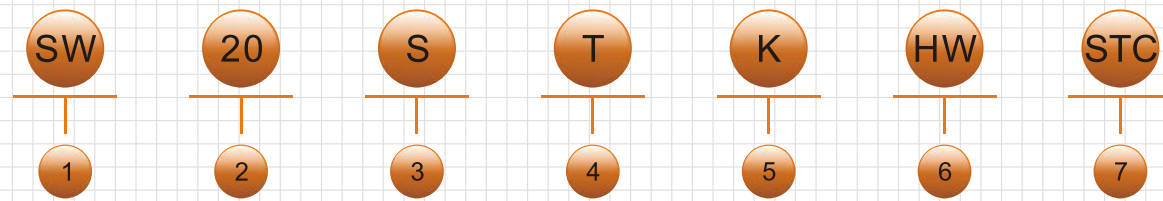


型号构成 Model:



**1. 驱动器系列: SK SW**

Series No. : SK SW

**2. 驱动器规格: 10~70**

Size of actuator : 10~70

**3. 动作形式:**

Acting type:

无代号 (双动作型)

No symbol (Double acting)

S (单动作标准型)

S (Single acting, standard)

L (单动作低压型)

L (Single acting, low pressure)

工作压力: 0.29~0.36MPa

Work Pressure: 0.29~0.36Mpa

**4. 特殊代码 (选择):**

Special code ( Selective )

B: 螺栓螺母不锈钢

B: Material of bolt and nut stainless steel

C: 控制用

C: For control

F: 高频率

F: High-frequency

M: 高温 (0~120° C)

M: High temperature (0~120° C)

T: 低温 (-45~60° C)

T: Low temperature (-45~60° C)

N: 空气接口NPT

N: air connect - NPT

Q: 高速

Q: High speed

**5. 输出方式**

Type of output

无代号: 轴输出 (SW13~SW28)

No symbol: Shaft output (SW13~SW28)

K: 孔输出 (SW13~SW28)

K: Hole output (SW13~SW28)

**6. 附属机构 (选择):**

Accessorial

无代号: 无附属装置

No symbol: No accessorial unit

HG: 双动作手动蜗轮装置 (SW13~SW28)

HG: Gear operator for double acting (SW13~SW28)

HW: 单动作侧面手轮装置 (SW13~SW28)

HW: Side-hand wheel for single acting (SW13~SW28)

HY: 液压手装置 (SW35(S)~SW70(S))

HY: Hydraulic manual unit ( SW35(S)~SW70(S) )

**7. 气源故障位置 (单作用型)**

Air failure postin (Single acting)

STC: 弹簧关

STC: Spring to close

STO: 弹簧开

STO: Spring to open

# C-MAX<sup>®</sup>



## Pneumatic Actuators 气动阀门驱动装置



**成都麦克斯流体控制有限公司**  
CHENGDU MAX FLOW CONTROL CO.,LTD

地址: 成都大邑苏场工业开发区

Add: Suchang industry developing area Dayi county Chengdu

邮编(Zip Code): 611330

电话(Tel): 0086-028-88312338

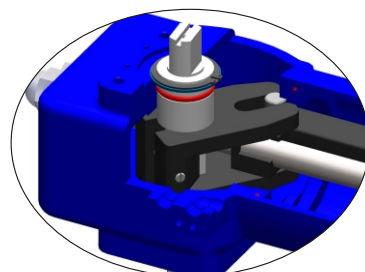
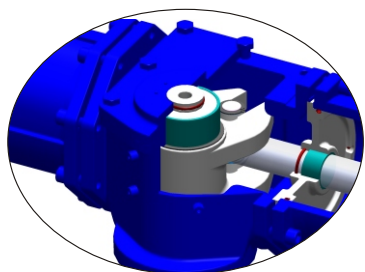
传真(Fax): 0086-028-88311238

网址(Website): [Http://www.cdmks.com](http://www.cdmks.com)

**成都麦克斯流体控制有限公司**  
CHENGDU MAX FLOW CONTROL CO.,LTD

**产品特性 Features and benefits:**

- 拨叉结构设计  
Yoke Structure Design.



- ISO5211 标准连接尺寸  
ISO5211 Mounting
- 顶法兰采用NUMAR连接尺寸  
NUMAR top mounting drilling
- SW系列气动头具有孔输出及轴输出方式可选  
SW series actuators have hole and shaft output type to choose

- 行程 ±5° 可调  
Over travel adjustment ±5°

**应用 General Application:**

- 工作压力：4Bar  
Work pressure: 4Bar
- 供给压力：3~7Bar  
Supply pressure: 3~7Bar
- 操作介质：干燥或润滑的空气  
Operating medium: Dry or lubricated air
- 温度：  
Temperature range:  
标准型：-20~+80°C  
Standard range: -20~+80°C  
低温：-45~+60°C  
Low Temperature: -45~+60°C  
高温型：0~+120°C  
High Temperature: 0~+120°C
- 输出扭矩：  
Torque output range:  
双动作型：114~111750 Nm  
Double acting: 114~111750 Nm  
单动作型：42~21160Nm  
Single acting: 42~21160 Nm



SK及SW系列驱动装置作为球阀、蝶阀、旋塞阀、风阀等90°回转阀门的自动驱动装置，广泛应用于化工、食品及饮料、冶金、海洋平台、制药、能源、石油天然气、造纸及纺织等行业。

SK and SW series actuators is normally used for remote control of any quarter-turn application: ball, butterfly, rotary plug or damper style valves, etc. To be used in chemical process, food and beverage, iron and steel, off-shore marine, pharmaceutical, power, oil and gas, pulp and paper, and textile industries.

**产品范围 Production range:**

型号 MODEL							
双动作型 Double acting				单动作型 Single acting			
标准 Standard	低温 Low temp.	高温 High temp.	高速型 High speed	标准 Standard	低温 Low temp.	高温 High temp.	高速型 High speed
SK10	SK10T	SK10M	SK10Q	SK10S	SK10ST	SK10SM	SK10SQ
SK12	SK12T	SK12M	SK12Q	SK12S	SK12ST	SK12SM	SK12SQ
SK15	SK15T	SK15M	SK15Q	SK15S	SK15ST	SK15SM	SK15SQ
SW13	SW13T	SW13M	SW13Q	SW13S	SW13ST	SW13SM	SW13SQ
SW17	SW17T	SW17M	SW17Q	SW17S	SW17ST	SW17SM	SW17SQ
SW20	SW20T	SW20M	SW20Q	SW20S	SW20ST	SW20SM	SW20SQ
SW25	SW25T	SW25M	SW25Q	SW25S	SW25ST	SW25SM	SW25SQ
SW28	SW28T	SW28M	SW28Q	SW28S	SW28ST	SW28SM	SW28SQ
SW35	SW35T	SW35M	SW35Q	SW35S	SW35ST	SW35SM	SW35SQ
SW49	SW49T	SW49M	SW49Q	SW49S	SW49ST	SW49SM	SW49SQ
SW60	SW60T	SW60M	SW60Q	SW60S	SW60ST	SW60SM	SW60SQ
SW70	SW70T	SW70M	SW70Q	SW70S	SW70ST	SW70SM	SW70SQ

**结构特点 Structure characteristic:**

**SK系列**

① 导向拉杆 Center bar  
高强度合金钢制成的导向拉杆，对活塞的全行程导向，避免活塞和气缸的金属面接触。  
Center bar, made of improved high strength alloy Steel, guides the piston throughout its full stroke, Preventing metal to metal contact with the cylinder bore.

