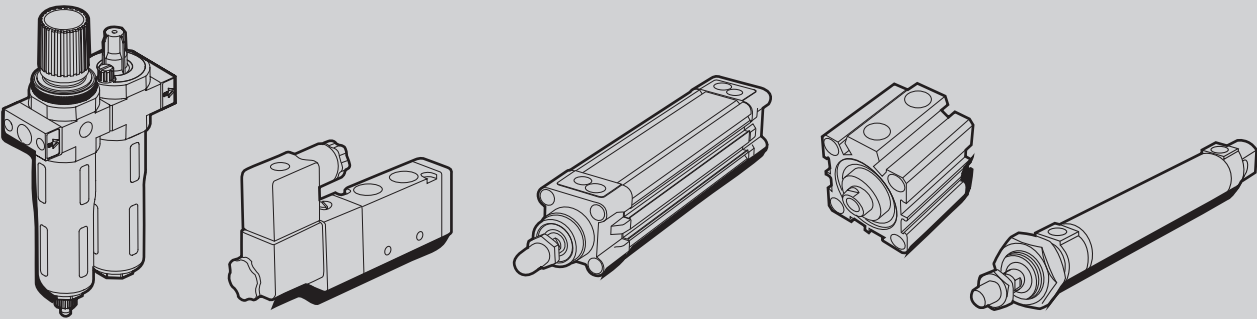


Thanks to browse

Welcome to FORWARD



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Hydraulic Component

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Company introductions 公司简介

In **FORWARD**,Driving force has always been our vision and prospect: We own the courage to challenge mediocrity to create surprising products.Depend on our great perseverance ,we promote the development of Chinese fluid industry.

Welcome to **FORWARD!**

在**FORWARD**，我们的推动力一直是我们的愿景：我们具备挑战平庸的勇气，以求创造令人惊喜的产品。凭借对产品、客户坚持不懈和永不放弃的精神，致力于推动中国流体行业的卓越发展。

FORWARD 欢迎您！



三联件 Filter,Regulator,Lubricator / OU

型号代码 Type codes



OU 型三连件由一个OFR 型过滤减压阀和一个OL型油雾器组成, 这些元件可以分别订购, 分水过滤器能过滤空气中的液态油、冷凝水及杂质, 对于特殊应用场合, $5\mu\text{m}$ 滤芯容易替换 $40\mu\text{m}$ 的标准滤芯。

即使输入压力与压缩空气消耗产生系统波动，减压阀也能保证其设定的工作压力非常稳定。

油雾器可以均匀地向过滤空气中喷油雾，其油雾量与空气流量成正比例，并可不停气加油，可通过调节螺钉调节滴油量，通常每1000L空气中含有1-12滴就足够了。

The OU consisted of OFR and OL, each unit can be ordered separately.

The OF with water separator cleans the compressed air of fluid oil, condensation and dirt particles. For special application, the standard 40µm filter element may easily be replaced by a 5µm filter element.

The OR maintain inputting constant operating pressure despite fluctuation in line pressure and the amount of air consumed.

The proportional lubricator adds a regulated quantity of oil to the filtered air. The oil-mist content proportional to the flow and oil can be added during operation. The oil drip rate is controlled by the adjustable bolt. Normally, 1 to 12 drops / 1000L of the air is sufficient.

OU

1/4

MINI

基本功能 Basic function

OU

三联件 Filter,Regulator,Lubricator

接口尺寸 Connection

1/8

G1/8

1/4

G1/4

3/8

G3/8

1/2

G1/2

3/4

G3/4

1

G1

压力调节范围 Pressure regulation range

0.5...12bar

7

0.5...7bar

过滤等级 Grade of Filtration

40 μm

5M

5 μm

压力表 Pressure gauge

带压力表 With pressure gauge

0

不带压力表 Without pressure gauge

规格 Size

MINI

小型

MIDI

中型

MAXI

大型

排水阀 Condensate drain

手动 Turned manually

S

半自动 Semi-automatic

A

自动 Fully automatic

三联件 Filter,Regulator,Lubricator / OU

技术参数 Technical data



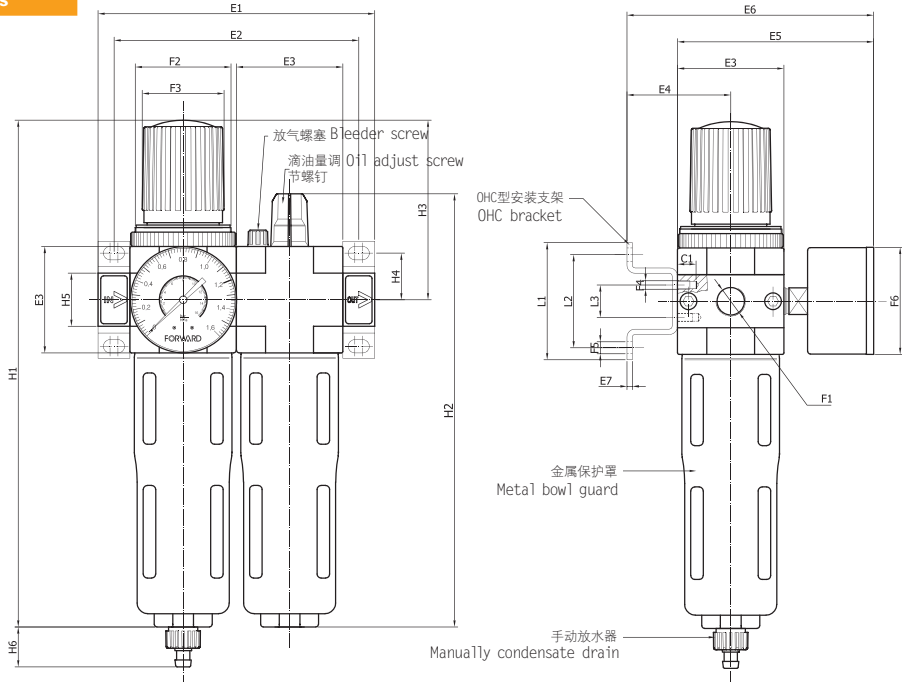
主要技术参数 General technical data									
规格 Size		MINI		MIDI				MAXI	
工作介质 Medium		压缩空气 Compressed air							
结构特点 Features of structure		带水分离器的烧结式过滤器；MINI/MIDI：膜片式减压阀；MAXI：活塞式减压阀； 油雾型自动可调节流式 Sintered filter with water separator；MINI/MIDI：Diaphragm type regulator； MAXI：Piston regulator；Direct constant-density lubricator							
安装方式 Mounting type		管式安装或支架安装 Pipe mounting or foot mounting							
安装位置 Assembly position		垂直方向±5° Vertical ±5°							
连接尺寸 Connection		G1/8	G1/4	G3/8	G3/8	G1/2	G3/4	G3/4	G1
标准额定流量 Standard nominal flow rate	0FR-...（-A）	700	1000	1200	2000	2600	2600	7000	8000
	0FR-...-7-（-A）	800	1300	1500	2500	2800	2800	8500	8700
	0FR-...-5M-（-A）	600	850	1050	1700	1800	2100	6500	7200
输入压力 Primary pressure	手动排水阀 Manual condensate drain	1~16bar							
	自动排水阀 Automatic condensate drain	1.5~12bar							
工作压力 Working pressure		0.5~12bar / 0.5~7bar							
最小起雾流量 Min. Standard nominal flow rate		3 l/min			6 l/min			10 l/min	
过滤精度 Grade of filtration		40 μm / 5 μm							
最大凝度容量 Capacity of condensate fluid		22ml			43ml			80ml	
温度范围 Temperature range		0~60℃							
材料 Materials information		壳体：压铸锌；过滤杯和油杯：PC；金属保护罩：铝合金；密封：丁腈橡胶；调压手轮：POM Housing：Zinc die-casting；Filter bowl and oil bowl：PC； Metal bowl guard：Aluminium alloy；Sealing：NBR；Adjusting knob：POM							

三联件 Filter,Regulator,Lubricator / OU

技术参数 Technical data

FORWARD

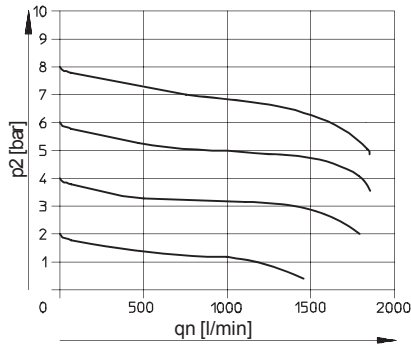
尺寸图 Dimensions



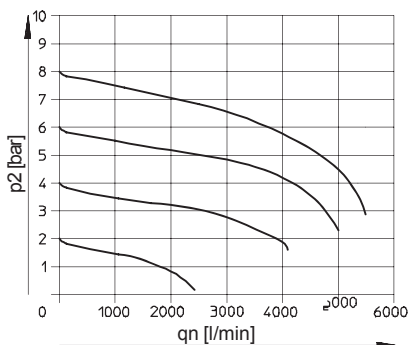
型号 Model	E1	E2	E3	E4	E5	E6	E7	F1	F2	F3Ø	F4	F5Ø	F6Ø	L1	L2	L3	H1	H2	H3	H4	H5	H6
OU-...-MINI	104	92	40	39	76	95	2	G1/8,G1/4,G3/8	M36*1.5	31	M4	4.5	40	44	35	11	194	169	69	17.5	20	15
OU-...-MIDI	140	125	55	47	93	112	3	G1/8,G1/2,G3/4	M52*1.5	50	M5	5.5	52	71	60	22	250	206	97	24.5	32	15
OU-...-MAXI	162,182	146,157	66	53	104	124	3	G3/4,G1	M36*1.5	31	M5	5.5	63	71	60	22	252	223	80	24.5	32,40	15

标准额定流量qn和输出压力p2的关系 Standard flow rate qn as a function of the output pressure p2

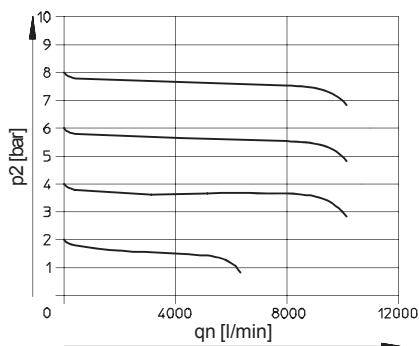
OU-1/4-MINI



OU-1/2-MIDI



OU-1-MAXI



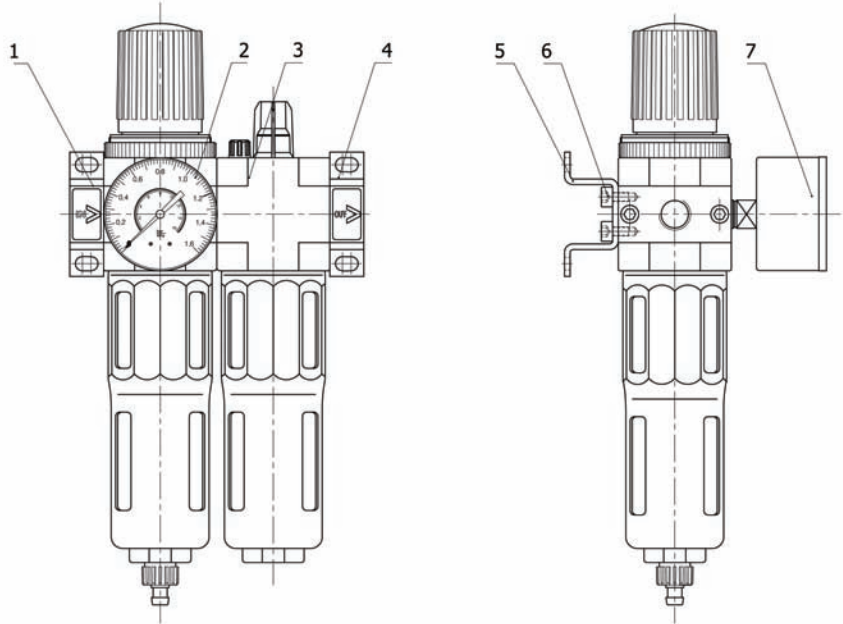
*输入压力 Primary pressure: p1=10 bar

三联件 Filter,Regulator,Lubricator / OU

技术参数 Technical data

FORWARD

内部结构图 Inner structure



序号 NO.	名称 Item	材料 Material	序号 NO.	名称 Item	材料 Material
1	分气块-IN Flange - IN	锌合金 Zinc alloy	5	支架 Bracket	SPCC
2	过滤减压阀 Filter + Regulator		6	内六角螺丝 Allen screw	S35C
3	油雾器 Lubricator		7	压力表 Pressure guage	
4	分气块-OUT Flange - OUT	锌合金 Zinc alloy			

过滤减压阀 Filter regulator / OFR

型号代码 Type codes

FORWARD



过滤器和减压阀组成一个单独的装置，能过滤空气中的液态油、冷凝水及杂质，对于特殊应用场合，5μm 滤芯容易替换40μm的标准滤芯。即使输入压力与压缩空气消耗产生系统波动，减压阀也能保证其设定的工作压力非常稳定。

Filter and pressure regulator combine a single unit ,and cleans the compressed air of fluid oil,condensation and dirt particles.For special application,the standard 40μm filter element may easily be replaced by a 5 μm filter element.
The OR maintain imputting constant operating pressure despite fluctuation in line pressure and the amount of air consumed.

OFR - 1/4 - - - MINI -

基本功能 Basic function	
OFR	过滤减压阀 Filter regulator
接口尺寸 Connection	
1/8	G1/8
1/4	G1/4
3/8	G3/8
1/2	G1/2
3/4	G3/4
1	G1
压力调节范围 Pressure regulation range	
	0.5...12bar
7	0.5...7bar
过滤等级 Grade of Filtration	
	40 μ m
5M	5 μ m
压力表 Pressure gauge	
	带压力表 With pressure gauge
0	不带压力表 Without pressure gauge
规格 Size	
MINI	小型
MIDI	中型
MAXI	大型
排水阀 Condensate drain	
	手动 Turned manually
S	半自动 Semi-automatic
A	自动 Fully automatic

过滤减压阀 Filter regulator / OFR

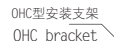
技术参数 Technical data

FORWARD

主要技术参数 General technical data									
Size		MINI			MIDI			MAXI	
工作介质 Medium		压缩空气 Compressed air							
结构特点 Features of structure		带水分离器的烧结式过滤器；MINI/MIDI：膜片式减压阀；MAXI：活塞式减压阀 Sintered filter with water separator；MINI/MIDI：Diaphragm type regulator； MAXI：Piston regulator							
安装方式 Mounting type		管式安装或支架安装 Pipe mounting or foot mounting							
安装位置 Assembly position		垂直方向±5° Vertical±5°							
连接尺寸 Connection		G1/8	G1/4	G3/8	G3/8	G1/2	G3/4	G3/4	G1
标准额定流量 Standard nominal flow rate	OFR-...（-A）	750	1400	1600	3100	3400	3400	9000	10000
	OFR-...-7-（-A）	900	1500	1700	3400	3900	4000	9500	16000
	OFR-...-5M-（-A）	650	1200	1350	2400	2500	2600	7300	7600
输入压力 Primary pressure	手动排水阀 Manual condensate drain	1~16bar							
	自动排水阀 Automatic condensate drain	1.5~12bar							
工作压力 Working pressure		0.5~12bar / 0.5~7bar							
过滤精度 Grade of filtration		40μm / 5μm							
最大凝度容量 Max.condensate capacity		22ml			43ml			80ml	
温度范围 Temperature range		0~60℃							
材料 Materials information		壳体：压铸锌；过滤杯：聚碳酸酯；金属保护罩：铝合金；密封：丁腈橡胶；调压手轮：POM Housing：Zinc die-casting；Filter bowl：PC； Metal bowl guard：Aluminium alloy；Sealing：NBR；Adjusting knob：POM							

技术参数 Technical data

尺寸图 Dimensions



金属保护罩
Metal bowl guard

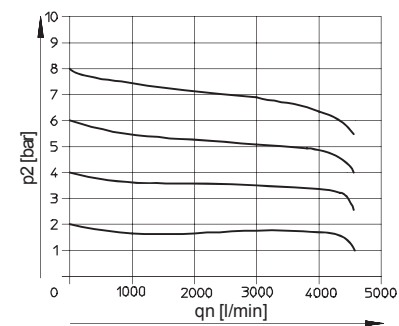
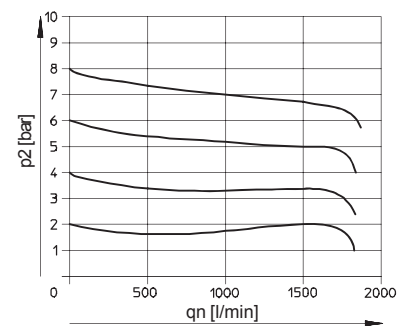
手动放水器
Manually condensate drain

型号 Model	E3	E4	E5	E6	E8	E9	F1	F2	F3Ø	F4	F5Ø	F6Ø	L1	L2	L3	H1	H3	H4	H5	H6
OFr---MINI	40	39	76	95	64	52	G1/8,G1/4,G3/8	M36*1.5	31	M4	4.5	40	44	35	11	194	69	17.5	20	15
OFr---MIDI	55	47	93	112	85	70	G1/8,G1/2,G3/4	M52*1.5	50	M5	5.5	52	71	60	22	250	98	24.5	32	15
OFr---MAXI	66	53	104	124	96,116	80,91	G3/4,G1	M36*1.5	31	M5	5.5	63	71	60	22	252	80	24.5	32,40	15

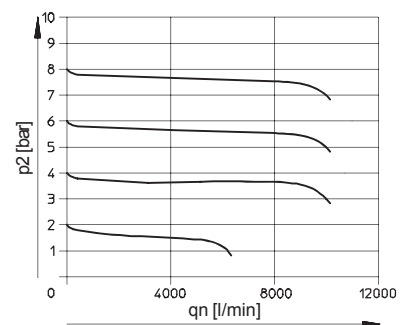
标准额定流量 q_n 和输出压力 p_2 的关系 Standard flow rate q_n as a function of the output pressure p_2

	OFR-1/4-MINI	OFR-1/2-MIDI
--	--------------	--------------

OFR-1/2-MIDI



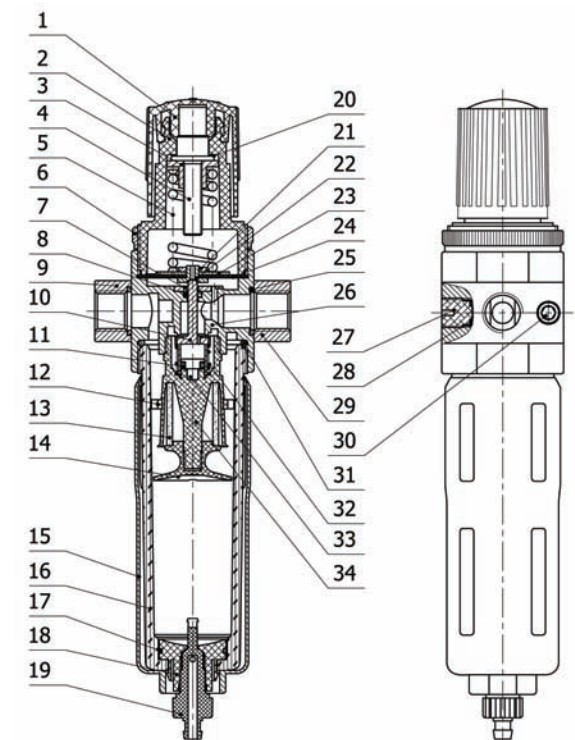
OFR-1-MAXI



输入压力 $p_1=10 \text{ bar}$

技术参数 Technical data

内部结构图 Inner structure

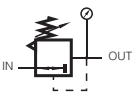


序号 NO.	名称 Item	材料 Material	序号 NO.	名称 Item	材料 Material
1	调压手轮 Pressure knob	POM	21	OR垫片 Sheet	NBR
2	阀盖 Regulator cap	POM	22	溢流阀座 Overflow base	6061-T6
3	主调压六角螺帽 Regulator nut	S35C	23	膜片托盘 One part of diaphragm	SPCC
4	调压螺杆 Adjusting spindle	S35C	24	膜片 Diaphragm	NBR+尼龙网
5	弹簧 Pressure spring	SWC	25	O型圈 O-ring	NBR
6	滚花并帽 Fixed ring	6061-T6	26	OR阀体 OR Body	锌合金 Zinc alloy
7	膜片挡圈 One part of membrane	PA6+G15	27	丝堵 Plug	POM
8	O型圈 O-ring	NBR	28	O型圈 O-ring	NBR
9	分气块-IN Flange - IN	锌合金 Zinc alloy	29	分气块-OUT Flange - OUT	锌合金 Zinc alloy
10	阀芯 Spool	黄铜 Brass	30	内六角螺丝 Allen screw	S35C
11	O型圈 O-ring	NBR	31	O型圈 O-ring	NBR
12	旋风叶轮 Whirl wind impeller	POM	32	复位弹簧 Spring	SWPB
13	滤芯 Filter element	聚乙烯 PE	33	扣钉 Fasteners	黄铜 Brass
14	挡水板 Manger	POM	34	滤芯座 Filter element base	POM
15	保护罩 Metal bowl guard	铝合金 Aluminium alloy			
16	水杯 Filter bowl	PC			
17	O型圈 O-ring	NBR			
18	内接头 Inner joint	POM			
19	放水器 Condensate drain	POM			
20	耐磨垫片 Wearing sheet	绝缘胶板 Insulation sheet			

减压阀 Regulator / OR

型号代码 Type codes

FORWARD



即使输入压力与压缩空气消耗产生系统波动，减压阀也能保证其设定的工作压力非常稳定。

The OR maintain imputting constant operating pressure despite fluctuation in line pressure and the amount of air consumed.

OR		1/4				MINI
基本功能 Basic function						
OR	减压阀 Regulator					
接口尺寸 Connection						
1/8	G 1/8					
1/4	G 1/4					
3/8	G 3/8					
1/2	G 1/2					
3/4	G 3/4					
1	G 1					
压力调节范围 Pressure regulation range						
	0.5...12bar					
7	0.5...7bar					
过滤等级 Grade of Filtration						
	40 μ m					
5M	5 μ m					
压力表 Pressure gauge						
	带压力表 With pressure gauge					
0	不带压力表 Without pressure gauge					
规格 Size						
MINI	小型					
MIDI	中型					
MAXI	大型					

减压阀 Regulator / OR

技术参数 Technical data

FORWARD

主要技术参数 General technical data									
规格 Size		MINI			MIDI			MAXI	
工作介质 Medium		过滤压缩空气（润滑或未润滑）Filtered,compressed air (lubricated or unlubricated)							
结构特点 Features of structure		MINI/MIDI: 膜片式减压阀 Diaphragm type regulator; MAXI: 活塞式减压阀 Piston regulator							
安装方式 Mounting type		管式安装、支架安装或面板式安装 Pipe / Foot / Plate mounting							
安装位置 Assembly position		任意 Any							
连接尺寸 Connection		G1/8	G1/4	G3/8	G3/8	G1/2	G3/4	G3/4	G1
标准额定流量 Standard nominal flow rate	OR-...	800	1500	1700	3200	3500	3500	11000	11500
	OR-...-7-	1000	1600	1800	3300	4000	4500	12000	12500
输入压力 Primary pressure		1~16bar							
工作压力 Working pressure		0.5~12bar / 0.5~7bar							
温度范围 Temperature range		0~60℃							
材料 Materials information		壳体: 压铸锌; 密封: 丁腈橡胶; 调压手轮: POM Housing: Zinc die-casting; Sealing: NBR; Adjusting knob: POM							

减压阀 Regulator / OR

技术参数 Technical data

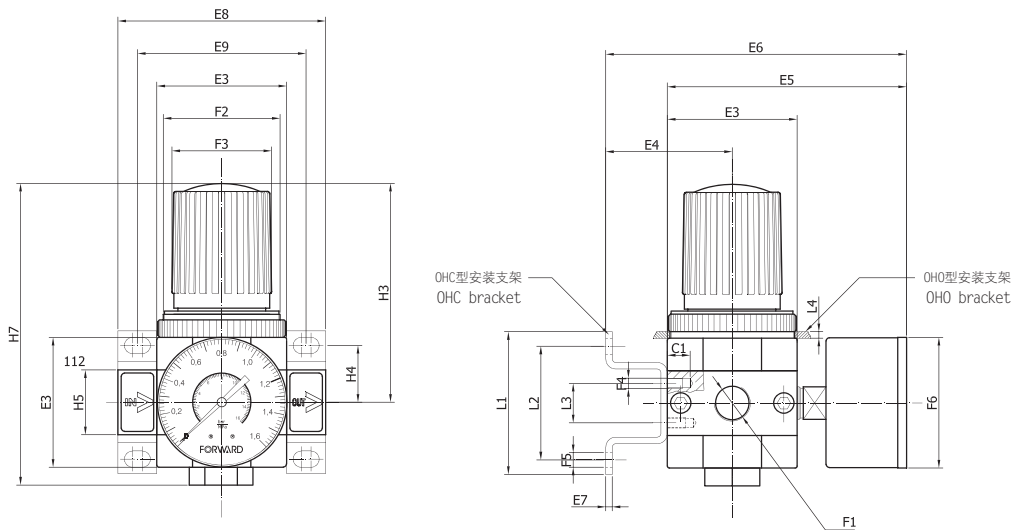
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减压阀 Regulator / OR

技术参数 Technical data

FORWARD

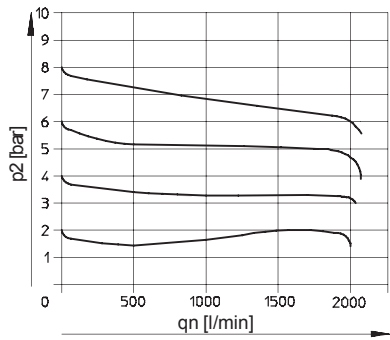
尺寸图 Dimensions



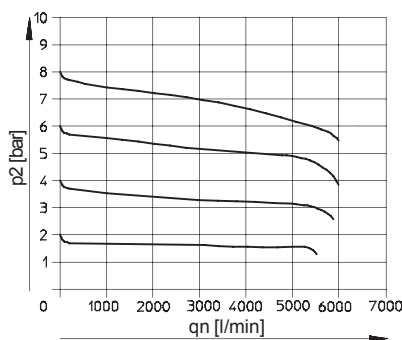
型号 Model	E3	E4	E5	E6	E8	E9	F1	F2	F3Ø	F4	F5Ø	F6Ø	L1	L2	L3	L4	H3	H4	H7
OR-...-MINI	40	39	76	95	64	52	G1/8,G1/4,G3/8	M36*1.5	31	M4	4.5	40	44	35	11	Max.3	69	17.5	96
OR-...-MIDI	55	47	93	112	85	70	G1/8,G1/2,G3/4	M52*1.5	50	M5	5.5	52	71	60	22	Max.5	98	24.5	96
OR-...-MAXI	66	53	104	124	96,116	80,91	G3/4,G1	M36*1.5	31	M5	5.5	63	71	60	22	Max.4	80	24.5	96

标准额定流量qn和输出压力p2的关系 Standard flow rate qn as a function of the output pressure p2

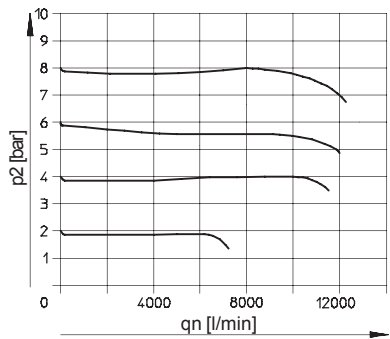
OR-1/4-MINI



OR-1/2-MIDI

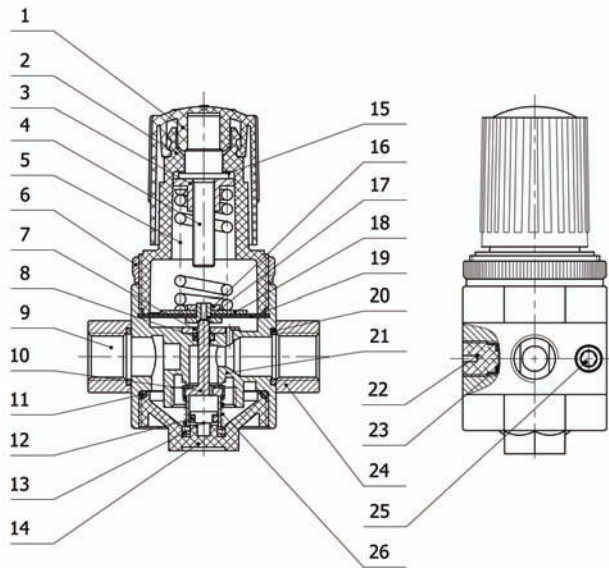


OR-1-MAXI



* 输入压力 Primary pressure: p1=10 bar

内部结构图 Inner structure



序号 NO.	名称 Item	材料 Material	序号 NO.	名称 Item	材料 Material
1	调压手轮 Pressure knob	POM	16	OR垫片 Sheet	NBR
2	阀盖 Regulator cap	POM	17	溢流阀座 Overflow base	6061-T6
3	主调压六角螺帽 Regulator nut	S35C	18	膜片托盘 One part of diaphragm	SPCC
4	调压螺杆 Adjusting spindle	S35C	19	膜片 Diaphragm	NBR+尼龙网
5	弹簧 Pressure spring	SWC	20	O型圈 O-ring	NBR
6	滚花并帽 Fixed ring	6061-T6	21	OR阀体 OR Body	锌合金 Zinc alloy
7	膜片挡圈 One part of membrane	NBR	22	丝堵 Plug	POM
8	O型圈 O-ring	NBR	23	O型圈 O-ring	NBR
9	分气块-IN Flange - IN	锌合金 Zinc alloy	24	分气块-OUT Flange - OUT	锌合金 Zinc alloy
10	阀芯 Spool	黄铜 Brass	25	内六角螺丝 Allen screw	S35C
11	O型圈 O-ring	NBR	26	复位弹簧 Spring	SWPB
12	O型圈 O-ring	NBR			
13	扣钉 Fasteners	黄铜 Brass			
14	锁紧盖 Locker cover	锌合金 Zinc alloy			
15	耐磨垫片 Wearing sheet	绝缘胶板 Insulation sheet			

过滤器 Filter / OF

型号代码 Type codes

FORWARD



分水过滤器能过滤空气中的液态油、冷凝水及杂质，对于特殊应用场合，5μm滤芯容易替换40μm的标准滤芯。

The OF with water separator cleans the compressed air of fluid oil,condensation and dirt particles,for special application,the standard 40μm filter element may easily be replaced by a 5μm filter element.

基本功能 Basic function	
OF	过滤器 Filter
接口尺寸 Connection	
1/8	G1/8
1/4	G1/4
3/8	G3/8
1/2	G1/2
3/4	G3/4
1	G1
过滤等级 Grade of Filtration	
	40 μ m
5M	5 μ m
规格 Size	
MINI	小型
MIDI	中型
MAXI	大型
排水阀 Condensate drain	
	手动 Turned manually
S	半自动 Semi-automatic
A	自动 Fully automatic

OF	-	1/4	-		-	MINI	-	
----	---	-----	---	--	---	------	---	--

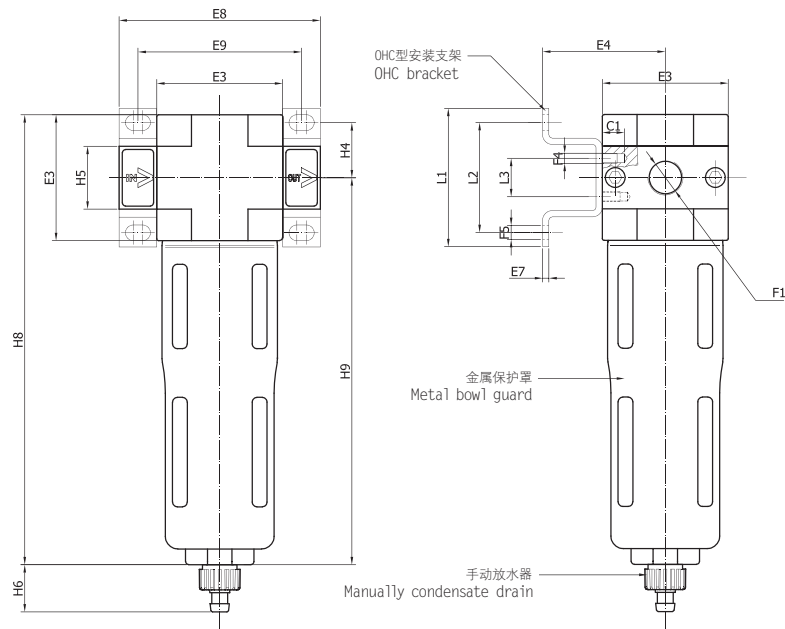
过滤器 Filter / OF

技术参数 Technical data

FORWARD

主要技术参数 General technical data									
规格 Size		MINI			MIDI			MAXI	
工作介质 Medium		压缩空气 Compressed air							
结构特点 Features of structure		带水分离器的烧结式过滤器 Sintered filter with water separator							
安装方式 Mounting type		管式安装或支架安装 Pipe mounting or foot mounting							
安装位置 Assembly position		垂直方向±5° Vertical±5°							
连接尺寸 Connection		G1/8	G1/4	G3/8	G3/8	G1/2	G3/4	G3/4	G1
标准额定流量 Standard nominal flow rate	OF-... (-A)	1000	1200	1400	2700	3000	3000	5000	5300
	OF-...-5M- (-A)	600	950	1100	1800	1900	1900	3200	3300
输入压力 Primary pressure	手动排水阀 Manual condensate drain	最大16bar Max: 16bar							
	自动排水阀 Automatic condensate drain	1.5~12bar							
过滤精度 Grade of filtration		40 μ m / 5 μ m							
最大凝度容量 Max.condensate capacity		22ml			43ml			80ml	
温度范围 Temperature range		0~60℃							
材料 Materials information		壳体：压铸锌；过滤杯：PC；金属保护罩：铝合金；密封：丁腈橡胶 Housing: Zinc die-casting; Filter bowl: PC; Metal bowl guard: Aluminium alloy; Sealing: NBR							

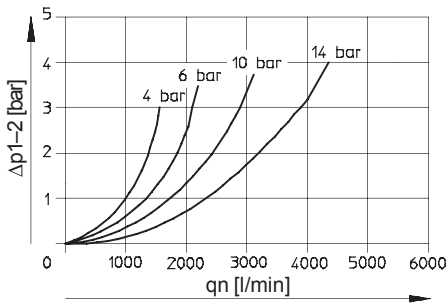
尺寸图 Dimensions



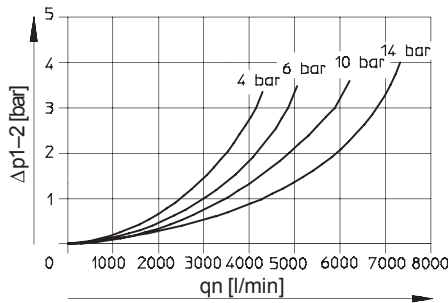
型号 Model	E3	E4	E7	E8	E9	F1	F4	F5	L1	L2	L3	H4	H5	H6	H8	H9
OF-...-MINI	40	39	2	64	52	G1/8,G1/4,G3/8	M4	4.5	44	35	11	17.5	20	15	144	129
OF-...-MIDI	55	47	3	85	70	G1/8,G1/2,G3/4	M5	5.5	71	60	22	24.5	32	15	179	156
OF-...-MAXI	66	53	3	96,116	80,91	G3/4,G1	M5	5.5	71	60	22	24.5	32,40	15	203	175

标准额定流量qn和输出压力p2的关系 Standard flow rate qn as a function of the output pressure p2

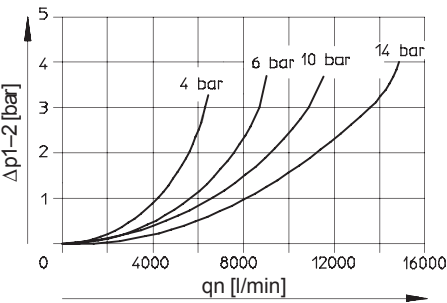
OF-1/4-MINI



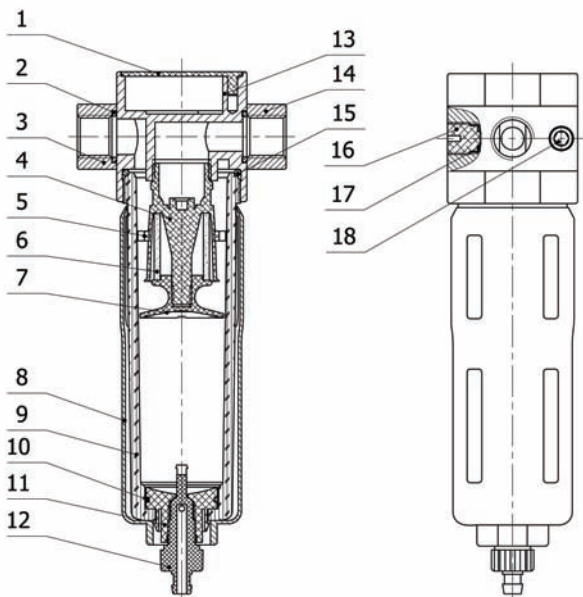
OF-1/2-MIDI



OF-1-MAXI



内部结构图 Inner structure



序号 NO.	名称 Item	材料 Material	序号 NO.	名称 Item	材料 Material
1	装饰盖 (圆型) Ornament cover(round)	POM	11	内接头 Inner joint	POM
2	O型圈 O-ring	NBR	12	放水器 Condensate drain	POM
3	分气块-IN Flange - IN	锌合金 Zinc alloy	13	OF 阀体 OF Body	锌合金 Zinc alloy
4	滤芯座 Filter element base	POM	14	分气块 OUT Flange -OUT	锌合金 Zinc alloy
5	旋风叶轮 Whirl wind impeller	POM	15	O型圈 O-ring	NBR
6	滤芯 Filter element	聚乙烯 PE	16	丝堵 Plug	POM
7	挡水板 Manger	POM	17	O型圈 O-ring	NBR
8	保护罩 Metal bowl guard	铝合金 Aluminium alloy	18	内六角螺丝 Allen screw	S35C
9	水杯 Filter bowl	PC			
10	O型圈 O-ring	NBR			

油雾器 Lubricator / OL

型号代码 Type codes

FORWARD



自动可节流式油雾器可均匀地向压缩空气喷油雾。一个调节器保证了油雾量与压缩空气流量成比例。
压缩空气经过喷嘴时产生压降，迫使油液从油杯进入视油器，随压缩空气进入输入口，同时被雾化。
在工作中可实现不停气加油。
可通过调节螺钉调节滴油量，通常每1000L空气中含有1-12滴就足够了。

The direct constant-density lubricator add regulatd quantity oil to the compressed air.A valve maintains oil mist content proportional to the compressed oil flow.
The pressure drop that occurs when the air flow through a sight feed oil cup delives oil from the bowl to the sight oil indicator .The drop of the oil flows into the air channel when it is atomized.
The oil drip rate is controlled by means of the regulating screw.Normally,1 to 12 drops /1000L of the air is sufficient.

