



SIL3



ATEX



## MTC- Series Pneumatic Actuators

- Racks & pinion structure design with SIL3 approval for quarter turn
- Meet the ISO5211, DIN3337 and Namur standards
- Available for double acting and spring return
- Available for use in -60°C degree



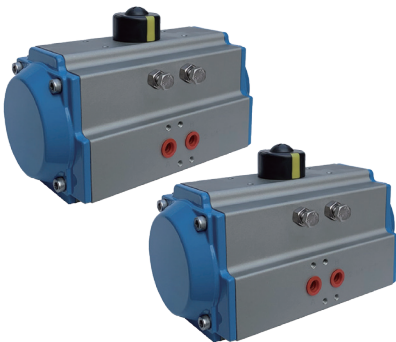
## Design and Features

MT-C series pneumatic actuators are a high-quality classic product

The actuator features a top mount multifunction indicator and open-close stops adjustment as a standard. In addition, the state-of-the-art engineering design has allowed us to reduce the size of the actuator without losing any torque. Up to now, C series pneumatic actuator has successfully got the approvals of CE, SIL3, IECEx and ATEX. Here are the product features and working conditions.

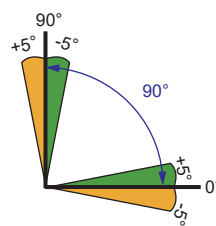
### 1. Specification and Output Torque

Double acting and spring return is available for the actuator. The double acting actuator's output torque range is from 11.9Nm to 8140Nm at 5 bar and the spring return actuator's output torque (fail to closed) range is from 4.3Nm to 4199Nm.

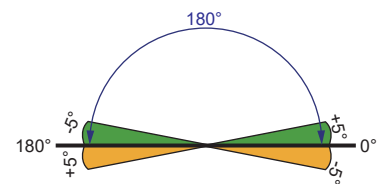


### 2. Travel Stroke and it's adjustment

- 1) Standard stroke: 0°~ 90° with +/-5° adjustment at 0°(Closed) and 90°(Open) stops.
- 2) Large stroke: 0°~ 180° with +/-5° adjustment at 0°(Closed) and 180°(Open) stops. The open stop at 100°, 120°, 130°, 140°, 150°, 160° or 170° also is available for optional.



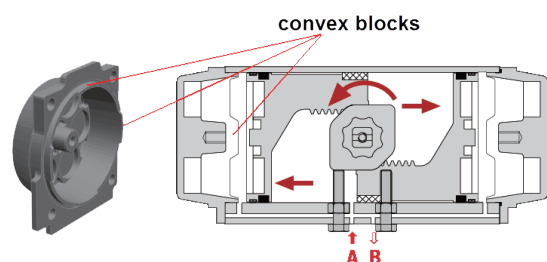
Standard stroke



Large stroke

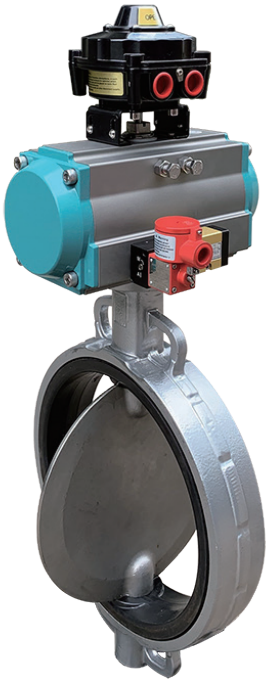
### 3. Safety Limiter

The safety limiter of the C series actuator is achieved by four small convex block on the end cap which can ensure that the meshing motion of piston and pinion is always in a safe state (Maximum rotary travel ≤100° for standard stroke)





## Design and Features



### 4. Namur Interface (VDI/VDE 3845, BS EN15714-3:2009(E))

- 1) Top namur interface design ensures the convenient and standardised assembly installation for accessories, such as the limit switch box, position sensors and positioner.
- 2) Solenoid valve namur interface design are available for pressure connection with NAMUR solenoid valve or in-line solenoid valve directly.

### 5. Valve Mounting (Flange dimensions)

The valve mounting dimensions on C series actuator fully comply with the international standard of ISO5211:2001(E).

### 6. Driving mode

This actuator is able to offer double square (Standard), double D (Special orders) or keyed (FK)(Special orders) female driving mode for a number of different new or existing valve stem configurations.



### 7. Material, Coating and working atmosphere

The body and the end-cap of the actuator are made of extruded aluminum and die-casting aluminum respectively. Hard anodized coated for the body and anodized + polyester coated for the end-cap are standard coating for C series actuator. The nickel phosphorus or PTFE coated are optional for use in a harsh environment.