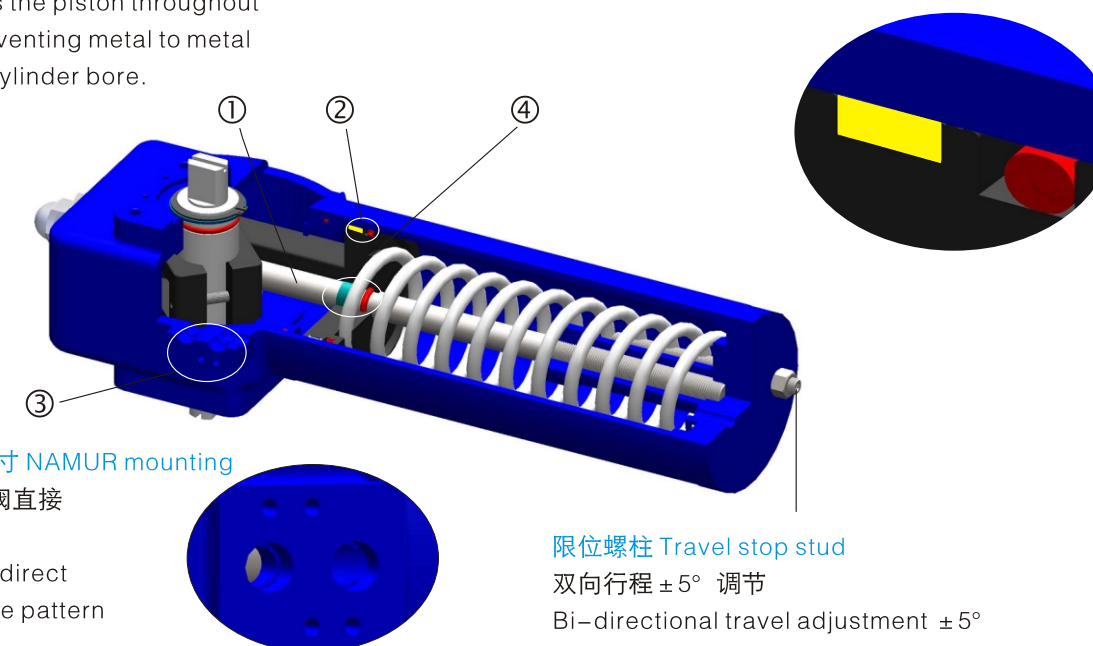
② 聚四氟乙烯导向环 PTFE guide ring  
聚四氟乙烯导向环保护气缸免受活塞划伤  
Guide ring, made of PTFE, project the cylinder not be scratched by piston.

③ NAMUR连接尺寸 NAMUR mounting

NAMUR标准电磁阀直接安装连接面  
NAMUR solenoid direct Mounting interface pattern

限位螺柱 Travel stop stud

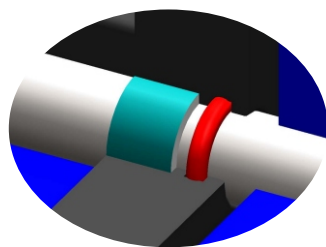
双向行程 ±5° 调节  
Bi-directional travel adjustment ±5°



④活塞 Piston

活塞装有滑动轴承，避免导向拉杆被划伤

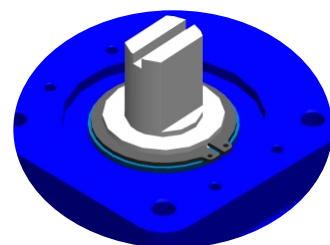
Bearing be used in piston, prevent center bar be scratched



相同上、下连接法兰 Same top and bottom mounting size

上、下法兰面相同连接尺寸在弹簧复位时可以很方便地实现FO、FC的轻易转换

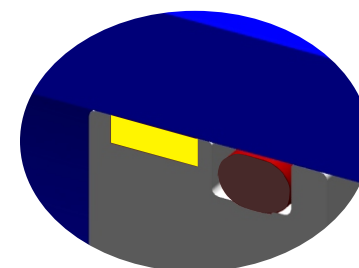
The same top and bottom mounting size, It's easy to turn from FC to FO for single acting actuators.



⑤聚四氟乙烯导向环 PTFE guide ring

活塞上安装有一个聚四氟乙烯导向环,避免活塞外侧偏移和气缸内表面被划伤,确保运行平稳。

A guide ring fitted to the piston to Prevent lateral deflection of piston and scuffing of cylinder bore.



NUMAR标准连接 NUMAR MOUNTING

顶部采用NUMAR标准连接尺寸便于限位开关和定位器的安装

Top of the actuators have NUMAR standard size, it's easy to mount limit switch and positioner