基本功能 Basic function		OL - 1/4 - MINI
OL	油雾器 Lubricator	
接口尺寸 Connection		
1/8	G1/8	
1/4	G1/4	
3/8	G3/8	
1/2	G1/2	
3/4	G3/4	
1	G1	
规格 Size		
MINI	小型	
MIDI	中型	
MAXI	大型	

油雾器 Lubricator / OL

技术参数 Technical data

FORWARD

主要技术参数 General technical data								
规格 Size	MINI			MIDI			MAXI	
工作介质 Medium	压缩空气 Compressed air							
结构特点 Features of structure	油雾型自动可节流式 The direct constant-density lubricator							
安装方式 Mounting type	管式安装或支架安装 Pipe or Foot mounting							
安装位置 Assembly position	垂直方向±5° Vertical ±5°							
连接尺寸 Connection	G1/8	G1/4	G3/8	G3/8	G1/2	G3/4	G3/4	G1
标准额定流量 Standard nominal flow rate	1300	2300	2700	5500	6100	6300	8400	9000
最大工作压力 Max. Working pressure	16bar							
最小起雾流量 Min. Standard nominal flow rate	3 l/min			6 l/min			10 l/min	
最大凝度容量 Max.Condensate capacity	22ml			43ml			80ml	
温度范围 Temperature range	0~60℃							
材料 Materials information	壳体：压铸锌；油杯和视油器：PC；金属保护罩：铝合金；密封：丁腈橡胶； Housing: Zinc die-casting; Oil bowl and Drip cap: PC; Metal bowl guard: Aluminium alloy; Sealing: NBR							
推荐用油 Recommended oil	ISO VG 32或同级用油 ISO VG 32 or the same grade							

油雾器 Lubricator / OL

技术参数 Technical data

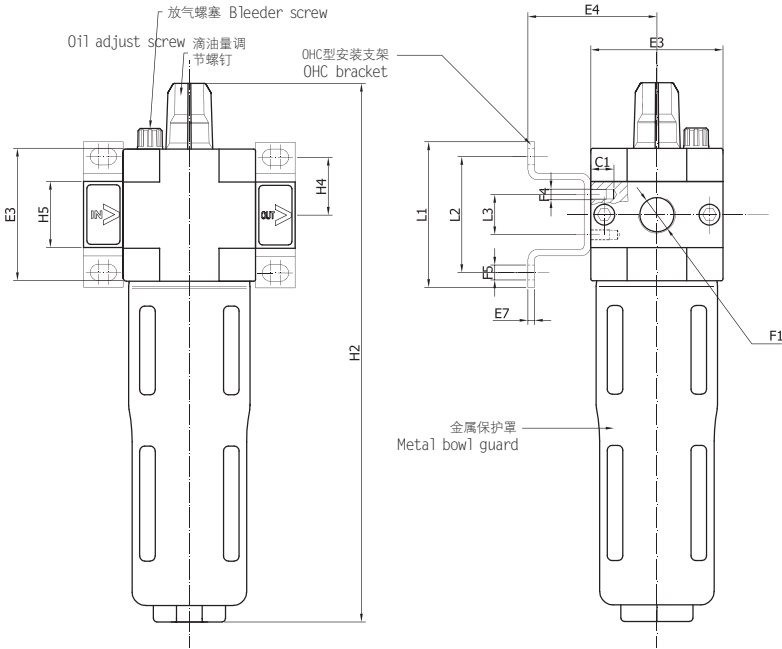
FORWARD

油雾器 Lubricator / OL

技术参数 Technical data

FORWARD

尺寸图 Dimensions

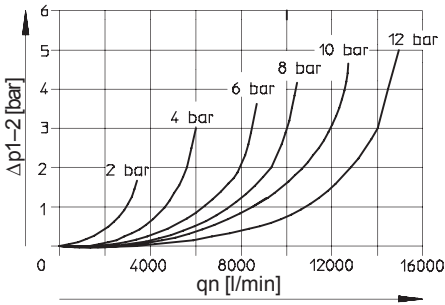
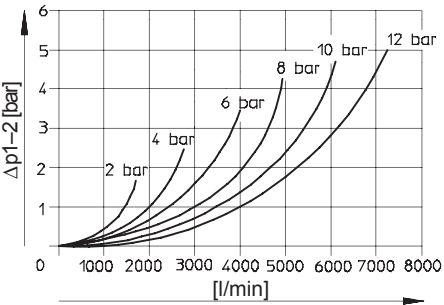


型号 Model	E3	E4	E7	F1	F4	F5Ø	L1	L2	L3	H4	H5
OL-...-MINI	40	39	2	G1/8,G1/4,G3/8	M4	4,5	44	35	11	17,5	20
OL-...-MIDI	55	47	3	G1/8,G1/2,G3/4	M5	5,5	71	60	22	24,5	32
OL-...-MAXI	66	53	3	G3/4,G1	M5	5,5	71	60	22	24,5	32,40

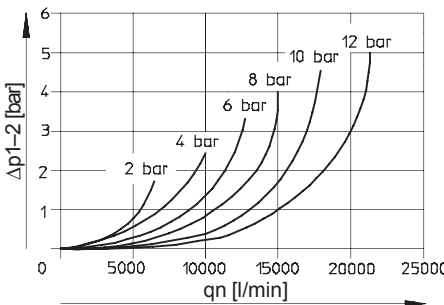
标准额定流量qn和输出压力p2的关系 Standard flow rate qn as a function of the output pressure p2

OL-1/4-MINI

OL-1/2-MIDI

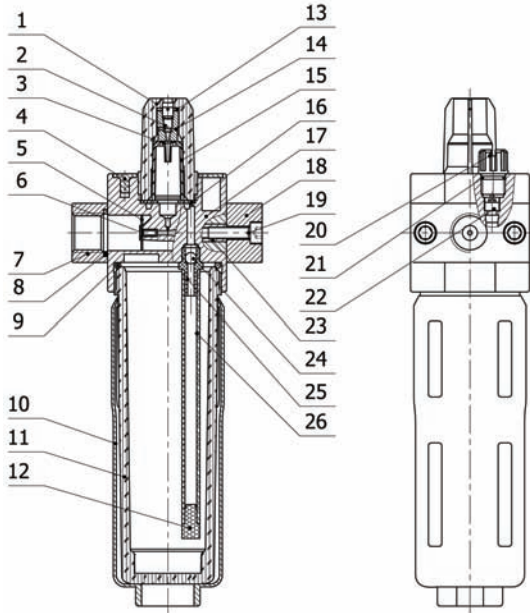


OL-1-MAXI



*输入压力 Primary pressure: p1=10 bar

内部结构图 Inner structure

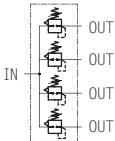


序号 NO.	名称 Item	材料 Material	序号 NO.	名称 Item	材料 Material
1	视油窗 Upper glass	PC	16	密封平垫 Seal piece	NBR
2	调节螺钉 Adjust screw	黄铜 Brass	17	OL 阀体 OL Body	锌合金 Zinc alloy
3	O型圈 O-ring	NBR	18	分气块 OUT Flange – OUT	锌合金 Zinc alloy
4	装饰盖 (环形) Ornament cover (circular)	PO	19	内六角螺丝 Allen screw	S35C
5	挡风片 Windshield chip	NBR	20	放气螺塞 Bleeder screw	POM
6	挡风座 Windshield base	黄铜 Brass	21	O型圈 O-ring	NBR
7	分气块-IN Flange – IN	锌合金 Zinc alloy	22	气门芯 Valve pin	黄铜 Brass
8	O型圈 O-ring	NBR	23	双头螺栓 Double-end bolt	SUS
9	O型圈 O-ring	NBR	24	钢球 Steel ball	SUS304
10	保护罩 Metal bowl guard	铝合金 Aluminium alloy	25	油管接头 Oil tube connection	POM
11	油杯 Lubricator bowl	PC	26	油管 Oil tube	PU
12	滤塞 Oil-filter plug	Brass powder sintered			
13	O型圈 O-ring	NBR			
14	针座 Screw base	黄铜 Brass			
15	滴油嘴 Oil dropping	PC			

减压阀组合 Pressure regulator combinations / ORB

型号代码 Type codes

FORWARD



这种减压阀适用于集成安装，可提供各种不同压力的气源，每个减压阀的前后两边各有一个压力输出口。

The regulator for an integrated installation,can provide a variety of different pressure gas source,the front and rear sides of each one has a output connection.

基本功能 Basic function

ORB 减压阀组件 Pressure regulator combination

接口尺寸 Connection

1/4	G1/4
3/8	G3/8
1/2	G1/2

压力调节范围 Pressure regulation range

	0.5...12bar
7	0.5...7bar

压力表 Pressure gauge

	带压力表 With pressure gauge
0	不带压力表 Without pressure gauge

功能 Functions

K2	集成有2个减压阀 Manifold with 2 pressure regulators
K3	集成有3个减压阀 Manifold with 3 pressure regulators
K4	集成有4个减压阀 Manifold with 4 pressure regulators
K5	集成有5个减压阀 Manifold with 5 pressure regulators

规格 Size

MINI	小型
MIDI	中型
MAXI	大型

ORB - 1/4 - 7 - 0 - K2 - MINI

减压阀组合 Pressure regulator combinations / ORB

技术参数 Technical data

FORWARD

主要技术参数 General technical data			
规格 Size	MINI		MIDI
工作介质 Medium	压缩空气 Compressed air		
结构特点 Features of structure	一级调压膜片式减压阀，带二级排气口和可锁定旋转手柄或按钮式锁（ORBS），直接驱动 Directly actuated diaphragm regulator with through pressure supply		
安装方式 Type of mounting	带安装支架 Via accessory		
安装位置 Assembly position	任意 Any		
连接尺寸 Connection	G1/8 壳体上的内螺纹（压力表） (Connection of pressure gauge)		G1/4 壳体上的内螺纹（压力表） (Connection of pressure gauge)
	G1/4 壳体上的内螺纹（气源输出） (Connection of gas outlet)		G3/8 壳体上的内螺纹（气源输出） (Connection of gas outlet)
压力调节范围 Pressure regulation range	0.5~7bar		
	0.5~12bar		
输入压力 Primary pressure	1~16bar		
标准额定流量 Standard nominal flow rate	0.5~7bar	1800	3800
	0.5~12bar	1600	3200

减压阀组合 Pressure regulator combinations / ORB

技术参数 Technical data

FORWARD

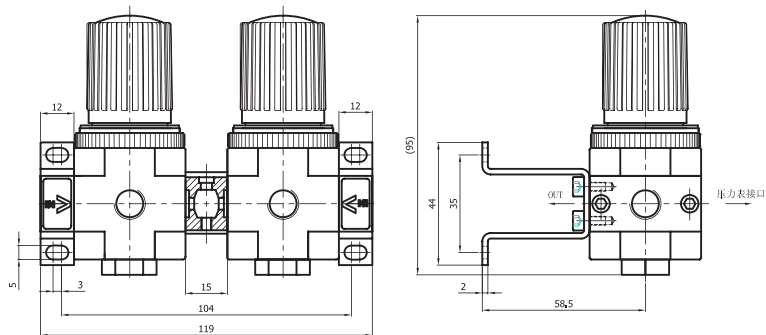
减压阀组合 Pressure regulator combinations / ORB

技术参数 Technical data

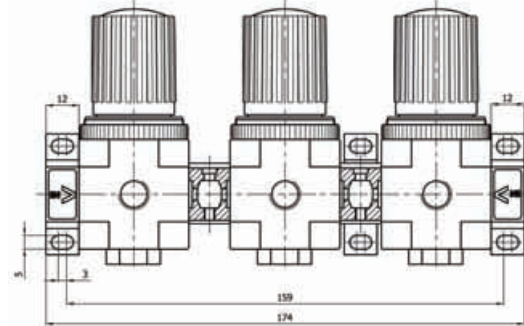
FORWARD

尺寸图 Dimensions

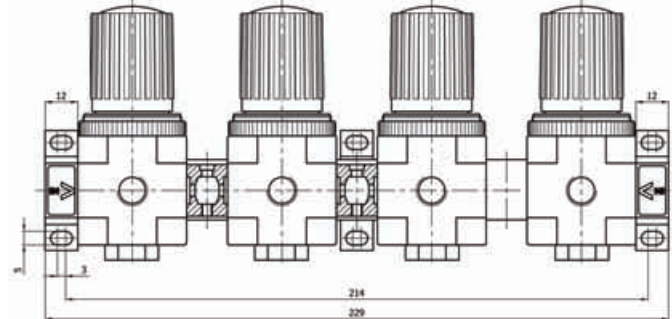
ORB-...-K2 基本尺寸图 Basic version



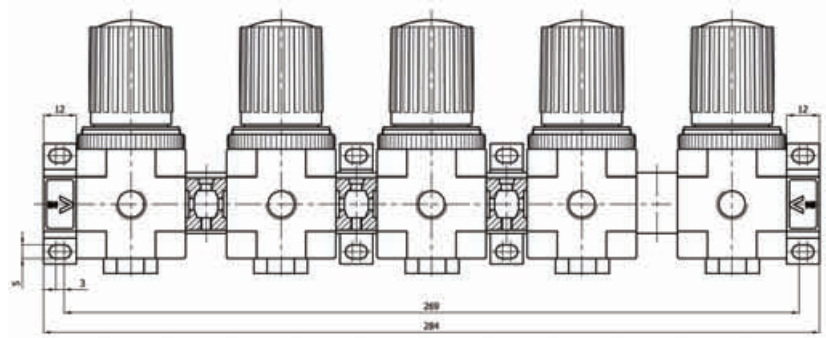
ORB-...-K3 基本尺寸图 Basic version



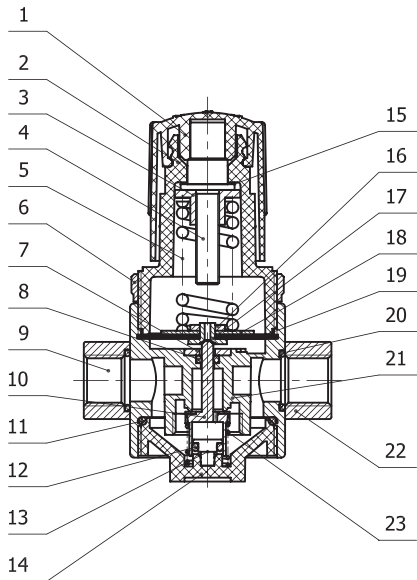
ORB-...-K4 基本尺寸图 Basic version



ORB-...-K5 基本尺寸图 Basic version



内部结构图 Inner structure



序号 NO.	名称 Item	材料 Material	序号 NO.	名称 Item	材料 Material
1	调压手轮 Pressure knob	POM	16	OR垫片 Sheet	NBR
2	阀盖 Regulator cap	POM	17	溢流阀座 Overflow base	6061-T6
3	主调压六角螺帽 Regulator nut	S35C	18	膜片托盘 One part of diaphragm	SPCC
4	调压螺杆 Adjusting spindle	S35C	19	膜片 Diaphragm	NBR+尼龙网
5	弹簧 Pressure spring	SWC	20	O型圈 O-ring	NBR
6	滚花并帽 Fixed ring	6061-T6	21	OR阀体 OR Body	锌合金 Zinc alloy
7	膜片挡圈 One part of membrane	NBR	22	分气块-OUT Flange - OUT	锌合金 Zinc alloy
8	O型圈 O-ring	NBR	23	复位弹簧 Spring	SWPB
9	分气块-IN Flange - IN	锌合金 Zinc alloy			
10	阀芯 Spool	黄铜 Brass			
11	O型圈 O-ring	NBR			
12	O型圈 O-ring	NBR			
13	扣钉 Fasteners	黄铜 Brass			
14	锁紧盖	锌合金 Zinc alloy			
15	耐磨垫片 Wearing sheet	绝缘胶板 Insulation sheet			

辅件 Accessories

技术参数 Technical data

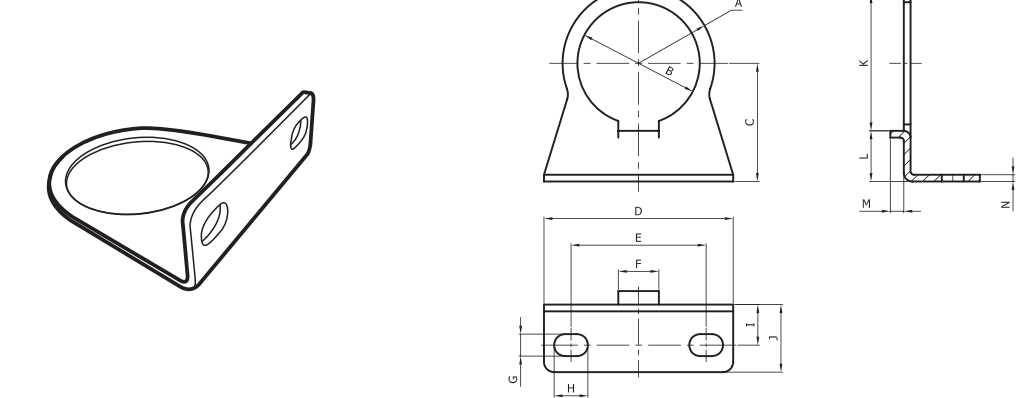
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Mounting bracket OHC



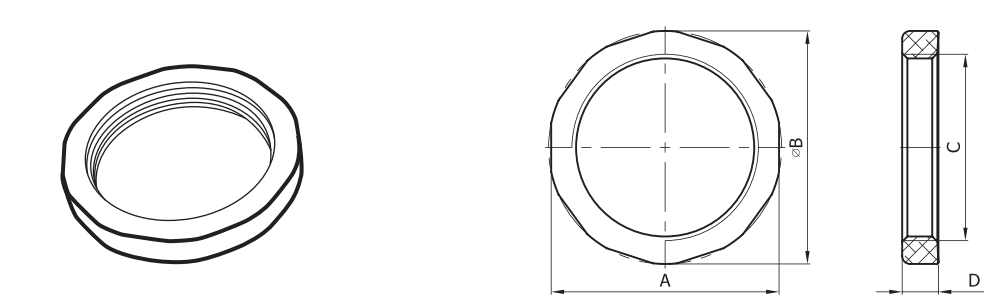
尺寸和订货数据 Dimensions and ordering data										
规格 Size	B1	B1	B1	B1	B1	B1	B1	B1	B1	型号 Type
MINI	2	19	7.3	4.3	43	35	5.5	11	12	OHC-MINI
MIDI/MAXI	3	19	8.3	5.3	70	60	16.5	22	14	OHC-MIDI/MAXI

Mounting bracket OHO



尺寸和订货数据 Dimensions and ordering data															
规格 Size	A	B	C	D	E	F	G	H	I	J	K	L	M	N	型号 Type
MINI/MAXI	22.5	36.5	35	56	40	12	6.5	10	12	20	40.4	15	4	2	OHO-MINI/MAXI
MIDI	30	52.5	48	70	53	12	8.5	10.5	17.5	27	55.5	20	4	2	OHO-MIDI

Nut HMR



尺寸和订货数据 Dimensions and ordering data					
规格 Size	A	B	C	D	型号 Type
MINI/MAXI	44	45	M36*1.5	7	HMR-MINI/MAXI
MIDI	60	62	M52*1.5	8	HMR-MIDI

辅件 Accessories

技术参数 Technical data

FORWARD

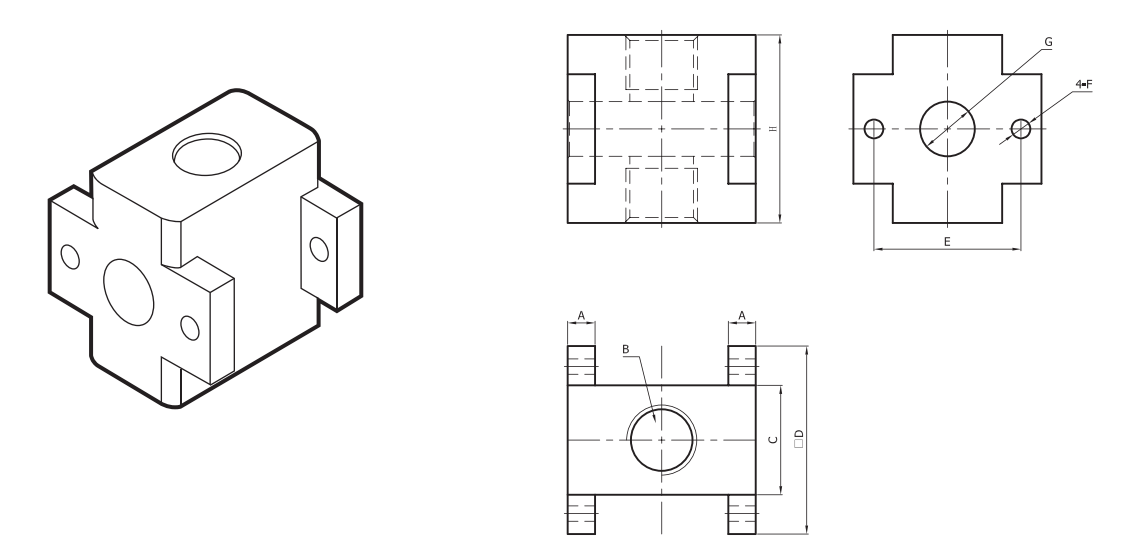
Manometer OMA



压力表用于测量、显示气动控制系统的压力。
The manometer is used to measure and display the pressure of the controlled system.

尺寸和订货数据 Dimensions and ordering data			
型号 Type	Normal size 外形尺寸	Pneumatic connection 接口尺寸	Indicating range 显示范围
OMA-40-10-1/8	40	G1/8	0-10 bar
OMA-40-16-1/8			0-16 bar
OMA-50-10-1/4	50	G1/4	0-10 bar
OMA-50-16-1/4			0-16 bar

Branching modules FRM



尺寸和订货数据 Dimensions and ordering data									
规格 Size	A	B	C	D	E	F	G	H	型号 Type
MINI	6	G1/8,G1/4,G3/8	22	40	30	4.3	11.5	40	FRM-...-MINI
MIDI	8	G3/8,G1/2,G3/4	32	55	43	5.5	16	55	FRM-...-MIDI

电磁阀 Solenoid valve / 3V1

型号代码 Type codes



- 1、直动式常闭阀，换向灵敏；
Direct acting type and normally closed mode,flexible in direction change;
- 2、无需加油润滑；
No need to add oil for lubrication;
- 3、可多阀集成使用，节省安装空间；
Several valves can be installed integrately to save installation space;
- 4、附设手动装置，利于安装调试；
Affiliated manual devices are equipped to facilitate installation and debugging;
- 5、有多种标准电压等级可供选用。
Several standard voltage grades are optional.

3V		1	-	06	-	A	-		-	
型号 Type										
3V	三口二位电磁阀 Solenoid valve(3/2 way)									
系列代号 Code										
1	1 系列 Series									
接管口径 Port size										
M5	M5									
06	1/8									
标准电压 Voltage										
A	AC220V									
B	DC24V									
C	AC110V									
E	AC24V									
F	DC12V									
接电方式 Electrical entry										
	DIN插座式									
I	出线式									
接管口螺牙 Thread type										
	PT									
NPT	NPT									
G	G									

FORWARD

电磁阀 Solenoid valve / 3V1

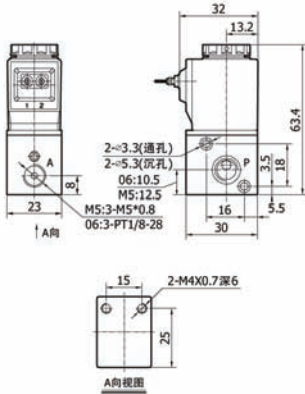
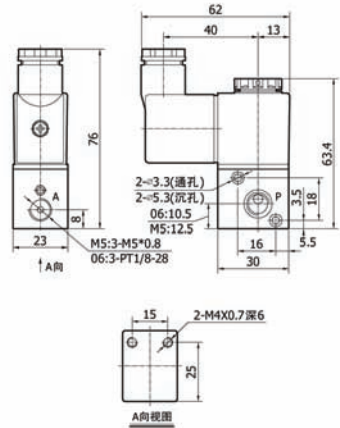
技术参数 Technical data

FORWARD

3V1 主要技术参数 General technical data		
型号 Type	3V1-M5	3V1-06
工作介质 Fluid	空气 (经40um滤芯过滤) Air(to be filtered by 40um filter element)	
作动方式 Acting	直动式 Direct acting	
接管口径 Port size	M5	1/8
位置数 Valve type	三口二位 3 port 2 position	
使用压力范围 Operating pressure	0.15-0.8MPa(21-114Psi)	
保证耐压力 Proof pressure	1.5MPa(215Psi)	
工作温度 Temperature	-20-70℃	
出风口直径 Orifice size	1.2mm	
本体材质 Material of body	铝合金 Aluminum alloy	
润滑 Lubrication	不需要 Not required	
标准电压 Standard voltage	AC220V,AC110V,AC24V,DC24V,DC12V	
使用电压范围 Scope of voltage	AC: ± 15%,DC: ± 10%	
耗电量 Power consumption	AC:3.5VA,DC:3.0W	
保护等级 Protection	IP65(DIN40050)	
耐热等级 Temperature classification	B级 B Class	
接电型式 Electrical entry	DIN 插座式，出线式 Terminal、Grommet	
最短励磁时间 Activating time	0.05秒以下 0.05 sec and below	
最高作动频率 Max. frequency	10次 / 秒 10 cycle/sec	

内部结构图 Inner structure			
序号 NO.	名称 Item	序号 NO.	名称 Item
1	接线端子 Connector	5	可动铁组 Armature
2	端子垫片 Gasket	6	O令 O-ring
3	固定螺帽 Coil nut	7	复归弹簧 Return spring
4	线圈 Coil	8	本体 Body

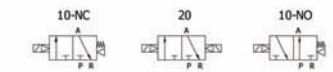
3V系列 尺寸图 Dimensions	
3V1 Terminal	3V1 Grommet



电磁阀 Solenoid valve / 3V100,3V200,3V300

型号代码 Type codes

FORWARD



- 1、先导方式：外部与内部可选；
Pilot-oriented mode:optional for internal or external;
- 2、滑柱式结构，密封性好，反应灵敏；
Structure in sliding column mode:good tightness and sensitive reaction;
- 3、双头电磁阀具有记忆功能；
Double control solenoid valves have memory function;
- 4、内孔采用特殊工艺加工，磨擦阻力小，启动气压低，使用寿命长；
Internal hole adopts special processing technology which has little attrition friction,low start pressure and long service life;
- 5、无需加油润滑；
No need to add oil for lubrication;
- 6、附设手动装置，利于安装调试；
Affiliated manual devices are equipped to facilitate installation and debugging;
- 7、有多种标准电压等级可供选用。
Several standard voltage grades are optional.

3V

1

10

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06

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NO

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A

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型号 Type	
3V	三口二位电磁阀 Solenoid valve(3/2 way)
系列代号 Code	
1	100 Series
2	200 Series
3	300 Series
电控方式 Valve type	
10	双位置单电控 Single solenoid
20	双位置双电控 Double solenoid
接管口径 Port size	
M5	M5
06	1/8
08	1/4
10	3/8
初始状态 Acting type	
NC	常闭型 Normally closed
NO	常开型 Normally opened
标准电压 Voltage	
A	AC220V
B	DC24V
C	AC110V
E	AC24V
F	DC12V
接电方式 Electrical entry	
	DIN插座式 Terminal
I	出线式 Grommet
接管口螺纹 Thread type	
	PT
NPT	NPT
G	G

电磁阀 Solenoid valve / 3V100,3V200,3V300

技术参数 Technical data

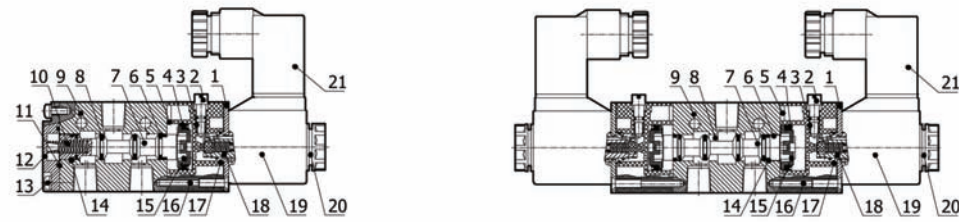
FORWARD

3V 主要技术参数 General technical data												
型号 Type	3V110-M5	3V120-M5	3V110-06	3V120-06	3V210-06	3V220-06	3V210-08	3V220-08	3V310-08	3V320-08	3V310-10	3V320-10
工作介质 Fluid	空气（ 经40um滤芯过滤 ） Air(to be filtered by 40um filter element)											
作动方式 Acting	先导式 Internal piloted											
接管口径 Port size	M5	1/8		进气 = 出气 = 1/8 In=Out=1/8		进气 = 出气 = 1/4 In=Out=1/4			进气 = 出气 = 3/8 In=Out=3/8			
有效截面积 Orifice size	5.5mm ² (Cv=0.31)	12.0mm ² (Cv=0.67)		14.0mm ² (Cv=0.78)		16.0mm ² (Cv=0.89)		25.0mm ² (Cv=1.39)		30.0mm ² (Cv=1.67)		
位置数 Valve type	三口二位 3 port 2 position											
使用压力范围 Operating pressure	0.15-0.8MPa(21-114Psi)											
保证耐压力 Proof pressure	1.5MPa(215Psi)											
工作温度 Temperature	-20~70℃											
本体材质 Material of body	铝合金 Aluminum alloy											
润滑 Lubrication	不需要 Not required											
标准电压 Standard voltage	AC220V,AC110V,AC24V,DC24V,DC12V											
使用电压范围 Scope of voltage	AC: ± 15%,DC: ± 10%											
耗电量 Power consumption	AC:2.5VA,DC:2.5W				AC:3.5VA,DC:3.0W							
保护等级 Protection	IP65(DIN40050)											
耐热等级 Temperature classification	B级 B Class											
接电型式 Electrical entry	DIN 插座式，出线式 Terminal、Grommet											
最短历磁时间 Activating time	0.05秒 0.05 sec and below											
最高作动频率 Max. frequency	5次 / 秒 5 cycle/sec											

技术参数 Technical data

FORWARD

内部结构图 Inner structure



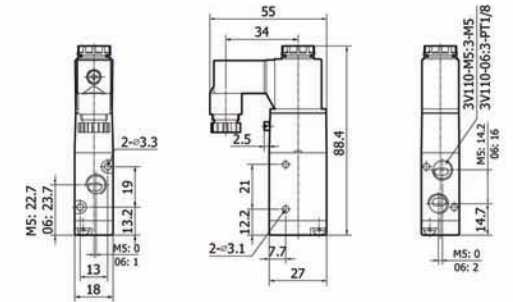
序号 NO.	名称 Item	序号 NO.	名称 Item
1	固定铁片 Fixed plate	12	底盖 Bottom cover
2	手动销 Manual override	13	圆头螺钉 Screw
3	弹簧 Override spring	14	耐磨环 Wearing ring
4	异型O令 Piston O-ring	15	活塞 Piston
5	引导本体 Pilot body	16	埋头螺钉 Pilot screw
6	异型O令 Piston O-ring	17	O令 O-ring
7	轴芯 Spool	18	可动铁 Armature
8	O令 O-ring	19	线圈 Coil
9	本体 Body	20	固定螺帽 Coil nut
10	弹簧 Spool spring	21	端子 Connector
11	止泄垫 Bottom cover gasket		

技术参数 Technical data

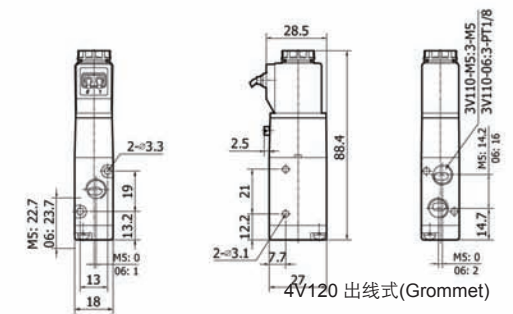
FORWARD

3V100 尺寸图 Dimensions

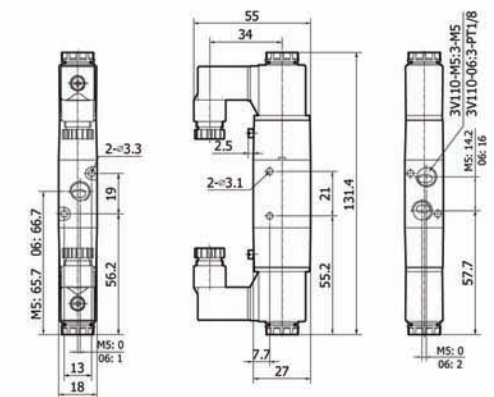
3V110 DIN插座式(Terminal)



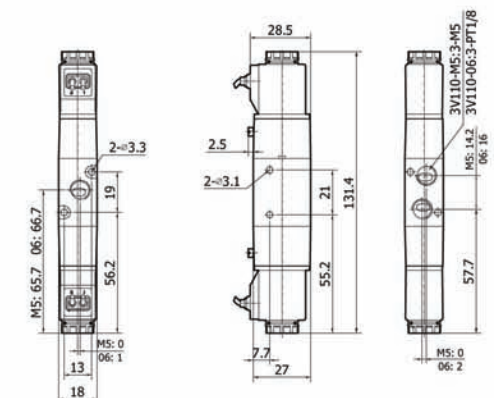
3V110 出线式(Grommet)



3V120 DIN插座式(Terminal)



3V120 出线式(Grommet)



电磁阀 Solenoid valve / 3V100,3V200,3V300

技术参数 Technical data

FORWARD

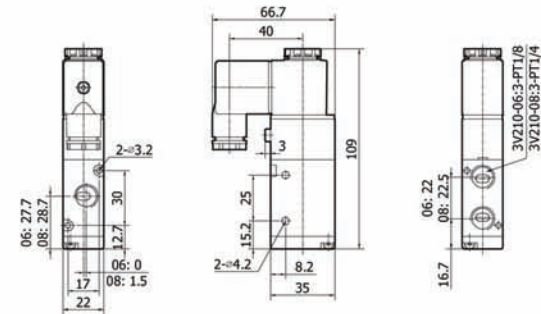
电磁阀 Solenoid valve / 3V100,3V200,3V300

技术参数 Technical data

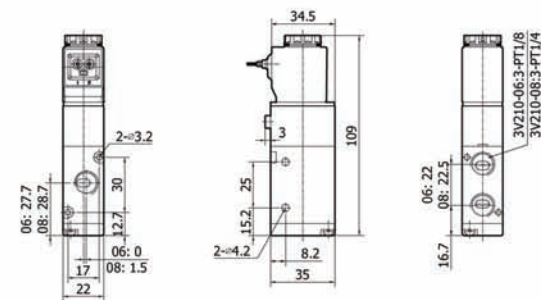
FORWARD

3V200 尺寸图 Dimensions

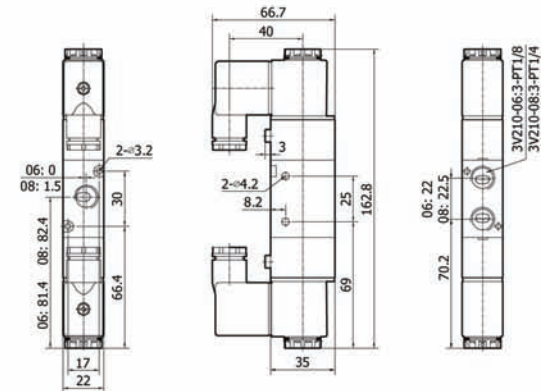
3V210 DIN插座式(Terminal)



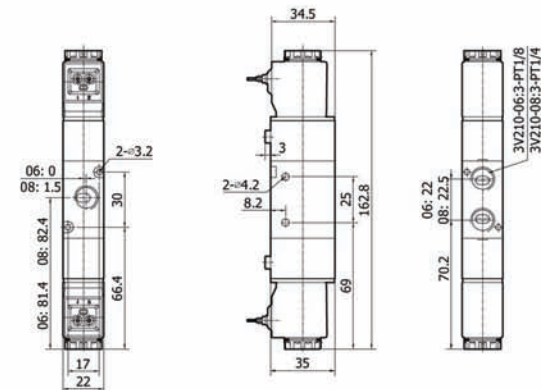
3V210 出线式(Grommet)



3V220 DIN插座式(Terminal)

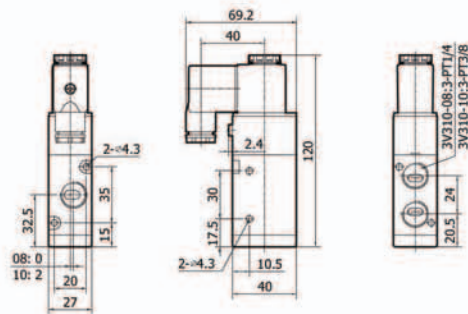


3V220 出线式(Grommet)

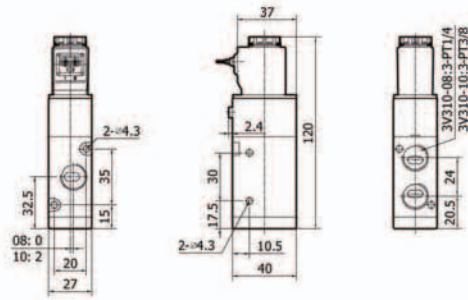


3V300 尺寸图 Dimensions

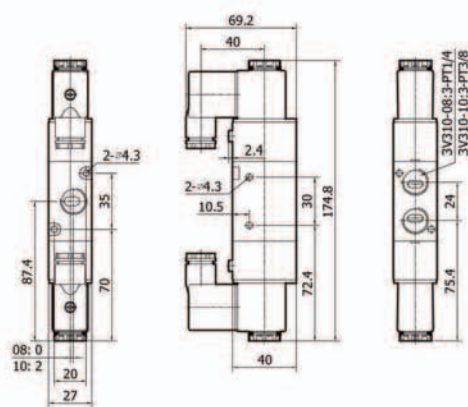
3V310 DIN插座式(Terminal)



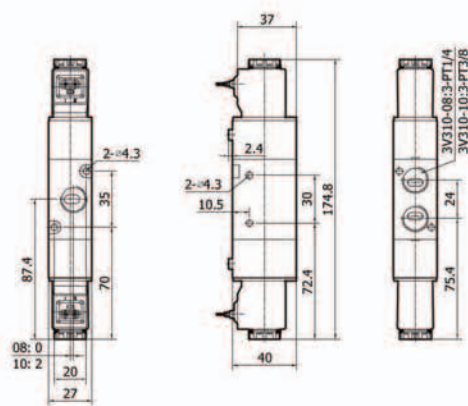
3V310 出线式(Grommet)



3V320 DIN插座式(Terminal)



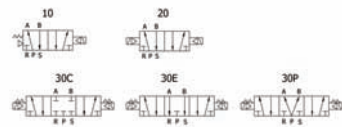
3V320 出线式(Grommet)



电磁阀 Solenoid valve / 4V100

型号代码 Type codes

FORWARD



- 1、先导方式：外部与内部可选；
Pilot-oriented mode:optional for internal or external;
- 2、滑柱式结构，密封性好，反应灵敏；
Structure in sliding column mode:good tightness and sensitive reaction;
- 3、三位电磁阀有三种中央功能可供选择；
Three position solenoid valves have three kinds of central function for your choice;
- 4、双头二位置电磁阀具有记忆功能；
Double control solenoid valves have memory function;
- 5、内孔采用特殊工艺加工，磨擦阻力小，启动气压低，使用寿命长；
Internal hole adopts special processing technology which has little attrition friction,low start pressure and long service life;
- 6、无需加油润滑；
No need to add oil for lubrication;
- 7、可与底座集成阀组，节省安装空间；
It is available to form integrated valve group with the base to save installation space;
- 8、附设手动装置，利于安装调试；
Affiliated manual devices are equipped to facilitate installation and debugging;
- 9、有多种标准电压等级可供选用；
Several standard voltage grades are optional;

4V		1	10	-	06	-	A	-		-	
型号 Type											
4V	五口二位、五口三位电磁阀 Solenoid valve 5/2、5/3way										
系列代号 Code											
1	100 Series										
电控方式 Valve type											
10	双位置单电控 Single solenoid 5/2 way										
20	双位置双电控 Double solenoid 5/2 way										
30C	三位置双电控中位封闭型 Double solenoid 5/3 way closed center										
30E	三位置双电控中位排气型 Double solenoid 5/3 way exhaust center										
30P	三位置双电控中位压力型 Double solenoid 5/3 way pressure center										
接管口径 Port size											
M5	M5										
06	1/8										
标准电压 Voltage											
A	AC220V										
B	DC24V										
C	AC110V										
E	AC24V										
F	DC12V										
接电方式 Electrical entry											
	DIN插座式 Terminal										
I	出线式 Grommet										
接管口螺纹 Thread type											
	PT										
NPT	NPT										
G	G										

