



UAD SERIES PNEUMATIC ACTUATOR



"UAD" series Pneumatic Actuator is used for controlling 90° rotation of the valves and other similar products, such as Butterfly Valve, Ball Valve, Damper, Cock Valve and etc. It is widely applies to Water Treatment, Paper Mill, Air Ventilation, Filtration System, Automation Industry and etc.

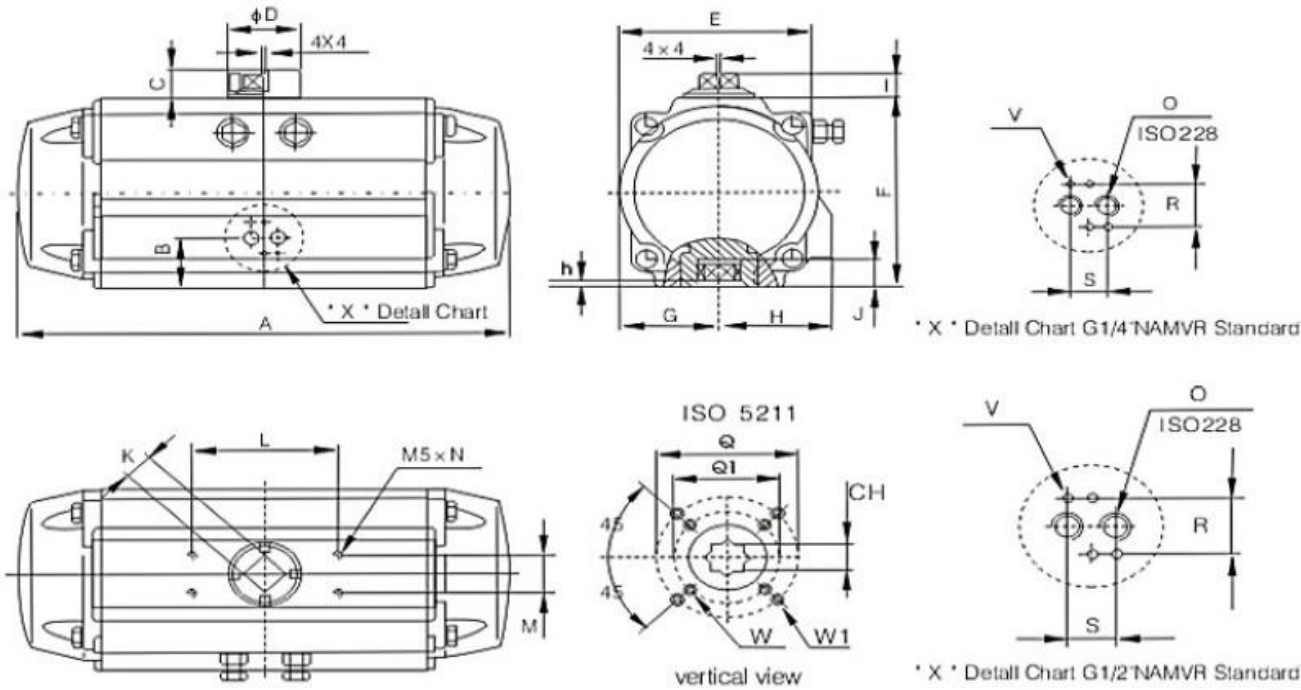
Technical Features:

- Mounting according DIN3337/ISO5211/VID/VIE3845 and NAMUR
- Rack and Pinion design.
- Two independent external stop adjustment bolts easily adjust $\pm 5^\circ$ at both open/close direction.
- Type of actuator : -D (double acting) or -S (spring return/single acting).
- Easily mount with Namur solenoid Valve, Limit switch, Positioner, Indicator, Clutch Gear Operator and etc.

