

宁波太坦工业自动化有限公司
NINGBO TITAN INDUSTRIAL AUTOMATION CO.,LTD.

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NTA
太坦

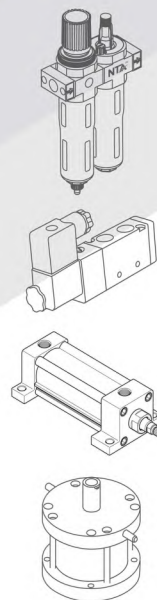
Expert in Pneumatic Power Transmission

选型手册/Selection Guide

NTA 太坦

PNEUMATIC

Expert in Pneumatic Power Transmission



AIR PREPARATION

DIRECTIONAL VALVE

PNEUMATIC CYLINDER

AIR BOOSTER REGULATOR

宁波太坦工业自动化有限公司
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TITAN INDUSTRIAL AUTOMATION

Expert in Pneumatic Power Transmission



太坦工业自动化 · 气动传动零部件专家



OUR NEW PLANT COVERS

9400m² office building

27600m² workshop

18676m² land area

ABOUT NTA

Company info——公司介绍

Pneumatic Technology Made in China

Headquartered in Ningbo city China, N.T.A.(TITAN) is one of a greatest pneumatic technology and engineering company providing innovative solutions for customers in industrial automation market, helping customers to realize maximize production, protect personnel and the environment while optimizing their energy and operating costs.

As a national leader in pneumatic technology, our 47 years of mechanical spare parts manufacturing and 26 years of pneumatic components manufacturing experience are an important basis for our flexibility, creativity and innovative skills to meet our customers' needs.



Management Team



Sales Team



Sales Team



High precision machining workshop



Die casting parts infiltration workshop



Pneumatic cylinder parts machining



Pneumatic cylinder parts machining



Die casting workshop



Robot spraying production line



Cylinder barrel cutting line



Spray paint oven



Mold developing workshop



Manual painting lines



Industrial tunnel oven



9 Automatic pneumatic tube manufacturing lines



Automatic pneumatic push in fitting assembly system



Hundreds of moulds



PU spring tube assembly



pneumatic cylinder assembly line



18 sets of Brother tapping centers



20 sets of Citizen Miyano CNC automatic lathe



Die casting workshop



Engineering



Testing



Quality Control



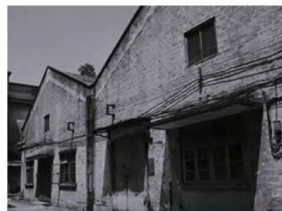
1972

In 1972 bought the first lathe started to make some simple tools with 2 workers



1980

In 1980's started to make gas cooker valve with 12 workers



1993

In 1993, Huajing pneumatic manufacturing factory was founded, started to manufacture pneumatic cylinder and pneumatic valve components, having 45 workers



2000

In 2000, Shengda Sunshine Pneumatic machinery was founded in the same year we started exporting pneumatic cylinder to other country



2002

In 2002, we moved into a new manufacturing base which covers a land area of 18,300 square meters and a structure area of 21,000 m²



2003

In 2003, company approved by ISO9001



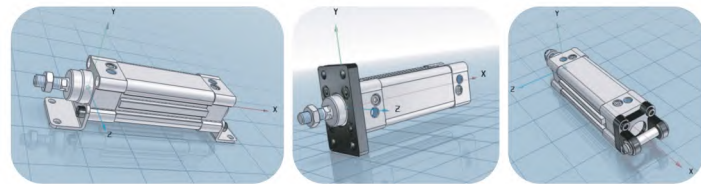
2012

In 2012 N.T.A was founded to develop international business having 200 workers



2021

We are looking forward the first 100 years
NTA moved into new plant
18,676 m² land area
37,000 m² building area
350 workers



Innovative, committed and reliable

To N.T.A(TITAN) , innovation isn't just a marketing phrase, it's the way we do business every day. Our sales team is committed to working with our customers to help define all the application

ISO 9001:2015 Certified to serve your automation needs

For over 47 years, N.T.A(TITAN) has partnered with customers to solve automation application challenges. Our manufacturing process are geared for efficiency and our team is focused on providing quality products with industry leading delivery schedules. Our quality commitment is working throughout our ISO 9001:2015 certified manufacturing plant. We are financially and strategically focused on helping you address growing competitive pressures: big enough to get the job done, small enough to care.

Testing center

N.T.A(TITAN) test center with all test requirements

Conducting efficient and safe testing, producing accurate test results

The N.T.A(TITAN) test center complies with all test requirements. Equipped with various machines and equipment, including the associated peripherals, the test center enables N.T.A(TITAN) to conduct efficient and safe testing, producing accurate test results.