Hard anodized body + polyester coated end-caps



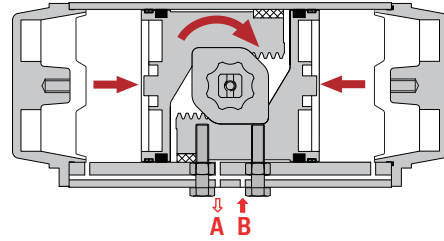
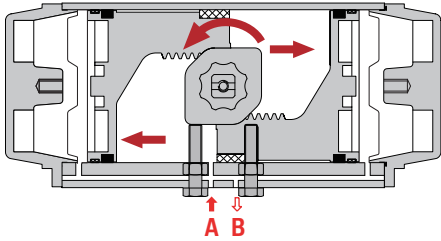
Nickel phosphorus coated



PTFE Coated

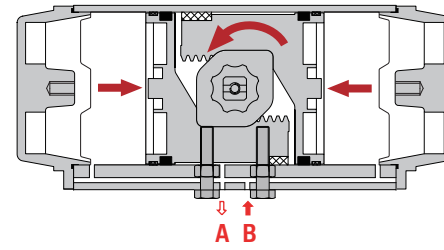
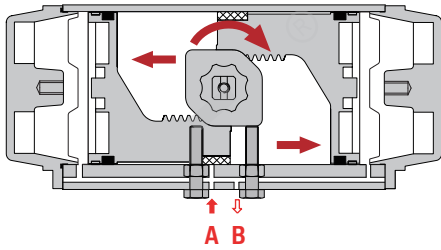
## Double acting

Standard Assembly:



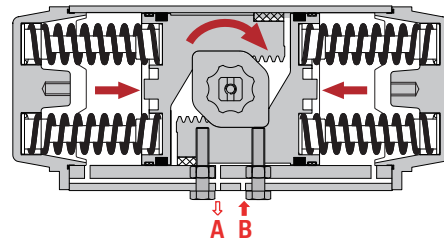
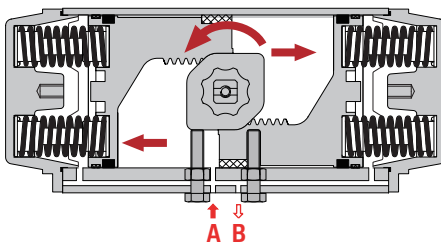
Air to port A forces the pistons outwards, causing the pinion to turn counterclockwise while the air is being exhausted from port B. Air to port B forces the pistons inwards, causing the pinion to turn clockwise while the air is being exhausted from port A.

Reverse Assembly:



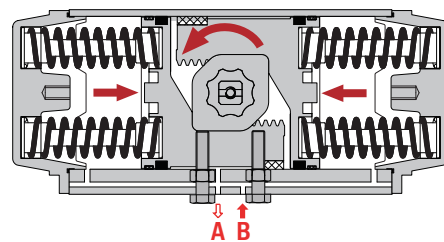
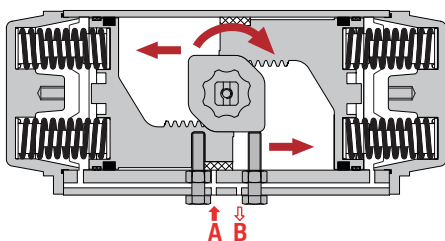
## Spring return

Standard Assembly: (fail to close)