Working Conditions:

- Air Pressure of 4bar, maximum 8 bar.
- Operating media by dry filtered air or lubricated with NBR compatible oil.
- Standard temperature : $-10 \sim +60^\circ \text{C}$

Appearance View and Dimension

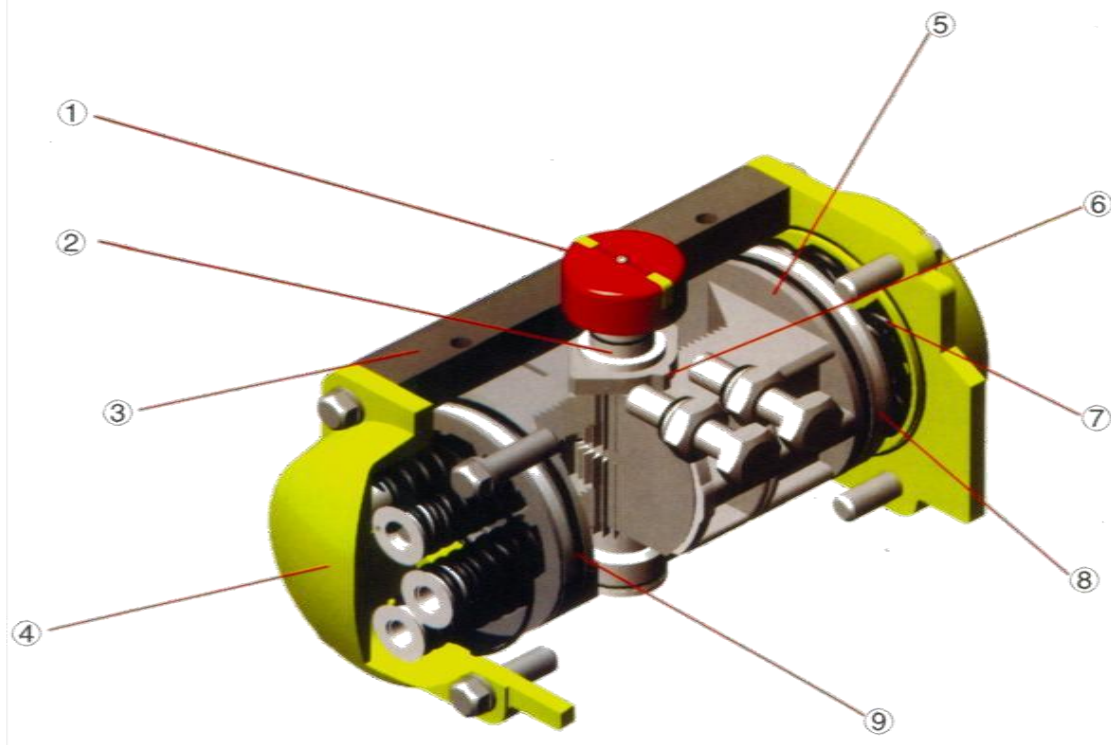


Model	UAD 050	UAD 063	UAD 075	UAD 090	UAD 100	UAD 115	UAD 125	UAD 145	UAD 160	UAD 190	UAD 210	UAD 240	UAD 270	UAD 300	UAD 350	UAD 400
A	148	168	219	242	267	305	340	405	435	515	585	685	743	857	935	1035
B	26.5	30	30.5	32.5	37.5	42.5	45	50	51.5	56	70	70	88	91	91	91
E	53	66	82	92.5	107	112	130	146.5	159	186	201	231	252.5	290		
F	69	85	102.5	115	127.5	140	156.5	176	196	231	253.5	291	331.5	354	410	466
G	29	36.5	43	49	55.5	61.5	69.5	78.5	88	105	116	130.5	147	162	190	260
H	41	46.5	52.5	56.5	66.5	71	80.5	91	97	110	119.5	130.5	147	173	195	260
I	20	20	20	20	20	30	30	30	30	30	30	40	40	40	40	60
h	0.5	0.5	1	1	1	1	1.5	1.5	1.5	2	2	2	2	2.5	2.5	2.5
R	32	32	32	32	32	32	32	32	32	32	32	45	45	45	45	45
S	24	24	24	24	24	24	24	24	24	24	24	40	40	40	40	40
O	G 1/4"	G 1/4"	G 1/4"	G 1/4"	G 1/4"	G 1/4"	G 1/4"	G 1/4"	G 1/4"	G 1/4"	G 1/4"	G 3/8"	G 3/8"	G 1/2"	G 1/2"	G 1/2"
ISO 228																
M	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30
L	80	80	30	80	80	130	130	130	130	130	130	130	130	130	130	130
k	11	11	14	14	14	21	21	27	27	27	27	36	36	36	36	36
CH	11	14	17	17	22	22	27	27	27	36	36	46	46	46	46	55
ISO 5211	F3/F5	F3/F5	F5/F7	F5/F7	F7/F10	F7/F10	F7/F10	F10/F12	F10/F12	F14	F14	F16	F16	F16	F25	F25
Q	36	36	50	50	70	70	70	102	102	140	140	165	165	165	254	254
