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A-ONE

Automatic Valves
Electric On/Off & Control Valves
Pneumatic Actuator & Valves

FLUID CONTROL SOLUTION

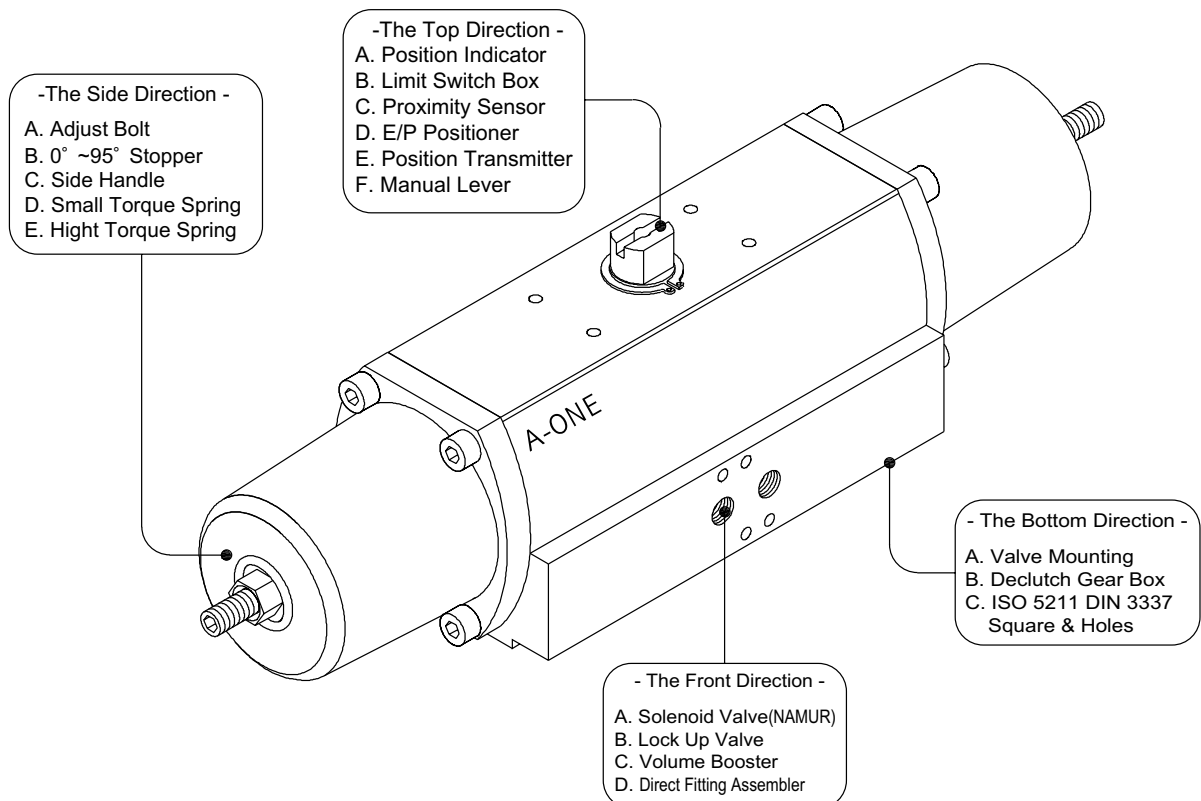


A-ONE AUTO VALVE

● Design and Construction

1. A-one actuator is designed for rotary type valve.
2. A-one actuator is scotch yoke type and is powerful with less defect.
3. A-one actuator is designed for ISO standard and it makes assembly with various accessories possible.
4. A-one actuator with good price and high quality is mass-produced through precision processing.
5. 3 steps inspection is performed in every actuator to minimize a defect.
6. More than 500,000pcs are produced yearly in automation facilities and quick delivery is one of our advantages.
7. A-one have a variety of size actuators including heavy-duty actuator to meet customers' needs.
8. A-one is available to provide solutions to a wide of range of industries including petrochemical, power generation, atomic power plant, steel mill, shipyard, refining, wastewater disposal, automation facilities and building air conditioner.