电磁阀 Solenoid valve / 4V100

技术参数 Technical data

FORWARD

4V100 主要技术参数 General technical data				
型号 Type	4V110-M5	4V130C-M5	4V110-06	4V130C-06
	4V120-M5	4V130E-M5	4V120-06	4V130E-06
		4V130P-M5		4V130P-06
工作介质 Fluid	空气 (经40um滤芯过滤) Air(to be filtered by 40um filter element)			
作动方式 Acting	先导式 Internal piloted			
接管口径 Port size	进气 = 出气 = M5 In=Out=M5		进气 = 出气 = 1/8 In=Out=1/8	
有效截面积 Orifice size	5.5mm ² (Cv=0.31)	5.0mm ² (Cv=0.28)	12.0mm ² (Cv=0.67)	9.0mm ² (Cv=0.50)
位置数 Valve type	五口二位 5 port 2 position	五口三位 5 port 3 position	五口二位 5 port 2 position	五口三位 5 port 3 position
使用压力范围 Operating pressure	0.15-0.8MPa(21-114Psi)			
保证耐压力 Proof pressure	1.5MPa(215Psi)			
工作温度 Temperature	-20-70℃			
本体材质 Material of body	铝合金 Aluminum alloy			
润滑 Lubrication	不需要 Not required			
最高动作频率 Max. frequency	5次 / 秒 5 cycle/sec	3次 / 秒 3 cycle/sec	5次 / 秒 5 cycle/sec	3次 / 秒 3 cycle/sec
重量 Weight	4V110-M5:120g 4V120-M5:175g	200g	4V110-06:120g 4V120-06:175g	200g
标准电压 Standard voltage	AC220V,AC110V,AC24V,DC24V,DC12V			
使用电压范围 Scope of voltage	AC: ± 15%,DC: ± 10%			
耗电量 Power consumption	AC:2.5VA,DC:2.5W			
保护等级 Protection	IP65(DIN40050)			
耐热等级 Temperature classification	B级 B Class			
接电型式 Electrical entry	DIN 插座式，出线式 Terminal、Grommet			
最短励磁时间 Activating time	0.05秒 0.05 sec and below			

电磁阀 Solenoid valve / 4V100

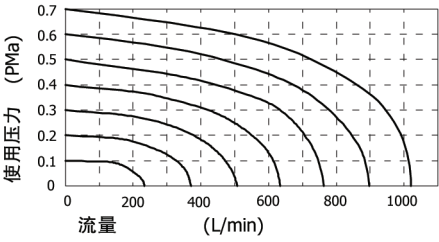
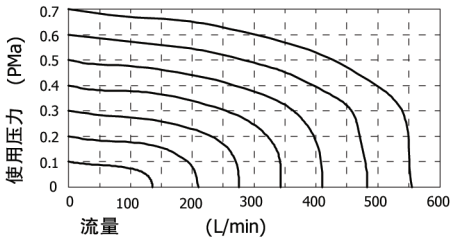
技术参数 Technical data

FORWARD

流量特性 Flow chart

4V110-M5

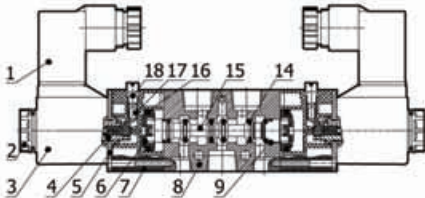
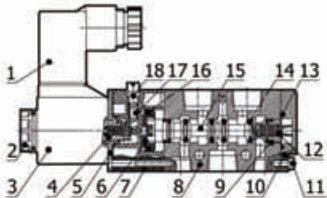
4V110-06



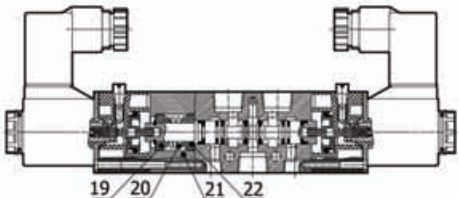
内部结构图 Inner structure

4V110

4V120



4V130C



序号 NO.	名称 Item	序号 NO.	名称 Item
1	端子 Connector	12	弹簧 Spool spring
2	固定螺帽 Coil nut	13	止泄垫 Bottom cover gasket
3	线圈 Coil	14	O 令 Spool O-ring
4	可动铁 Armature	15	轴芯 Spool
5	固定铁片 Fixed plate	16	异型O令 Piston O-ring
6	活塞 Piston	17	弹簧 Override spring
7	引导本体 Pilot kit	18	手动销 Manual override
8	本体 Body	19	复归座 Spring holder
9	耐磨环 Wearing ring	20	弹簧 Return spring
10	底盖 Bottom cover	21	侧盖 Side cover
11	螺钉 Fixed screw	22	复归座 Spring holder

电磁阀 Solenoid valve / 4V100

技术参数 Technical data

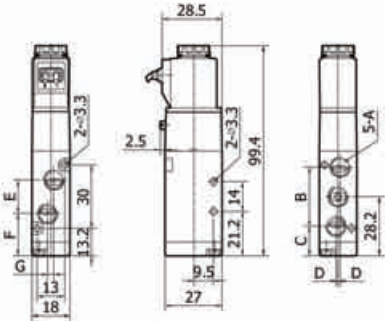
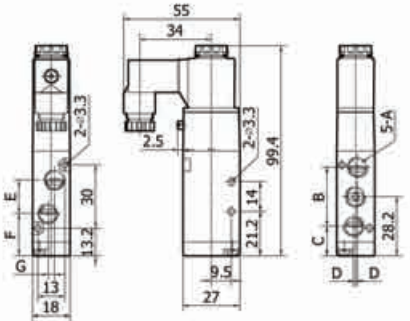
FORWARD

尺寸图 Dimensions

型号 Model	A	B	C	D	E	F	G
4V110-M5	M5*0.8	27	14.7	0	14	21.2	0
4V110-06	PT1/8	28	14.2	1	16	20.2	3
4V120-M5	M5*0.8	27	57.7	0	14	64.3	0
4V120-06	PT1/8	28	57.2	1	16	63.2	3
4V130-M5	M5*0.8	27	57.7	0	14	64.3	0
4V130-06	PT1/8	28	57.2	1	16	63.2	3

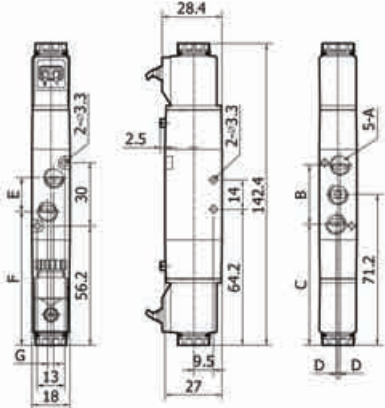
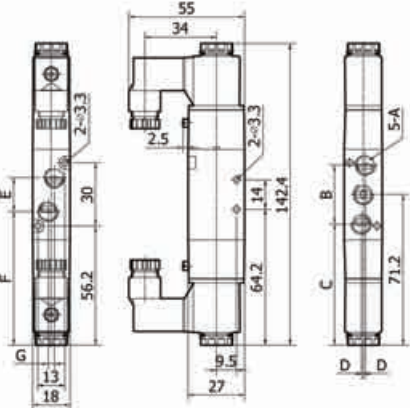
4V110 DIN插座式(Terminal)

4V110 出线式(Grommet)



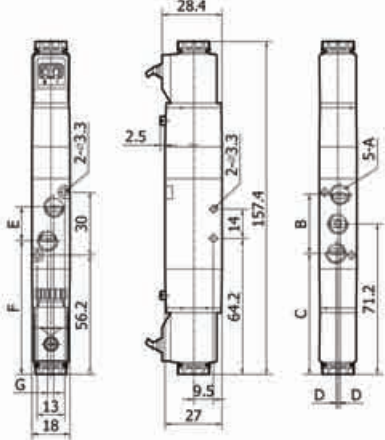
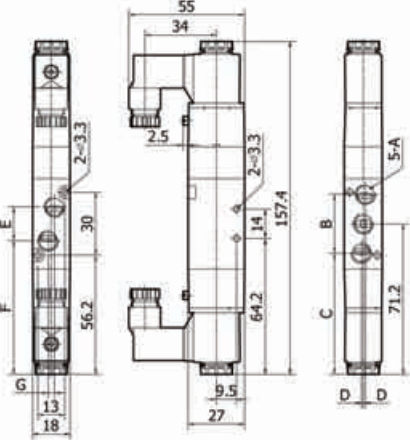
4V120 DIN插座式(Terminal)

4V120 出线式(Grommet)



4V130 DIN插座式(Terminal)

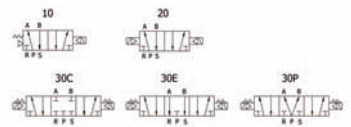
4V130 出线式(Grommet)



电磁阀 Solenoid valve / 4V200

型号代码 Type codes

FORWARD



- 1、先导方式：外部与内部可选；
Pilot-oriented mode:optional for internal or external;
- 2、滑柱式结构，密封性好，反应灵敏；
Structure in sliding column mode:good tightness and sensitive reaction;
- 3、三位电磁阀有三种中央功能可供选择；
Three position solenoid valves have three kinds of central function for your choice;
- 4、双头二位置电磁阀具有记忆功能；
Double control solenoid valves have memory function;
- 5、内孔采用特殊工艺加工，磨擦阻力小，启动气压低，使用寿命长；
Internal hole adopts special processing technology which has little attrition friction,low start pressure and long service life;
- 6、无需加油润滑；
No need to add oil for lubrication;
- 7、可与底座集成阀组，节省安装空间；
It is available to form integrated valve group with the base to save installation space;
- 8、附设手动装置，利于安装调试；
Affiliated manual devices are equipped to facilitate installation and debugging;
- 9、有多种标准电压等级可供选用；
Several standard voltage grades are optional;

4V

2

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- 08

- A

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型号 Type	
4V	五口二位、五口三位电磁阀 Solenoid valve 5/2、5/3way
系列代号 Code	
2	200 Series
电控方式 Valve type	
10	双位置单电控 Single solenoid 5/2 way
20	双位置双电控 Double solenoid 5/2 way
30C	三位置双电控中位封闭型 Double solenoid 5/3 way closed center
30E	三位置双电控中位排气型 Double solenoid 5/3 way exhaust center
30P	三位置双电控中位压力型 Double solenoid 5/3 way pressure center
接管口径 Port size	
06	1/8
08	1/4
标准电压 Voltage	
A	AC220V
B	DC24V
C	AC110V
E	AC24V
F	DC12V
接电方式 Electrical entry	
	DIN插座式 Terminal
I	出线式 Grommet
接管口螺纹 Thread type	
	PT
NPT	NPT
G	G

电磁阀 Solenoid valve / 4V200

技术参数 Technical data

FORWARD

4V200 主要技术参数 General technical data				
型号 Type	4V210-06	4V230C-06	4V210-08	4V230C-08
	4V220-06	4V230E-06	4V220-08	4V230E-08
		4V230P-06		4V230P-08
工作介质 Fluid	空气 (经40um滤芯过滤) Air(to be filtered by 40um filter element)			
作用方式 Acting	先导式 Internal piloted			
接管口径 Port size	进气 = 出气 = 排气 = 1/8 In=Out=Exhaust=1/8		进气 = 出气 = 1/4，排气 = 1/8 In=Out=1/4,Exhaust=1/8	
有效截面积 Orifice size	14.0mm ² (Cv=0.78)	12.0mm ² (Cv=0.67)	16.0mm ² (Cv=0.89)	12.0mm ² (Cv=0.67)
位置数 Valve type	五口二位 5 port 2 position	五口三位 5 port 3 position	五口二位 5 port 2 position	五口三位 5 port 3 position
使用压力范围 Operating pressure	0.15-0.8MPa(21-114Psi)			
保证耐压力 Proof pressure	1.5MPa(215Psi)			
工作温度 Temperature	-20-70℃			
本体材质 Material of body	铝合金 Aluminum alloy			
润滑 Lubrication	不需要 Not required			
最高动作频率 Max. frequency	5次 / 秒 5 cycle/sec	3次 / 秒 3 cycle/sec	5次 / 秒 5 cycle/sec	3次 / 秒 3 cycle/sec
重量 Weight	4V210-06:220g 4V220-06:320g	360g	4V210-08:220g 4V220-08:320g	360g
标准电压 Standard voltage	AC220V,AC110V,AC24V,DC24V,DC12V			
使用电压范围 Scope of voltage	AC: ± 15%,DC: ± 10%			
耗电量 Power consumption	AC:3.5VA,DC:3.0W			
保护等级 Protection	IP65(DIN40050)			
耐热等级 Temperature classification	B级 B Class			
接电型式 Electrical entry	DIN 插座式，出线式 Terminal、Grommet			
最短励磁时间 Activating time	0.05秒 0.05 sec and below			

电磁阀 Solenoid valve / 4V200

技术参数 Technical data

FORWARD

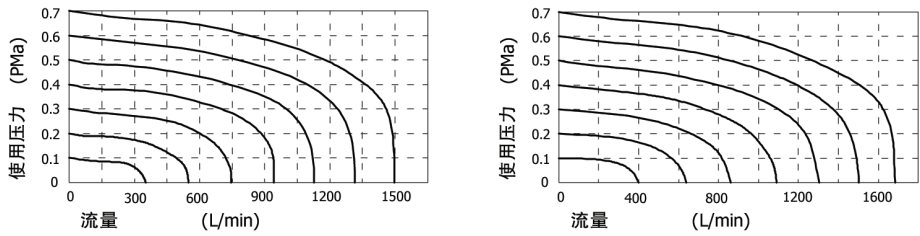
电磁阀 Solenoid valve / 4V200

技术参数 Technical data

FORWARD

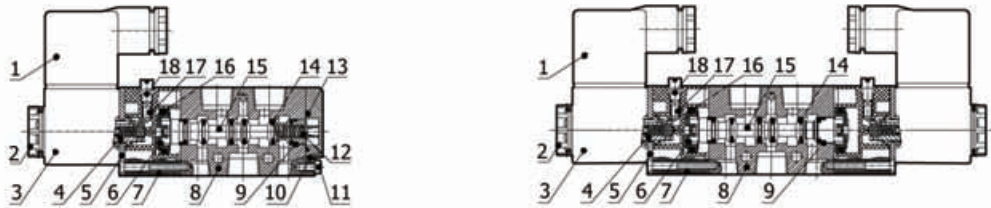
流量特性 Flow chart

4V210-064V210-08

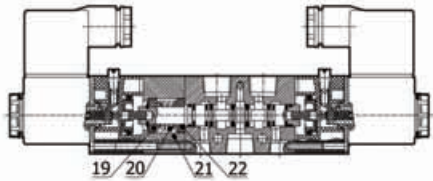


内部结构图 Inner structure

4V2104V220



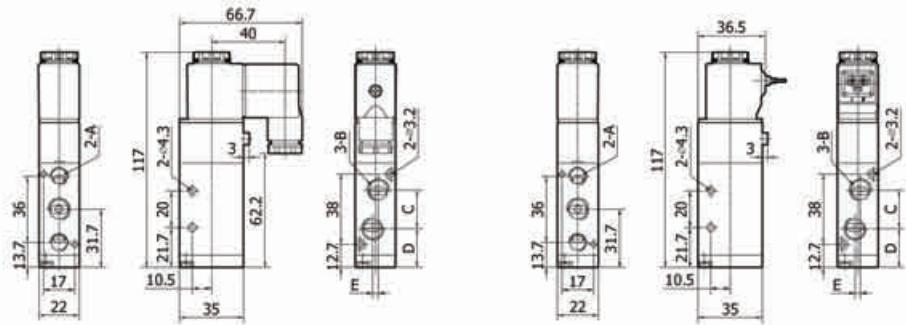
4V230C



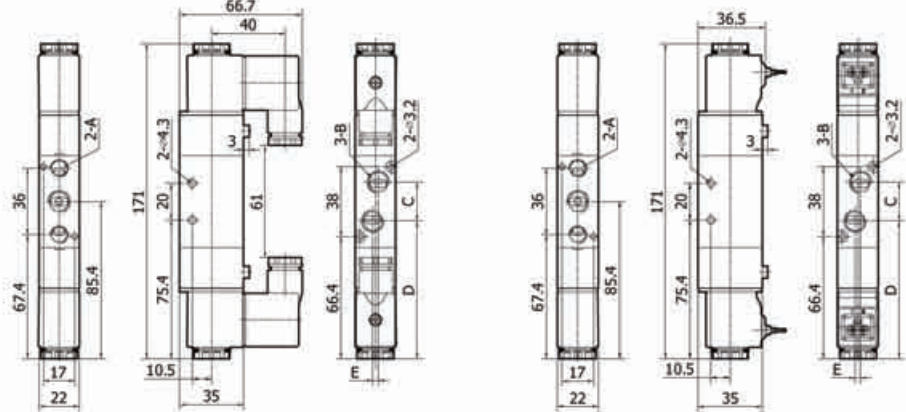
序号 NO.	名称 Item	序号 NO.	名称 Item
1	端子 Connector	12	弹簧 Spool spring
2	固定螺帽 Coil nut	13	止泄垫 Bottom cover gasket
3	线圈 Coil	14	O 令 Spool O-ring
4	可动铁 Armature	15	轴芯 Spool
5	固定铁片 Fixed plate	16	异型O令 Piston O-ring
6	活塞 Piston	17	弹簧 Override spring
7	引导本体 Pilot kit	18	手动销 Manual override
8	本体 Body	19	复归座 Spring holder
9	耐磨环 Wearing ring	20	弹簧 Return spring
10	底盖 Bottom cover	21	侧盖 Side cover
11	螺钉 Fixed screw	22	复归座 Spring holder

尺寸图 Dimensions					
型号 Model	A	B	C	D	E
4V210-06	PT1/8	PT1/8	18	22.7	0
4V210-08	PT1/8	PT1/4	21	21.2	3
4V220-06	PT1/8	PT1/8	18	76.4	0
4V220-08	PT1/8	PT1/4	21	74.9	3
4V230-06	PT1/8	PT1/8	18	76.4	0
4V230-08	PT1/8	PT1/4	21	74.9	3

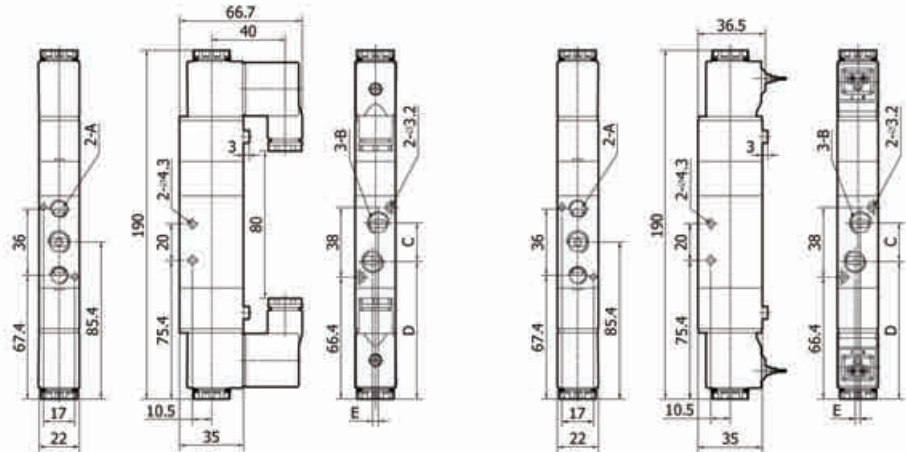
4V210 DIN插座式(Terminal)4V210 出线式(Grommet)



4V220 DIN插座式(Terminal)4V220 出线式(Grommet)



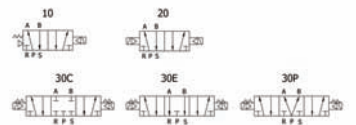
4V230 DIN插座式(Terminal)4V230 出线式(Grommet)



电磁阀 Solenoid valve / 4V300

型号代码 Type codes

FORWARD



- 1、先导方式：外部与内部可选；
Pilot-oriented mode:optional for internal or external;
- 2、滑柱式结构，密封性好，反应灵敏；
Structure in sliding column mode:good tightness and sensitive reaction;
- 3、三位电磁阀有三种中央功能可供选择；
Three position solenoid valves have three kinds of central function for your choice;
- 4、双头二位置电磁阀具有记忆功能；
Double control solenoid valves have memory function;
- 5、内孔采用特殊工艺加工，磨擦阻力小，启动气压低，使用寿命长；
Internal hole adopts special processing technology which has little attrition friction,low start pressure and long service life;
- 6、无需加油润滑；
No need to add oil for lubrication;
- 7、可与底座集成阀组，节省安装空间；
It is available to form integrated valve group with the base to save installation space;
- 8、附设手动装置，利于安装调试；
Affiliated manual devices are equipped to facilitate installation and debugging;
- 9、有多种标准电压等级可供选用；
Several standard voltage grades are optional;

4V

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型号 Type	
4V	五口二位、五口三位电磁阀 Solenoid valve 5/2、5/3way
系列代号 Code	
3	300 Series
电控方式 Valve type	
10	双位置单电控 Single solenoid 5/2 way
20	双位置双电控 Double solenoid 5/2 way
30C	三位置双电控中位封闭型 Double solenoid 5/3 way closed center
30E	三位置双电控中位排气型 Double solenoid 5/3 way exhaust center
30P	三位置双电控中位压力型 Double solenoid 5/3 way pressure center
接管口径 Port size	
08	1/4
10	3/8
标准电压 Voltage	
A	AC220V
B	DC24V
C	AC110V
E	AC24V
F	DC12V
接电方式 Electrical entry	
	DIN插座式 Terminal
I	出线式 Grommet
接管口螺纹 Thread type	
	PT
NPT	NPT
G	G

电磁阀 Solenoid valve / 4V300

技术参数 Technical data

FORWARD

4V300 主要技术参数 General technical data				
型号 Type	4V310-08	4V330C-08	4V310-10	4V330C-10
	4V320-08	4V330E-08	4V320-10	4V330E-10
		4V330P-08		4V330P-10
工作介质 Fluid	空气 (经40um滤芯过滤) Air(to be filtered by 40um filter element)			
作用方式 Acting	先导式 Internal piloted			
接管口径 Port size	进气 = 出气 = 排气 = 1/4 In=Out=Exhaust= 1/4		进气 = 出气 = 3/8，排气 = 1/4 In=Out=3/8,Exhaust= 1/4	
有效截面积 Orifice size	25.0mm ² (Cv=1.40)	18.0mm ² (Cv=1.00)	30.0mm ² (Cv=1.68)	18.0mm ² (Cv=1.00)
位置数 Valve type	五口二位 5 port 2 position	五口三位 5 port 3 position	五口二位 5 port 2 position	五口三位 5 port 3 position
使用压力范围 Operating pressure	0.15-0.8MPa(21-114Psi)			
保证耐压力 Proof pressure	1.5MPa(215Psi)			
工作温度 Temperature	-20-70℃			
本体材质 Material of body	铝合金 Aluminum alloy			
润滑 Lubrication	不需要 Not required			
最高动作频率 Max. frequency	4次 / 秒 4 cycle/sec	3次 / 秒 3 cycle/sec	4次 / 秒 4 cycle/sec	3次 / 秒 3 cycle/sec
重量 Weight	4V310-08:310g 4V320-08:400g	450g	4V310-10:310g 4V320-10:400g	450g
标准电压 Standard voltage	AC220V,AC110V,AC24V,DC24V,DC12V			
使用电压范围 Scope of voltage	AC: ± 15%,DC: ± 10%			
耗电量 Power consumption	AC:3.5VA,DC:3.0W			
保护等级 Protection	IP65(DIN40050)			
耐热等级 Temperature classification	B级 B Class			
接电型式 Electrical entry	DIN 插座式，出线式 Terminal、Grommet			
最短励磁时间 Activating time	0.05秒 0.05 sec and below			

电磁阀 Solenoid valve / 4V300

技术参数 Technical data

FORWARD

电磁阀 Solenoid valve / 4V300

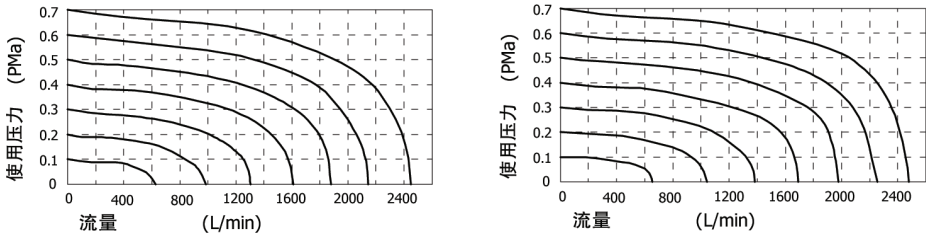
技术参数 Technical data

FORWARD

流量特性 Flow chart

4V310-08

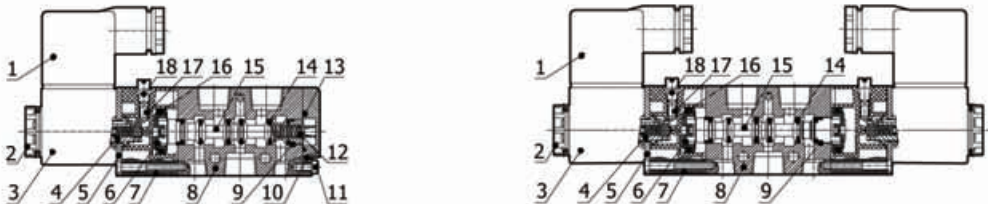
4V310-10



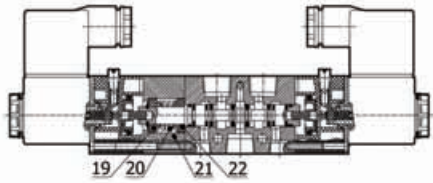
内部结构图 Inner structure

4V310

4V320



4V330C

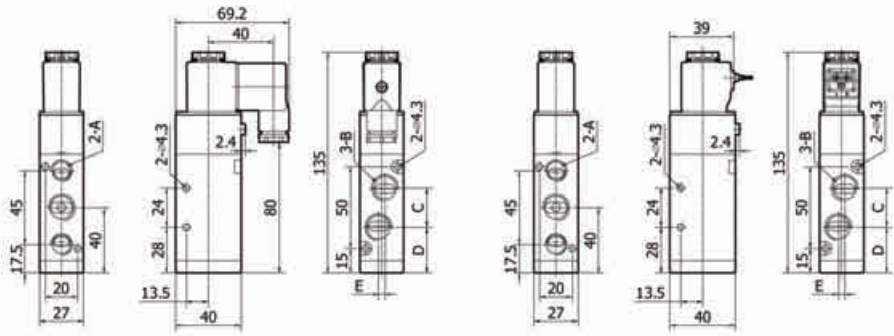


序号 NO.	名称 Item	序号 NO.	名称 Item
1	端子 Connector	12	弹簧 Spool spring
2	固定螺帽 Coil nut	13	止泄垫 Bottom cover gasket
3	线圈 Coil	14	O 令 Spool O-ring
4	可动铁 Armature	15	轴芯 Spool
5	固定铁片 Fixed plate	16	异型O令 Piston O-ring
6	活塞 Piston	17	弹簧 Override spring
7	引导本体 Pilot kit	18	手动销 Manual override
8	本体 Body	19	复归座 Spring holder
9	耐磨环 Wearing ring	20	弹簧 Return spring
10	底盖 Bottom cover	21	侧盖 Side cover
11	螺钉 Fixed screw	22	复归座 Spring holder

尺寸图 Dimensions					
型号 Model	A	B	C	D	E
4V310-08	PT1/4	PT1/4	22	29	0
4V310-10	PT1/4	PT3/8	24	28	4
4V320-08	PT1/4	PT1/4	22	83.9	0
4V320-10	PT1/4	PT3/8	24	82.9	4
4V330-08	PT1/4	PT1/4	22	83.9	0
4V330-10	PT1/4	PT3/8	24	82.9	4

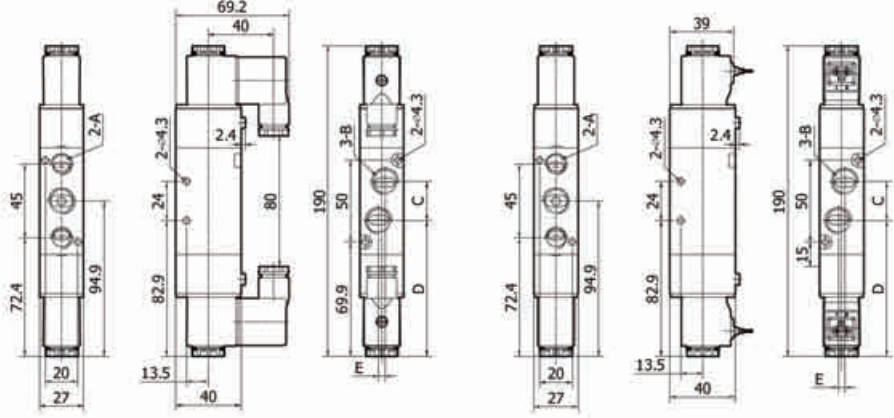
4V310 DIN插座式(Terminal)

4V310 出线式(Grommet)



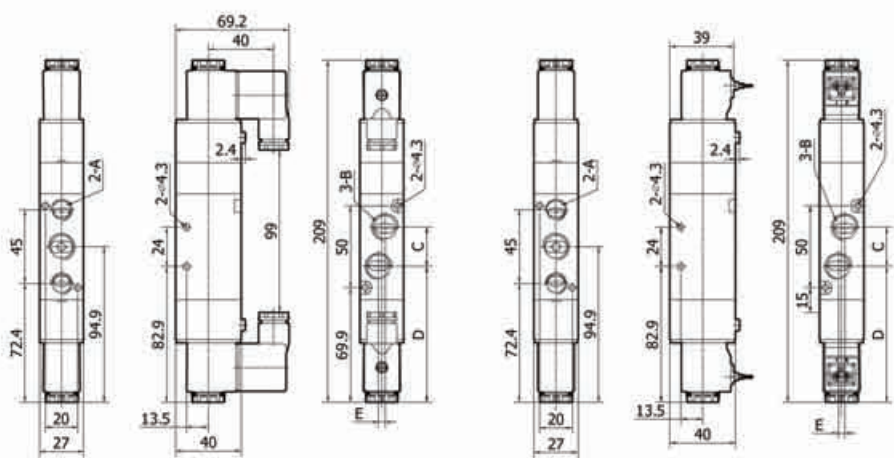
4V320 DIN插座式(Terminal)

4V320 出线式(Grommet)



4V330 DIN插座式(Terminal)

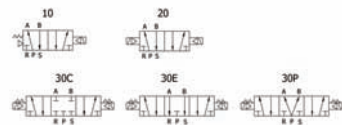
4V330 出线式(Grommet)



电磁阀 Solenoid valve / 4V400

型号代码 Type codes

FORWARD



- 1、先导方式：外部与内部可选；
Pilot-oriented mode:optional for internal or external;
- 2、滑柱式结构，密封性好，反应灵敏；
Structure in sliding column mode:good tightness and sensitive reaction;
- 3、三位电磁阀有三种中央功能可供选择；
Three position solenoid valves have three kinds of central function for your choice;
- 4、双头二位置电磁阀具有记忆功能；
Double control solenoid valves have memory function;
- 5、内孔采用特殊工艺加工，磨擦阻力小，启动气压低，使用寿命长；
Internal hole adopts special processing technology which has little attrition friction,low start pressure and long service life;
- 6、无需加油润滑；
No need to add oil for lubrication;
- 7、可与底座集成阀组，节省安装空间；
It is available to form integrated valve group with the base to save installation space;
- 8、附设手动装置，利于安装调试；
Affiliated manual devices are equipped to facilitate installation and debugging;
- 9、有多种标准电压等级可供选用；
Several standard voltage grades are optional;

4V

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型号 Type

4V

五口二位、五口三位电磁阀 Solenoid valve 5/2、5/3way

系列代号 Code

4

400 Series

电控方式 Valve type

10

双位置单电控 Single solenoid 5/2 way

20

双位置双电控 Double solenoid 5/2 way

30C

三位置双电控中位封闭型
Double solenoid 5/3 way closed center

30E

三位置双电控中位排气型
Double solenoid 5/3 way exhaust center

30P

三位置双电控中位压力型
Double solenoid 5/3 way pressure center

接管口径 Port size

15

1/2

标准电压 Voltage

A

AC220V

B

DC24V

C

AC110V

E

AC24V

F

DC12V

接电方式 Electrical entry

DIN插座式 Terminal

I

出线式 Grommet

接管口螺牙 Thread type

PT

NPT

NPT

G

G

电磁阀 Solenoid valve / 4V400

技术参数 Technical data

FORWARD

4V400 主要技术参数 General technical data					
型号 Type	4V410-15	4V420-15	4V430C-15	4V430E-15	4V430P-15
工作介质 Fluid	空气（ 经40um滤芯过滤 ） Air(to be filtered by 40um filter element)				
作动方式 Acting	先导式 Internal piloted				
接管口径 Port size	进气 = 出气 = 排气 = 1/2 In=Out=Exhaust=1/2				
有效截面积 Orifice size	50.0mm ² (Cv=2.79)		30.0mm ² (Cv=1.68)		
位置数 Valve type	五口二位 5 port 2 position		五口三位 5 port 3 position		
使用压力范围 Operating pressure	0.15-0.8MPa(21-114Psi)				
保证耐压力 Proof pressure	1.5MPa(215Psi)				
工作温度 Temperature	-20-70℃				
本体材质 Material of body	铝合金 Aluminum alloy				
润滑 Lubrication	不需要 Not required				
最高动作频率 Max. frequency	3次 / 秒 3 cycle/sec				
重量 Weight	590g	720g	770g		
标准电压 Standard voltage	AC220V,AC110V,AC24V,DC24V,DC12V				
使用电压范围 Scope of voltage	AC: ± 15%,DC: ± 10%				
耗电量 Power consumption	AC:3.5VA,DC:3.0W				
保护等级 Protection	IP65(DIN40050)				
耐热等级 Temperature classification	B级 B Class				
接电型式 Electrical entry	DIN 插座式，出线式 Terminal、Grommet				
最短历磁时间 Activating time	0.05秒 0.05 sec and below				

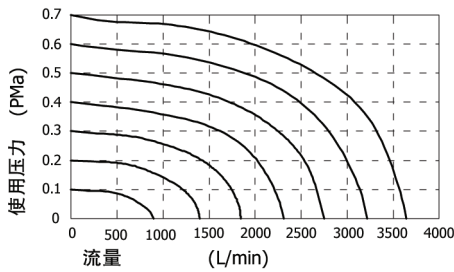
电磁阀 Solenoid valve / 4V400

技术参数 Technical data

FORWARD

流量特性 Flow chart

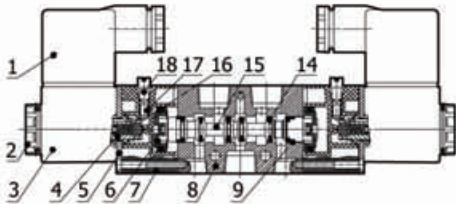
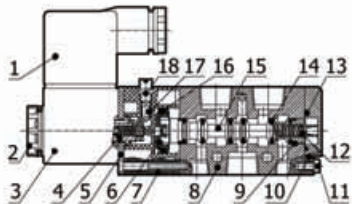
4V410-15



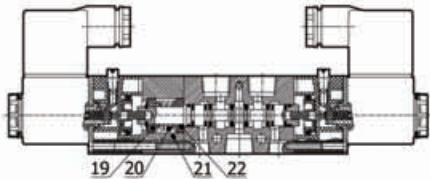
内部结构图 Inner structure

4V410

4V420



4V430C



序号 NO.	名称 Item	序号 NO.	名称 Item
1	端子 Connector	12	弹簧 Spool spring
2	固定螺帽 Coil nut	13	止泄垫 Bottom cover gasket
3	线圈 Coil	14	O 令 Spool O-ring
4	可动铁 Armature	15	轴芯 Spool
5	固定铁片 Fixed plate	16	异型O令 Piston O-ring
6	活塞 Piston	17	弹簧 Override spring
7	引导本体 Pilot kit	18	手动销 Manual override
8	本体 Body	19	复归座 Spring holder
9	耐磨环 Wearing ring	20	弹簧 Return spring
10	底盖 Bottom cover	21	侧盖 Side cover
11	螺钉 Fixed screw	22	复归座 Spring holder

电磁阀 Solenoid valve / 4V400

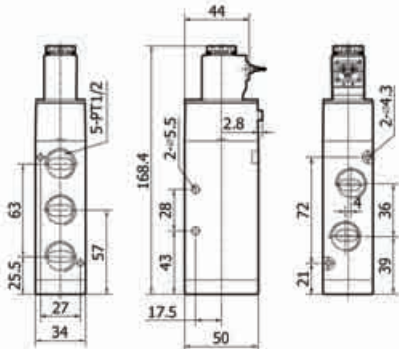
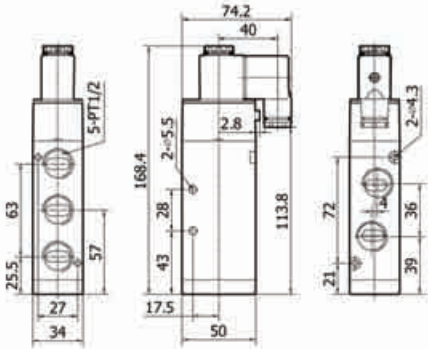
技术参数 Technical data

FORWARD

尺寸图 Dimensions

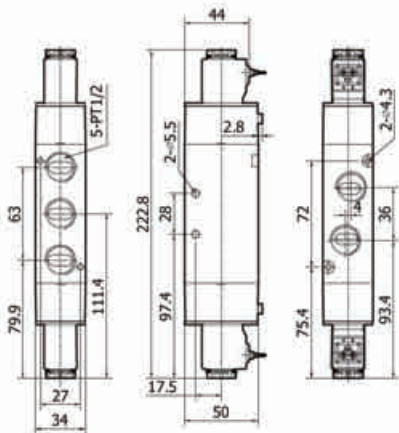
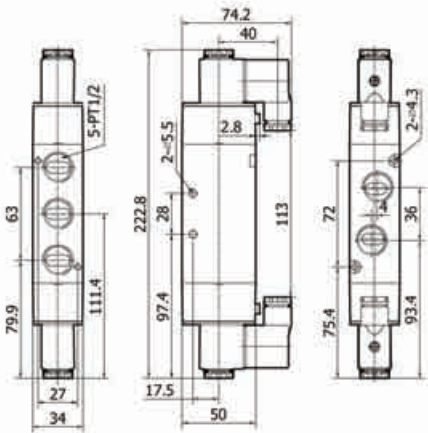
4V410 DIN插座式(Terminal)

4V410 出线式(Grommet)



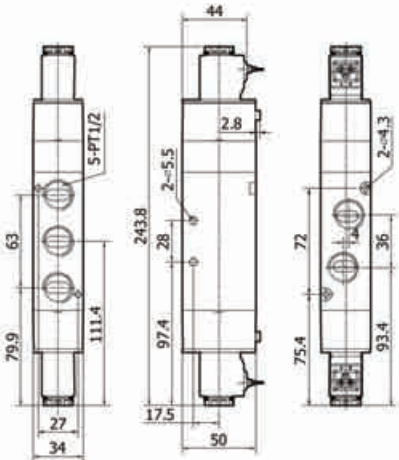
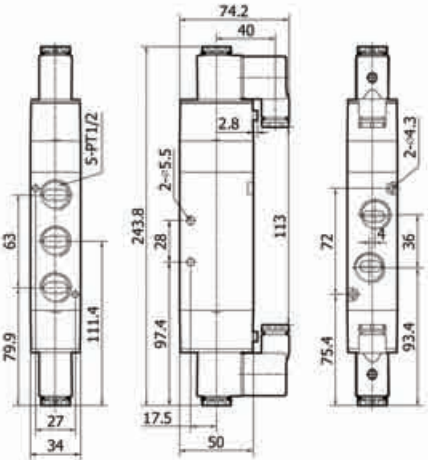
4V420 DIN插座式(Terminal)

4V420 出线式(Grommet)



4V430 DIN插座式(Terminal)

4V430 出线式(Grommet)



气控阀 Air valve / 3A100,3A200,3A300

型号代码 Type codes

FORWARD



- 1、滑柱式结构，密封性好，反应灵敏；
Structure in sliding column mode;good tightness and sensitive reaction;
- 2、双头气控具有记忆功能；
Double air control valves have memory function;
- 3、内孔采用特殊工艺加工，摩擦阻力小，启动气压低，使用寿命长；
Internal hole adopts special processing technology which has little attrition friction,low start pressure and long service life;
- 4、无需加油润滑；
No need to add oil for lubrication;
- 5、多位置安装，安装使用方便。
Multi-mounting helps to install and apply.

