



ARITA Scotch Yoke Pneumatic Rotary Actuator

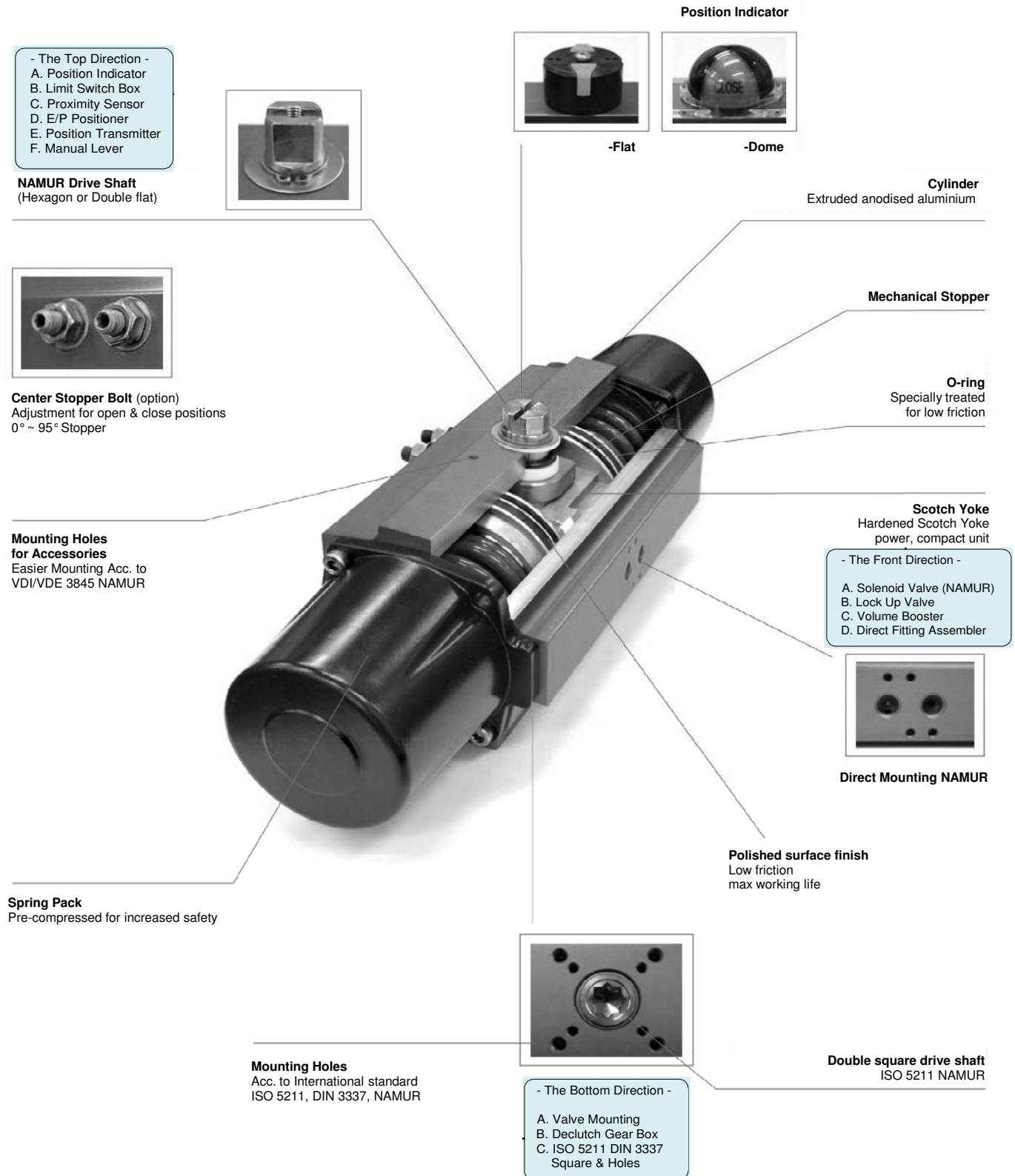
CE

**HIGH QUALITY
PNEUMATIC ACTUATOR**





ARITA Scotch Yoke Pneumatic Rotary Actuator



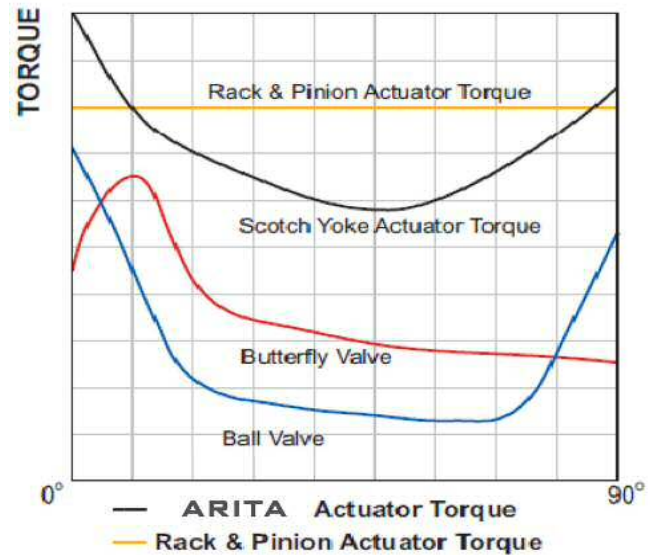
FEATURES AND ADVANTAGE



Advantage (Scotch Yoke)

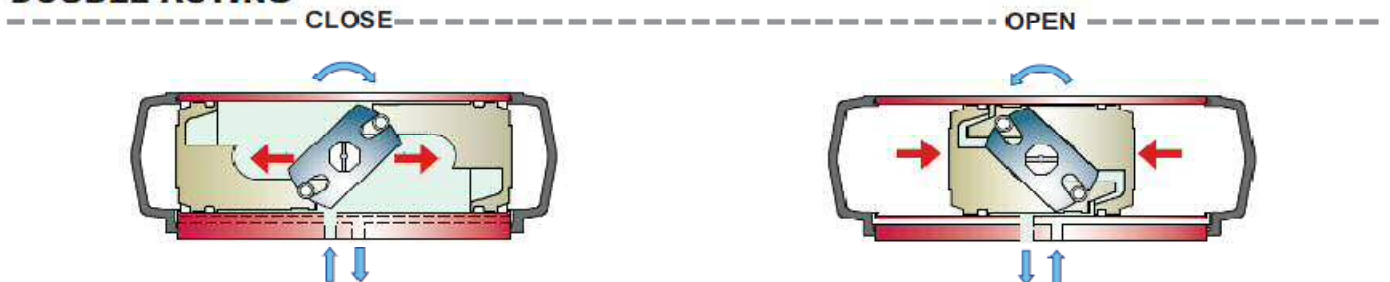
ARITA actuators provide increased torque at open and close position, this closely matches the required torque for practical valve operation.

- Increased torque at the open and close position
- Compact design and size
- Extremely long cycle life
- Adjustable center stopper for both open & close positions