● Pneumatic Rotary Actuator Applications



AD SERIES

ROTARY ACTUATOR / DOUBLE ACTING

Ball Valve, Butterfly Valve, Plug Valve, Damper Control



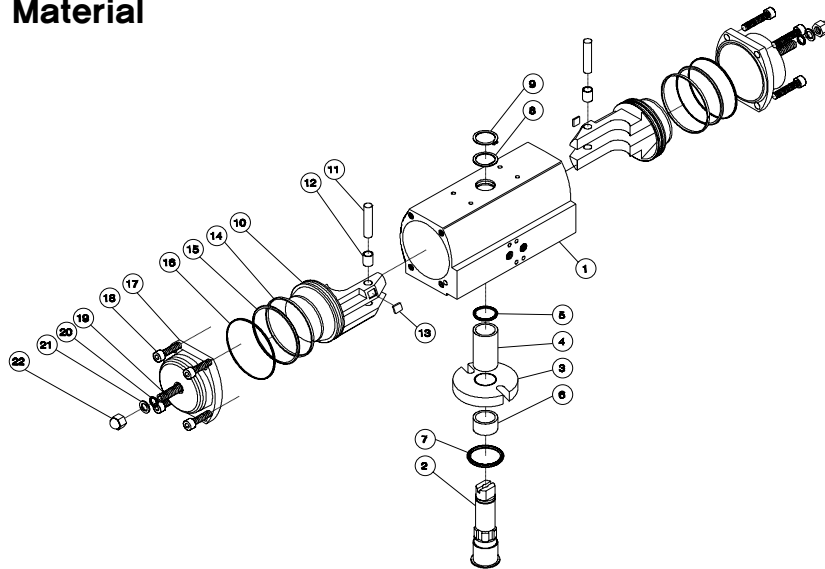
● Features

- Scotch - Yoke type
- No metal to metal touch
- ISO5211, 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/cm ²												
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	

● Part and Material



No.	Part Name	Materials	No.	Part Name	Materials
1	Body	Aluminum Alloy	12	Guide Bushing	Polyphthalamide
2	Drive Shaft	Steel Alloy (Nickel plated)	13	Dynamic Pad	Polyphthalamide
3	Crank	Steel Alloy (Nickel plated)	14	Piston Guide	Polyphthalamide
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	Polyphthalamide	18	Bolt	SCM435 Plating
8	Washer	Polyphthalamide	19	Adjust Bolt	Stainless Steel
9	C-Ring	Stainless Steel	20	Adjust O-ring	NBR
10	Piston	Aluminum Alloy	21	Adjust Washer	Stainless Steel
11	Piston Pen	Steel Alloy (Nickel plated)	22	Adjust Nut	Stainless Steel