■ 刻度指示阀门的开、关位置  
Dial indicate the opening of valves

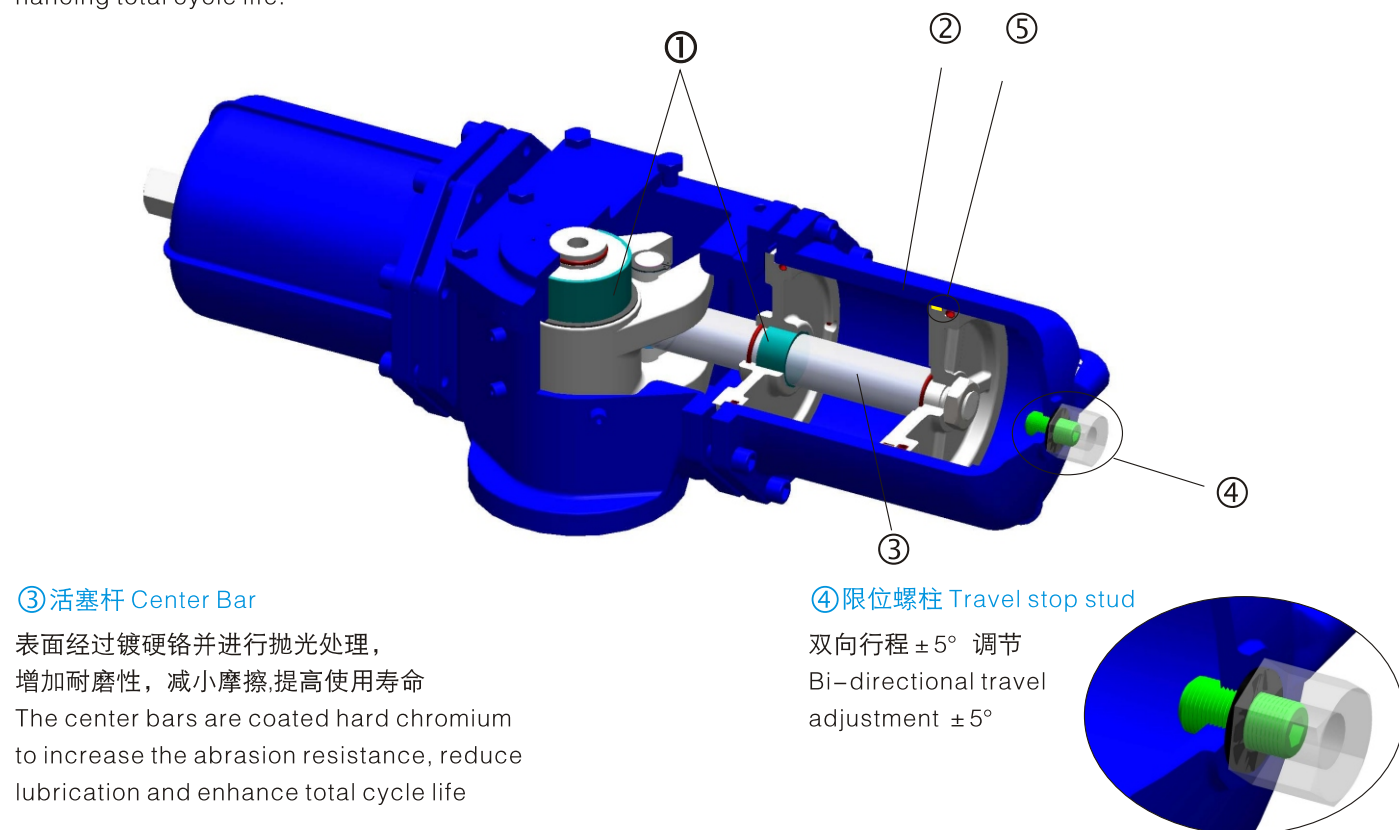
SW系列

①轴承 Bearing

由青铜/PTFE组成的复合轴承，安装在拨叉、销轴、隔板上，保证平稳连续的输出扭矩，增加使用寿命  
Bearings, made of bronze and PTFE. Be used on the Yoke, pin and adapter. These bearings help to assure smooth and consistent torque output, while enhancing total cycle life.

②气缸 Cylinder

内表面喷涂增强PTFE增加气缸的自润滑性和抗腐蚀性，减少摩擦，提高运行的平稳性  
The inner face of cylinder coated reinforced PTFE, Increased the self-lubrication and anticorrosion, reduce lubrication and enhance traveling comfort.

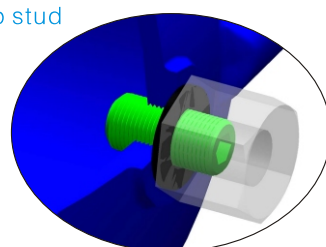


③活塞杆 Center Bar

表面经过镀硬铬并进行抛光处理，增加耐磨性，减小摩擦,提高使用寿命  
The center bars are coated hard chromium to increase the abrasion resistance, reduce lubrication and enhance total cycle life

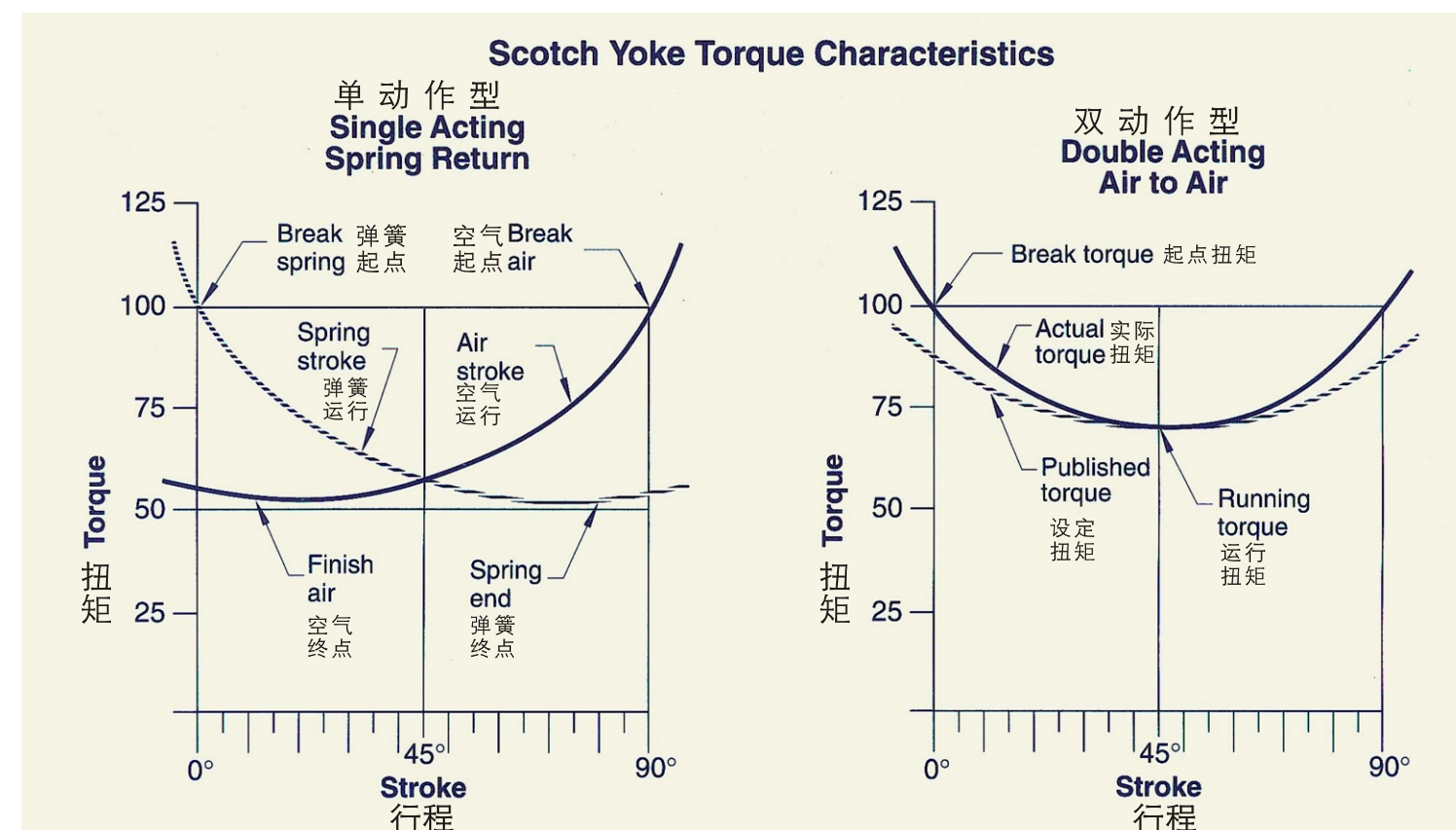
④限位螺柱 Travel stop stud

双向行程±5° 调节  
Bi-directional travel adjustment ±5°



输出扭矩 Torque output:

输出扭矩特性



单动作（弹簧复位）型气动头  
Single(Spring return) acting actuator

**SK系列 SK-S SERIES**

(N.m)

型号 Model	弹簧输出扭矩 Torque of spring		空气压力产生扭矩 Torque of air					
			4.0Bar		5.0Bar		6.0Bar	
	起点 Start	终点 End	起点 Start	终点 End	起点 Start	终点 End	起点 Start	终点 End
SK10S	68	42	67	44	100	70	120	93
SK12S	162	100	164	102	308	118	398	170
SK15S	267	166	261	163	479	245	615	328

**SW系列**

(N.m)

型号 Model	弹簧输出扭矩 Torque of spring		空气压力产生扭矩 Torque of air					
			4.0Bar		5.0Bar		6.0Bar	
	起点 Start	终点 End	起点 Start	终点 End	起点 Start	终点 End	起点 Start	终点 End
SW13S	462	280	519	337	719	537	918	736
SW17S	1024	650	1060	690	1488	1118	1916	1546
SW20S	2328	1450	2371	1493	3327	2449	4280	3402
SW25S	4110	2540	4310	2770	5174	4520	7700	6280
SW28S	5362	3500	5660	3800	7950	6090	10237	8377
SW35S	12300	7380	11290	6370	15950	11030	20625	15700
SW49S	17500	10000	17120	9619	23840	16340	30600	23100
SW60S	25282	16518	26692	17920	37495	28730	482900	39534
SW70S	34847	21160	35895	22210	50160	36480	64420	50750

双动作型气动头 Double acting actuator

**SK系列 SK-series**

(N.m)

