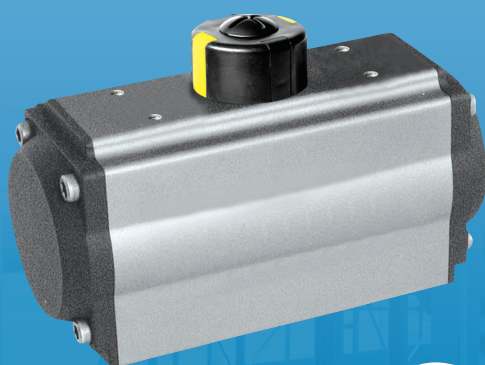




圣汉斯(集团)
ST.HANS GROUP



C SERIES

PNEUMATIC ACTUATORS

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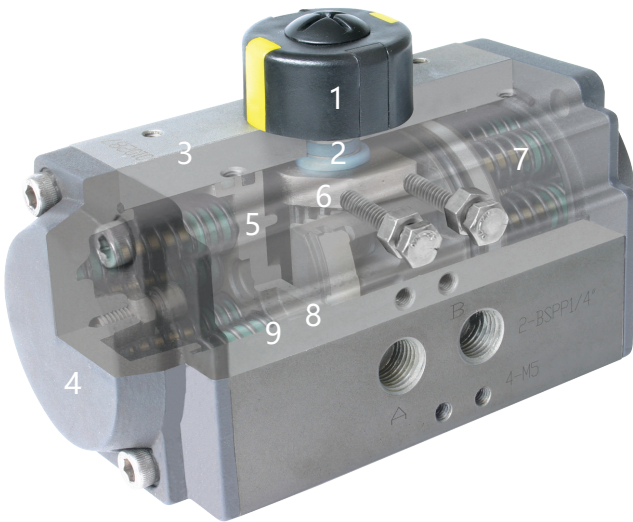
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Design

Our newly-designed C Series Pneumatic Actuator is aluminum rack & pinion actuators in double acting and spring return based on our innovative and patented technology. This kind of actuator features a top mount multifunction indicator and open-close stop adjustment as a standard. In addition, state-of-the-art engineering has allowed us to reduce the size of the actuator without losing any torque. The features and characteristics of the actuator have kept pace with 4th generation pneumatic actuator in the world.



Structure



1. Indicator

Position indicator with NAMUR is convenient for mounting accessories such as limit switch box, positioner and so on.

2. Pinion

The pinion is high-precision and integrative, made from nickel alloy steel, full conform to the latest standards of ISO5211, DIN3337, NAMUR. The dimensions can be customized and the stainless steel is available.

3. Actuator body

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

4. End caps

Die-casting aluminum powder polyester painted in different colors, PTFE or nickel plated.

5. Pistons

The twin rack pistons are made from die-casting aluminum 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 5° at both open and close directions easily and precisely.

7. High performance springs

Preloaded coating springs are made from the high quality material for resistant to corrosion and longer cycle life, which can be demounted safely and conveniently to satisfy different requirements of torque by changing quantity of springs.

8. Bearings & guides

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

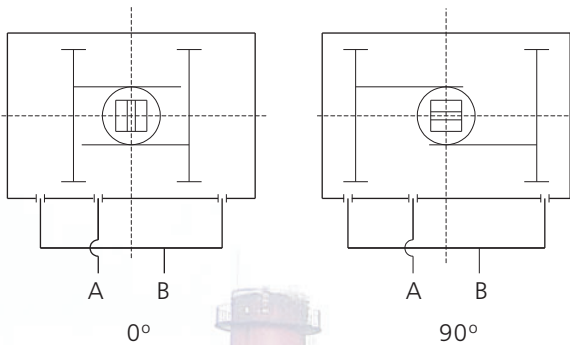
9. O-rings

NBR rubber o-rings provide trouble-free operation at standard temperature ranges. For high temperature viton is used. For low temperature NBR is used.

Operating Principle

Double acting

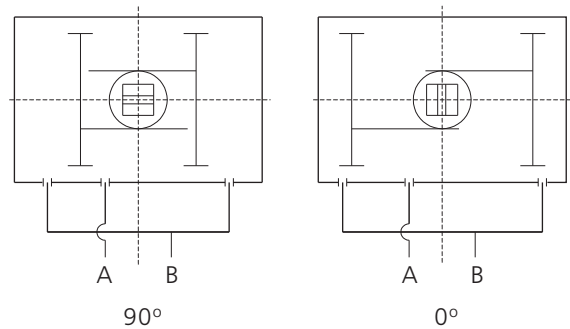
Standard rotation



Standard Rotation:

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

Reverse rotation



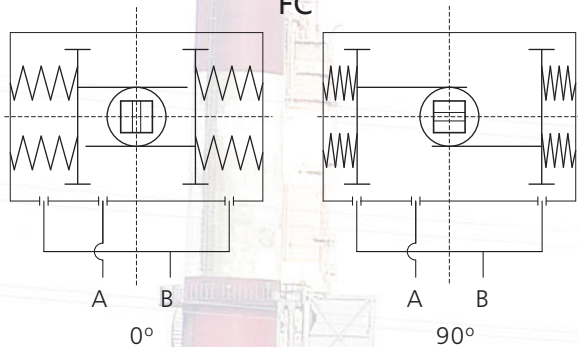
Reverse Rotation:

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

Spring return

Standard rotation

FC

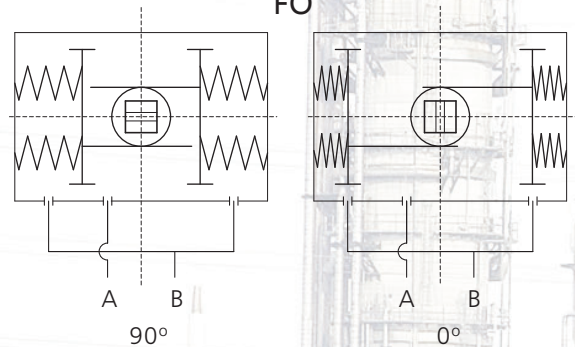


Standard Rotation:

Air to port A forces the pistons outwards, causing the springs to compress, the pinion turns counterclockwise while air is being exhausted from port B. Loss of air pressure on port A, the stored energy in the springs forces the pistons inwards. The pinion turns clockwise while air is being exhausted from port A.

Reverse rotation

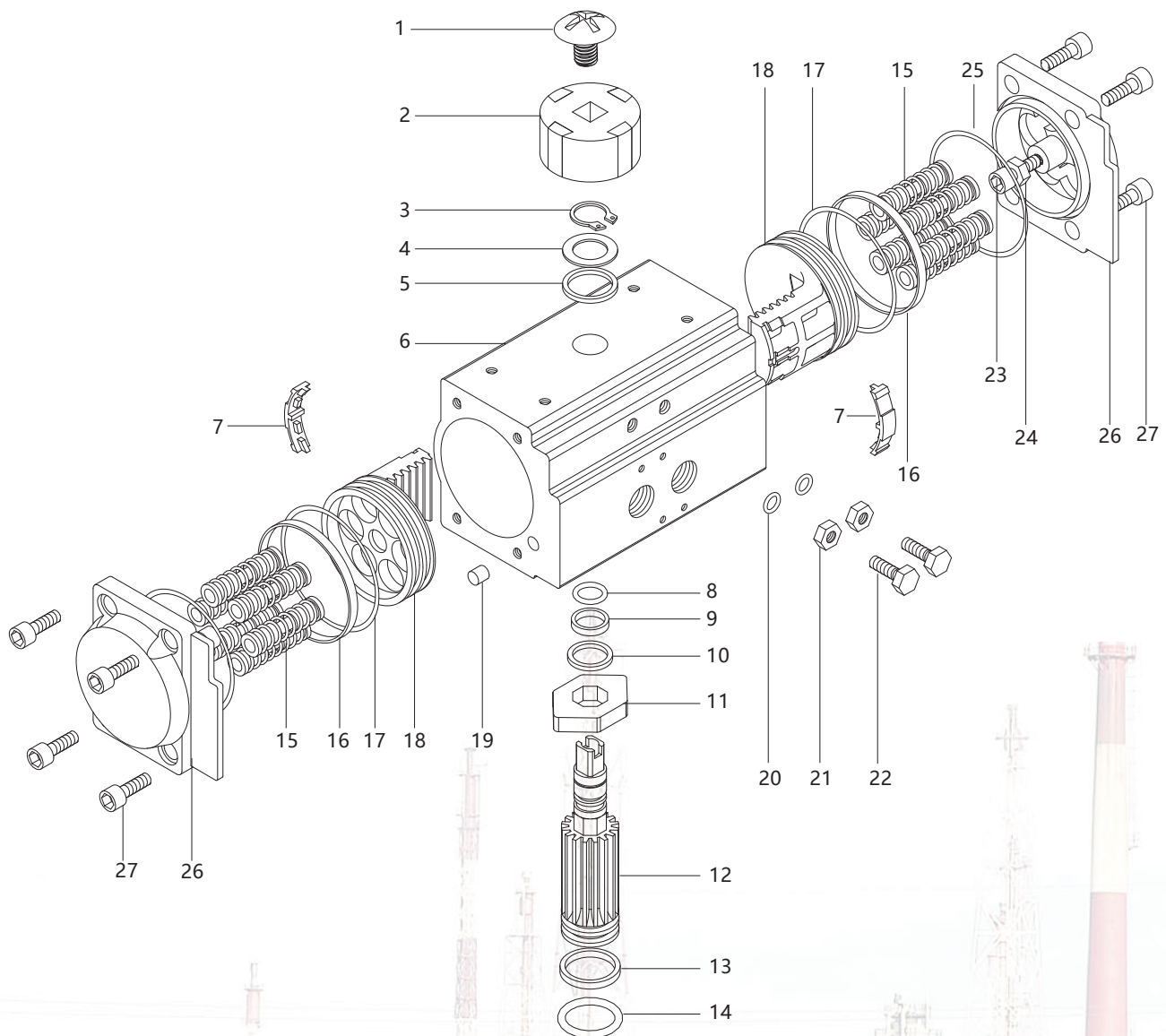
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Reverse Rotation:

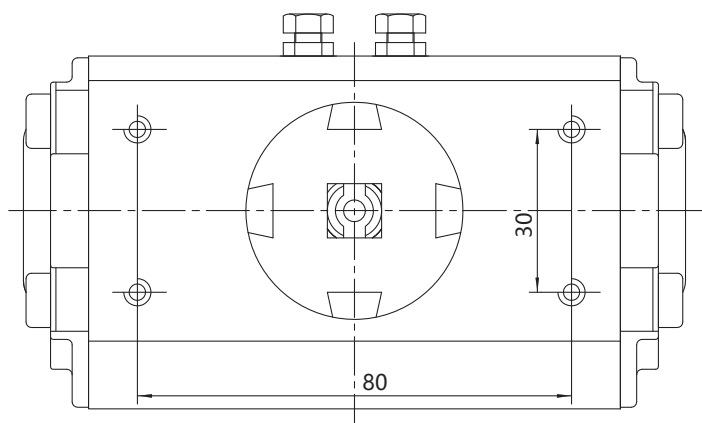
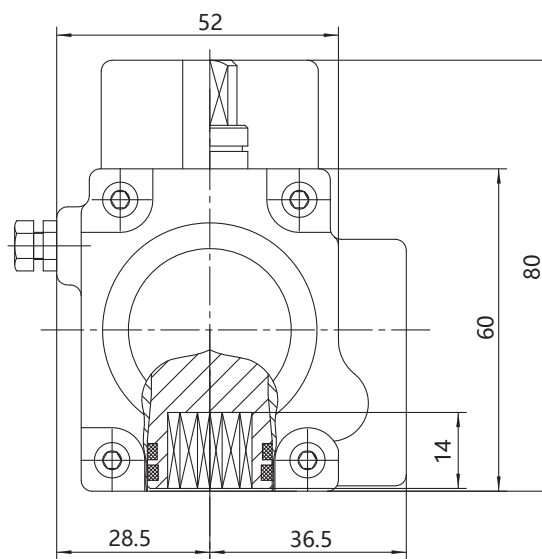
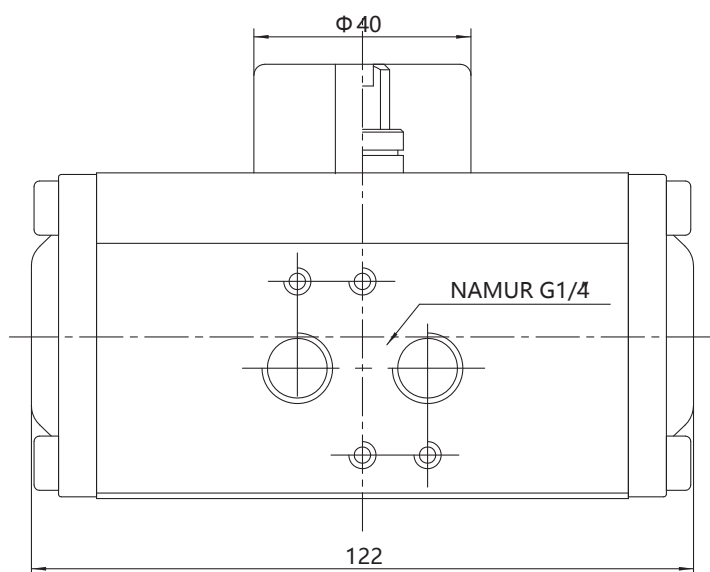
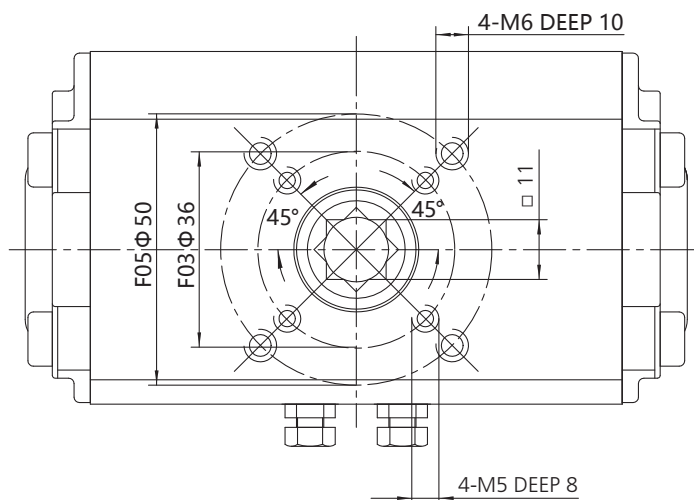
Air to port A forces the pistons outwards, causing the springs to compress, the pinion turns clockwise while air is being exhausted from port B. Loss of air pressure on port A, the stored energy in the springs forces the pistons inwards. The pinion turns counterclockwise while air is being exhausted from port A.