Q1	50	50	70	70	102	102	102	125	125							
W	M5	M5	M6	M6	M8	M8	M8	M10	M10	M16	M16	M20	M20	M20	M20	M20
W1	M6	M6	M8	M8	M10	M10	M10	M12	M12							
J	15	16	22	22	28	30	35	42	42	42	42	50	50	60	60	60

*All dimension in unit mm

*all technical specification are without obligation. www.myuic.com.my

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◆ 1 : Indicator

Position indicator with NAMUR is convenient for mounting accessories such as Limit Switch box, Positioner etc.

◆ 2 : Pinion

The pinion is high-precision and integrative, made from nickel-alloy steel, full conform to the lasted standard of ISO 5211, DIN 3337, NAMUR. The dimensions and the stainless steel material can be customized.

◆ 3 : Actuator Body

According to the different requirements, the extruded aluminium alloy ASTM6005 body can treated with hard anodized, powder polyester painted (different colour is available such as blue, orange, yellow etc.), PTFE or Nickel plated.

◆ 4 : End Caps

Die-casting aluminium powder polyester painted in different colour, PTFE or nickel plated.

◆ 5 : Pistons

The twin rack pistons are made from Die-casting aluminium treated with hard anodized or made from Cast steel with galvanization. Symmetric mounting position, long cycle life and fast operation, reversing rotation by simply inverting the pistons.

◆ 6 : Travel Adjustment

The two independent external travel stop adjustment bolts can adjust $\pm 5^\circ$ at both open and close directions easily and precisely.