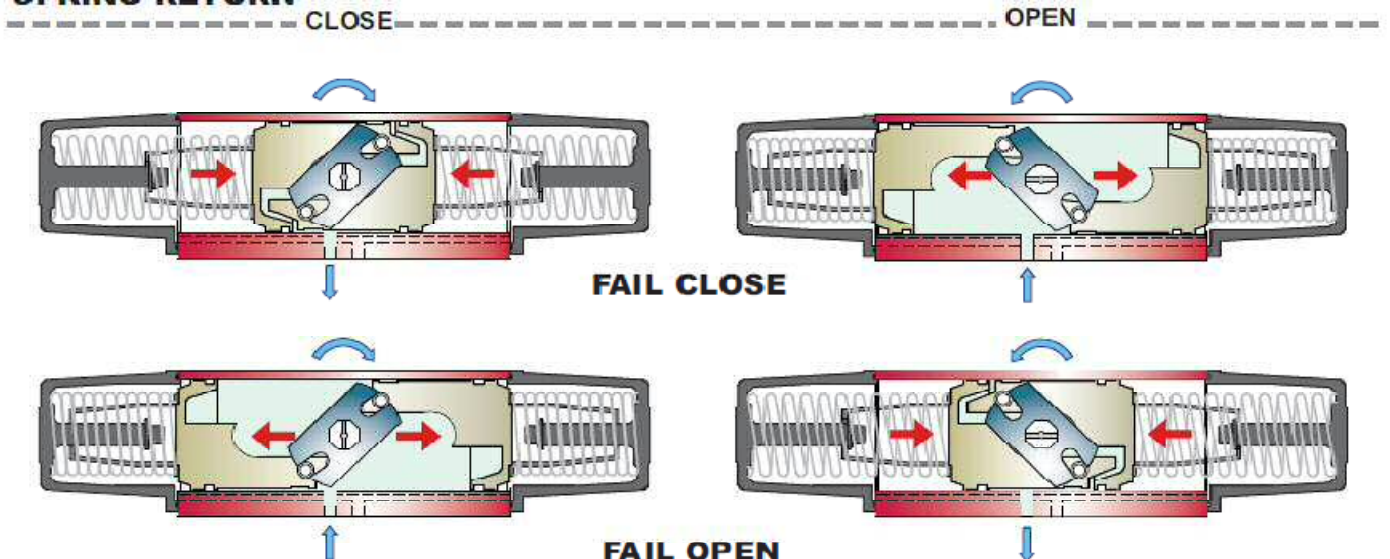


MECHANICAL MOVEMENT & POSITION INSIDE

DOUBLE ACTING



SPRING RETURN





ARITA Scotch Yoke Pneumatic Rotary Actuator

AD SERIES

ROTARY ACTUATOR / DOUBLE ACTING

Ball Valve, Butterfly Valve, Plug Valve, Damper Control



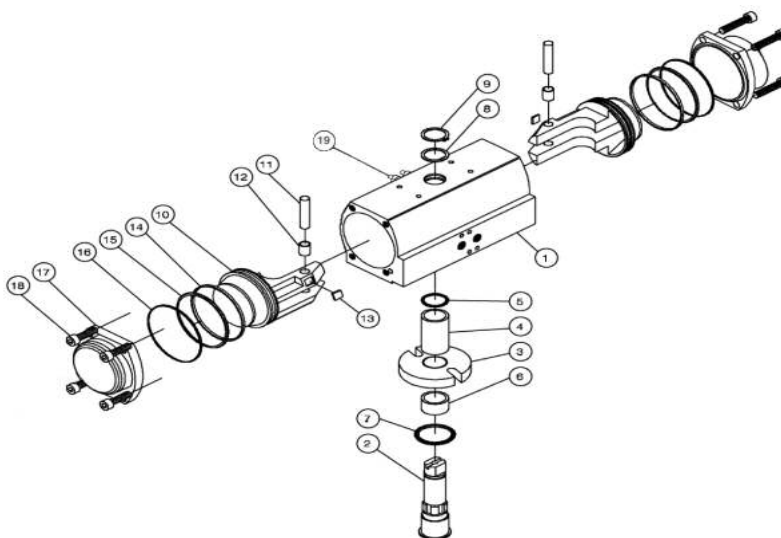
● Features

- Scotch - Yoke type
- No metal to metal touch
- I S O 5211. D I N 3337
- Anodized surface & double coated interior

● Specification

Item	AD40	AD50	AD65	AD80	AD100	AD125	AD140	AD160	AD200	AD250D	AD300D	AD400D
Operating Type	R&P	Scotch - Yoke								Piston		
Operating Media	Compressed Dry Air											
Operating Pressure	4 ~ 7kg/cm²											
Rotating Angle	90° ± 3°											
Operating Temperature	-10 ~ 60℃											
Weight (kg)	0.7	1.5	2.5	4	7	11	18	25	44.5	122	228	456

● Part and Material



No.	Part Name	Materials	No.	Part Name	Materials
1	Body	Aluminum Alloy	12	Guide Bushing	Polyphithalamide
2	Drive Shaft	Steel Alloy (Nickel plated)	13	Dynamic Pad	Polyphithalamide
3	Crank	Steel Alloy (Nickel plated)	14	Piston Guide	Polyphithalamide
4	Bushing	Acetyl	15	O-ring (Guide)	NBR
5	O-Ring	NBR	16	O-ring (Cover)	NBR
6	Bushing	Acetyl	17	Cover	Aluminum Alloy
7	Washer	Polyphithalamide	18	Bolt	SCM435 Plating
8	Washer	Polyphithalamide	19	Adjust Bolt	Stainless Steel
9	C-Ring	Stainless Steel			
10	Piston	Aluminum Alloy			
11	Piston Pen	Steel Alloy (Nickel Plated)			



