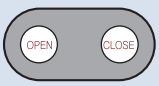
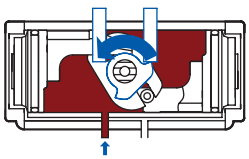
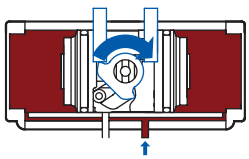
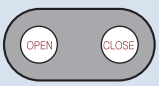
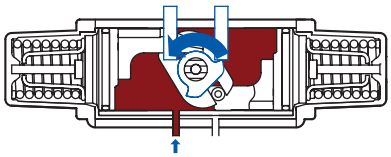
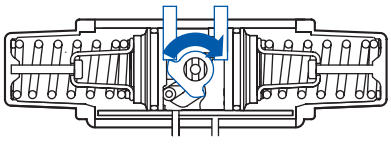
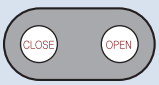
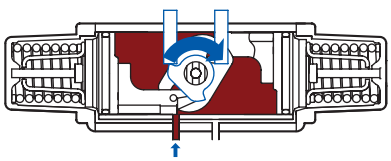
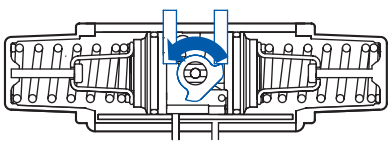
Sep.2013[2.4ar]

Part List



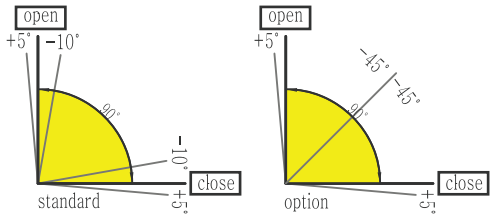
1. Body
2. Shaft
3. Crank
4. Bushing (Top)
5. Body O-ring (Top)
6. Shaft Roller (Top)
7. Bushing (Bottom)
8. Body O-ring (Bottom)
9. Shaft Roller (Bottom)
10. Body Washer (Bottom)
11. Body Washer (Top)
12. Body Snap-ring
13. Piston
14. Piston O-ring
15. Piston Guide-ring
16. Piston Pin
17. Piston Roller
18. Piston Pad
19. Cover
20. Cover O-ring
21. Cover Bolt
22. Spring Cap
23. Spring
24. Stopper
25. Stopper Bolt
26. Stopper O-ring
27. Stopper Washer
28. Stopper Nut

Operating Mechanism

DOUBLE ACTING	Action "A" 	 Open	 Close
SPRING RETURN	Action "A" (Fail Close) 	 Open	 Close
	Action "B" (Fail Open) 	 Close	 Open

KOSAPLUS Co.,Ltd. specializes in manufacture of pneumatic actuator.
科仨加有限公司是专门生产气动执行器的企业。

WHY? KOSA+



Aluminum Cover: is not easily peeled off, and its polish can last long as it is power coated upon special surface treatment.

铝合金端盖：进行特殊表面处理后涂装，表面不易脱落，可长期维持光泽。

ISO5211/DIN3337: is the international standards, and thus the products can easily be fitted (assembled) with the accessories such as limit switch box.