◆ 7 : High performance springs

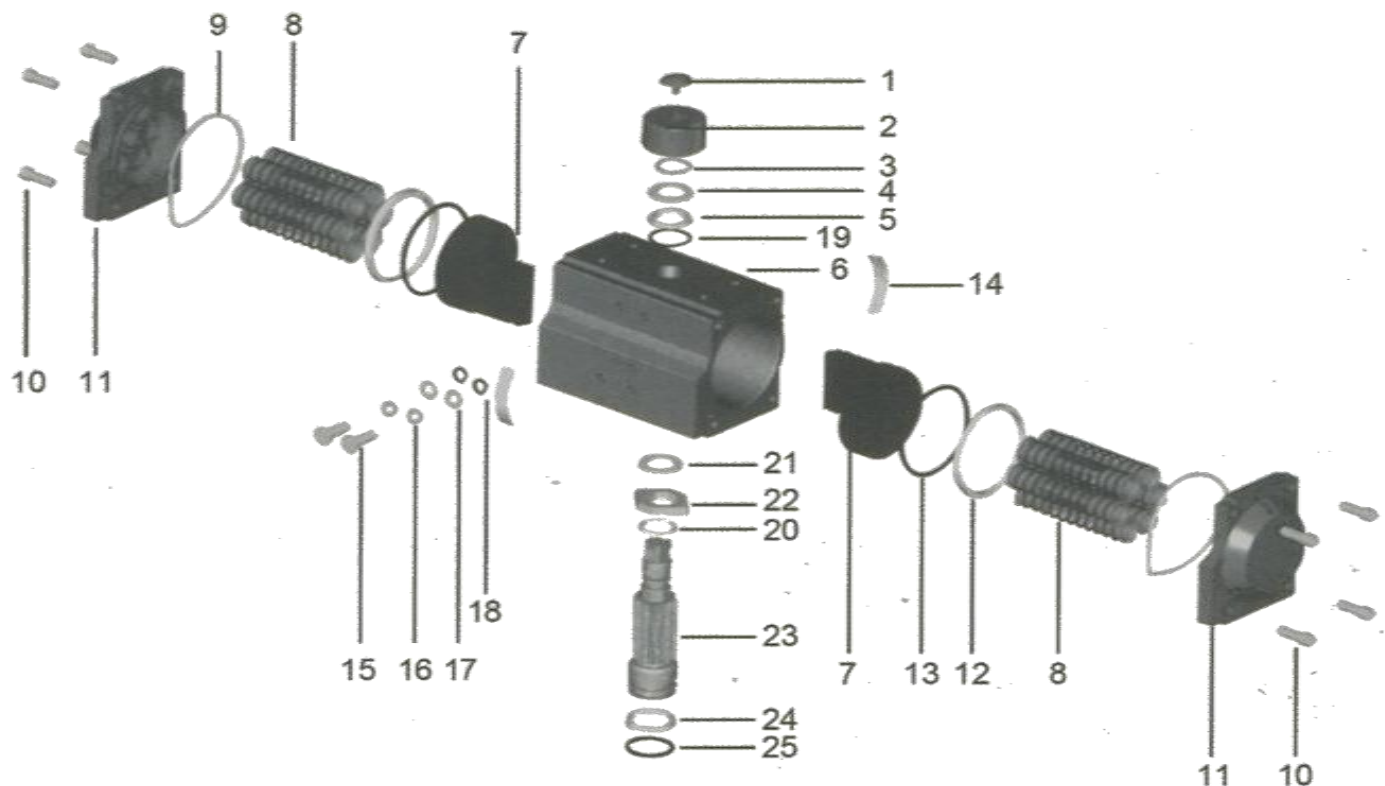
Pre-loaded coating springs are made from the high quality material for resistant to corrosion and longer service life, which can be de-mounted safely and conveniently to satisfy different requirements of torque by changing quantity of spring.

◆ 8 : Bearings & Guides

Made from low friction, long-life compound material, to avoid the direct contact between metals. The maintenance and replacement are more easy and convenient.

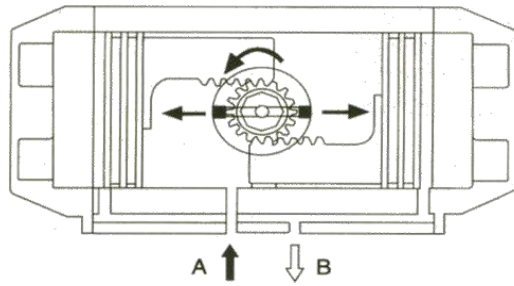
◆ 9 : O-rings

Normal : NBR. Options: (High/low temperature) : Viton or Silicone.

