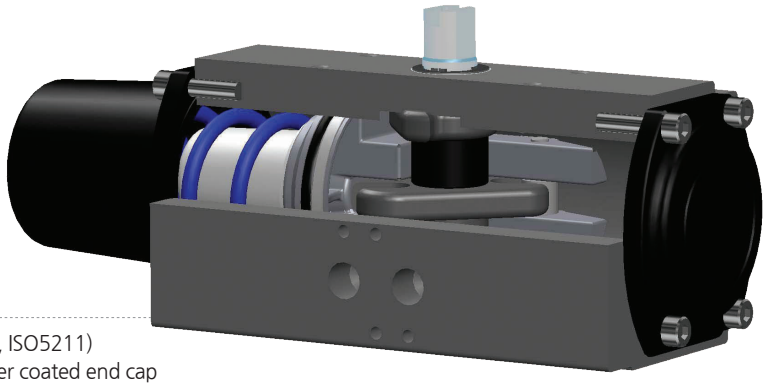
Pneumatic actuator (A/R series)

Contents

A sereis Part List
A series Selection guide Dimension
A series Torque table
R sereis Part list
R series Selection guide Dimension
R series Torque table
Various option
Valve position indicator



- International standard (DIN3337, NAMUR, ISO5211)
- Hard anodized aluminum body and powder coated end cap

- The working medium is compressed air, the maximum size of the foreign matter or dust from the filter can be supplied for demanding clean air, it is recommended that management does not exceed 40μ. (ISO 8573 Part 1, Class 5)
- It is good to be near or supply air, especially using a dehumidified air 41° F (5° C) so that the moisture contained in the air, if not less cooling in the supply line must be installed in a separate dehumidifier.

- Operating air pressure : 3~8Bar
- Recommended pressure : 4~6Bar
- Design pressure : 10Bar

▸ Model range

A D 65

① A series - Scotch yoke / R series - Rack pinion

② D-Double acting / S-Spring return

③ Internal diameter

AD	50/65/80/100/125/140/160/185/210/250/300
AS	50/65/80/100/125/140/160/185/210/250/300
RD	32/40/50/65/80/90/100/115/125/140/160/185/210
RS	40/50/65/80/90/100/115/125/140/160/185/210

▸ Model code

A6ND-AKKB-1012C27-OP

ⓐ Mechanism
- A : scotch yoke
- R : rack pinion

ⓑ Diameter
- 3 : 32
- 4 : 40
- 5 : 50
- 6 : 65
- 8 : 80
- 9 : 90
- 10 :100
- 11 : 115
- ⋮

ⓒ O-RING
- N : NBR*
- V : Vition (High temp.)
- E : EPDM (Low temp.)

ⓓ SPRING
- D : Double acting
- W : Weak spring
- WM : Weak Middle spring
- WS : Weak Strong spring
- M : Middle spring
- MS : Middle strong spring
- S : Strong spring
- *Refer to page 5.
- No. : RS spring q'ty *Refer to page 11

ⓔ Action
- A : Action A* (Fail closed)
- B : Action B (Fail open)
- C : Action C (Fail closed/Open CW)
- D : Action D (Fail open/Open CW)

ⓕ Body color
- K : Hard anodized*
- L : Blue anodized
- W : White anodized
- Y : Yellow anodized
- R : Red anodized

ⓖ End cap color
- K : Black painted*
- L : Blue painted
- M : Mint painted
- R : Red painted

ⓗ Indicator
- A : A type
- B : B type
- C : C type
- D : D type
- * Refer to page 14

ⓘ ISO5211
- 3 : F03
- 5 : F05
- ⋮

ⓙ STEM
- C11 :11*11
- C14 :14*14
- ⋮

ⓚ OPTION
- T4 : PT1/4
- T8 : PT3/8
- T2 : PT1/2
- N4 : NPT1/4
- N8 : NPT3/8
- N2 : NPT1/2
- O45 : Open -45° (center stopper)
- SE1 : end cap stopper
- * Refer to page 15~16

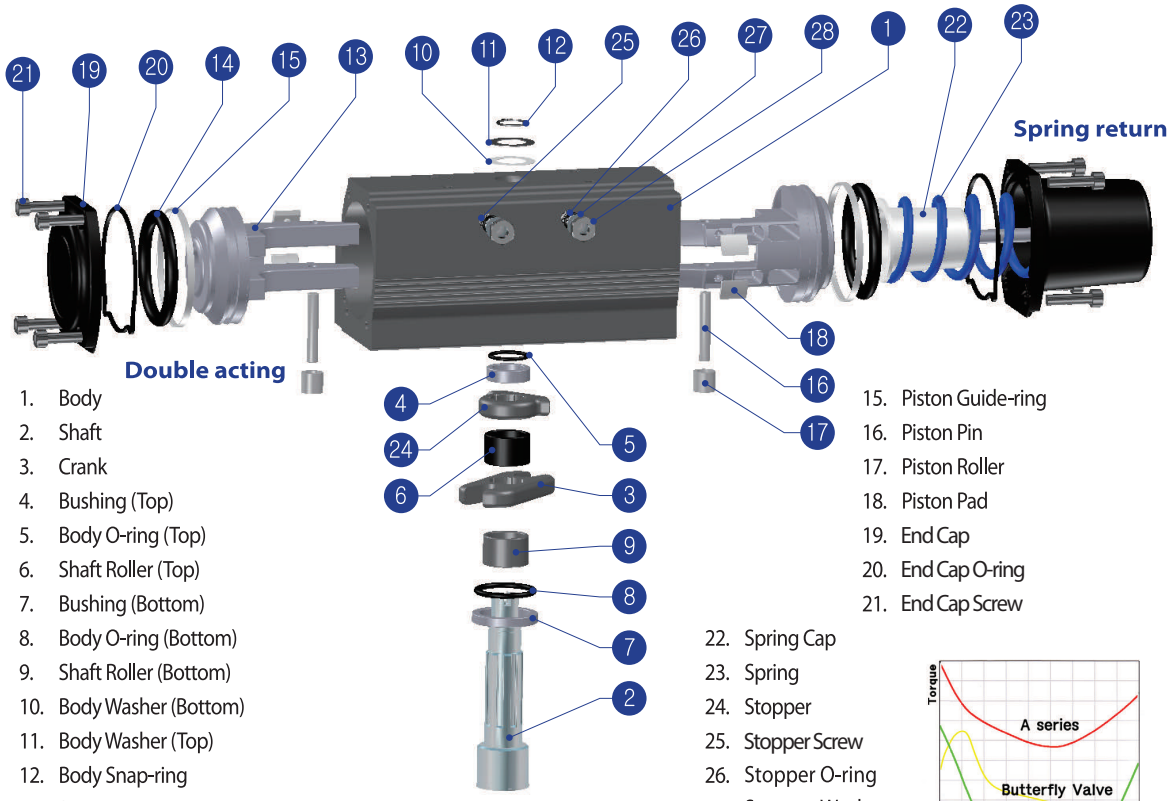
*Standard

- Data contained in the Catalog may be subject to change without advance notice for improvement of performance&safety of Product.
- Contact us for the most recent product and technical information. Visit our website for more details: http://www.kosaplus.com

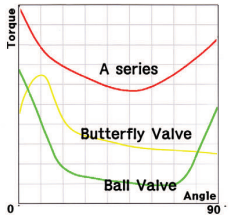
Contents

A sereis Part List
A series Selection guide Dimension
A series Torque table
R sereis Part list
R series Selection guide Dimension
R series Torque table
Various option
Valve position indicator

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. End Cap
20. End Cap O-ring
21. End Cap Screw
22. Spring Cap
23. Spring
24. Stopper
25. Stopper Screw
26. Stopper O-ring
27. Stopper Washer
28. Stopper Nut



Operating mechanism

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

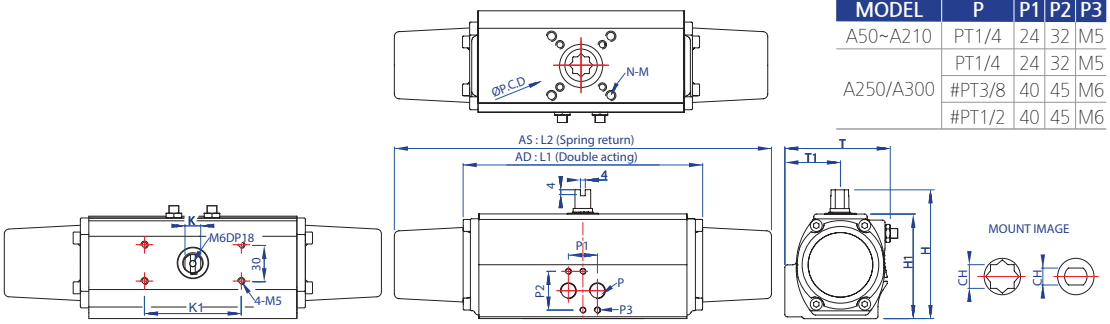
▶ Selection guide

Valve Size		Double acting		Spring return	
		Ball valve	Butterfly valve	Ball valve	Butterfly valve
1/2”	15A	AD50		AS50	
3/4”	20A				
1”	25A			AS65	
1-1/4”	32A	AD65			
1-1/2”	40A		AD50		AS50
2”	50A			AS80	
2-1/2”	65A	AD80			AS65
3”	80A		AD65	AS100	
4”	100A	AD100		AS125	AS80
5”	125A	AD125	AD80	AS140	
6”	150A	AD140		AS160	AS100
8”	200A	AD160	AD100	AS185	
10”	250A	AD185		AS210	AS125
12”	300A	AD210	AD125	AS250	AS140
14”	350A	AD250	AD140	AS300	AS160
16”	400A	AD300	AD160		AS185
18”	450A		AD185		AS210
20” ~ 22”	500A ~ 550A		AD210		AS250
24” ~ 32”	600A ~ 800A		AD250		AS300
34” ~ 40”	850A ~ 1000A		AD300		

▪Based on 10K/#150
▪The above data is for reference only; the actual assembly may be different depending on valve material, pressure, structure, fluid and operational environment.
▪The data is not legally effective and therefore should not be used as legal ground.

