

# ACCTUAL TORQUE

Passed 1.000.000 Cycles Test.



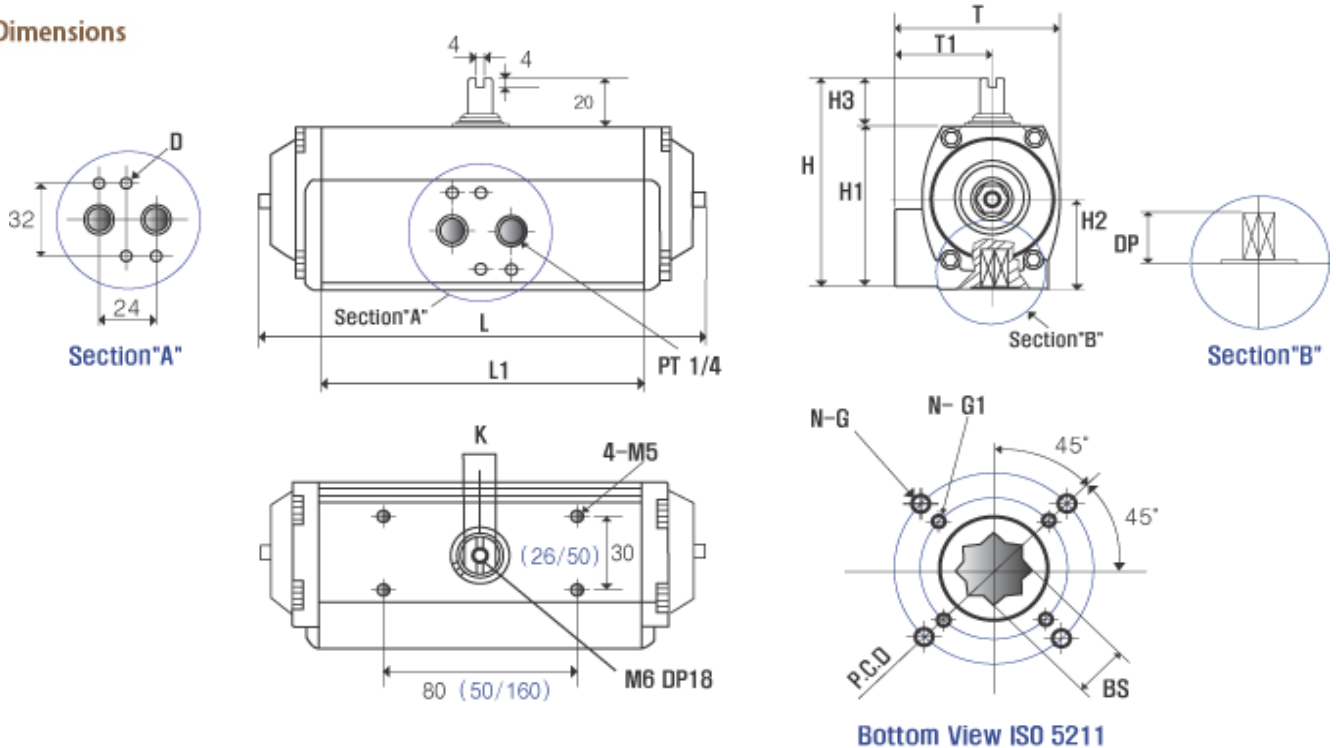
## Features

- Scotch - Yoke design
- Anodized surface & double coated cylinder inner face
- ISO 5211, DIN 3337
- Indirect contact between scotch and cylinder

## ACCTUAL TORQUE DOUBLE ACTING ACTUATOR

- \* Operation Mechanism : Scotch Yoke
- \* Operating Media : Dry Air
- \* Operating Pressure : 3 – 8 kg/cm<sup>2</sup>
- \* Travel Angle : 90° - 3°
- \* Operating Temperature : 30°C - 80°C