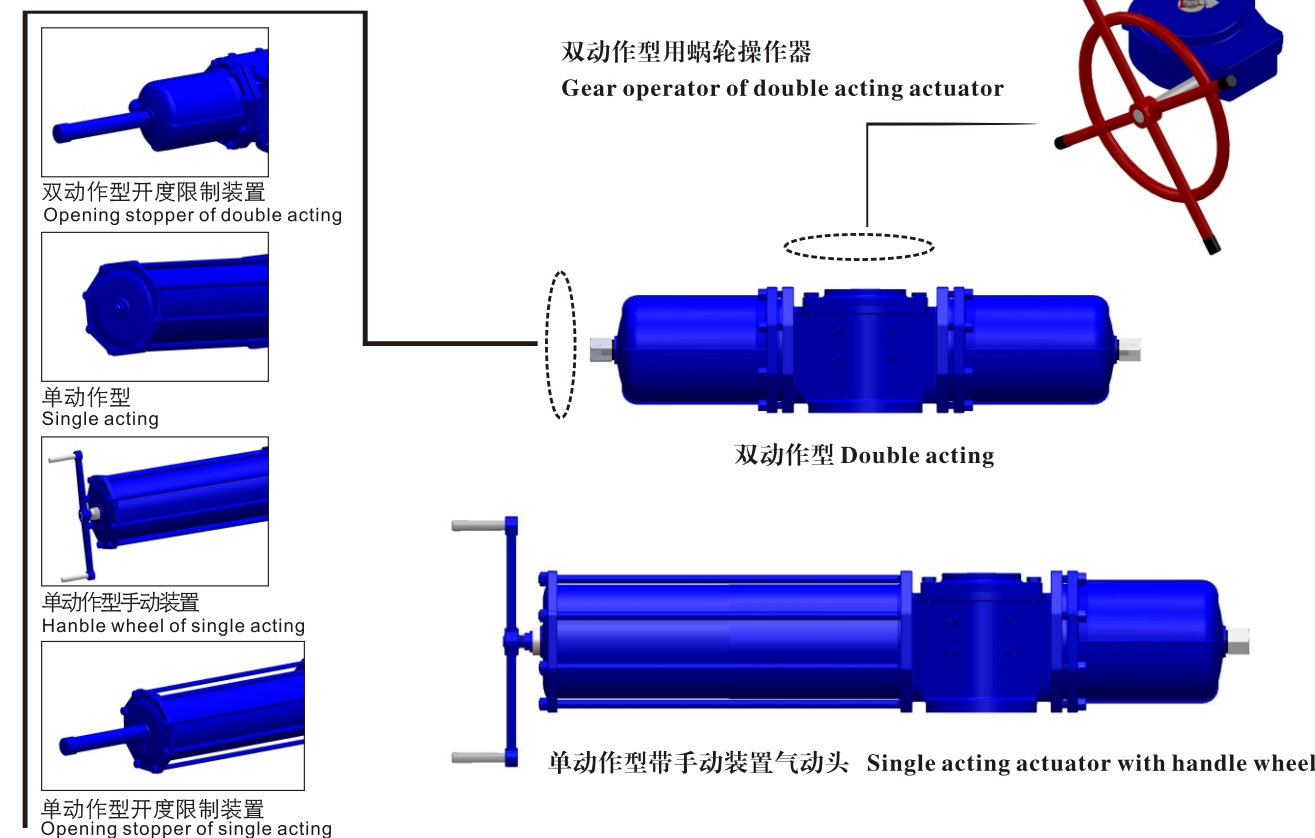
型号 Model		气源压力Air pressure			
		3.0Bar	4.0Bar	5.0Bar	6.0Bar
SK10	起始/终点扭矩 Start / end	85	114	142	170
	运行扭矩 Stroke	51	68	85	102
SK12	起始/终点扭矩 Start / end	266	355	443	532
	运行扭矩 Stroke	158	211	263	316
SK15	起始/终点扭矩 Start / end	412	550	687	825
	运行扭矩 Stroke	246	328	410	492

**SW系列 SW-series**

(N.m)

型号 Model		气源压力Air pressure			
		3.0Bar	4.0Bar	5.0Bar	6.0Bar
SW13	起始/终点扭矩 Start / end	599	799	999	1198
	运行扭矩 Stroke	355	474	592	711
SW17	起始/终点扭矩 Start / end	1285	1714	2142	2570
	运行扭矩 Stroke	763	1017	1271	1525
SW20	起始/终点扭矩 Start / end	2866	3821	4777	5730
	运行扭矩 Stroke	1701	2269	2836	3400
SW25	起始/终点扭矩 Start / end	4918	6558	7869	9837
	运行扭矩 Stroke	2919	3892	4865	5838
SW28	起始/终点扭矩 Start / end	6871	9162	11453	13740
	运行扭矩 Stroke	4080	5440	6800	8160
SW35	起始/终点扭矩 Start / end	14000	18670	23337	
	运行扭矩 Stroke	8310	11080	13856	
SW49	起始/终点扭矩 Start / end	32000	43400	54300	
	运行扭矩 Stroke	17300	23000	28800	
SW60	起始/终点扭矩 Start / end	49300	65740	82170	
	运行扭矩 Stroke	28080	37440	46800	
SW70	起始/终点扭矩 Start / end	67048	89400	111750	
	运行扭矩 Stroke	38180	50910	63648	

手动及开度限位装置 Manual installation and opening stopper



**双动作型用蜗轮操作器尺寸**  
**Dimension of Gear operator for double acting actuator**

型号 Model	A	B	H	W
SW17-HG	425	263	170	450
SW20-HG	482	287	185	600
SW25-HG	546	325	227	800
SW28-HG	546	325	227	800

**空气需要量 Air Consumption**

瞬时流量:  $Q_p$ 、 $Q_s$

Momentary flow rate:  $Q_p$ 、 $Q_s$

双动作型:  $Q_p = A \{ (P+0.1) / 0.1 \} 60 / T$

Double acting:  $Q_p = A \{ (P+0.1) / 0.1 \} 60 / T$

单动作型:  $Q_s = B \{ (P+0.1) / 0.1 \} 60 / T$

Single acting:  $Q_s = B \{ (P+0.1) / 0.1 \} 60 / T$

空气消耗量:  $V_p$ 、 $V_s$

Air Consumption:  $V_p$ 、 $V_s$

双动作型:  $V_p = (A+B) \{ (P+0.1) / 0.1 \} n$

Double acting:  $V_p = (A+B) \{ (P+0.1) / 0.1 \} n$

单动作型:  $V_s = B \{ (P+0.1) / 0.1 \} n$

Single acting:  $V_s = B \{ (P+0.1) / 0.1 \} n$

**说明 Remarks:**

$Q_p$ =双动作时气缸的瞬间流量, L/min

$Q_p$ =Momentary flow rate of double acting type (L/min)

$Q_s$ =单动作时气缸的瞬间流量, L/min

$Q_s$ =Momentary flow rate of single acting type (L/min)

$V_p$ =双动作时气缸的空气消耗量, L

$V_p$ =Air Consumption of double acting type (L)

$V_s$ =单动作时气缸的空气消耗量, L

$V_s$ =Air Consumption of single acting type(L)

A、B=气缸容积, L

A、B=Cylinder capacity (L)