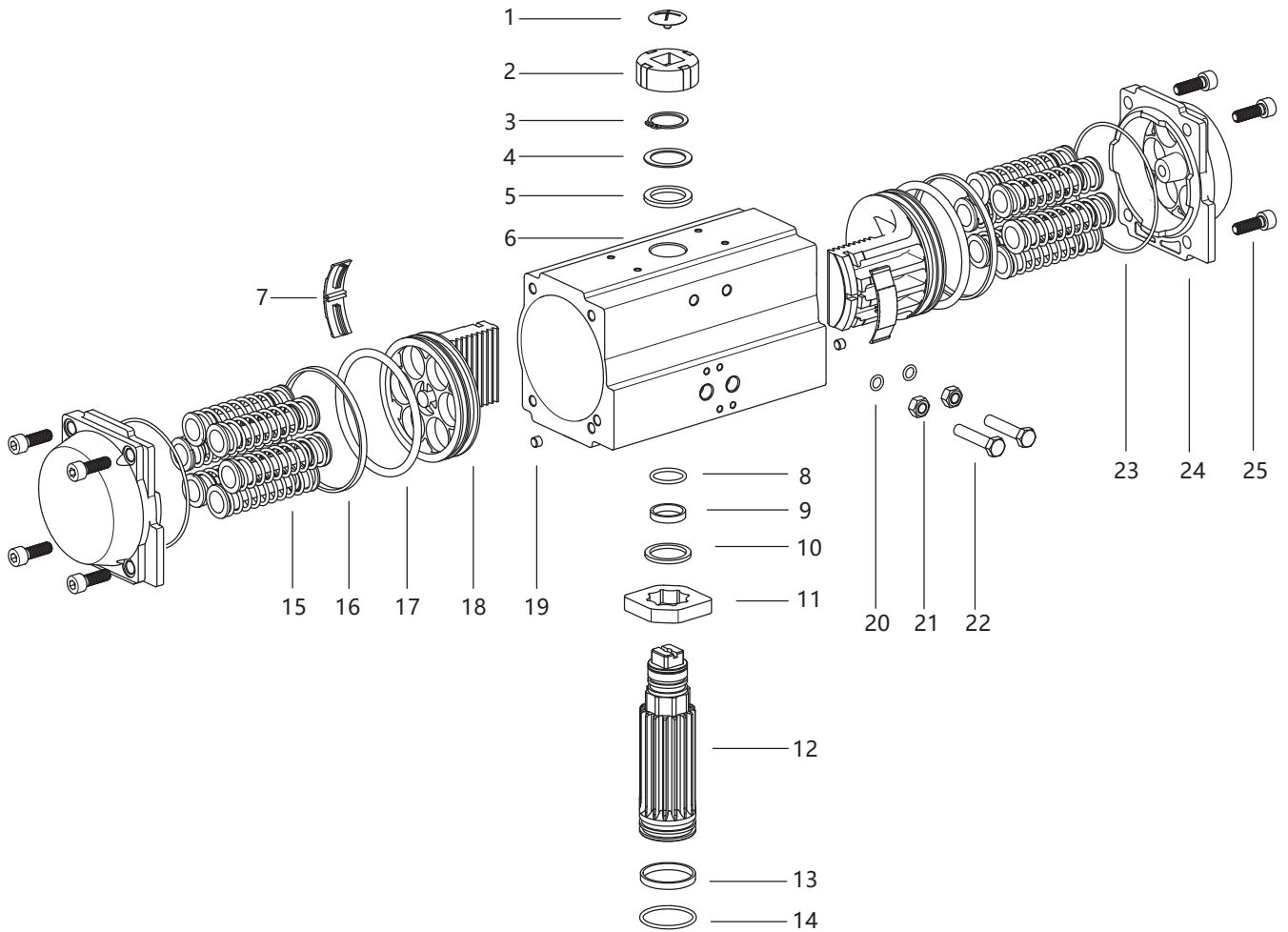
Air to port A forces the pistons outwards, causing the springs to compress, the pinion turns counterclockwise while air is being exhausted from port B. Loss of air pressure on port A, the stored energy in the springs forces the pistons inwards. The pinion turns clockwise while air is being exhausted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

Reverse Assembly (fail to open)

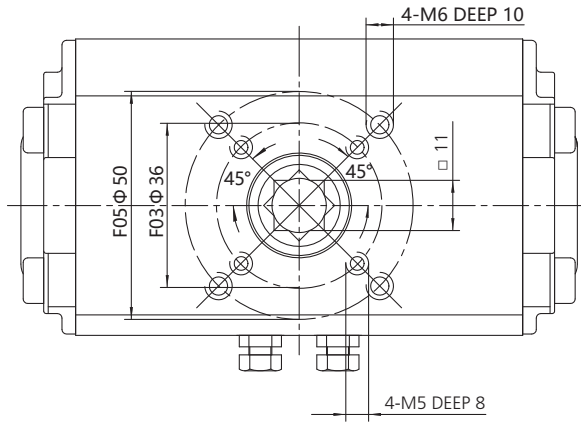




## Assemble, parts and material

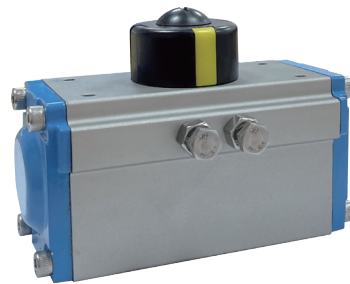
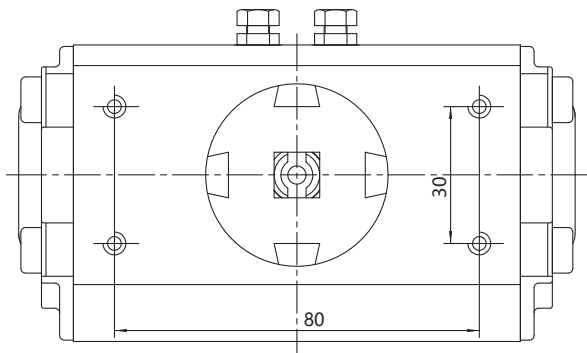
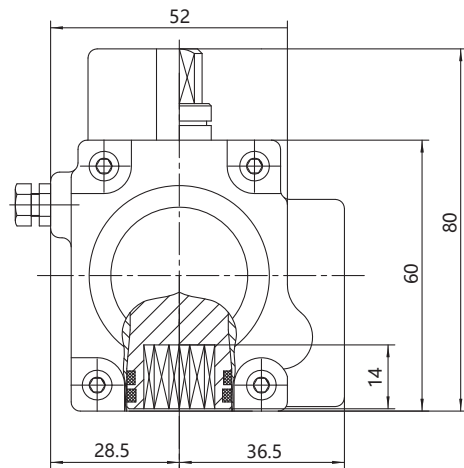
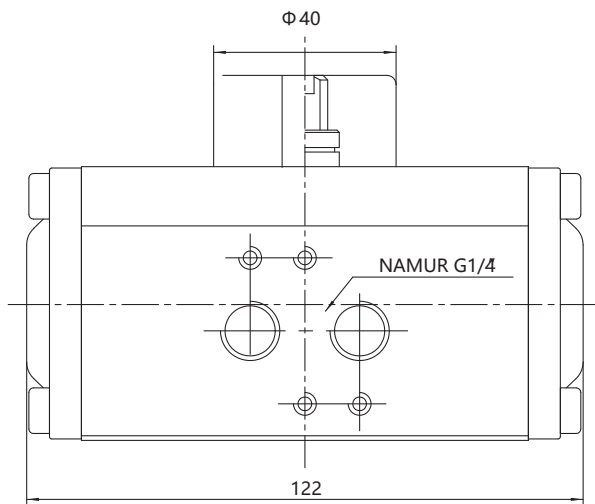