▶ Dimension table

MODEL	P	P1	P2	P3
A50~A210	PT1/4	24	32	M5
A250/A300	PT1/4	24	32	M5
	#PT3/8	40	45	M6
	#PT1/2	40	45	M6



※Unit:mm

MODEL	K1	ISO	P.C.D (Ø)	N-G (depth)	K	AD L1	AS L2	T	T1	H	H1	CH	Stem depth	AD WG(Kg)	AS WG(Kg)
A50	80	F03/F05/F07	36/50/70	4-M5/M6/M8 (10/12/12.5)	9	162	257	75	40	90	70	11*11	13	1.4	1.6
												#14*14	14		
												#9.7*Ø15	14		
A65	80	F05/F07	50/70	4-M6/M8 (14/14)	13	202	314	89	46	107	87	14*14	17	2.3	3.0
												#11*11	13		
												#11.7*Ø17	17		
												#9.7*Ø15	14		
A80	80	F07	70	4-M8(15)	13	253	421	101	49.5	126	106	17*17	19	3.9	5.3
												#14.7*Φ19	20		
A100	80	F07/F10	70/102	4-M8/M10 (16/19)	19	311	500	129	61.5	148	128	22*22	26	6.7	9.5
												#17.7*Ø22	26		
A125	80	F07/F10	70/102	4-M8/M10 (16/19)	19	390	606	151	71.5	174	154	22*22	26	11.3	17.6
A140	80	F10/F12	102/125	4-M10/M12 (18/26)	24	431	682	164	77	192	172	27*27	30	16.4	23.9
												#22*22			
A160	80	F14	140	4-M16(25)	24	506	781	188	89	216	196	36*36	38	23.7	36.6
		#F10/F12	#102/125	4-M10/M12 (18/26)								#27*27	27		
A185	80/130	F14	140	4-M16(26)	24	581	894	217	102	244	224	36*36	38	34.8	56.9
A210	130	F16	165	4-M20(30)	36	605	982	231	115	284	254	46*46	60	45.5	77.2
		#F14	140	4-M16(26)								#36*36	50		
A250	130	F16	165	4-M20(30)	36	755	1108	301	152	335	305	46*46	60	65.8	119.6
A300*	130	F16/F25	165/254	4-M20(30) /8-M16(23)	36	889	1345	372	170	408	378	55*55	60	165.0	275.5

*The material of A300 body&end caps is a ductile cast iron.

#Option

Contents

A sereis Part List
A series Selection guide Dimension
A series Torque table
R sereis Part list
R series Selection guide Dimension
R series Torque table
Various option
Valve position indicator

Contents

A sereis Part List
A series Selection guide Dimension
A series Torque table
R sereis Part list
R series Selection guide Dimension
R series Torque table
Various option
Valve position indicator

▶ AD sereis Torque table

※Unit : Nm

Model	Angle	Supply air (Air to)													
		3Bar		4Bar		4.5Bar		5Bar		6Bar		7Bar		8Bar	
		Close	Open	Close	Open	Close	Open	Close	Open	Close	Open	Close	Open	Close	Open
AD50	0°	25.8	24.0	35.6	32.4	39.4	36.2	44.9	39.9	53.4	47.3	64.0	54.5	71.1	60.4
	45°	13.9	13.6	18.5	17.9	21.1	20.3	23.2	21.9	28.2	27.3	33.6	31.9	37.9	36.0
	90°	22.9	24.9	31.3	33.8	35.5	38.6	39.2	43.6	47.7	50.3	55.4	62.6	61.4	68.4
AD65	0°	60.2	54.6	81.7	70.3	93.6	78.1	105.0	83.8	123.5	105.8	142.9	119.1	164.1	135.8
	45°	31.6	30.1	42.2	40.0	47.4	44.4	52.8	51.1	63.5	59.9	74.2	70.6	85.1	79.8
	90°	52.9	52.0	69.2	70.7	77.4	78.1	84.9	87.0	108.5	102.3	125.2	120.0	142.9	138.5
AD80	0°	120.0	100.5	160.5	135.8	182.6	152.6	203.7	169.3	244.3	206.4	288.4	239.0	333.4	264.6
	45°	65.3	51.2	85.6	71.4	95.3	82.0	105.8	90.0	127.0	110.3	147.3	130.5	165.8	148.2
	90°	107.6	97.0	142.0	135.8	158.8	156.1	174.6	165.8	211.7	201.1	246.1	238.1	275.2	273.4
AD100	0°	201.1	185.2	268.1	241.7	305.2	280.5	345.7	311.3	321.0	381.0	495.7	433.9	558.3	483.3
	45°	116.4	109.4	154.4	148.2	176.4	167.6	196.7	185.2	235.5	224.9	271.7	269.9	305.2	314.9
	90°	187.9	173.8	251.4	234.6	281.4	266.4	310.5	295.5	373.1	362.5	440.1	428.7	493.9	485.1
AD125	0°	493.9	430.4	618.3	589.2	703.8	650.0	778.8	716.2	952.6	834.4	1,118.4	949.0	1,300.1	1,108.7
	45°	234.6	225.8	310.5	304.3	350.2	345.7	388.1	382.8	491.3	456.0	541.5	541.5	613.0	608.6
	90°	382.8	357.2	510.7	479.8	572.4	538.9	631.5	601.5	781.5	718.8	904.1	849.4	1,001.1	965.8
AD140	0°	800.0	649.2	1,030.2	833.5	1,179.2	932.3	1,266.6	1,016.9	1,584.1	1,178.4	1,796.6	1,338.0	1,987.1	1,494.1
	45°	339.6	311.3	448.1	414.5	506.3	467.5	553.9	520.4	669.4	624.5	774.4	727.7	872.3	821.1
	90°	516.9	531.0	680.0	715.3	786.7	796.4	862.6	912.0	1,025.8	1,064.6	1,223.3	1,261.3	1,338.9	1,412.1
AD160	0°	1,094.6	912.0	1,487.1	1,173.9	1,698.7	1,316.8	1,932.5	1,447.4	2,294.1	1,724.3	2,758.9	2,142.4	3,261.6	2,424.6
	45°	486.0	480.7	654.4	637.7	735.6	718.8	821.1	799.1	977.3	994.0	1,149.2	1,138.7	1,285.1	1,281.5
	90°	765.6	1,098.1	1,009.0	1,195.1	1,140.4	1,284.2	1,263.9	1,412.1	1,496.8	1,688.1	1,837.2	1,936.9	2,033.9	2,232.3
AD185	0°	1,566.4	1,268.3	2,082.4	1,620.2	2,313.5	1,794.9	2,404.3	1,964.2	2,942.4	2,310.8	3,532.4	2,672.5	4,029.9	2,988.2
	45°	753.2	733.8	1,009.9	976.4	1,136.0	1,089.3	1,260.4	1,218.0	1,507.3	1,472.9	1,755.2	1,736.7	2,028.6	1,984.5
	90°	1,204.8	1,145.7	1,581.4	1,536.4	1,771.1	1,749.0	2,057.7	1,854.8	2,347.9	2,257.0	2,774.8	2,654.8	3,141.7	3,159.3
AD210	0°	2,090.3	1,781.6	2,831.2	2,266.7	3,219.3	2,540.2	3,625.0	2,804.8	4,462.9	3,272.2	5,300.8	3,748.5	6,209.3	4,233.6
	45°	970.2	1,093.7	1,296.5	1,420.0	1,464.1	1,578.8	1,631.7	1,746.4	1,966.9	2,072.7	2,310.8	2,416.7	2,663.6	2,760.7
	90°	1,508.2	1,816.9	2,019.8	2,425.5	1,993.3	2,716.6	2,504.9	2,998.8	2,998.8	3,625.0	3,501.5	4,268.9	3,977.8	4,868.6
AD250	0°	3,783.8	2,866.5	5,124.4	3,686.8	5,821.2	4,101.3	6,650.3	4,533.5	8,237.9	5,344.9	9,613.8	6,121.1	10,001.9	6,809.0
	45°	1,764.0	1,852.2	2,390.2	2,399.0	2,663.6	2,698.9	2,963.5	3,025.3	3,572.1	3,598.6	4,233.6	4,224.8	4,798.1	4,877.5
	90°	2,919.4	3,342.8	3,827.9	4,639.3	4,295.3	5,230.3	4,771.6	5,856.5	5,715.4	6,782.6	6,588.5	7,179.5	7,470.5	7,320.6
AD300	0°	5,450.8	4,965.7	7,426.4	6,421.0	8,334.9	7,108.9	9,322.7	7,788.1	11,421.9	9,181.6	13,256.5	10,407.6	15,311.5	11,642.4
	45°	3,087.0	3,475.1	4,145.4	4,621.7	4,683.4	5,186.2	5,221.4	5,759.5	6,271.0	6,853.1	7,329.4	7,973.3	8,370.2	9,067.0
	90°	4,939.2	5,680.1	6,500.3	7,611.7	7,294.1	8,643.6	8,070.3	9,569.7	9,596.2	11,836.4	11,122.0	12,744.9	12,595.0	13,124.2