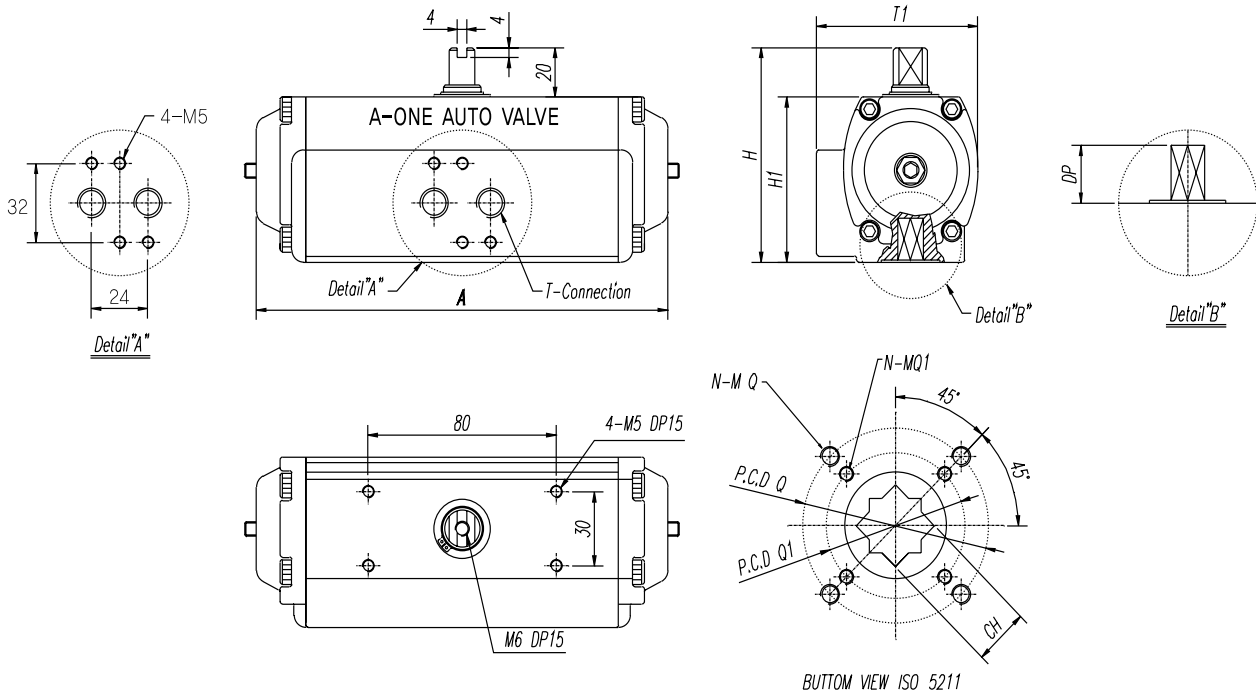
AD SERIES

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
AD40	108	74	54	12	60	36	4-M5	50	4-M6	9x9	1/8	F03/F05
AD50	178	87	67	13	69	36	4-M5	50	4-M6	11x11	1/4	F03/F05
AD65	234	108	88	17	83	50	4-M6	70	4-M8	14x14	1/4	F05/07
AD80	276	123	103	19	98	70	4-M8	-	-	17x17	1/4	F07
AD100	334	143	123	26	114	70	4-M8	102	4-M10	22x22	1/4	F07/10
AD125	414	164	144	26	136	70	4-M8	102	4-M10	22x22	1/4	F07/10
AD140	456	180	160	30	158	102	4-M10	125	4-M12	27x27	1/4	F10/13
AD160	540	210	190	30	178	140	4-M16	-	-	36x36	1/4	F14
AD200	640	281	261	60	230	165	4-M20	-	-	46x46	1/4	F16

AS SERIES

ROTARY ACTUATOR / DOUBLE ACTING

Ball Valve, Butterfly Valve, Plug Valve, Damper Control



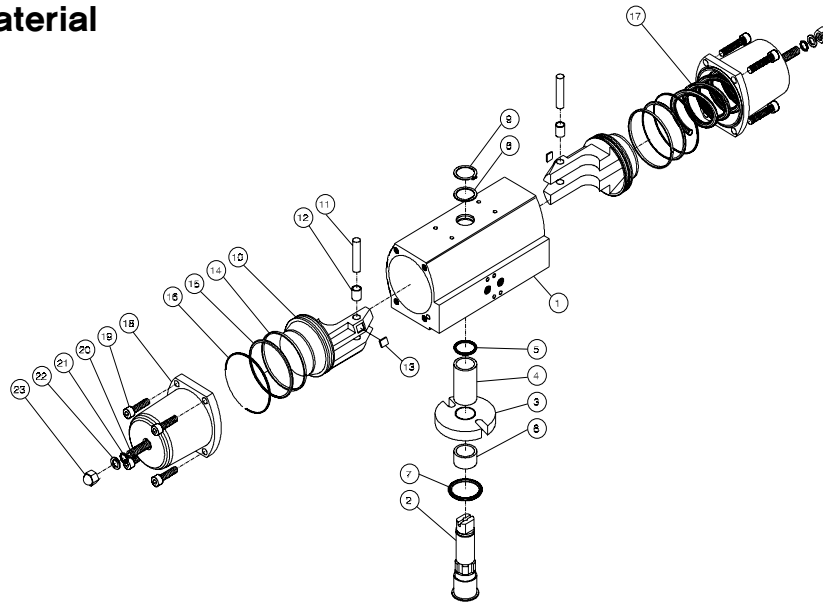
● Features

- Scotch - Yoke type
- No metal to metal touch
- ISO5211, DIN3337
- Anodized surface & double coated interior