### Dimensions

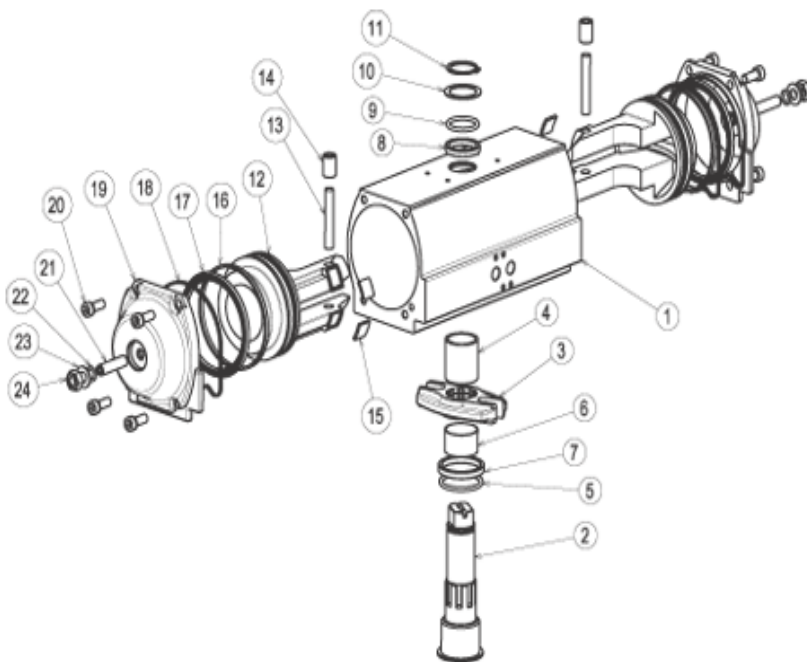


※ ( / ) = OTD(S)40/210

MODEL	ISO	L	L1	D	T	T1	H	H1	H2	H3	DP	K	P.C.D	N-G	N-G1	BS
BM40DA	F03/F05	108.5	-	M5	60	33	74	54	27	20	13	10	36/50	4-M5 /4-M6	-	9*9/11*11
BM 50DA	F03/F05	190	133	M5	69	40	87.5	67	36	20.5	13	11	36/50	4-M6	4-M5	11*11
BM65DA	F05/F07	242	166	M5	83	46	106.5	86	47	20.5	17	13	50/70	4-M8	4-M6	14*14
BM80DA	F07	289	202	M5	98	56	123.5	103	55	20.5	19	15	70	4-M8	-	17*17
BM100DA	F07/F10	348	250	M5	114	62	143.5	123	64.5	20.5	26	22	70/102	4-M10	4-M8	22*22
BM125DA	F07/F10	443	305.4	M5	136	68	168.5	144	77	20.5	26	22	70/102	4-M10	4-M8	22*22
BM140DA	F10/F12	486	356	M5	158	79	191	170	90	21	29	22	102/125	4-M12	4-M10	27*27
BM160DA	F10/F12	560	400	M5	178	86	211	190	100	21	30	31.8	102/125	4-M12	4-M10	27*27
	F14												140	4-M16	-	36*36
BM210DA	F16	606	460	M5	230	115	282	261	139	21	40	31.8	166	4-M20	-	46*46

► Torque Table ( N - m )