ARITA Scotch Yoke Pneumatic Rotary Actuator

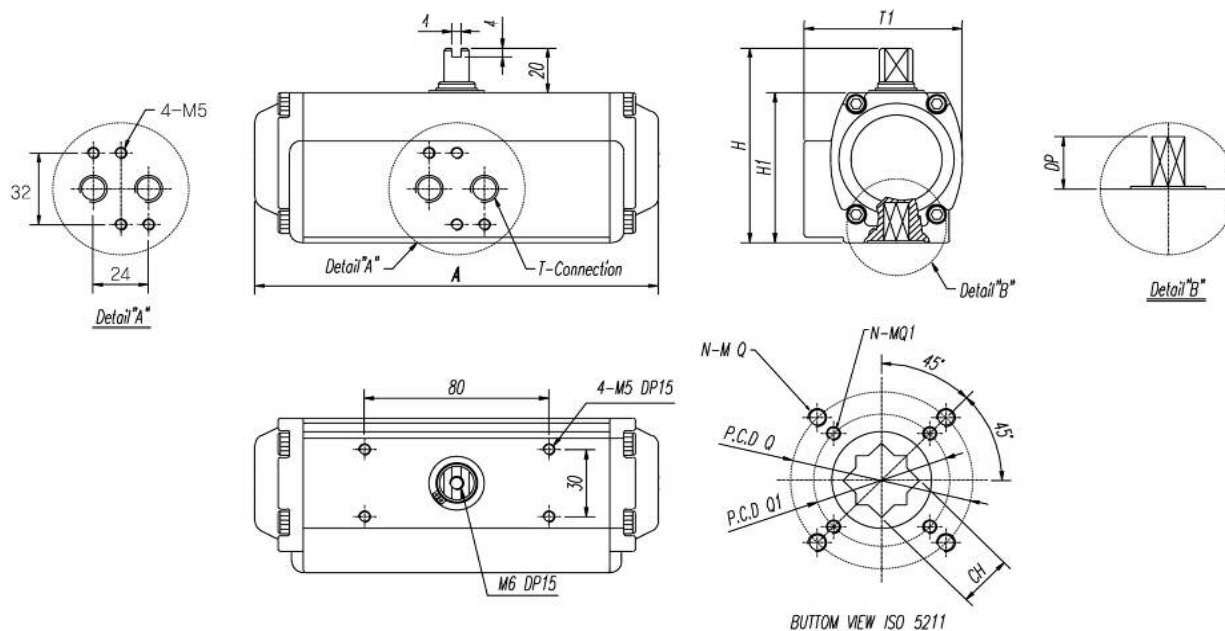
AD SERIES

ROTARY ACTUATOR / DOUBLE ACTING

● Torque Table (N-m)

Model	Angle	4bar	5bar	6bar	Model	Angle	4bar	5bar	6bar
AD40	0°	8	10	11	AD125	0°	551	678	794
	45°	8	10	11		45°	360	443	531
	90°	8	10	11		90°	491	613	732
AD50	0°	28	37	41	AD140	0°	754	923	1097
	45°	21	26	30		45°	455	582	668
	90°	38	40	52		90°	720	880	970
AD65	0°	78	95	116	AD160	0°	1062	1312	1600
	45°	49	63	73		45°	758	949	1133
	90°	71	93	107		90°	1320	1635	2027
AD80	0°	143	183	210	AD200	0°	2600	3200	4820
	45°	92	121	144		45°	1500	1950	2400
	90°	133	156	209		90°	2300	2900	3450
AD100	0°	247	292	368					
	45°	165	196	250					
	90°	237	301	363					

● Dimension



(mm)

