

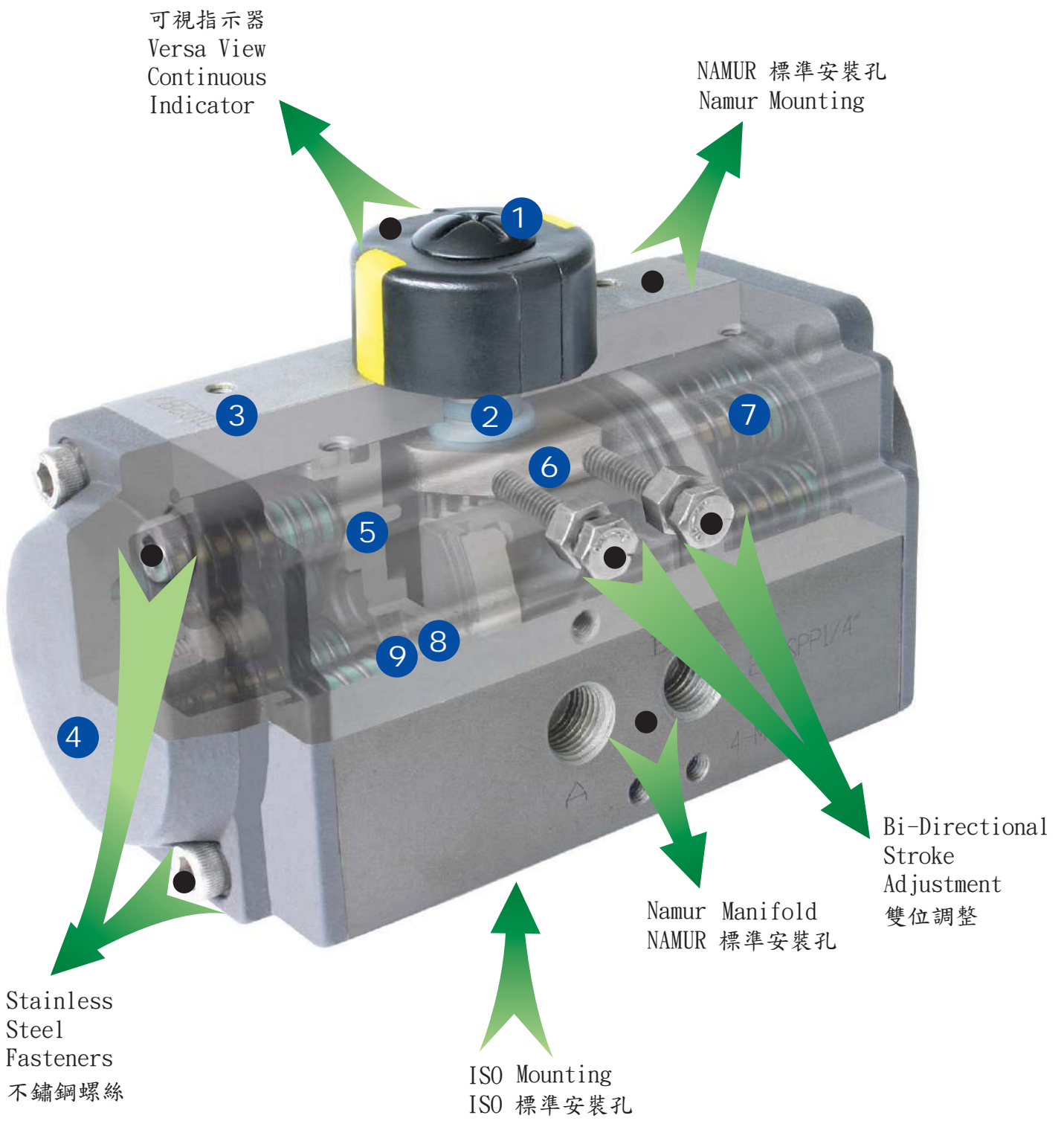
*HoChün*

氣動執行器

Pneumatic actuator



合勤興業有限公司



可視指示器  
Versa View  
Continuous  
Indicator

NAMUR 標準安裝孔  
Namur Mounting

Stainless  
Steel  
Fasteners  
不鏽鋼螺絲

ISO Mounting  
ISO 標準安裝孔

Namur Manifold  
NAMUR 標準安裝孔

Bi-Directional  
Stroke  
Adjustment  
雙位調整

## 結構 Construction

### 1 指示器 Indicator

NAMUR 標準指示器便于安裝位置開關、定位器等附件。

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

### 2 輸出軸 Pinion

鍍鎳合金鋼、高精度一體式輸出軸同時符合NAMUR、ISO5211、DIN3337標準。可根據客戶要求訂製尺寸和不鏽鋼材料。

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

### 3 缸體 Actuator Body

ASTM6005壓鑄鋁合金缸體可以採用硬質氧化、環氧樹脂噴塗（根據要求噴塗藍色、橙色、黃色等）、PTFE塗層或鍍鎳滿足不同要求。

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

### 4 端蓋 End caps

壓鑄鋁合金表面金屬粉末噴塗各種顏色、PTFE塗層或鍍鎳處理。

Die-casting aluminum powder polyester painted in different colours, PTFE or Nickel plated.