Parts and Material

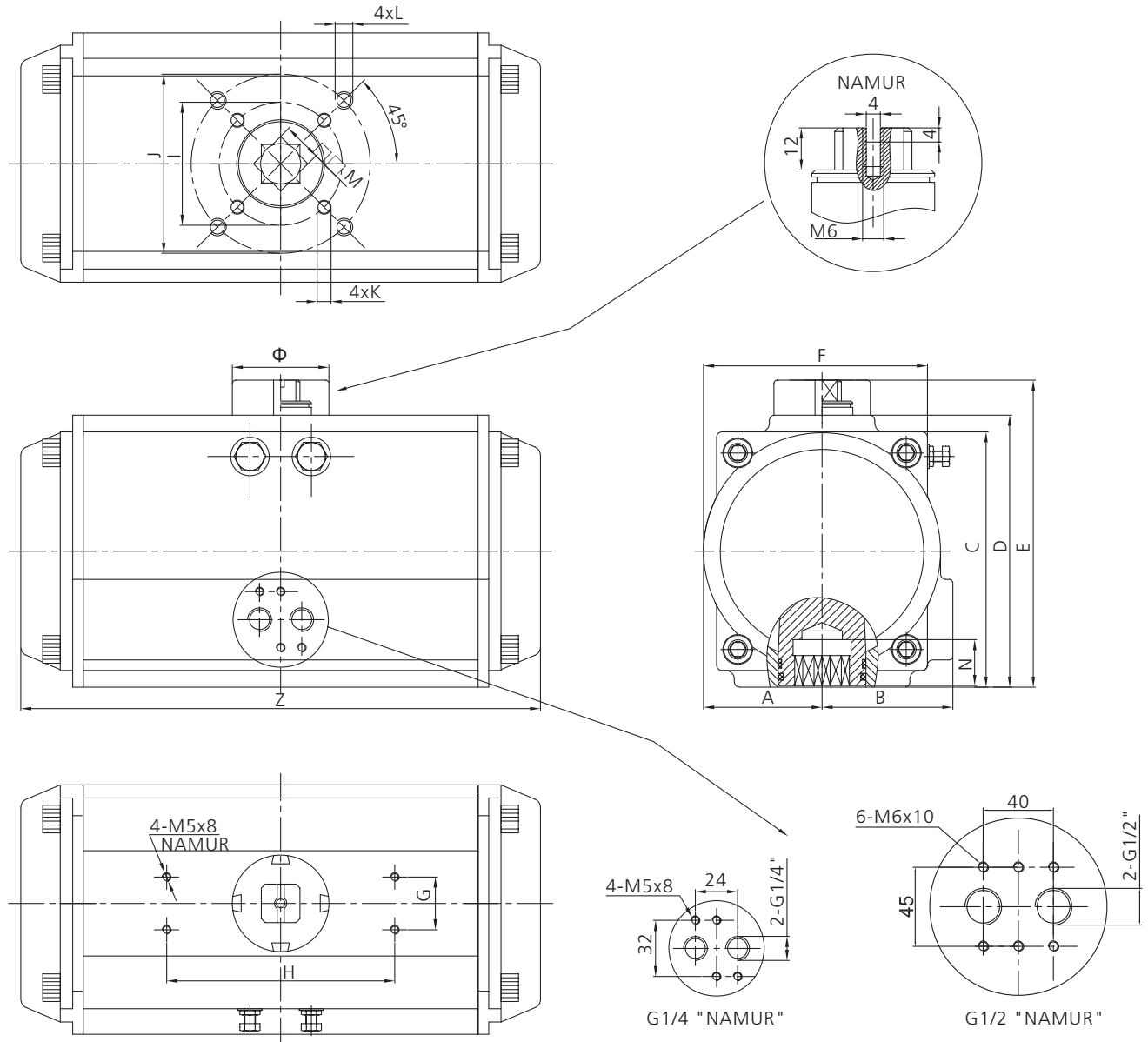


No.	Description	Qty.	Material	No.	Description	Qty.	Material
1	Indicator screw	1	Plastic(ABS)	15	Spring	0~12	Spring steel
2	Indicator	1	Plastic(ABS)	16	Bearing (piston)	2	polyoxymethylene
3	Circlip	1	Stainless steel(304)	17	O-ring(piston)	2	NBR or Viton
4	Thrust washer	1	Stainless steel(304)	18	Piston	2	Die-Cast aluminum(A380)
5	Outside washer	1	polyoxymethylene	19	Plug	2	NBR or Viton
6	Body	1	Extruded aluminum alloy(6005-T5)	20	O-ring(adjust screw)	2	NBR or Viton
7	Guide(piston)	2	polyoxymethylene	21	Nut (adjust screw)	2	Stainless steel(304)
8	O-ring(pinion top)	1	NBR or Viton	22	Adjust screw	2	Stainless steel(304)
9	Bearing(pinion top)	1	polyoxymethylene	23	Stop screw	2	Stainless steel(304)
10	Inside washer	1	polyoxymethylene	24	Nut (stop screw)	2	Stainless steel(304)
11	Cam	1	(Alloy Steel)#45	25	O-ring(end cap)	2	NBR or Viton
12	Pinion	1	(Alloy Steel)#45	26	End-cap	2	Die-Cast aluminum(A380)
13	Bearing (pinion bottom)	1	polyoxymethylene	27	End-cap screw	8	Stainless steel(304)
14	O-ring(pinion bottom)	1	NBR or Viton				

Dimension For C-40



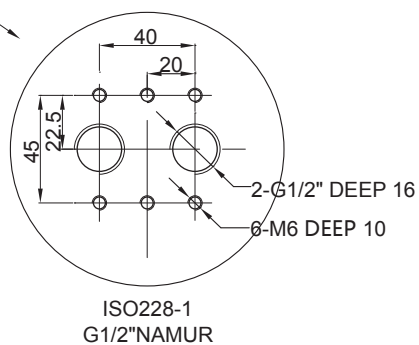
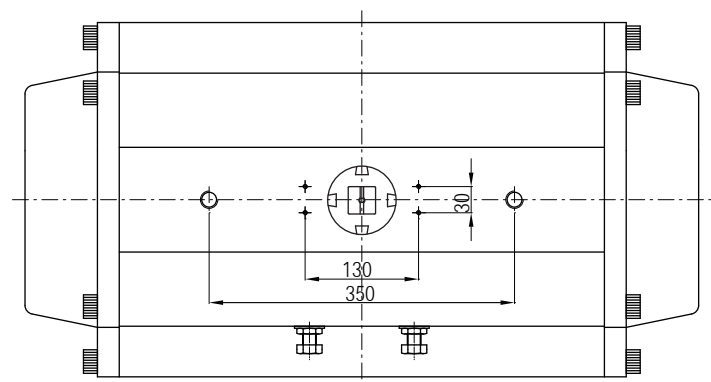
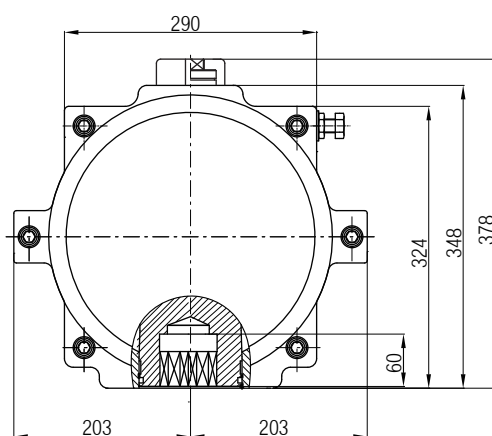
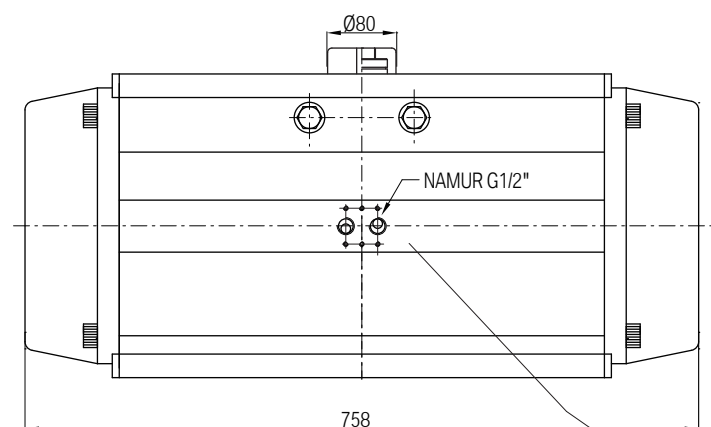
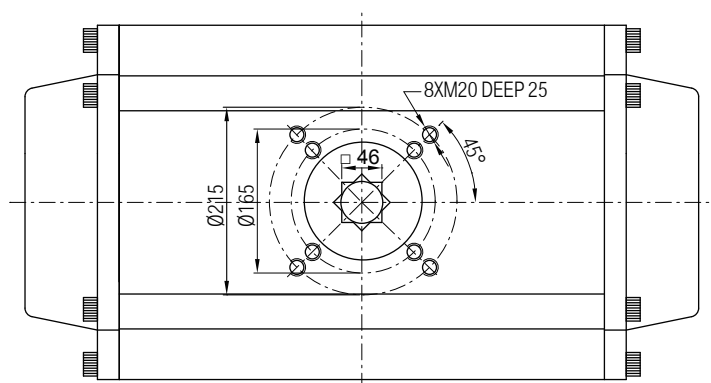
Dimension For C-52 ~ C-270



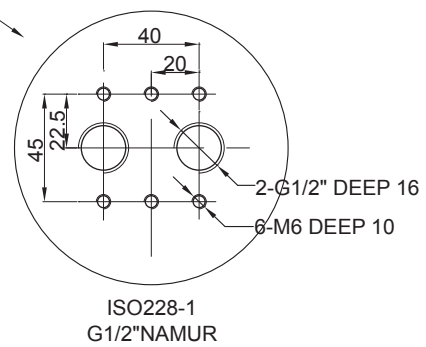
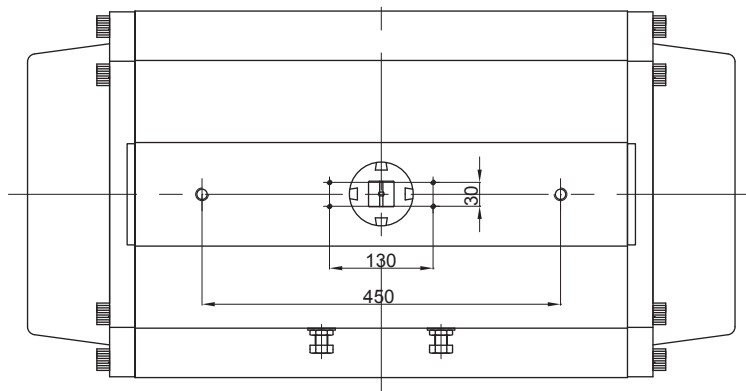
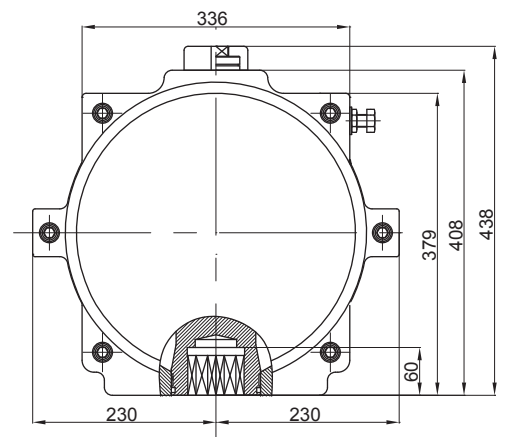
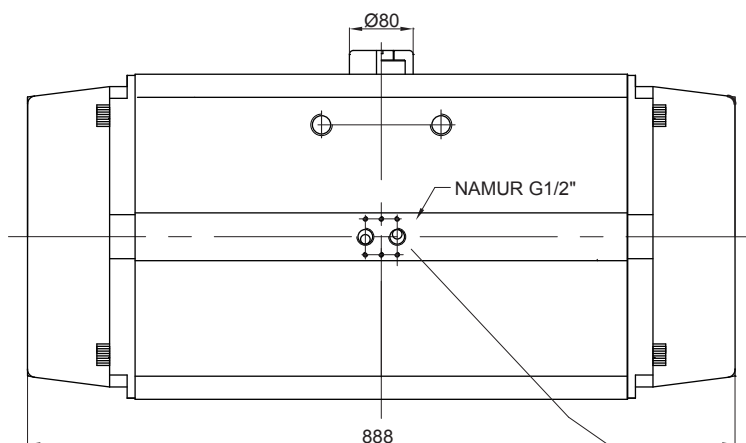
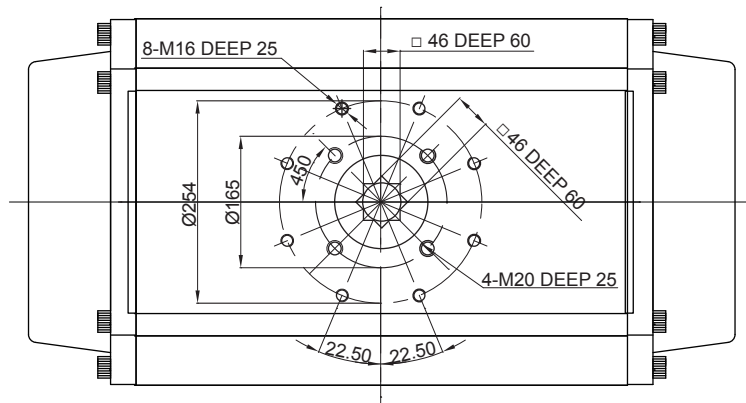
Unit: mm