Model	Angle	3bar		4bar		5bar		6bar	
		CLOSE	OPEN	CLOSE	OPEN	CLOSE	OPEN	CLOSE	OPEN
BM40DA	0°	4.9	5.9	6.9	7.8	8.8	9.8	9.8	10.8
	45°								
	90°	4.9	5.9	6.9	7.8	8.8	9.8	9.8	10.8
BM50DA	0°	28.4	20.6	36.3	27.4	37.2	36.3	41.2	40.2
	45°	14.7	15.7	19.6	20.6	24.5	25.5	29.4	30.4
	90°	24.5	24.5	32.3	37.2	38.2	39.2	49.0	51.0
BM65DA	0°	61.7	57.8	83.3	76.4	102.9	93.1	128.4	113.7
	45°	32.3	37.2	44.1	48.0	55.9	61.7	66.6	71.5
	90°	52.9	51.0	70.6	69.6	86.2	91.1	104.9	104.9
BM80DA	0°	118.6	102.9	160.7	140.1	152.9	179.3	255.8	205.8
	45°	63.7	67.6	82.3	90.2	109.8	118.6	127.4	141.1
	90°	95.1	99.0	127.4	130.3	167.6	152.9	194.0	204.8
BM100DA	0°	190.1	182.3	259.7	242.1	325.4	286.2	385.1	360.6
	45°	107.8	124.5	144.1	161.7	181.3	192.1	232.3	245.0
	90°	169.5	175.4	226.4	232.3	291.1	295.0	341.0	355.7
BM125DA	0°	419.4	423.4	564.5	540.0	710.5	664.4	869.3	778.1
	45°	249.9	267.5	332.2	352.8	416.5	434.1	502.7	520.4
	90°	377.3	367.5	499.8	481.2	622.3	600.7	735.0	717.4
BM140DA	0°	610.5	564.5	813.4	738.9	1082.9	904.5	1284.8	1075.1
	45°	326.3	324.4	441.0	445.9	567.4	570.4	677.2	654.6
	90°	509.6	512.5	675.2	705.6	845.7	862.4	1033.9	950.6
BM160DA	0°	933.9	796.7	1124.1	1040.8	1455.3	1285.8	1764.0	1568.0
	45°	529.2	557.6	715.4	742.8	901.6	930.0	1087.8	1110.3
	90°	862.4	959.4	1146.6	1293.6	1419.0	1602.3	1715.0	1986.5
BM210DA	0°			3978.0		3647.0		3978.0	
	50°			1865.0		1710.0		1865.0	
	90°			2733.0		2505.0		2733.0	



No.	Part Name	Materials
1	Body	Aluminum Alloy
2	Drive Shaft	Steel Alloy (Nickel plated)
3	Crank	Steel Alloy
4	Bushing	Acetyl
5	O-Ring (Shaft)	NBR
6	Bushing	Acetyl
7	Washer	SUS304
8	Bushing	SUS304
9	O-Ring (Shaft)	NBR
10	Washer	Acetyl (Stainless Steel)
11	C-Ring	Stainless Steel
12	Piston	Aluminum Alloy
13	Piston Pen	Steel Alloy
14	Guide Bushing	Steel Alloy
15	Dynamic Pad	Polyphthalamide
16	Piston Guide	Polyphthalamide
17	O-Ring (Guide)	NBR
18	O-Ring (Cover)	NBR
19	Cover	Aluminum
20	Bolt	Stainless Steel
21	Adjust Bolt	Stainless Steel
22	Adjust O-Ring	NBR
23	Adjust Washer	Stainless Steel
24	Adjust Nut	Stainless Steel

# ACCTUAL TORQUE Scotch Yoke Acting Actuator

Passed 1.000.000 Cycles Test.