P=操作压力, MPa

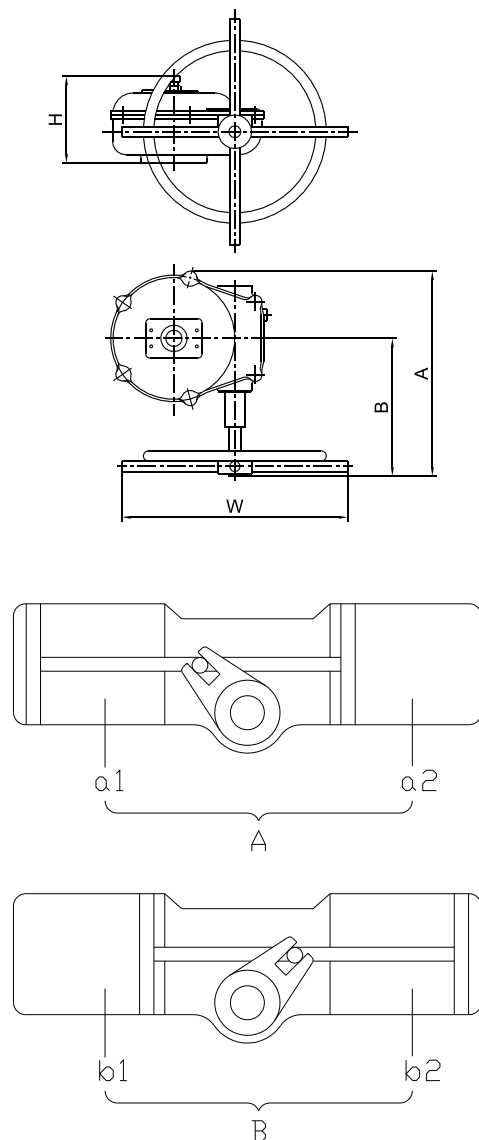
P=Operation Pressure (MPa)

T=操作时间, Sec

T=Operation time (Sec)

n=单位时间内的动作次数, 活塞往复为一次。

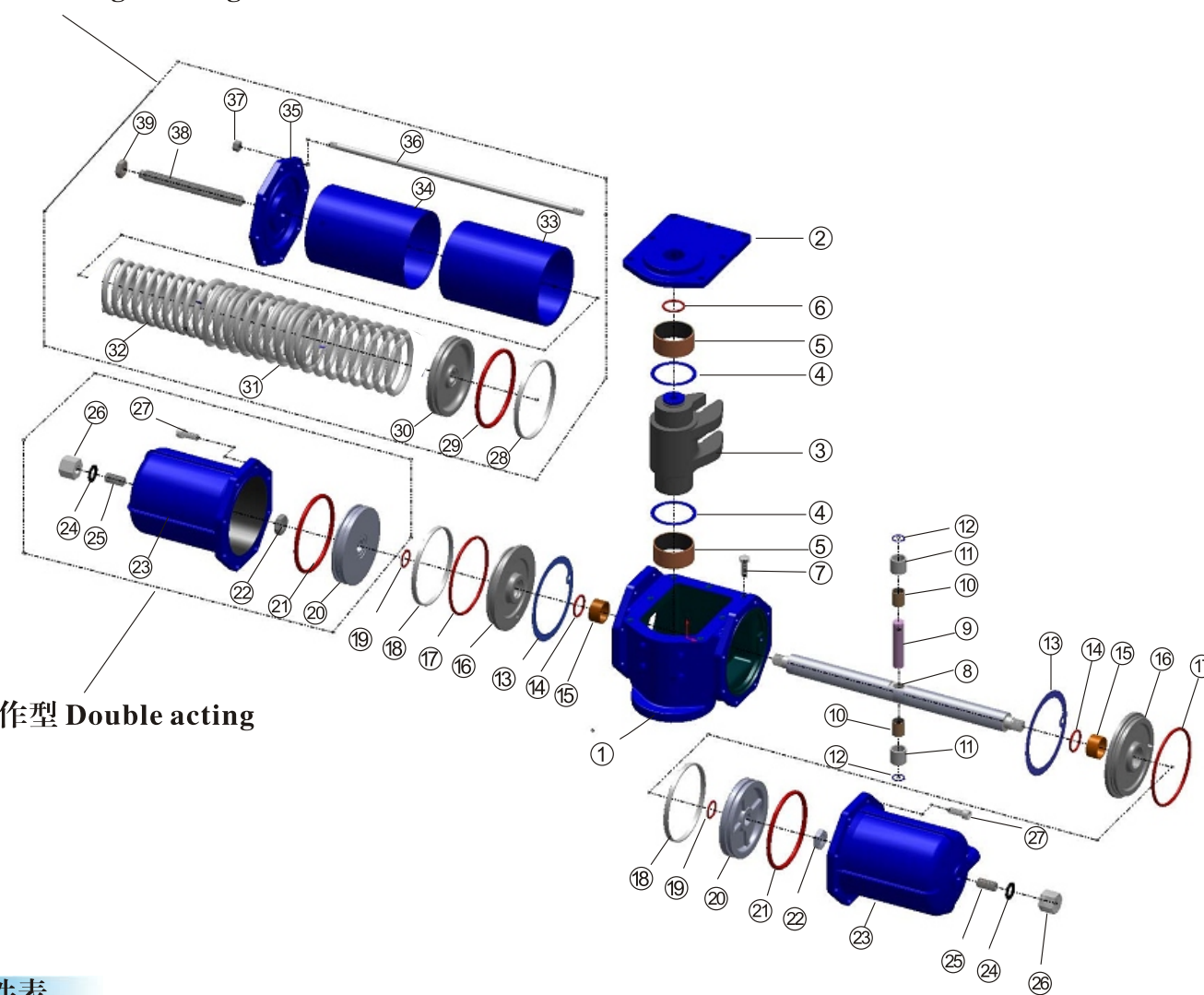
n=Operation times within a certain period



型号 Model	A	B	A + B
SW13	3.10	3.10	6.20
SW17	6.70	6.70	13.40
SW20	14.80	14.80	29.60
SW25	25.60	25.60	51.20
SW28	34.60	34.60	69.20
SW35	58.5	58.5	117
SW49	134	134	268
SW60	246	246	492
SW70	335	335	670