### 5 活塞 Pistons

雙活塞齒條採用鑄鋁硬質氧化或鑄鋼鍍鋅處理，安裝位置對稱、運作迅速、使用壽命長，簡單的顛倒活塞可以改變旋轉方向。

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 行程調節 Travel adjustment

兩個獨立的行程調節螺絲可以進行方便、精確 $\pm 5^\circ$ 的調節開、關位置。

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



### 7 高性能彈簧 High performance springs

採用優質材料、塗層處理，預壓裝配。具有較強的抗腐蝕性和使用壽命。能夠安全、簡單的拆卸單動執行器，通過改變彈簧數量滿足不同的力矩輸出範圍。

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

### 8 軸承、導板 Bearings & Guides

採用低摩擦、長壽命複合材料，避免了金屬與金屬的直接接觸，維修更換簡單方便。

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

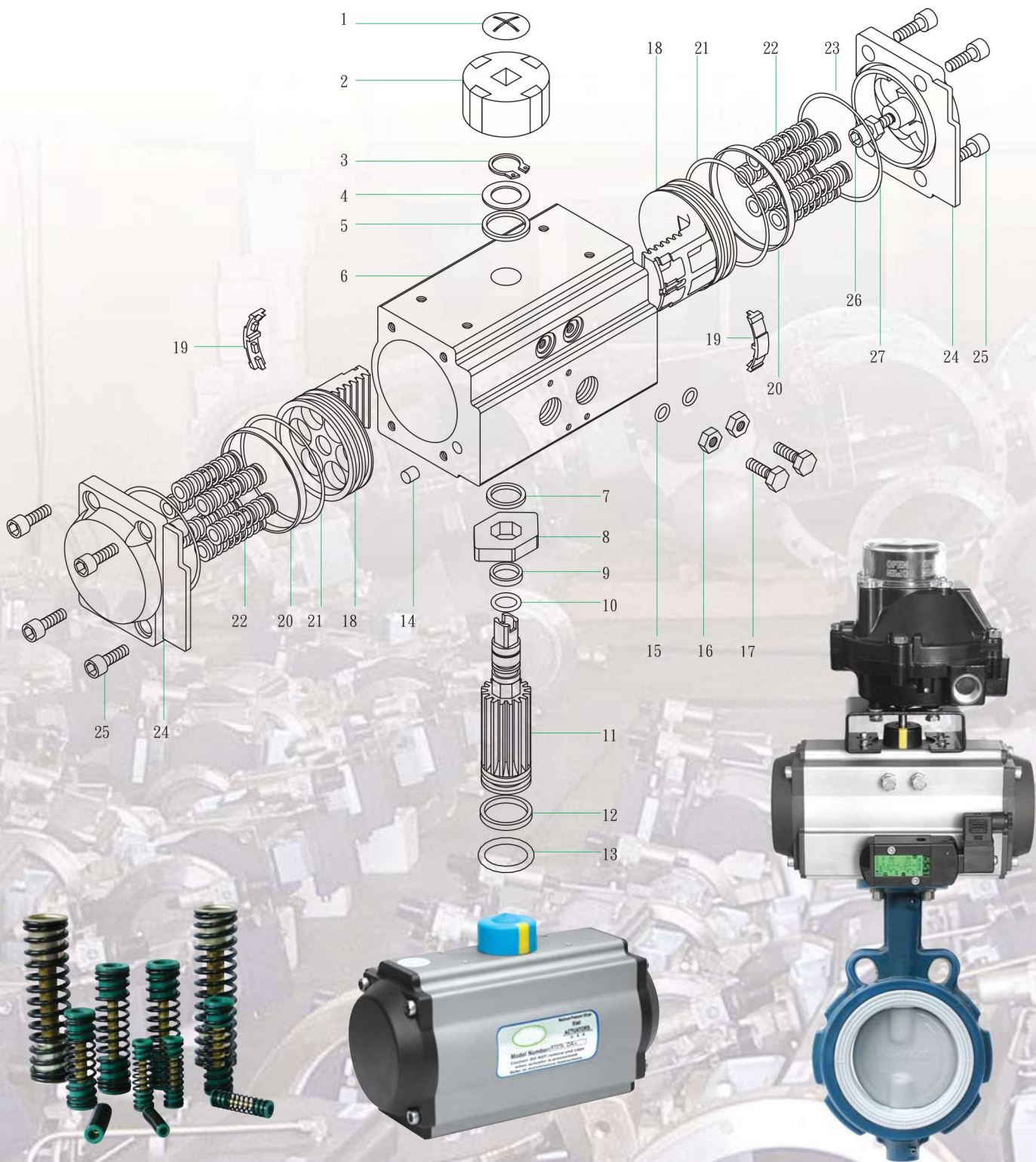
### 9 O-rings 密封

在常溫工作條件下使用丁腈橡膠，在高溫或低溫時採用氟橡膠或硅橡膠。

NBR rubber O-rings provide trouble-free operation at standard temperature ranges. For high and low temperature applications Viton or Silicone.