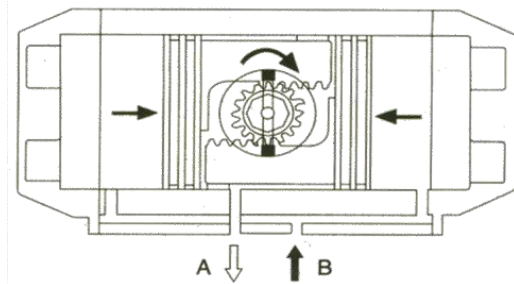


No.	Description	Qty	Standard Material	Anti-corrode Material	Optional Material
1	Indicator screw	1	Plastic		
2	Indicator	1	Plastic		
3	circlip	1	Alloy Spring Steel	Nickel Plated	
4	Washer	1	Stainless Steel		
5	Outside washer	1	PTFE		
6	Body	1	Extruded aluminium alloy	Hard anodized etc	
7	Piston	2	Extruded aluminium alloy	Anodization	Stainless Steel
8	Spring-Interated	5~12	Spring steel	Epoxy resin coating	
9	O-ring (End cap)	2	NBR		Viton / Silicone
10	Cap screw	8	Stainless Steel		
11	End cap	2	Aluminium Alloy	powder polyster painted etc	
12	Bearing (Piston)	2	Engineering plastics		
13	O-ring (Piston)	2	NBR		Viton / Silicone
14	Guide (Piston)	2	Engineering plastics		Viton / Silicone
15	Adjust screw	2	Stainless Steel		
16	Nut (Adjust screw)	2	Stainless Steel		
17	washer(Adjust screw)	2	Stainless Steel		
18	O-ring(Adjust screw)	2	NBR		Viton / Silicone
19	O-ring	1	NBR		
20	Bearing (pinion top)	1	Nylon46		
21	Thrust bearing	1	Composite material		
22	Octi-Cam	1	Alloy steel	Nickel Plated	Stainless Steel
23	Output Pinion	1	Alloy Steel	Nickel Plated	Stainless Steel
24	Bearing (pinion bottom)	1	Nylon46		Viton / Silicone
25	O-ring (Pinion bottom)	1	NBR		Viton / Silicone

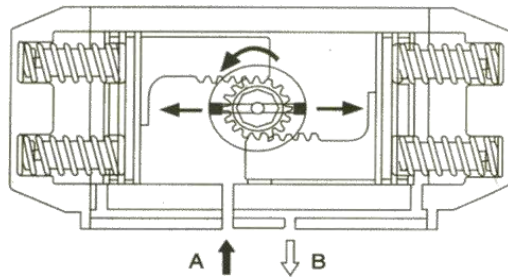
Operating principle (standard rotation)



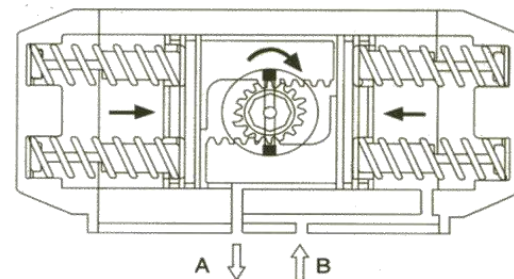
Air into Port A forces the pistons outwards, causing the pinion to turn counterclockwise while the air being exhausted from Port B.



Air into Port B forces the pistons inwards, causing the pinion to turn clockwise while the air is being exhausted from Port A.



Air into Port A forces the pistons outwards, causing the spring to compress, the pinion turns counter-clockwise while air is being exhausted from Port B.



In the event of loss air pressure or power, the stored energy in the springs forces the pistons inwards, causing the pinion turns clockwise while air is being exhausted from Port A, and air to Port B can accelerate closing the valve.