Model	A	H	H1	DP	T1	P.C.D-Q1	H-Q1	P.C.D-Q	H-Q	CH	T	ISO
AD-40	108	74	54	12	60	36	4-M5	50	4-M6	9 x 9	1/8	F03/F05
AD-50	158	90	70	13	72	36	4-M5	50	4-M6	11 x 11	1/4	F03/F05
AD-65	202	106	87	17	89	50	4-M6	70	4-M8	14 x 14	1/4	F05/07
AD-80	262	126	99	19	101	70	4-M8	-	-	17 x 17	1/4	F07
AD100	334	143	123	26	114	70	4-M8	102	4-M10	22 x 22	1/4	F07/10
AD125	414	164	144	26	136	70	4-M8	102	4-M10	22 x 22	1/4	F07/10
AD140	456	180	160	30	158	102	4-M10	125	4-M12	27 x 27	1/4	F10/13
AD160	540	210	190	30	178	140	4-M16	-	-	36 x 36	1/4	F14
AD200	640	281	261	60	230	165	4-M20	-	-	46 x 46	1/4	F16



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AS SERIES

ROTARY ACTUATOR / SINGLE ACTING

Ball Valve, Butterfly Valve, Plug Valve, Damper Control



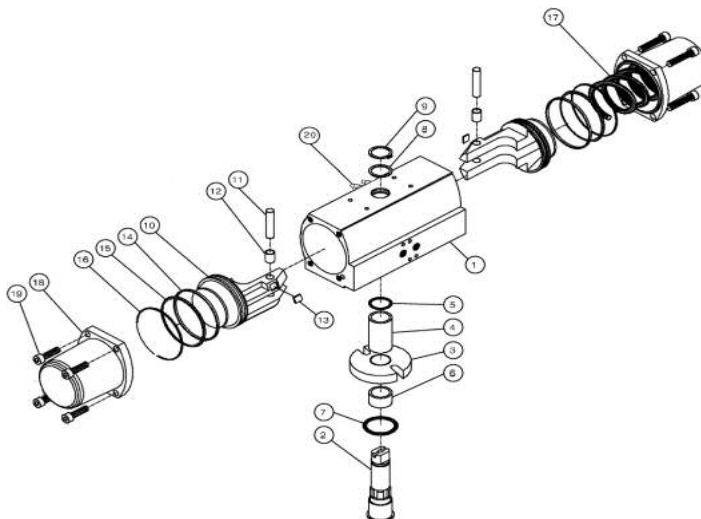
● Features

- Scotch - Yoke type
- No metal to metal touch
- I S O 5211. D I N 3337
- Anodized surface & double coated interior

● Specification

tem	AS40	AS50	AS65	AS80	AS100	AS125	AS140	AS160	AS200	AS250D	AS300D	AS400D	AS500D
Operating Type	R & P	Scotch - Yoke								Piston			
Operating Media	Compressed Dry Air												
Operating Pressure	4 ~ 7kg/cm²												
Rotating Angle	90° ± 3°												
Operating Temperature	-10 ~ 60 °C												
Weight (kg)	0.7	1.5	2.5	4	7	11	18	25	44.5	122	228	456	680

● Part and Material



No.	Part Name	Materials	No.	Part Name	Materials
1	Body	Aluminum Alloy	12	Guide Bushing	Polyphithalamide
2	Drive Shaft	Steel Alloy (Nickel plated)	13	Dynamic Pad	Polyphithalamide
3	Crank	Steel Alloy (Nickel plated)	14	Piston Guide	Polyphithalamide
4	Bushing	Acetyl	15	O-ring (Guide)	NBR
5	O-Ring	NBR	16	O-ring (Cover)	NBR
6	Bushing	Acetyl	17	Spring	SUPG
7	Washer	Polyphithalamide	18	Cover	Aluminium Alloy
8	Washer	Polyphithalamide	19	Bolt	SCM435 Plating
9	C-Ring	Stainless Steel	20	Adjust Bolt	Stainless Steel
10	Piston	Aluminum Alloy			
11	Piston Pen	Steel Alloy (Nickel Plated)			