**组装图 Assemble Drawing**

**单动作型 Single acting**



**双动作型 Double acting**

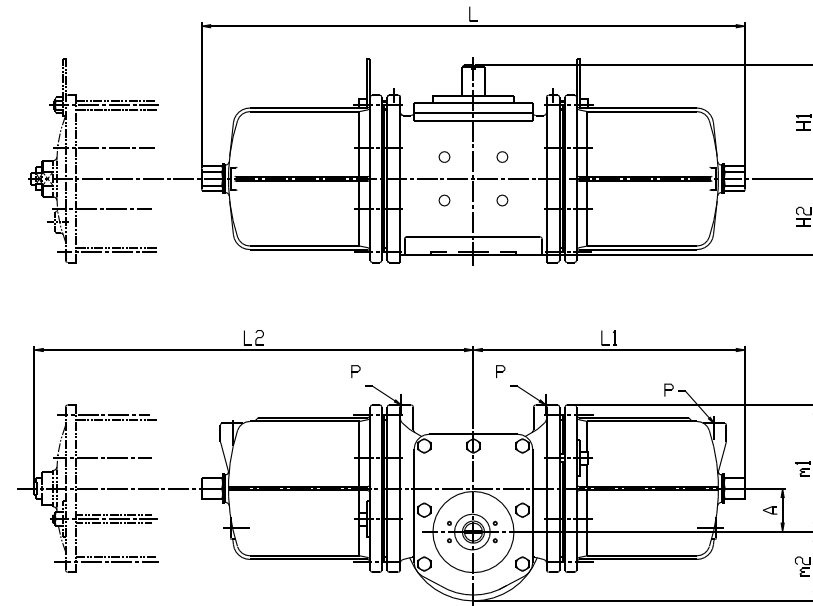
**部件表**

序号No.	零件名称 Name	序号No.	零件名称 Name	序号No.	零件名称 Name
1	箱体 Body	14	O型圈 O-Ring	27	螺钉 Bolt
2	箱盖 Cap	15	滑动轴承 Sliding Bearing	28	导向环 Guide Ring
3	拨叉 Yoke	16	隔板 Adapter	29	O型圈 O-Ring
4	止推轴承 Thrust Bearing	17	O型圈 O-Ring	30	活塞 Piston
5	滑动轴承 Sliding Bearing	18	导向环 Guide Ring	31	弹簧 Spring
6	O型圈 O-Ring	19	O型圈 O-Ring	32	弹簧 Spring
7	螺栓 Bolt	20	活塞 Piston	33	气缸 Cylinder
8	活塞杆 Center Bar	21	O型圈 O-Ring	34	弹簧缸 Spring Case
9	销轴 Pin	22	螺母 Nut	35	弹簧缸盖 Spring Cover
10	滑动轴承 Sliding Bearing	23	气缸 Cylinder	36	螺柱 Screw
11	滚套 Roller	24	垫片 Gasket	37	螺母 Nut
12	挡圈 Check Ring	25	调节螺柱 Adjust Stud	38	调节螺柱 Adjust Stud
13	垫片 Gasket	26	盖形螺母 Cap Nut	39	螺母 Nut



SW系列 SW series

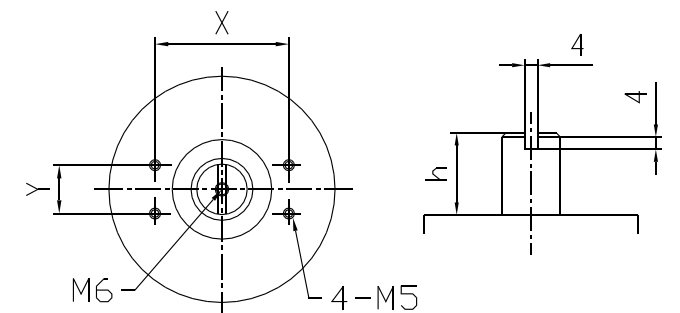
(SW13K~SW28K孔输出)  
(SW13K to SW28K hole output)



型号 Model	SW13K	SW13SK	SW17K	SW17SK	SW20K	SW20SK	SW25K	SW25SK	SW28K	SW28SK
A	49	49	60	60	98	98	110	110	120	120
m1	132	132	176	176	232	232	278	278	300	300
m2	66	66	95	95	115	115	150	150	158	158
L	574	----	755	----	1060	----	1276	----	1360	----
L1	----	287	----	377.5	----	530	----	686	----	780
L2	----	523	----	610	----	885	----	1000	----	1160
H1	85	85	116	116	130	130	166	166	188	188
H2	83	83	114	114	128	128	168	168	175	175
P	RC1/4	RC1/4	RC3/8	RC3/8	RC3/8	RC3/8	RC1/2	RC1/2	RC1/2	RC1/2
WT(Kg)	35.8	55.4	75	125	130	181	225	325	275	398

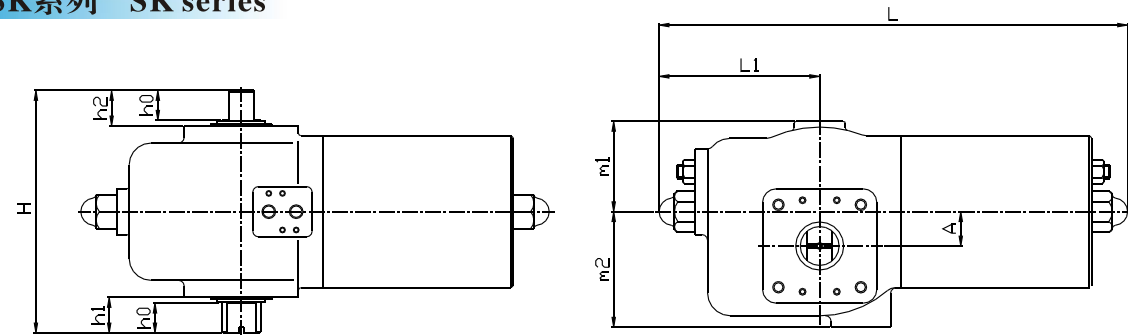
顶部安装尺寸  
Top mounting

型号 Model	X	Y	h
SW13	80	30	20
SW17	80	30	20
SW20	80	30	30
SW25	130	30	30
SW28	130	30	30



尺寸表 Dimension

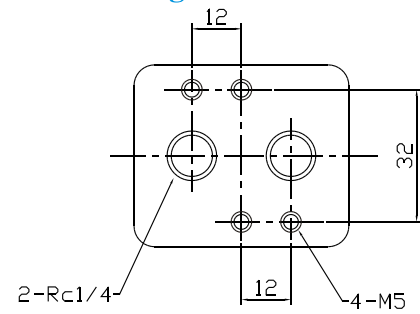
SK系列 SK series



型号 Model	SK10	SK12	SK15	SK10S	SK12S	SK15S
L	315	430	430	415	566	566
L1	105	140	140	105	140	140
m1	70	83	83	70	83	83
m2	88	101	115	88	101	115
A	20	30	30	20	83	83
H	160	190	215	160	190	215
h1	20	25	25	20	25	25
h2	20	25	25	20	25	25
X	70	100	100	70	100	100
Y	100	100	100	100	100	100
C	70	102	102	70	102	102
Md	M8	M10	M10	M8	M10	M10
b	12	17	22	12	17	22
h	18	22	22	18	22	22
F	55	70	70	55	70	70