No.	Description	Qty.	Material	No.	Description	Qty.	Material
1	Indicator screw	1	Plastic(ABS)	14	O-ring(pinion bottom)	1	NBR or Viton
2	Indicator	1	Plastic(ABS)	15	Spring	0~12	Spring steel
3	Circlip	1	Stainless steel(304)	16	Bearing (piston)	2	polyoxymethylene
4	Thrust washer	1	Stainless steel(304)	17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

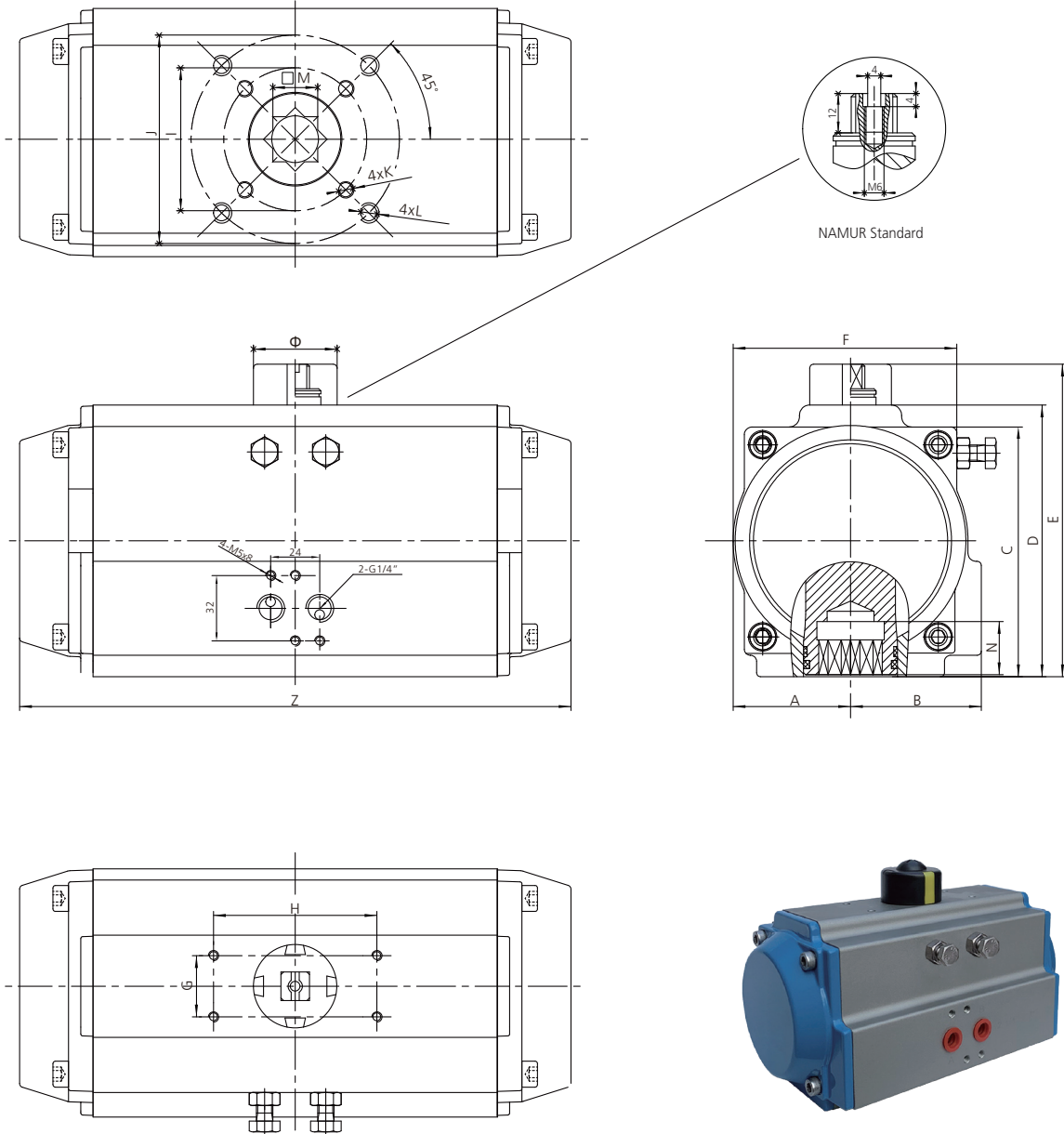


## Dimensional Drawing

### Dimensions For C-40



## Dimension For C-52 ~ C-160



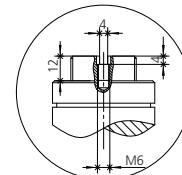
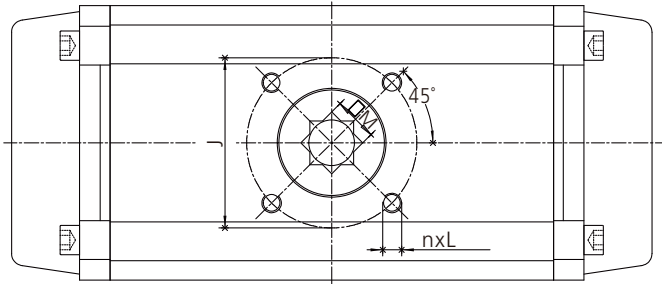
Unit: mm

Model	A	B	C	D	E	F	G	H	I	J	K	L	M	N	Z	Φ	Air Connection
C-52	30	42	66	72	92	65	30	80	Φ36	Φ50	M5x8	M6x10	11	14	145	Φ40	G1/4" (1/4" NPT)
C-63	36	47	81	88	108	72	30	80	Φ50	Φ70	M6x10	M8x13	14	18	166	Φ40	G1/4" (1/4" NPT)
C-75	42	53	94	100	120	81	30	80	Φ50	Φ70	M6x10	M8x13	14	18	180	Φ40	G1/4" (1/4" NPT)