3A10-06-NO-

3A

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06

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NO

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型号 Type	
3A	三口二位气控阀 Air valve (3/2 way)
系列代号 Code	
1	100 Series
2	200 Series
3	300 Series
电控方式 Valve type	
10	双位置单气控 Single air control
20	双位置双气控 Double air control
接管口径 Port size	
M5	M5
06	1/8
08	1/4
10	3/8
初始状态 Acting type	
NC	常闭型 Normally close
NO	常开型 Normally open
接管口螺纹 Thread type	
	PT
NPT	NPT
G	G

气控阀 Air valve / 3A100,3A200,3A300

技术参数 Technical data

FORWARD

3A 主要技术参数 General technical data												
型号 Type	3A110-M5	3A120-M5	3A110-06	3A120-06	3A210-06	3A220-06	3A210-08	3A220-08	3A310-08	3A320-08	3A310-10	3A320-10
工作介质 Fluid	空气（ 经40um滤芯过滤 ） Air(to be filtered by 40um filter element)											
作动方式 Acting	外部气控式 Exterior control											
接管口径 Port size	M5	1/8		进气 = 出气 = 1/8 In=Out= 1/8		进气 = 出气 = 1/4 In=Out= 1/4			进气 = 出气 = 3/8 In=Out=3/8			
有效截面积 Orifice size	5.5mm ² (Cv=0.31)	12mm ² (Cv=0.67)		14.0mm ² (Cv=0.78)		16.0mm ² (Cv=0.89)		25.0mm ² (Cv=1.39)		30.0mm ² (Cv=1.67)		
位置数 Valve type	三口二位 3 port 2 position											
使用压力范围 Operating pressure	0.15—0.8MPa(21—114Psi)											
保证耐压力 Proof pressure	1.5MPa(215Psi)											
工作温度 Temperature	-20—70℃											
本体材质 Material of body	铝合金 Aluminum alloy											
润滑 Lubrication	不需要 Not required											
最高作动频率 Max. frequency	5次 / 秒 5 cycle/sec											

气控阀 Air valve / 3A100,3A200,3A300

技术参数 Technical data

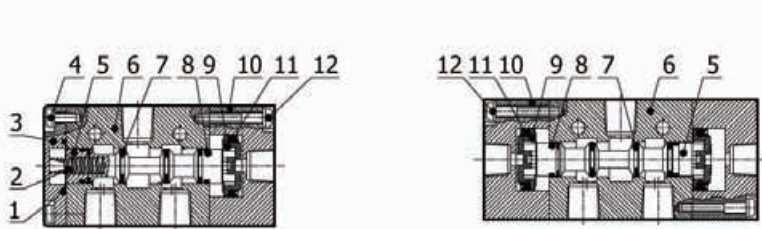
FORWARD

气控阀 Air valve / 3A100,3A200,3A300

技术参数 Technical data

FORWARD

内部结构图 Inner structure

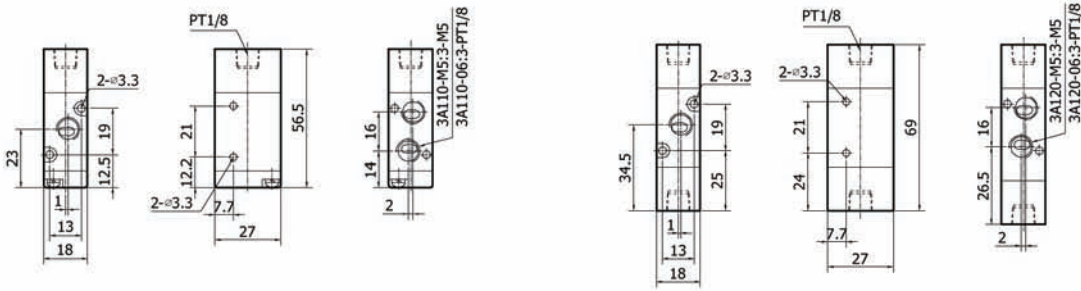


序号 NO.	名称 Item	序号 NO.	名称 Item
1	止泄垫 Bottom cover gasket	7	O令 O-ring
2	弹簧 Spring	8	耐磨环 Wear ring
3	底盖 Bottom cover	9	活塞 Piston
4	圆头螺钉 Bottom cover screw	10	引导本体 Pilot body
5	轴芯 Spool	11	活塞O令 Piston O-ring
6	本体 Body	12	圆头螺钉 Pilot screw

3A系列 尺寸图 Dimensions

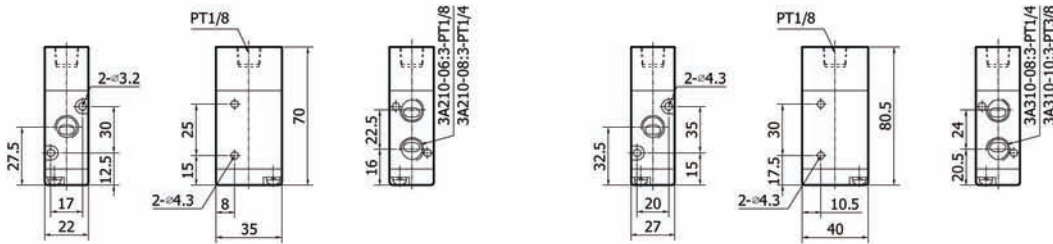
3A110

3A120



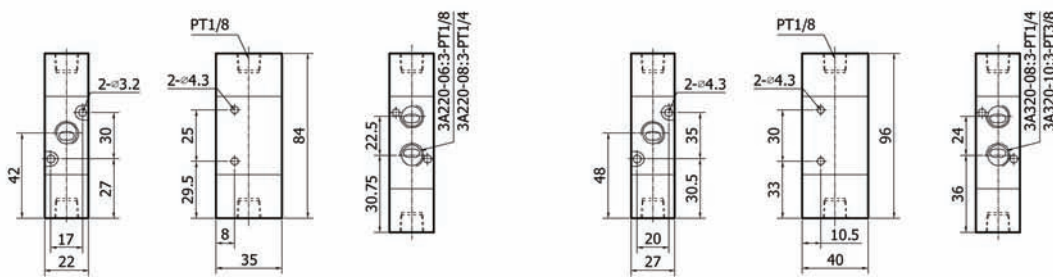
3A210

3A310



3A220

3A320



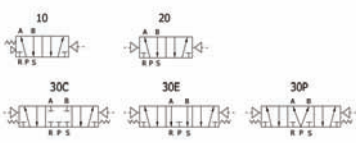
气控阀 Air valve / 4A100,4A200,4A300,4A400

型号代码 Type codes

FORWARD



- 1、滑柱式结构，密封性好，反应灵敏；
Structure in sliding column mode:good tightness and sensitive reaction;
- 2、三位置气动阀有三种中间功能可供选择；
There are three medium functions of three–position air valves for your choice;
- 3、双头二位置气控具有记忆功能；
Two–position air control valve with two heads has memory function;
- 4、内孔采用特殊工艺加工，摩擦阻力小，启动气压低，使用寿命长；
Internal hole adopts special processing technology which has little attrition friction,low start pressure and long service life;
- 5、无需加油润滑；
No need to add oil for lubrication;
- 6、可与底座集成阀组，节省安装空间。
Integrate with the manifold to save installation space.



4A

1

10

-

06

-

型号 Type

4A

五口二位、五口三位气控阀 Air valve (5/2 5/3 way)

系列代号 Code

1

100 Series

2

200 Series

3

300 Series

4

400 Series

气控方式 Valve type

10

双位置单气控 Single air control 5/2 way

20

双位置双气控 Double air control 5/2 way

30C

三位置双气控中位封闭型 Double air control 5/3 way closed center

30E

三位置双气控中位排气型 Double air control 5/3 way exhaust center

30P

三位置双气控中位压力型 Double air control 5/3 way pressure center

接管口径 Port size

M5

M5

06

PT1/8

08

PT1/4

10

PT3/8

接管口螺纹 Thread type

PT

NPT

NPT

G

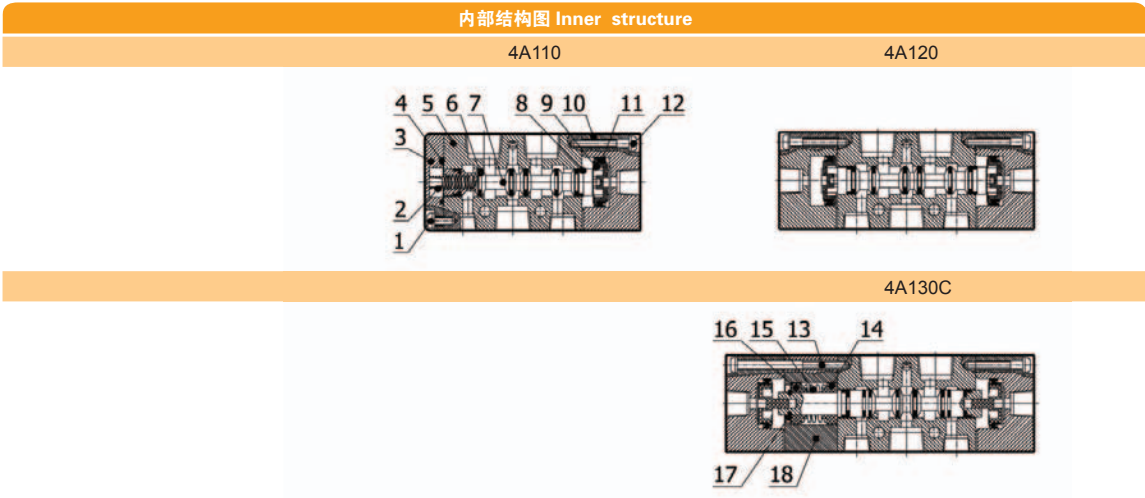
G

气控阀 Air valve / 4A100,4A200,4A300,4A400

技术参数 Technical data

FORWARD

4A系列 主要技术参数 General technical data	
共同参数 Common technical data	
工作介质 Fluid	空气（经40um滤芯过滤） Air(to be filtered by 40um filter element)
作用方式 Acting	外部气控式 Exterior control
使用压力范围 Operating pressure	0.15–0.8MPa(21–114Psi)
保证耐压力 Proof pressure	1.5MPa(215Psi)
工作温度 Temperature	–20–70℃
本体材质 Material of body	铝合金 Aluminum alloy
润滑 Lubrication	不需要 Not required



序号 NO.	名称 Item	序号 NO.	名称 Item
1	圆头螺钉 Bottom cover screw	10	引导本体 Pilot body
2	弹簧 Spool spring	11	O令 O–ring
3	底盖 Bottom cover	12	圆头螺钉 Pilot screw
4	止泄垫 Bottom cover gasket	13	螺钉 Pilot screw
5	本体 Body	14	复归座 Return seat
6	O令 Spool O–ring	15	复归弹簧 Return spring
7	轴芯 Spool	16	复归座 Return seat
8	耐磨环 Wear ring	17	E型扣环 E clip
9	活塞 Piston	18	侧盖 Side cover

气控阀 Air valve / 4A100,4A200,4A300,4A400

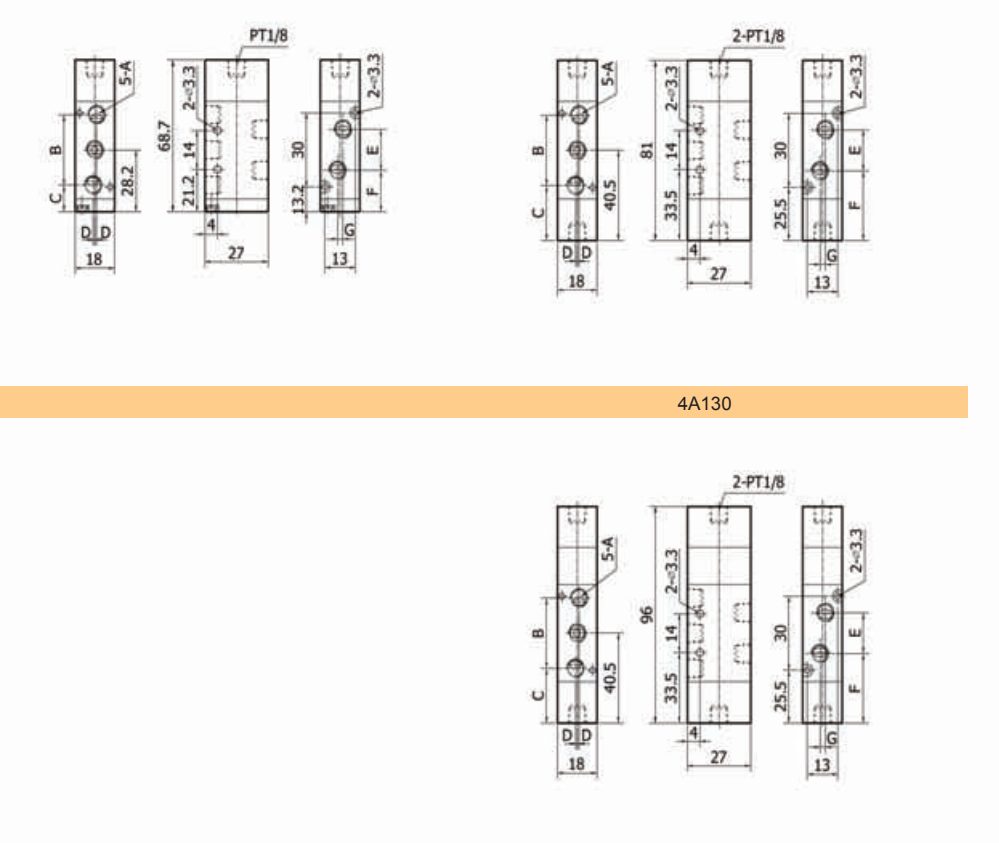
技术参数 Technical data

FORWARD

4A100 主要技术参数 General technical data				
型号 Type	4A100-M5 4A120-M5	4A130C-M5 4A130E-M5 4A130P-M5	4A110-06 4A120-06	4A130C-06 4A130E-06 4A130P-06
位通数 Position and way No.	五口二位 5 port 2 position	五口三位 5 port 3 position	五口二位 5 port 2 position	五口三位 5 port 3 position
有效截面积 Effective sectional area	5.5mm ² (Cv=0.31)	5.0mm ² (Cv=0.28)	12.0mm ² (Cv=0.67)	9.0mm ² (Cv=0.50)
接管口径 Joint pipe bore	进气 = 出气 = M5 In=Out=M5		进气 = 出气 = 1/8 In=Out=1/8	
最高作动频率 Max. frequency	5次 / 秒 5 cycle/sec	3次 / 秒 3 cycle/sec	5次 / 秒 5 cycle/sec	3次 / 秒 3 cycle/sec
重量 Weight	4A110-M5:85g 4A120-M5:140g	165g	4A110-06:85g 4A120-06:140g	165g

尺寸图 Dimensions							
型号 Model	A	B	C	D	E	F	G
4A110-M5	M5*0.8	27	14.7	0	14	21.2	0
4A110-06	1/8	28	14.2	1	16	20.2	3
4A120-M5	M5*0.8	27	27	0	14	33.5	0
4A120-06	1/8	28	26.5	1	16	32.5	3
4A130-M5	M5*0.8	27	42.5	0	14	33.5	0
4A130-06	1/8	28	41.5	1	16	32.5	3

4A110	4A120
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气控阀 Air valve / 4A100,4A200,4A300,4A400

技术参数 Technical data

FORWARD

4A200 主要技术参数 General technical data				
型号 Type	4A210-06 4A220-06	4A230C-06 4A230E-06 4A230P-06	4A210-08 4A220-08	4A230C-08 4A230E-08 4A230P-08
位通数 Position and way No.	五口二位 5 port 2 position	五口三位 5 port 3 position	五口二位 5 port 2 position	五口三位 5 port 3 position
有效截面积 Effective sectional area	14mm ² (Cv=0.78)	12.0mm ² (Cv=0.67)	16.0mm ² (Cv=0.89)	12.0mm ² (Cv=0.67)
接管口径 Joint pipe bore	进气 = 出气 = 排气 = 1/8 In=Out=Exhaust=1/8		进气 = 出气 = 1/4, 排气 = 1/8 In=Out=1/4, Exhaust=1/8	
最高作动频率 Max. frequency	5次 / 秒 5 cycle/sec	3次 / 秒 3 cycle/sec	5次 / 秒 5 cycle/sec	3次 / 秒 3 cycle/sec
重量 Weight	4A210-06:185g 4A220-06:285g	365g	4A210-08:185g 4A220-08:285g	365g

尺寸图 Dimensions					
型号 Model	A	B	C	D	E
4A210-06	1/8	1/8	18	22.7	0
4A210-08	1/8	1/4	21	21.2	3
4A220-06	1/8	1/8	18	37	0
4A220-08	1/8	1/4	21	35.5	3
4A230-06	1/8	1/8	18	37	0
4A230-08	1/8	1/4	21	35.5	3

4A210	4A220
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气控阀 Air valve / 4A100,4A200,4A300,4A400

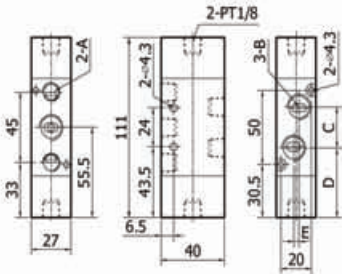
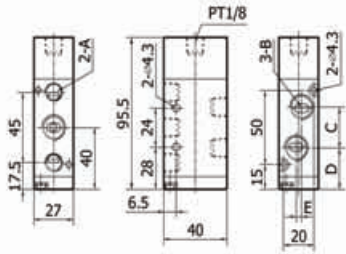
技术参数 Technical data

FORWARD

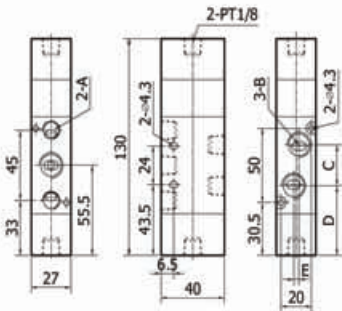
4A300 主要技术参数 General technical data				
型号 Type	4A310-08 4A320-08	4A330C-08 4A330E-08 4A330P-08	4A310-10 4A320-10	4A330C-10 4A330E-10 4A330P-10
位通数 Position and way No.	五口二位 5 port 2 position	五口三位 5 port 3 position	五口二位 5 port 2 position	五口三位 5 port 3 position
有效截面积 Effective sectional area	25.0mm ² (Cv=1.40)	18.0mm ² (Cv=1.00)	30.0mm ² (Cv=1.68)	18.0mm ² (Cv=1.00)
接管口径 Joint pipe bore	进气 = 出气 = 排气 = 1/4 In=Out=Exhaust=1/4		进气 = 出气 = 3/8, 排气 = 1/4 In=Out=3/8,Exhaust=1/4	
最高作动频率 Max. frequency	4次 / 秒 5 cycle/sec	3次 / 秒 3 cycle/sec	4次 / 秒 5 cycle/sec	3次 / 秒 3 cycle/sec
重量 Weight	4A310-08:275g 4A320-08:365g	505g	4A310-10:275g 4A320-10:365g	505g

尺寸图 Dimensions						
型号 Model	A	B	C	D	E	
4A310-08	1/4	1/4	22	29	0	
4A310-10	1/4	3/8	24	28	4	
4A320-08	1/4	1/4	22	44.5	0	
4A320-10	1/4	3/8	24	43.5	4	
4A330-08	1/4	1/4	22	44.5	0	
4A330-10	1/4	3/8	24	43.5	4	

4A310	4A320
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4A330



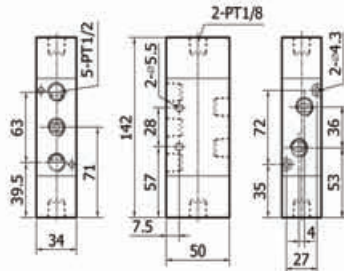
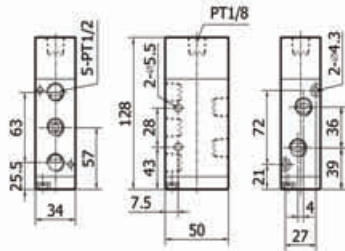
气控阀 Air valve / 4A100,4A200,4A300,4A400

技术参数 Technical data

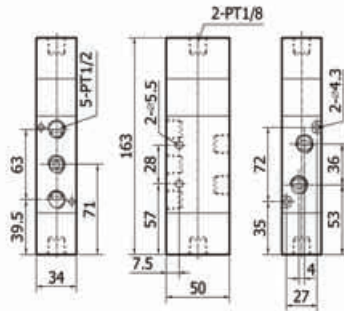
FORWARD

4A400 主要技术参数 General technical data					
型号 Type	4A410-15	4A420-15	4A430C-15	4A430E-15	4A430P-15
位通数 Position and way No.	五口二位 5 port 2 position		五口三位 5 port 3 position		
有效截面积 Effective sectional area	50.0mm ² (Cv=2.79)		30.0mm ² (Cv=1.68)		
接管口径 Joint pipe bore	进气 = 出气 = 排气 = 1/2 In=Out=Exhaust=1/2				
最高作动频率 Max. frequency	3次 / 秒 3 cycle/sec				
重量 Weight	555g	685g	735g		

尺寸图 Dimensions	
4A410	4A420



4A430



板式阀 Plate type valve / 4M

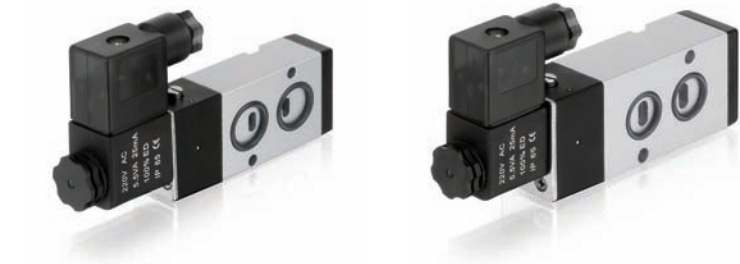
型号代码 Type codes

FORWARD

板式阀 Plate type valve / 4M

技术参数 Technical data

FORWARD



4M		2	10	-	08	-	AC220V	-		-	
型号 Type											
4M	板式阀 Plate type valve										
系列代号 Code											
1	100										
2	200										
3	300										
4	400										
线圈及位数 Coil and places											
10	单头双位置 Single coil double-position										
20	双头双位置 Double coil double-position										
接管口径 Joint pipe bore											
M5	M5										
06	1/8										
08	1/4										
10	3/8										
15	1/2										
标准电压 Standard voltage											
DC24V	DC24V										
AC110V	AC110V										
AC220V	AC220V										
接线形式 Wiring form											
	标准端子式 Standard connector										
W	引线式线圈 Lead wire type coil										
L	带指示灯线圈 With lighting connector coil										
接管口螺牙 Joint pipe thread											
	PT										
BSP	BSP										
NPT	NPT										

主要技术参数 General technical data										
型号 Type	4M210-06	4M220-06	4M210-08	4M220-08	4M310-08	4M320-08	4M310-10	4M320-10	4M410-15	4M420-15
工作介质 Medium	经过滤的压缩空气，润滑或未润滑 Filtered compressed air,lubricated or unlubricated									
动作方式 Motion pattern	内部先导式 Inner guide type									
位通数 Position and way No.	二位五通 Two-position five-way									
有效截面积 Effective sectional area	14mm (CV=0.78)	16mm (CV=0.89)			25mm (CV=1.39)		30mm (CV=1.67)		50mm (CV=2.79)	
接管口径 Joint pipe bore	进气 = 排气 = G1/8 Air inlet= Exhaust=G1/8		进气 = 排气 = G1/4 Air inlet=Exhaust=G1/4				进气 = 排气 = G3/8 Air inlet= Exhaust=G3/8		进气 = 排气 = G1/2 Air inlet= Exhaust=G1/2	
润滑 Lubricate	不需要 Not necessary									
使用压力范围 Working-pressure range	0.15-0.9MPa									
最大耐压力 Pressure resistance	1.2MPa									
工作温度 Operating temperature	-5~60									
电压范围 Voltage range	-5%~+10%									
耗电量 Power consumption	DC24V: 3.0W , AC110V: 2.5VA , AC220V: 2.0VA									
绝缘性及防护等级 Insulation class	F级.IP65 / F Class.IP65									
接线形式 Wiring form	W 或 L									
最高动作频率 Highest action frequency	每秒 5 次 / 5 Cycle/Sec									
最短励磁时间 Shortest excitation time	0.05 second									

尺寸图 Dimensions		
4M210-08	4M220-08	4M310-10
4M320-10	4M410-15	4M420-15

手扳阀 Hand-pull valve / 4H

型号代码 Type codes

FORWARD



型号 Type

4H 手扳阀 Hand-pull valve

系列代号 Code

2 200 series
3 300 series
4 400 series

位置数 Specification code

10 单头双位置 Single-head double-position
30 单头三位置 Single-head three-position

接管口径 Joint pipe bore

M5 M5
06 1/8
08 1/4
10 3/8
15 1/2

形式代号 Type code

三位五通复位型 Three-position five-way reset type
L 三位五通锁型 Three-position five-way locking type

4H 2 10 - 08 - L

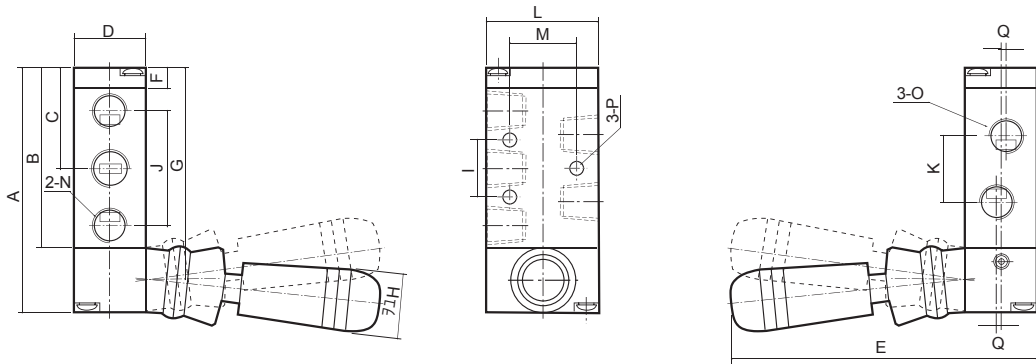
手扳阀 Hand-pull valve / 4H

技术参数 Technical data

FORWARD

主要技术参数 General technical data								
型号 Type	4H210-06	4H210-08	4H230-08	4H310-08	4H310-10	4H330-10	4H410-15	4H430-15
工作介质 Medium	经过滤的压缩空气，润滑或未润滑 Filtered compressed air,lubricated or unlubricated							
动作方式 Motion pattern	直动式 Direct drive type							
有效截面积 Effective sectional area	14mm (CV=0.78)	16mm (CV=0.89)	25mm (CV=1.39)	30mm (CV=1.67)	50mm (CV=2.79)	50mm (CV=2.79)	50mm (CV=2.79)	50mm (CV=2.79)
接管口径 Joint pipe bore	进气 = 出气 = 排气 = G1/8 Air inlet= Air outlet= Exhaust=G1/8	进气 = 出气 = 排气 = G1/4 Air inlet=Air outlet=Exhaust=G1/4			进气 = 出气 = G3/8 排气 = G1/4 Air inlet=Air outlet=G3/8 Exhaust=G1/4		进气 = 出气 = 排气 = G1/2 Air inlet=Air outlet=Exhaust=G1/2	
使用压力范围 Working-pressure range	0.15~0.9MPa							
工作温度 Operating temperature	-5~60° C							

尺寸图 Dimensions



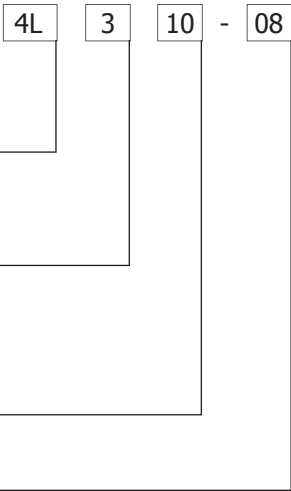
型号 Model	4H210-06	4H230-06	4H210-06 自动复位Automatic reset	4H210-08	4H230-08L	4H230-08 自动复位Automatic reset	4H310-08	4H310-10	4H410-15
A	76		95	76		95	92	92	126
B	56.5		75.5	56.5		75.5	72.5	72.5	102
C	31.5		31.5	31.5		31.5	40	40	55.5
D	22		22	22		22	27	27	34
E	95		95	95		95	100	100	110
F	6.5		6.5	6.5		6.5	7.5	7.5	7.5
G	66.5		85.5	66.5		85.5	82.5	82.5	114
H	18		18	18		18	18	18	18
I	20		20	20		20	24	24	28
J	36		36	36		36	45	45	63
K	21		21	21		21	24	24	36
L	35		35	35		35	40	40	50
M	21		21	21		21	27	27	35
N	G1/8		G1/8	G1/8		G1/8	G1/4	G1/4	G1/2
O	G1/8		G1/8	G1/4		G1/4	G1/4	G3/8	G1/2
P	4.3		4.3	4.3		4.3	4.3	4.3	5.5
Q	-		-	1.5		1.5	-	2	-

手拉阀 Hand-draw valve / 3L,4L

型号代码 Type codes



型号 Type	
3L	二位三通手拉阀 Two-position three-way hand-draw valve
4L	二位五通手拉阀 Two-position five-way hand-draw valve
系列代号 Code	
1	100 series
2	200 series
3	300 series
位置代号 Valve type	
10	双位置 2 position
接管口径 Joint pipe bore	
06	1/8
08	1/4
10	3/8
15	1/2



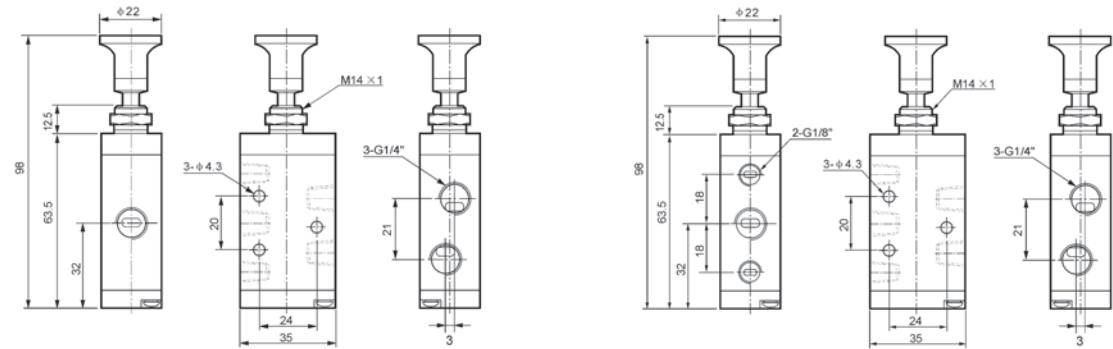
FORWARD

手拉阀 Hand-draw valve / 3L,4L

技术参数 Technical data

主要技术参数 General technical data								
型号 Type	4L110-06	4L210-08	4L310-10	4L410-15	3L110-06	3L210-08	3L310-10	3L410-15
工作介质 Medium	经过滤的压缩空气，润滑或未润滑 Filtered compressed air, lubricated or unlubricated							
动作方式 Motion pattern	直动式 Direct drive type							
位通数 Positon and way NO.	二位五通 Two-position five-way				二位三通 Two-position three-way			
接管口径 Joint pipe bore	G1/8	G1/4	G3/8	G1/2	G1/8	G1/4	G3/8	G1/2
使用压力范围 Working-pressure range	0-1.0MPa							
工作温度 Operating temperature	-5~60° C							

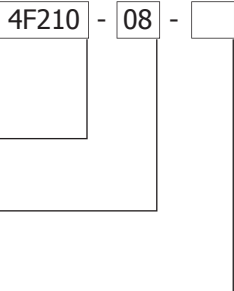
尺寸图 Dimensions	
3L210-08	4L210-08



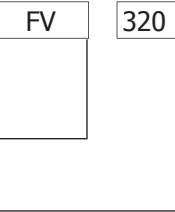
脚踏阀 Foot valve / 4F210 , FV

型号代码 Type codes

FORWARD



型号 Type	
4F	二位五通脚踏阀 Two-position five-way foot valve
接口尺寸 Connection	
08	G1/4
型式代号	
	标准型 Standard
L	附锁型 With lock
G	附护罩型 With guard
LG	附锁及护罩型 With lock and guard



型号 Type	
FV	脚踏阀 Foot valve
接口尺寸 Connection	
320	二位三通 Two-position three-way
420	二位四通 Two-position four-way

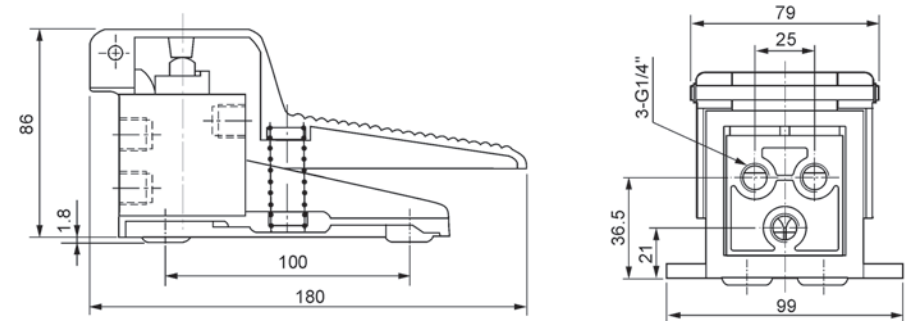
脚踏阀 Foot valve / 4F210 , FV

技术参数 Technical data

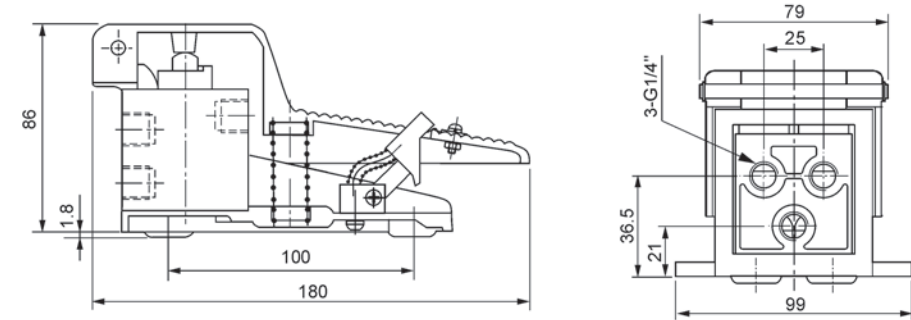
FORWARD

主要技术参数 General technical data						
型号 Type	4F210-08	4F210-08-L	4F210-08G	4F210-08-LG	FV320	FV420
工作介质 Medium	压缩空气 Compressed air					
位通数 Position and way No.	二位五通 Two-position five-way				二位三通 Two-position three-way	二位四通 Two-position five-way
接管口径 Joint pipe bore	进气 = 出气 = 排气 = G1/4 Air inlet=Air outlet=Exhaust=G1/4				进气 = 出气 = G1/4 排气 = G1/8 Air inlet=Air outlet=G1/4 Exhaust=G1/8	
动作形式 Motion patten	直动式 Direct acting					
使用压力范围 Working-pressure range	0.15~0.9 MPa					
工作温度 Operating temperature	0-60℃					

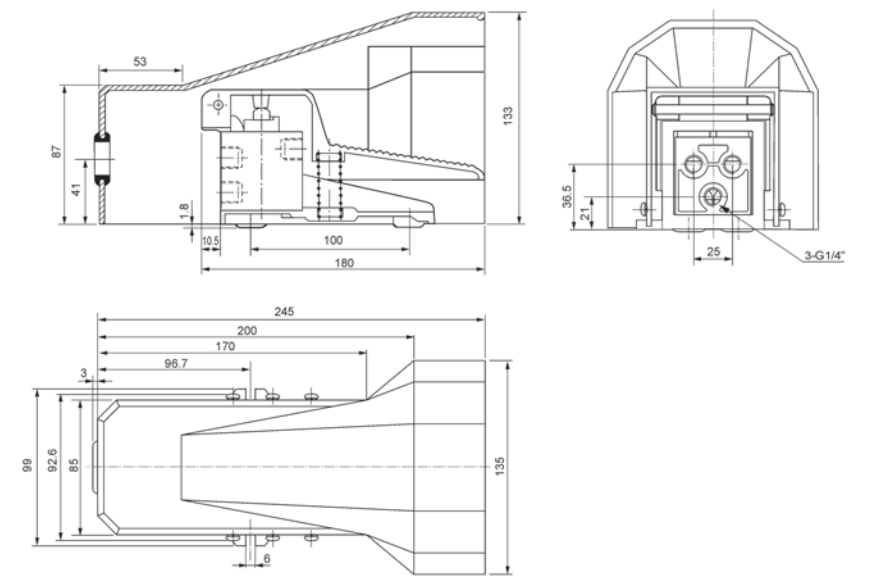
尺寸图 Dimensions 4F210-08



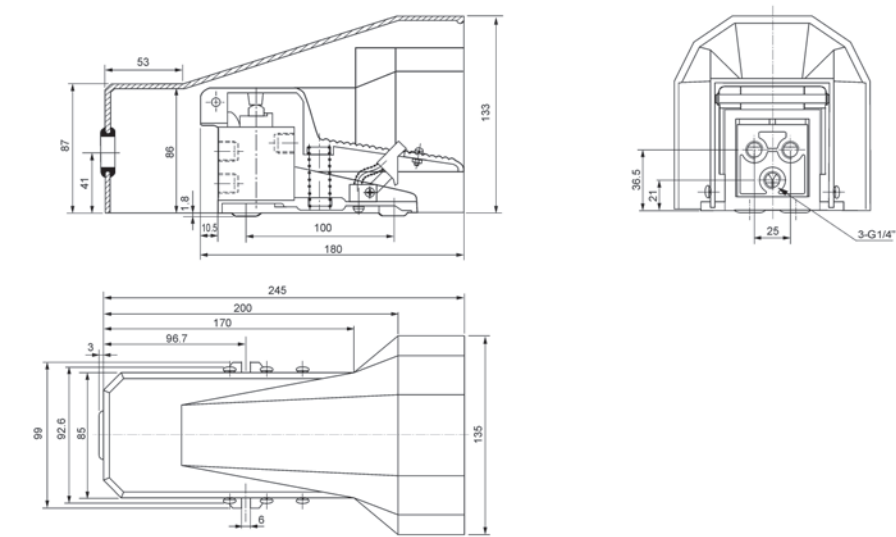
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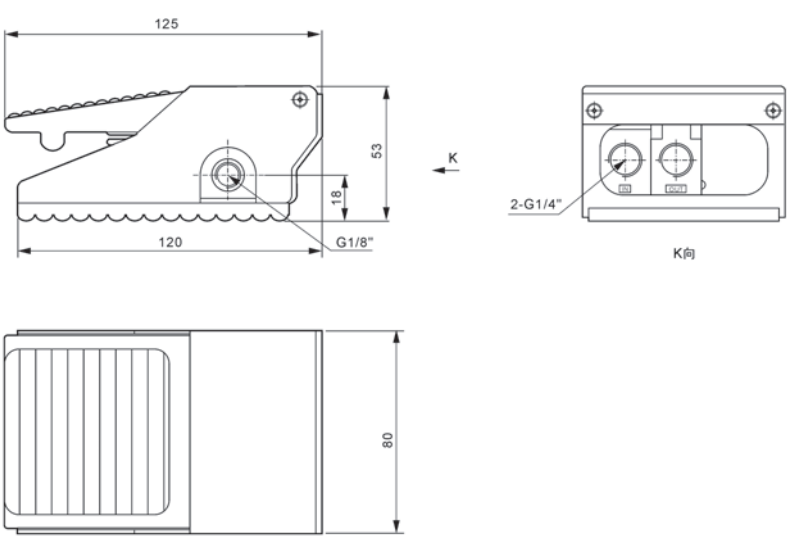
尺寸图 Dimensions
4F210-08-G