※0°-Valve Closed / 90°-Valve open

▸ AS sereis Torque table

※Unit : Nm

Model	Spring type	Angle	Supply Air (Air to Open)							Spring to Close
			3Bar	4Bar	4.5Bar	5Bar	6Bar	7Bar	8Bar	
AS50	Weak	0°	15.9	24.4	27.2	31.0	40.8	52.2	56.5	10.1
		45°	7.9	12.5	14.8	17.1	21.8	27.0	31.5	6.7
		90°	10.1	19.3	22.9	27.0	36.6	44.9	54.0	13.0
	Middle*	0°	11.1	19.2	23.5	27.6	36.0	45.5	52.1	13.5
		45°	4.5	9.1	11.9	14.1	18.7	23.6	27.7	9.5
		90°	4.5	14.0	18.5	22.4	32.2	41.8	49.7	19.1
	Strong	0°	11.9	19.3	23.4	30.0	37.0	46.0	54.2	18.2
		45°	1.8	7.2	10.0	12.6	17.9	22.3	26.5	12.4
		90°	-	7.2	10.9	15.7	22.7	31.3	37.5	23.2
AS65	Weak	0°	34.6	52.8	60.2	71.0	88.1	106.1	124.8	23.9
		45°	15.8	28.0	33.6	38.5	49.8	59.6	69.5	15.4
		90°	20.7	39.3	48.8	57.9	76.0	91.0	110.8	27.9
	Middle*	0°	21.6	39.9	48.7	56.1	76.7	92.5	113.6	36.1
		45°	6.9	17.9	23.4	29.0	38.2	49.5	59.6	24.3
		90°	-	25.3	24.5	33.6	52.2	70.7	89.8	49.2
	Strong	0°	12.7	31.7	40.3	51.8	67.9	85.0	105.5	45.6
		45°	-	9.5	14.7	20.6	31.3	42.5	53.9	32.1
		90°	-	-	9.3	18.6	37.3	55.1	65.5	66.1
AS80	Weak	0°	84.7	122.9	142.4	161.1	198.3	234.6	270.9	42.8
		45°	40.0	61.4	72.6	82.9	103.3	123.8	145.2	25.8
		90°	41.0	75.4	95.9	111.7	147.1	186.2	229.0	48.4
	Middle*	0°	43.8	80.1	104.3	122.9	159.2	197.4	234.6	69.8
		45°	9.3	28.9	40.0	54.0	75.4	95.9	118.2	48.4
		90°	-	37.2	56.8	74.5	113.6	151.8	212.3	95.9
	Strong	0°	20.5	59.6	79.1	95.9	139.7	176.9	212.3	95.0
		45°	-	11.2	25.1	37.2	56.8	77.3	99.6	66.1
		90°	-	-	20.5	39.1	74.5	109.9	147.1	130.3
AS100	Weak	0°	115.4	180.6	229.0	255.1	310.0	373.3	425.5	80.1
		45°	46.6	93.1	111.7	128.5	172.2	217.9	265.3	60.5
		90°	64.2	130.3	162.9	195.5	260.7	325.9	389.2	121.0
	Middle*	0°	77.3	144.3	176.9	207.6	271.9	332.4	412.4	112.7
		45°	14.0	60.5	81.9	100.5	141.5	179.7	233.7	85.7
		90°	-	70.8	102.4	135.0	202.0	270.0	353.8	164.8
	Strong	0°	49.3	121.0	150.8	186.2	257.9	317.5	375.2	147.1
		45°	-	40.0	60.5	81.9	120.1	161.1	205.8	112.7
		90°	-	24.2	58.7	91.2	159.2	230.9	293.3	240.2
AS125	W	0°	337.0	467.4	540.0	599.6	729.0	864.0	959.9	84.7
		45°	170.4	254.2	296.1	338.0	423.6	498.1	573.5	57.7
		90°	255.1	382.6	440.4	509.3	635.9	773.7	904.9	116.4
	WM	0°	256.0	392.0	474.8	539.0	670.3	796.9	915.2	182.5
		45°	118.2	195.5	238.3	282.1	365.0	448.7	527.9	119.2
		90°	159.2	283.0	353.8	412.4	549.3	681.5	820.2	223.4
	WS	0°	203.9	342.6	409.6	477.6	630.3	748.5	865.8	235.5
		45°	78.2	160.1	201.1	244.9	323.1	409.6	487.8	150.9
		90°	92.2	223.4	291.4	351.0	485.1	619.1	758.8	278.4
	M	0°	181.5	334.2	403.1	471.1	603.3	735.5	861.2	267.2
		45°	66.1	147.1	189.9	234.6	313.7	402.2	475.7	173.2
		90°	50.3	179.7	243.9	312.8	445.9	580.0	704.8	329.6
	MS	0°	128.5	276.5	351.9	421.7	561.4	684.3	804.4	316.5
		45°	27.0	108.0	146.2	186.2	267.2	346.3	428.3	207.6
		90°	-	119.2	180.6	250.4	381.7	509.3	630.3	393.8
	S*	0°	90.3	234.6	303.5	372.4	513.9	650.8	762.5	370.5
		45°	-	85.7	128.5	169.4	255.1	337.0	417.1	233.7
		90°	-	60.5	128.5	189.0	320.3	452.5	581.9	444.1

※0°-Valve Closed / 90°-Valve open

*Standard

Contents

A sereis Part List
A series Selection guide Dimension
A series Torque table
R sereis Part list
R series Selection guide Dimension
R series Torque table
Various option
Valve position indicator

Contents

A sereis Part List

A series Selection guide Dimension

A series Torque table

R sereis Part list

R series Selection guide Dimension

R series Torque table

Various option

Valve position indicator

※Unit : Nm

Model	Spring type	Angle	Supply air (Air to)							Spring to Close
			3Bar	4Bar	4.5Bar	5Bar	6Bar	7Bar	8Bar	
AS140	W	0°	463.6	661.0	756.0	850.0	1,043.7	1,209.4	1,379.7	146.2
		45°	233.7	337.0	392.9	445.9	555.8	661.0	766.2	92.2
		90°	361.2	553.9	660.1	759.7	951.5	1,144.2	1,340.6	176.9
	WM	0°	381.7	577.2	684.3	782.0	954.3	1,131.2	1,238.2	265.3
		45°	172.2	274.6	325.9	377.1	488.8	591.2	702.9	158.3
		90°	237.4	409.6	498.1	591.2	796.0	1,000.8	1,182.4	302.6
	WS	0°	280.2	473.9	589.3	684.3	869.6	1,052.0	1,205.6	329.6
		45°	110.8	223.4	275.6	330.5	434.8	553.9	648.0	206.7
		90°	119.2	322.1	416.2	514.8	719.7	926.3	1,120.0	393.8
	M	0°	260.7	442.2	544.6	623.8	800.7	982.2	1,168.4	400.3
		45°	107.1	214.1	265.3	316.5	423.6	526.0	637.7	228.1
		90°	79.1	274.6	372.4	470.2	670.3	879.8	1,098.6	446.9
	MS	0°	194.6	380.8	483.2	575.4	796.9	972.0	1,145.1	484.1
		45°	37.2	153.6	211.3	269.1	382.6	481.3	583.7	284.9
		90°	-	172.2	271.9	375.2	562.3	762.5	954.3	539.0
	S*	0°	125.7	311.9	405.0	497.2	693.6	861.2	1,042.7	558.6
		45°	-	116.4	162.9	218.8	325.9	432.9	544.6	325.9
		90°	-	79.1	172.2	265.3	456.2	651.7	842.6	623.8
AS160	W	0°	649.8	964.5	1,141.4	1,289.4	1,596.7	1,896.4	2,194.4	343.5
		45°	307.2	475.7	560.5	647.0	812.8	983.1	1,167.5	202.0
		90°	452.5	749.5	900.3	1,066.0	1,338.8	1,642.3	1,967.2	379.8
	WM	0°	601.4	915.2	1,055.8	1,202.9	1,576.2	1,864.8	2,090.1	422.7
		45°	284.0	450.6	534.4	621.0	784.8	952.4	1,120.0	244.9
		90°	391.0	683.4	848.1	1,002.7	1,336.0	1,589.2	1,830.3	463.6
	WS	0°	418.0	703.8	863.0	993.4	1,382.5	1,655.3	1,875.0	559.5
		45°	151.8	326.8	405.9	494.4	672.2	839.8	1,015.7	332.4
		90°	142.4	462.7	618.2	760.6	1,053.9	1,366.7	1,689.8	662.9
	M	0°	528.8	841.6	982.2	1,152.6	1,509.2	1,878.8	2,143.2	472.9
		45°	230.9	404.1	489.7	571.6	745.7	918.0	1,081.8	277.4
		90°	296.1	600.5	756.9	896.6	1,189.8	1,458.9	1,726.1	525.1
	MS	0°	355.6	656.4	824.9	978.5	1,323.9	1,631.1	1,862.9	654.5
		45°	109.9	283.0	366.8	459.0	629.4	805.3	969.2	388.2
		90°	133.1	365.9	490.6	632.1	955.2	1,258.7	1,525.0	767.1
	S*	0°	210.4	509.3	655.4	797.9	1,136.8	1,418.8	1,716.8	842.6
		45°	-	191.8	277.4	367.7	533.5	703.8	864.0	498.1
		90°	-	161.1	323.1	463.6	749.5	1,064.1	1,328.5	952.4
AS185	W	0°	951.5	1,317.4	1,511.0	1,713.0	2,105.9	2,395.5	2,794.9	386.4
		45°	484.1	745.7	872.3	1,002.7	1,289.4	1,549.2	1,818.2	260.7
		90°	656.4	1,064.1	1,273.6	1,458.9	1,820.1	2,220.4	2,676.6	492.5
	WM	0°	727.1	1,108.8	1,371.4	1,539.9	1,891.8	2,282.8	2,630.1	626.6
		45°	333.3	606.1	742.0	864.9	1,118.1	1,409.5	1,686.0	420.8
		90°	369.6	765.3	970.1	1,177.7	1,645.1	1,930.0	2,424.3	769.9
	WS	0°	506.5	895.6	1,113.5	1,337.8	1,718.6	2,081.7	2,518.4	911.4
		45°	171.3	444.1	584.7	713.1	978.5	1,231.7	1,501.7	567.0
		90°	18.6	485.1	703.8	899.3	1,318.3	1,679.5	2,100.3	1,074.4
	M	0°	468.3	886.3	1,130.2	1,313.6	1,689.8	2,098.5	2,370.3	902.1
		45°	177.8	442.2	566.0	693.6	951.5	1,215.9	1,490.5	592.1
		90°	-	468.3	671.3	877.0	1,287.6	1,689.8	2,079.9	1,157.2
	MS	0°	319.3	751.3	935.7	1,123.7	1,510.1	1,911.3	2,303.3	1,087.4
		45°	28.9	300.7	451.5	590.3	833.2	1,101.4	1,376.0	726.2
		90°	-	209.5	432.0	637.7	1,035.3	1,417.9	1,897.4	1,394.6
	S*	0°	138.7	606.1	817.4	1,010.1	1,446.8	1,819.2	2,194.4	1,336.9
		45°	-	156.4	289.5	417.1	674.0	990.6	1,215.9	869.6
		90°	-	-	169.4	382.6	795.7	1,242.0	1,652.5	1,654.4