C-83	46	57	99	109	129	92	30	80	Φ50	Φ70	M6x10	M8x13	17	21	205	Φ40	G1/4" (1/4" NPT)
C-92	50	59	111	117	137	98	30	80	Φ50	Φ70	M6x10	M8x13	17	21	265	Φ40	G1/4" (1/4" NPT)
C-105	58	64	123	133	153	110	30	80	Φ70	Φ102	M8x13	M10x16	22	26	270	Φ40	G1/4" (1/4" NPT)
C-125	68	75	146	155	175	128	30	80	Φ70	Φ102	M8x13	M10x16	22	26	302	Φ55	G1/4" (1/4" NPT)
C-140	75	77	161	172	192	138	30	80	Φ102	Φ125	M10x16	M12x20	27	31	394	Φ55	G1/4" (1/4" NPT)
C-160	87	87	184	197	217	158	30	80	Φ102	Φ125	M10x16	M12x20	27	31	451	Φ55	G1/4" (1/4" NPT)

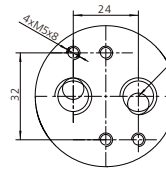


# Dimensional Drawing

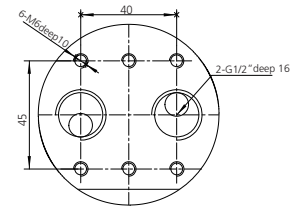
## Dimension For C-190 ~ C-270



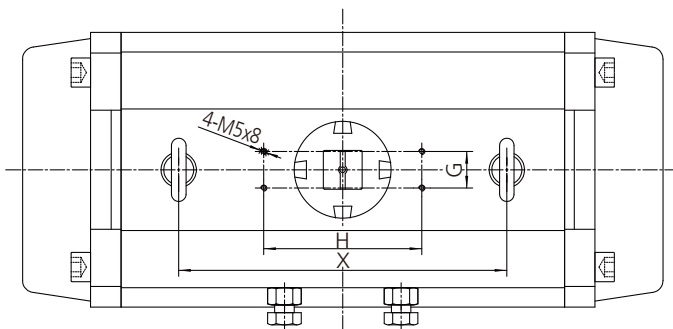
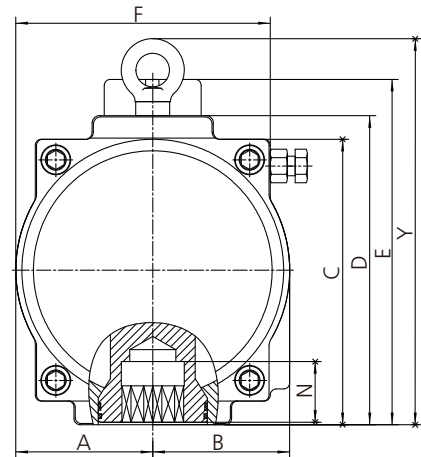
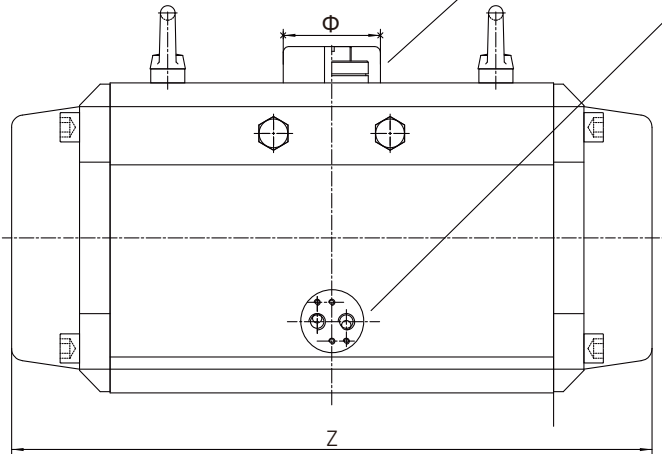
NAMUR Standard