Output torque of UAD Spring Return Actuator

Unit : Nm

Output Torque of Air supply													
Air Pressure (Bar)		3		4		5		6		7		Spring Stroke	
Model	Spring Qty	0°	90°	0°	90°	0°	90°	0°	90°	0°	90°	90°	0°
		Start	End	Start	End	Start	End	Start	End	Start	End	Start	End
UAD050S	5	5.9	4.6	8.8	7.5	11.7	10.4					4.3	3.0
	6	5.4	3.8	8.3	6.7	11.2	9.6					5.1	3.5
	7	4.8	2.9	7.7	5.8	10.6	8.7	13.6	11.7			6.0	4.1
	8			7.0	4.9	9.9	7.8	12.9	10.8	15.9	13.8	6.9	4.8
	9			6.4	4.0	9.3	6.9	12.3	9.9	15.3	12.9	7.8	5.4
	10					8.8	6.1	11.8	9.1	14.8	12.1	8.6	5.9
	11					8.2	5.2	11.2	8.2	14.2	11.2	9.5	6.5
	12							10.5	7.3	13.5	10.3	10.4	7.2
UAD063S	5	10.7	8.1	16.0	13.4	21.1	18.5					7.5	4.9
	6	9.7	6.6	15.0	11.9	20.1	17.0					9.0	5.9
	7	8.7	5.1	14.0	10.4	19.1	15.5	24.4	20.8			10.5	6.9
	8			13.0	8.9	18.1	14.0	23.4	19.3	28.6	24.5	12.0	7.9
	9			12.0	7.4	17.1	12.5	22.4	17.8	27.6	23.0	13.5	8.9
	10					16.1	11.0	21.4	16.3	26.6	21.5	15.0	9.9
	11					15.2	9.2	20.5	14.5	25.7	19.7	16.8	10.8
	12							19.5	13.4	24.7	18.6	17.9	11.8
UAD075S	5	21.1	15.6	31.5	26.0	41.9	36.4					15.4	9.9
	6	19.2	12.5	29.6	22.9	40.0	33.3					18.5	11.8
	7	17.2	9.5	27.6	19.9	38.0	30.3	48.3	40.6			21.5	13.8
	8			25.7	16.8	36.1	27.2	46.4	37.5	56.7	47.8	24.6	15.7
	9			23.7	13.7	34.1	24.1	44.4	34.4	54.7	44.7	27.7	17.7
	10					32.1	21.0	42.4	31.3	52.7	41.6	30.8	19.7
	11					30.2	17.9	40.5	28.2	50.8	38.5	33.9	21.6
	12							38.5	25.2	48.8	35.5	36.9	23.6
UAD090S	5	32.6	23.2	48.8	39.4	65.1	55.7					25.7	16.3
	6	29.3	18.0	45.5	34.2	61.8	50.5					30.9	19.6
	7	26.0	17.9	42.2	29.1	58.5	45.4	75.0	61.9			35.0	22.9
	8			39.1	24.0	55.4	40.3	71.9	56.8	87.9	72.8	41.1	26.0
	9			35.7	18.8	52.0	35.1	68.5	51.6	84.5	67.6	46.3	29.4
	10					48.7	29.9	65.2	46.4	81.2	62.4	51.5	32.7
	11					45.5	24.9	62.0	41.4	78.0	57.4	56.5	35.9
	12							58.8	36.2	74.8	52.2	61.7	39.1
UAD100S	5	48.5	36.0	71.8	59.3	95.9	83.4					35.0	22.5
	6	44.0	28.9	67.3	52.2	91.4	76.3					42.1	27.0
	7	39.4	22.0	62.7	45.3	86.8	69.4	110.8	93.4			49.0	31.6
	8			58.3	38.3	82.4	62.4	106.4	86.4	129.5	109.5	56.0	36.0
	9			53.7	31.2	77.8	55.3	101.8	79.3	124.9	102.4	63.1	40.6
	10					73.3	48.3	97.3	72.3	120.4	95.4	70.1	45.1
	11					68.8	41.3	92.8	65.3	115.9	88.4	77.1	49.6
	12							88.3	58.3	111.4	81.4	84.1	54.1
UAD115S	5	78.5	56.7	116.5	94.7	154.5	132.7					58.3	36.5
	6	71.2	45.0	109.2	83.0	147.2	121.0					70.0	43.8
	7	63.9	33.4	101.9	71.4	139.9	109.4	178.9	148.4			81.6	51.1
	8			94.6	59.5	132.6	97.5	171.6	136.5	209.6	174.5	93.5	58.4
	9			87.3	48.0	125.3	86.0	164.3	125.0	202.3	163.0	105.0	65.7
	10					118.0	74.4	157.0	113.4	195.0	151.4	116.6	73.0
	11					110.7	63.0	149.7	102.0	187.7	140.0	128.0	80.3
	12							142.3	90.3	180.3	128.3	139.7	87.7
UAD125S	5	101.3	75.0	150.9	124.6	199.8	173.5					73.0	46.7
	6	92.0	60.0	141.6	109.6	190.5	158.5					88.0	56.0
	7	82.6	45.7	132.2	95.3	181.1	144.2	230.1	193.2			102.3	65.4
	8			122.8	80.1	171.7	129.0	220.7	178.0	270.5	227.8	117.5	74.8
	9			113.6	65.9	162.5	114.8	211.5	163.8	261.3	213.6	131.7	84.0
	10					153.0	99.5	202.0	148.5	251.8	198.3	147.0	93.5
	11					143.5	85.5	192.5	134.5	242.3	184.3	161.0	103.0
	12							183.5	119.5	233.3	169.3	176.0	112.0