Practical testing is important to ensure the optimal economic and technical design of the machines. This is particularly important for thermal engineering applications. The appropriate sizing and capacity in sorting technology also require the use of the test center.



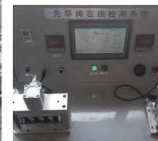
High-precision measuring projector



Hardness tester



High precision digital leaking testing center



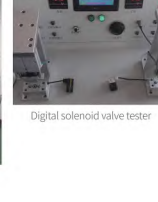
Digital pilot valve tester



Digital tensile tester



Digital bursting pressure tester



Digital solenoid valve tester



We developed a data collecting, intelligent analysis and lifetime testing integrated testing system together with Institute of Fluid Engineering, Zhejiang University

Asia

China South Korea Indonesia
Kuwait Malaysia Singapore Thailand Vietnam

Oceania

Australia

Europe

France Germany Ireland Poland
Russia United Kingdom Ukraine
Belgium Czech Republic Greece
Netherlands Portugal Spain

North America

Canada USA Mexico

South America

Argentina Brazil Ecuador



Our Distributors in China Mainland

Shanghai City, Beijing City, Tianjin City, Chongqing City
 Zhejiang Province: Ningbo City, Hangzhou City, Taizhou City
 Hei Longjiang Province: HA Erbing City, Da Qing City
 Jiao Ning Province: Shenyang City, Dalian City
 Jilin Province: Changchun City
 Henan Province: Zhengzhou City
 Hebei Province: Shijiazhuang City
 Shandong Province: Jinan City, Qingdao City
 Jiangsu Province: Nanjing City, Wuxi City, Suzhou City, Taizhou City
 Anhui Province: Hefei City
 Fujian Province: Fuzhou City, Xiamen City, Putian City
 Hunan Province: Changsha City
 Hubei Province: Wuhan City, Xiangfan City
 Guangdong Province: Guangzhou City, Shenzhen City, Dongguan City

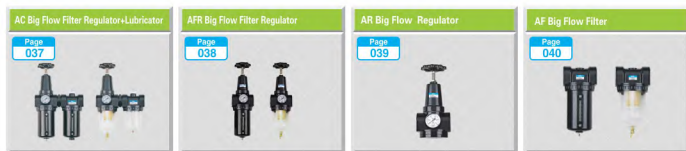
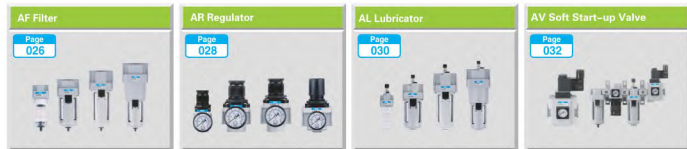
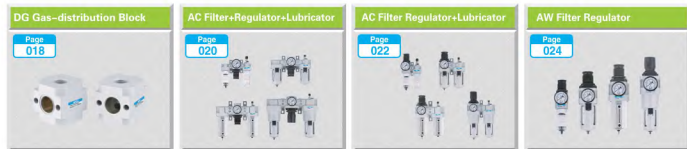
Please contact NTA for contact information of different market area.



Company glory—公司荣誉

- ❖ Patent for utility models-a kind of lubricator
- ❖ Patent for utility models-a kind of solenoid valve
- ❖ Patent for utility models-a kind of filter regulator
- ❖ Patent for utility models-air control one way pneumatic valve
- ❖ Patent for utility models-safety stop valve
- ❖ Patent for utility models-a kind of cylinder with locking function
- ❖ Patent for utility models-a kind of pneumatic-hydraulic booster cylinder
- ❖ Patent for utility models-compact cylinder
- ❖ Patent for utility models-a kind of adjustable cylinder
- ❖ Patent for utility models-a kind of guiding rod cylinder
- ❖ Patent for utility models-3/2 valve
- ❖ Patent for utility models-big port size filter regulator
- ❖ Patent for utility models-a kind of solenoid valve
- ❖ Patent for utility models- welding procedure clamping cylinder
- ❖ Patent for utility models-high precision regulator
- ❖ Win Science and Technology Enterprise Technological Innovation Fund
- ❖ TITAN" LOGO became the famous brand in Ningbo City
- ❖ Got ISO9001:2008 Certificate
- ❖ Became the vice-president company of Ningbo Hydraulics Pneumatics&Seals Association
- ❖ Became high technology company
- ❖ Got ISO9001:2015 Certificate
- ❖ Got CE certificate for pneumatic cylinders





Air Source Treatment Unit

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OSLH High Pressure Filter Page 068 	QFRH High Pressure Filter Regulator Page 069 	GM, GS, GH, GF Gauge Page 070 	R200 Regulator Page 071 
R07 Regulator Page 071 	ZF-02 Filter Page 071 	ZF-02 Oiler Page 071 	