※0°-Valve Closed / 90°-Valve open

*Standard

※Unit : Nm

Model	Spring type	Angle	Air (to Open)							Spring to Close
			3Bar	4Bar	4.5Bar	5Bar	6Bar	7Bar	8Bar	
AS210	W	0°	1,443.1	1,955.1	2,290.3	2,495.1	3,025.8	3,556.4	4,124.3	335.2
		45°	837.9	1,191.7	1,359.3	1,536.2	1,889.9	2,253.0	2,597.5	214.1
		90°	1,182.4	1,713.0	2,001.7	2,318.2	2,895.4	3,472.6	4,105.7	400.3
	WM	0°	1,080.0	1,601.3	1,880.6	2,150.6	2,699.9	3,193.3	3,724.0	744.8
		45°	558.6	921.7	1,107.9	1,275.5	1,787.5	1,973.7	2,299.6	456.2
		90°	744.8	1,340.6	1,647.9	1,964.4	2,588.2	3,230.6	3,826.4	875.1
	WS	0°	986.9	1,564.1	1,834.1	2,066.8	2,644.0	3,212.0	3,742.6	977.6
		45°	437.6	800.7	977.6	1,154.4	1,489.6	1,852.7	2,206.5	540.0
		90°	465.5	1,005.5	1,377.9	1,666.5	2,271.6	2,942.0	3,519.2	1,042.7
	M	0°	623.8	1,173.1	1,405.8	1,666.5	2,187.9	2,718.5	3,193.3	1,182.4
		45°	288.6	670.3	865.8	1,033.4	1,405.8	1,787.5	2,197.2	698.3
		90°	167.6	791.4	1,098.6	1,387.2	2,048.2	2,662.7	3,314.4	1,331.3
	MS	0°	586.5	1,163.8	1,461.7	1,750.3	2,290.3	2,802.3	3,314.4	1,387.2
		45°	195.5	540.0	726.2	893.8	1,247.5	1,601.3	1,973.7	810.0
		90°	-	558.6	884.5	1,191.7	1,815.5	2,448.5	3,165.4	1,536.2
	S*	0°	297.9	837.9	1,117.2	1,387.2	1,973.7	2,495.1	2,979.2	1,601.3
		45°	-	400.3	586.5	763.4	1,154.4	1,526.8	1,899.2	958.9
		90°	-	270.0	567.9	847.2	1,452.4	2,076.1	2,662.7	1,778.2
AS250	W	0°	2,364.7	3,314.4	3,798.5	4,301.2	5,213.6	6,116.7	6,936.0	763.4
		45°	1,340.6	1,955.1	2,346.1	2,634.7	3,277.1	3,891.6	4,487.4	391.0
		90°	2,392.7	3,593.7	4,170.9	4,785.3	5,455.7	6,079.4	8,472.1	754.1
	WM	0°	1,787.5	2,755.8	3,258.5	3,733.3	4,673.6	5,576.7	6,451.8	1,461.7
		45°	1,024.1	1,629.3	1,936.5	2,253.0	2,876.8	3,509.9	4,133.6	763.4
		90°	1,601.3	2,746.5	3,351.6	3,910.2	5,101.9	6,312.2	7,587.7	1,387.2
	WS	0°	1,508.2	2,513.7	3,007.1	3,454.0	4,431.6	5,371.9	6,274.9	1,768.9
		45°	791.4	1,433.7	1,750.3	2,048.2	2,662.7	3,286.4	3,891.6	940.3
		90°	1,033.4	2,169.2	2,709.2	3,267.8	4,403.6	5,595.3	6,805.6	1,796.8
	M	0°	1,508.2	2,616.1	3,165.4	3,668.1	4,627.1	5,539.5	6,405.3	1,908.6
		45°	716.9	1,368.6	1,675.8	1,973.7	2,588.2	3,230.6	3,817.1	1,042.7
		90°	800.7	1,983.0	2,578.9	3,156.1	4,366.4	5,586.0	6,740.4	2,020.3
	MS	0°	1,145.1	2,132.0	2,625.4	3,100.2	4,068.5	5,008.8	5,828.1	2,364.7
		45°	353.8	986.9	1,303.4	1,592.0	2,215.8	2,848.9	3,463.3	1,396.5
		90°	232.8	1,284.8	1,862.0	2,457.8	3,565.7	4,627.1	5,781.5	2,448.5
	S*	0°	958.9	2,011.0	2,485.8	2,988.5	3,789.2	4,701.6	4,617.8	2,653.4
		45°	270.0	893.8	1,201.0	1,508.2	2,132.0	2,755.8	3,416.8	1,536.2
		90°	46.6	1,033.4	1,601.3	2,253.0	3,295.7	4,506.0	5,567.4	3,035.1
AS300	W	0°	4,394.3	6,126.0	6,908.0	7,755.2	9,216.9	10,576.2	11,963.4	1,368.6
		45°	2,718.5	3,910.2	4,515.4	5,111.2	6,274.9	7,429.4	8,583.8	698.3
		90°	4,319.8	6,330.8	7,354.9	8,397.6	9,915.2	10,762.4	11,311.7	1,322.0
	WM	0°	3,444.7	5,111.2	5,874.6	6,638.0	8,192.8	9,663.8	10,985.8	2,457.8
		45°	2,011.0	3,230.6	3,733.3	4,375.7	5,539.5	6,731.1	7,839.0	1,359.3
		90°	2,709.2	4,664.3	5,697.7	6,721.8	8,825.9	10,436.5	10,855.5	2,644.0
	WS	0°	2,550.9	4,143.0	4,971.5	5,818.8	7,503.9	8,993.5	9,570.7	3,696.1
		45°	1,377.9	2,541.6	3,146.8	3,733.3	4,887.8	6,051.5	7,196.6	1,880.6
		90°	1,489.6	3,547.1	4,580.5	6,014.3	7,801.8	9,570.7	10,408.6	3,333.0
	M	0°	2,448.5	4,236.1	5,083.3	5,902.5	7,448.0	8,928.3	10,092.0	3,956.8
		45°	1,070.7	2,308.9	2,867.5	3,454.0	4,589.8	5,809.4	6,898.7	2,150.6
		90°	1,145.1	3,090.9	4,105.7	5,092.6	7,029.1	8,984.2	10,110.7	3,956.8
	MS	0°	1,964.4	3,565.7	4,338.5	5,213.6	6,814.9	8,379.0	9,701.0	4,729.5
		45°	651.7	1,834.1	2,346.1	3,007.1	4,254.7	5,353.3	6,451.8	2,476.5
		90°	409.6	2,383.4	3,137.5	4,236.1	6,535.6	8,146.3	9,989.6	4,552.6
	S*	0°	1,247.5	3,100.2	4,096.4	4,943.6	6,619.4	8,313.8	9,645.2	5,818.8
		45°	-	1,266.2	1,843.4	2,355.4	3,537.8	4,757.4	5,939.8	3,165.4
		90°	-	958.9	1,899.2	2,839.6	4,925.0	7,038.4	9,086.6	5,744.3

※0°-Valve Closed / 90°-Valve open

*Standard

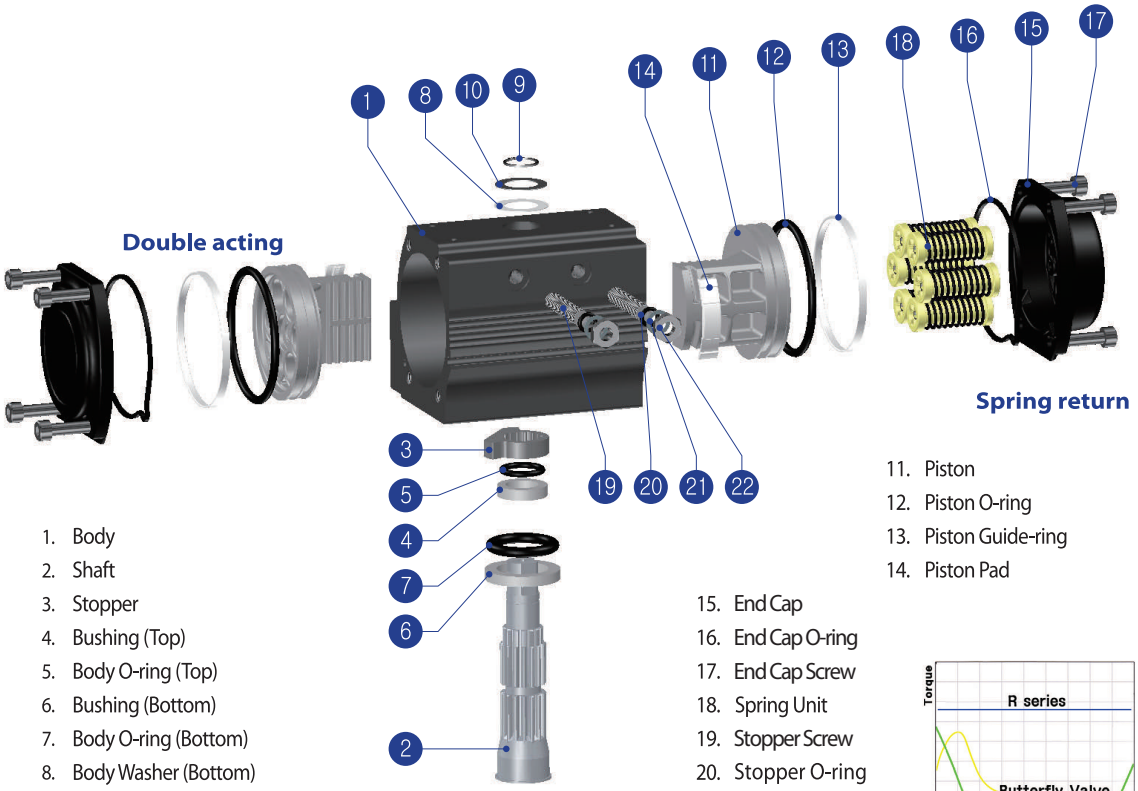
Contents

A sereis Part List
A series Selection guide Dimension
A series Torque table
R sereis Part list
R series Selection guide Dimension
R series Torque table
Various option
Valve position indicator