*All data subjected to change without prior notice. www.myuic.com.my

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Output torque of UAD Spring Return Actuator

Unit : Nm

Output Torque of Air supply													
Air Pressure (Bar)		3		4		5		6		7		Spring Stroke	
Model	Spring Qty	0°	90°	0°	90°	0°	90°	0°	90°	0°	90°	90°	0°
		Start	End	Start	End	Start	End	Start	End	Start	End	Start	End
UAD145S	5	159	117	237	195	314	272					115	88.0
	6	144	94	222	172	299	249					138	88.0
	7	130	72	208	150	285	227	362	304			160	102
	8			193	127	270	204	347	281	425	359	183	117
	9			178	104	255	181	332	258	410	336	206	132
	10					240	157	317	234	395	312	230	147
	11					226	135	303	212	381	290	252	161
	12							288	189	366	267	275	176
UAD160S	5	202	154	304	256	404	356					148	100
	6	182	125	284	227	384	307					177	120
	7	162	95	264	297	364	297	466	399			207	140
	8			244	267	344	267	446	369	546	469	237	160
	9			224	138	324	238	426	340	526	440	266	180
	10					304	209	406	311	506	411	295	200
	11					284	179	386	281	486	381	325	220
	12							366	251	466	351	355	240
UAD190S	5											258	167
	6	367	257									310	200
	7	334	206	523	395							361	233
	8	300	154	489	343	679	533					413	267
	9			456	292	646	482	834	670			464	300
	10			422	240	612	430	800	618	990	808	516	334
	11					579	379	767	567	957	757	567	367
	12					546	327	734	515	924	705	619	400
UAD210S	5											317	229
	6	431	326									380	275
	7	335	263	621	499							443	321
	8	339	200	575	436	809	670					506	367
	9			529	393	763	607	999	843			569	413
	10			484	309	718	543	954	779	1190	1015	633	458
	11					672	480	908	716	1144	952	696	504
	12					626	417	862	653	1098	889	759	550
UAD240S	5	765	612	1134	981	1502	1349					495	342
	6	696	513	1065	882	1433	1250					594	411
	7	627	413	996	782	1364	1150	1734	1520			694	480
	8			928	684	1296	1052	1666	1422	2034	1790	792	548
	9			859	585	1227	953	1597	1323	1965	1691	891	617
	10					1159	854	1529	1224	1897	1592	990	685
	11					1091	755	1461	1125	1829	1493	1089	753
	12							1392	1026	1760	1394	1188	822
UAD270S	5											745	530
	6	1054	768									894	636
	7	937	602	1525	1190							1043	742
	8	819	437	1407	1025	1612	2293					1192	848
	9			1289	859	1446	2176	2463	2033			1341	954
	10			1171	694	1281	2069	2345	1868	2932	2455	1490	1060
	11					1115	1942	2227	1702	3814	2289	1639	1166
	12					950	1825	2110	1537	1697	2124	1788	1272
UAD300S	5	1476	1165									997	686
	6	1339	965									1197	823
	7	1201	766	1721	1486							1396	961
	8			1784	1287	2504	2007					1595	1098
	9			1647	1088	2367	1808	3089	2530			1794	1235
	10			1510	887	2230	1607	2952	2329	3672	3049	1995	1372
	11					2090	1408	2814	2130	3534	2850	2194	1510
	12					1955	1209	2677	1931	3397	2651	2393	1647