Model	A	B	C	D	E	F	G	H	I	J	K	L	M	N	Z	Φ	Air Connection
C-52	30	41.5	65.5	72	92	65	30	80	Φ 36	Φ 50	M5x8	M6x10	11	14	147	Φ 40	G1/4" (1/4" NPT)
C-63	36	47	81	87.5	107.5	72	30	80	Φ 50	Φ 70	M6x10	M8x13	14	18	168	Φ 40	G1/4" (1/4" NPT)
C-75	42	53	94	99.5	119.5	81	30	80	Φ 50	Φ 70	M6x10	M8x13	14	18	184	Φ 40	G1/4" (1/4" NPT)
C-83	46	57	98.5	108.7	128.7	92	30	80	Φ 50	Φ 70	M6x10	M8x13	17	21	204	Φ 40	G1/4" (1/4" NPT)
C-92	50	58.5	111	116.5	136.5	98	30	80	Φ 50	Φ 70	M6x10	M8x13	17	21	262	Φ 40	G1/4" (1/4" NPT)
C-105	57.5	64	122.5	133	153	109.5	30	80	Φ 70	Φ 102	M8x13	M10x16	22	26	268	Φ 40	G1/4" (1/4" NPT)
C-125	67.5	74.5	145.5	155	175	127.5	30	80	Φ 70	Φ 102	M8x13	M10x16	22	26	301	Φ 55	G1/4" (1/4" NPT)
C-140	75	77	161	172	192	137.5	30	80	Φ 102	Φ 125	M10x16	M12x20	27	31	394	Φ 55	G1/4" (1/4" NPT)
C-160	87	87	184	197	217	158	30	80	Φ 102	Φ 125	M10x16	M12x20	27	31	458	Φ 55	G1/4" (1/4" NPT)
C-190	103	103	216	230	260	189	30	130		Φ 140		M16x25	36	40	528	Φ 80	G1/4" (1/4" NPT)
C-210	113	113	235.5	255	285	210	30	130		Φ 140		M16x25	36	40	532	Φ 80	G1/4" (1/4" NPT)
C-240	130	130	264.5	289	319	245	30	130		Φ 165		M20x25	46	50	602	Φ 80	G1/4" (1/4" NPT)
C-270	147	147	299	326	356	273	30	130		Φ 165		M20x25	46	50	722	Φ 80	G1/2" (1/2" NPT)

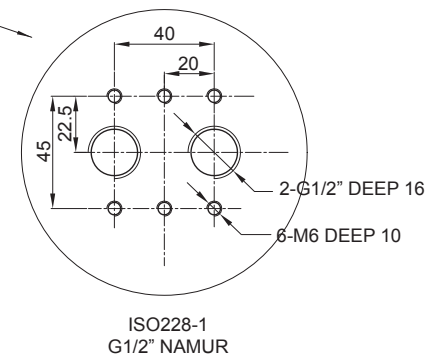
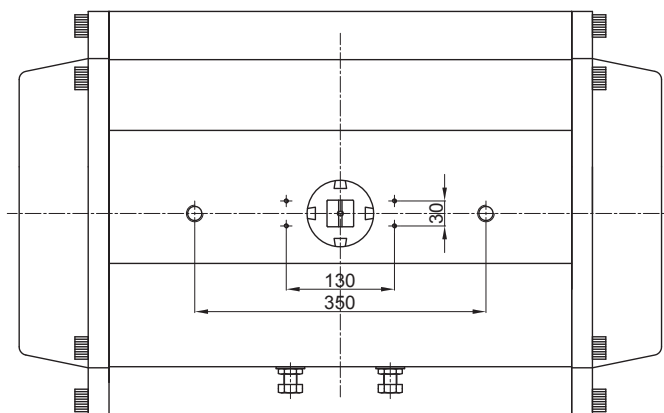
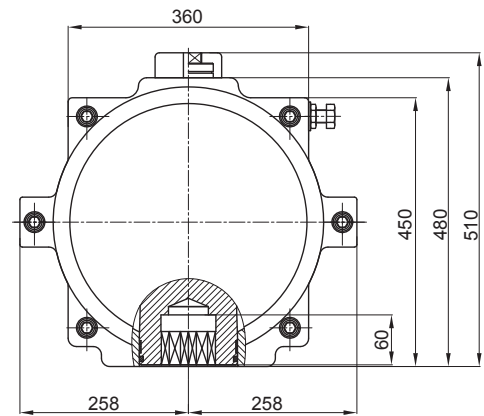
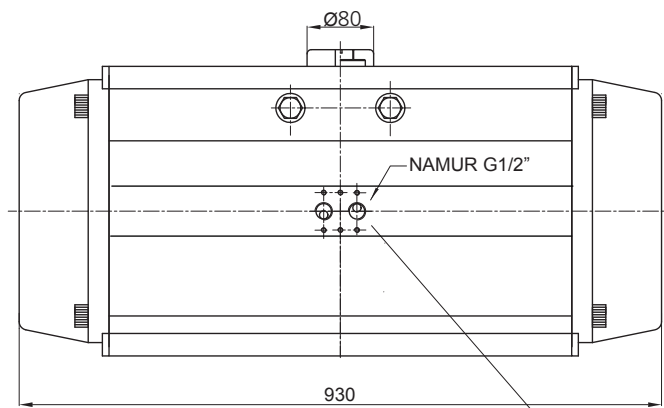
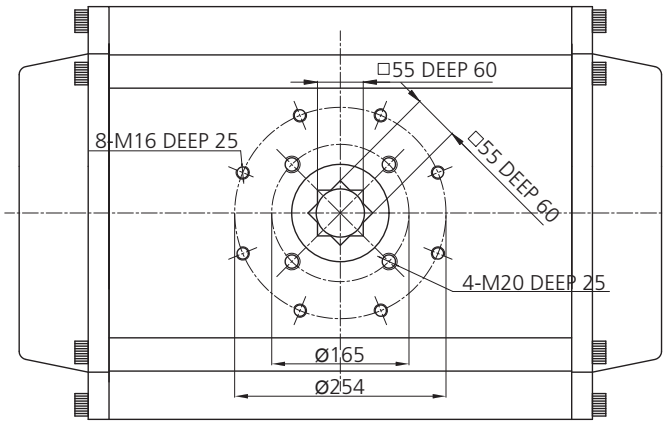
Dimension For C-300



Dimension For C-350

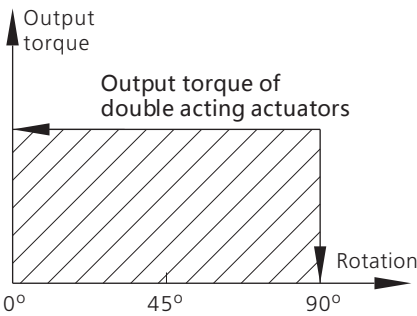


Dimension For C-400



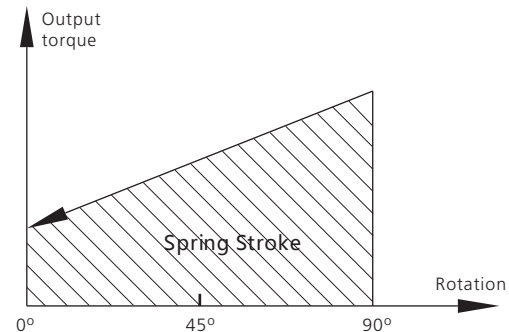
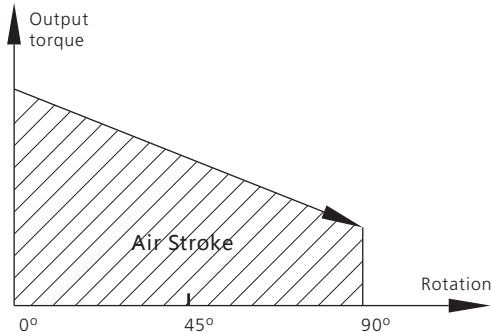
Output torque