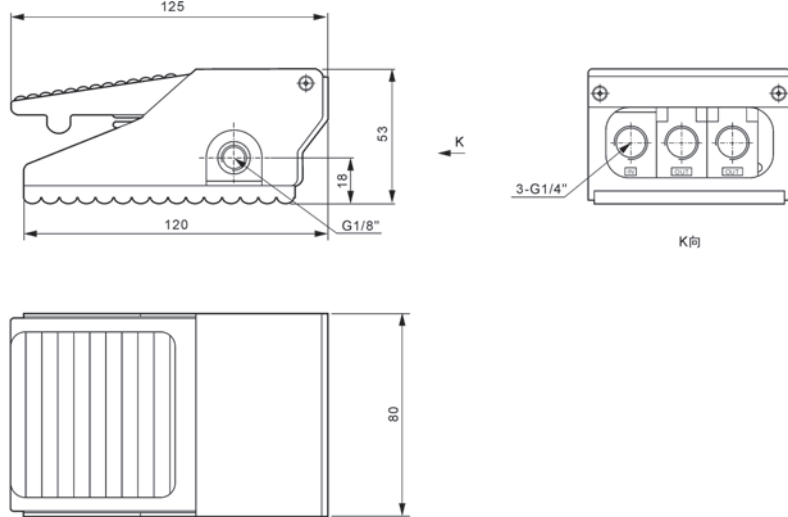
4F210-08-LG



尺寸图 Dimensions
FV320



FV420



手转阀 Hand-switching valve / 4HV

型号代码 Type codes

FORWARD



型号 Type

4HV 手转阀 Hand-switching valve

系列代号 Code

2 200 series
3 300 series
4 400 series

位置数 Specification code

10 单头双位置 Single-head double-position
30 单头三位置 Single-head three-position

接管口径 Joint pipe bore

M5 M5
06 1/8
08 1/4
10 3/8
15 1/2
20 3/4

形式代号 Type code

阀体安装 Body installation
S 面板安装 Panel installation

4HV 2 10 - 08 - S

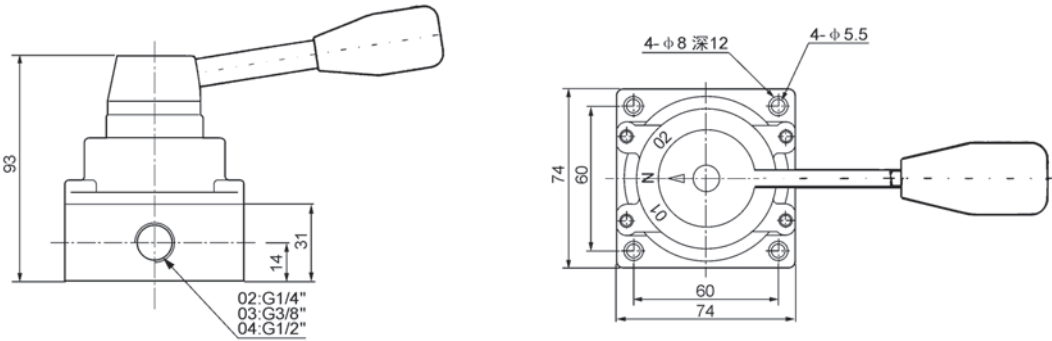
手转阀 Hand-switching valve / 4HV

技术参数 Technical data

FORWARD

主要技术参数 General technical data										
型号 Type	4HV210-06	4HV210-08	4HV230-08	4HV310-08	4HV310-10	4HV330-10	4HV410-15	4HV430-15	4HV410-20	4HV430-20
工作介质 Medium	经过滤的压缩空气，润滑或未润滑 Filtered compressed air,lubricated or unlubricated									
位通数 Position and way No.	二位四通、三位四通 Two-position four-way、Three-position four-way									
接管口径 Joint pipe bore	1/8	1/4			3/8		1/2		3/4	
使用压力范围 Working-pressure range	0~1.0 MPa									
保证耐压力 Proof pressure	1.5 MPa									
工作温度 Operating temperature	-5~60° C									
工作角度 Operating angle	90°									

尺寸图 Dimensions



机械阀 Mechanical valve / FMV

型号代码 Type codes

FORWARD

机械阀 Mechanical valve / FMV

技术参数 Technical data

FORWARD



型号 Type	
FMV	机械阀 Mechanical valve
位通数 Position and way No.	
32	二位三通 Two-position three-way
52	二位五通 Two-position five-way
接管口径 Joint pipe bore	
06	1/8
08	1/4
按钮形式 Button type	
	基本型 Basic type
R	滚轮型 Roller type
TB	选择型旋钮 Selective knob
LB	加长型旋钮 Strengthened knob
PB	大圆型按钮 Large round button
PP	平圆型按钮 Plat round button
PPL	凸圆型按钮 Convex round button
EB	带锁型按钮 With lock button
接管口螺牙 Joint pipe thread	
	PT
BSP	BSP
NPT	NPT

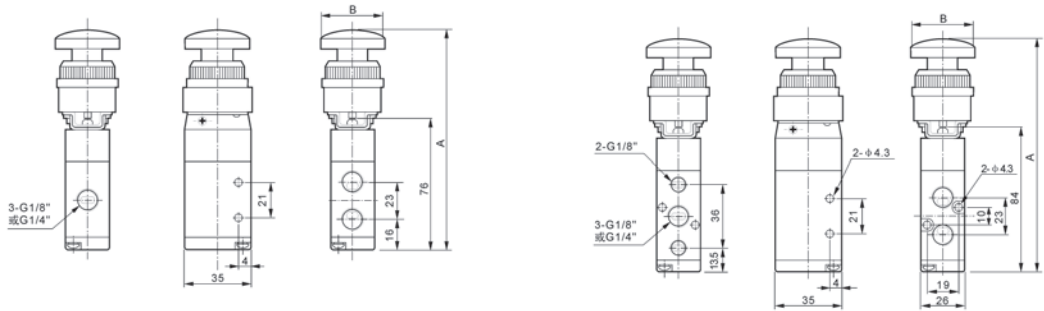
FMV - 32 - 08 - R -

主要技术参数 General technical data

型号 Type	FMV-32	FMV-52
工作介质 Medium	压缩空气 Compressed air	
位通数 Position and way No.	二位三通 Two-position three-way	二位五通 Two-position five-way
接管口径 Joint pipe bore	G1/8,G1/4	
使用压力范围 Working-pressure range	0~1.0MPa	
有效截面积 Effective section area	16mm² (CV=0.89)	
工作温度 Operating temperature	0~60° C	

尺寸图 Dimensions

FMV-32	FMV-52
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单向节流阀 One-way flow control valve / GR

型号代码 Type codes

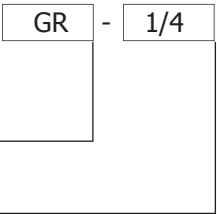
FORWARD



单向节流阀用于调节气体流量。

One-way flow control valve is used for adjusting gas flow rate.

Type 型号	
GR	单向节流阀 One-way flow control valve
接口尺寸 Connection	
M3	Metric thread M3
M5	Metric thread M5
1/8	Pipe thread G1/8
1/4	Pipe thread G1/4
3/8	Pipe thread G3/8
1/2	Pipe thread G1/2
3/4	Pipe thread G3/4



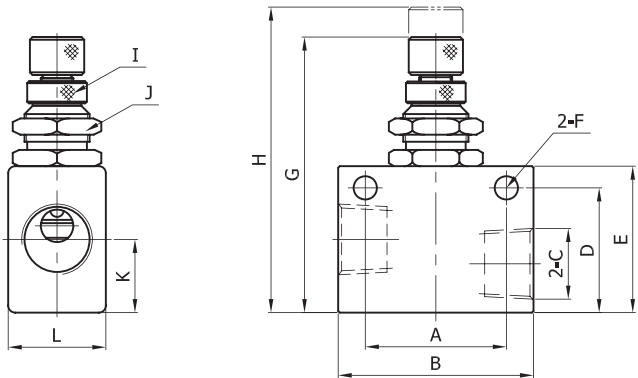
单向节流阀 One-way flow control valve / GR

技术参数 Technical data

FORWARD

主要技术参数 General technical data				
型号 Type	GR-1/8	GR-1/4	GR-3/8	GR-1/2
工作介质 Medium	压缩空气 Compressed air			
安装方式 Mounting type	通孔安装、面板安装 Through-hole,Front panel mounting			
连接尺寸 Connection	G1/8	G1/4	G3/8	G1/2
标准额定流量 Standard nominal flow rate	217 l/min	780 l/min	1150 l/min	2760 l/min
工作压力 Working pressure	1~16bar			
温度范围 Temperature range	0~60℃			
材料 Materials information	阀体 Housing	铝合金、黄铜 Wrought aluminium alloy,Brass		
	密封件 Seal	丁腈橡胶 NBR		

尺寸图 Dimensions



型号 Type	A	B	C	D	E	F	G	H	I	J	K	L
GR-1/8	22	32	1/8	18	22	4.3	46.8	52.3	M6×0.5	M12×0.75	10	16
GR-1/4	26	36	1/4	23	27	4.3	50.8	56.3	M6×0.5	M12×0.75	13.5	18
GR-3/8	35	50	3/8	32	37	5.3	65	74	M8×0.75	M16×1.0	17.5	28
GR-1/2	35	50	1/2	32	37	5.3	65	74	M8×0.75	M16×1.0	17.5	28

标准气缸 Standard cylinder ISO6431 / ODNC

型号代码 Type codes

FORWARD



终端带可调缓冲装置，并可安装行程开关进行位置感测。
气缸活塞上可带或不带永久磁环，位置感测需否可供选择。
缸筒上的沟槽可直接安装行程开关，不需安装支架。

Attached with adjustable buffer at both ends,and mounted stroke
switch for detecting the conversion position.
Piston rod with/without magenetic ring,sensor-position is optional
if necessary or unnecessary.
Stroke switch could mount on the cylinder,parrel directly,no need
mounting bracket.

基本功能 Basic function

ODNC | 标准气缸 Standard Cylinder ISO6431

缸径 Bore

行程 Stroke

缓冲形式 Cushioning

P | 任意一端具有不可调缓冲器 Flexible cushioning
rings/pads at both ends

PPV | 双端具有可调缓冲器 Pneumatic cushioning,
adjustable at both ends

位置感测 Position sensing

| 不带位置感测 Without position sensing

A | 带位置感测 Via proximity sensor

派生型 Variants

ODNC - 32 - 100 - PPV - A -

标准气缸 Standard cylinder ISO6431 / ODNC

技术参数 Technical data

FORWARD

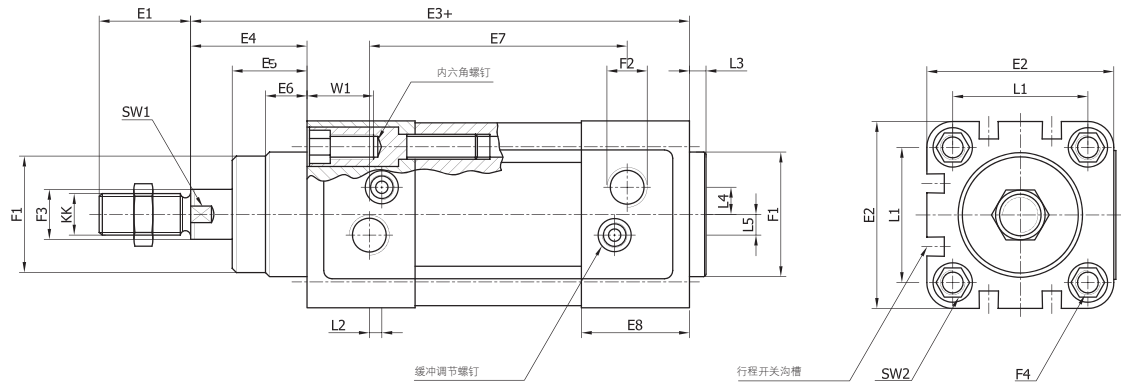
主要技术参数 General technical data						
缸径 Bore (mm) Ø	32	40	50	63	80	100
工作介质 Medium	经过滤的空气 Filtered Air					
动作形式 Action Form	双动 Double Action					
耐压实验压力 Compression Pressure	15 bar					
最高工作压力 Max. Working Pressure	10 bar					
最低工作压力 Min. Working Pressure	1 bar					
缓冲 Buffer	气缓冲 (标准) Air Buffer (Standard)					
环境温度 Condition Temperature	5-60° C					
使用速度 Operation Speed	50-500mm/s					
润滑 Lubricate	不需要 Not Necessary +1.0					
连接尺寸 Connection	1/8"	1/4"		3/8"		1/2"
标准行程 Standard Stroke	25 40 50 80 100 125 160 200 250 320 400 500					
缓冲行程 Buffer Stroke	20		22		32	

标准气缸 Standard cylinder ISO6431 / ODN

技术参数 Technical data

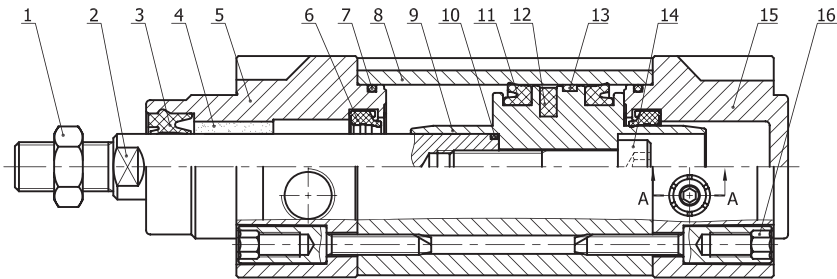
FORWARD

尺寸图 Dimensions
基本尺寸图 Basic version



缸径 Bore(mm) Ø	E1	E2	E3+	E4	E5	E6	E7	E8	F1 Ø	F2	F3 Ø	F4	L1	L2	L3	L4	L5	KK	W1	SW1	SW2
32	22	45	120	26	18	10	63	25	30	G1/8	12	M6	32.5	3	4	6	5	M10*1.25	16	10	6
40	24	54	135	30	22	11	77	30	35	G1/4	16	M6	38	4	4	8	6	M12*1.25	16	14	6
50	32	64	143	37	28	12	78	30	40	G1/4	20	M8	46.5	5	4	10	9	M16*1.5	17	17	8
63	32	75	158	37	29	15	87	36	45	G3/8	20	M8	56.5	7	4	12.5	10	M16*1.5	17	17	8
80	40	93	174	46	35	16	95	36	45	G3/8	25	M10	72	11	4	12.5	8	M20*1.5	17	22	6
100	40	110	189	51	38	19	100	40	55	G1/2	25	M10	89	12	4	12	10	M20*1.5	17	22	6

内部结构图 Inner structure



序号 NO.	名称 Item	序号 NO.	名称 Item	序号 NO.	名称 Item
1	螺母 Rod nut	8	铝管 Barrel	15	后盖 Back cover
2	活塞杆 Piston rod	9	活塞 Pilot body	16	连接螺栓 Connecting bolt
3	防尘 Rod packing	10	活塞杆O型圈 Rod O-ring		
4	滑动衬套 Bushing	11	活塞密封圈 Piston seal		
5	前盖 Front cover	12	磁铁 Magnet		
6	缓冲圈 Cushion	13	耐磨环 Wearing		
7	管壁O型圈 O-ring	14	内六角螺栓 Screw		

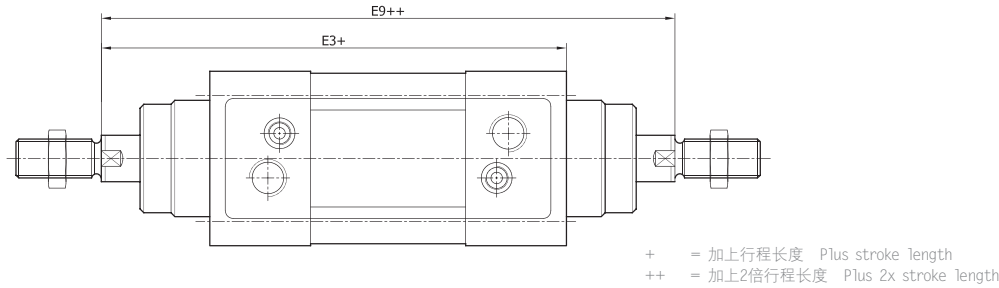
标准气缸 Standard cylinder ISO6431 / ODN

技术参数 Technical data

FORWARD

尺寸图-派生型 Dimensions-Variou

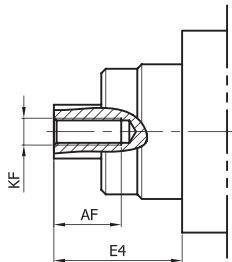
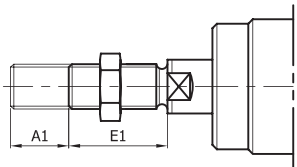
S2 双端活塞杆 Through piston rod



缸径 Bore(mm) Ø	E3	E9
32	120	146
40	135	165
50	143	180
63	158	195
80	174	220
100	189	240

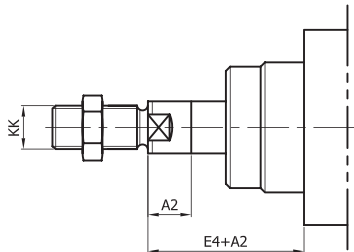
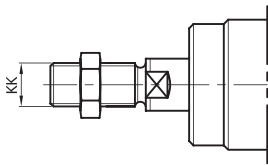
K2 活塞杆上加长外螺纹 Extended male piston rod thread

K3 活塞杆上内螺纹 Female piston rod thread



K5 活塞杆上特殊螺纹 Special piston rod thread

K8 加长活塞杆 Extended piston rod



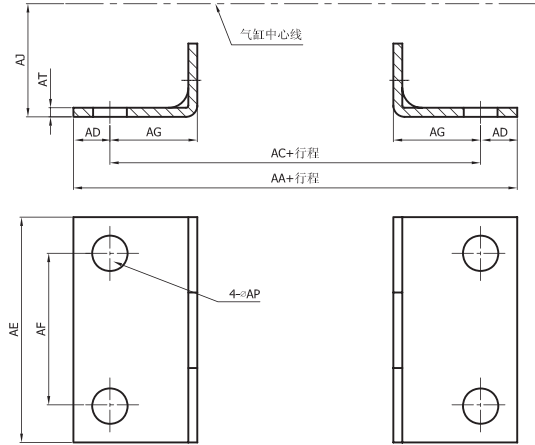
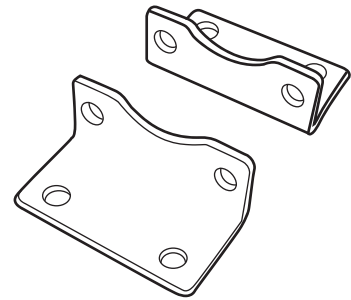
缸径 Bore(mm) Ø	A1 最大 Max.	A2 最大 Max.	E1	E4	KK		AF	KF
					基本螺纹 Basic thread	特殊螺纹 Special thread		
32	35	500	22	26	M10 x 1.25	M10	12	M6
40	35	500	24	30	M12 x 1.25	M12	12	M8
50	70	500	32	37	M16 x 1.5	M16	16	M10
63	70	500	32	37	M16 x 1.5	M16	16	M10
80	70	500	40	46	M20 x 1.5	M20	20	M12
100	70	500	40	51	M20 x 1.5	M20	20	M12

标准气缸 Standard cylinder ISO6431 / ODNC

附件 Accessories

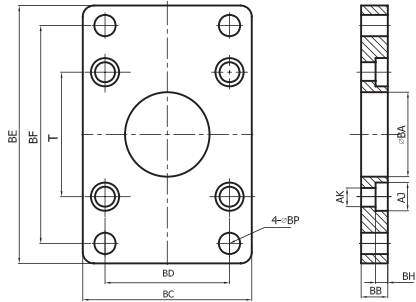
FORWARD

脚架安装件 LB



Dimensions and ordering data									
Bore(mm) Ø	AA	AC	AD	AE	AF	AG	AJ	AP	Type
32	158	142	8	48	32	24	32	7	LB-32
40	179	161	9	53	36	28	36	9	LB-40
50	190	170	10	63	45	32	45	9	LB-50
63	209	185	12	73	50	32	50	9	LB-63
80	248	210	19	98	63	41	63	12	LB-80
100	258	220	19	115	75	41	71	14	LB-100
125	290	250	20	140	90	45	90	16	LB-125

法兰安装件 FA/FB



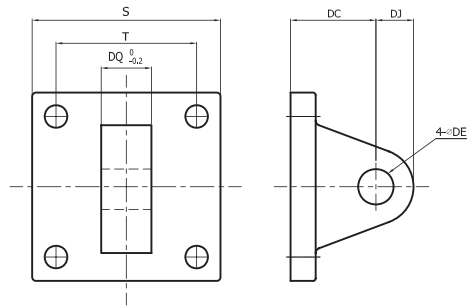
尺寸和订货数据 Dimensions and ordering data												
缸径 Bore(mm) Ø	BA	BB	BC	BD	BE	BF	BH	AJ	AK	BP	T	型号 Type
32	30.3	10	45	32	80	64	6.5	10.5	6.5	7	32.5	FA/FB-32
40	35.3	10	52	36	90	72	6.5	10.5	6.5	9	38	FA/FB-40
50	40.3	12	65	45	110	90	8.5	13.5	8.5	9	46.5	FA/FB-50
63	45.3	12	76	50	120	100	8.5	13.5	8.5	9	56.5	FA/FB-63
80	45.3	16	94	63	150	126	10.5	16.5	10.5	12	72	FA/FB-80
100	55.3	16	112	75	175	150	10.5	16.5	10.5	14	89	FA/FB-100
125	60.3	20	140	90	224	180	15	19	12.5	16	110	FA/FB-125

标准气缸 Standard cylinder ISO6431 / ODNC

附件 Accessories

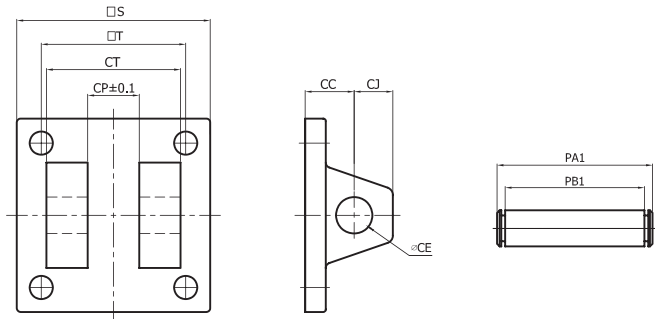
FORWARD

单耳环安装件 CA



尺寸和订货数据 Dimensions and ordering data							
缸径 Bore(mm) Ø	S	T	DC	DJ	DE	DQ	型号 Type
32	45	32.5	22	10	10	26	CA-32
40	52	38	25	11	12	28	CA-40
50	65	46.5	27	13	12	32	CA-50
63	76	56.5	32	16	16	40	CA-63
80	94	72	36	16	16	50	CA-80
100	112	89	41	20	20	60	CA-100
125	140	110	50	25	25	70	CA-125

双耳环安装件 CB



尺寸和订货数据 Dimensions and ordering data										
缸径 Bore(mm) Ø	S	T	CT	CP	CC	CJ	CE	PA1	PB1	型号 Type
32	45	32.5	45	26	22	10	10	53	46.5	CB-32
40	52	38	52	28	25	11	12	60	53.5	CB-40
50	65	46.5	60	32	27	13	12	68	61.5	CB-50
63	76	56.5	70	40	32	16	16	78	71.5	CB-63
80	94	72	90	50	36	46	16	100	91.5	CB-80
100	112	89	110	60	41	20	20	120	111.5	CB-100
125	114	110	120	70	50	25	25	130	121.5	CB-125

标准气缸 Standard cylinder / SU

型号代码 Type codes

FORWARD

标准气缸 Standard cylinder / SU

技术参数 Technical data

FORWARD



基本功能 Basic function

SU	标准气缸 Standard Cylinder
SUD	双轴复动型 Double rod type
SUJ	双轴复动行程可调型 Adjustable stroke type

缸径 Bore

行程 Stroke

位置感测 Position sensing

	不带位置感测 Without magnet
S	带位置感测 With magnet

调整行程 Adjustable stroke

固定型式 Mounting type

LB	脚架 Foot base
FA/FB	前/后法兰 Front / Rear flange
CA	单耳环 Single earring
CB	双耳环 Double earring

SU - 32 - 100 - S - 20 - LB

主要技术参数 General technical data						
缸径 Bore (mm) Ø	32	40	50	63	80	100
工作介质 Medium	经过滤的空气 Filtered Air					
动作形式 Action Form	复动型 Double acting type					
使用压力范围 Pressure range	1~9 bar					
保证耐压力 Proof pressure	15 bar					
环境温度 Condition Temperature	-5~70° C					
缓冲型式 Cushion type	可调缓冲 Variable cushion					
使用速度 Operation Speed	50-800mm/s					
连接尺寸 Connection	1/8"	1/4"		3/8"		1/2"

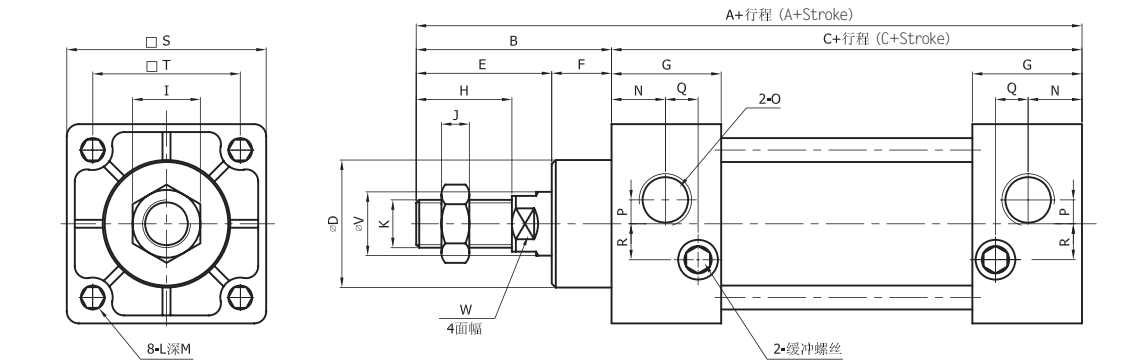
标准气缸 Standard cylinder / SU

技术参数 Technical data

FORWARD

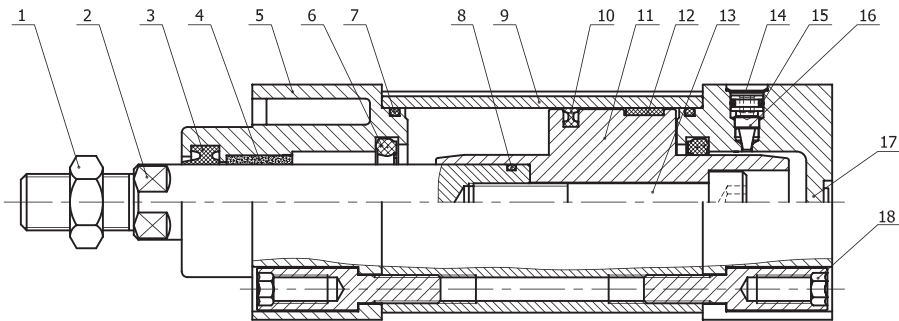
尺寸图 Dimensions

基本尺寸图 Basic version



缸径 Bore(mm) Ø	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	V	W
32	140	47	93	28	32	15	27.5	22	17	6	M10×1.25	M6×1.0	9.5	13.7	1/8	3.5	7.5	7	45	33	12	10
40	142	49	93	32	34	15	27.5	24	17	7	M12×1.25	M6×1.0	9.5	13.5	1/4	6	8.2	9	50	37	16	14
50	150	57	93	38	42	15	27.5	32	23	8	M16×1.5	M6×1.0	9.5	13.5	1/4	8.5	8.2	9	62	47	20	17
63	153	57	96	38	42	15	27.5	32	23	8	M16×1.5	M8×1.25	9.5	13.5	3/8	7	8.2	8.5	75	56	20	17
80	182	75	107	47	54	21	33	40	26	10	M20×1.5	M10×1.5	11.5	16.5	3/8	10	9.5	14	94	70	25	22
100	188	75	113	47	54	21	33	40	26	10	M20×1.5	M10×1.5	11.5	16.5	1/2	11	9.5	14	112	84	25	22

内部结构图 Inner structure



序号 NO.	名称 Item	序号 NO.	名称 Item	序号 NO.	名称 Item
1	螺母 Rod nut	8	活塞杆O型圈 Rod O-ring	15	缓冲防漏O型圈 O-ring
2	活塞杆 Piston rod	9	铝管 Barrel	16	缓冲调整螺丝 Cushion needle
3	防尘 Rod packing	10	活塞密封圈 Piston seal	17	后盖 Back cover
4	含油轴承 Bushing	11	活塞 Pilot body	18	连接螺栓 Connecting bolt
5	前盖 Front cover	12	耐磨环 Wearing		
6	缓冲圈 Cushion	13	内六角螺栓 Screw		
7	管壁O型圈 O-ring	14	内齿挡圈 Locker sheet		

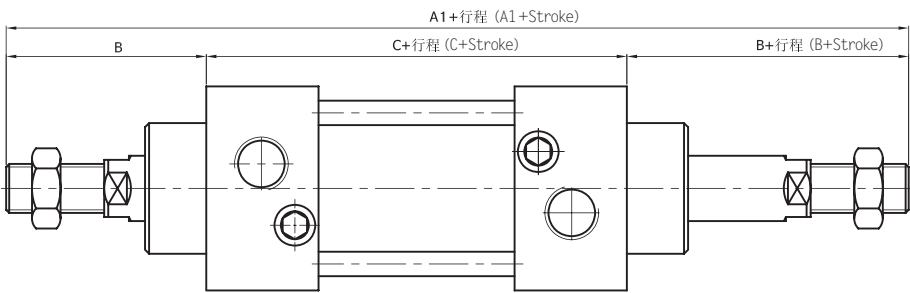
标准气缸 Standard cylinder / SU

技术参数 Technical data

FORWARD

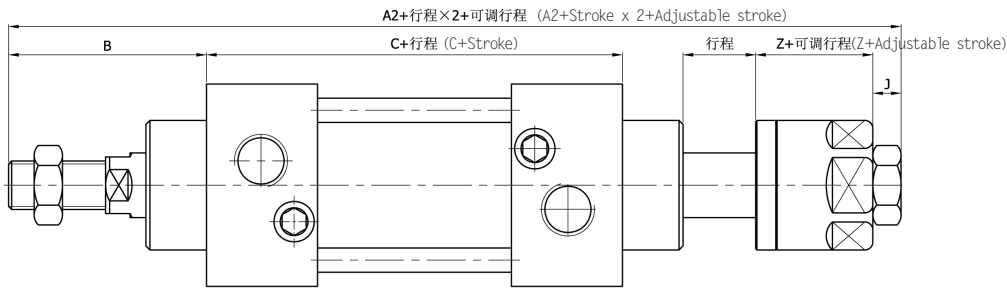
尺寸图-派生型 Dimensions-Variou

SUD 双端活塞杆 Through piston rod



缸径 Bore(mm) Ø	A1	B	C
32	187	47	93
40	191	49	93
50	207	57	93
63	210	57	96
80	257	75	107
100	263	75	113

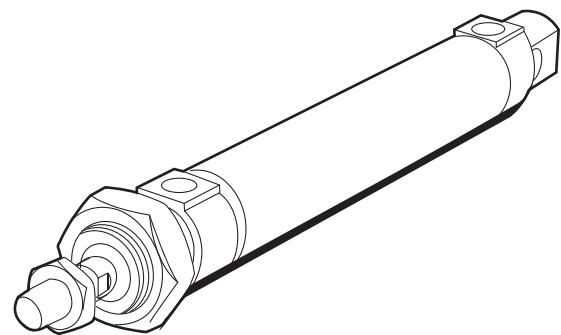
SUJ 双端行程可调型 Adjustable stroke type



缸径 Bore(mm) Ø	A2	B	C	J	Z
32	182	47	93	6	21
40	185	49	93	7	21
50	196	57	93	8	23
63	199	57	96	8	23
80	242	75	107	10	29
100	248	75	113	10	29

不锈钢迷你气缸
 MINI cylinder stainless steel
 / DSNU,ISO6432

型号代码
 Type codes



型号 Type		DSNU	-	20	-	80	-	PPV	-	A	-	CA
DSNU / DSN	双作用 Double-acting											
ESNU / ESN	单作用 Single-acting											
缸径 Bore												
行程 Stroke												
缓冲形式 Cushioning												
P	任意一端具有不可调缓冲器 Flexible cushioning rings/plates at both ends											
PPV	双端具有可调缓冲器 Pneumatic cushioning adjustable at both ends											
位置感测 Position sensing												
	不带位置感测 Without magnet											
A	带位置感测 With magnet											
固定型式 Mounting type												
CA	摆尾型 Pivot type											
U	径向进气型 Perpendicular 90°											
R	轴向进气型 Axial air-in											
CM	圆尾型 Round-end type											

FORWARD

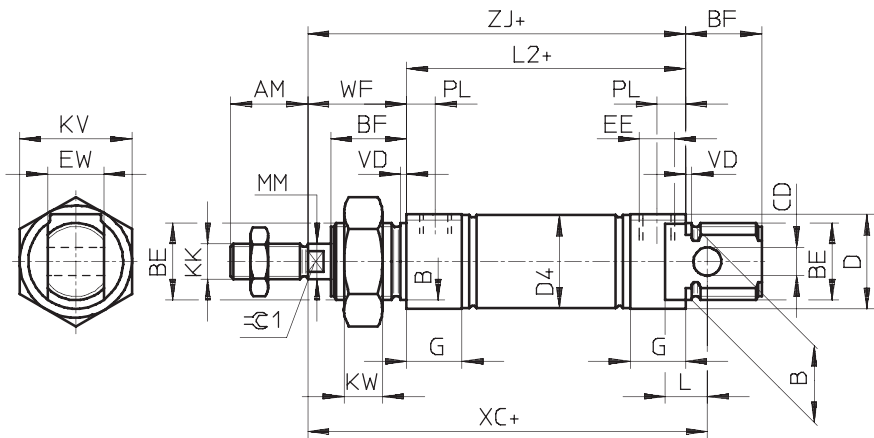
不锈钢迷你气缸
 MINI cylinder stainless steel
 / DSNU,ISO6432

技术参数
 Technical data

主要技术参数 General technical data									
缸径 Bore (mm) Ø		8	10	12	16	20	25	32	40
工作介质 Medium		经过滤的压缩空气，润滑或未润滑 Filtered compressed air,lubricated or unlubricated							
动作形式 Action Form		复动型、单动押出型、单动引入型 Double acting type、Single acting-push type、Single acting-pull type							
保证耐压力 Compression Pressure		15 bar							
使用压力范围 Max. Operating Pressure	复动型 Double-acting type	0.5~7 bar							
	单动型 Single-acting type	2~7 bar							
环境温度 Condition Temperature		-5-70° C							
使用速度范围 Operation Speed Range		50~750 mm/s							
气接口 Pneumatic Connection		M5*0.8				1/8"		1/4"	

尺寸图 Dimensions

基本尺寸图 Basic version

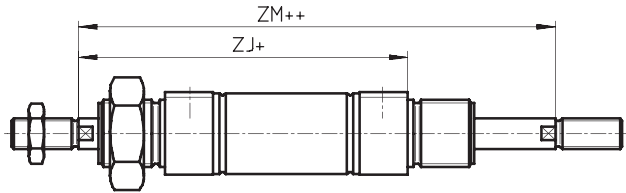


缸径 Bore(mm) Ø	AM	B	BE	BF	CD	D	D4	EE	EW	G	KK	KV
8	12	12	M12*1.25	12	4	15	9.3	M5	8	10	M4	19
10							11.3					
12	16	16	M16*1.5	17	6	20	13.3		12		M6	24
16							17.3					
20	20	22	M22*1.5	20	8	27	21.3	G1/8	16	16	M8	32
25				22			26.5				M10*1.25	

缸径 Bore(mm) Ø	KW	L	L2	MM	PL	TO	VD	WF	XC	ZJ		
8	6	6	46	4	6	18	2	16	64	62		
10												
12	8	9	50	6		23		22	75	72		
16			56						82	78		
20	11	12	68	8	8.2	31		24	95	92		
25			69.5						28	104		

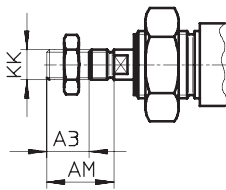
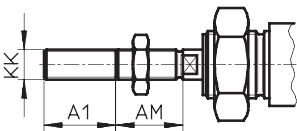
尺寸图-派生型 Dimensions-Variou

S2 双端活塞杆 Through piston rod



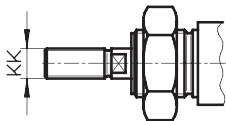
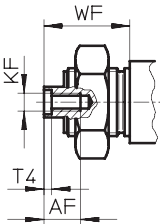
K2 活塞杆加长外螺纹 Extended male piston rod thread

K6 活塞杆缩短外螺纹 Shortened male piston rod thread

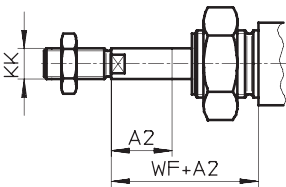


K3 活塞杆内螺纹 Female piston rod thread

K5 特殊活塞杆螺纹 Special piston rod thread



K8 加长活塞杆 Extended piston rod



Ø [mm]	A1	A2	A3	AM	AF	KF	基本螺纹 Basic thread		T4	WF	特殊螺纹 Special thread			ZM
							基本螺纹 Basic thread	特殊螺纹 Special thread			MQ	MA	MH	
8	15	50	4	12	-	-	M4	-	-	16	62	59.6	61.5	78.4
10					-	-		-				59.1	61.8	
12	20	100	4	16	-	-	M6	-	-	22	72	69.7	72	94
16					-	-		-				78	75.7	
20	25		8	20	12	M4	M8	-	2	24	92	90.5	91.5	116
25	35			22		M6	M10*1.25	M10				97.5	96.5	