Control Valve

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Control Valve

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HSV Hand Valve Page 135 	HV Hand-Switching Valve Page 136 	MOV Mechanical Valve Page 137 	JM Mechanical Valve Page 138 
JMJ Mechanical Valve Page 139 	FV Foot Valve Page 140 	4F Foot Valve Page 141 	KA Check Valve Page 143 
SE Quick Exhaust Valve Page 144 	KLA Flow Rate Control Valve Page 145 	RE Flow Capacity Control Valve Page 146 	ST Shuttle Valve Page 146 

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SZ Lockable cylinder Page 165 	GPM Standard Cylinder Page 167 	OGB Standard Cylinder Page 168 	OGB Standard Big BoreCylinder Page 170 
OGBH Clamp Cylinder Page 171 	Cylinder Joint Page 173 	SR Inch Bore Cylinder Page 174 	NTH Nonrotating Cylinder Page 177 
MI Mini Cylinder Page 178 	MA Mini Cylinder Page 180 	MAL Mini Cylinder Page 182 	SDA Compact Cylinder Page 185 



Please read this safety notice carefully, pay attention to safety items while using this product, in order to prevent injury to human body and damage of property; thus, it is divided into three classes of "Danger" "Warning" and "Caution" according to the extent of prevention.

	Danger: Obviously situated at "Danger" state, may cause casualty if not avoided, take special safety protection and management to prevent the occurrence of "Danger"
	Warning: Condition of operation is situated at "Danger" state, may cause casualty if not avoided, take special safety protection and management to prevent the occurrence of "Danger"
	Caution: Condition of operation is situated at "Danger" state, may cause minor or moderate injury and damage of property if not avoided, take safety protection and management.

For safety protection and prevention of accident, please understand the condition of application and know the design, installation, procedure of usage and essential safety condition before using this product.

Please use within the specification and requirement of this product; application beyond the specification may cause hazard. In case of special condition of application, take the confirmation of safety into account and then use it; in case of doubt in reading this information and related data, contact us before using.

It is hazardous in wrong assemble and operation of compressed air and its accessories; so while selecting the product, the related person of design, assemble, operating and service should possess sufficient knowledge and experience, and follow normal operating procedure, in order to maintain safe operation and good effect.

This product is suitable for application in general industrial equipment; adhere to the following caution while designing, assembling using and maintenance.

- Danger:**
- Please never use in following applications
 - Use in operation delivering and management of the appliance for the purpose of human life and body.
 - Use in operation which rise obvious "Danger" and safety concern to human life and body.
 - Special for safety purpose, situation with impact of safety to human life and body.
 - Confirmation of safety shall avoid the following conditions which cause safety impact to human and damage of equipment.
 - Operation of machine, device should note to the drop of drop of driven object or race at the rotation radius and operation range cause injury of human and damage of equipment.
 - Operation of machine, device should note the air supply source and poor power supply and interruption and cause injury of human and damage of equipment.
 - When restarting the machine, device may cause object flying out and cause injury of human and damage of equipment.

- Warning:**
- Please reverse use in following situation
 - Use in outdoor dusty condition
 - Avoid chemical, corrosive and inflammable gas; avoid sea water, high temperature place in surrounding
 - Exceed the condition in the specification of the product
 - In the place tend to received rigorous shock impact, which affect the quality and stability of the product.
 - Please don't make any modification or disassemble to the structure, function of the product
 - Shut off the power switch and air source properly before service and maintenance, avoid consequent hazard and damage of product.
 - Avoid consequent hazard and damage of product while assembling and operation.

- Caution:**
- Pay attention to the cleanliness of the pipeline while laying the pipe, avoid dust, dirt and leak proof tape be sucked into the pipeline, affect the operation performance of the product
 - There are itemized cautions for various products, please contact our sales person if any doubt arise.

Please read the safety notice carefully before using and pay attention to the safety caution of this product. Pay attention to the individual caution for various model series(read the cautions and safety notice in P1-2 for common cautions)

Caution for design, selection

Warning:

- PC transparent cup of the filter, oil applicator and the see through oil dripping device of oil applicator are made of PC plastic material, no synthetic oil, organic solvent, chemical, cutting oil, volatile gas and above mentioned conditions are allowed, in order to avoid destruction of material and affect safety of application.
- If the selected plastic panel of the pressure meter for regulation valve is not suitable for spraying with organic solvent, please avoid possible panel damage of the pressure meter.

Caution:

- Avoid the place with impact or rigorous vibration when designing the device; avoid to be mounted outdoor and environment presence with chemical and corrosive air.