For Double Acting Actuator



Output Torque of C Series Pneumatic Actuator with Double Acting (unit:Nm)										
Model	Air pressure(Bar)									
	2	2.5	3	4	4.5	5	5.5	6	7	8
C40DA	4.8	6	7.2	9.5	10.7	11.9	13.1	14.3	16.7	19.1
C52DA	8.0	10.0	12.0	16.0	18.0	20.0	21.9	23.9	27.9	31.9
C63DA	14.6	18.2	21.9	29.2	32.8	36.5	40.1	43.8	51.1	58.4
C75DA	20.1	25.1	30.1	40.1	45.1	50.2	55.2	60.2	70.2	80.3
C83DA	31.4	39.2	47.0	62.7	70.5	78.4	86.2	94.1	109.7	125.4
C92DA	45.1	56.4	67.7	90.3	101.6	112.9	124.1	135.4	158.0	180.6
C105DA	66.1	82.7	99.2	132.2	148.8	165.3	181.8	198.4	231.4	264.5
C125DA	100.3	125.4	150.5	200.6	225.7	250.8	275.9	301.0	351.1	401.3
C140DA	171.0	213.8	256.5	342.0	384.8	427.5	470.3	513.0	598.5	684.0
C160DA	266.0	332.5	399.0	532.0	598.5	665.0	731.5	798.0	931.0	1064.0
C190DA	425.6	532.0	638.4	851.2	957.6	1064.0	1170.4	1276.8	1489.6	1702.4
C210DA	532.0	665.0	798.0	1064.0	1197.0	1330.0	1463.0	1596.0	1862.0	2128.0
C240DA	769.5	961.9	1154.3	1539.0	1731.4	1923.8	2116.1	2308.5	2693.3	3078.0
C270DA	1169.6	1462.1	1754.5	2339.3	2631.7	2924.1	3216.5	3508.9	4093.7	4678.6
C300DA	1526	1908	2671	3052	3434	3815	4197	4578	5341	6104
C350DA	2285	2856	3999	4570	5141	5712	6283	6854	7997	9139
C400DA	3256	4070	4884	6512	7326	8140	8954	9768	11396	13024

For spring return actuator



Output Torque of C Series Pneumatic Actuator with Spring Return (unit:Nm)

Model	Spring Q.TY	Air pressure(Bar)																Springs' output	
		2		2.5		3		4		5		6		7		8			
		0°	90°	0°	90°	0°	90°	0°	90°	0°	90°	0°	90°	0°	90°	0°	90°	90°	0°
C52SR		Start	End	Start	End	Start	End	Start	End	Start	End	Start	End	Start	End	Start	End	Start	End
	4	4.6	3.0	6.6	5.0	8.6	7.0											5.0	3.4
	5			5.7	3.8	7.6	5.7											6.2	4.3
	6			4.9	2.5	6.9	4.5	10.9	8.5									7.4	5.0
	7			4.0	1.3	6.0	3.3	9.8	7.3	14.0	10.4							8.6	5.9
	8					5.2	2.0	9.2	6.0	13.2	9.1	17.2	14.1					9.9	6.7
	9					4.3	0.8	8.3	4.8	12.3	7.9	16.3	12.8	20.3	16.8			11.1	7.6
	10							7.4	3.6	11.5	6.7	15.5	11.6	19.5	15.6			12.4	8.5
	11							6.6	2.3	10.6	5.4	14.6	10.4	18.6	14.3	22.6	18.3	13.6	9.3
C63SR	12									9.7	4.2	13.8	9.1	17.8	12.2	21.8	17.1	14.8	10.2
	4	9.2	6.3	12.8	9.9	16.5	13.6	23.8	20.9									8.3	5.4
	5			11.4	7.7	15.0	11.4	22.3	14.9									10.4	6.8
	6			10.1	5.7	13.6	9.3	20.9	16.6	28.3	23.9							12.5	8.2
	7			8.6	3.6	12.5	7.2	19.5	14.5	26.8	21.9							14.6	9.6
	8					10.9	5.1	18.2	12.4	25.5	19.8	32.8	27.0	40.1	34.3			16.7	10.9
	9							16.8	10.4	24.1	17.7	31.4	24.9	38.7	32.2			18.8	12.3
	10							15.5	8.2	22.8	15.6	30.0	22.8	37.3	30.1	44.7	37.4	20.9	13.7
	11									21.5	13.5	28.7	20.7	36.0	28.0	43.3	35.3	22.9	15.0
12									20.0	11.4	27.3	18.6	34.6	25.9	41.9	33.3	25.0	16.4	

Output Torque of C Series Pneumatic Actuator with Spring Return (unit:Nm)																				
Model	Spring Q.TY	Air pressure(Bar)																Springs' output		
		2		2.5		3		4		5		6		7		8				
		0° Start	90° End	0° Start	90° End	0° Start	90° End	0° Start	90° End	0° Start	90° End	0° Start	90° End	0° Start	90° End	0° Start	90° End	0° Start	90° End	
C75SR	4	11.7	8.5	16.7	13.5	21.7	18.5	31.7	28.5									11.6	8.4	
	5			14.5	10.6	19.4	15.5	29.5	25.7									14.5	10.5	
	6			12.4	7.6	17.3	12.6	27.4	22.7	37.5	32.8							17.4	12.7	
	7			10.4	4.8	15.2	9.7	25.3	19.9	35.4	29.9							20.3	14.8	
	8					13.1	6.8	23.1	16.9	33.3	27.0	43.2	37.0	53.3	47.0			23.2	16.9	
	9							21.0	14.1	31.2	24.1	41.1	34.1	51.2	44.2			26.1	19.0	
	10							19.0	11.1	28.8	21.2	39.0	31.2	49.1	41.2	59.1	51.2	29.0	21.1	
	11									27.0	18.3	37.0	28.3	47.0	38.4	57.0	48.4	31.9	23.2	
	12									24.9	15.4	34.9	25.4	44.9	35.4	54.9	45.4	34.7	25.3	
C83SR	4	18.7	13.0	26.5	20.8	34.3	28.6	50.0	44.3									18.4	12.7	
	5			23.7	16.1	31.1	24.0	46.8	37.9									23.0	15.8	
	6			20.1	11.5	28.0	19.3	43.7	35.1	59.4	50.7							27.6	19.0	
	7			17.0	6.9	24.8	14.8	40.5	30.5	56.2	46.2							32.2	22.1	
	8					21.7	10.1	37.4	25.8	53.1	41.5	68.8	57.2	84.5	72.9			36.8	25.3	
	9							34.2	21.3	49.9	37.0	65.6	52.6	81.2	68.3			41.4	28.5	
	10							31.0	16.6	46.7	32.3	62.4	48.0	78.1	63.7	93.8	79.3	46.0	31.6	
	11									43.6	27.7	59.3	43.4	75.0	59.1	90.6	74.8	50.6	34.8	
	12									40.4	23.2	56.1	38.9	71.7	54.5	87.4	70.2	55.2	38.0	
C92SR	4	26.4	17.6	37.3	28.9	49.0	40.2	71.6	62.8									27.5	18.7	
	5			33.1	22.0	44.2	33.2	66.8	55.9									34.4	23.3	
	6			28.4	15.2	39.6	26.4	62.2	49.0	84.8	71.6							41.2	28.0	
	7			23.8	8.2	34.9	19.4	57.5	42.1	80.2	64.7							48.1	32.7	
	8					31.3	12.6	52.9	35.2	75.5	57.9	98.1	80.5	120.7	103.0			55.0	37.3	
	9							48.2	28.4	70.9	51.0	93.5	73.6	116.0	96.1			61.9	42.0	
	10							43.6	21.5	66.2	44.1	88.8	66.7	111.3	89.2	134.0	111.8	68.7	46.7	
	11									61.5	37.2	84.1	59.9	106.6	82.4	129.2	105.0	75.6	51.4	
	12									56.8	30.4	79.4	53.0	101.9	75.5	124.5	98.1	82.5	56.0	
C105SR	4	40.8	26.7	57.4	43.3	73.9	59.8	106.9	92.8									39.4	25.3	
	5			51.0	33.4	67.5	49.9	100.6	83.0									49.2	31.6	
	6			44.7	23.5	61.1	40.0	94.2	73.2	127.3	106.2							59.1	38.0	
	7			38.4	13.7	54.9	30.3	87.9	63.4	121.0	96.4							68.9	44.3	
	8					48.5	20.4	81.6	53.5	114.7	86.5	147.7	119.6	180.8	152.7			78.7	50.6	
	9							75.3	43.7	108.4	76.8	141.5	109.8	174.5	142.9			88.6	56.9	
	10							68.9	33.4	102.0	66.5	135.1	99.6	168.2	132.6	201.2	165.7	98.4	63.3	
	11									95.7	57.0	128.7	90.1	161.8	123.1	194.8	156.2	108.3	69.6	
	12									89.4	47.5	122.5	80.6	155.5	113.6	188.6	146.7	118.1	75.9	
C125SR	4	58.7	37.1	83.8	62.2	108.9	87.3	159	137.4									63.2	41.6	
	5			73	47	98	72	148	122									79	52	
	6			63	31	88	56	138	107	188	157							94	63	
	7			52	15	77	40	127	90	178	141							110	73	
	8					67	25	117	75	167	125	217	176	268	226			125	84	
	9							107	59	157	109	207	159	257	210			141	94	
	10							96	44	146	94	196	144	247	194	297	245	157	105	
	11									136	78	186	128	236	178	286	228	173	115	
	12									125	63	176	113	226	163	276	213	188	125	
C140SR	4	102.2	67.8	145	110.6	187.7	153.3	273.2	238.8									103.2	68.8	
	5			128	85	171	127	256	213									129	86	
	6			111	59	154	102	239	187	325	273							155	103	
	7			94	33	137	76	222	162	308	247							181	120	
	8					120	50	205	136	291	221	376	307	462	392			206	137	
	9							187	110	273	196	358	281	444	367			232	155	
	10							170	84	256	169	341	255	427	340	512	426	258	172	
	11									238	143	324	229	409	314	495	400	284	189	
	12									221	118	307	203	392	289	478	374	310	206	
C160SR	4	154.0	99.6	220.5	166.1	287	232.6	420	365.6									166.4	112	
	5			193	124	259	191	392	324									208	140	
	6			165	83	232	149	365	282	498	415							250	168	
	7			137	41	203	107	336	240	469	373							292	196	
	8					176	66	309	199	442	332	575	465	708	598			333	223	
	9							280	157	413	290	546	423	679	556			375	251	
	10							253	115	386	248	519	381	652	514	785	647	417	279	
	11									358	207	491	340	624	473	757	606	458	307	
	12									330	165	463	298	596	431	729	564	500	335	