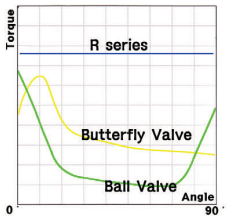
Contents

A sereis Part List
A series Selection guide Dimension
A series Torque table
R sereis Part list
R series Selection guide Dimension
R series Torque table
Various option
Valve position indicator

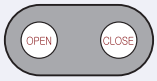
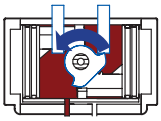
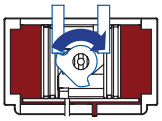
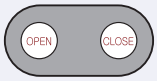
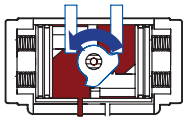
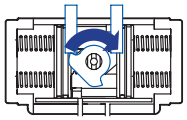
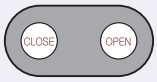
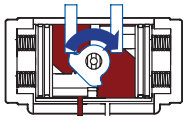
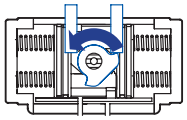
Part list



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. End Cap
16. End Cap O-ring
17. End Cap Screw
18. Spring Unit
19. Stopper Screw
20. Stopper O-ring
21. Stopper Washer
22. Stopper Nut



Operating mechanism

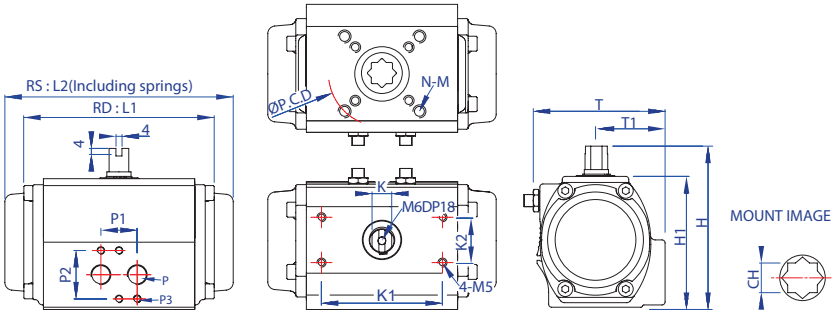
DOUBLE ACTING	Action "A" 	 Open	 Close
SPRING RETURN	Action "A" (Fail Close) 	 Open	 Close
	Action "B" (Fail Open) 	 Close	 Open

▸ Selection guide

Valve Size		Double acting			Spring return	
		Ball valve		Butterly valve	Ball valve	Butterly valve
1/2”	15A	RD32 (1piece)	RD50		RS40	
3/4”	20A	RD40 (1piece)			RS50	
1”	25A		RD65		RS65	
1-1/4”	32A				RS80	
1-1/2”	40A		RD80	RD50	RS90	RS50
2”	50A			RD65	RS100	RS65
2-1/2”	65A		RD90		RS115	RS80
3”	80A		RD100 / RD115	RD80	RS125	RS90
4”	100A		RD115 / RD125		RS140	RS100
5”	125A		RD140	RD90	RS160 / RS185	RS115
6”	150A		RD160	RD100	RS185 / RS210	RS125
8”	200A		RD185	RD125		RS140
10”	250A		RD210	RD140		RS160
12”	300A			RD160		RS185
14”	350A			RD185		RS210
16"	400A			RD210		

▪Based on 10K/#150
▪The above data is for reference only; the actual assembly may be different depending on valve material, pressure, structure, fluid and operational environment.
▪The data is not legally effective and therefore should not be used as legal ground.

▸ Dimension table



MODEL	P	P1	P2	P3
R32,R40	PT1/8	24	32	M5
R50~R210	PT1/4	24	32	M5

	K1	K2
R32	25.5	25.5
R40	50	25
R50~R160	80	30
R210	130	30

※Unit:mm

MODEL	ISO	P.C.D (Ø)	N-G (depth)	K	RD L1	RS L2	T	T1	H	H1	CH	Stem depth	RD Wt(Kg)	RS Wt(Kg)
@RD32	F03	36	4-M5(7)	7	66	-	45	25	55	45	9*9	9	0.3	-
@R40	F03/F05	36/50	4-M5/M6 (8/12)	9	97	97	63	32	75	55	9*9	9	0.5	0.6
	#F04	#42	#4-M5											
R50	F03/F05/ F07	36/50/70	4-M5/M6/M8 (10/12/12.5)	9	119	133	75	40	90	70	11*11	13	1.0	1.1
	#F04	#42	#4-M5											
R65	F05/F07	50/70	4-M6/M8 (11/11)	13	131	154	89	46	106.5	86.5	14*14	16	1.4	1.5
	#F07	#70	#4-M5											
R80	F05/F07	50/70	4-M6/M8 (11/15)	19	189	220	101	49.5	126	106	17*17	19	2.9	3.3
R90	F07	70	4-M8(17)	19	188	223	104	54.5	136	116	17*17	19	3.4	3.8
R100	F07/F10	70/102	4-M8/M10 (16/19)	19	229	256	132	61.5	148	128	22*22	26	4.7	5.4
											#17*17	19		
R115	F07/F10	70/102	4-M8/M10 (16/19)	19	264	302	141.5	67.5	163	143	22*22	26	6.7	5.4
R125	F07/F10	70/102	4-M10/M12 (18/25)	19	299	330	151	71.5	174	154	22*22	26	8.6	9.9
R140	F10/F12	102/125	4-M10/M12 (18/25)	25	332	389	164	77	192	172	27*27	30	12.4	14.5
											#22*22	26		
R160	F10/F12	102/125	4-M10/M12 (18/25)	24	364	416	188	103.5	216	196	27*27	30	16.9	19.5
R185	F10/F12	102/125	4-M10/M12 (18/25)	24	434	465	217	103	244	224	36*36	30	24.2	29.0
R210	F14	140	4-M16(23)	36	444	527	231	115	284	254	36*36	30	32.3	37.9

#Option

Contents

A sereis Part List
A series Selection guide Dimension
A series Torque table
R sereis Part list
R series Selection guide Dimension
R series Torque table
Various option
Valve position indicator

Contents

A sereis Part List
A series Selection guide Dimension
A series Torque table
R sereis Part list
R series Selection guide Dimension
R series Torque table
Various option
Valve position indicator
Limit switch box
Positioner

▶ RD sereis Torque table

※Unit : Nm

MODEL	Supply air						
	3Bar	4Bar	4.5Bar	5Bar	6Bar	7Bar	8Bar
RD32	2.0	3.0	3.4	3.8	4.7	5.6	6.6
RD40	4.8	6.6	7.5	8.3	10.1	11.9	13.6
RD50	8.8	12.1	13.9	15.2	18.2	21.6	24.4
RD65	16.5	21.8	24.8	27.3	33.2	38.5	44.1
RD80	35.4	49.3	55.9	63.3	76.3	91.2	107.1
RD90	44.7	63.3	71.7	81.0	98.7	117.3	139.7
RD100	70.8	95.9	109.9	122.0	148.0	176.0	203.0
RD115	113.6	156.4	176.0	195.5	236.5	277.4	314.7
RD125	156.4	210.4	237.4	265.3	317.5	375.2	424.5
RD140	246.7	327.7	365.9	407.8	485.1	566.0	630.3
RD160	339.8	450.6	509.3	566.0	676.8	788.6	901.2
RD185	449.7	596.8	675.9	748.5	907.7	1,060.4	1,203.8
RD210	642.4	844.4	949.6	1,052.0	1,263.4	1,487.7	1,736.3