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Output torque of UAD Spring Return Actuator

Unit : Nm

Output Torque of Air supply												Spring Stroke	
Air Pressure (Bar)		3		4		5		6		7			
Model	Spring Qty	0°	90°	0°	90°	0°	90°	0°	90°	0°	90°	90°	0°
		Start	End	Start	End	Start	End	Start	End	Start	End	Start	End
UAD350S	5											1445	987
	6	1863	1157									1735	1196
	7	1602	779	2745	1922							2315	1395
	8	1341	401	2484	1544	3626	2686					2025	1595
	9			2224	1165	3366	2307	4508	3449			2604	1795
	10			1963	787	3105	1929	4247	3071	5390	4212	2894	1994
	11					2844	1551	3986	2693	5129	3836	3183	2193
	12					2584	1172	3726	2314	4869	3457	3473	2393
UAD400S	7											2707	1726
	8	2639	1518									3094	1974
	9	2392	1131	3929	2668							3481	2220
	10	2145	744	3682	2281	5219	3818					3868	2467
	11			3435	1895	4972	3432	6510	4970			4254	2714
	12					4726	3044	6264	4582	7800	6118	4642	2960
	13					4479	2658	6017	4196	7553	5732	5028	3207
	14					4232	2271	5770	3809	7306	5345	5415	3454
	15					3986	1884	5524	3422	7080	4958	5802	3700
16							5277	3035	6813	4571	6189	3947	

Output torque of UAD Double Acting Actuator

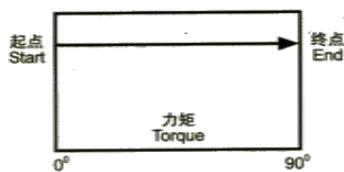
Unit : Nm

Model	Air pressure (bar)					
	2.5	3	4	5	6	7
UAD032D	2.78	4.2	6	7.5	9	10
UAD050D	7.3	8.9	11.8	14.7	17.7	20.7
UAD063D	13.0	15.6	20.9	26.0	31.3	36.5
UAD075D	25.9	31.0	41.4	51.8	62.1	72.4
UAD090D	40.7	48.9	65.1	81.4	97.9	113
UAD100D	59.2	71.0	94.3	118	142	165
UAD115D	95.2	115	153	191	230	268
UAD125D	123	148	197	246	295	345
UAD145D	193	232	310	387	464	542
UAD160D	253	302	404	504	606	706
UAD190D	473	567	756	946	1134	1324
UAD210D	588	706	942	1176	1412	1648
UAD240D	922	1107	1476	1844	2214	2582
UAD270D	1313	1576	2101	2626	3152	3678
UAD300D	1801	2162	2882	3602	4324	5044
UAD350D	2856	3427	4570	5712	6854	7997
UAD400D	3843	4612	6149	7686	9224	10760

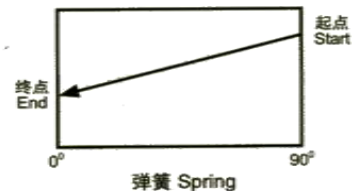
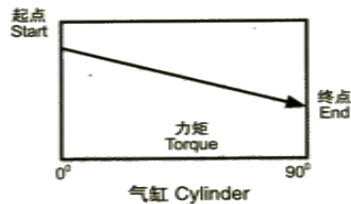
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Actuators

Double Action



Single Action



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