## ACCTUAL TORQUE SINGLE ACTING ACTUATOR

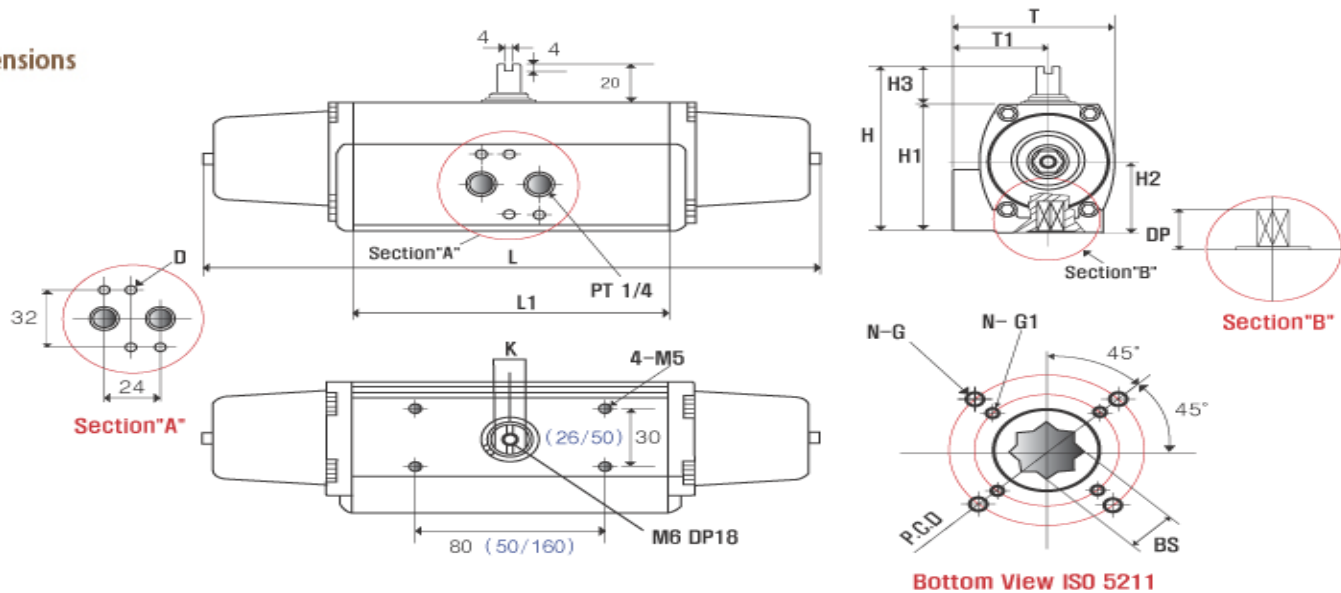
### ► Features



- Scotch - Yoke design
- Anodized surface & double coated cylinder inner face
- ISO 5211, DIN 3337
- Indirect contact between scotch and cylinder

- \* Operation Mechanism : Scotch Yoke
- \* Operating Media : Dry Air
- \* Operating Pressure : 3 – 8 kg/cm<sup>2</sup>
- \* Travel Angle : 90° - 3°
- \* Operating Temperature : 30°C - 80°C