※0°-Valve Closed / 90°-Valve open

▸ RS series Torque table

※Unit : Nm

Model	Spring unit	Supply air (to Open)															
		3Bar		4Bar		4.5Bar		5Bar		6Bar		7Bar		8Bar		Spring to Close	
		0°	90°	0°	90°	0°	90°	0°	90°	0°	90°	0°	90°	0°	90°	90°	0°
RS40	WM	3.3	0.5	5.0	1.3	5.9	1.9	6.8	2.2	8.7	3.2	10.5	4.3	12.4	5.3	2.4	1.4
	WS	2.6	-	4.4	0.7	5.3	1.3	6.1	1.7	8.0	2.7	9.8	3.5	11.5	4.3	3.3	1.9
	M	2.3	-	4.2	0.7	5.1	1.1	5.9	1.6	7.7	2.3	9.5	3.2	11.3	4.0	3.7	2.3
	MS	1.9	-	3.5	0.3	4.5	0.8	5.3	1.3	7.2	2.1	9.0	2.9	10.8	3.7	4.6	2.9
	S*	1.5	-	3.1	-	4.0	-	4.9	0.7	6.6	1.4	8.5	2.0	10.2	2.7	5.1	3.2
RS50	4	7.4	5.6	10.7	8.9	12.2	10.6	13.9	12.2	17.1	15.6	20.5	18.9	23.4	22.0	2.4	1.6
	5	6.7	4.8	10.0	7.9	11.6	9.9	13.2	11.4	16.6	15.0	19.9	18.2	23.1	21.2	3.4	2.0
	6	6.2	4.0	9.6	7.3	11.5	8.9	12.8	10.9	15.9	13.9	19.2	17.3	22.7	20.3	4.2	2.6
	7	5.8	3.0	8.9	6.1	10.6	7.8	12.3	9.5	15.6	12.8	19.0	16.5	22.1	19.6	4.9	3.1
	8*	5.0	2.1	8.3	5.2	9.9	6.9	11.6	8.6	14.9	11.9	18.4	15.5	21.2	18.7	6.0	3.6
	9	4.5	1.3	7.7	4.3	9.4	5.9	11.0	7.6	14.3	10.9	17.7	14.4	20.7	17.6	6.8	4.2
	10	3.8	-	7.2	3.5	8.8	5.2	10.5	6.7	14.0	10.1	17.1	13.6	20.2	16.7	7.7	4.7
	11	3.2	-	6.5	2.6	8.3	4.0	9.9	5.9	13.3	9.2	16.6	12.7	19.6	15.6	8.5	5.1
	12	2.7	-	6.1	1.5	7.6	3.1	9.5	4.7	12.7	8.1	16.1	11.5	19.0	14.5	9.4	5.8
RS65	4	11.5	10.0	17.3	15.5	20.6	18.6	23.1	21.1	29.2	27.3	34.6	33.1	40.8	38.9	5.9	3.2
	5	10.8	7.5	17.1	13.3	19.6	16.3	22.6	19.6	28.7	25.7	34.3	32.4	39.3	37.1	7.6	4.4
	6	9.8	6.4	16.1	12.2	19.1	15.6	22.7	18.9	28.0	24.4	33.8	30.3	43.8	35.5	8.8	5.4
	7	8.8	4.2	14.2	10.1	17.0	13.1	20.1	16.2	26.3	22.3	32.2	28.2	39.5	34.1	10.7	6.5
	8*	7.7	2.1	13.4	8.6	17.0	11.5	19.2	14.6	25.5	20.9	31.1	26.8	38.4	32.1	12.3	7.7
	9	6.2	-	11.9	5.8	14.9	8.5	17.8	12.8	23.7	17.9	29.5	24.1	35.3	30.1	14.6	8.3
	10	4.7	-	10.4	4.1	14.0	7.0	16.9	10.0	22.7	16.4	28.4	22.3	33.6	28.4	16.4	10.2
	11	3.5	-	9.3	2.1	12.4	5.2	15.2	8.4	21.4	14.5	27.1	20.7	33.4	26.2	18.1	11.5
	12	2.6	-	8.6	-	11.4	3.4	14.7	6.6	20.7	12.6	26.6	18.8	32.4	24.7	19.0	12.3
RS80	4	31.7	24.9	46.0	39.0	53.4	46.8	59.8	54.1	74.9	68.2	89.7	83.0	109.1	97.0	14.8	8.8
	5	29.0	19.8	43.0	34.4	50.5	41.5	57.6	48.5	71.8	63.8	86.8	78.3	105.4	92.0	18.7	11.0
	6	26.1	15.7	40.4	30.6	48.7	38.3	54.9	45.3	69.6	59.9	84.0	74.7	101.8	88.3	22.8	13.9
	7	23.0	10.9	38.2	25.1	45.7	32.7	52.1	39.2	66.5	54.2	83.9	69.7	99.4	82.7	27.7	15.9
	8*	19.9	5.9	35.3	20.8	42.3	28.9	49.5	35.4	64.0	50.1	77.6	65.5	93.5	78.3	32.0	18.4
	9	17.2	2.1	31.8	16.1	39.2	23.5	46.3	30.7	60.9	46.5	76.2	60.6	89.6	73.8	36.2	21.3
	10	14.6	-	29.1	12.2	36.6	18.7	44.2	26.7	58.5	41.1	73.2	55.8	86.3	68.1	40.7	24.7
	11	11.4	-	26.2	6.4	33.4	14.3	40.8	21.1	55.3	35.8	70.1	50.7	83.4	64.1	45.2	26.8
	12	9.3	-	23.1	-	30.4	9.6	37.9	16.4	52.8	31.3	67.0	46.4	80.6	61.2	49.5	29.2

※0°-Valve Closed / 90°-Valve open

*Standard

Contents

A sereis Part List
A series Selection guide Dimension
A series Torque table
R sereis Part list
R series Selection guide Dimension
R series Torque table
Various option
Valve position indicator
Limit switch box
Positioner

Contents

A sereis Part List

A series Selection guide Dimension

A series Torque table

R sereis Part list

R series Selection guide Dimension

R series Torque table

Various option

Valve position indicator

Limit switch box

Positioner

※Unit : Nm

Model	Spring unit	Supply Air															
		3Bar		4Bar		4.5Bar		5Bar		6Bar		7Bar		8Bar		Spring to Close	
		0°	90°	0°	90°	0°	90°	0°	90°	0°	90°	0°	90°	0°	90°	90°	0°
RS90	4	39.1	27.9	57.7	47.5	66.1	56.8	76.3	66.1	95.0	84.7	113.6	103.3	132.2	121.0	17.7	9.3
	5	34.4	19.6	52.1	38.2	61.4	47.5	70.8	58.7	91.2	76.3	108.0	96.8	126.6	116.4	24.2	13.0
	6	31.7	17.7	49.3	33.5	59.6	43.8	68.0	52.1	87.5	69.8	108.0	88.4	123.8	108.9	29.8	17.7
	7	28.9	7.4	45.6	26.1	55.9	34.4	65.2	44.7	83.8	63.3	102.4	81.9	120.1	102.4	33.5	20.5
	8*	24.2	-	42.8	19.6	52.1	28.9	61.4	38.2	80.1	55.9	95.9	75.4	115.4	94.0	40.0	22.3
	9	22.3	-	41.0	18.6	51.2	27.0	60.5	35.4	78.2	54.0	96.8	72.6	111.7	89.4	46.6	26.1
	10	20.5	-	38.2	13.0	47.5	21.4	56.8	31.7	75.4	50.3	92.2	68.9	108.0	81.0	53.1	27.9
	11	16.8	-	36.3	-	43.8	14.9	53.1	22.3	72.6	42.8	90.3	62.4	107.1	81.9	55.9	31.7
	12	14.0	-	29.8	-	39.1	8.4	50.3	14.9	66.1	33.5	84.7	54.9	105.2	72.6	61.4	35.4
RS100	4	55.9	35.4	81.0	62.4	94.0	74.5	106.1	88.4	132.2	114.5	158.3	141.5	184.3	168.5	31.7	17.7
	5	50.3	25.1	75.4	52.1	88.4	65.2	100.5	77.3	126.6	104.3	152.7	131.3	177.8	157.3	40.0	22.3
	6	48.4	22.3	73.5	46.6	85.7	59.6	98.7	71.7	124.8	98.7	149.9	125.7	175.0	151.8	47.5	27.0
	7	41.9	-	67.0	34.4	79.1	47.5	93.1	59.6	117.3	87.5	144.3	113.6	170.4	136.9	55.9	29.8
	8*	36.3	-	61.4	24.2	74.5	37.2	87.5	50.3	113.6	78.2	139.7	104.3	164.8	130.3	67.0	37.2
	9	29.8	-	55.9	9.3	68.0	27.9	81.0	41.0	107.1	67.0	133.1	93.1	159.2	120.1	75.4	44.7
	10	24.2	-	48.4	-	62.4	22.3	76.3	34.4	100.5	58.7	126.6	84.7	151.8	110.8	84.7	50.3
	11	18.6	-	44.7	-	56.8	-	69.8	21.4	95.0	48.4	121.0	73.5	146.2	100.5	93.1	53.1
	12	13.0	-	39.1	-	51.2	-	64.2	13.0	90.3	38.2	115.4	64.2	141.5	87.5	103.3	58.7
RS115	4	99.6	86.6	143.4	126.6	163.9	146.2	183.4	167.6	226.2	210.4	268.1	251.4	312.8	298.9	32.6	18.6
	5	95.0	71.7	138.7	116.4	157.3	138.7	178.8	156.4	219.7	198.3	260.7	240.2	308.2	288.6	45.6	26.1
	6	87.5	59.6	130.3	102.4	150.8	115.4	170.4	144.3	211.3	186.2	254.2	230.0	297.9	274.6	56.8	32.6
	7	80.1	49.3	122.0	92.2	142.4	112.7	162.9	134.1	205.8	176.0	247.6	217.9	290.5	263.5	67.0	41.9
	8*	74.5	40.0	116.4	80.1	136.9	101.5	157.3	121.0	198.3	162.9	241.1	206.7	284.0	243.0	77.3	45.6
	9	66.1	25.1	108.0	67.0	129.4	88.4	149.0	108.0	191.8	150.8	232.8	193.6	274.6	233.7	86.6	54.9
	10	58.7	15.8	99.6	57.7	122.0	79.1	141.5	98.7	183.4	140.6	225.3	183.4	267.2	224.4	101.5	61.4
	11	52.1	-	93.1	46.6	113.6	66.1	135.9	85.7	176.9	127.5	218.8	169.4	260.7	249.5	111.7	68.0
	12	46.6	-	87.5	27.9	107.1	54.0	128.5	74.5	170.4	116.4	211.3	158.3	254.2	238.3	121.0	74.5
RS125	4	126.6	98.7	180.6	150.8	209.5	182.5	236.5	206.7	289.5	262.5	344.5	318.4	393.8	375.2	55.9	28.9
	5	116.4	78.2	168.5	133.1	196.4	161.1	224.4	189.0	275.6	242.1	328.6	298.9	378.0	359.4	74.5	38.2
	6	104.3	58.7	156.4	114.5	184.3	142.4	212.3	169.4	261.6	224.4	306.3	280.2	364.0	344.5	93.1	46.6
	7	96.8	38.2	149.0	94.0	179.7	122.9	202.0	149.0	257.0	203.9	310.0	261.6	371.5	329.6	108.0	55.9
	8*	84.7	31.7	138.7	76.3	165.7	103.3	193.6	130.3	246.7	185.3	299.8	239.3	361.2	317.5	125.7	68.0
	9	72.6	9.3	127.5	54.9	153.6	82.9	180.6	109.9	234.6	165.7	288.6	219.7	349.1	299.8	145.2	78.2
	10	60.5	-	115.4	37.2	140.6	65.2	168.5	90.3	221.6	148.0	275.6	204.8	327.7	260.7	163.9	91.2
	11	50.3	-	104.3	18.6	133.1	45.6	157.3	72.6	212.3	129.4	264.4	183.4	320.3	236.5	181.5	102.4
	12	41.0	-	95.0	-	122.0	27.9	147.1	55.9	202.0	109.9	254.2	162.9	309.1	219.7	196.4	109.9