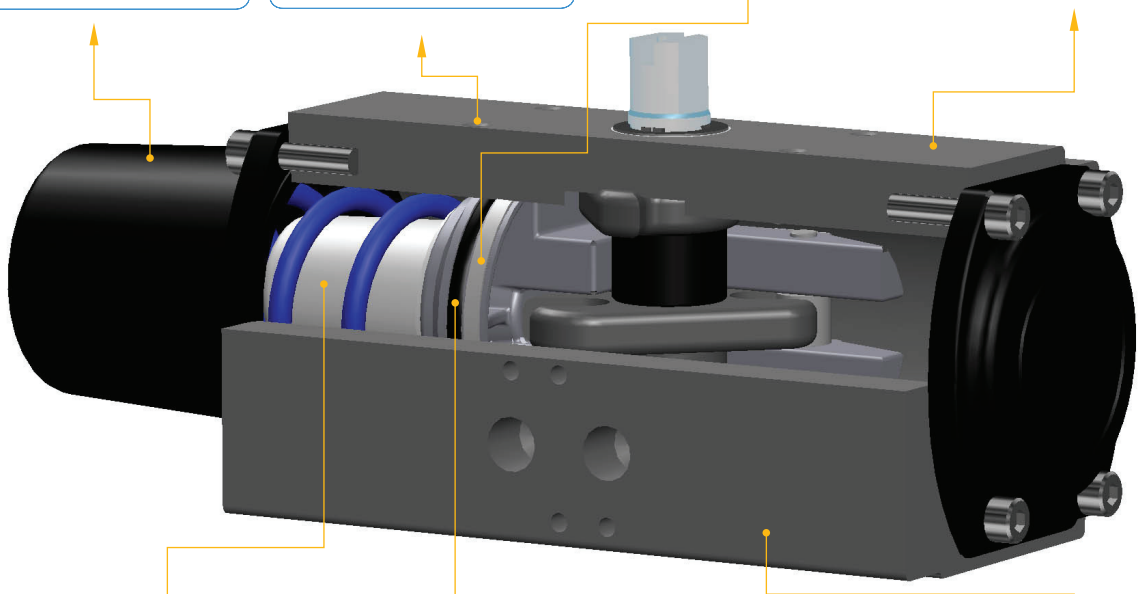
ISO5211/DIN3337：标准规格部件，可直接装上限位开关等配件。

As there is no friction between metal to metal , product life is long and without noise.

没有金属间的摩擦，寿命长，无噪音。

Aluminum Body is annodized to prevent internal/external scratches and thus securing long product life.

铝合金缸体：阳极硬化处理，可同时保护内/外部，不易被刮伤，有助于延长寿命。



Spring Cap: enables safer assembly/disassembly.

弹簧套：利用弹簧套保障安全，可安全的进行分解及装配工作。

NBR: The products can be used at low/high temperature as the products are available in EPDM and/or VITON in addition to the standard NBR.

NBR：除了标准NBR以外，EPDM或VITON可以在高/低温使用。

NAMUR: is the international standard, and thus the products can easily be fitted with solenoid valves.

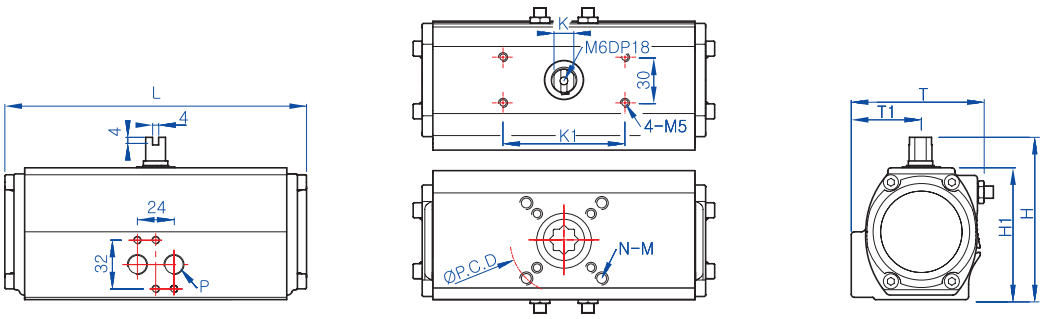
NAMUR：标准规格部件，可以迅速、简便的装上电磁阀。

All KOSA+ products are covered by the Product Liability insurance, and are undergoing a series of pre-shipment tests.