Caution for assembling

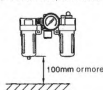
Danger:

- Pay attention to the direction of the air source while installing, never used in reversed air direction.
- Use spanner to tighten the pressure meter while installing, never tighten with your hand holding the casing of the pressure meter of the device of the pressure meter.
- Follow the torque in table below while laying the pipe (tighten the connector), never exceed the range of application to avoid damage of product.

Torque chart for piping

Port size	Appropriate turning torque N.m(kgf.cm)
G1/8	7-9(70-90)
G1/4	12-14(120-140)
G3/8	22-24(220-240)
G1/2	28-30(280-300)
G3/4	28-30(280-300)
G1	36-38(360-380)

- Filter and lubricator should be mounted with correct direction(Bottom of cup downward as illustrated in figure A) to ensure the function of the product while using.
- Prevent debris and leak proof tape residue from entering the pipe while laying, if the connector is locked by using anoxi-gel, avoid excessive amount and fluid glue form flowing in the body, which may cause jammed and poor movement.
- Bottom of cup downward



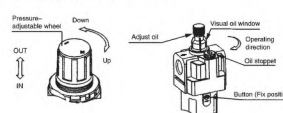
Caution for application

Danger:

- Don't remove the PC cup while running to avoid hazard; the press key of the PC cup should be locked in position and then air supply is allowed
- While top up oil to lubricator while running, shut off the air and then top up; air supply is allowed only after oiling and lock the oil plug.
- Caution for strainer offer:
 - The pressure differential type strainer use only for pressure above 0.15Mpa(1.5kgf/cm²)
 - Automatic float ball strainer use only for pressure above 0.1Mpa(1.0kgf/cm²)
 - Care for the cleanliness of air and PC cup, avoid clogged by debris and dirt cause poor function of the strainer and leak

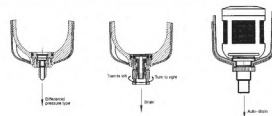
Caution:

- The setting range of the secondary pressure of the pressure regulation valve use as 85% of primary pressure or below to achieve better pressure setting and regulation
- The rotating button of the pressure regulator must be pulled before turning, increase pressure while turning in clockwise direction and vice versa to decrease. Press in and secure the swing button after operation. After turning to max value(either positive or reverse)(with no pressure variation anymore), don't turn by force use tool to avoid damage.



Operation and function of the drain cock

A	B	C
Differential pressure type	Manual drain standard	Automatic drain option
Adopting pressure differential for automatic drain, drain automatically when the air depletion and make up produced differential.	Also placed the left to be differential pressure type	Use float switch valve, drain automatically when water level over the float, close automatically after completely drain



- Align the scale of the transparent dripping device of the oil applicator to the pointer (protrusion) to regulate the oil fed amount, the feeding swing button allow one direction turning, operate in clockwise direction(positive), no counterclockwise direction(reverse) turning is allowed. The max and min oil amount value shall match the air use in adjustment.

- The density of element of filter is 50μm, the pipeline should maintain dry air, prevent excessive debris cause blockage and insufficient flow.

Caution for service and maintenance

Warning:

- Confirm the air line and power in turned off before serving, prevent injury and damage while disassembly for maintenance

Danger:

- The removal and installation of the element of the filter and oil applicator plug use hexagonal spanner; avoid to use tool in other maintenance, disassemble the internal part in unsuitable manner may cause poor performance of the product and affect safe operation
- Replace the element of the filter is clogged or poor performance, avoid blockage and insufficient flow
- The PC cup of the filter and oil applicator suitable to wipe by cotton paper or wash with pure water and neutral household detergent, avoid to use chemical which cause damage.
- After service and maintenance, check for all parts are tighten and position properly, and confirm the matching are safe and no problem, and then start air supply.



DC Filter+Regulator+Lubricator ----- Optional(M5,1/8",1/4",3/8",1/2",3/4",1") 008



DC Filter Regulator+Lubricator ----- Optional(M5,1/8",1/4",3/8",1/2",3/4",1") 010



DFR Filter Regulator ----- Optional(M5,1/8",1/4",3/8",1/2",3/4",1") 012



DF Filter ----- Optional(M5,1/8",1/4",3/8",1/2",3/4",1") 014

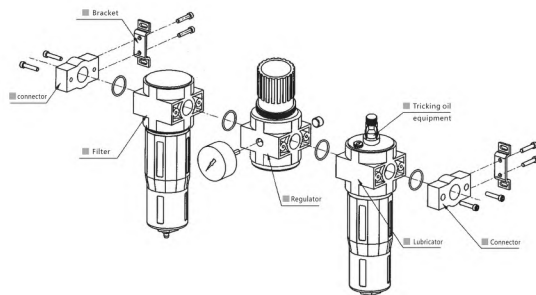


DR Relief Valve ----- Optional(M5,1/8",1/4",3/8",1/2",3/4",1") 016



DL Atomized Lubricator ----- Optional(M5,1/8",1/4",3/8",1/2",3/4",1") 018

F.R.L assembled sketch:



Filter+Regulator+Lubricator



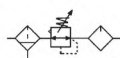
■ Specification:

Type	DC100-M5_01	DC200-01_02_03	DC400-01_04_06	DC600-06_08
Port size(G)	M5-1/8"	1/8"-1/4"-3/8"	3/8"-1/2"-3/4"	3/4"-1"
Gauge thread(G)	M5	1/8"	1/4"	1/4"
Fluid	Compressed air			
Operating pressure range(MPa)	0.15~0.85	0.15~1.2		
Max.Flow rate(L/min)	500	1700	3500	11500
Ambient temperature(°C)	-10~60			
Filter precision	5µm or 40µm			
Cup material	Polycarbonate			
Guard cup	-	•	•	•

■ How to order:

DC	200	01	D
Specification		Drainage Method	
DC Filter+Regulator+Lubricator		Blank Manual drain D Auto-drain	
Series		Port size	
100 Series		M5, 01: G1/8"	
200 Series		02: G1/4"	
400 Series		03: G3/8"	
600 Series		04: G1/2"	
		06: G3/4"	
		08: G1"	

■ Symbol:

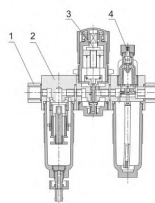


■ Product feature:

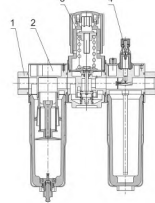
1. Oil dripping adopts the clearance seal to stabilize oil feeding.
2. Oil feeding is linear distribution and the quantity of oil is visible.
3. It can keep refueling without stops.
4. Fixed connection is fast reliable and easy for installation and using. Pressure adjust is stable and with high repeat precision.
5. High efficiency of removing water and solid particle.
6. Manual, differential pressure and automatic drain ways are optional.

■ Inner structure drawing:

DC100



DC200/400/600

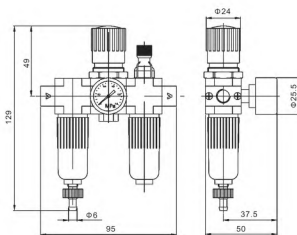


Number	Name
1	Connecting block
2	Filter
3	Regulator
4	Lubricator

Filter+Regulator+Lubricator

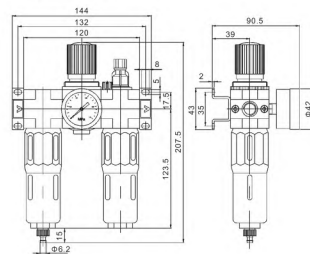
■ Dimension(mm):

■ DC100-M5, 01

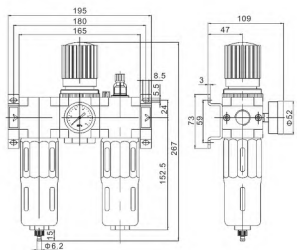


Note: The interface of M5 is without connecting block.

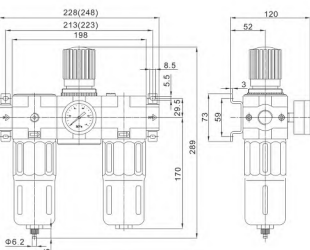
■ DC200-01, 02, 03



■ DC400-03, 04, 06



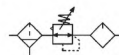
■ DC600-06, 08



Filter Regulator+Lubricator



■ Symbol:

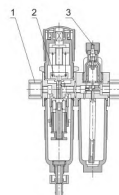


■ Product feature:

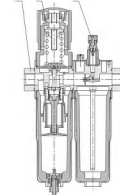
1. Oil dripping adopts the clearance seal to stabilize oil feeding.
2. Oil feeding is linear distribution and the quantity of oil is visible.
3. It can keep refueling without stops.
4. Fixed connection is fast reliable and easy for installation and using. Pressure adjust is stable and with high repeat precision.
5. High efficiency of removing water and solid particle.
6. Manual, differential pressure and automatic drain ways are optional.