铝合金迷你气缸 MINI cylinder aluminum barrel / MAL

型号代码 Type codes

FORWARD



MAL

-

CM

-

20

-

50

-

S

-

LB

型号 Type	
MAL	复动型 Mini cylinder double acting
MSAL	单动伸出型 Single acting-push type
MTAL	单动引入型 Single acting-pull type
后盖型式 Back cover type	
CA	摆尾型 Pivot type
CM	圆尾型 Round-end type
U	平尾型 Flat-end type
缸径 Bore	
行程 Stroke	
感应磁石 Magnet	
	不附磁石 Without magnet
S	附磁石 With magnet
固定型式 Mounting type	
LB	
FA	
SDB	

铝合金迷你气缸 MINI cylinder aluminum barrel / MAL

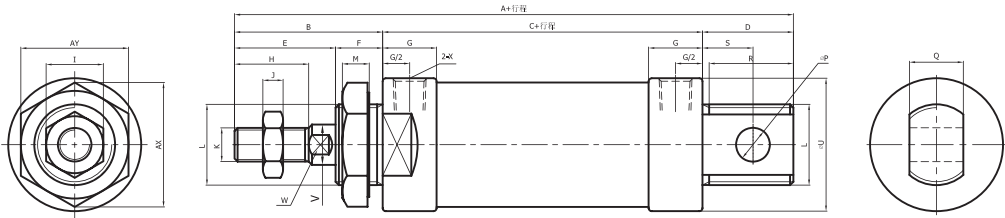
技术参数 Technical data

FORWARD

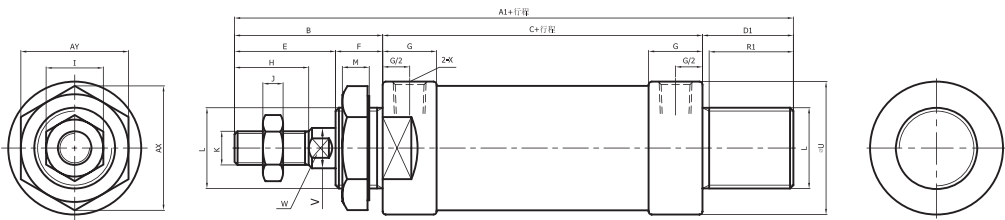
主要技术参数 General technical data				
缸径 Bore (mm) Ø	20	25	32	40
工作介质 Medium	经过滤的压缩空气，润滑或未润滑 Filtered compressed air,lubricated or unlubricated			
动作形式 Action Form	MAL: 复动型 Double acting type; 其它 Others: 单动型 Single acting			
固定型式 Mounting type	基本型 Basic LB FA SDB			
保证耐压力 Compression Pressure	15 bar			
使用压力范围 Max. Operating Pressure	MAL: 1-9 bar; 其它系列 Others: 2-9 bar			
环境温度 Condition Temperature	-5~70° C			
使用速度范围 Operation Speed Range	MAL: 30~800 mm/s; 其它系列 Others: 50~800 mm/s			
接管口径 Connection	1/8			1/4

MAL 尺寸图 Dimensions

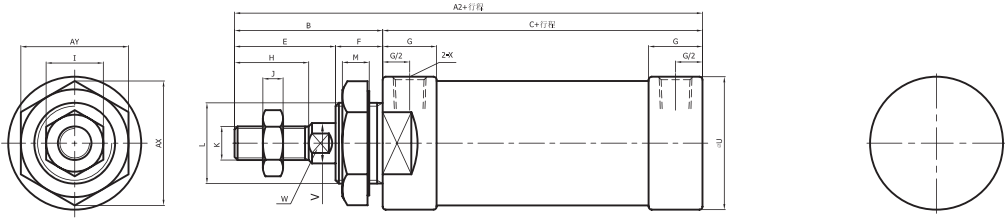
CA: Pivot type



CM: Round-end type

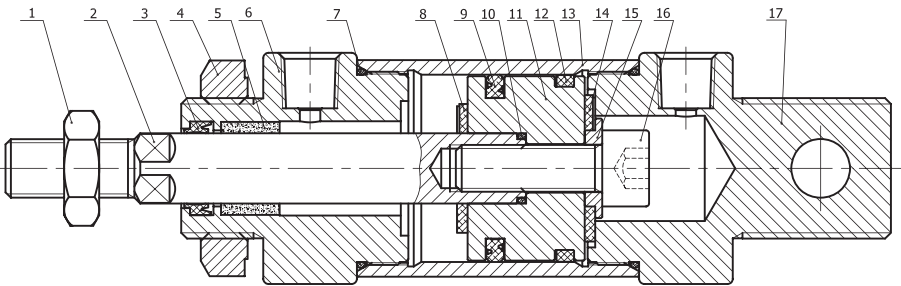


U: Flat-end type



缸径 Bore(mm) Ø	A	A1	A2	B	C	D	D1	E	F	G	H	I	J	K	L	M	P	Q	R	R1	S	U	V	W	X	AX	AY
20	131	122	110	40	70	21	12	28	12	16	20	12	6	M8×1.25	M22×1.5	7	8	16	19	10	12	29	8	6	1/8	33	29
25	135	128	114	44	70	21	14	30	14	16	22	17	6	M10×1.25	M22×1.5	7	8	16	19	12	12	34	10	8	1/8	33	29
32	141	128	114	44	70	27	14	30	14	16	22	17	6	M10×1.25	M24×2.0	8	10	16	25	12	15	39.5	12	10	1/8	37	32
40	165	152	138	46	92	27	14	32	14	22	24	17	7	M12×1.25	M30×2.0	9	12	20	25	12	15	49.5	16	14	1/4	47	41

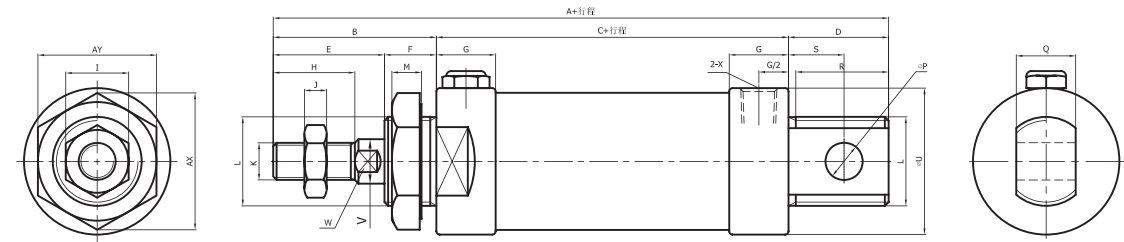
内部结构图 Inner structure



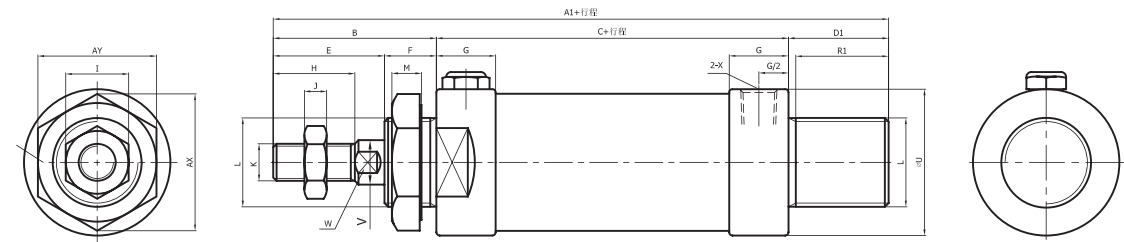
序号 NO.	名称 Item	序号 NO.	名称 Item	序号 NO.	名称 Item
1	螺母 Rod nut	7	管壁O型圈 O-ring	13	铝管 Barrel
2	活塞杆 Piston rod	8	防撞垫片 Bumper	14	防撞垫片 Bumper
3	前盖密封圈 Rod packing	9	活塞密封圈 Piston seal	15	后垫华司 Back washer
4	前盖螺母 Front cover nut	10	活塞杆O型圈 Rod O-ring	16	内六角螺栓 Screw
5	含油轴承 Bushing	11	活塞 Piston	17	后盖 Back cover
6	前盖 Front cover	12	耐磨环 Wearing		

MSAL 尺寸图 Dimensions

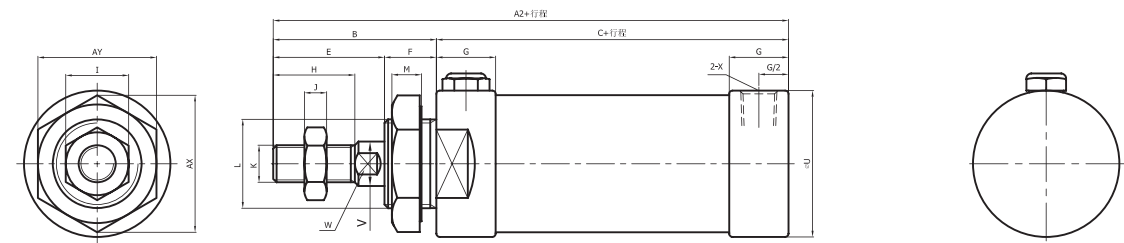
CA: Pivot type



CM: Round-end type



U: Flat-end type

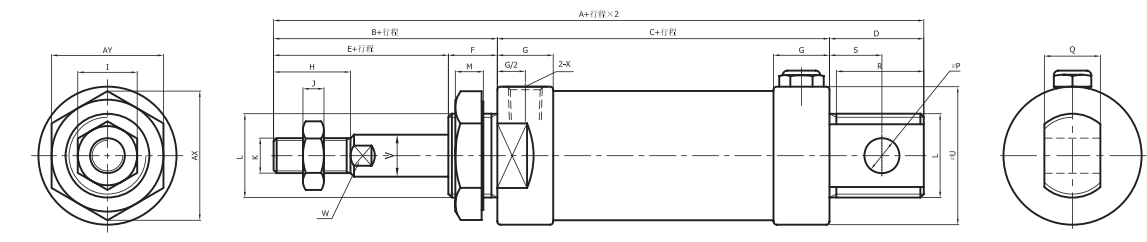


缸径 Bore(mm) Ø	A		A1		A2		B	C		D	D1	E	F	G	H
	0~50	51~100	0~50	51~100	0~50	51~100		0~50	51~100						
20	131	156	122	147	110	135	40	70	95	21	12	28	12	16	20
25	135	160	128	153	114	139	44	70	95	21	14	30	14	16	22
32	141	166	128	153	114	139	44	70	95	27	14	30	14	16	22
40	165	190	152	177	138	163	46	92	117	27	14	32	14	22	24

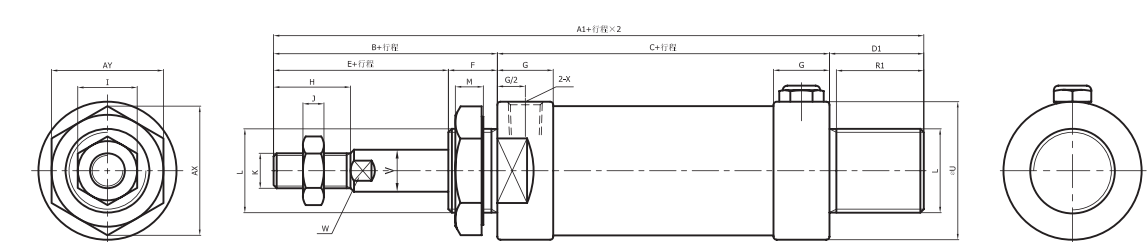
缸径 Bore(mm) Ø	I	J	K	L	M	P	Q	R	R1	S	U	V	W	X	AX	AY
20	12	6	M8×1.25	M22×1.5	7	8	16	19	10	12	29	8	6	1/8	33	29
25	17	6	M10×1.25	M22×1.5	7	8	16	19	12	12	34	10	8	1/8	33	29
32	17	6	M10×1.25	M24×2.0	8	10	16	25	12	15	39.5	12	10	1/8	37	32
40	17	7	M12×1.25	M30×2.0	9	12	20	25	12	15	49.5	16	14	1/4	47	41

MTAL 尺寸图 Dimensions

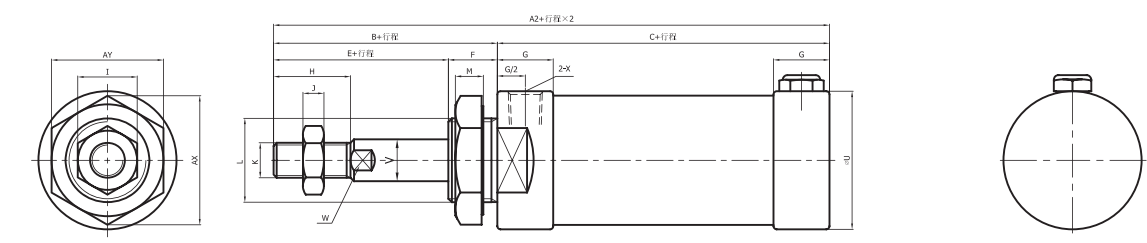
CA: Pivot type



CM: Round-end type



U: Flat-end type

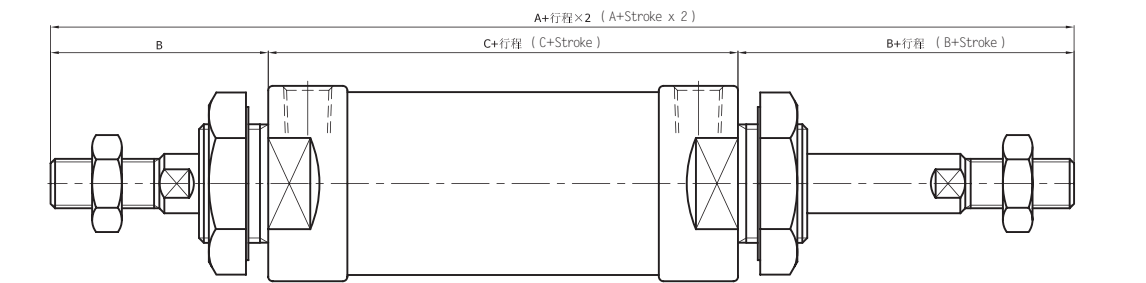


缸径 Bore(mm) Ø	A				A1				A2				B	C			
	0~25	26~50	51~75	76~100	0~25	26~50	51~75	76~100	0~25	26~50	51~75	76~100		0~25	26~50	51~75	76~100
20	146	156	171	181	137	147	162	172	125	135	150	160	40	85	95	110	120
25	150	160	175	185	143	153	168	178	129	139	154	164	44	85	95	110	120
32	156	166	186	196	143	153	173	183	129	139	159	169	44	85	95	115	125
40	180	190	210	220	167	177	197	207	153	163	183	193	46	107	117	137	147

缸径 Bore(mm) Ø	D	D1	E	F	G	H	I	J	K	L	M	P	Q	R	R1	S	U	V	W	X	AX	AY
20	21	12	28	12	16	20	12	6	M8×1.25	M22×1.5	7	8	16	19	10	12	29	8	6	1/8	33	29
25	21	14	30	14	16	22	17	6	M10×1.25	M22×1.5	7	8	16	19	12	12	34	10	8	1/8	33	29
32	27	14	30	14	16	22	17	6	M10×1.25	M24×2.0	8	10	16	25	12	15	39.5	12	10	1/8	37	32
40	27	14	32	14	22	24	17	7	M12×1.25	M30×2.0	9	12	20	25	12	15	49.5	16	14	1/4	47	41

尺寸图-派生型 Dimensions-Various

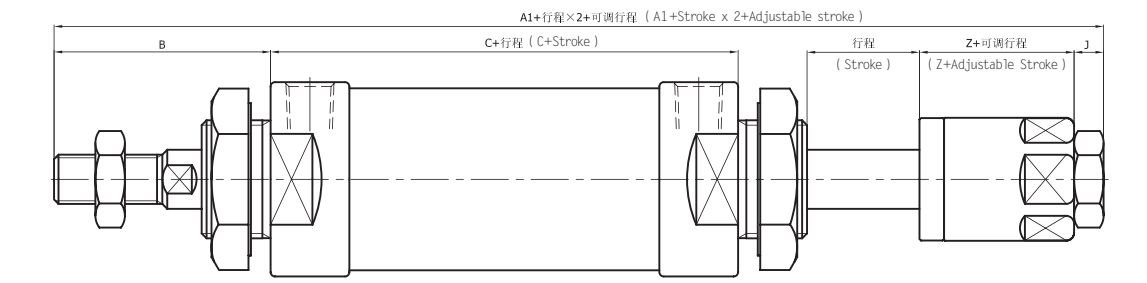
MALD 双轴型 Double rod type



缸径 Bore(mm) Ø	A	B	C
20	150	40	70
25	158	44	70
32	158	44	70
40	184	46	92

尺寸图-派生型 Dimensions-Various

MALJ 双轴行程可调型 Adjustable stroke type



缸径 Bore(mm) Ø	A	B	C	J	Z
20	147	40	70	6	19
25	155	44	70	6	21
32	155	44	70	6	21
40	180	46	92	7	21

紧凑型气缸 Compact cylinder / SDA,SSA,STA

型号代码 Type codes

FORWARD



型号 Type	
SDA	复动型 Double-acting
SSA	单动伸出型 Single acting-push type
STA	单动引入型 Single acting-pull type
磁石代号 Magnet	
S	附磁石 With magnet
	不附磁石 Without magnet
缸径 Bore	
行程 Stroke	
牙型 Rod type	
	内螺纹 Female thread
B	外螺纹 Male thread
N	无牙 No thread

SDA

-

S

-

20

-

40

-

紧凑型气缸 Compact cylinder / SDA,SSA,STA

技术参数 Technical data

FORWARD

主要技术参数 General technical data											
缸径 Bore (mm) Ø		12	16	20	25	32	40	50	63	80	100
工作介质 Medium		经过滤的压缩空气，润滑或未润滑 Filtered compressed air,lubricated or unlubricated									
动作形式 Action Form		复动型 Double Action									
		单动伸出型、单动引入型 Single acting-push type									
保证耐压力 Pressure		15 bar									
使用压力范围 Operating Pressure	复动型 Double acting	1~9 bar									
	单动型 Single acting	2~9 bar									
缓冲形式 Cushion type		防撞垫 Bumper									
环境温度 Condition Temperature		- 5~70° C									
使用速度 Operation Speed	复动型 Double acting	30~500mm/s						30~350mm/s		30~250mm/s	
	单动型 Single acting	100~500mm/s						-			
连接尺寸 Connection		M5×0.8				1/8"		1/4"		3/8"	

紧凑型气缸 Compact cylinder / SDA,SSA,STA

技术参数 Technical data

FORWARD

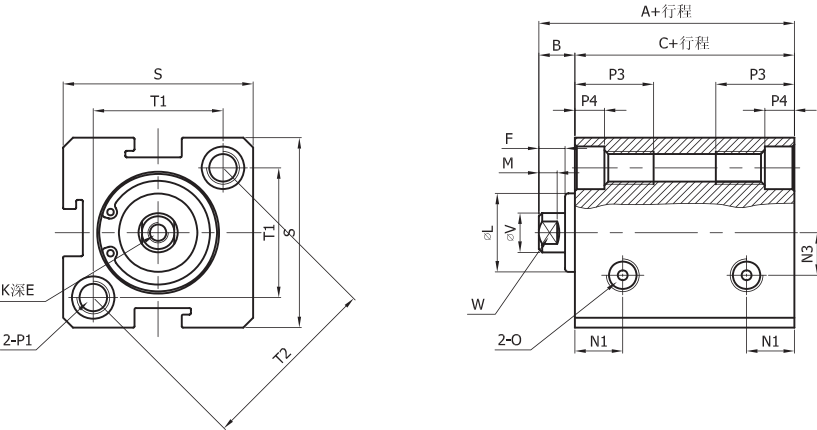
紧凑型气缸 Compact cylinder / SDA,SSA,STA

技术参数 Technical data

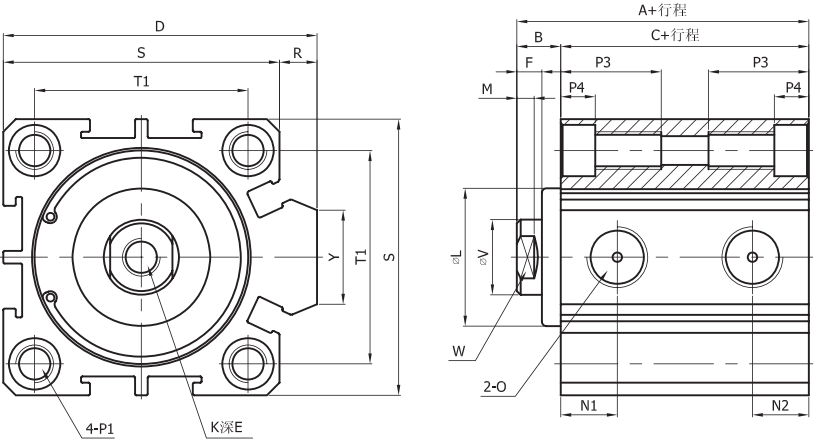
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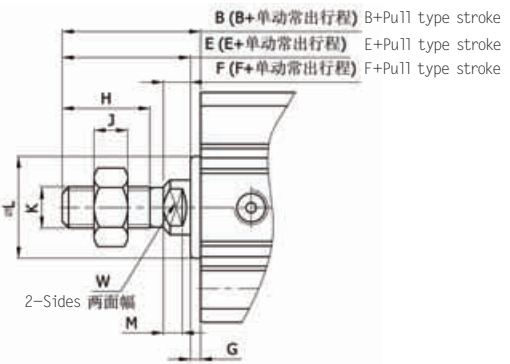
SDA SDAS 尺寸图 Dimensions

Ø 12~16



Ø 20~100



外牙尺寸 Male thread	缸径 Bore(mm) Ø	B	E	F	G	H	J	K	L	M	W
	12	17	16	4	1	10	4	M5×0.8	10.2	2.8	5
	16	17.5	16	4	1.5	10	4	M5×0.8	11	2.8	5
	20	20.5	19	4	1.5	13	5	M6×1.0	15	2.8	6
	25	23	21	4	2	15	6	M8×1.25	17	2.8	8
	32	25	22	4	3	15	6	M10×1.25	22	2.8	10
	40	35	32	4	3	25	8	M14×1.5	28	2.8	14
	50	37	33	5	4	25	11	M18×1.5	38	2.8	17
	63	37	33	5	4	25	11	M18×1.5	40	2.8	17
	80	44	39	6	5	30	13	M22×1.5	45	4	22
	100	50	45	7	5	35	13	M26×1.5	55	4	27

缸径 Bore(mm) Ø	SDA			SDAS			D	E	F	K	L	M	N1		N2	
	A	B	C	A	B	C							S=5	S>5	S=5	S>5
12	22	5	17	32	5	27	—	6	4	M3×0.5	10.2	2.8	6.3		6.3	
16	24	5.5	18.5	34	5.5	28.5	—	6	4	M3×0.5	11	2.8	7.3		7.3	
20	25	5.5	19.5	35	5.5	29.5	36	8	4	M4×0.7	15	2.8	7.5		7.3	
25	27	6	21	37	6	31	42	10	4	M5×0.8	17	2.8	8		8	
32	31.5	7	24.5	41.5	7	34.5	50	12	4	M6×1.0	22	2.8	9		9	
40	33	7	26	43	7	36	58.5	12	4	M8×1.25	28	2.8	10		10	
50	37	9	28	47	9	38	71.5	15	5	M10×1.5	38	2.8	10.5		10.5	
63	41	9	32	51	9	42	84.5	15	5	M10×1.5	40	2.8	9.5	12	9.5	11
80	52	11	41	62	11	51	104	20	6	M14×1.5	45	4	11.5	14.5	11.5	14.5
100	63	12	51	73	12	61	124	20	7	M18×1.5	55	4	16	20.5	16	20.5

缸径 Bore(mm) Ø	N3	O	P1	P3	P4	R	S	T1	T2	V	W	Y
12	6	M5×0.8	两侧：Ø6.5螺牙M5×0.8、通孔Ø4.2	12	4.5	—	25	16.2	23	6	5	—
16	6.5	M5×0.8	两侧：Ø6.5螺牙M5×0.8、通孔Ø4.2	12	4.5	—	29	19.8	28	6	5	—
20	—	M5×0.8	两侧：Ø6.5螺牙M5×0.8、通孔Ø4.2	14	4.5	2	34	24	—	8	6	10
25	—	M5×0.8	两侧：Ø8.2螺牙M6×1.0、通孔Ø4.6	15	5.5	2	40	28	—	10	8	10
32	—	1/8	两侧：Ø8.2螺牙M6×1.0、通孔Ø4.6	16	5.5	6	44	34	—	12	10	15
40	—	1/8	两侧：Ø10螺牙M8×1.25、通孔Ø6.5	20	7.5	6.5	52	40	—	16	14	16
50	—	1/4	两侧：Ø11螺牙M8×1.25、通孔Ø6.5	25	8.7	9.5	62	48	—	20	17	20
63	—	1/4	两侧：Ø11螺牙M8×1.25、通孔Ø6.5	25	8.7	9.5	75	60	—	20	17	20
80	—	3/8	两侧：Ø14螺牙M12×1.75、通孔Ø9.2	25	10.5	10	94	74	—	25	22	26
100	—	3/8	两侧：Ø17.5螺牙M14×2.0、通孔Ø11.3	30	13	10	114	90	—	32	27	26

紧凑型气缸 Compact cylinder / SDA,SSA,STA

技术参数 Technical data

FORWARD

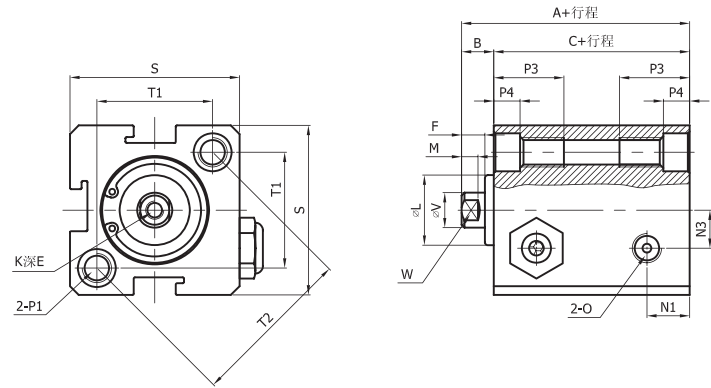
紧凑型气缸 Compact cylinder / SDA,SSA,STA

技术参数 Technical data

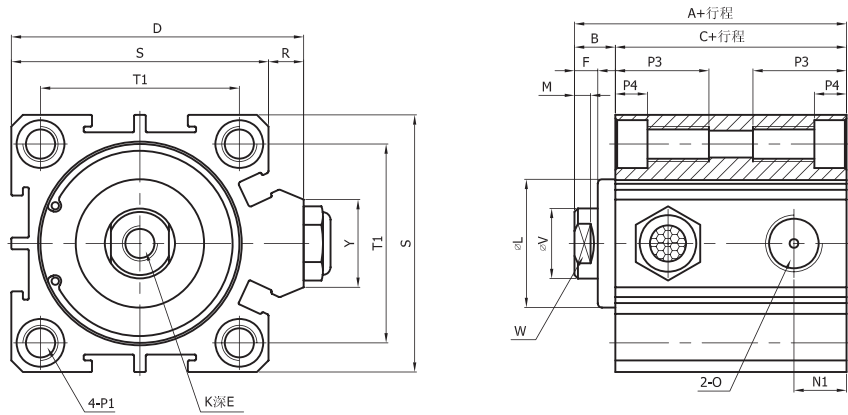
FORWARD

SSA SSAS 尺寸图 Dimensions

Ø 12~16



Ø 20~100

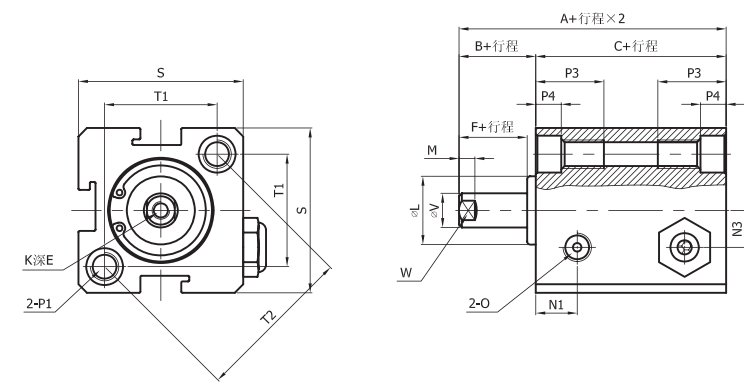


缸径 Bore(mm) Ø	SSA					SSAS					D	E	F	K	L	M
	A		B	C		A		B	C							
	S≤10	S>10		S≤10	S>10	S≤10	S>10		S≤10	S>10						
12	32	42	5	27	37	42	52	5	37	47	—	6	4	M3×0.5	10.2	2.8
16	34	44	5.5	28.5	38.5	44	54	5.5	38.5	48.5	—	6	4	M3×0.5	11	2.8
20	35	45	5.5	29.5	39.5	45	55	5.5	39.5	49.5	36	8	4	M4×0.7	15	2.8
25	37	47	6	31	41	47	67	6	41	51	42	10	4	M5×0.8	17	2.8
32	41.5	51.5	7	34.5	44.5	51.5	61.5	7	44.5	54.5	50	12	4	M6×1.0	22	2.8
40	43	53	7	36	46	53	63	7	46	56	58.5	12	4	M8×1.25	28	2.8

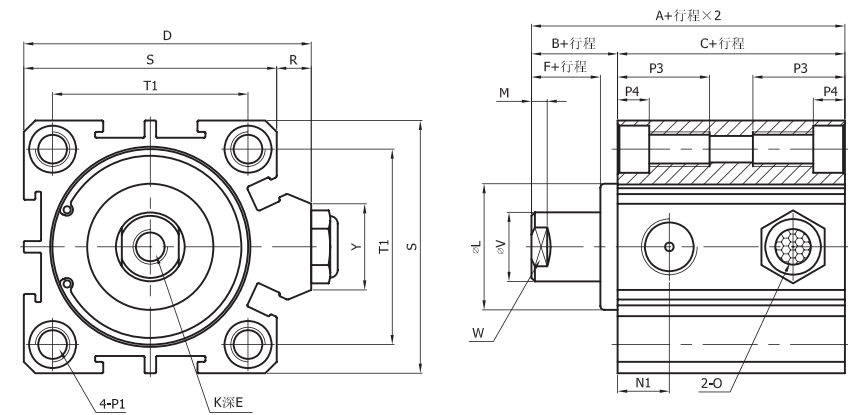
缸径 Bore(mm) Ø	N1	N3	O	P1	P3	P4	R	S	T1	T2	V	W	Y
12	6.3	6	M5×0.8	两侧: Ø6.5\螺牙M5×0.8、通孔Ø4.2	12	4.5	—	25	16.2	23	6	5	—
16	7.3	6.5	M5×0.8	两侧: Ø6.5\螺牙M5×0.8、通孔Ø4.2	12	4.5	—	29	19.8	28	6	5	—
20	7.5	—	M5×0.8	两侧: Ø6.5\螺牙M5×0.8、通孔Ø4.2	14	4.5	2	34	24	—	8	6	10
25	8	—	M5×0.8	两侧: Ø8.2\螺牙M6×1.0、通孔Ø4.6	15	5.5	2	40	28	—	10	8	10
32	9	—	1/8	两侧: Ø8.2\螺牙M6×1.0、通孔Ø4.6	16	5.5	6	44	34	—	12	10	15
40	10	—	1/8	两侧: Ø10\螺牙M8×1.25、通孔Ø6.5	20	7.5	6.5	52	40	—	16	14	16

STA STAS 尺寸图 Dimensions

Ø 12~16



Ø 20~100



缸径 Bore(mm) Ø	STA					STAS					D	E	F	K	L	M
	A		B	C		A		B	C							
	S≤10	S>10		S≤10	S>10	S≤10	S>10		S≤10	S>10						
12	32	42	5	27	37	42	52	5	37	47	—	6	4	M3×0.5	10.2	2.8
16	34	44	5.5	28.5	38.5	44	54	5.5	38.5	48.5	—	6	4	M3×0.5	11	2.8
20	35	45	5.5	29.5	39.5	45	55	5.5	39.5	49.5	36	8	4	M4×0.7	15	2.8
25	37	47	6	31	41	47	67	6	41	51	42	10	4	M5×0.8	17	2.8
32	41.5	51.5	7	34.5	44.5	51.5	61.5	7	44.5	54.5	50	12	4	M6×1.0	22	2.8
40	43	53	7	36	46	53	63	7	46	56	58.5	12	4	M8×1.25	28	2.8

缸径 Bore(mm) Ø	N1	N3	O	P1	P3	P4	R	S	T1	T2	V	W	Y
12	6.3	6	M5×0.8	两侧: Ø6.5\螺牙M5×0.8、通孔Ø4.2	12	4.5	—	25	16.2	23	6	5	—
16	7.3	6.5	M5×0.8	两侧: Ø6.5\螺牙M5×0.8、通孔Ø4.2	12	4.5	—	29	19.8	28	6	5	—
20	7.5	—	M5×0.8	两侧: Ø6.5\螺牙M5×0.8、通孔Ø4.2	14	4.5	2	34	24	—	8	6	10
25	8	—	M5×0.8	两侧: Ø8.2\螺牙M6×1.0、通孔Ø4.6	15	5.5	2	40	28	—	10	8	10
32	9	—	1/8	两侧: Ø8.2\螺牙M6×1.0、通孔Ø4.6	16	5.5	6	44	34	—	12	10	15
40	10	—	1/8	两侧: Ø10\螺牙M8×1.25、通孔Ø6.5	20	7.5	6.5	52	40	—	16	14	16

紧凑型气缸 Compact cylinder / SDA,SSA,STA

技术参数 Technical data

FORWARD

紧凑型气缸 Compact cylinder / SDA,SSA,STA

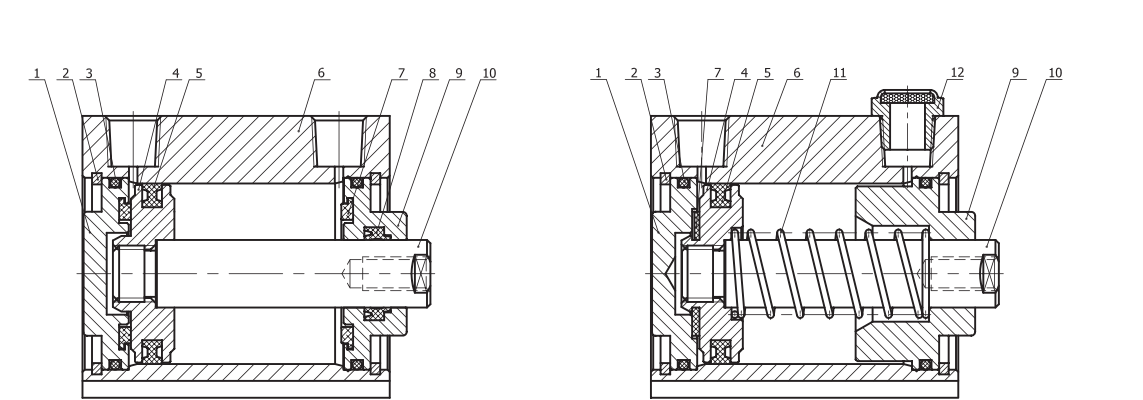
技术参数 Technical data

FORWARD

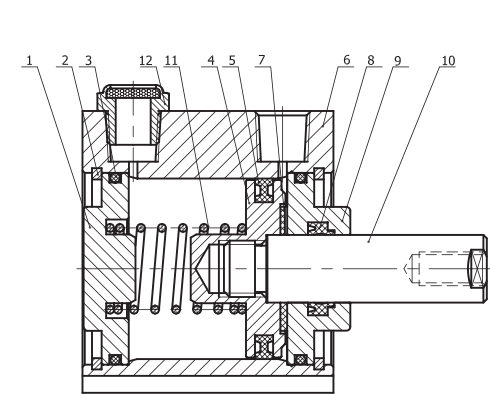
内部结构图 Inner structure

SDA

SSA



STA



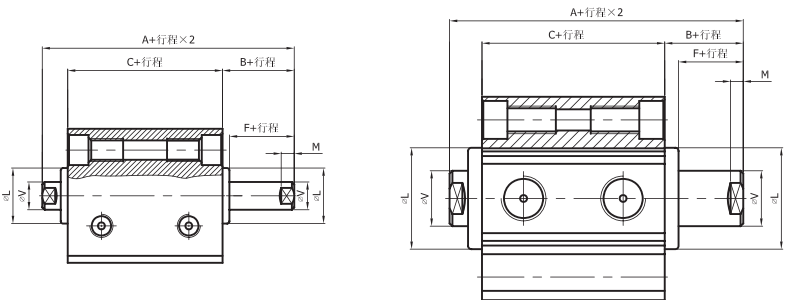
序号 NO.	名称 Item	序号 NO.	名称 Item	序号 NO.	名称 Item
1	后盖 Back cover	6	本体 Body	11	弹簧 Spring
2	C型扣环 C clip	7	防撞垫片 Bumper	12	消声器 Silencer
3	前后盖O型圈 Cover gasket	8	前盖密封圈 Rod packing		
4	活塞 Piston	9	前盖 Front cover		
5	活塞O型圈 Piston O-ring	10	活塞杆 Rod		

派生型 Variants

SDAD,SDADS 双端活塞杆 Through piston rod

Ø 12-16

Ø 20 - 100

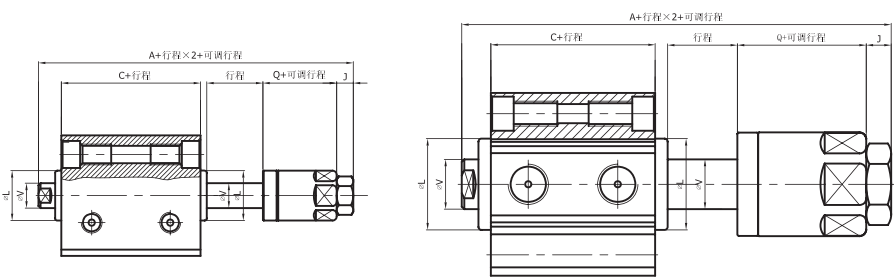


缸径 Bore(mm) Ø	SDAD			SDADS			F	V	L	M
	A	B	C	A	B	C				
12	27	5	17	37	5	27	4	6	10.2	2.8
16	29.5	5.5	18.5	39.5	5.5	28.5	4	6	11	2.8
20	30.5	5.5	19.5	40.5	5.5	29.5	4	8	15	2.8
25	33	6	21	43	6	31	4	10	17	2.8
32	34.5	7	24.5	48.5	7	34.5	4	12	22	2.8
40	40	7	26	50	7	36	4	16	28	2.8
50	46	9	28	56	9	38	5	20	38	2.8
63	50	9	32	60	9	42	5	20	40	2.8
80	63	11	41	73	11	51	6	25	45	4
100	75	12	51	85	12	61	7	32	55	4

SDAJ,SDAJS 行程可调型 Adjustable stroke type

Ø 12-16

Ø 20 - 100



缸径 Bore(mm) Ø	SDAJ		SDAJS		Q	J	L	V
	A	C	A	C				
12	40	17	50	27	13	4	10.2	6
16	42.5	18.5	52.5	28.5	13	4	11	6
20	47.5	19.5	57.5	29.5	16	5	15	8
25	55	21	65	31	19	6	17	10
32	61.5	24.5	71.5	34.5	21	6	22	12
40	65	26	75	36	21	8	28	16
50	73	28	83	38	21	11	38	20
63	77	32	87	42	21	11	40	20
80	94	41	104	51	24	13	45	25
100	105	51	115	61	24	13	55	32

接头 One-touch fitting

型号代码 Type codes

FORWARD

PC

(G)

8

-

01

-

型号 Type

PC

G-Thread & NPT-Thread

Tube outer dia.