### ► Dimensions



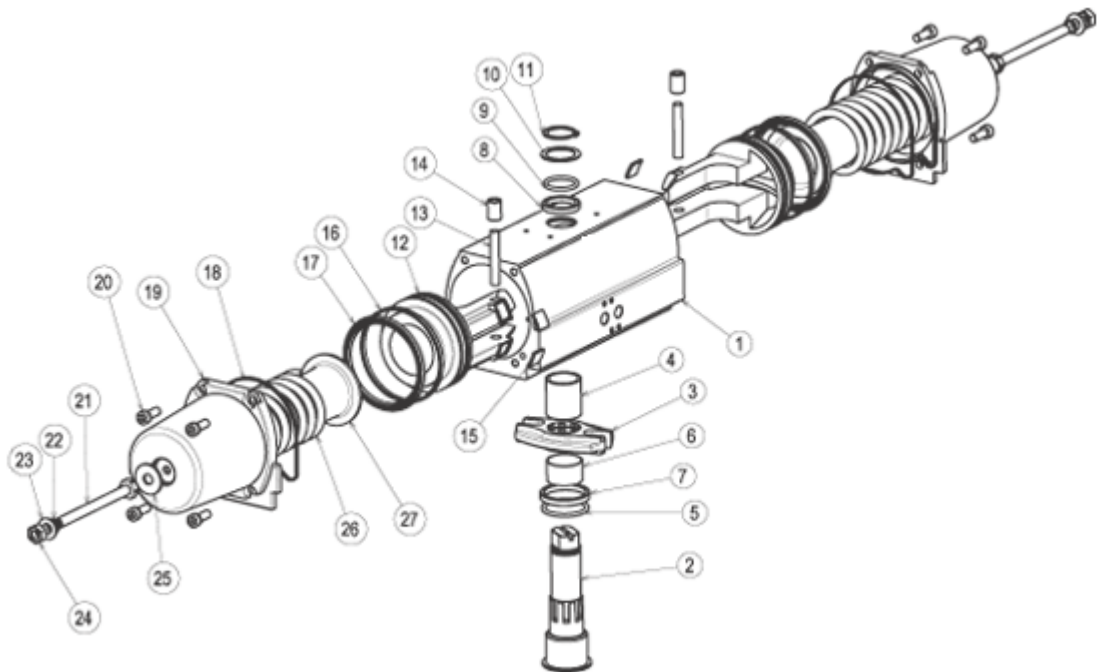
※ ( / ) = OTD(S)40/210

MODEL	ISO	L	L1	D	T	T1	H	H1	H2	H3	DP	K	P.C.D	N-G	N-G1	BS
BM 40SR	F03/F05	108.5	-	M5	60	33	74	54	27	20	12	10	36	4-M5 /4-M6	-	9*9/11*11
BM 50SR	F03/F05	258	133	M5	69	40	87.5	67	36	20.5	13	11	36/50	4-M6	4-M5	11*11
BM 65SR	F05/F07	320	166	M5	83	46	106.5	86	47	20.5	17	13	50/70	4-M8	4-M6	14*14
BM 80SR	F07	418	202	M5	98	56	123.5	103	55	20.5	19	15	70	4-M8	-	17*17
BM100SR	F07/F10	506	250	M5	114	62	143.5	123	64.5	20.5	26	22	70/102	4-M10	4-M8	22*22
BM125SR	F07/F10	649	305.4	M5	136	68	168.5	148	77	20.5	26	22	70/102	4-M10	4-M8	22*22
BM140SR	F10/F12	716	356	M5	158	79	191	170	90	21	29	22	102/125	4-M12	4-M10	27*27
BM160SR	F10/F12	850	400	M5	178	86	211	190	100	21	30	31.8	102/125	4-M12	4-M10	27*27
	140												4-M16	-	36*36	
BM210SR	F16	944	460	M5	230	115	282	261	139	21	40	31.8	166	4-M20	-	46*46

► Torque Table ( N - m )

Model	Angle	2bar	3bar	4bar	Spring	Model	Angle	2bar	3bar	4bar	Spring
BM40SR	0 °	3.9	5.9	7.8	4.9	BM125SR	0 °	245.0	372.4	499.8	294.0
	45 °						45 °	127.4	186.2	254.8	254.8
	90 °	2.9	3.9	4.9	7.8		90 °	147.0	225.4	294.0	499.8
BM50SR	0 °	19.6	25.5	33.3	16.7	BM140SR	0 °	362.6	539.0	715.4	401.8
	45 °	8.8	11.8	14.7	14.7		45 °	166.6	284.2	333.2	333.2
	90 °	9.8	13.7	16.7	33.3		90 °	196.0	294.0	401.8	715.4
BM65SR	0 °	38.2	52.9	68.6	47.0	BM160SR	0 °	529.2	735.0	1127.0	754.6
	45 °	17.6	27.4	31.4	36.3		45 °	284.2	411.6	548.8	548.8
	90 °	21.6	34.3	47.0	68.6		90 °	392.0	539.0	754.6	1127.0
BM80SR	0 °	68.6	98.0	127.4	78.4	BM210SR	Angle	4bar	5.5bar	6bar	Spring
	45 °	29.4	49.0	68.6	68.6		0 °	1680.0	2321.0	2652.0	1756.0
	90 °	39.2	58.8	78.4	127.4		60 °	1120.0	716.0	716.0	933.0
BM100SR	0 °	137.2	186.2	235.2	127.4		90 °	549.0	751.0	979.0	1329.0
	45 °	49.0	78.4	107.8	107.8						
	90 °	68.6	98.0	127.4	235.2						

► Parts and Materials



No.	Part Name	Materials	No.	Part Name	Materials
1	Body	Aluminum Alloy	15	Dynamic Pad	Polyphithalamide
2	Drive Shaft	Steel Alloy (Nickel plated)	16	Piston Guide	Polyphithalamide
3	Crank	Steel Alloy (Nickel plated)	17	O-Rring (Guide)	NBR
4	Bushing	Acetyl	18	O-Rring (Cover)	NBR
5	Washer	Acetyl	19	Cover	Aluminum
6	Bushing	Acetyl	20	Bolt	Stainless Steel
7	Washer	Steel	21	Adjust Bolt	Stainless Steel
8	Bushing	Steel Alloy	22	Adjust O-Rring	NBR
9	O-Ring(Shaft)	NBR	23	Adjust Washer	Stainless Steel
10	Washer	Acetyl(Stainless Steel)	24	Adjust Nut	Stainless Steel
11	C-Ring	Stainless Steel	25	O-Rring	NBR
12	Piston	Aluminum Alloy	26	Spring	Steel
13	Piston Pen	Steel Alloy (Nickel plated)	27	Spring Cover(Cap)	Steel
14	Guide Bushing	Steel Alloy			