■ Inner structure drawing:

■ DC101



■ DC201/401/601



■ Specification:

Type	DC101-M5_01	DC201-01_02_03	DC401-01_04_06	DC601-06_08
Port size(G)	M5-1/8"	1/8"-1/4"-3/8"	3/8"-1/2"-3/4"	3/4"-1"
Gauge thread(G)	M5	1/8"	1/4"	1/4"
Fluid	Compressed air			
Operating pressure range(MPa)	0.15-0.85	0.15-1.2		
Max Flow rate(L/min)	500	1700	3500	11500
Ambient temperature(°C)	-10-60			
Filter precision	5µm or 40µm			
Cup material	Polycarbonate			
Guard cup	-			

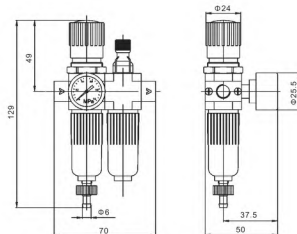
■ How to order:

DC 201 01 D				
Specification		Drainage Method		
DC Filter Regulator+Lubricator		Blank: Manual drain D: Auto-drain		
Series		Port size		
101 Series		M5, 01: G1/8"		
201 Series		02: G1/4"		
401 Series		03: G3/8"		
601 Series		04: G1/2"		
		05: G3/4"		
		08: G1"		

Filter Regulator+Lubricator

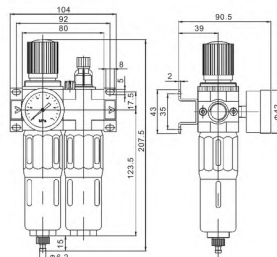
■ Dimension(mm):

■ DC101-M5, 01

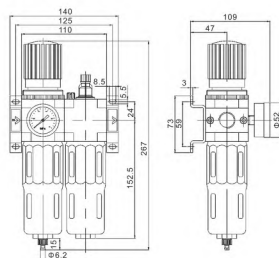


Note: The interface of M5 is without connecting block.

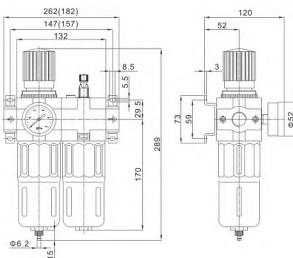
■ DC201-01, 02, 03



■ DC401-03, 04, 06



■ DC601-06, 08



Filter Regulator

■ Specification:

Type	DFR100-M5, 01	DFR200-01, 02, 03	DFR400-01, 04, 06	DFR600-06, 08
Port size(G)	M5 - 1/8"	1/8" - 1/4" - 3/8"	3/8" - 1/2" - 3/4"	3/4" - 1"
Gauge thread(G)	M5	1/8"	1/4"	1/4"
Fluid	Compressed air			
Operating pressure range(MPa)	0.15~0.7	0.15~1.2	0.15~1.2	0.15~1.2
Max.Flow rate(L/min)	500	1700	3500	11500
Ambient temperature(°C)	-10~60			
Filter precision	5μm or 40μm			
Cup material	Polycarbonate			
Guard cup	-			

■ How to order:

DFR	200	01	D
Specification	DFR: Filter Regulator		
Series	100 Series	200 Series	400 Series
Drainage Method	Blank: Manual drain	D: Auto-drain	
Port size	M5, 01, G1/8"	02, G1/4"	03, G3/8"
		04, G1/2"	06, G3/4"
			08, G1"

■ Symbol:

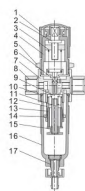


■ Product feature:

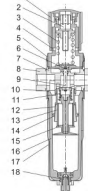
- 1 Hand wheel adopts the pressed self-locking mechanism to prevent the setting pressure from external disturbance and unusual action.
- 2 Pressure adjustment mechanism adopts the balance design with more stable adjustment and better characteristic.
- 3 Special guide structure makes the flowing gases spin properly to separate the water from gas and filter solid particle efficiently.
- 4 Filter precision 5 or 40 μm is optional.
- 5 Manual, differential pressure and automatic drain ways are optional.

■ Inner structure drawing:

■ DFR100



■ DFR200/400/600

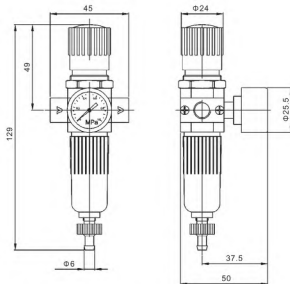


Number	Name	Material
1	Hand wheel	POM
2	Spring	Q235
3	Spring	Spring steel
4	Valve core	POM
5	Nut	Aluminium
6	Diaphragm	NBR
7	Regulate body	Aluminium (DFR100/200/400)
8	Connecting block	Aluminium (DFR100/200/400)
9	Valve core	6061 + NBR
10	O-ring	NBR
11	Spring	SSA304
12	Filter core pedestal	POM
13	Filter core	Polycarbonate (acrylic resin)
14	Washer	POM
15	Filter core pedestal	POM
16	Water cup	PC
17	Base cap	Aluminium
18	Drain	POM