G1/4" NAMUR Standard



G1/2" NAMUR Standard



Unit: mm

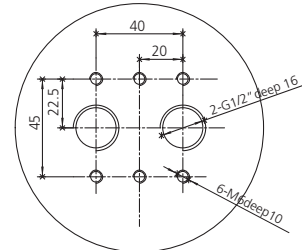
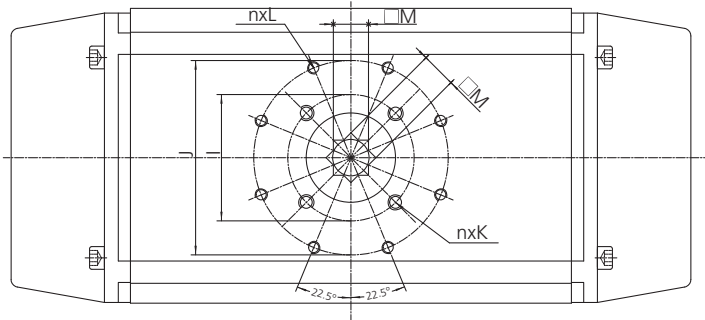
Model	A	B	C	D	E	F	G	H	I	J	K	L	M	N	X	Y	Z	Φ	Air Connection
C-190	103	103	216	230	260	189	30	130		Φ 140		M16x25	36	40	270	294	522	Φ 80	G1/4" (1/4" NPT)
C-210	113	113	236	255	285	210	30	130		Φ 140		M16x25	36	40	270	319	527	Φ 80	G1/4" (1/4" NPT)
C-240	130	130	265	289	319	245	30	130		Φ 165		M20x25	46	50	270	353	598	Φ 80	G1/4" (1/4" NPT)
C-270	147	147	299	326	356	273	30	130		Φ 165		M20x25	46	50	350	400	720	Φ 80	G1/2" (1/2" NPT)



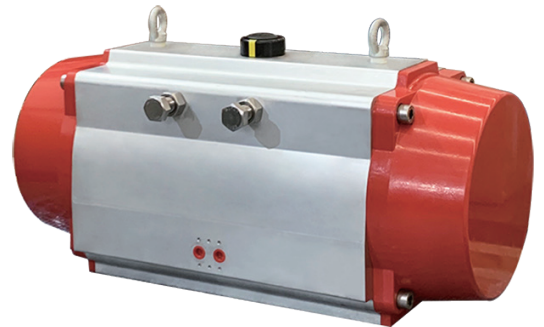
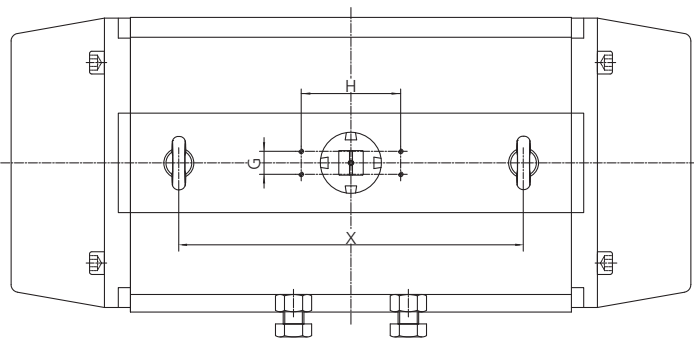
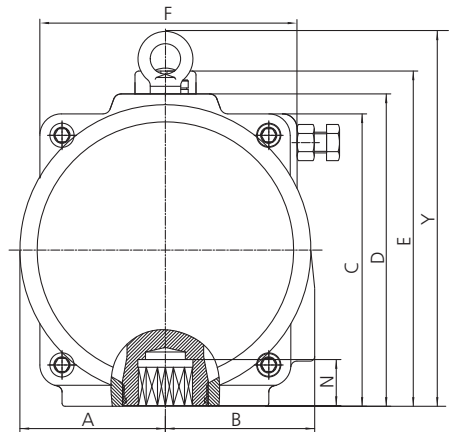
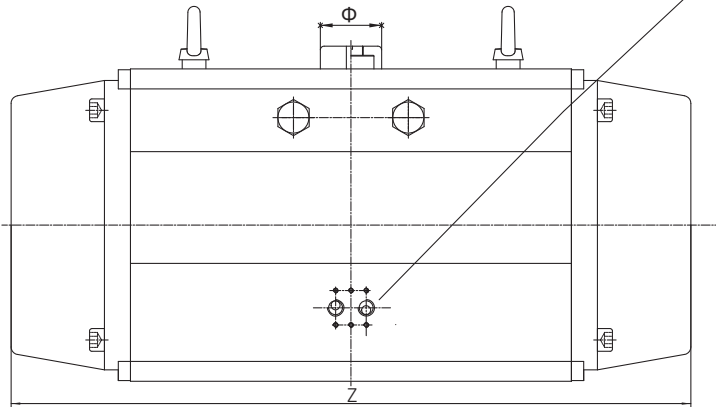