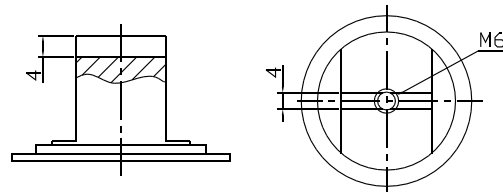
电磁阀安装尺寸

Mounting dimension for solenoid valves



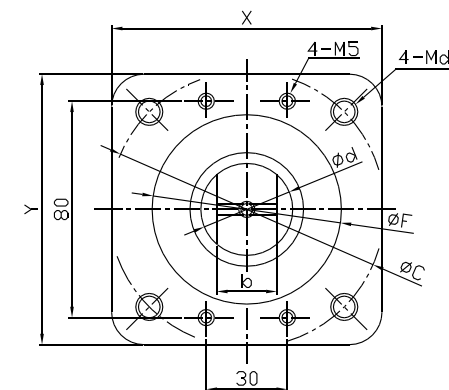
输出轴顶端尺寸

Dimension of top shaft



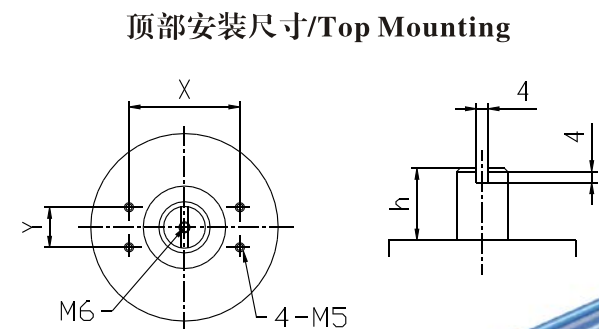
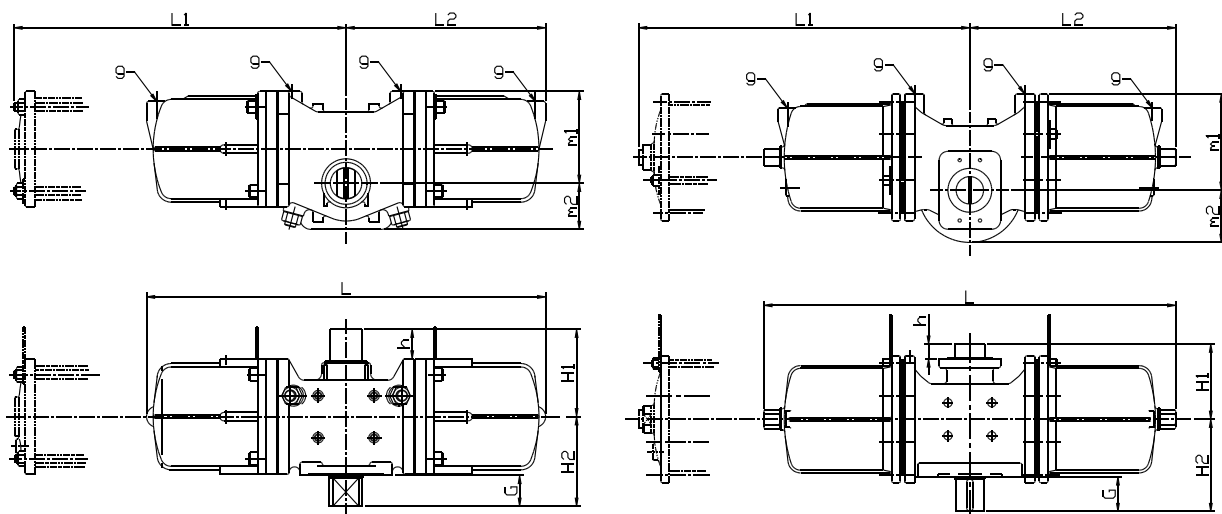
顶法兰/底法兰安装尺寸

Top and bottom flange for mounting



(SW13~SW28轴输出)  
(SW13~SW28 shaft output)

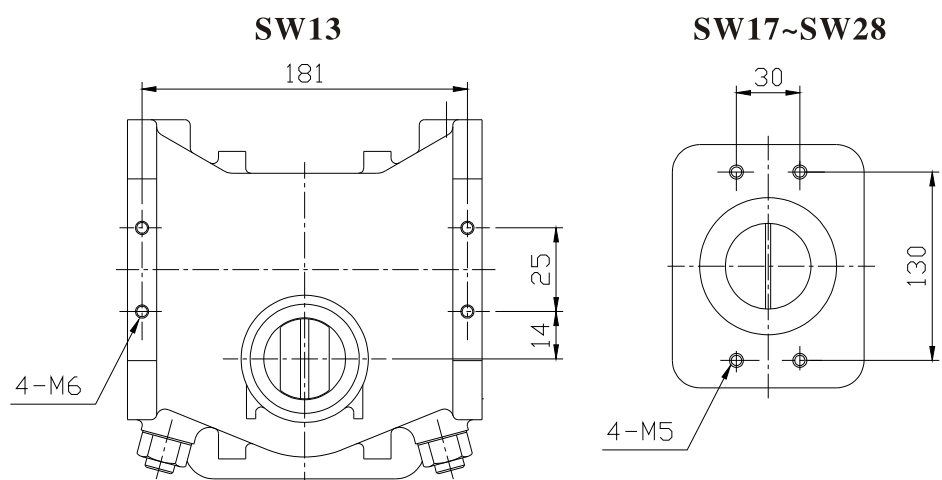
SW35~SW70 系列超大出力型气动头  
SW35~SW70 series extra torque actuators



(SW35~SW70) 无手动装置  
(SW35~SW70) No manual unit

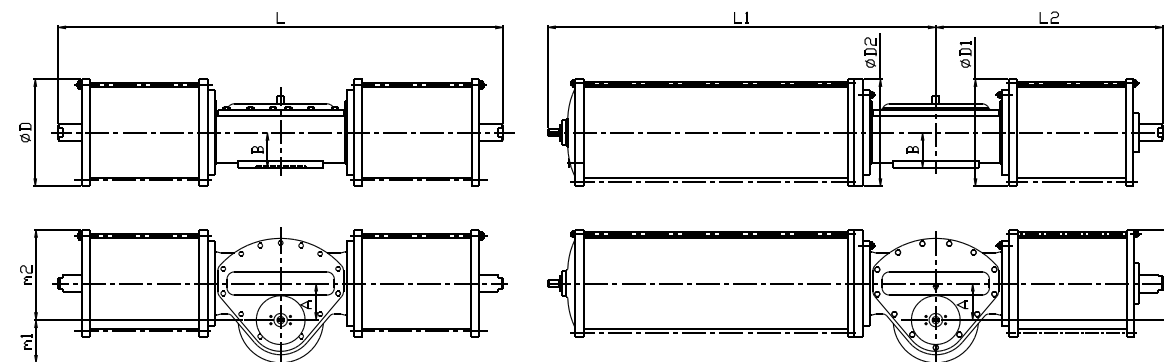
型号 Model	SW13	SW13S	SW17	SW17S	SW20	SW20S	SW25	SW25S	SW28	SW28S
L	574	---	755	---	1060	---	1276	---	1360	---
L1	--	287	--	377.5	--	530	--	686	--	780
L2	---	523	---	610	---	885	---	1000	---	1160
m1	132	132	176	176	232	232	278	278	300	300
m2	66	66	95	95	115	115	150	150	158	158
H1	105	105	142	142	165	165	204	204	200	200
H2	128	128	172	172	213	213	265	265	273	273
G	43	43	67	67	83	83	90	90	108	108
h	23	23	30	30	30	30	30	30	30	30
g	RC1/4	RC1/4	RC3/8	RC3/8	RC3/8	RC3/8	RC1/2	RC1/2	RC1/2	RC1/2
WT(Kg)	35.8	55.4	75	125	130	181	225	325	275	398

顶部安装尺寸  
Top mounting



双动作型 (Double acting)

单动作型 (Single acting)

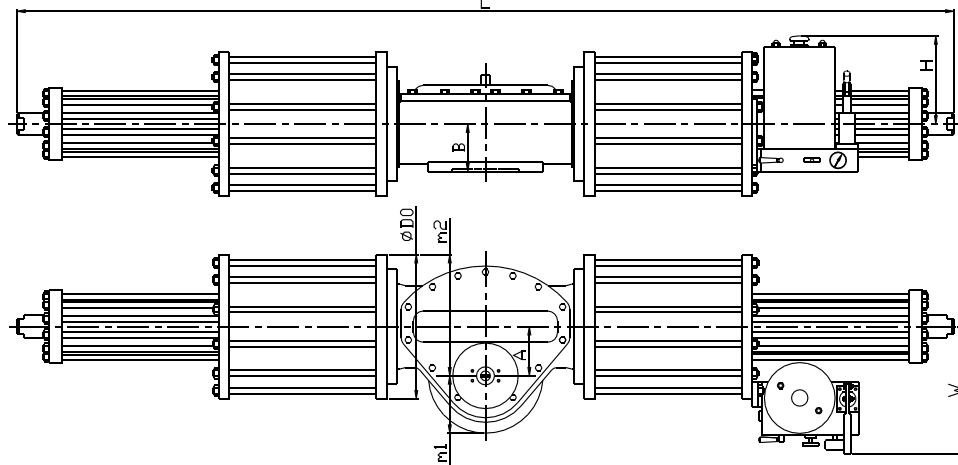


型号 Model	A	B	L	L1	L2	D	D1	D2	m1	m2	空气接口 Air con.size
SW35	150	145	1825	---	---	440	---	---	175	370	RC1/2
SW49	180	160	2130	---	---	562	---	---	200	461	RC3/4
SW60	220	190	2530	---	---	700	---	---	250	570	RC1
SW70	220	190	2530	---	---	800	---	---	250	620	RC1
SW35S	150	145	---	1590	912	---	440	440	175	370	RC1/2
SW49S	150	145	---	1780	930	---	562	440	175	431	RC3/4
SW60S	150	145	---	1990	950	---	700	562	175	500	RC1
SW70S	150	145	---	2030	975	---	800	645	175	550	RC1