Filter Regulator

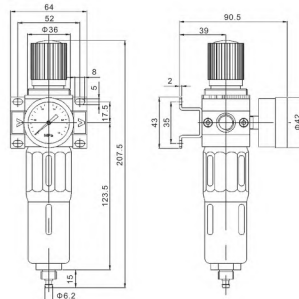
Dimension(mm):

■ DFR100-M5, 01

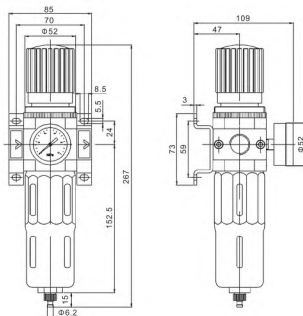


Note: The interface of M5 is without connecting block.

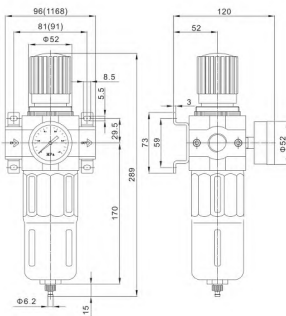
■ DFR200-01, 02, 03



■ DFR400-03, 04, 06



■ DFR600-06, 08



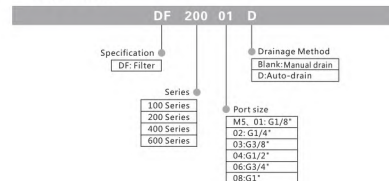
Filter



Specification:

Type	DF100-M5_01	DF200-01_02_03	DF400-01_04_06	DF600-06_08
Port size(G)	M5 1/8"	1/8" 1/4" 3/8" 3/8" 1/2" 3/4"	3/8" 1/2" 3/4"	3/4" 1"
Fluid	Compressed air			
Operating pressure(MPa)	0.15~0.7	0.15~1.2		
Max.Flow rate(L/min)	500	2000	4000	11500
Ambient temperature(°C)	-10~60			
Filter precision	5μm or 40μm			
Cup material	Polycarbonate			
Guard cup	-	•	•	•

How to order:



Symbol:

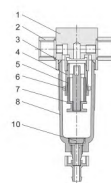


Product feature:

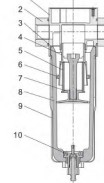
1. Special guide structure makes the flowing gases spin properly to separate the water from gas and filter solid particle efficiently.
2. Low pressure loss and high division efficiency.
3. Filter precision 5 or 40 μm is optional.
4. Manual, differential pressure and automatic drain ways are optional.

Inner structure drawing:

■ DF100



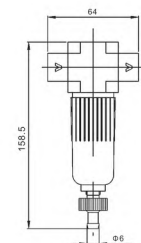
■ DF200/400/600



Number	Feature	Material
1	Regulate body	Aluminum(DF100/200/400/600)
2	Connecting block	Aluminum(DF100/200/400/600)
3	O-ring	NBR
4	Filter core	POM
5	Filter core	Polypropylene fiber
6	Impeller	POM
7	Impeller	POM
8	Water cup	PC
9	Guard cup	Aluminum
10	Water	POM

Filter

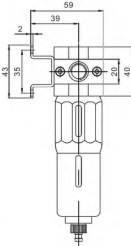
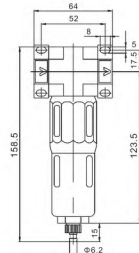
■ Dimension(mm):



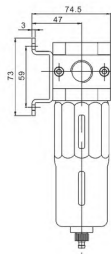
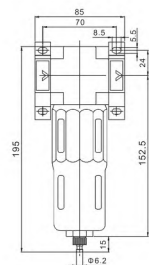
Note: The interface of M5 is without connecting block.



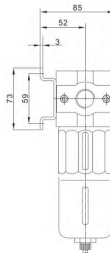
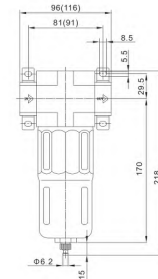
■ DF200-01, 02, 03



■ DF400-03, 04, 06



■ DF600-06, 08

**DR** Air Source Treatment Unit

Regulator



■ Symbol:

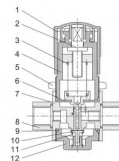


■ **Product feature:**

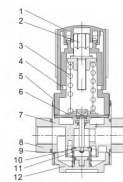
1. Hand wheel adopts the pressed self-locking mechanism to prevent the setting pressure from external disturbance and unusual action.
2. Pressure adjustment mechanism adopts the balance design with more stable adjustment and better characteristic.
3. Besides panel-mounting, fixed bracket installation is optional.