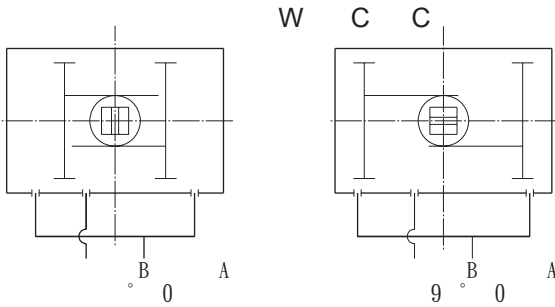
零件和材料 Parts and Material



序號	名稱	數量	材 料	防腐處理	可選材料
1	指示器螺絲	1	塑 膠		
2	指示器	1	塑 膠		
3	卡 簧	1	不銹鋼		
4	墊 圈	1	不銹鋼		
5	外墊片	1	工程塑膠		
6	缸 體	1	鑄 鋁	硬質氧化等	
7	內墊片	1	工程塑膠		
8	凸 輪	1	合金鋼		
9	上軸軸承	1	工程塑膠		
10	上軸O_RING	1	丁腈橡膠		氟橡膠/硅橡膠
11	齒 軸	1	合金鋼	鍍鎳	不銹鋼
12	下軸軸承	1	工程塑膠		
13	下軸O_RING	1	丁腈橡膠		氟橡膠/硅橡膠
14	堵 頭	2	丁腈橡膠		氟橡膠/硅橡膠
15	調節螺絲O_RING	2	丁腈橡膠		氟橡膠/硅橡膠
16	調節螺絲螺母	2	不銹鋼		
17	調節螺栓	2	不銹鋼		
18	活 塞	2	鑄鋁/鑄鋼	氧化/鍍鋅	不銹鋼
19	活塞導板	2	工程塑膠		
20	活塞軸承	2	工程塑膠		
21	活塞O_RING	2	丁腈橡膠		氟橡膠/硅橡膠
22	彈 簧	0~12	彈簧鋼	浸漆	
23	端蓋O_RING	2	丁腈橡膠		氟橡膠/硅橡膠
24	端 蓋	2	鑄 鋁	粉末噴塗等	
25	端蓋螺栓	8	不銹鋼		
26	限位螺栓	2	不銹鋼		
27	限位螺母	2	不銹鋼		

No.	Description	Qty	STANDARD MATERIAL	PROTECTION	OPTIONAL MATERIAL
1	Indicator screw	1	plastic		
2	Indicator	1	plastic		
3	Spring clip	1	Stainless Steel		
4	Thrust washer	1	Stainless Steel		
5	Outside washer	1	engineering plastics		
6	Body	1	Extruded aluminum alloy	Hard anodized etc	
7	Inside washer	1	engineering plastics		
8	Cam	1	Alloy steel		
9	O-ring (pinion top)	1	NBR		Viton/Silicone
10	Bearing(pinion top)	1	engineering plastics		
11	Pinion	1	Alloy steel	Nickel plated	Stainless Steel
12	O-ring pinion bottom)	1	engineering plastics		
13	Bearing(pinion bottom)	1	NBR		Viton/Silicone
14	Plug	2	NBR		Viton/Silicone
15	O-ring(Adjust screw)	2	NBR		Viton/Silicone
16	Nut(Adjust screw)	2	Stainless Steel		
17	Adjust screw	2	Stainless Steel		
18	Piston	2	Cast aluminum/casting	anodized/Zinc galvanized	Stainless Steel
19	Guide(Piston)	2	engineering plastics		
20	Bearing(Piston)	2	engineering plastics		
21	O-ring(Piston)	2	NBR		Viton/Silicone
22	Spring	0~12	Spring steel	dip coating	
23	O-ring(End cap)	2	NBR		Viton/Silicone
24	End cap	2	Cast aluminum	powder polyester painted etc	
25	Cap screw	8	Stainless Steel		
26	Stop screw	2	Stainless Steel		
27	Nut(stop screw)	2	Stainless Steel		

## 雙動執行器 Double Acting Actuators

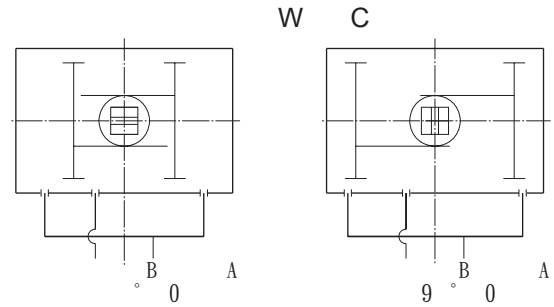


A 進氣，壓縮空氣推動活塞向外運動，使執行器輸出軸逆時針旋轉(0°→90°)，B 排氣。

B 進氣，壓縮空氣推動活塞向內運動，使執行器輸出軸順時針旋轉(90°→0°)，A 排氣。

**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.**



A 進氣，壓縮空氣推動活塞向外運動，使執行器輸出軸順時針旋轉(0°→90°)，B 排氣。

B 進氣，壓縮空氣推動活塞向內運動，使執行器輸出軸逆時針旋轉(90°→0°)，A 排氣。

**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 counterclockwise while the air is being exhausted from Port A.**

雙動執行器輸出力矩 Output Torque of Double Acting Actuators

(Unit: Nm)