Output Torque of C Series Pneumatic Actuator with Spring Return (unit:Nm)																				
Model	Spring Q.TY	Air pressure(Bar)																Springs' output		
		2		2.5		3		4		5		6		7		8				
		0° Start	90° End	0° Start	90° End	0° Start	90° End	0° Start	90° End	0° Start	90° End	0° Start	90° End	0° Start	90° End	0° Start	90° End	0° Start	90° End	
C190SR	4	265.6	178.4	372	284.8	478.4	391.2	691.2	604										247.2	160
	5			332	222	438	329	651	542										309	200
	6			292	161	398	267	611	480	824	693								371	240
	7			252	99	358	205	571	418	784	631								433	280
	8					318	143	531	356	744	569	957	782	1169	995				495	320
	9							491	295	704	507	917	720	1130	933				557	360
	10							451	233	664	446	877	658	1090	871	1302	1084	618	400	
	11									624	384	837	597	1050	809	1263	1022	680	440	
										584	322	797	535	1010	748	1223	960	742	480	
C210SR	4	312.0	228.0	445	361	578	494	844	760										304	220
	5			390	285	523	418	789	684										380	275
	6			335	209	468	342	734	608	1000	874								456	330
	7			280	133	413	266	679	532	945	798								532	385
	8					358	190	624	456	890	722	1156	988	1422	1254				608	440
	9							569	380	835	646	1101	912	1367	1178				684	495
	10							514	304	780	570	1046	836	1312	1102	1578	1368	760	550	
	11									725	494	991	760	1257	1026	1523	1292	836	605	
										670	418	936	684	1202	950	1468	1216	912	660	
C240SR	4	441.5	326.3	633.9	518.7	826.3	711.1	1211	1095.8										443.2	328
	5			552	409	744	600	1129	985										554	410
	6			470	297	662	489	1047	874	1432	1259								665	490
	7			388	187	580	379	964	764	1349	1149								775	575
	8					498	268	883	653	1267	1037	1652	1422	2037	1807				886	656
	9							800	542	1185	926	1569	1311	1954	1696				998	739
	10							718	431	1103	816	1488	1201	1872	1586	2257	1970	1108	821	
	11									1021	705	1406	1090	1791	1471	2176	1859	1219	903	
										939	594	1323	979	1708	1363	2093	1748	1330	985	
C270SR	4	721.6	540.0	1014.1	832.5	1306.5	1124.9	1891.3	1709.7										629.6	448
	5			903	675	1195	968	1779	1552										787	560
	6			790	519	1083	811	1667	1396	2252	1981								943	672
	7			679	361	972	654	1556	1238	2141	1823								1101	783
	8					860	497	1444	1081	2029	1666	2614	2252	3199	2836				1258	895
	9							1332	923	1917	1509	2502	2094	3087	2678				1416	1007
	10							1220	767	1805	1352	2390	1937	2974	2521	3560	3107	1572	1119	
	11									1693	1197	2278	1779	2862	2364	3448	2949	1730	1231	
										1582	1037	2167	1623	2751	2207	3336	2792	1887	1342	
C300SR	4	942.0	611.2	1324	1059.2														848.8	584
	5			1097	729														1061	730
	6			935	494	1316	875												1273	876
	7			772	258	1153	639	1916	1402										1485	1022
	8					991	403	1754	1166	2517	1929								1697	1168
	9							1592	930	2355	1693	3118	2456						1909	1314
	10							1430	695	2193	1458	2956	2221	3719	2984	4482	3747	2122	1460	
	11									2030	1222	2793	1985	3556	2748	4319	3511	2334	1606	
										1868	986	2631	1749	3394	2512	4157	3275	2546	1752	
C350SR	4	1346.6	923.4	1917.6	1494.4														1361.6	938.4
	5			1553	964														1702	1173
	6			1292	586	1863	1157												2043	1408
	7			1031	208	1602	779	2745	1922										2383	1640
	8					1341	401	2484	1544	3626	2686								2724	1877
	9							2224	1165	3366	2307	4508	3449						3064	2112
	10							1963	787	3105	1929	4247	3071	5390	4214	6532	5356	3405	2346	
	11									2844	1551	3986	2693	5129	3836	6271	4978	3745	2581	
										2584	1172	3726	2314	4869	3457	6011	4599	4086	2816	
C400SR	7			2028	869														2880	1837
	8			1736	411	2550	1225												3292	2100
	9					2259	768	3887	2396										3703	2362
	10					1967	311	3595	1939	5223	3567								4115	2624
	11							3303	1482	4931	3110	6559	4738						4526	2887
	12							3012	1025	4640	2653	6268	4281	7895	5908	9523	7536	4938	3149	
	13									4348	2195	5976	3823	7603	5450	9231	7078	5349	3412	
	14									4057	1738	5685	3366	7312	4993	8940	6621	5761	3674	
	15									3765	1281	5393	2909	7020	4536	8648	6164	6172	3937	
	16											5101	2452	6728	4079	8356	5707	6584	4199	

Operating Conditions

1. Operating media

Dry or lubricated air, or the non-corrosive gas.

The maximum particle diameter must less than 30um.

2. Air supply pressure

The minimum supply pressure is 2 Bar

The maximum supply pressure is 8 Bar

3. Operating temperature

Standard(NBR O-ring): -20°C~+80°C

Low temperature(L NBR O-ring): -35°C~+80°C

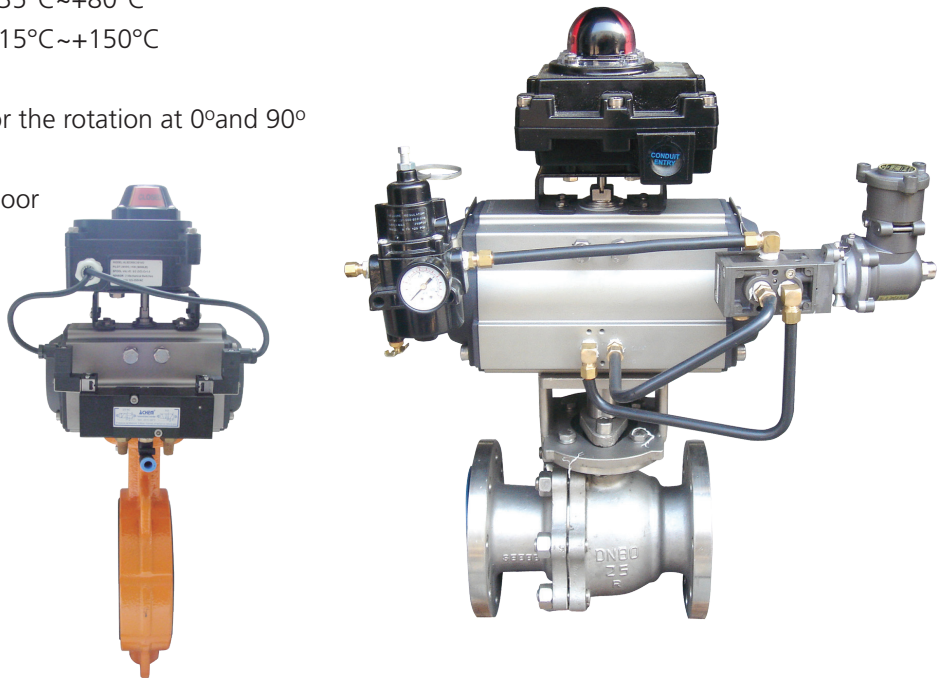
High temperature(Viton O-ring): -15°C~+150°C