※0°-Valve Closed / 90°-Valve open

※Unit : Nm

Model	Spring unit	Supply Air															
		3Bar		4Bar		4.5Bar		5Bar		6Bar		7Bar		8Bar		Spring to Close	
		0°	90°	0°	90°	0°	90°	0°	90°	0°	90°	0°	90°	0°	90°	90°	0°
RS140	4	179.7	154.5	257.0	237.4	297.9	283.0	335.2	317.5	412.4	402.2	491.6	485.1	606.1	552.1	78.2	49.3
	5	175.0	132.2	252.3	211.3	290.5	252.3	329.6	291.4	405.9	372.4	486.0	454.3	599.6	524.2	95.9	55.9
	6	160.1	107.1	237.4	187.1	280.2	228.1	316.5	268.1	393.8	346.3	471.1	429.2	587.5	499.0	116.4	68.0
	7	146.2	84.7	223.4	165.7	262.5	206.7	300.7	246.7	381.7	325.9	459.0	407.8	575.4	477.6	139.7	82.9
	8*	131.3	65.2	211.3	146.2	249.5	186.2	288.6	225.3	366.8	305.4	443.2	385.4	560.5	461.8	160.1	95.0
	9	116.4	45.6	198.3	122.9	235.5	162.9	274.6	204.8	353.8	284.0	430.1	365.0	547.4	441.3	182.5	108.9
	10	95.9	18.6	178.8	96.8	219.7	138.7	261.6	180.6	338.0	261.6	416.2	342.6	533.5	419.0	205.8	126.6
	11	81.0	-	165.7	75.4	204.8	118.2	246.7	153.6	323.1	236.5	404.1	317.5	521.4	393.8	223.4	135.9
	12	75.4	-	153.6	54.0	191.8	94.0	230.9	131.3	312.8	212.3	393.8	293.3	509.3	373.3	245.8	145.2
RS160	4	261.6	221.6	372.4	336.1	429.2	390.1	482.3	445.0	594.0	559.5	710.4	670.3	820.2	780.2	114.5	71.7
	5	236.5	179.7	349.1	294.2	405.0	351.0	463.6	405.0	569.8	517.6	686.1	628.4	796.0	736.4	149.0	96.8
	6	214.1	150.8	326.8	264.4	383.6	317.5	438.5	375.2	550.2	485.1	661.0	596.8	770.9	703.8	179.7	115.4
	7	194.6	111.7	307.2	226.2	364.0	283.0	420.8	337.0	530.7	450.6	650.8	558.6	751.3	666.6	209.5	135.9
	8*	173.2	83.8	284.9	196.4	340.7	254.2	397.5	310.0	507.4	421.7	627.5	532.5	728.0	637.7	241.1	156.4
	9	152.7	51.2	263.5	159.2	317.5	219.7	374.3	274.6	484.1	393.8	604.2	499.0	704.8	605.2	270.9	177.8
	10	127.5	14.9	238.3	131.3	296.1	187.1	351.0	242.1	460.8	355.6	580.9	470.2	681.5	574.4	302.6	198.3
	11	117.3	-	220.6	98.7	280.2	156.4	332.4	212.3	447.8	326.8	567.9	442.2	668.5	546.5	331.4	216.9
	12	89.4	-	203.9	71.7	258.8	123.8	314.7	180.6	425.5	296.1	545.6	410.6	646.1	514.8	359.4	237.4
RS185	4	336.1	279.3	490.6	438.5	571.6	518.6	648.9	589.3	806.2	745.7	964.5	904.0	1,115.3	1,081.8	166.6	108.9
	5	320.3	240.2	471.1	391.0	554.9	469.2	628.4	547.4	789.5	703.8	941.2	864.9	1,091.1	1,030.6	214.1	143.4
	6	286.7	187.1	438.5	346.3	521.4	425.5	590.3	500.9	756.9	655.4	913.3	820.2	1,079.0	966.4	259.7	168.5
	7	253.2	136.9	409.6	290.5	486.0	374.3	559.5	449.7	734.6	612.6	883.5	767.1	1,031.5	933.8	309.1	203.9
	8*	216.9	90.3	380.8	245.8	458.1	323.1	534.4	403.1	702.0	560.5	855.6	718.7	990.6	887.2	356.6	234.6
	9	195.5	42.8	353.8	198.3	433.8	278.4	509.3	355.6	678.7	513.0	832.3	675.0	966.4	842.6	405.9	270.0
	10	161.1	-	320.3	147.1	405.9	226.2	476.7	306.3	633.1	467.4	790.4	624.7	924.5	788.6	457.1	294.2
	11	128.5	-	288.6	99.6	365.0	177.8	441.3	259.7	597.7	415.2	784.8	578.2	891.0	741.1	492.5	324.9
	12	105.2	-	258.8	48.4	340.7	137.8	416.2	216.0	572.6	376.1	738.3	527.9	865.8	691.7	543.7	357.5
RS210	4	518.6	438.5	744.8	670.3	868.6	784.8	956.1	897.5	1,219.6	1,170.3	1,443.1	1,364.8	1,660.0	1,576.2	233.7	152.7
	5	481.3	369.6	703.8	598.6	835.1	711.3	946.8	823.9	1,174.9	1,053.9	1,397.4	1,288.5	1,622.7	1,499.8	297.9	193.6
	6	438.5	308.2	663.8	532.5	776.5	644.3	901.2	756.9	1,139.5	988.7	1,360.2	1,220.5	1,576.2	1,442.1	356.6	233.7
	7	405.9	256.0	632.1	479.5	745.7	589.3	861.2	705.7	1,097.6	932.9	1,326.7	1,170.3	1,540.8	1,387.2	397.5	262.5
	8*	366.8	189.9	591.2	419.9	704.8	530.7	819.3	648.0	1,050.2	875.1	1,294.1	1,104.2	1,509.2	1,320.2	468.3	312.8
	9	319.3	118.2	542.8	345.4	655.4	462.7	768.1	568.8	1,010.1	801.6	1,240.1	1,026.9	1,453.3	1,254.1	533.5	355.6
	10	272.8	50.3	503.7	275.6	608.9	392.0	721.5	509.3	963.6	728.0	1,195.4	953.3	1,397.4	1,184.2	597.7	400.3
	11	236.5	-	456.2	214.1	574.4	331.4	686.1	448.7	911.4	676.8	1,162.8	905.9	1,364.8	1,123.7	649.8	442.2
	12	193.6	-	417.1	147.1	530.7	266.3	644.3	384.5	875.1	608.9	1,118.1	842.6	1,323.0	1,058.5	724.3	480.4

※0°-Valve Closed / 90°-Valve open

*Standard

Contents

A sereis Part List
A series Selection guide Dimension
A series Torque table
R sereis Part list
R series Selection guide Dimension
R series Torque table
Various option
Valve position indicator
Limit switch box
Positioner

Contents

A sereis
Part List

A series
Selection guide
Dimension

A series
Torque table

R sereis
Part list

R series
Selection guide
Dimension

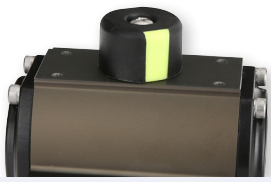
R series
Torque table

Various option

Valve position
indicator

▸ Various option

● Indicator

A	B	C	D
			
· It is fixed with screws.	· Standard indicator · It is possible to assemble the switch box in an indicator-mounted state.	· To AR50~AR160 can be used with 1 size. · It is easy to recognize since size is big.	· There is no discoloration with plastic 4 piece indicator system. *For R40/AR50~AR125

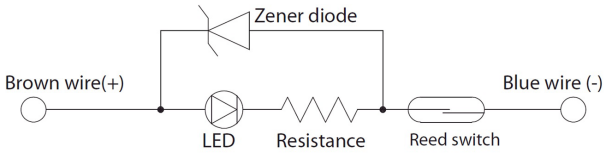
● Epoxy coated actuator

· Epoxy coated after hard anodized aluminum body.

· It is used for Chemical pipe line.

● Side sensor

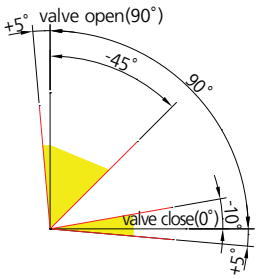
[Sensor Circuit Diagram]

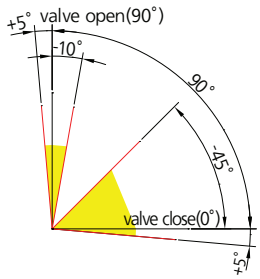


Sensor Specification		
Sensor	D-93K (KCC)	
Application	Relay, PLC	
Voltage	DC24V	AC110V
Current range	5~40mA	5~20mA
Contact protection circuit	None	
Internal voltage drop	≤2.7V	
Indicator lamp	Red LED	
Wire length	1m(standard), 3m, 5m	

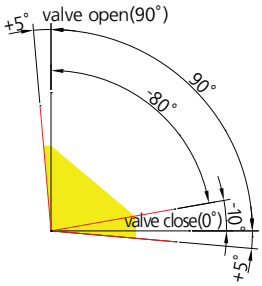
● Stopper

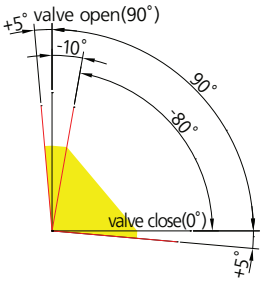
[Center stopper]



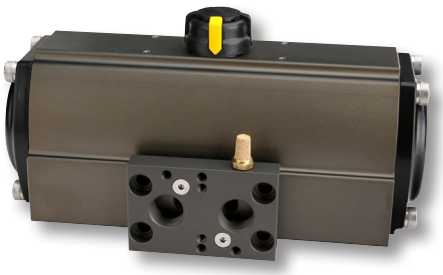


[End cap stopper]



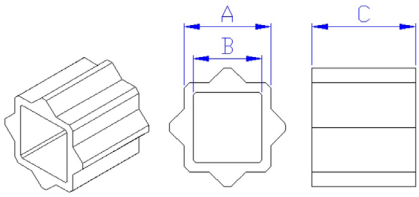


● Port pad



- Change Port size easily.
- Assemble other size NAUMUR solenoid valve with long screws.
- Add vent hole for quick response time in case of spring return.