科仨加的全部产品都上了pl (消费者补偿保险) 保险，出货前全部进行测试。

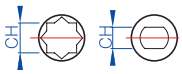
Dimension table

Double acting



P	
A50~A210	PT1/4
A250	PT1/4
	PT3/8
	PT1/2

MOUNT IMAGE



Unit : mm

MODEL	K1	ISO	P.C.D(Ø)	N-M	K	L	T	T1	H	H1	CH	DTH	WG(Kg)
AD50	80	F03/F05/F07	36/50/70	4-M5/M6/M8	9	162	75	40	90	70	11*11	13	1.4
											#14*14	14	
											#9.7*Ø15	14	
AD65	80	F05/F07	50/70	4-M6/M8	13	202	89	46	107	87	14*14	17	2.3
											#11.7*Ø17	17	
											#9.7*Ø15	14	
AD80	80	F07	70	4-M8	13	262	101	49.5	126	106	17*17	19	3.9
											#14.7*Ø19	20	
AD100	80	F07/F10	70/102	4-M8/M10	19	311	129	61.5	148	128	22*22	26	6.7
											#17.7*Ø22	26	
AD125	80	F07/F10	70/102	4-M8/M10	19	390	151	71.5	174	154	22*22	26	11.3
AD140	80	F10/F12	102/125	4-M10/M12	24	431	164	77	192	172	27*27	30	16.4
											#22*22		
AD160	80	F14	140	4-M16	24	506	188	89	216	196	36*36	30	23.7
		#F10/F12	#102/125	#4-M10/M12							#27*27		
AD210	130	F16	165	4-M20	36	605	231	115	284	254	46*46	60	45.5
											#36*36	50	
AD250	130	F16	165	4-M20	36	755	301	152	335	305	46*46	60	65.8
AD300	130	F16/F25	165/254	4-M20/8-M16	36	900	360	170	408	378	55*55	60	78.0

· AD300 is expected data. / AD115, AD185 will be added.