Taper pipe thread

Body color

No black

A Grey

直管螺纹和美制锥管螺纹 G-Thread & NPT-Thread					
直管螺纹 G-Thread					
Code	G01	G02	G03	G04	G06
Size	G1/8	G1/4	G3/8	G1/2	G3/4
美制锥管螺纹 American standard taper pipe thread (NPT)					
Code	N01	N02	N03	N04	N06
Size	NPT1/8	NPT1/4	NPT3/8	NPT1/2	NPT3/4

气管外径 Tube outer dia.													
公制 Metric size								英制 Inch size					
Code	4	6	8	10	12	15	16	5/32	3/16	1/4	5/16	3/8	1/2
Size	4	6	8	10	12	15	16	5/32	3/16	1/4	5/16	3/8	1/2

锥管螺纹 Taper pipe thread									
公制 Metric size									
Code	M5	M6	M8	M10	M12	M12A	M14A	M16	M20
Size	M5 X 0.8	M6 X 1	M8 X 1	M10 X 1	M12 X 1.25	M12 X 1.5	M14 X 1.5	M16 X 1.5	M20 X 1.5
锥管螺纹 Taper pipe thread									
Code	01	02	03	04	06				
Size	R1/8	R1/4	R3/8	R1/2	R3/4				

主要技术参数 General technical data	
工作介质 Medium	压缩空气 Compressed air
使用压力范围 Operating pressure	0~1.0 MPa
负压 Negative pressure	-750mmHg
耐压力 Pressure proof	1.5 MPa
使用温度范围 Operating temperature range	5~60℃
适用软管 Tube material	尼龙 PU/Nylon and polyurethane

接头 One-touch fitting

订货数据 Ordering data

FORWARD

PC-G



订货数据 Ordering data								
Tube(Metric)-Thread(R)			Tube(Inch)-Thread(NPT)			Tube(Metric)-Thread(G)		
PC 04-M5	PC 08-01	PC 12-03	PC 5/32-N01	PC 5/16-N03		PC 04-G01	PC 10-G01	
PC 04-M6	PC 08-02	PC 12-04	PC 5/32-N02	PC 5/16-N04		PC 04-G02	PC 10-G02	
PC 04-01	PC 08-03	PC 15-03	PC 3/16-N01	PC 3/8-N01		PC 06-G01	PC 10-G03	
PC 04-02	PC 08-04	PC 15-04	PC 3/16-N02	PC 3/8-N02		PC 06-G02	PC 10-G04	
PC 06-M5	PC 10-01	PC 16-03	PC 1/4-N01	PC 3/8-N03		PC 06-G03	PC 12-G01	
PC 06-M6	PC 10-02	PC 16-04	PC 1/4-N02	PC 3/8-N04		PC 06-G04	PC 12-G02	
PC 06-01	PC 10-03	PC 16-06	PC 1/4-N03	PC 1/2-N01		PC 08-G01	PC 12-G03	
PC 06-02	PC 10-04		PC 1/4-N04	PC 1/2-N02		PC 08-G02	PC 12-G04	
PC 06-03	PC 12-01		PC 5/16-N01	PC 1/2-N03		PC 08-G03	PC 16-G03	
PC 06-04	PC 12-02		PC 5/16-N02	PC 1/2-N04		PC 08-G04	PC 16-G04	

PCF-G



订货数据 Ordering data								
Tube(Metric)-Thread(R)			Tube(Inch)-Thread(NPT)			Tube(Metric)-Thread(G)		
PCF 04-M5	PCF 08-01	PCF 12-03	PCF 5/32-N01	PCF 5/16-N03		PCF 04-G01	PCF 10-G01	
PCF 04-M6	PCF 08-02	PCF 12-04	PCF 5/32-N02	PCF 5/16-N04		PCF 04-G02	PCF 10-G02	
PCF 04-01	PCF 08-03		PCF 3/16-N01	PCF 3/8-N01		PCF 06-G01	PCF 10-G03	
PCF 04-02	PCF 08-04		PCF 3/16-N02	PCF 3/8-N02		PCF 06-G02	PCF 10-G04	
PCF 06-M5	PCF 10-01		PCF 1/4-N01	PCF 3/8-N03		PCF 06-G03	PCF 12-G01	
PCF 06-M6	PCF 10-02		PCF 1/4-N02	PCF 3/8-N04		PCF 06-G04	PCF 12-G02	
PCF 06-01	PCF 10-03		PCF 1/4-N03	PCF 1/2-N01		PCF 08-G01	PCF 12-G03	
PCF 06-02	PCF 10-04		PCF 1/4-N04	PCF 1/2-N02		PCF 08-G02	PCF 12-G04	
PCF 06-03	PCF 12-01		PCF 5/16-N01	PCF 1/2-N03		PCF 08-G03		
PCF 06-04	PCF 12-02		PCF 5/16-N02	PCF 1/2-N04		PCF 08-G04		

PB-G



订货数据 Ordering data								
Tube(Metric)-Thread(R)			Tube(Inch)-Thread(NPT)			Tube(Metric)-Thread(G)		
PB 04-M5	PB 06-04	PB 12-02	PB 5/32-N01	PB 5/16-N03		PB 04-G01	PB 08-G04	PB 16-G04
PB 04-M6	PB 08-01	PB 12-03	PB 5/32-N02	PB 5/16-N04		PB 04-G02	PB 10-G01	
PB 04-01	PB 08-02	PB 12-04	PB 3/16-N01	PB 3/8-N01		PB 04-G03	PB 10-G02	
PB 04-02	PB 08-03	PB 15-03	PB 3/16-N02	PB 3/8-N02		PB 06-G01	PB 10-G03	
PB 04-03	PB 08-04	PB 15-04	PB 1/4-N01	PB 3/8-N03		PB 06-G02	PB 10-G04	
PB 06-M5	PB 10-01	PB 16-03	PB 1/4-N02	PB 3/8-N04		PB 06-G03	PB 12-G01	
PB 06-M6	PB 10-02	PB 16-04	PB 1/4-N03	PB 1/2-N01		PB 06-G04	PB 12-G02	
PB 06-01	PB 10-03		PB 1/4-N04	PB 1/2-N02		PB 08-G01	PB 12-G03	
PB 06-02	PB 10-04		PB 5/16-N01	PB 1/2-N03		PB 08-G02	PB 12-G04	
PB 06-03	PB 12-01		PB 5/16-N02	PB 1/2-N04		PB 08-G03	PB 16-G03	

接头 One-touch fitting

订货数据 Ordering data

FORWARD

PD-G



订货数据 Ordering data								
Tube(Metric)–Thread(R)			Tube(Inch)–Thread(NPT)			Tube(Metric)–Thread(G)		
PD 04–M5	PD 06–04	PD 12–02	PD 5/32–N01	PD 5/16–N03		PD 04–G01	PD 10–G01	
PD 04–M6	PD 08–01	PD 12–03	PD 5/32–N02	PD 5/16–N04		PD 04–G02	PD 10–G02	
PD 04–01	PD 08–02	PD 12–04	PD 3/16–N01	PD 3/8–N01		PD 06–G01	PD 10–G03	
PD 04–02	PD 08–03	PD 15–03	PD 3/16–N02	PD 3/8–N02		PD 06–G02	PD 10–G04	
PD 04–03	PD 08–04	PD 15–04	PD 1/4–N01	PD 3/8–N03		PD 06–G03	PD 12–G01	
PD 06–M5	PD 10–01	PD 16–03	PD 1/4–N02	PD 3/8–N04		PD 06–G04	PD 12–G02	
PD 06–M6	PD 10–02	PD 16–04	PD 1/4–N03	PD 1/2–N01		PD 08–G01	PD 12–G03	
PD 06–01	PD 10–03		PD 1/4–N04	PD 1/2–N02		PD 08–G02	PD 12–G04	
PD 06–02	PD 10–04		PD 5/16–N01	PD 1/2–N03		PD 08–G03		
PD 06–03	PD 12–01		PD 5/16–N02	PD 1/2–N04		PD 08–G04		

PLL-G



订货数据 Ordering data								
Tube(Metric)–Thread(R)			Tube(Inch)–Thread(NPT)			Tube(Metric)–Thread(G)		
PLL 04–M5	PLL 08–02	PLL 12–04	PLL 5/32–N01	PLL 5/16–N02		PLL 04–G01	PLL 10–G01	
PLL 04–M6	PLL 08–03		PLL 5/32–N02	PLL 5/16–N03		PLL 04–G02	PLL 10–G02	
PLL 04–01	PLL 08–04		PLL 5/32–N03	PLL 3/8–N01		PLL 06–G01	PLL 10–G03	
PLL 04–02	PLL 10–01		PLL 3/16–N01	PLL 3/8–N02		PLL 06–G02	PLL 10–G04	
PLL 06–M5	PLL 10–02		PLL 3/16–N02	PLL 3/8–N03		PLL 06–G03	PLL 12–G01	
PLL 06–M6	PLL 10–03		PLL 3/16–N03	PLL 3/8–N04		PLL 06–G04	PLL 12–G02	
PLL 06–01	PLL 10–04		PLL 1/4–N01	PLL 1/2–N02		PLL 08–G01	PLL 12–G03	
PLL 06–02	PLL 12–01		PLL 1/4–N02	PLL 1/2–N03		PLL 08–G02	PLL 12–G04	
PLL 06–03	PLL 12–02		PLL 1/4–N03	PLL 1/2–N04		PLL 08–G03		
PLL 08–01	PLL 12–03		PLL 5/16–N01			PLL 08–G04		

PLN-G



订货数据 Ordering data								
Tube(Metric)–Thread(R)					Tube(Metric)–Thread(G)			
PLN 04–M5	PLN 06–M5	PLN 06–04	PLN 10–01	PLN 12–02	PLN 04–G01	PLN 06–G03	PLN 08–G04	PLN 12–G01
PLN 04–M6	PLN 06–M6	PLN 08–01	PLN 10–02	PLN 12–03	PLN 04–G02	PLN 06–G04	PLN 10–G01	PLN 12–G02
PLN 04–01	PLN 06–01	PLN 08–02	PLN 10–03	PLN 12–04	PLN 04–G03	PLN 08–G01	PLN 10–G02	PLN 12–G03
PLN 04–02	PLN 06–02	PLN 08–03	PLN 10–04		PLN 06–G01	PLN 08–G02	PLN 10–G03	PLN 12–G04
PLN 04–03	PLN 06–03	PLN 08–04	PLN 12–01		PLN 06–G02	PLN 08–G03	PLN 10–G04	

PLF-G



订货数据 Ordering data							
Tube(Metric)–Thread(R)				Tube(Metric)–Thread(G)			
PLF 04–M5	PLF 06–M6	PLF 08–02	PLF 12–02	PLF 5/32–N01	PLF 1/4–N02	PLF 5/16–N04	PLF 1/2–N01
PLF 04–M6	PLF 06–01	PLF 08–03	PLF 12–03	PLF 5/32–N02	PLF 1/4–N03	PLF 3/8–N01	PLF 1/2–N02
PLF 04–01	PLF 06–02	PLF 10–02	PLF 12–04	PLF 3/16–N01	PLF 5/16–N01	PLF 3/8–N02	PLF 1/2–N03
PLF 04–02	PLF 06–03	PLF 10–03		PLF 3/16–N02	PLF 5/16–N02	PLF 3/8–N03	PLF 1/2–N04
PLF 06–M5	PLF 08–01	PLF 10–04		PLF 1/4–N01	PLF 5/16–N03	PLF 3/8–N04	

接头 One-touch fitting

订货数据 Ordering data

FORWARD

PX-G



订货数据 Ordering data								
Tube(Metric)–Thread(R)			Tube(Inch)–Thread(NPT)			Tube(Metric)–Thread(G)		
PX 04–M5	PX 06–02	PX 10–03	PX 5/32–N01	PX 5/16–N02	PX 1/2–N03	PX 04–G01	PX 08–G02	PX 12–G02
PX 04–M6	PX 06–03	PX 10–04	PX 5/32–N02	PX 5/16–N03	PX 1/2–N04	PX 04–G02	PX 08–G03	PX 12–G03
PX 04–01	PX 08–01	PX 12–01	PX 3/16–N01	PX 5/16–N04		PX 04–G03	PX 08–G04	PX 12–G04
PX 04–02	PX 08–02	PX 12–02	PX 3/16–N02	PX 3/8–N01		PX 06–G01	PX 10–G01	
PX 04–03	PX 08–03	PX 12–03	PX 1/4–N01	PX 3/8–N02		PX 06–G02	PX 10–G02	
PX 06–M5	PX 08–04	PX 12–04	PX 1/4–N02	PX 3/8–N03		PX 06–G03	PX 10–G03	
PX 06–M6	PX 10–01		PX 1/4–N03	PX 3/8–N04		PX 06–G04	PX 10–G04	
PX 06–01	PX 10–02		PX 5/16–N01	PX 1/2–N02		PX 08–G01	PX 12–G01	

PKD-G



订货数据 Ordering data								
Tube(Metric)–Thread(R)			Tube(Inch)–Thread(NPT)			Tube(Metric)–Thread(G)		
PKD 04–M5	PKD 06–02	PKD 08–04	PKD 1/4–N1/8	PKD 5/16–N3/8		PKD 04–G01	PKD 08–G01	PKD 10–G03
PKD 04–01	PKD 06–03	PKD 10–01	PKD 1/4–N1/4	PKD 5/16–N1/2		PKD 04–G02	PKD 08–G02	PKD 10–G04
PKD 04–02	PKD 06–04	PKD 10–02	PKD 1/4–N3/8	PKD 3/8–N1/8		PKD 06–G01	PKD 08–G03	
PKD 04–03	PKD 08–01	PKD 10–03	PKD 1/4–N1/2	PKD 3/8–N1/4		PKD 06–G02	PKD 08–G04	
PKD 06–M5	PKD 08–02	PKD 10–04	PKD 5/16–N1/8	PKD 3/8–N3/8		PKD 06–G03	PKD 10–G01	
PKD 06–01	PKD 08–03		PKD 5/16–N1/4	PKD 3/8–N1/2		PKD 06–G04	PKD 10–G02	

PE



订货数据 Ordering data					
Tube(Metric)			Tube(Inch)		
PE 04	PE 12	PE 08–06–08	PE 5/32	PE 3/8	PE 5/16–1/4–5/16
PE 06	PE 15	PE 10–08–10	PE 3/16	PE 1/2	PE 3/8–5/16–3/8
PE 08	PE 16	PE 12–10–12	PE 1/4	PE 3/16–5/32–3/16	PE 1/2–3/8–1/2
PE 10	PE 06–04–06		PE 5/16	PE 1/4–3/16–1/4	

PM



订货数据 Ordering data					
Tube(Metric)			Tube(Inch)		
PM 04	PM 12		PM 5/32	PM 3/8	
PM 06			PM 3/16	PM 1/2	
PM 08			PM 1/4		
PM 10			PM 5/16		

PZ



订货数据 Ordering data					
Tube(Metric)			Tube(Inch)		
PZ 04	PM 12		PZ 5/32		
PZ 06			PZ 1/4		
PZ 08			PZ 5/16		
PZ 10			PZ 3/8		

接头 One-touch fitting

订货数据 Ordering data

FORWARD

PU



订货数据 Ordering data						
Tube(Metric)			Tube(Inch)			
PU 04	PU 12	PU 8-6	PU 5/32	PU 3/8	PU 5/16-1/4	
PU 06	PU 15	PU 10-8	PU 3/16	PU 1/2	PU 3/8-5/16	
PU 08	PU 16	PU 12-10	PU 1/4	PU 3/16-5/32	PU 1/2-3/8	
PU 10	PU 6-4		PU 5/16	PU 1/4-3/16		

PP



订货数据 Ordering data						
Tube(Metric)						
PP 04	PP 12					
PP 06						
PP 08						
PP 10						

PH-G



订货数据 Ordering data								
Tube(Metric)-Thread(R)			Tube(Inch)-Thread(NPT)			Tube(Metric)-Thread(G)		
PH 04-M5	PH 06-03	PH 10-03	PH 5/32-N01	PH 5/16-N01	PH 1/2-N03	PH 04-G01	PH 08-G01	PH 10-G03
PH 04-01	PH 08-01	PH 10-04	PH 3/16-N01	PH 5/16-N02	PH 1/2-N04	PH 04-G02	PH 08-G02	PH 10-G04
PH 04-02	PH 08-02	PH 12-02	PH 3/16-N02	PH 5/16-N03		PH 06-G01	PH 08-G03	PH 12-G02
PH 06-M5	PH 08-03	PH 12-03	PH 3/16-N03	PH 3/8-N02		PH 06-G02	PH 08-G04	PH 12-G03
PH 06-01	PH 08-04	PH 12-04	PH 1/4-N01	PH 3/8-N03		PH 06-G03	PH 10-G01	PH 12-G04
PH 06-02	PH 10-02		PH 1/4-N02	PH 3/8-N04		PH 06-G04	PH 10-G02	

PHF-G



订货数据 Ordering data								
Tube(Metric)-Thread(R)			Tube(Inch)-Thread(NPT)			Tube(Metric)-Thread(G)		
PHF 04-M5	PHF 06-03	PHF 10-03	PHF 5/32-N01	PHF 5/16-N01	PHF 3/8-N04	PHF 04-G01	PHF 08-G01	PHF 10-G03
PHF 04-01	PHF 08-01	PHF 10-04	PHF 3/16-N01	PHF 5/16-N02	PHF 1/2-N02	PHF 04-G02	PHF 08-G02	PHF 10-G04
PHF 04-02	PHF 08-02	PHF 12-02	PHF 3/16-N02	PHF 5/16-N03	PHF 1/2-N03	PHF 06-G01	PHF 08-G03	PHF 12-G02
PHF 06-M5	PHF 08-03	PHF 12-03	PHF 1/4-N01	PHF 5/16-N04	PHF 1/2-N04	PHF 06-G02	PHF 08-G04	PHF 12-G03
PHF 06-01	PHF 08-04	PHF 12-04	PHF 1/4-N02	PHF 3/8-N02		PHF 06-G03	PHF 10-G01	PHF 12-G04
PHF 06-02	PHF 10-02		PHF 1/4-N03	PHF 3/8-N03		PHF 06-G04	PHF 10-G02	

PHT-G(2)



订货数据 Ordering data					
Tube(Metric)-Thread(R)			Tube(Metric)-Thread(G)		
PHT 04-01(2)	PHT 08-02(2)	PHT 12-02(2)	PHT4-G01(2)	PHT8-G01(2)	PHT10-G03(2)
PHT 04-02(2)	PHT 08-03(2)	PHT 12-03(2)	PHT6-G01(2)	PHT8-G02(2)	PHT10-G04(2)
PHT 06-01(2)	PHT 08-04(2)		PHT6-G02(2)	PHT8-G03(2)	PHT12-G02(2)
PHT 06-02(2)	PHT 10-02(2)		PHT6-G03(2)	PHT8-G04(2)	PHT12-G03(2)
PHT 06-03(2)	PHT 10-03(2)		PHT6-G04(2)	PHT10-G01(2)	
PHT 08-01(2)	PHT 10-04(2)			PHT10-G02(2)	

接头 One-touch fitting / Couplers

订货数据 Ordering data

FORWARD

PYJ



订货数据 Ordering data						
Tube(Metric)			Tube(Inch)			
PYJ 04	PYJ 12	PYJ 12-10	PYJ 5/32	PYJ 3/8	PYJ 3/8-5/16	
PYJ 06	PYJ 06-04		PYJ 3/16	PYJ 1/2	PYJ 1/2-3/8	
PYJ 08	PYJ 08-06		PYJ 1/4	PYJ 1/4-5/32		
PYJ 10	PYJ 10-08		PYJ 5/16	PYJ 5/16-1/4		

PGJ



订货数据 Ordering data						
Tube(Metric)			Tube(Inch)			
PGJ 06-04	PGJ 10-08	PGJ 1/4-5/32	PGJ 3/8-5/16			
PGJ 08-04	PGJ 12-06	PGJ 5/16-5/32	PGJ 1/2-1/4			
PGJ 08-06	PGJ 12-08	PGJ 5/16-1/4	PGJ 1/2-5/16			
PGJ 10-06	PGJ 12-10	PGJ 3/8-1/4	PGJ 1/2-3/8			

PLJ



订货数据 Ordering data						
Tube(Metric)			Tube(Inch)			
PLJ 04	PLJ 12	PLJ 12-10	PLJ 5/32	PLJ 3/8	PLJ 5/16-1/4	
PLJ 06	PLJ 06-04		PLJ 3/16	PLJ 1/2	PLJ 3/8-5/16	
PLJ 08	PLJ 08-06		PLJ 1/4	PLJ 3/16-5/32	PLJ 1/2-3/8	
PLJ 10	PLJ 10-08		PLJ 5/16	PLJ 1/4-5/32		

BA



订货数据 Ordering data						
BA-01	BA-02	BA-03	BA-04	BA-02-01	BA-03-02	

BB



订货数据 Ordering data						
BB-01-01	BB-01-02	BB-01-03	BB-02-02	BB-02-03	BB-02-04	
BB-03-03	BB-03-04	BB-04-04				

BD



订货数据 Ordering data						
BD-01-02	BD-01-03	BD-01-04	BD-02-03	BD-02-04	BD-03-04	

BZ



订货数据 Ordering data						
BZ-1	BZ-2	BZ-3	BZ-4			

节流阀 Speed controllers , 手滑阀 Hand slide valves / HSV

订货数据 Ordering data

FORWARD

NSC-G



订货数据 Ordering data								
Tube(Metric)–Thread(R)			Tube(Inch)–Thread(NPT)			Tube(Metric)–Thread(G)		
NSC 04-M5	NSC 06-04	NSC 10-03	NSC 5/32-N01	NSC 5/16-N02	NSC 1/2-N04	NSC 04-G01	NSC 08-G02	NSC 12-G02
NSC 04-01	NSC 08-01	NSC 10-04	NSC 3/16-N01	NSC 5/16-N03		NSC 04-G02	NSC 08-G03	NSC 12-G03
NSC 04-02	NSC 08-02	NSC 12-02	NSC 3/16-N02	NSC 5/16-N04		NSC 06-G01	NSC 08-G04	NSC 12-G04
NSC 06-M5	NSC 08-03	NSC 12-03	NSC 1/4-N01	NSC 3/8-N02		NSC 06-G02	NSC 10-G01	
NSC 06-01	NSC 08-04	NSC 12-04	NSC 1/4-N02	NSC 3/8-N03		NSC 06-G03	NSC 10-G02	
NSC 06-02	NSC 10-01		NSC 1/4-N03	NSC 3/8-N04		NSC 06-G04	NSC 10-G03	
NSC 06-03	NSC 10-02		NSC 5/16-N01	NSC 1/2-N03		NSC 08-G01	NSC 10-G04	

NSF



订货数据 Ordering data						
Tube(Metric)			Tube(Inch)			
NSF 04	NSF 12		NSF 5/32	NSF 3/8		
NSF 06			NSF 3/16	NSF 1/2		
NSF 08			NSF 1/4			
NSF 10			NSF 5/16			

HSV



HSV - 1/4 - SS	
型号 Type	手滑阀 Hand slide valve
接管口径 Connection	
1/8	1/8
1/4	1/4
3/8	3/8
1/2	1/2
3/4	3/4
1	1
安装形式 Dovt thread	
	标准型 Standard
SS	双外牙型 Double male thread
FF	双内牙型 Double female thread
SF	外内牙型 Male and female thread

其它 Else

订货数据 Ordering data

FORWARD

BSLM



订货数据 Ordering data						
BSLM-M5	BSLM-01	BSLM-02	BSLM-03	BSLM-04	BSLM-06	BSLM-10

PSL



订货数据 Ordering data			
PSL-01	PSL-02	PSL-03	PSL-04

PSU



订货数据 Ordering data				
PSU-M5	PSU-01	PSU-02	PSU-03	PSU-04

AG



AG - B	
型号 Type	
AG	
颜色种类 Color type	
B	黑色 Black
BL	蓝色 Blue
Y	黄色 Yellow

TUBE CUT



TUBE CUT - B	
型号 Type	
TUBE CUT	
颜色种类 Color type	
B	黑色 Black
BL	蓝色 Blue
R	红色 Red

标准气液增压缸 Standard boosting cylinder / HPN

工作原理 Working principle

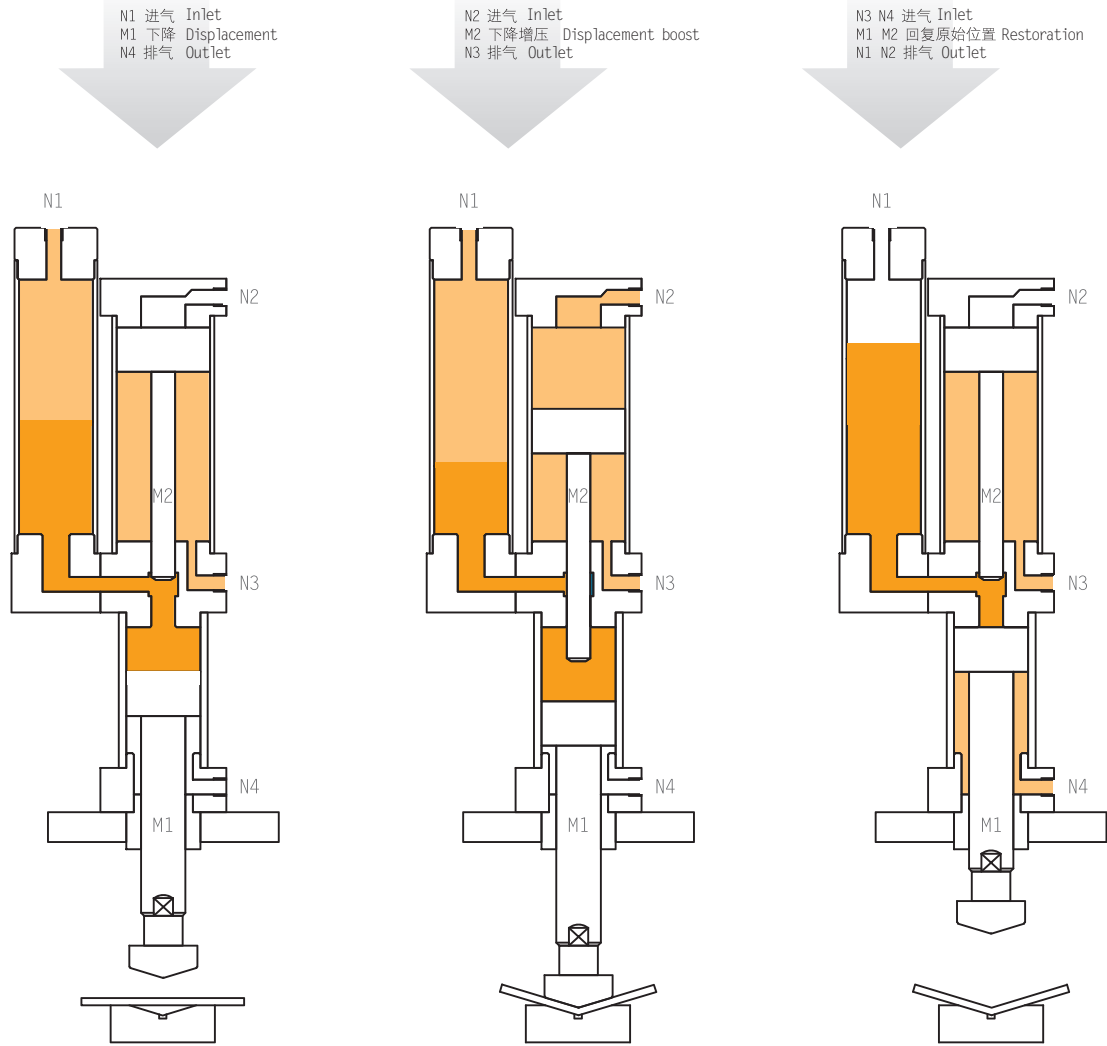


HPN 系列气液增压缸，使用纯气压为动力，利用前后大小活塞截面积之比例，将低压空气转换成高压油，输出增压比可达25:1左右，主要用于冲压，铆接，弯曲等冲压作业处。

HPN series of gas-liquid boosting cylinders are mainly used for stamping,rivets,bending,and stamping operations,which using pure pressure air as a driven force,using front and rear pistons sectional area ratio,to make the low pressure air into the high oil pressure.The output ratio will be up to 25:1 ro so.

使用说明

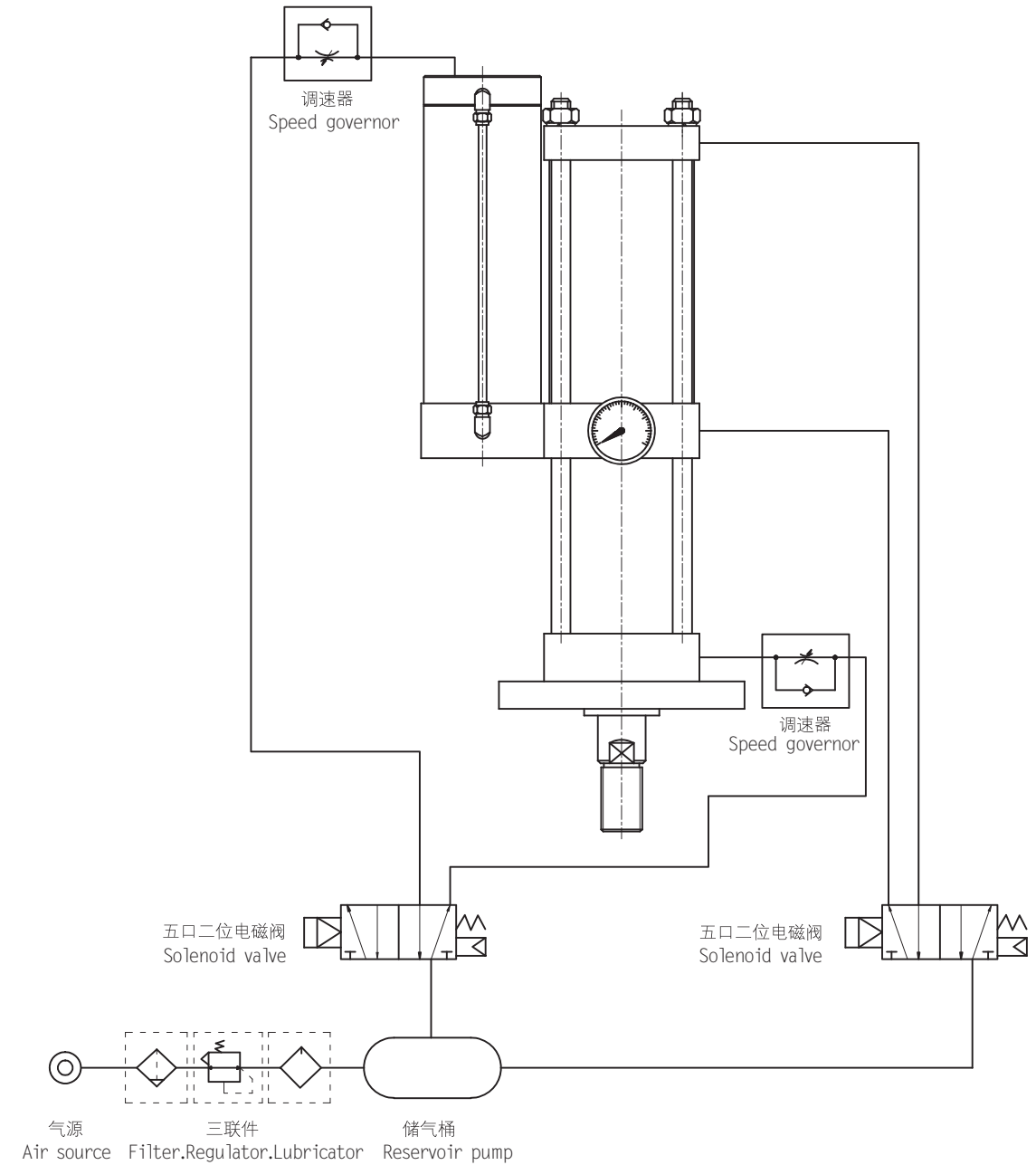
Step 1: 预压 Pre-pressurize	Step 2: 增压 Boost	Step 3: 回复 Restoration
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压缩空气 Compressed
液压油 Hydraulic oil

标准气液增压缸 Standard boosting cylinder / HPN

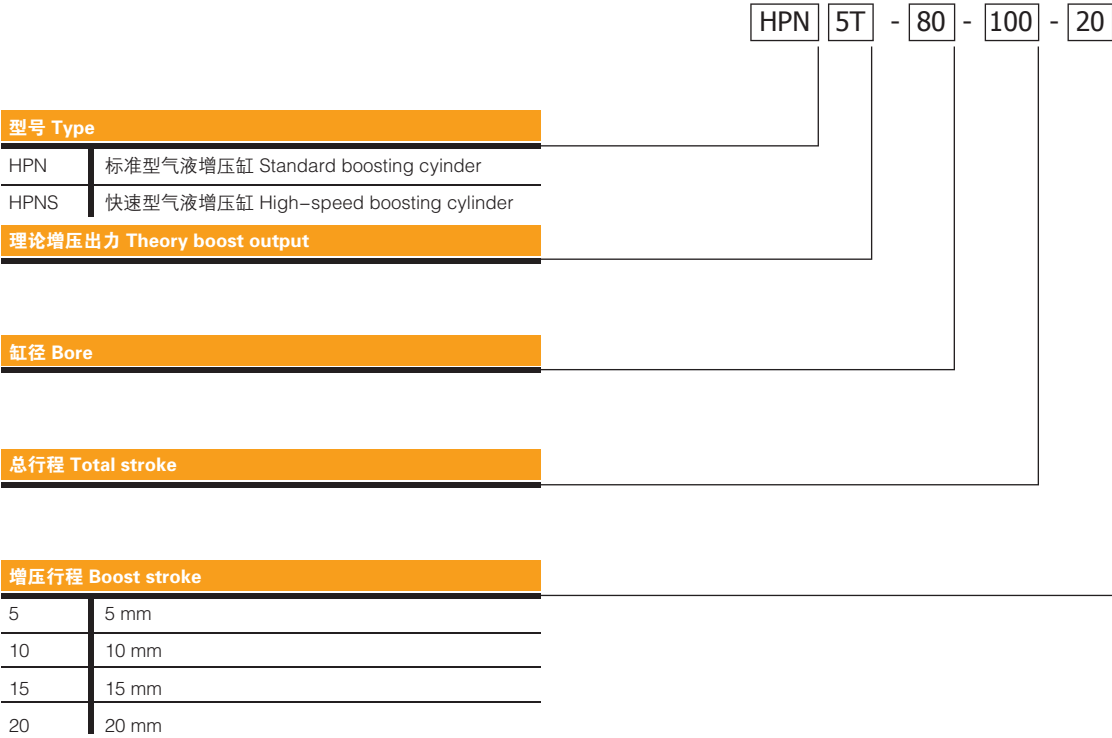
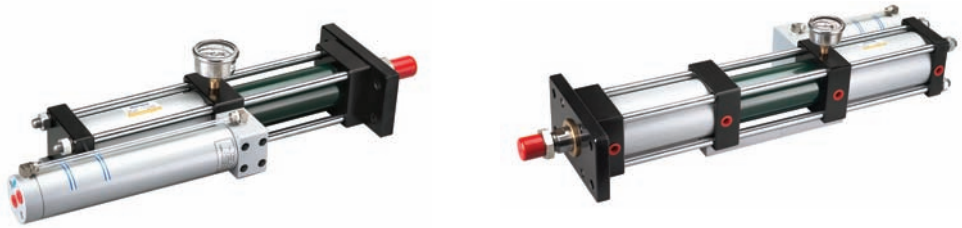
工作原理 Working principle



气液增压缸 Boosting cylinder / HPN / HPNS

型号代码 Type codes

FORWARD



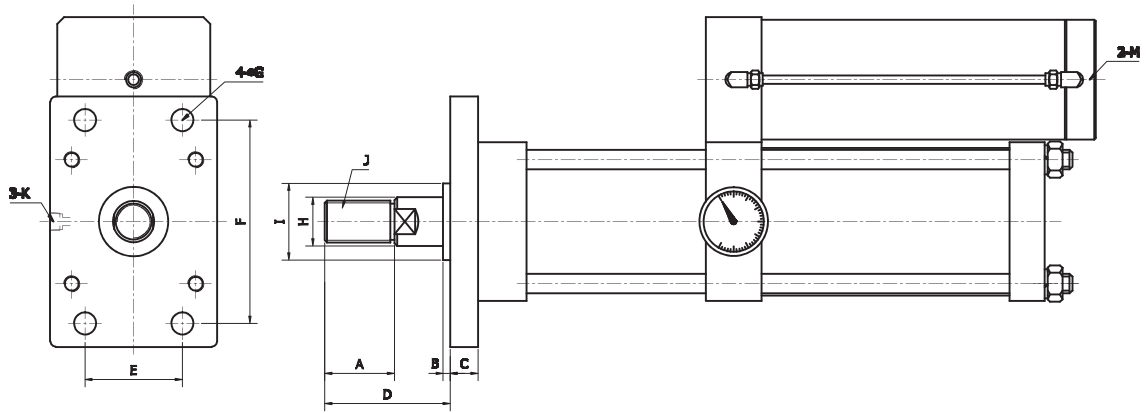
气液增压缸 Boosting cylinder / HPN / HPNS

技术参数 Technical data

FORWARD

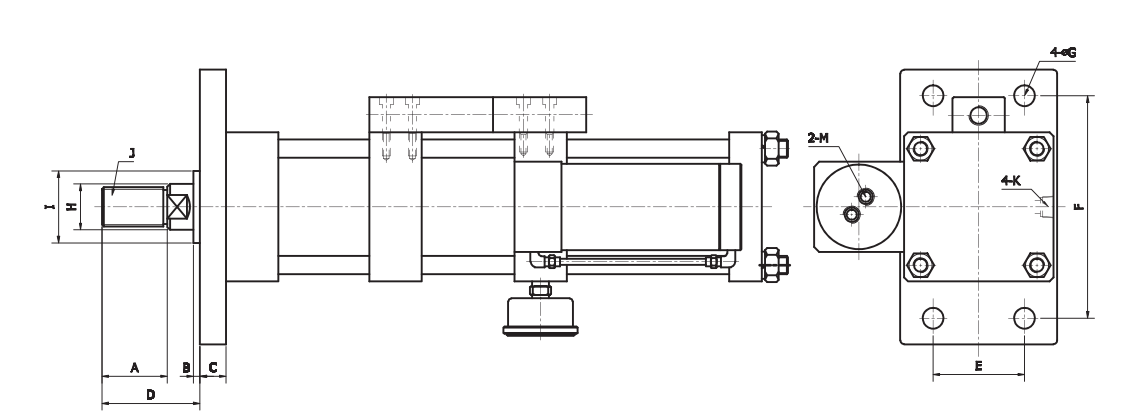
主要技术参数 General technical data		
缸径 Bore (mm) Ø	HPN	HPNS
作动压力 Operation pressure	4~7 KG/CM ₂ 过滤后之干燥压缩空气	
动作形式 Action form	双动 Double acting	
循环油 Fuel oil	ISOVG68	ISOVG32
温度范围 Temperature range	5~80° C (其余工作温度须定制 Other temperature should be customized)	
操作速度 Piston speed	50~700mm/s	
油缸保证耐压 Oil proof pressure	210 bar	
气缸保证耐压 Air cylinder proof pressure	15 bar	
行程公差 Stroke tolerance	+ 1.0MM	
	0	
工作频率 Working frequency	10次以上/MIN 10 times/min	

HPN 尺寸图 Dimensions												
吨位 Tons	A	B	C	D	I	H	E	F	G	J	K	M
1T	50	5	20	75	Ø50	Ø30	50	120	12	M26*1.5	PT1/4	PT1/4
3T	50	5	20	75	Ø55	Ø35	65	150	14	M30*1.5	PT3/8	PT3/8
5T	50	5	25	90	Ø55	Ø35	70	170	16	M30*1.5	PT3/8	PT3/8
10T	55	5	30	90	Ø65	Ø45	80	200	20	M40*2.0	PT1/2	PT3/8
13T	55	5	30	90	Ø65	Ø45	80	200	20	M40*2.0	PT1/2	PT3/8
15T	55	5	30	90	Ø80	Ø60	120	250	25	M50*2.0	PT1/2	PT3/8
20T	55	5	30	90	Ø80	Ø60	120	250	25	M50*2.0	PT1/2	PT3/8
30T	55	5	35	90	Ø100	Ø80	140	290	30	M63*2.0	PT3/4	PT1/2
40T	55	5	40	90	Ø100	Ø80	160	320	35	M63*2.0	PT3/4	PT1/2



理论出力 Theory output									
工作压力 Working pressure		4KG/CM ²		5KG/CM ²		6KG/CM ²		7KG/CM ²	
缸径 Bore	吨位 Tons	增压出力KG Booster output	回程拉力KG Return thrust	增压出力KG Booster output	回程拉力KG Return thrust	增压出力KG Booster output	回程拉力KG Return thrust	增压出力KG Booster output	回程拉力KG Return thrust
Ø50	1T	1200	50	1500	62	1800	74	2100	86
Ø63	3T	2000	80	2500	100	3000	120	3500	140
Ø80	5T	4000	160	5000	200	6000	240	7000	280
Ø100	10T	6240	240	7800	300	9360	360	10920	420
Ø100	13T	7840	240	9800	300	11760	360	13720	420
Ø125	15T	10240	376	12800	470	15360	564	17920	658
Ø125	20T	13920	376	17400	470	20880	564	24360	658
Ø160	30T	21200	600	26500	750	31800	900	37100	1050
Ø180	40T	28180	816	35225	1020	42270	1224	49315	1428

HPNS 尺寸图 Dimensions												
吨位 Tons	A	B	C	D	I	H	E	F	G	J	K	M
1T	50	5	20	75	Ø50	Ø30	50	120	12	M26*1.5	PT1/4	PT3/8
3T	50	5	20	75	Ø55	Ø35	65	150	14	M30*1.5	PT3/8	PT3/8
5T	50	5	25	75	Ø55	Ø35	70	170	16	M30*1.5	PT3/8	PT3/8
10T	55	5	30	90	Ø65	Ø45	80	200	20	M40*2.0	PT1/2	PT3/8
13T	55	5	30	90	Ø65	Ø45	80	200	20	M40*2.0	PT1/2	PT3/8
15T	55	5	30	90	Ø80	Ø60	120	250	25	M50*2.0	PT1/2	PT3/8
20T	55	5	30	90	Ø80	Ø60	120	250	25	M50*2.0	PT1/2	PT3/8
30T	55	5	35	90	Ø100	Ø80	140	290	30	M63*2.0	PT3/4	PT3/8
40T	55	5	40	90	Ø100	Ø80	160	320	35	M63*2.0	PT3/4	PT3/8

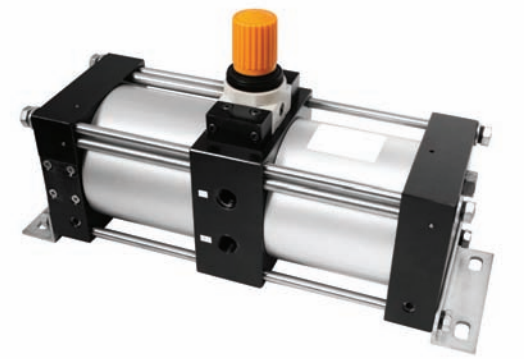


理论出力 Theory output									
工作压力 Working pressure		4KG/CM ²		5KG/CM ²		6KG/CM ²		7KG/CM ²	
缸径 Bore	吨位 Tons	增压出力KG Booster output	回程拉力KG Return thrust	增压出力KG Booster output	回程拉力KG Return thrust	增压出力KG Booster output	回程拉力KG Return thrust	增压出力KG Booster output	回程拉力KG Return thrust
Ø50	1T	1200	96	1500	120	1800	144	2100	168
Ø63	3T	2000	160	2500	200	3000	240	3500	280
Ø80	5T	4000	160	5000	200	6000	240	7000	280
Ø100	10T	6240	240	7800	300	9360	360	10920	420
Ø100	13T	7840	240	9800	300	11760	360	13720	420
Ø125	15T	10240	376	12800	470	15360	564	17920	658
Ø125	20T	13920	376	17400	470	20880	564	24360	658
Ø160	30T	21200	600	26500	750	31800	900	37100	1050
Ø180	40T	28180	816	35225	1020	42270	1224	49315	1428

空气增压泵 Booster pump / FHBA

型号代码 Type codes

FORWARD



FHBA空气增压泵采用单气控非平衡气体分配阀来实现泵的往复运动。专为解决一般压缩空气的压力过低而专门设计的产品，具有体积小、寿命长、稳定性高，无需用电，维护简单等特点。

FHBA booster pump use single air control non-equilibrium gas distribution valve to achieve reciprocating motion for pump.Designed to solve the problem of low pressure of compressed air.With the features of small size,long life,high stability,no electricity,easy maintain and etc.