● Adapter



Double square			Single square		
A	B	C	A	B	C
11	9	12	11	9	10
14	9	15	14	9	15
14	11	15	14	11	16
17	14	18	17	11	17
17	11	18	17	14	17
22	14	24	22	17	22
22	17	24	27	22	27
27	17	27			
27	22	27			
36	27	38			

Contents

A sereis Part List
A series Selection guide Dimension
A series Torque table
R sereis Part list
R series Selection guide Dimension
R series Torque table
Various option
Valve position indicator

Contents

A sereis Part List

A series Selection guide Dimension

A series Torque table

R sereis Part list

R series Selection guide Dimension

R series Torque table

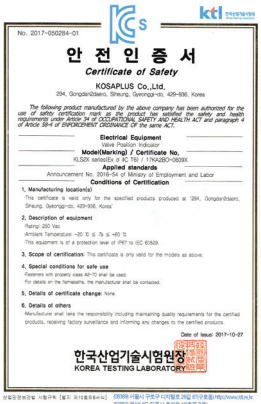
Various option

Valve position indicator

Valve position indicator

[KLS20]
KLS20 height 104.6mm

[KLS10]
KLS10 height 87.1mm

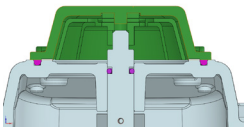


안 전 인 증 서
Certificate of Safety
KOSAPLUS Co.,Ltd.
한국산업기술시험원장
KOREA TESTING LABORATORY

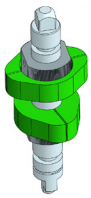
Ex d II C T6

· 3way indicator

· 4 piece plastic indicator



· The top twofold weatherproof structure



· Quick-set & Both side contact cam
· Subdivided serrature (Resolution 2.25°)

▸ Model code

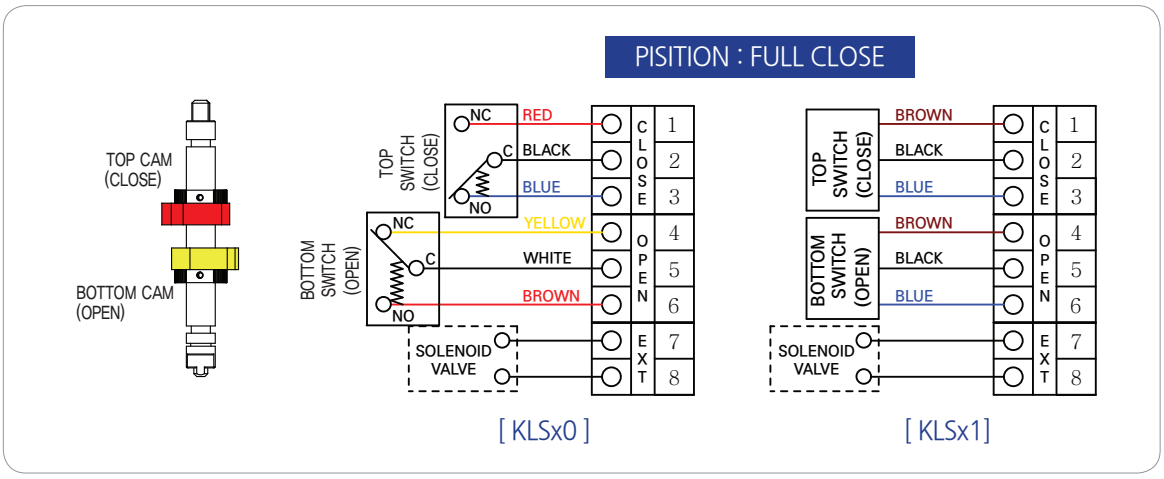
K 1 0 - 2 S F 2 - B 2

- **KLS**
- ⓐ **A**
  - 1 : IP67/68
  - 2 : Ex d II C T6 IP68
- ⓑ **B**
  - 0 : 2*SPDT
  - P : Proximity(PNP)
  - N : Proximity(NPN)
- ⓒ **C**
  - 1 : 2way indicator
  - 2 : 3way indicator
- ⓓ **D**
  - S : short stem
  - L : long stem
- ⓔ **D**
  - F2 : PF1/2
  - F4 : PF3/4
  - N2 : NTP1/2
  - N4 : NTP3/4
  - M0 : M20
  - M5 : M25
- ⓕ **F**
  - B1 : bracket BS1
  - B2 : bracket BS2
  - B2 : bracket BS3

Switch specification

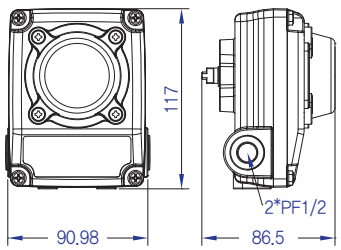
KLSx0	2*SPDT	250VAC, 30VDC 5A
KLSx1	2*Proximity	DC 12-24V

Wiring

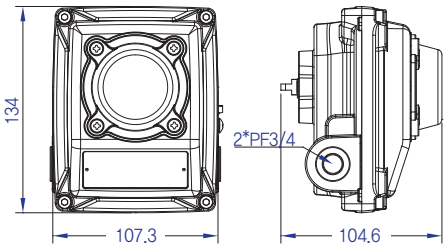


Dimension

[KLS10]

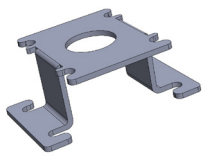
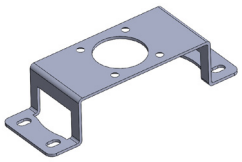


[KLS20]



[KLS10]

Bracket

BS1	BS2	BS3
		
Size	Size	Size
50*25*20 (R40)	30*80*20 (AR50~AR185)	30*130*30 (AR210~A300)
Material	Material	Material
Stainless steel	Stainless steel	Stainless steel

Contents

A sereis Part List
A series Selection guide Dimension
A series Torque table
R sereis Part list
R series Selection guide Dimension
R series Torque table
Various option
Valve position indicator

Electric actuator

Dome type indicator

The open & close status of the valve can be checked even from a long distance through the external position indicator.

Plastic intermediate cap

Even after long period of usage and exposure to sunlight, the letters are clear and visible.

Captive bolt

Prevents the bolt from being lost even when the cover is open for wiring.

Terminal Box

Easy & safe wiring is possible by opening the terminal box only. There is no need to disassemble the entire actuator body.
(Except for KE002)

▶ Selection guide

Valve Size		Ball Valve (2way/10K/#150)	Butterfly Valve (2way/10K/#150)
1/2”	15A	KE002	
3/4”	20A	KE004	
1”	25A		
1-1/4”	32A	KE005	
1-1/2”	40A	KE006	KE002
2”	50A	KE008	KE004
2-1/2”	65A	KE010	
3”	80A	KE016	
4”	100A	KE028	KE005/KE006
5”	125A	KE040	KE008/KE010
6”	150A	KE050/KE080	KE016
8”	200A	KE080/KE120	KE028
10”	250A		KE040/KE050
12”	300A		KE080
14”	350A		KE080/KE120
16"	400A		KE120

▸ Model code

Q5N20-2AL357C14-OP

ⓐ ⓑ ⓒ ⓓ ⓔ ⓕ ⓖ ⓗ

Mechanism

Q : Quarter turn

Model

2 : KE002
4 : KE004
5 : KE005
6 : KE006
8 : KE008
10 : KE010
⋮

Color

*L : Blue
K : Black
R : :Red
G : Grey
M : Mint

ISO5211

3 : F03
5 : F05
7 : F07
⋮

STEM

C11 : 11*11
C14 : 14*14
⋮

Option

Refer to option table(Page 8)

Option torque
Low torque/Faster operating time

Refer to performance table(page 3)
*Blank : Standard
N20 : 20Nm
N100 : 100Nm
⋮

Voltage

1A	: 110V AC	(KE002~KE120)
*2A	: 220V AC	(KE002~KE120)
3A	: 380V AC	(KE016~KE120)
4A	: 440V AC	(KE016~KE120)
2D	: 24V DC	(KE002~KE040)
1M	: 100~250V AC	(KE005)
2M	: 24V AC/DC	(KE005 KE016~KE040)

※Maximum range ±10%

*Standard

KE002
(20Nm)

KP010
(100Nm Ex-proof)

KE016
(160Nm)

KE016-LC
(160Nm Local Control)

Contents

A sereis Part List

A series Selection guide Dimension

A series Torque table

R sereis Part list

R series Selection guide Dimension

R series Torque table

Various option

Valve position indicator

▶ A series (scotch yoke) ISO5211 / Stem / Weight

MODEL	ISO5211	STEM	AD(Kg)	AS(Kg)
A50	F03/F05/F07	11*11	1.4	1.6
		#14*14		
		#9.7*15		
A65	F05/F07	14*14	2.3	3.0
		#11*11		
		#11.7*∅17		
		#9.7*∅15		
A80	F07	17*17	3.9	5.3
		#14.7*∅19		
A100	F07/F10	22*22	6.7	9.5
		#17.7*∅22		
A125	F07/F10	22*22	11.3	17.6
A140	F10/F12	27*27	16.4	23.9
		#22*22		
A160	F14	36*36	23.7	36.6
	#F10/F12	#27*27		
A185	F14	36*36	34.8	56.9
A210	F16	46*46	45.5	77.2
	#F14	#36*36		
A250	F16	46*46	65.8	119.6
A300	F16/F25	55*55	165	275.5

#Option

▶ R series (rack pinion) ISO5211 / Stem / Weight

MODEL	ISO5211	STEM	RD(Kg)	RS(Kg)
RD32	F03	9*9	0.3	-
R40	F03/F05	9*9	0.5	0.6
	#F04			
R50	F03/F05/F07	11*11	1.0	1.1
	#F04			
R65	F05/F07	14*14	1.4	1.5
	#F04/F07			
R80	F05/F07	17*17	2.9	3.3
R90	F07	17*17	3.4	3.8
R100	F07/F10	22*22	4.7	5.4
		#17*17		
R115	F07/F10	22*22	6.7	7.5
R125	F07/F10	22*22	8.6	9.9
R140	F10/F12	27*27	12.4	14.5
		#22*22		
R160	F10/F12	27*27	16.9	19.5
R185	F10/F12	36*36	24.2	29.0
R210	F14	36*36	32.3	37.9

#Option

KOSAPLUS

KOSAPLUS Co.,Ltd.
294, Gongdan2daero, Siheung, Gyeonggi, 15115, S.Korea (http://www.kosaplus.com)
· E-mail : oversea@kosaplus.com · Tel : +82-31-433-3159 / Fax : +82-31-433-3151

Catalog Version : 5.2 (Jan.2021)

- Data contained in the Catalog may be subject to change without advance notice for improvement of performance&safety of Product.
- Contact us for the most recent product and technical information. Visit our website for more details: http://www.kosaplus.com