Model 型號	Air supply pressure (Unit: Bar)					輸入氣源壓力(單位：巴)				
	2.5	3	3.5	4	4.5	5	5.5	6	7	8
HC-RD32	3.0	4.0	5.0	6.0	7.0	8.0	8.5	9.0	11.0	12.0
HC-RD40	5.0	6.0	7.0	10.0	11.0	12.0	13.0	14.0	17.0	19.0
HC-RD52	8.0	10.0	12.0	16.0	18.0	20.0	21.9	23.9	27.9	31.9
HC-RD63	14.6	18.2	21.9	29.2	32.8	36.5	40.1	43.8	51.1	58.4
HC-RD75	20.1	25.1	30.1	40.1	45.1	50.2	55.2	60.2	70.2	80.3
HC-RD83	31.4	39.2	47.0	62.7	70.5	78.4	86.2	94.1	109.7	125.4
HC-RD92	45.1	56.4	67.7	90.3	101.6	112.9	124.1	135.4	158.0	180.6
HC-RD105	66.1	82.7	99.2	132.2	148.8	165.3	181.8	198.4	231.4	264.5
HC-RD125	100.3	125.4	150.5	200.6	225.7	250.8	275.9	301.0	351.1	401.3
HC-RD140	171.0	213.8	256.5	342.0	384.8	427.5	470.3	513.0	598.5	684.0
HC-RD160	266.0	332.5	399.0	532.0	598.5	665.0	731.5	798.0	931.0	1064.0

雙動執行器的選擇：

在正常操作條件下，雙動執行器考慮的安全係數為20%-30%。

範例：

- 閥門力矩=100Nm
- 安全力矩=100×(1+30%)=130Nm
- 氣源壓力=5Bar

對照雙動輸出力矩表，選配雙動執行器最小規格為 RT160DA。

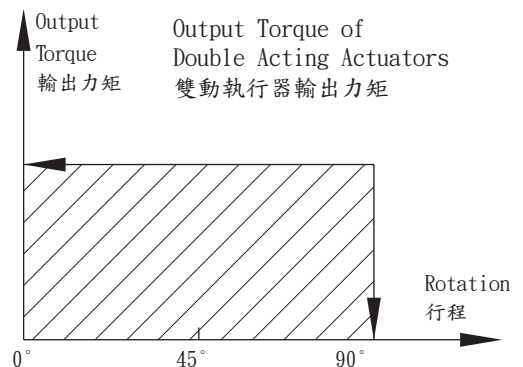
**Sizing: Double Acting Actuator**

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

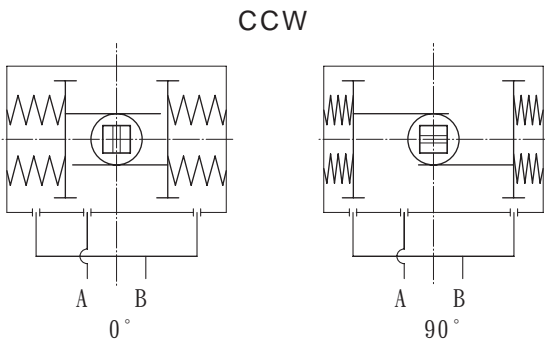
**Example:**

- 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 RT160DA.



## 單動執行器 Spring Return Actuators

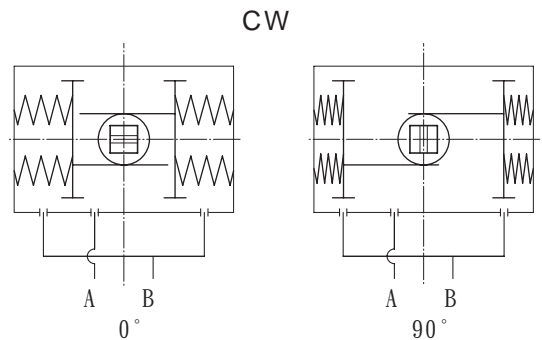


A 進氣，壓縮空氣克服彈簧力，推動活塞向外運動，執行器輸出軸逆時針轉動( $0^\circ \rightarrow 90^\circ$ )，B 排氣；

當氣源停止輸入，活塞在彈簧力的作用下向內運動，執行器輸出軸順時針轉動( $90^\circ \rightarrow 0^\circ$ )，A 排氣。

**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.**



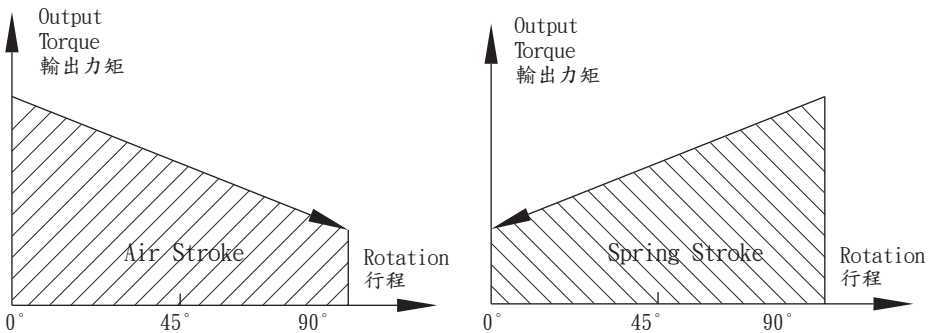
A 進氣，壓縮空氣克服彈簧力，推動活塞向外運動，執行器輸出軸順時針轉動( $0^\circ \rightarrow 90^\circ$ )，B 排氣；