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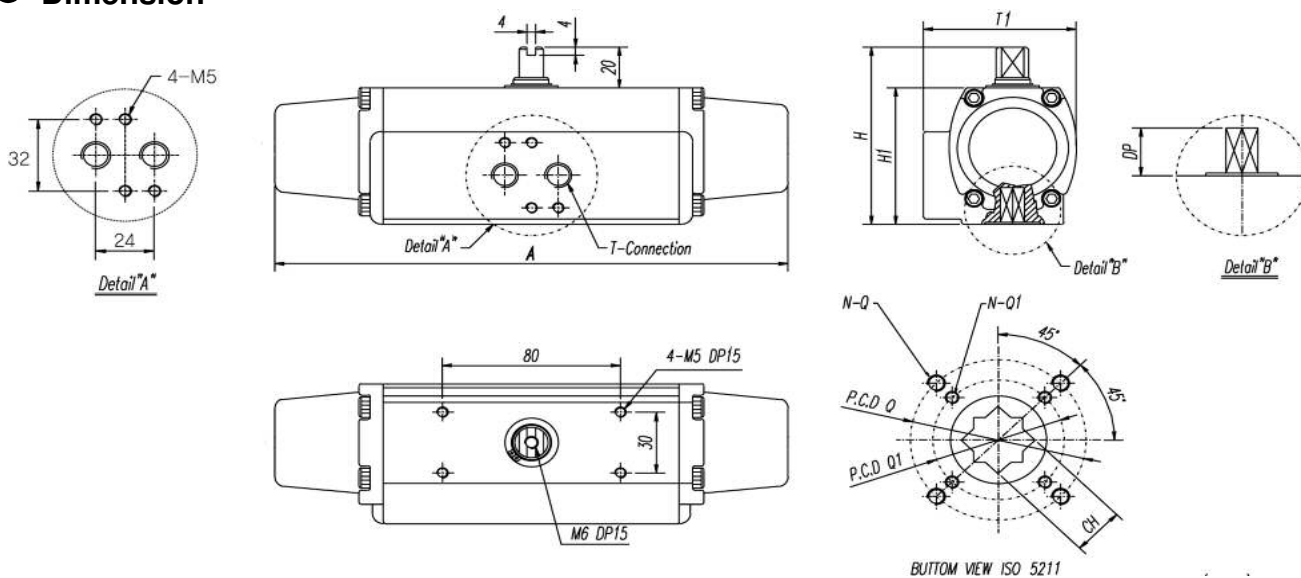
AS SERIES

ROTARY ACTUATOR / SINGLE ACTING

● Torque Table (N-m)

Model	Angle	Spring Torque 2 ~ 3kgf/cm ² G		Model	Angle	Spring Torque 2 ~ 3kgf/cm ² G	
		Spring to	Air to 4.5			Spring to	Air to 4.5
AS40	0°	4	6	AS125	0°	230	380
	45°	3	3		45°	190	190
	90°	6	4		90°	280	230
AS50	0°	14	26	AS140	0°	300	550
	45°	12	12		45°	290	290
	90°	26	14		90°	550	300
AS65	0°	35	54	AS160	0°	550	750
	45°	23	28		45°	420	420
	90°	54	35		90°	750	550
AS80	0°	60	100	AS200	0°	1050	1620
	45°	50	50		45°	940	940
	90°	100	60		90°	1620	1050
AD100	0°	100	190				
	45°	80	80				
	90°	190	100				

● Dimension



(mm)

Model	A	H	H1	DP	T1	P.C.D-Q1	H-Q1	P.C.D-Q	H-Q	CH	T	ISO
AS-40	108	74	54	12	60	36	4-M5	50	4-M6	9 x 9	1/8	F03
AS-50	256	90	70	13	72	36	4-M5	50	4-M6	11 x 11	1/4	F05
AS-65	314	106	87	17	89	50	4-M6	70	4-M8	14 x 14	1/4	F05/07
AS-80	430	126	99	19	101	70	4-M8	-	-	17 x 17	1/4	F07
AS100	486	143	123	26	114	70	4-M8	102	4-M10	22 x 22	1/4	F07/10
AS125	597	164	144	26	136	70	4-M8	102	4-M10	22 x 22	1/4	F07/10
AS140	700	180	160	30	158	102	4-M10	125	4-M12	27 x 27	1/4	F10/13
AS160	790	210	190	30	178	140	4-M16	-	-	36 x 36	1/4	F14
AS200	960	281	261	60	230	165	4-M20	-	-	46 x 46	1/4	F16