● Specification

Item	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	4.5 ~ 7kg/cm ²												
Rotating Angle	90° ± 3°												
Operating Temperature	-10 ~ 60°C												
Weight (kg)	0.7	1.6	3.2	5.4	10	17	24	35	72.5	122	228	520	680

● Part and Material



No.	Part Name	Material	No.	Part Name	Material
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	Bolt	SCM435 Plating
8	Washer	Polyphithalamide	19	Adjust Bolt	Stainless Steel
9	C-Ring	Stainless Steel	20	Adjust O-ring	NBR
10	Piston	Aluminum Alloy	21	Adjust Washer	Stainless Steel
11	Piston Pen	Steel Alloy (Nickel plated)	22	Adjust Nut	Stainless Steel

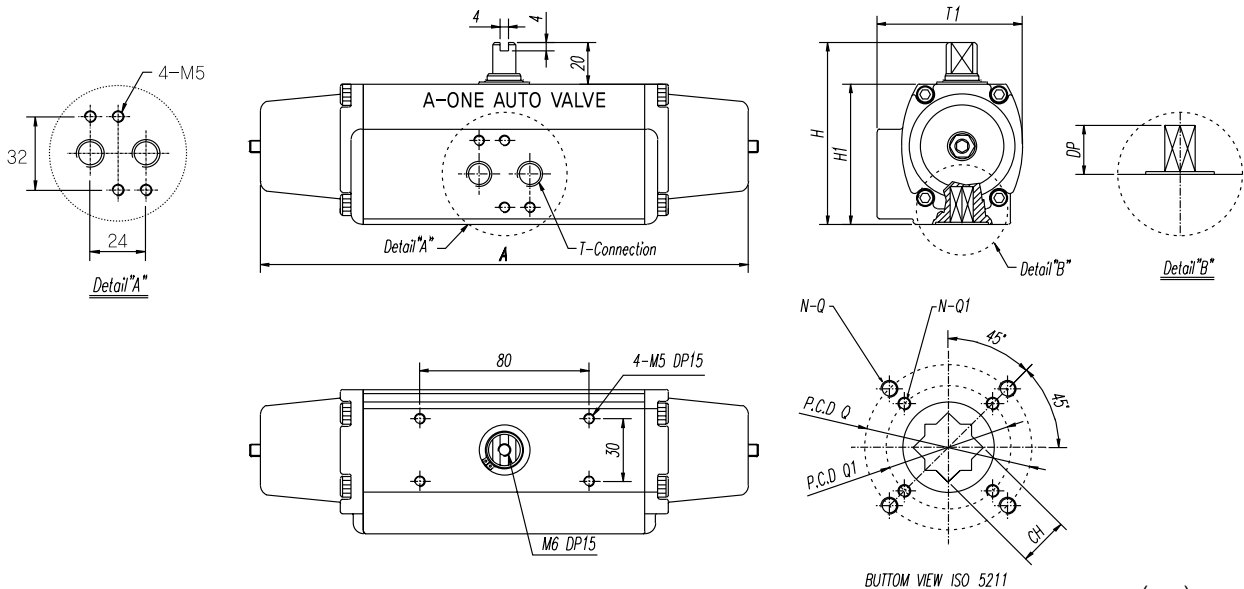
AS SERIES

ROTARY ACTUATOR / SINGLE ACTING

● Torque Table (N-m)

Model	Angle	Spring Torque 2~3kgf/cm ² G		Spring Torque 3~4kgf/cm ² G		Model	Angle	Spring Torque 2~3kgf/cm ² G		Spring Torque 3~4kgf/cm ² G	
		Spring to	Air to 4.5	Spring to	Air to 6			Spring to	Air to 4.5	Spring to	Air to 6
AS40	0°	4	6	5	8	AS125	0°	230	380	300	510
	45°	3	3	4	4		45°	190	190	260	260
	90°	6	4	8	5		90°	380	230	510	300
AS50	0°	14	26	17	34	AS140	0°	300	550	410	730
	45°	12	12	15	15		45°	290	290	340	340
	90°	26	14	34	17		90°	550	300	730	410
AS65	0°	35	54	48	70	AS160	0°	550	750	770	1150
	45°	23	28	37	32		45°	420	420	560	560
	90°	54	35	70	48		90°	750	550	1150	770
AS80	0°	60	100	80	130	AS200	0°	1050	1620	1420	2170
	45°	50	50	70	70		45°	940	940	1260	1260
	90°	100	60	130	80		90°	1620	1050	2170	1420
AS100	0°	100	190	130	240						
	45°	80	80	110	110						
	90°	190	100	240	130						