當氣源停止輸入，活塞在彈簧力的作用下向內運動，執行器輸出軸逆時針轉動( $90^\circ \rightarrow 0^\circ$ )，A 排氣。

**Air to port B 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.**

單動執行器輸出力矩 Output Torque of Spring Return Actuators



### 注意

確保執行器的輸出扭矩和驅動閥門所需要的扭矩相符（執行器的型號和氣源壓力）。

請注意，挑選型號力矩不僅取決於閥門，還要考慮相關的環境、安全係數等參數。

### NOTE

Make sure that the torque necessary to operate the valve is compatible with the actuator torque (it depends on both actuator type and air supply).

Please note that the requested torque depends not only on the valve, but on the working conditions and the safety margins of the plant in question, too.





(Unit: Nm)

## 單動執行器輸出力矩 Output Torque of Spring Return Actuators

Air pressure 氣源壓力		輸出力矩 Output torque of air to springs														Springs' output 彈簧輸出力矩	
Model 型號	Spring Q.ty 彈簧 數量	2.5Bar		3Bar		4Bar		5Bar		6Bar		7Bar		8Bar		90° 開始	0° 結束
		0° Start 開始	90° End 結束	0° Start 開始	90° End 結束	0° Start 開始	90° End 結束	0° Start 開始	90° End 結束	0° Start 開始	90° End 結束	0° Start 開始	90° End 結束	0° Start 開始	90° End 結束		
HC-RS52	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
HC-RS63	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					1.4	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
HC-RS75	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
HC-RS83	5	23.3	16.1	31.1	24.0	46.8	39.7									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
HC-RS92	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
HC-RS105	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



(Unit: Nm)

		單動執行器輸出力矩 Output Torque of Spring Return Actuators																	
		輸出力矩 Output torque of air to springs														Springs' output 彈簧輸出力矩			
Air pressure 氣源壓力		2.5Bar		3Bar		4Bar		5Bar		6Bar		7Bar		8Bar		彈簧輸出力矩			
Model 型號	Spring Q. ty 彈簧數量	0°		90°		0°		90°		0°		90°		0°		90°			
		Start 開始	End 結束	Start 開始	End 結束	Start 開始	End 結束	Start 開始	End 結束	Start 開始	End 結束	Start 開始	End 結束	Start 開始	End 結束	Start 開始	End 結束		
HC-RS125	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
	HC-RS140	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
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
HC-RS160		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	237	575	465	708	598					333
	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
	HC-RS190	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
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
HC-RS210		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
	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

## 單動執行器的選型 Sizing: Spring Return Actuators

在正常工作條件下，單動執行器考慮的安全係數為30%-50%

例如：

閥門需要力矩=80N.m

安全力矩=80(1+30%)=104N.m

氣源壓力=5Bar

對照單動執行器輸出力矩表，我們可以查到

HC-RS435

K7輸出力矩為

空氣行程0°=308N.m

空氣行程90°=247N.m

彈簧行程90°=181N.m

彈簧行程0°=120N.m

所有輸出力矩均大於我們需求。

注意：

單動執行器彈簧復位過程中，執行器 B點通氣不影響執行器輸出力矩，相反幫助彈簧的復位。

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%)=104 N.m

Air Supply=5Bar

According to the table of spring return actuators' output, we find output torque of HC-RS435 K7 is:

Air stroke 0°=308N.m

Air stroke 90°=247N.m

Spring stroke 90°=181 N.m

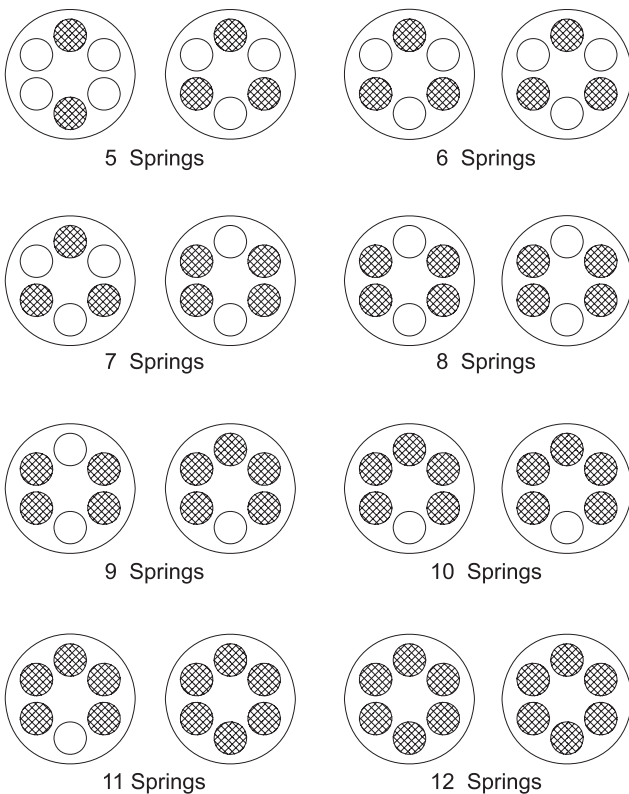
Spring stroke 0°=120N.m

All the output torque is larger than we needed.