Option

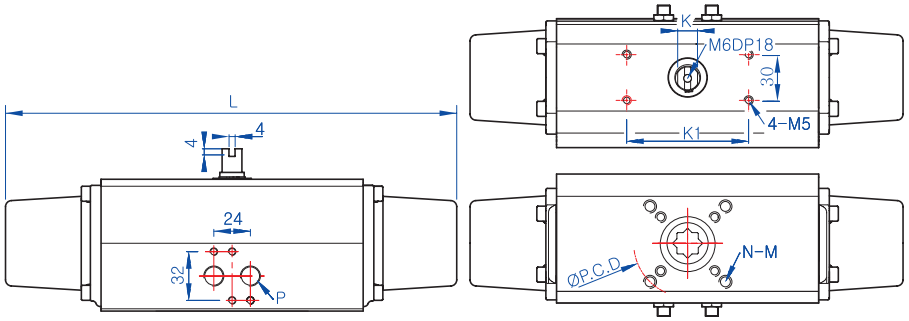
Torque table

Unit : Nm

Model	Angle	Supply air									
		3Bar		4Bar		4.5Bar		5Bar		6Bar	
		Close	Open	Close	Open	Close	Open	Close	Open	Close	Open
AD50	0°	29.0	21.0	37.0	28.0	37.5	32.5	38.0	37.0	42.0	41.0
	45°	15.0	16.0	20.0	21.0	22.5	23.5	25.0	26.0	30.0	31.0
	90°	25.0	25.0	33.0	38.0	36.0	39.0	39.0	40.0	50.0	52.0
AD65	0°	63.0	59.0	85.0	78.0	95.0	86.5	105.0	95.0	131.0	116.0
	45°	33.0	38.0	45.0	49.0	51.0	56.0	57.0	63.0	68.0	73.0
	90°	54.0	52.0	72.0	71.0	80.0	82.0	88.0	93.0	107.0	107.0
AD80	0°	121.0	105.0	164.0	143.0	160.0	163.0	156.0	183.0	261.0	210.0
	45°	65.0	69.0	84.0	92.0	98.0	106.5	112.0	121.0	130.0	144.0
	90°	97.0	101.0	130.0	133.0	150.5	144.5	171.0	156.0	198.0	209.0
AD100	0°	194.0	186.0	265.0	247.0	298.5	269.5	332.0	292.0	393.0	368.0
	45°	110.0	127.0	147.0	165.0	166.0	180.5	185.0	196.0	237.0	250.0
	90°	173.0	179.0	231.0	237.0	264.0	269.0	297.0	301.0	348.0	363.0
AD125	0°	428.0	432.0	576.0	551.0	650.5	614.5	725.0	678.0	886.9	793.9
	45°	255.0	273.0	339.0	360.0	382.0	401.5	425.0	443.0	513.0	531.0
	90°	385.0	375.0	510.0	491.0	572.5	552.0	635.0	613.0	750.0	732.0
AD140	0°	623.0	576.0	829.9	753.9	967.4	838.4	1104.9	922.9	1310.9	1096.9
	45°	333.0	331.0	450.0	455.0	514.5	518.5	579.0	582.0	691.0	668.0
	90°	520.0	523.0	689.0	720.0	775.9	799.9	862.9	879.9	1054.9	969.9
AD160	0°	952.9	812.9	1146.9	1061.9	1315.9	1186.9	1484.9	1311.9	1799.9	1599.9
	45°	540.0	569.0	730.0	757.9	824.9	853.4	919.9	948.9	1109.9	1132.9
	90°	879.9	978.9	1169.9	1319.9	1308.9	1477.4	1447.9	1634.9	1749.9	2026.9
AD210	0°	1979.9	1909.9	2799.8	2599.8	2939.8	2859.8	3299.8	3199.8	3919.7	3819.7
	45°	1099.9	1149.9	1459.9	1499.9	1709.9	1749.9	1919.9	1949.9	2299.8	2399.8
	90°	1669.9	1719.9	2149.9	2299.8	2599.8	2709.8	2799.8	2899.8	3349.8	3449.8
AD250	0°	4100.0	3000.0	5500.0	3950.0	6300.0	4400.0	7100.0	4850.0	8480.0	5750.0
	45°	1880.0	1850.0	2550.0	2500.0	2870.0	2830.0	3200.0	3150.0	3800.0	3760.0
	90°	3100.0	3400.0	4180.0	4580.0	4680.0	5250.0	5240.0	5850.0	6180.0	7050.0
AD300 (DRAFT)	0°	7211.0	5049.0	9615.0	6732.0	10817.0	7574.0	12019.0	8416.0	14422.0	10099.0
	45°	2970.0	2970.0	3960.0	3960.0	4455.0	4455.0	4950.0	4950.0	5940.0	5940.0
	90°	5049.0	7211.0	6732.0	9415.0	7574.0	10817.0	8416.0	12019.0	10099.0	14422.0

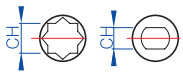
Dimension table

Spring return



P	
A50~A210	PT1/4
A250	PT1/4
	PT3/8
	PT1/2

MOUNT IMAGE



Unit : mm

MODEL	K1	ISO	P.C.D(Ø)	N-M	K	L	T	T1	H	H1	CH	DTH	WG(Kg)
AS50	80	F03/F05/F07	36/50/70	4-M5/M6/M8	9	257	75	40	90	70	11*11	13	1.6
											# 14*14	14	
											# 9.7*Ø15	14	
AS65	80	F05/F07	50/70	4-M6/M8	13	314	89	46	107	87	14*14	17	3.0
											# 11.7*Ø17	17	
											# 9.7*Ø15	14	
AS80	80	F07	70	4-M8	13	430	101	49.5	126	106	17*17	19	5.3
											#14.7*Ø19	20	
AS100	80	F07/F10	70/102	4-M8/M10	19	500	129	61.5	148	128	22*22	26	9.5
											# 17.7*Ø22	26	
AS125	80	F07/F10	70/102	4-M8/M10	19	606	151	71.5	174	154	22*22	26	17.6
AS140	80	F10/F12	102/125	4-M10/M12	24	682	164	77	192	172	27*27	30	23.9
											# 22*22		
AS160	80	F14	140	4-M16	24	781	188	89	216	196	36*36	30	36.6
		# F10/F12	# 102/125	# 4-M10/M12							# 27*27		
AS210	130	F16	165	4-M20	36	982	231	115	284	254	46*46	60	77.2
											# 36*36	50	
AS250	130	F16	165	4-M20	36	1108	301	152	335	305	46*46	60	119.6
AS300	130	F16/F25	165/254	4-M20/8-M16	36	1344	360	170	408	378	55*55	60	145.0