● Dimension



BOTTOM VIEW ISO 5211

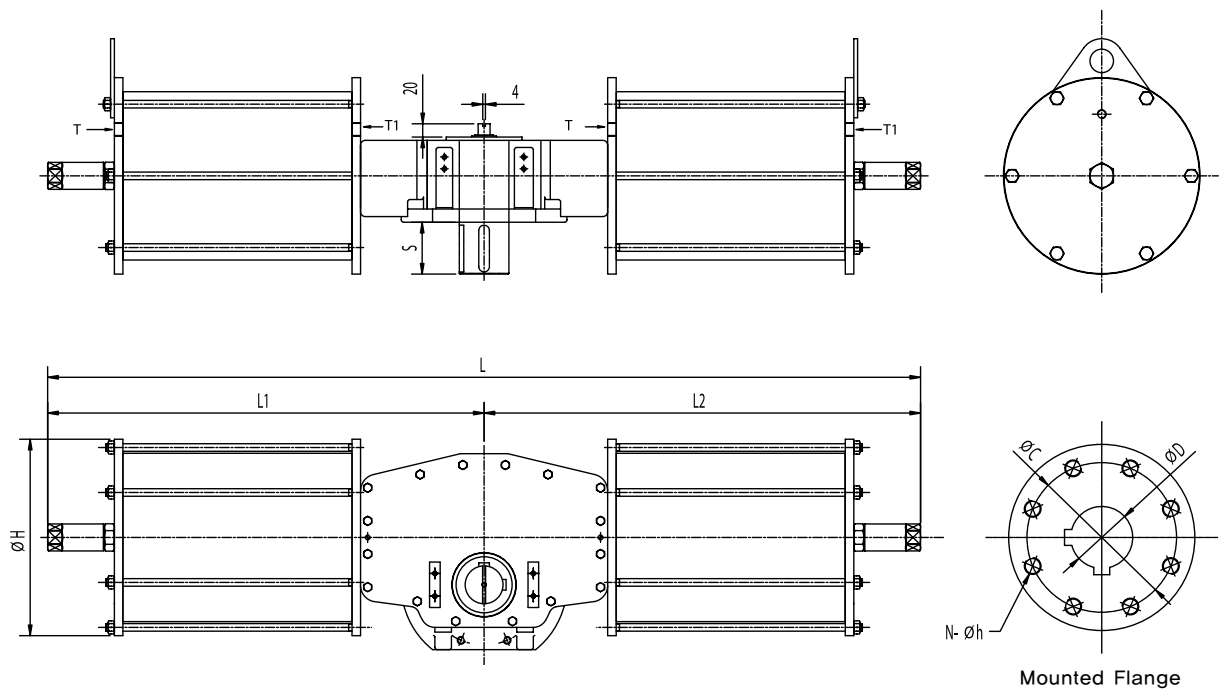
(mm)

Model	A	H	H1	DP	T1	P.C.D-Q1	H-Q1	P.C.D-Q	H-Q	CH	T	ISO
AS40	108	74	54	12	60	36	4-M5	50	4-M6	9x9	1/8	F03
AS50	258	87	67	13	69	36	4-M5	50	4-M6	11x11	1/4	F05
AS65	320	108	88	17	83	50	4-M6	70	4-M8	14x14	1/4	F05/07
AS80	408	123	103	19	98	70	4-M8	-	-	17x17	1/4	F07
AS100	486	143	123	26	114	70	4-M8	102	4-M10	22x22	1/4	F07/10
AS125	597	164	144	26	136	70	4-M8	102	4-M10	22x22	1/4	F07/10
AS140	700	180	160	30	158	102	4-M10	125	4-M12	27x27	1/4	F10/13
AS160	790	210	190	30	178	140	4-M16	-	-	36x36	1/4	F14
AS200	960	281	261	60	230	165	4-M20	-	-	46x46	1/4	F16

● 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	1,2597	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