# Dimensional Drawing

## Dimension For C-300 ~ C-350



ISO0228-1  
G1/2" NAMUR Standard



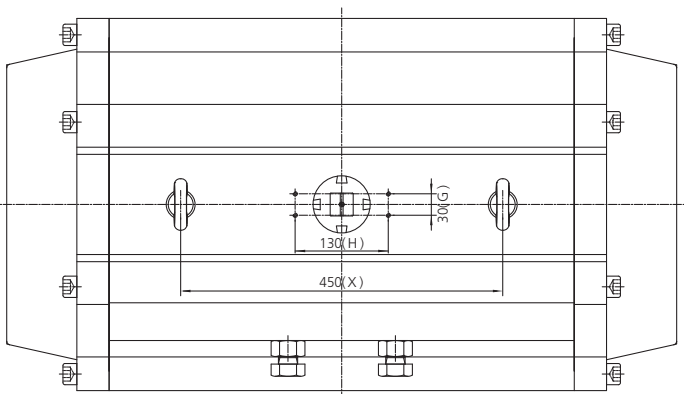
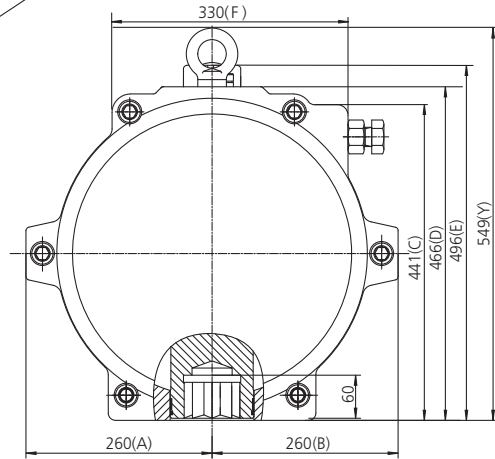
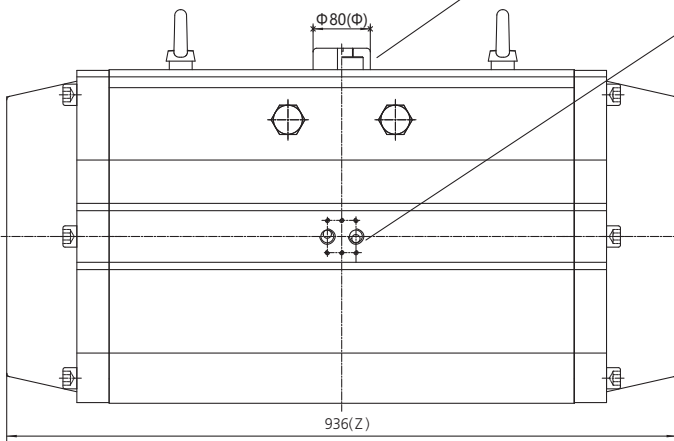
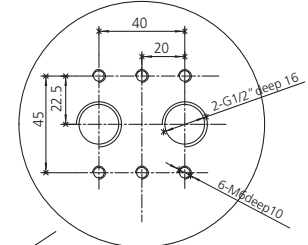
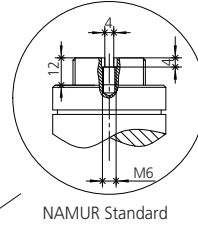
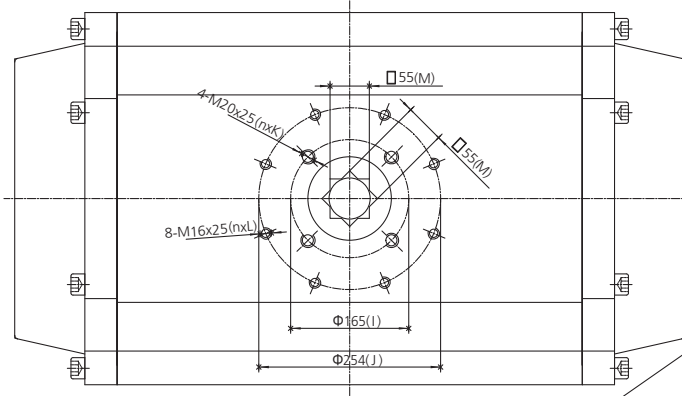
Unit: mm

Model	A	B	C	D	E	F	G	H	I	J	K	L	M	N	X	Y	Z	Φ	Air Connection
C-300	160	173	329	352	382	289	30	130	Φ165	Φ215	4-M20x25	4-M20x25	46	60	350	426	757	Φ 80	G1/2" (1/2" NPT)
C-350	190	195	382	408	438	336	30	130	Φ165	Φ254	4-M20x25	8-M16x25	46	60	450	482	888	Φ 80	G1/2" (1/2" NPT)