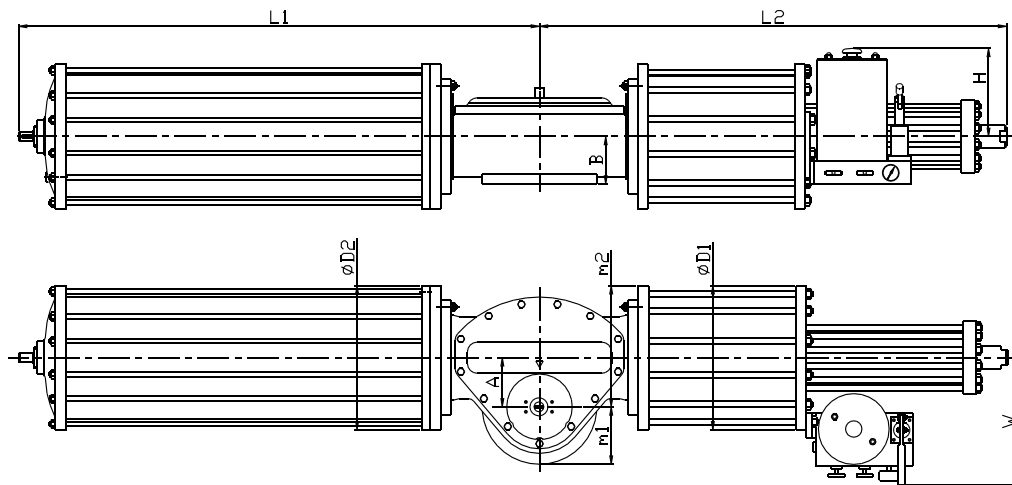
(SW35-HY~SW70-HY)  
(SW35-HY~SW70-HY)

带液压手动装置气动头  
Actuator with hydraulic manual unit

双动作型 (Double acting)



单动作型 (Single acting)

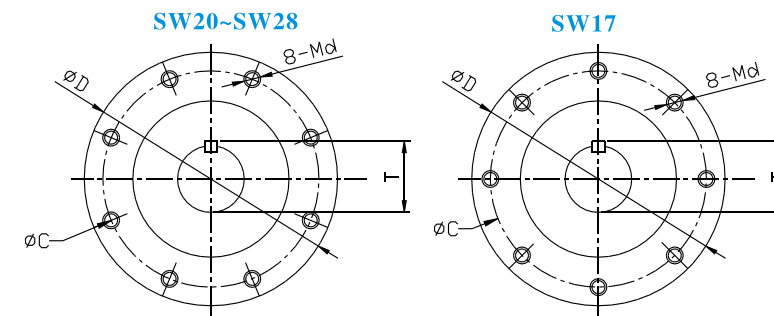


型号 Model	A	B	L	L1	L2	D	D1	D2	m1	m2	W	H
SW35-HY	150	145	2910	----	----	440	----	----	175	370	380	145
SW49-HY	180	160	3330	----	----	562	----	----	200	461	440	210
SW60-HY	220	190	3920	----	----	700	----	----	250	570	500	340
SW70-HY	220	190	3920	----	----	800	----	----	250	620	550	450
SW35S-HY	150	145	----	1590	1420	----	440	440	175	370	380	145
SW49S-HY	150	145	----	1780	1540	----	562	440	175	431	440	210
SW60S-HY	150	145	----	1990	1580	----	700	562	175	500	500	340
SW70S-HY	150	145	----	2030	1610	----	800	645	175	550	550	450

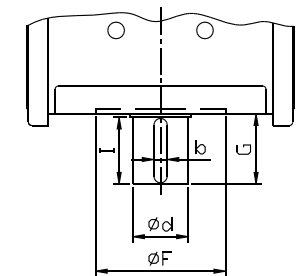
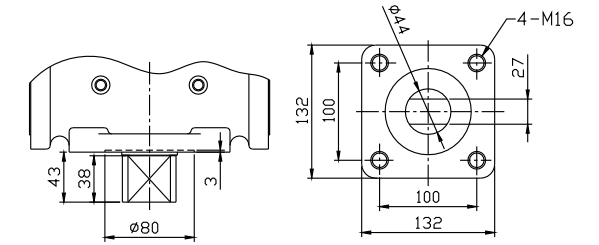
连接尺寸 Mounting Details

SW13~SW28 轴输出 (Shaft output)

型号 Model	D	C	d	G	I	T	F	b	Md
SW17/SW17S	190	160	50	67	60	53.5	120	12	M16
SW20/SW20S	230	200	64	83	75	69	140	18	M16
SW25/SW25S	300	254	72	90	80	76.5	200	20	M16
SW28/SW28S	316	280	85	108	100	91	220	24	M20



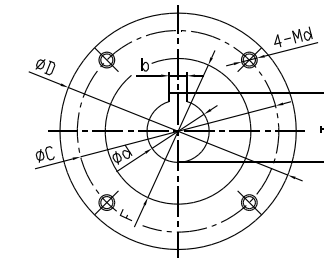
SW13



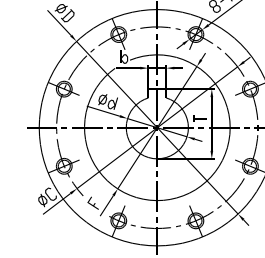
SW13K~SW28K 孔输出 (Hole output)

型号 Model	A	D	C	F/深 (Deep)	d/深 (Deep)	b	T	Md
SW13K/SW13SK	132	---	140	100/4	35/50	10	38.3	M16
SW17K/SW17SK	---	210	165	130/5	50/80	14	53.8	M20
SW20K/SW20SK	---	230	165	130/5	64/100	18	68.4	M20
SW25K/SW25SK	---	300	254	200/5	72/110	20	76.9	M16
SW28K/SW28SK	---	340	298	230/5	85/130	22	90.4	M20

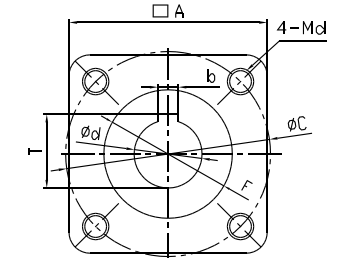
SW17K&SW20K



SW25K&SW28K



SW13K



SW35~SW70

型号 Model	D	C	F/深 (Deep)	d/深 (Deep)	b	T	N-Md
SW35/SW35S	350	300	230/5	100/150	28	106.4	8-M24
SW49	400	350	280/5	120/160	32	127.4	12-M24
SW60	500	450	320/5	140/180	36	148.4	12-M27
SW70	500	450	320/5	150/200	36	158.4	16-M27
SW49S/SW60S	350	300	230/5	100/150	28	106.4	8-M24
SW70S	350	300	230/5	110/160	28	106.4	12-M24