· AS300 is expected data. / AS115, AS185 will be added.

Option

Torque table

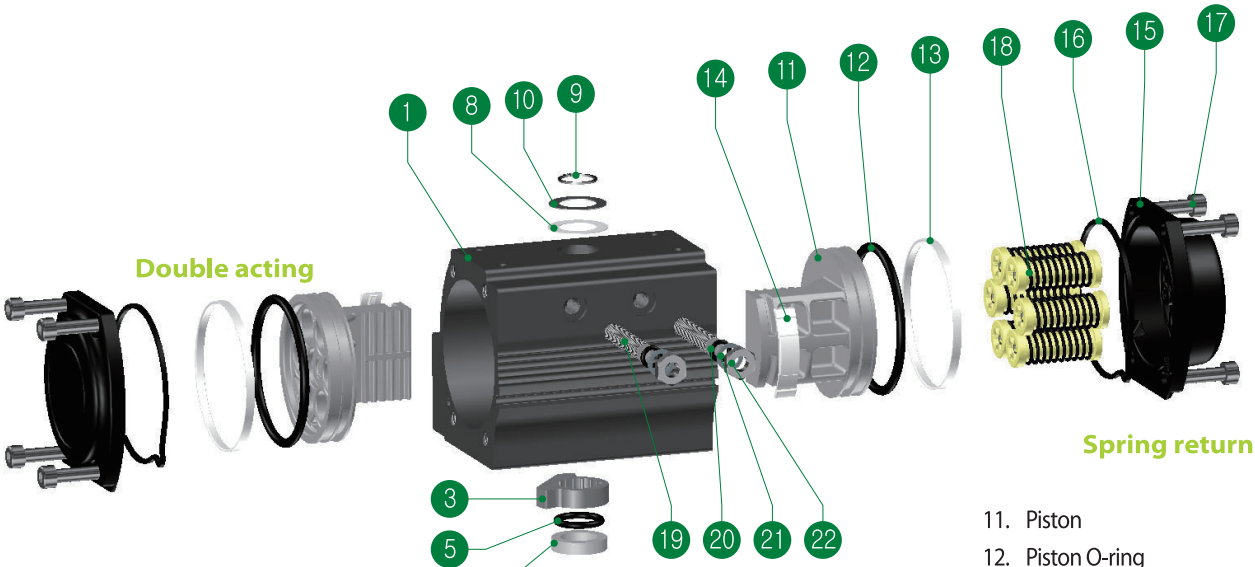
Unit : Nm

Model	Angle	Spring type: Weak		Spring type: Middle		Spring type: Strong	
		Spring to Close	Air to Open:3Bar	Spring to Close	Air to Open:4.5Bar	Spring to Close	Air to Open:6Bar
AS50	0°	10.0	20.0	14.0	26.0	17.0	34.0
	45°	9.0	9.0	12.0	12.0	15.0	15.0
	90°	20.0	10.0	26.0	14.0	34.0	17.0
AS65	0°	22.0	39.0	35.0	54.0	48.0	70.0
	45°	18.0	18.0	23.0	28.0	37.0	32.0
	90°	39.0	22.0	54.0	35.0	70.0	48.0
AS80	0°	40.0	70.0	60.0	100.0	80.0	130.0
	45°	30.0	30.0	50.0	50.0	70.0	70.0
	90°	70.0	40.0	100.0	60.0	130.0	80.0
AS100	0°	70.0	140.0	100.0	190.0	130.0	240.0
	45°	50.0	50.0	80.0	80.0	110.0	110.0
	90°	140.0	70.0	190.0	100.0	240.0	130.0
AS125	0°	175.0	251.0	243.0	403.0	358.0	520.0
	45°	105.0	125.0	177.0	182.0	215.0	254.0
	90°	215.0	168.0	395.0	210.0	441.0	341.0
AS140	0°	200.0	370.0	371.0	576.0	480.0	726.0
	45°	170.0	170.0	236.0	265.0	330.0	360.0
	90°	370.0	200.0	447.0	366.0	680.0	430.0
AS160	0°	400.0	540.0	550.0	750.0	769.9	1149.9
	45°	290.0	290.0	420.0	420.0	560.0	560.0
	90°	540.0	400.0	750.0	550.0	1149.9	769.9
AS210	0°	840.0	910.0	1250.0	1510.0	1750.0	2160.0
	45°	500.0	430.0	740.0	780.0	1040.0	1130.0
	90°	1000.0	500.0	1500.0	920.0	2140.0	1370.0
AS250	0°	1540.0	1900.0	2120.0	2760.0	3060.0	3660.0