# Dimensional Drawing

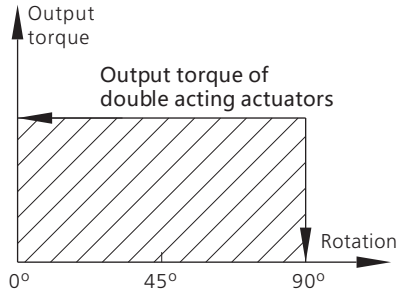
## Dimension For C-400





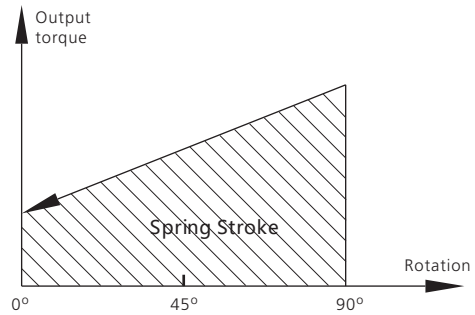
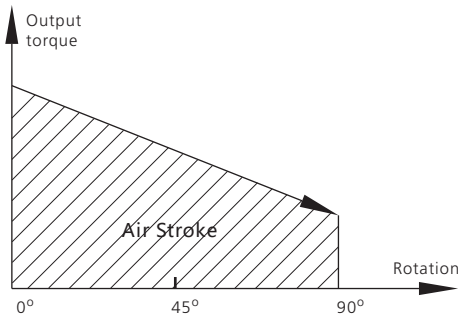
# Output Torque

## 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	2289	3052	3434	3815	4197	4578	5341	6104
C350DA	2285	2856	3427	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		90°	0°	
		0°	90°	0°	90°	0°	90°	0°	90°	0°	90°	0°	90°	0°	90°	0°	90°			
C52SR	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	
	12									9.7	4.2	13.8	9.1	17.8	12.2	21.8	17.1	14.8	10.2	
	C63SR	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

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	90° Start	0° 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

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	
	12									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	
12										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	
	12									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	
12										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	
	12									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	
12										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	



## Technical Data

### 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 temperature (NBR O-ring) : -20°C ~ +80°C

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

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

Cold temperature (LNBR-P O-ring) : -50°C ~ +80°C

Cold temperature (LNBR-P O-ring) : -60°C ~ +80°C

#### 4. 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	0.06	0.07	C-160	3.81	4.91
C-52	0.12	0.15	C-190	6.15	7.85
C-63	0.21	0.23	C-210	7.53	9.94
C-75	0.30	0.37	C-240	11.09	14.41
C-83	0.42	0.54	C-270	16.61	22.09
C-92	0.64	0.90	C-300	22.94	28.19
C-105	0.95	1.19	C-350	33.22	46.08
C-125	1.49	1.84	C-400	50.11	66.97
C-140	2.47	3.16			

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

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

## 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	209
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	252

## 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°
40DA	0.5	0.5	40SR	-	-	-	-	-	-	-	-	-	-	-	-	-	-
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

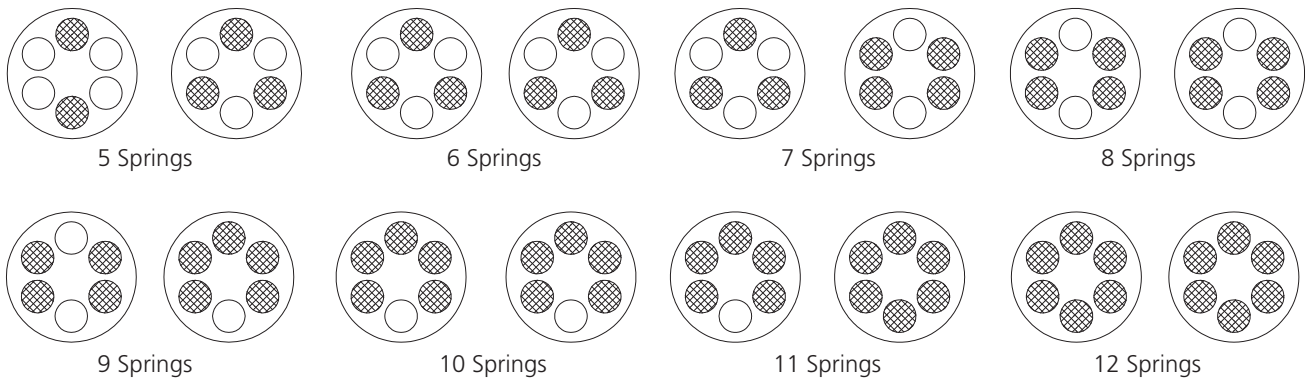
Air Pressure: 5 bar



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

## Mounting Configuration

1. To ensure long term trouble-free operation, C series pneumatic actuator uses preloaded springs for fail closed serves.
2. The springs are made from piano spring material with cartridge structure which can be demounted safely and conveniently to drive a variety of valves by changing quantity of springs.



## 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.