4. Travel adjustment

Have adjustment range of $\pm 5^\circ$ for the rotation at 0°and 90°

5. Application

Suitable both for indoor and outdoor



Air Consumption

Air volume opening & closing

Unit: L

Model	Air volume opening	Air volume closing	Model	Air volume opening	Air volume closing
C-40	0.05	0.06	C-140	2.5	2.2
C-52	0.12	0.16	C-160	3.7	3.2
C-63	0.21	0.23	C-190	5.9	5.4
C-75	0.3	0.34	C-210	7.5	7.5
C-83	0.43	0.47	C-240	11	9
C-92	0.64	0.73	C-270	17	14
C-105	0.95	0.88	C-300	23.8	29.7
C-125	1.60	1.40	C-350	35.1	46.3
			C-400	52.6	56

Air consumption depends on Air Supply. Air volume and Action cycle times, the calculating as follows:

$$L/Min = \text{Air volume (Air volume Opening + Air volume closing)} \times \left[\frac{\text{Air Supply (Kpa)} + 101.3}{101.3} \right] \times \text{Action cycle times (/min)}$$

Weight

Unit: Kg

Model	C-40	C-52	C-63	C-75	C-83	C-92	C-105	C-125	C-140	C-160	C-190	C-210	C-240	C-270	C-300	C-350	C-400
DA	0.86	1.32	2.02	2.67	3.22	4.59	5.89	9.13	13.33	19.88	32.75	39.40	55.45	83.80	128.50	210.15	280
SR		1.47	2.17	2.97	3.62	5.34	6.74	10.53	15.83	23.78	39.35	49.00	69.25	106.60	156.10	259.35	360

Operation Time

Unit: s

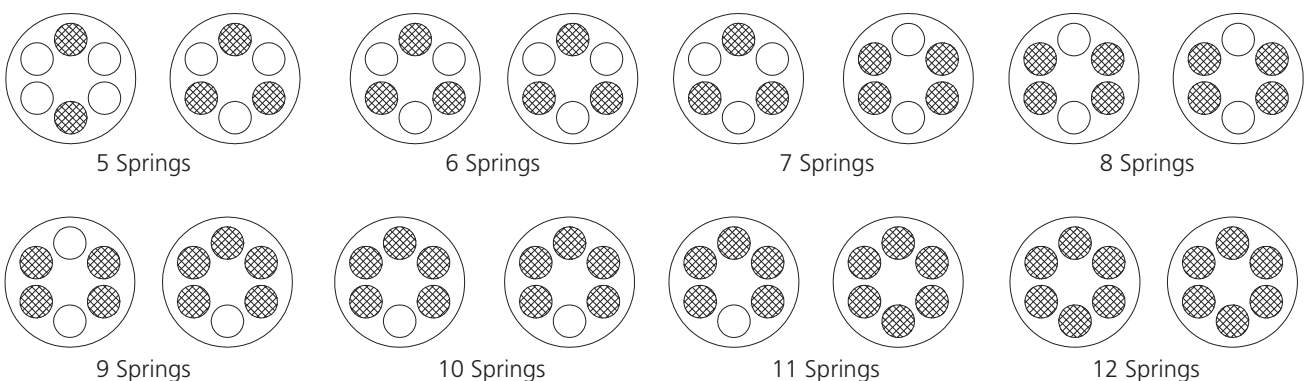
Double Acting			Spring Return														
Size	0°-90°	90°-0°	Size	Spring Qty.													
				3+3		3+4		4+4		4+5		5+5		5+6		6+6	
				0°-90°	90°-0°	0°-90°	90°-0°	0°-90°	90°-0°	0°-90°	90°-0°	0°-90°	90°-0°	0°-90°	90°-0°	0°-90°	90°-0°
52DA	0.6	0.53	52SR	2.46	0.48	2.48	0.46	2.5	0.44	2.52	0.42	2.54	0.4	2.56	0.38	2.58	0.36
63DA	0.66	0.58	63SR	2.54	0.56	2.56	0.54	2.58	0.52	2.6	0.5	2.62	0.48	2.64	0.46	2.66	0.44
75DA	0.72	0.64	75SR	2.62	0.64	2.64	0.62	2.66	0.6	2.68	0.58	2.7	0.56	2.72	0.54	2.74	0.52
83DA	0.83	0.73	83SR	2.71	0.73	2.73	0.71	2.75	0.69	2.77	0.67	2.79	0.65	2.81	0.63	2.83	0.61
92DA	1	0.86	92SR	2.89	0.86	2.91	0.84	2.93	0.82	2.95	0.8	2.97	0.78	2.99	0.76	3.01	0.74
105DA	1.35	1.3	105SR	3.14	0.91	3.16	0.89	3.18	0.87	3.2	0.85	3.22	0.83	3.24	0.81	3.26	0.79
125DA	2.4	1.79	125SR	4.24	1.2	4.26	1.18	4.28	1.16	4.3	1.14	4.32	1.12	4.34	1.1	4.36	1.08
140DA	2.5	2.1	140SR	4.4	1.35	4.4	1.33	4.62	1.31	4.64	1.29	4.66	1.27	4.68	1.25	4.68	1.22
160DA	3.93	2.6	160SR	4.74	1.77	4.76	1.75	4.78	1.73	4.8	1.71	4.82	1.69	4.82	1.67	4.84	1.65
190DA	4.55	3.45	190SR	5.75	3.7	5.77	3.5	5.75	3.48	5.77	3.46	5.79	3.44	5.8	3.42	5.83	3.4
210DA	5.5	4.35	210SR	8.25	4.8	8.4	4.6	8.42	4.58	8.44	4.56	8.46	4.54	8.48	4.52	8.5	4.5
240DA	8.4	8.33	240SR	16.2	5.14	16.4	5.12	16.42	5.1	16.44	4.9	16.6	4.98	16.8	4.86	17	4.84
270DA	10.9	8.53	270SR	17.6	6.28	17.8	6.26	17.6	6.24	17.8	6.2	18	6.18	18.2	6.16	18.4	6.14
300DA	15	14.9	300SR	24	13.2	24.5	13	24.4	12.8	24.3	12.6	24.5	12.58	24.7	12.56	24.9	12.54
350DA	23.7	18.6	350SR	31	17.3	31.5	17	31.3	16.8	31	16.6	31.2	16.58	31.4	16.56	31.6	16.54
400DA	31	29	400SR	45	27	51	27	51.3	26.8	51.5	26.8	51.7	26.6	51.9	26.4	52.1	26.2

Air Pressure: 5 bar

Mounting Operation

Remove any manual opening device from the valve, leaving the valve stem clear. Make sure that the shape of the stem fit the actuator output and that the rotation is not hindered in any way. Mount the actuator onto the valve, certaining it well on the stem. Make sure that the rotation direction is correct, in any case do not insert your hands inside the valve. We strongly suggest checking the cleanness of the air-supply pipes, especially when the plant is not provided with filters. A spacer between actuator and valve will be necessary with fluids at high temperature.

Springs mounting form for spring return actuators:



Maintenance

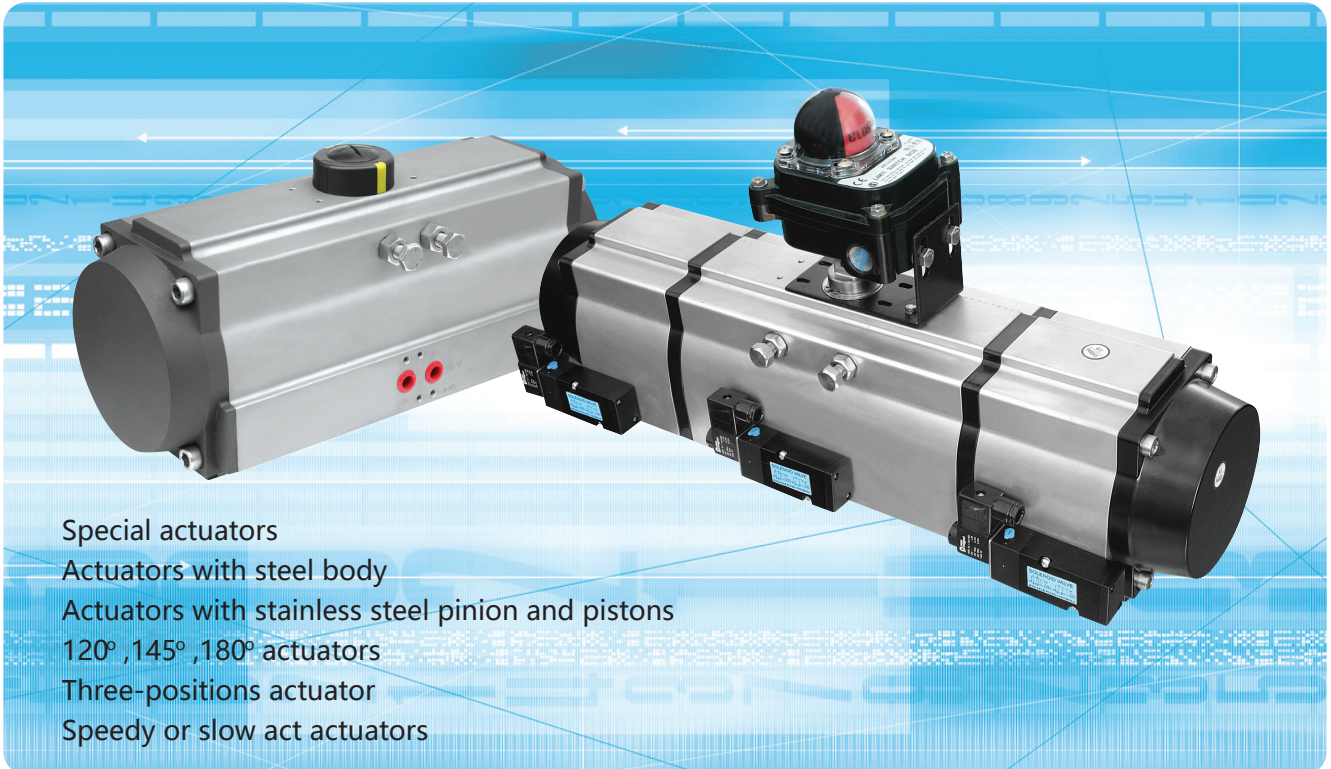
1. It is recommended that periodic checks be performed to make sure that all fasteners remain tight.
2. The actuator is supplied ready-lubricated no further lubrication is required. If lubrication is deemed necessary , use EP-1 grease.
3. Under certain working conditions (heavy duty, non-compatible operating media or abnormal operating conditions) internal seals should be checked periodically and replaced when necessary.
4. On spring return actuators, spring fatigue may set in requiring the replacement of springs. Spring should always be replaced in full sets.