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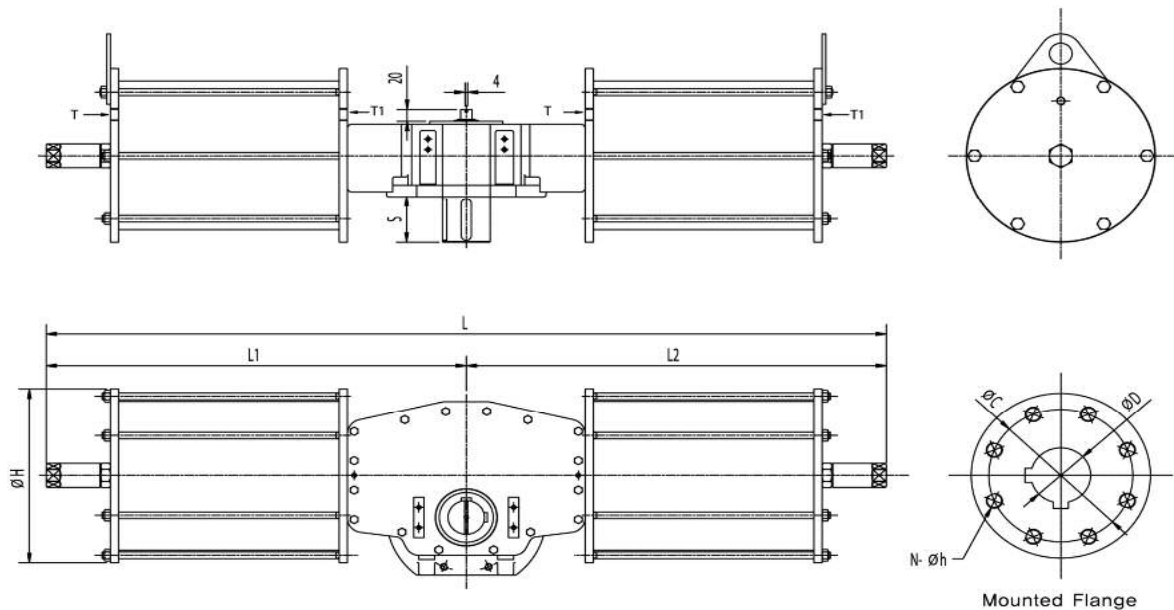
HEAVY DUTY - DOUBLE ACTING

ROTARY ACTUATOR / DOUBLE ACTING

● Torque Table (N-m)

Model	Angle	4Bar	5Bar	6Bar
AD250D	0°	4,200	5,200	6,300
	45°	3,100	3,800	4,600
	90°	4,200	5,200	6,300
AD300D	0°	7,600	9,500	11,000
	45°	6,500	8,000	9,700
	90°	7,600	9,500	11,000
AD400D	0°	10,780	12,597	15,117
	45°	7,126	8,908	10,689
	90°	9,574	11,967	14,361
AD500D	0°	18,966	23,708	28,449
	45°	13,411	16,764	20,117
	90°	18,018	22,522	27,027

● Dimension



Model	ØH	L1	L2	L	ØD	S	N-m	KEY	T	P.C.D- ØC
AD250D	280	445	445	890	Ø55	60	4-M20	16 x 20	PT 3/8"	165
AD300D	370	725	725	1450	Ø70	60	8-M16	20 x 12	PT 3/8"	254
AD400D	460	800	800	1600	Ø90	-	8-M20	25 x 14	PT 3/4"	298
AD500D	560	1080	1080	2160	Ø120	-	8-M30	32 x 18	PT 3/4"	356