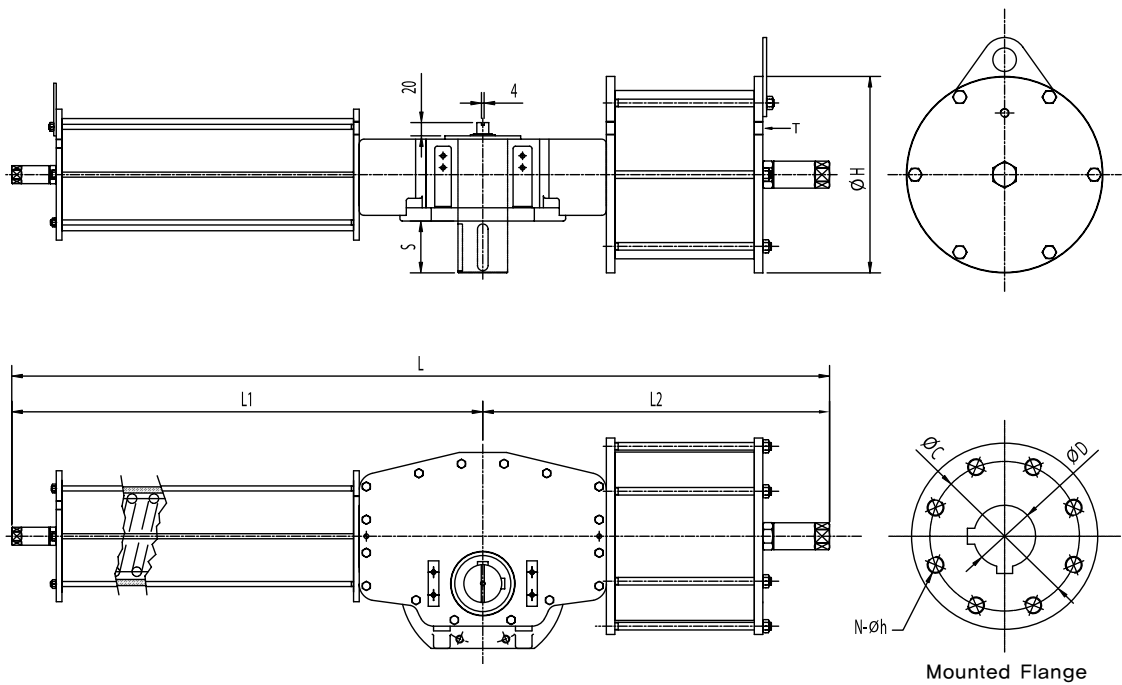


Model	ØH	L1	L2	L	ØD	S	N-m	KEY	T	P.C.D-ØC
AD250D	280	445	445	890	Ø55	60	4-M20	16 × 20	PT 3/8"	165
AD300D	370	725	725	1450	Ø70	60	8-M16	20 × 12	PT 3/8"	254
AD400D	460	800	800	1600	Ø90	-	8-M20	25 × 14	PT 3/4"	298
AD500D	560	1080	1080	2160	Ø120	-	8-M30	32 × 18	PT 3/4"	356

● 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	16×20	PT 3/8"	165
AS300D	370	1100	725	1825	Ø70	60	8-M16	20×12	PT 3/8"	254
AS400D	460	1200	800	2000	Ø90	-	8-M20	25×14	PT 3/4"	298

● 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)

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

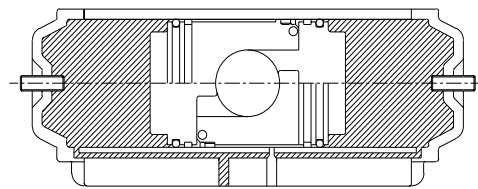
V = Air Consumption (Liter)

A = Volume "A"

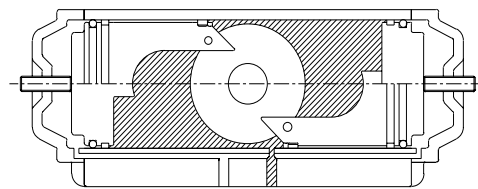
B = Volume "B"

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



Volume "A"



Volume "B"



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※ The product is subject to change for technical development and quality improvement without prior notice.