NOTE

If an actuator is properly assembled and used , it will be maintenance free, as it has been lubricated enough to last a normal working life under normal working conditions. Should it get necessary to replace its seals, we suggest turning to our company where the product will be overhauled first , and then tested. On request, our company will be willing to provide its customers with kits and instructions.



Different colors powder polyester painted and treatment body and ends available.

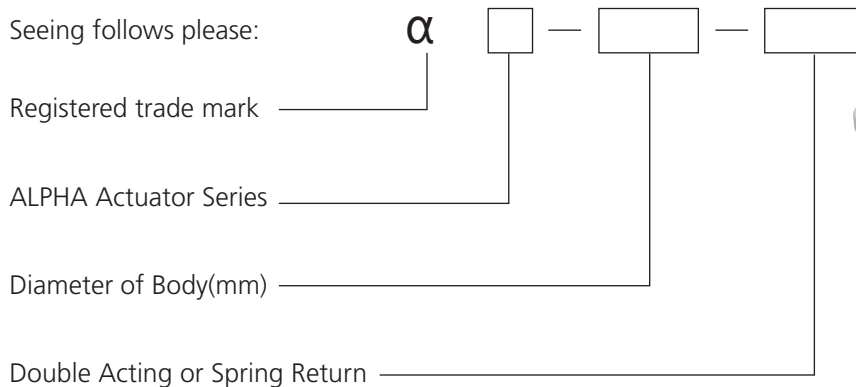


Special actuators
Actuators with steel body
Actuators with stainless steel pinion and pistons
120°, 145°, 180° actuators
Three-positions actuator
Speedy or slow act actuators

Sizing information and How to Order

There are four parts in the Model and specification of ALPHA Series Actuators .

Seeing follows please:



Example:

α C-85DA

ALPHA C Series Actuator With Double Acting. The Diameter of Body equal to 85mm.

α C-240SR

ALPHA C Series Actuator With Spring Return. The Diameter of Body equal to 240mm.



Sizing: Double Acting Actuators

The suggested safety factor for double acting actuators under normal working conditions is 20%-30%.

Example:

- The torque needed by valve=100N.m
- The torque considered safety factor
(1+30%)=130N.m
- Air Supply=5Bar

According to the above table, we can choose the minimum model is α C-105DA.

Attention:

During the restoration, the spring return actuators' output torque will not be affected by the inputting air from the port B. On the contrary it will help the restoration of springs.

Sizing: Spring Return Actuators

The suggested safety factor for spring return actuator under normal working conditions is 30%-50%

Example:

The torque needed by valve=80N.m

The torque consider safety factor (1+30%)=104N.m

Air Supply=5Bar

According to the table of spring return actuators' output, we find output torque of C-140SRT is:

Air stroke 0°=308N.m

Air stroke 90°=247N.m

Spring stroke 90°=181N.m

Spring stroke 0°=120N.m

All the output torque is larger than we needed.

Accessories

ALVB series solenoid valve
Namur Connection Both for 1/4" and 1/2"
IP65 Double Coils or single Coil
Wide Range Voltage Both for DC and AC



ALS-200 series Mini Type Limit Switch box
Weather Protection IP67
ISO5211 Bracket Carbon steel and Stainless Steel available
Mechanical Switches, Proximity Sensor and Magnet Sensor



ALS-300 series Mult-Function Type Limit Switch box
Weather Protection IP67
ISO5211 Bracket Carbon steel and Stainless Steel available
Mechanical Switches, Proximity Sensor and Magnet Sensor
Position Transmitter (4-20mA) available



ALS-400 series Explosion-proof Limit Switch box
Weather Protection IP66
Explosion-proof Ex d II CT6
ISO5211 Bracket Carbon steel and Stainless Steel available
Mechanical Switches, Proximity Sensor and Magnet Sensor





ALS-500 series Explosion-proof Limit Switch box
Weather Protection IP66
Explosion-proof Ex d II BT6
ISO5211 Bracket Carbon steel and Stainless Steel available
Mechanical Switches, Proximity Sensor and Magnet Sensor
Stainless Steel Body and cover available



ALSD400 series Explosion-proof Pneumatic Monitor
Weather Protection IP66
2/5 , 2/3 Solenoid valve
ISO5211 Bracket Carbon steel and Stainless Steel available
Mechanical Switches, Proximity Sensor and Magnet Sensor
Position Transmitter (4-20mA) available



ALSD400 series Explosion-proof Pneumatic Monitor
Weather Protection IP66
Explosion-proof Ex d II CT6
2/5 , 2/3 Solenoid valve
ISO5211 Bracket Carbon steel and Stainless Steel available
Mechanical Switches, Proximity Sensor and Magnet Sensor
Stainless Steel Body and cover available



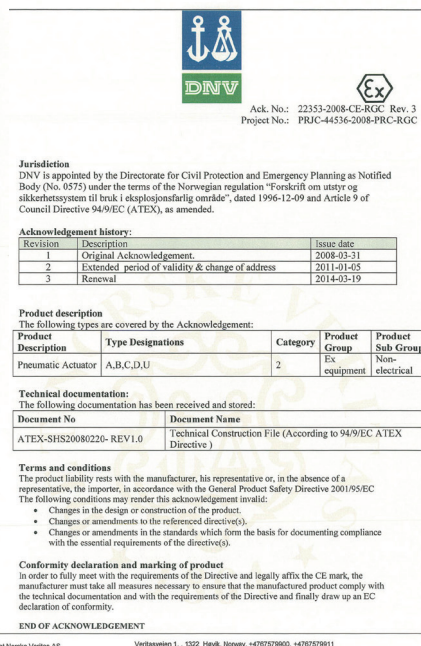
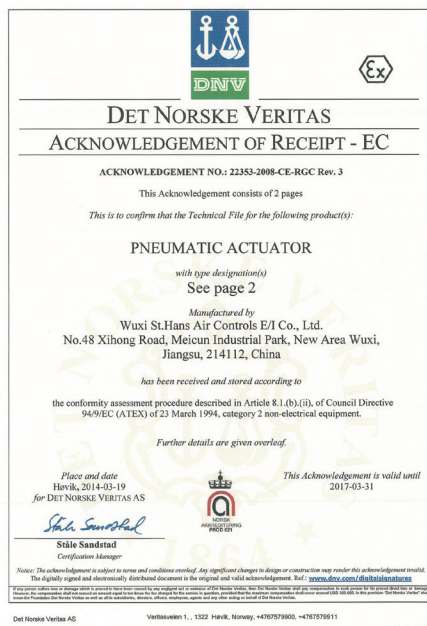
ALSD500 series Explosion-proof Pneumatic Monitor
Weather Protection IP66
Explosion-proof Ex d II BT6
2/5 , 2/3 Solenoid valve
ISO5211 Bracket Carbon steel and Stainless Steel available
Mechanical Switches, Proximity Sensor and Magnet Sensor



ALP1000 Electric Pneumatic Valve Positioner
Input signal 4-20mADC or 5-15mADC
Weather Protection IP66
Explosion-proof Ex d II BT6 or Ex ia II CT6
Available both for linear and Rotary
Position Transmitter (4-20mA) available



ALP1200 Pneumatic Pneumatic Valve Positioner
Input signal 0.2 ~ 1kgf/cm , 3 ~ 15psi
Weather Protection IP66
Available both for linear and Rotary



样本修改记录

2015.11.13

- 1、增加C400型号 (SR DA)
- 2、C-190总长度由525改为528

2016.02.02

- 1、修改C400气源接口

2016.02.05

修改C-63 10弹簧4bar 0°扭矩改为15.5

2016.02.06

将底页公司联系只保留圣汉斯进出口一个

2016.06.07

140外形尺寸Z数值390改为394

ST.HANS GROUP

无锡圣汉斯气动控制器进出口有限公司

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集团海外销售网络

Group Overseas Network