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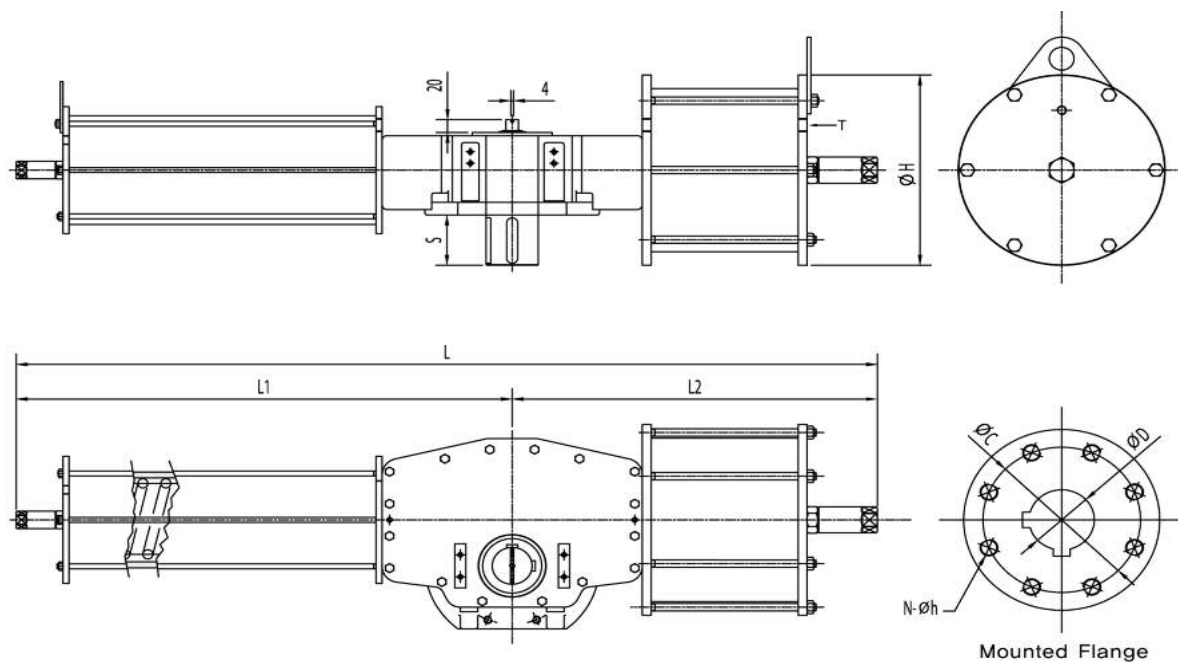
HEAVY DUTY - SINGLE ACTING

ROTARY ACTUATOR / SINGLE ACTING

● Torque Table (N-m)

Model	Angle	4.5Bar	5Bar	6Bar	Spring
AS250D	0°	1,620	2,023	2,827	2,000
	45°	1,106	1,509	2,313	2,514
	90°	578	981	1,785	3,042
AS300D	0°	2,873	3,591	5,028	3,591
	45°	1,976	2,694	4,131	4,488
	90°	1,030	1,751	3,188	5,413
AS400D	0°	5,605	7,015	9,817	7,025
	45°	4,630	6,040	8,842	8,000
	90°	2,020	3,430	6,232	10,610

● Dimension



Model	ØH	L1	L2	L	ØD	S	N-m	KEY	T	P.C.D- Ø
AS250D	280	770	770	1540	Ø55	60	4-M20	16 x 20	PT 3/8"	165
AS300D	370	1100	725	1825	Ø70	60	8-M16	20 x 12	PT 3/8"	254
AS400D	460	1200	800	2000	Ø90	-	8-M20	25 x 14	PT 3/4"	298



ARITA Scotch Yoke Pneumatic Rotary Actuator

TECHNICAL DATA

ROTARY ACTUATOR

● Air Consumption

The air consumption of actuator is calculated by below.

The air consumption is based on 1 action of used valve and do calculate the consumption per an hour.

■ Spring Return Actuator (AS Series)

$$V = B \times N$$

■ Spring Return Heavy Duty Actuator

$$V = B1 \times N$$

■ Double Acting Actuator (AD Series)

$$V = (B + A) \times N$$

V = Air Consumption (Liter)

A = Volume "A"

B = Volume "B"

N = Number of Operating

Actuator Model		Actuator Volume		
		A	B	B1
AD40	AS40	0.07	0.06	
AD50	AS50	0.13	0.11	
AD65	AS65	0.25	0.24	
AD80	AS80	0.54	0.48	
AD100	AS100	0.97	0.86	
AD125	AS125	1.47	1.28	
AD140	AS140	1.74	1.45	
AD160	AS160	4.76	3.6	
AD200	AS200	5.62	4.83	
AD250D	AS250D	6.50	6.50	4.20
AD300D	AS300D	13.0	13.0	8.40
AD400D	AS400D	23.0	23.0	14.90