	45°	920.0	950.0	1320.0	1370.0	1830.0	1900.0
	90°	1800.0	1400.0	2470.0	2200.0	3550.0	2760.0
AS300 (DRAFT)	0°	2870.0	4283.0	4308.0	6421.0	5740.0	8566.0
	45°	1447.0	1523.0	2172.0	2283.0	2894.0	3046.0
	90°	2928.0	2180.0	4396.0	3266.0	5857.0	4359.0

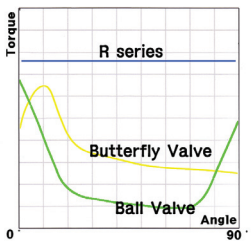
• You may select spring types from strong/middle/weak; if unspecified in P/O,the standard type (as shown in the blue box) is provided

•弹簧分为 强/中/弱 三种供您选择, 如订单上没有特别标注, 以标准(蓝色框)出货.

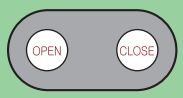
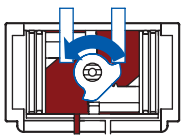
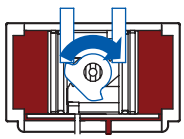
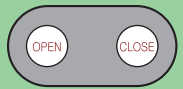
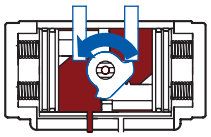
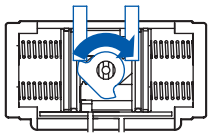
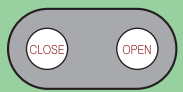
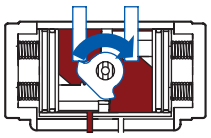
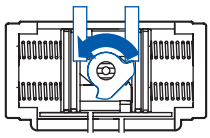
Part List



1. Body
2. Shaft
3. Stopper
4. Bushing (Top)
5. Body O-ring (Top)
6. Bushing (Bottom)
7. Body O-ring (Bottom)
8. Body Washer (Bottom)
9. Body Washer (Top)
10. Body Snap-ring
11. Piston
12. Piston O-ring
13. Piston Guide-ring
14. Piston Pad
15. Cover
16. Cover O-ring
17. Cover Bolt
18. Spring Unit
19. Stopper Bolt
20. Stopper O-ring
21. Stopper Washer
22. Stopper Nut



Operating Mechanism

DOUBLE ACTING	Action "A" 	 Open	 Close
SPRING RETURN	Action "A" (Fail Close) 	 Open	 Close
	Action "B" (Fail Open) 	 Close	 Open