型号 Type	
FHBA	空气增压泵 Booster pump
缸径 Bore	
增压比 Boost ratio	

FHBA - 100 - 02

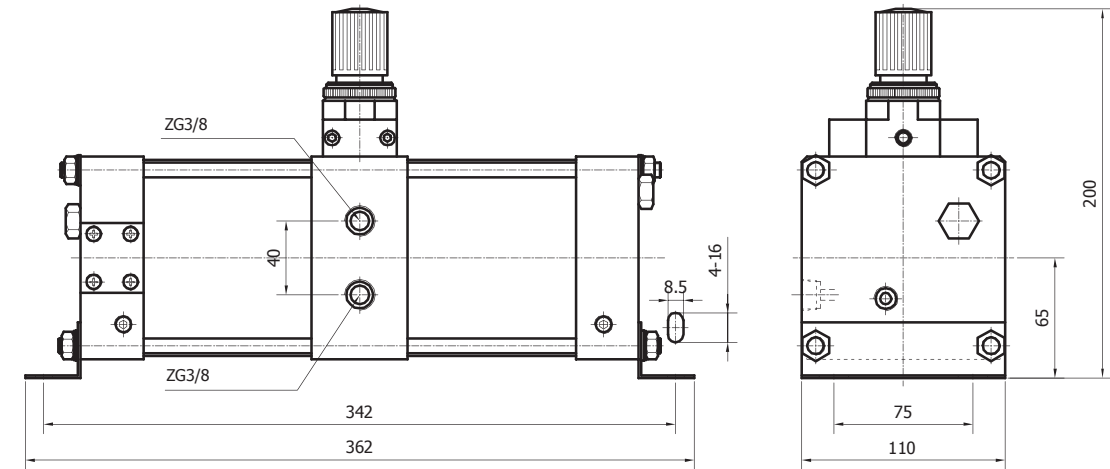
空气增压泵 Booster pump / FHBA

技术参数 Technical data

FORWARD

主要技术参数 General technical data		
缸径 Bore (mm) Ø	FHBA-100-02	FHBA-100-04
增压比 Boost ratio	2: 1	4: 1
驱动压力 Driven pressure	2-8 bar	2-8 bar
最大输出压力 Max. output pressure	16 bar	32 bar
每行程排量 Displacement volume per stroke	942 cc	295 cc
工作介质 Medium	压缩空气 Compressed air	
连接尺寸 Connection	G3/8	

尺寸图 Dimensions



空气增压泵 Booster pump / FHBD

型号代码 Type codes

FORWARD



- 1.到达预定压力后即自动停机，不再消耗多余的能量和产生热量。
- 2.不产生热量，不会有火花和火焰危险，安全防爆。
- 3.输出压力高，满足大多数高压要求。
- 4.轻便可靠，易于维护，坚固耐用。
- 5.可以连续起停，不受限制，并且无不良影响。
- 6.动力源为压缩空气，不需要电源。

- 1.FHBD booster pump will stop automaticlly when it reaches the predetermined pressure,no longer consuming excess energy and producing heat.
- 2.No heat,sparks and frame,safety and explosion proof.
- 3.Outlet pressure is high,to meet most of the high-pressure requirements.
- 4.Lightweight and reliable,easy to maintain,sturdy and durable.
- 5.Can be a continuous start-stop,unlimited,and no adverse effects.
- 6.Power source is compressed air,instead of electric power.

FHBD - 12 - 06 - L1 - A

型号 Type

FHBD | 空气增压泵 Booster pump

缸径 Bore

12	125
16	160

增压比 Boost ratio

04	4:1
06	6:1
09	9:1
10	10:1
15	15:1
16	16:1
25	25:1
39	39:1
40	40:1
60	60:1

类型 Specification

	单头增压泵 Single acting
L1	双头增压泵 Double acting
L2	双头二级增压泵 Double acting,two stages

介质 Medium

A	空气 Air
N	氮气 Nitrogen
H	氢气 Hydrogen
O	氧气 Oxygen
T	其它气体 Other gases

空气增压泵 Booster pump / FHBD

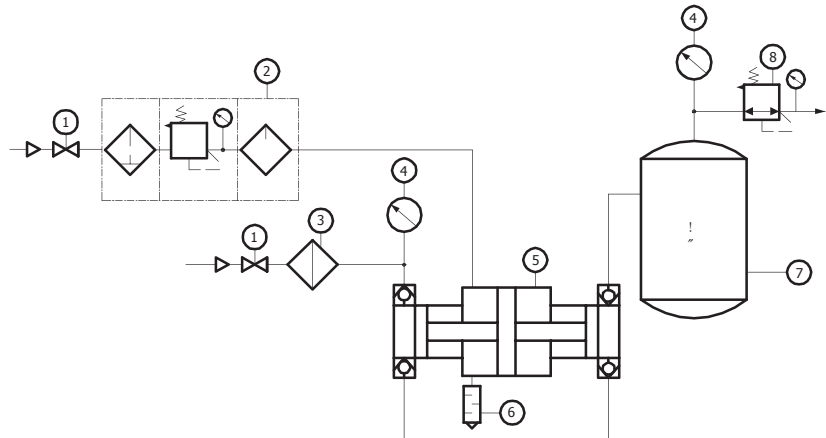
技术参数 Technical data

FORWARD

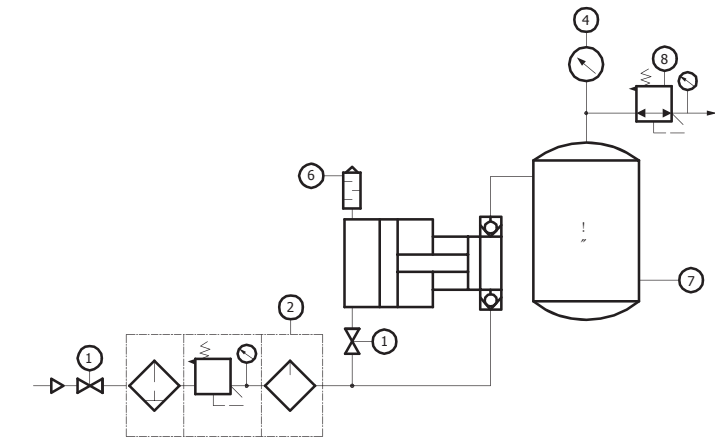
典型安装回路图 Typical system diagram

序号 NO.	名称 Item	序号 NO.	名称 Item
1	气源开关 Switch	5	气体增压泵 Booster pump
2	气动三联件 F.R.L	6	消声器 Silencer
3	过滤器 Filter	7	储气罐 Reservoir pump
4	气压表 Pressure gauge	8	高压调压阀 High-pressure regulator

回路图 System diagram 1



回路图 System diagram 2



空气增压泵 Booster pump / FHBD12

技术参数 Technical data

FORWARD

FHBD12系列气体增压泵采用单气控非平衡气体分配阀来实现泵的往复运动。采用气压驱动，可随停随动。非常适用于各种高压气体测试或是作为简单的高压气体源。本系列驱动活塞直径为Φ125，最大驱动气压10bar，为了保证泵的寿命，建议使用气压≤8bar。增压泵自带有空气冷却装置，无需其它冷却泵。

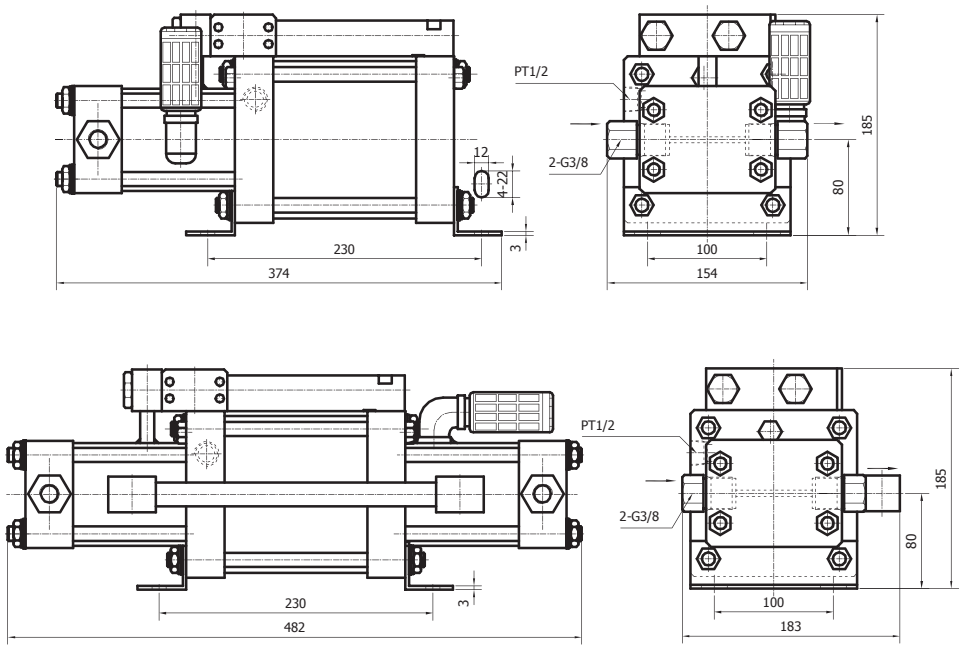
FHBD12 series gas booster pump use single air control non-equilibrium gas distribution valve to achieve reciprocating motion for pump.Pneumatic drive can be stopped with the servo.Ideally suited for a variety of high-pressure gas tests or as a high-pressure gas source.The piston diameter is Φ125 and the max. driven gas pressure is 10bar,to ensure pump’s life,suggestion pressure is less than 8bar.This pump comes with air-cooling device,no other cooling pump.

FHBD12 主要技术参数 General technical data						
型号 Model	FHBD1204	FHBD1206	FHBD1209	FHBD1215	FHBD1225	FHBD1239
增压比 Boost ratio	4:1	6:1	9:1	15:1	25:1	39:1
出口压力计算公式 Formula to calculate gas outlet pressure	4Pa	6Pa	9Pa	15Pa	25Pa	39Pa
最小气体入口压力 (bar) Min. gas inlet pressure	0	1.7	3.4	7.5	12	20
最大气体出口压力 (bar) Max. gas outlet pressure	32	48	72	120	200	312
每行程排量 (cc) Displacement volume per stroke	249	157	100	64	39	25

* Pa: 驱动压力 Driven pressure

* 双头增压泵与双头二级增压泵每行程排量是单头增压泵的2倍。双头二级增压泵主要应用于初始气压较低且要求输出压力较高的场合。
Double acting booster pump and double acting two stages one are twice compare with single acting one.Double acting two stages booster pump mainly used in an occasion of low initial gas pressure and high outlet gas pressure.

尺寸图 Dimensions



空气增压泵 Booster pump / FHBD16

技术参数 Technical data

FORWARD

FHBD16系列气体增压泵采用单气控非平衡气体分配阀来实现泵的往复运动。采用气压驱动，可随停随动。非常适用于各种高压气体测试或是作为简单的高压气体源。本系列驱动活塞直径为Φ160，最大驱动气压10bar，为了保证泵的寿命，建议使用气压≤8bar。增压泵自带有空气冷却装置，无需其它冷却泵。

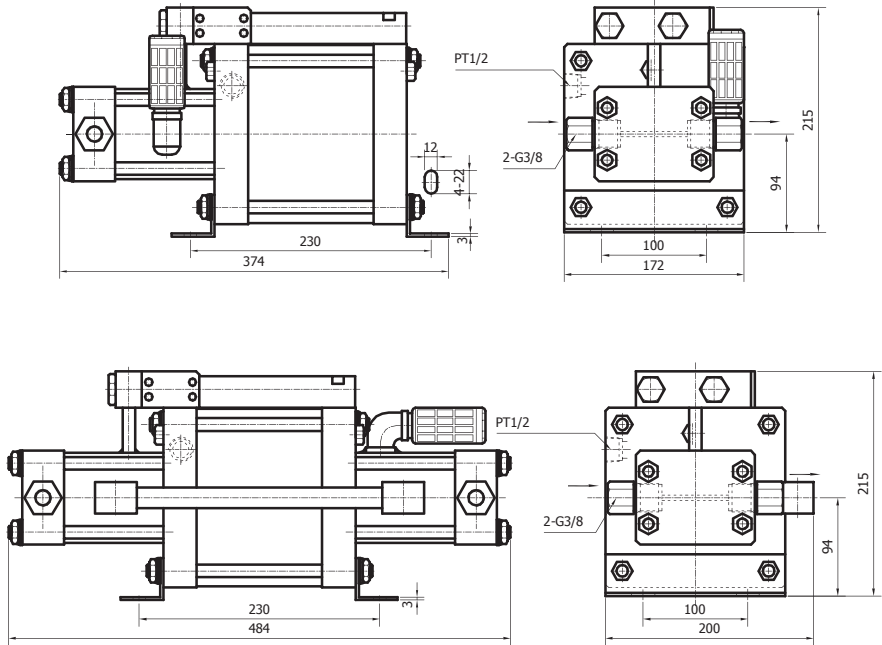
FHBD16 series gas booster pump use single air control non-equilibrium gas distribution valve to achieve reciprocating motion for pump.Pneumatic drive can be stopped with the servo.Ideally suited for a variety of high-pressure gas tests or as a high-pressure gas source.The piston diameter is Φ160 and the max. driven gas pressure is 10bar,to ensure pump’s life,suggestion pressure is less than 8bar.This pump comes with air-cooling device,no other cooling pump.

FHBD16 主要技术参数 General technical data						
型号 Model	FHBD1606	FHBD1610	FHBD1616	FHBD1625	FHBD1640	FHBD1660
增压比 Boost ratio	6:1	10:1	16:1	25:1	40:1	60:1
出口压力计算公式 Formula to calculate gas outlet pressure	6Pa	10Pa	16Pa	25Pa	40Pa	60Pa
最小气体入口压力 (bar) Min. gas inlet pressure	0	1.7	3.4	7.5	12	20
最大气体出口压力 (bar) Max. gas outlet pressure	48	80	128	200	320	480
每行程排量 (cc) Displacement volume per stroke	249	157	100	64	39	25

* Pa: 驱动压力 Driven pressure

* 双头增压泵与双头二级增压泵每行程排量是单头增压泵的2倍。双头二级增压泵主要应用于初始气压较低且要求输出压力较高的场合。
Double acting booster pump and double acting two stages one are twice compare with single acting one.Double acting two stages booster pump mainly used in an occasion of low initial gas pressure and high outlet gas pressure.

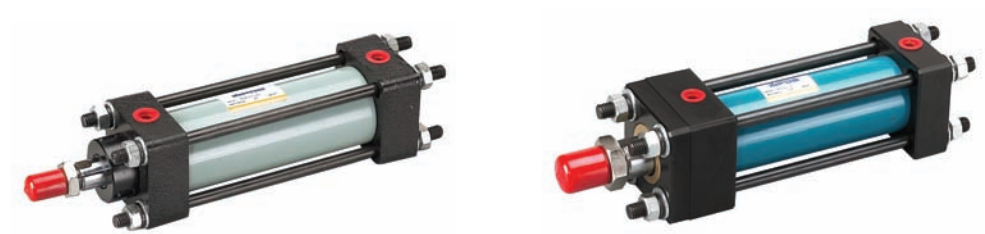
尺寸图 Dimensions



油压缸 Hydraulic cylinder / MOB , HOB

型号代码 Type codes

FORWARD



MOB - 80 - 100 - FA - Y - KN - L1

基本功能 Basic function

MOB

轻型油压缸 Light hydraulic cylinder

HOB

重型油压缸 Heavy hydraulic cylinder

缸径 Bore

80

100

行程 Stroke

100

安装形式 Mounting type

FA

前法兰型 Front flange

FB

后法兰型 Rear flange

CA

单耳型 Single earring

CB

双耳型 Double earring

TC

中间摆动型

LB

前后脚架型

接头 Connector

Y

Y型接头 Y-type connector

T

T型接头 T-type connector

磁石代号 Stroker

不附磁石 No magnetic

KN

附磁石 With magnetic

派生型 Various

标准型 Standard

L

行程可调型 Adjustable stroke

L1

双出轴型 Double rods

油压缸 Hydraulic cylinder / MOB , HOB

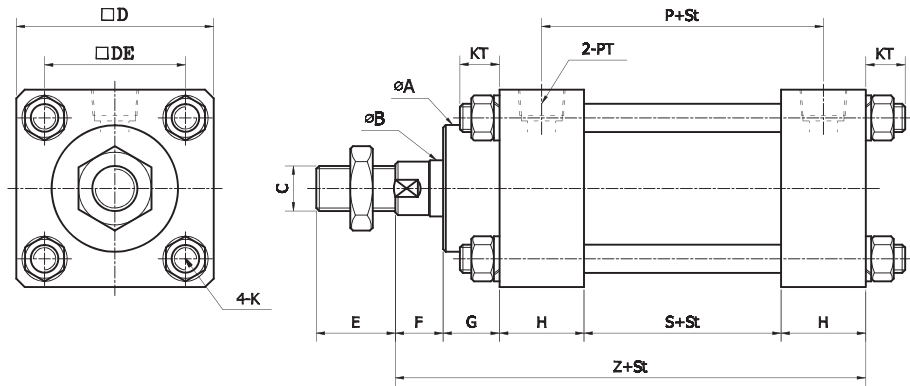
技术参数 Technical data

FORWARD

MOB 主要技术参数 General technical data							
缸径 Bore (mm) Ø	30	40	50	63	80	100	125
最大行程 Max.stroke	1 200		2000			3000	
额定压力 Rated pressure	70kgf/cm ²						
耐压力 Proof pressure	1 40kgf/cm ²						
最低启动压力 Min.start-up pressure	3kgf/cm ²						
使用温度范围 Temperature range	- 10~ + 80° C (周围温度及油温 The surrounding temperature oil)						
使用介质 Medium	液压油 Hydraulic oil						

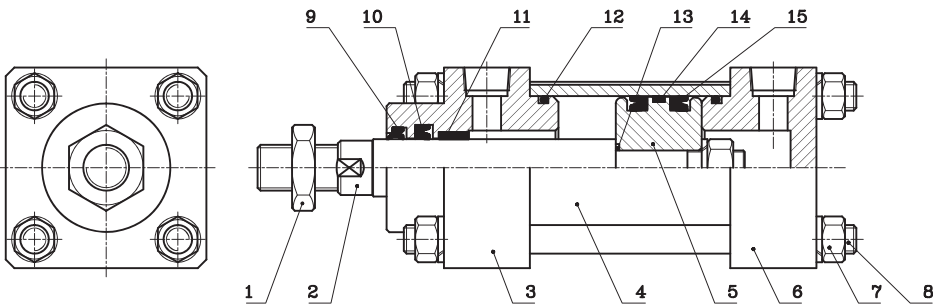
HOB 主要技术参数 General technical data											
缸径 Bore (mm) Ø	40	50	63	80	100	125	150	160	180	200	250
最大行程 Max.stroke	1200	2000			3000						
额定压力 Rated pressure	140kgf/cm ²										
耐压力 Proof pressure	210kgf/cm ²										
最低启动压力 Min.start-up pressure	3kgf/cm ²										
使用温度范围 Temperature range	- 10~ + 80° C (周围温度及油温 The surrounding temperature oil)										
使用介质 Medium	液压油 Hydraulic oil										

MOB 尺寸图 Dimensions



缸径 Bore(mm) Ø	A	B	C	D	DE	E	F	G	H	K	KT	P	PT	S	Z
30	30	16	M14*1.5	52	34	28	10	15	25	M8	20	75	PT1/4	50	125
40	40	20	M16*1.5	64	45	28	17	20	30	M8	20	80	PT3/8	50	147
50	45	20	M16*1.5	70	50	28	17	20	30	M10	20	80	PT3/8	50	147
63	55	25	M22*1.5	85	60	40	20	30	31	M10	20	81	PT3/8	50	162
80	62	32	M26*1.5	106	74	40	20	32	37	M12	25	92	PT1/2	55	181
100	78	40	M30*1.5	122	89	45	20	32	37	M14	25	110	PT1/2	80	206
125	85	50	M40*2	147	110	55	36	30	41	M16	30	116	PT1/2	80	228

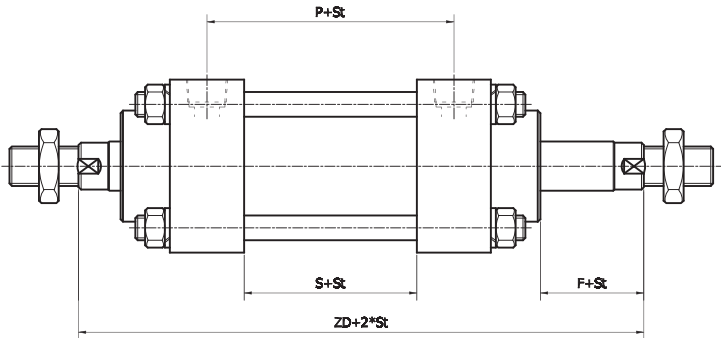
内部结构图 Inner structure



序号 NO.	名称 Item	序号 NO.	名称 Item	序号 NO.	名称 Item
1	轴头螺帽 Nut	6	后盖 Back cover	11	无油润滑轴承 Bushing
2	活塞杆 Piston rod	7	螺母 Tie-rod Nut	12	O型密封圈 O-ring
3	前盖 Front cover	8	拉杆 Tie-rod	13	O型密封圈 O-ring
4	缸筒 Barrel	9	防尘圈 Wiper seal	14	导向耐磨环 Wearing
5	活塞 Pilot body	10	轴用油封 Rod seal	15	活塞密封圈 Piston seal

派生型 Various

MOB-L1 双端活塞杆 Double rod



缸径 Bore(mm) Ø	P	S	F	ZD
30	75	50	10	150
40	80	50	17	184
50	80	50	17	184
63	81	50	20	212
80	92	55	20	233
100	110	80	20	258
125	116	80	36	294

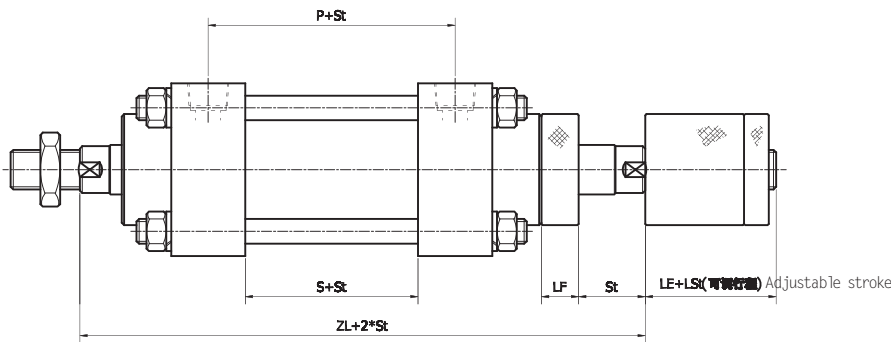
油压缸 Hydraulic cylinder / MOB

技术参数 Technical data

FORWARD

派生型 Various

MOB-L 可调活塞杆 Adjustable stroke



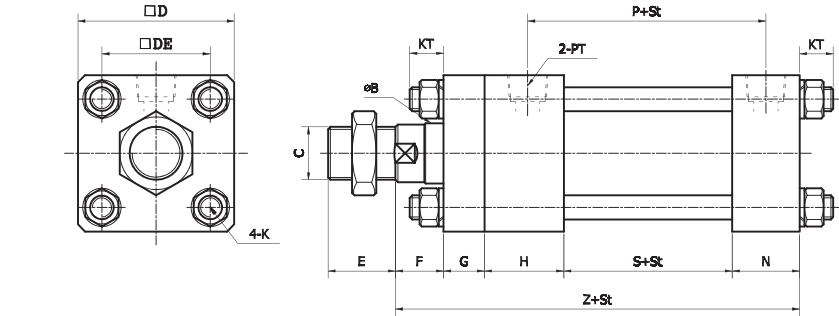
缸径 Bore(mm) Ø	P	S	ZL	LF	LE
30	75	50	150	10	35
40	80	50	182	15	35
50	80	50	182	15	45
63	81	50	212	20	45
80	92	55	233	20	55
100	110	80	258	20	55
125	116	80	283	25	60

油压缸 Hydraulic cylinder / HOB

技术参数 Technical data

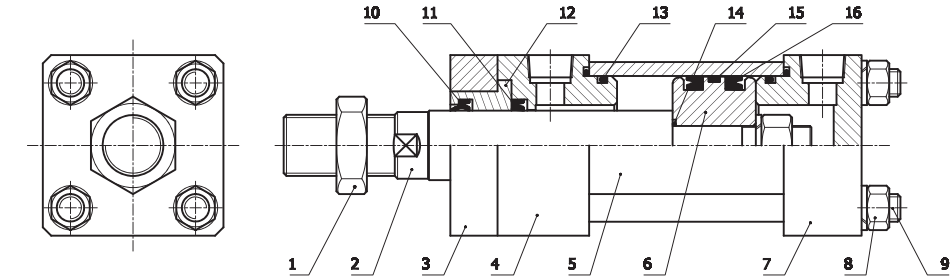
FORWARD

HOB 尺寸图 Dimensions



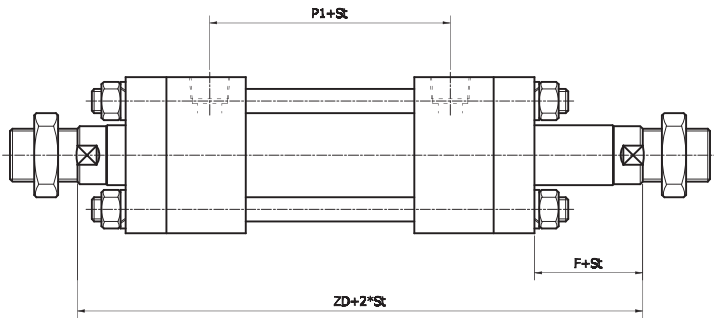
缸径 Bore(mm) Ø	HOB														
	B	C	D	DE	E	F	G	H	N	K	KT	PT	S	P	Z
40	25	M22*1.5	65	45	40	20	17	33	28	M10	25	PT3/8	50	78	148
50	30	M26*1.5	80	56	40	20	17	38	30	M12	25	PT3/8	55	86	160
63	35	M30*1.5	95	65	45	20	17	38	30	M14	30	PT3/8	55	86	160
80	40	M30*1.5	110	80	45	20	19	38	35	M16	35	PT1/2	74	107	186
100	50	M40*2	131	95	55	25	19	41	37	M18	40	PT1/2	84	122	206
125	60	M50*2	162	122	70	35	28	57	47	M22	50	PT3/4	84	129	251
150	80	M70*2	195	144	80	35	30	60	50	M27	60	PT3/4	90	138	265
160	80	M70*2	210	153	80	35	30	60	50	M27	60	PT3/4	90	138	265
180	100	M90*2	235	175	100	35	40	65	55	M27	60	PT1 "	120	170	315
200	100	M90*2	262	193	120	40	40	65	60	M33	70	PT1 "	120	172	325
250	125	M110*2	330	246	140	50	45	80	70	M39	70	PT1 "	140	200	385

内部结构图 Inner structure



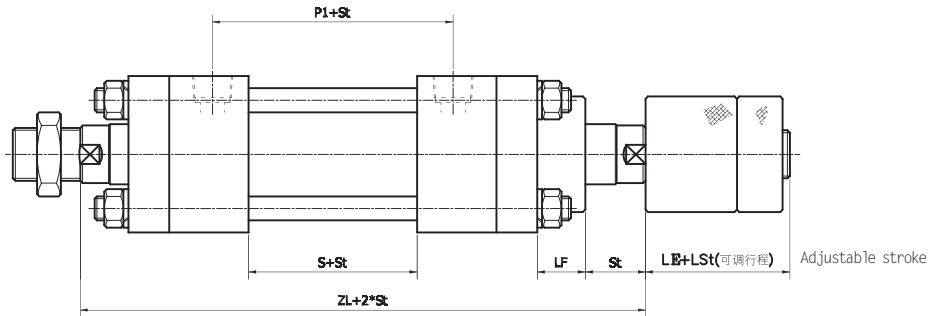
序号 NO.	名称 Item	序号 NO.	名称 Item	序号 NO.	名称 Item
1	轴头螺帽 Nut	7	后盖 Back cover	13	O型密封圈 O-ring
2	活塞杆 Piston rod	8	螺母 Tie-rod Nut	14	O型密封圈 O-ring
3	压板 Press plate	9	拉杆 Tie-rod	15	导向耐磨环 Wearing
4	前盖 Front cover	10	防尘圈 Wiper seal	16	活塞密封圈 Piston seal
5	缸筒 Barrel	11	轴用油封 Rod seal		
6	活塞 Pilot body	12	无油润活轴承 Bushing		

派生型 Various
HOB-L1 双端活塞杆 Double rod



缸径 Bore(mm) Ø	P1	ZD
40	78	190
50	87	205
63	87	205
80	106	228
100	122	254
125	128	324
150	138	340
160	138	340
180	170	400
200	170	410
250	200	490

派生型 Various
HOB-L 可调活塞杆 Adjustable stroke



缸径 Bore(mm) Ø	P1	ZL	LF	LE
40	78	190	45	20
50	87	205	55	20
63	87	205	55	20
80	106	228	60	20
100	122	254	65	25
125	128	314	70	25
150	138	330	75	25
160	138	—	—	—
180	170	—	—	—
200	170	—	—	—
250	200	—	—	—

油压缸 Hydraulic cylinder / MOB

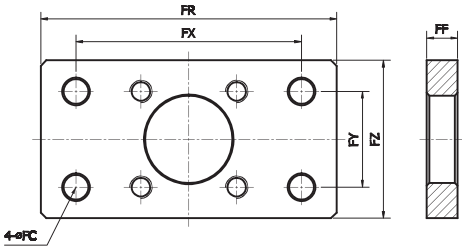
辅件 Accessories

FORWARD

MOB 安装辅件 Accessories

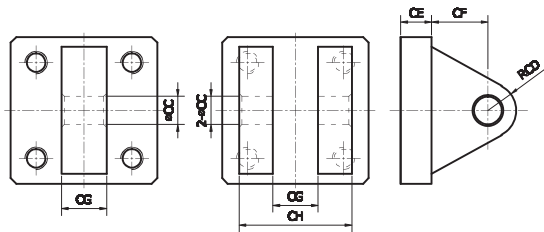
FA \ FB

缸径 Bore(mm) Ø	30	40	50	63	80	100	125
FC	9	12	12	14	14	16	18
FF	11	11	11	14	20	20	20
FX	80	93	93	117	152	158	184
FY	34	50	50	60	75	90	110
FR	105	115	115	140	180	200	225
FZ	56	72	72	90	105	125	153



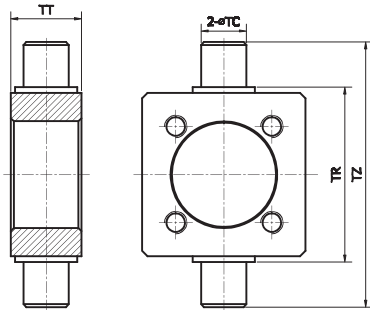
CA \ CB

缸径 Bore(mm) Ø	30	40	50	63	80	100	125
CC	10	12	12	20	30	35	35
CD	10	13	13	20	30	35	35
CE	11	11	12	15	18	18	18
CF	20	25	24	31	50	55	55
CG	16	22	22	30	30	35	35
CH	40	46	46	58	62	71	75



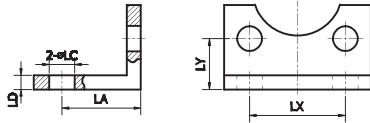
TC

缸径 Bore(mm) Ø	30	40	50	63	80	100	125
TC	16	18	20	25	28	30	32
TR	62	74	80	95	116	132	160
TT	25	25	28	32	35	38	40
TZ	94	114	130	159	180	212	260



LB

缸径 Bore(mm) Ø	30	40	50	63	80	100	125
LA	28	38	38	38	36	48	51
LC	9	9	11	11	13	16	18
LD	5	6	6	6	6	9	9
LY	18	22.5	21	23	23	33.5	32
LX	34	45	50	60	74	89	110



油压缸 Hydraulic cylinder / HOB

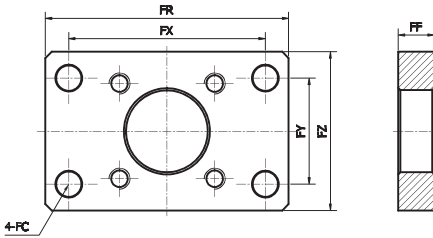
辅件 Accessories

FORWARD

HOB 安装辅件 Accessories

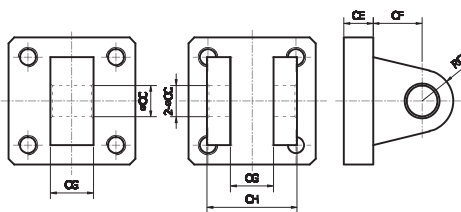
FA \ FB

缸径 Bore(mm) Ø	40	50	63	80	100	125	150	160	180	200	250
FC	12	13	14	18	20	24	28	28	35	35	40
FF	17	17	17	19	19	28	30	30	40	40	45
FX	93	110	126	152	180	222	260	260	315	355	410
FY	50	56	68	75	100	122	155	155	188	207	250
FR	115	150	155	190	220	280	310	310	375	425	510
FZ	75	85	100	120	140	170	206	220	250	272	340



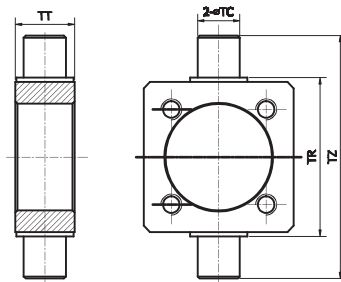
CA \ CB

缸径 Bore(mm) Ø	40	50	63	80	100	125	150	160	180	200	250
CC	16	20	25	30	35	50	60	60	80	90	100
CD	16	20	25	30	35	50	60	60	80	90	100
CE	15	15	18	18	25	35	35	40	40	45	45
CF	25	35	45	50	60	70	80	80	100	110	120
CG	22	22	30	35	40	55	60	60	80	90	100
CH	46	46	58	75	80	105	120	130	160	170	190



TC

缸径 Bore(mm) Ø	40	50	63	80	100	125	150	160	180	200	250
TC	20	25	32	32	40	50	60	60	80	90	100
TR	75	90	102	120	140	175	206	222	243	272	360
TT	28	33	40	43	53	58	73	73	98	108	120
TZ	115	140	166	184	220	275	326	342	403	452	560



LB

缸径 Bore(mm) Ø	40	50	63	80	100	125	150	160	180	200	
LA	37.5	42	44	63	66	80	80	90	90	95	
LC	11	14	16	18	20	24	28	32	35	35	
LD	6	8	8	13	15	15	20	20	20	25	
LY	23.5	26	29.5	36	45.5	53	53	58.5	62.5	73.5	
LX	45	56	65	80	100	122	144	155	175	193	