Attention:

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

## 單動執行器彈簧安裝形式 Spring mounting form for spring return actuators



在單動執行器的選配過程中，如果能夠了解閥門在開啟、運行和關閉時的扭矩分配，我們就可以更加經濟、更加合理地選配執行器。

During selecting the spring return actuators, we can choose the more reasonable and more economical actuators, if we know the different torque needed by the valve working at opening, operating and closing.

Example:

The max torque needed by the butterfly valve=104N.m

The torque after opened (operating)104x30%=32N.m

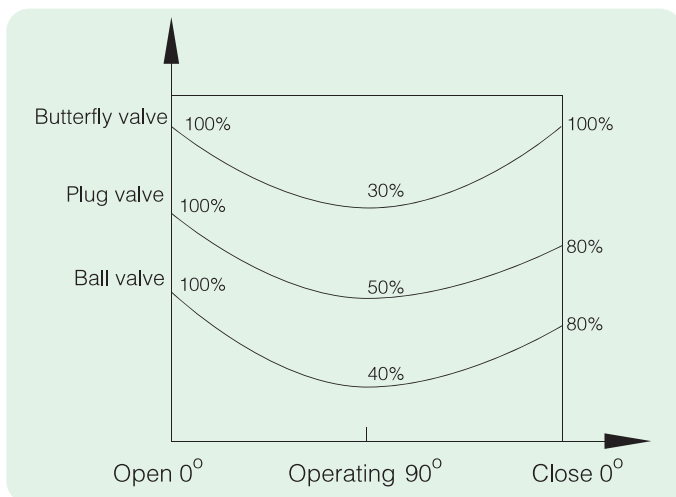
Air Supply=5Bar

We can select the RT255SR K11

output torque is:

- Air stroke 0°=136N.m >104N.m
- Air stroke 90°=78N.m >32N.m
- Spring stroke 90°=173N.m >32N.m
- Spring stroke 0°=115N.m >104N.m

The above datas show the actuator's torque can satisfy the requirement of the butterfly valve.



例如：

蝶閥最大扭矩=104N.m

打開後扭矩104x30%=32N.m

氣源壓力=5Bar

我們可以選擇 HC-RS255 K11

空氣行程0°=136N.m>104N.m

空氣行程90°=78N.m>32N.m

彈簧行程90°=173N.m>32N.m

彈簧行程0°=115N.m>104N.m

以上數據顯示可以滿足該蝶閥的正常啟閉。

### 工作技術條件 Operating conditions

#### 1、工作介質

乾燥或潤滑的空氣或無腐蝕性氣體介質中雜質微粒小於30 um。

#### 2、氣源壓力

最小氣源壓力2.5 BAR，最大氣源壓力8 BAR。

#### 3、介質環境溫度

標準：-20°C~+80°C

低溫：-35°C~+80°C

高溫：-150°C~+150°C

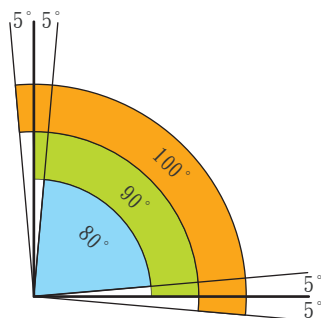
#### 4、行程調節

0°和90°兩個位置有±5°

的調節範圍

#### 5、使用場合

室內或室外安裝



#### 1.Operating media

Dry or lubricated air, or the non-corrosive gases

The maximum particle diameter must less than 30 vm

#### 2. Air supply pressure

The minimum supply pressure is 2.5 Bar

The maximum supply pressure is 8 Bar

#### 3.Operating temperature

Standard:-20°C~+80°C

Low temperature:-35°C~+80°C

High temperature:-15°C~+150°C

#### 4.Travel adjustment

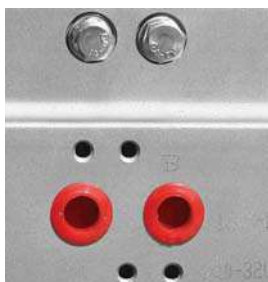
Have adjustment range of ±5° for the rotation at 0° and 90°

#### 5.Application

Either indoor or outdoor

#### 動作形式 Operating Type

單動和雙動 Spring return and Double Acting



氣源接口符合NAMUR標準，可簡單方便地安裝電磁閥。

Air supply connection is designed in accordance with NAMUR Standard to install solenoid valves.



輸出軸的NAMUR標準槽和缸體上部標準安裝孔，可使限位開關、定位器直接組合和安裝。

The Namur drive pinion and the Namur top mounting connection permit direct installation of accessories such as limit switch box and positioner.

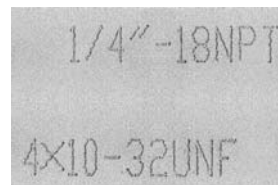
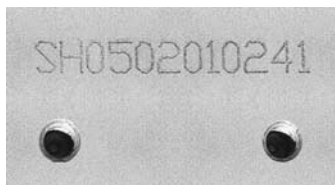


底部安裝孔設計符合ISO5211、口IN3337標準，可以直接安裝離合器(氣動手輪機構)或安裝支架。

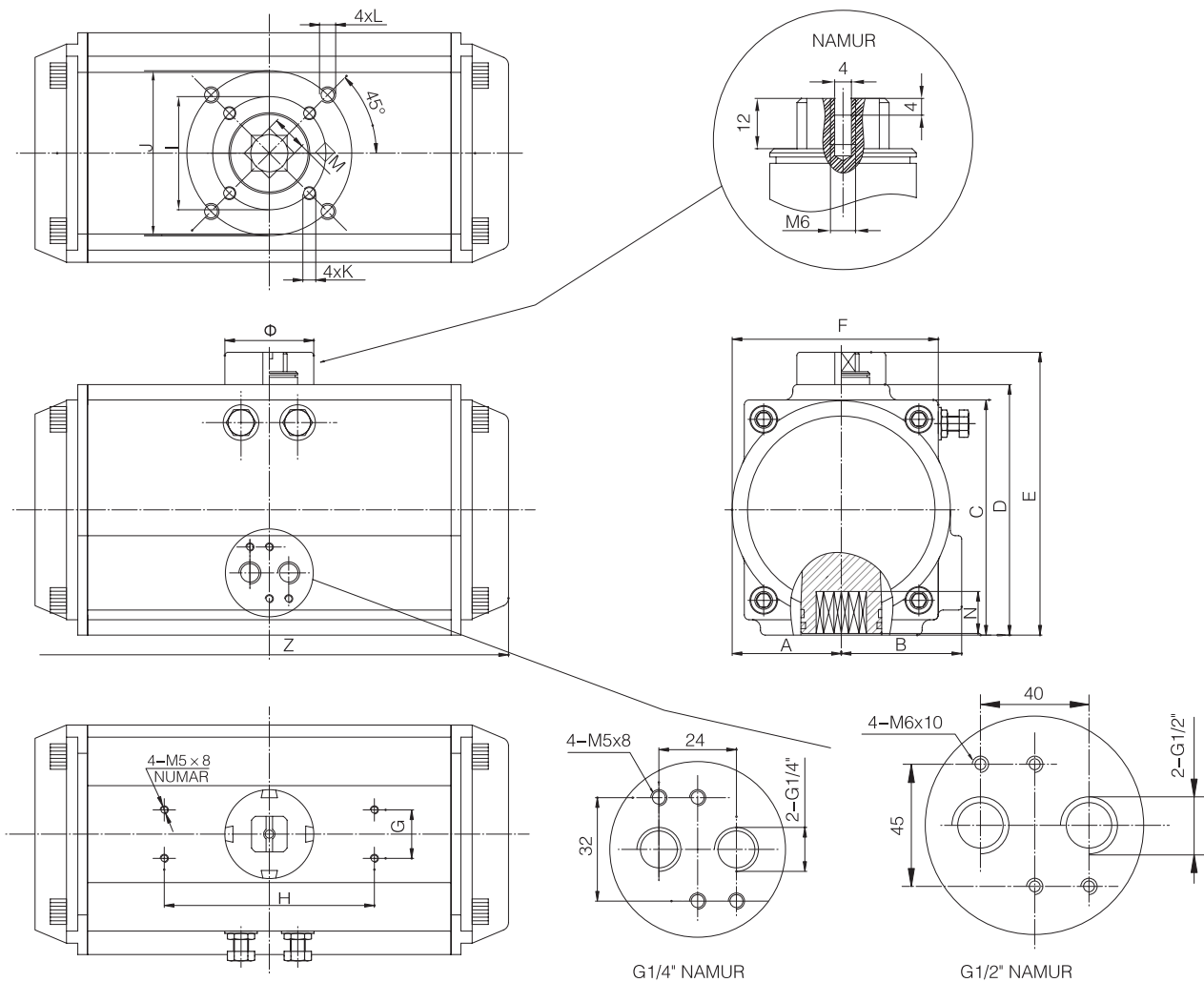
Bottom mounting connection is designed in accordance with ISO5211 and DIN3337 standards for direct mounting with valve gear boxes or mounting brackets.

產品序列號、氣源接口及底部安裝孔全部電腦打字，易於辨識和追蹤服務。

Each actuator is marked with a serial number, air connection and bottom mounting holes are marked for easy track and distinction.



## 外觀尺寸 Dimension



	A	B	C	D	E	F	G	H	I	J	K	L	M	N	Z	Φ	氣源接口 Air connection
RD32	22	24		45	71	47	30	50			M5x8		9	12	109	Φ40	NAMUR G1/8"
RD40	32	37	60	63	89	49	30	80	Φ36	Φ50	M5x8	M6x10	11	13	124	Φ40	NAMUR G1/4"
RD52	36	47.5	65.5	72	89.5	65	30	80	Φ36	Φ50	M5x8	M6x10	11	14	154	Φ40	NAMUR G1/4"
RD63	42	50	81	87.5	114	72	30	80	Φ50	Φ70	M6x10	M8x13	14	18	175	Φ40	NAMUR G1/4"
RD75	43	53.3	94	99.5	126	81	30	80	Φ50	Φ70	M6x10	M8x13	14	18	190	Φ40	NAMUR G1/4"
RD83	46	57.2	98.5	108.7	135	92	30	80	Φ50	Φ70	M6x10	M8x13	17	21	215	Φ40	NAMUR G1/4"
RD92	50	58.4	111	116.5	143	98	30	80	Φ50	Φ70	M6x10	M8x13	17	21	244	Φ40	NAMUR G1/4"
RD105	58	64	122.5	133	161	109.5	30	80	Φ70	Φ102	M8x13	M10x16	22	26	280	Φ40	NAMUR G1/4"
RD125	68	75	145.5	155	175	127.5	30	80	Φ70	Φ102	M8x13	M10x16	22	26	301	Φ55	NAMUR G1/4"
RD140	75	77	161	172	192	137.5	30	80	Φ102	Φ125	M10x16	M12x20	27	31	390	Φ55	NAMUR G1/4"
RD160	87	87	184	197	217	158	30	80	Φ102	Φ125	M10x16	M12x20	27	31	458	Φ55	NAMUR G1/4"
RD190	104	103	213	230	260	189	30	130		Φ140		M16x25	36	40	525	Φ80	NAMUR G1/4"
RD210	113	133	235.5	255	285	210	30	130		Φ140		M16x25	36	40	532	Φ80	NAMUR G1/4"



## 耗氣量 Air Consumption

雙動執行器(5 Bar)			開啟和關閉的耗氣量 Air volume opening & closing			Unit: L
Model 型號	Air volume opening 開啟容積(升)	Air volume closing 關閉容積(升)	Model 型號	Air volume opening 開啟容積(升)	Air volume closing 關閉容積(升)	
HC-RD32	0.12	0.16	HC-RD105	2.5	2.2	
HC-RD40	0.21	0.23	HC-RD125	3.7	3.2	
HC-RD52	0.3	0.34	HC-RD140	5.9	5.4	
HC-RD63	0.43	0.47	HC-RD160	7.5	7.5	
HC-RD75	0.64	0.73				
HC-RD83	0.95	0.88				
HC-RD92	1.6	1.4				

### Air consumption rest with Air Supply. Air volume and Action cycle times, expressions:

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

耗氣量取決於供氣壓力、開關行程、體積及動作次數，計算如下：

$$\text{升/分} = \text{氣缸體積 (打開容積 + 關閉容積)} \times \left[ \frac{\text{供氣壓力 (Kpa)} + 101.3}{101.3} \right] \times \text{次數/分鐘}$$

Series	Model 型號	Spring Qty. 彈簧數量	Options
HC - RD 雙動執行器	032	K5	120°, 140°, 180° for special degree operation
	040	K6	
	052	K7	
	063	K8	
HC - RS 單動執行器	075	K9	SS Stainless Steel Pinion
	083	K10	
	092	K11	
		K12	

Series	Model 型號	Spring Qty. 彈簧數量	Options
HC - RD 雙動執行器	105	K5	120°, 140°, 180° for special degree operation
	125	K6	
	140	K7	
	160	K8	
	190	K9	
HC - RS 單動執行器	210	K10	SS Stainless Steel Pinion
		K11	
		K12	

## 重量表 Weight Table

Model 型號	RD32	RD40	RD52	RD63	RD75	RD83	RD92
重量(雙動)	0.51kg	0.79kg	1.3kg	2.0kg	2.5kg	3.12kg	4.01kg
重量(單動)		0.9kg	1.4kg	2.1kg	2.67kg	3.62kg	4.71kg

Model 型號	RD105	RD125	RD140	RD160	RD190
重量(雙動)	5.68kg				
重量(單動)	6.61kg				

PS: 1. RS為12根彈簧; 2. 重量為淨重量



卡簧+平墊+密封圈，中軸不會爆出或晃動。



卡簧+密封圈，中軸易爆出或晃動，壽命短。



所有安裝孔均為加工中心加工，螺紋精準，安裝方便。



安裝孔由老式車床或普通數控加工，精度低，安裝易滑牙。



台製SUS304螺絲，永不生鏽。



低價品用201螺絲，易生鏽，時間一長就轉不動。



缸體與活塞均經過硬質氧化處理，光滑堅硬耐磨，壽命長扭力大。



有些缸體有硬氧化，活塞沒有；大部分缸體活塞均未硬氧化處理。  
PS: 硬質氧化成本高，但對於產品品質和使用壽命卻是最關鍵的。



輸出軸精度高，硬度高，持久耐用。



輸出軸精度低，硬度不夠，時間一長有些竟被磨成圓孔。



相關產品 Interrelated Products



# HANDWHEEL

手輪機構



# Limit Switch Box

限位開關



# Solenoid Valves

電磁閥



# Valve Positioners

閥門定位器



# Filter Relief-pressure Valve

過濾條壓閥

# *Hochin*

合勤興業有限公司

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