■ Inner structure drawing:

■ DR100



■ DR200/400/600



■ **Specification:**

Type	DR100-M5, 01	DR200-01, 02, 03	DR400-03, 04, 06	DR600-06, 08
Port size(G)	M5 1/8"	1/8" 1/4" 3/8"	3/8" 1/2" 3/4"	3/4" 1"
Gauge thread(G)	M5	1/8"	1/4"	
Fluid	Compressed air			
Operating pressure range(MPa)	0.15~0.7		0.15~1.2	
Max.Flow rate(L/min)	500	1700	3500	11500
Ambient temperature(°C)	-10~60			

■ **How to order:**

```

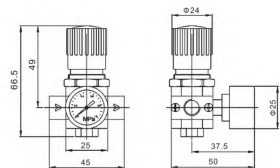
graph TD
    Root[DR 200 01] --> Spec[Specification]
    Root --> Port[Port size]
    Spec --> SpecBox[DR Regulator]
    Port --> Series[Series]
    Port --> PortTable
    Series --> S1[100 Series]
    Series --> S2[200 Series]
    Series --> S3[400 Series]
    Series --> S4[600 Series]
    PortTable --> P1[M5, 01: G1/8"]
    PortTable --> P2[02: G1/4"]
    PortTable --> P3[03: G3/8"]
    PortTable --> P4[04: G1/2"]
    PortTable --> P5[06: G3/4"]
    PortTable --> P6[08: G1"]
  
```



Regulator

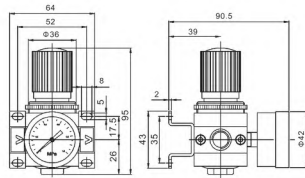
■ Dimension(mm):

■ DR100-M5, 01

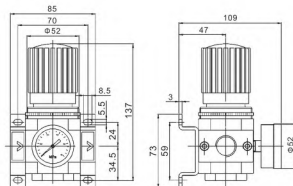


Note: The interface of M5 is without connecting block.

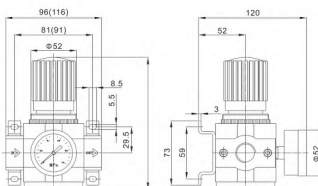
■ DR200-01, 02, 03



■ DR400-03, 04, 06



■ DR600-06, 08



Lubricator

■ Specification:

Type	DL100-M5, 01	DL200-01, 02, 03	DL400-03, 04, 06	DL600-06, 08
Port size(G)	M5 1/8"	1/8" 1/4" 3/8"	3/8" 1/2" 3/4"	3/4" 1"
Fluid	Compressed air			
Operating pressure range(MPa)	0.15~0.7	0.15~1.2	0.15~1.2	0.15~1.2
Max.Flow rate(L/min)	500	2000	4000	11500
Ambient temperature(°C)	-10~60			
Cup material	Polycarbonate			
Guard cup	-	-	-	-

■ How to order:

DL 200 01	
Specification DL: Lubricator	Port size M5, 01: G1/8" 02: G1/4" 03: G1/2" 04: G1/2" 06: G3/4" 08: G1"
Series 100 Series 200 Series 400 Series 600 Series	

■ Symbol:

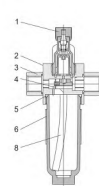


■ Product feature:

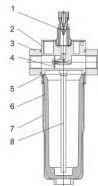
- 1.Oil dripping adopts the clearance seal to stabilize oil feeding.
- 2.Oil feeding is linear distribution and the quantity of oil is visible.
- 3.Special oil dripping structure leads to negative pressure at the exit of oil dripping and low fog flow.
- 4.It can keep refueling without stops.
- 5.Fixed bracket installation is optional.

■ Inner structure drawing:

■ DL100



■ DL200/400/600

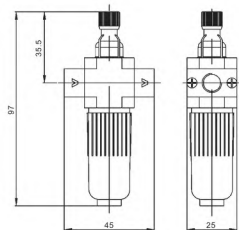


Number	Name	Material
1	Oil window	PC
2	Valve body	Aluminium
3	Connecting block	Aluminium
4	Damping fin	NBR
5	O-ring	NBR
6	Oil cup	PC
7	Guard cup	POM
8	Oil tube	PVC

Lubricator

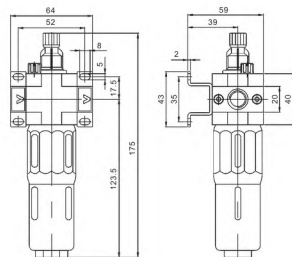
■ Dimension(mm):

■ DL100-M5, 01

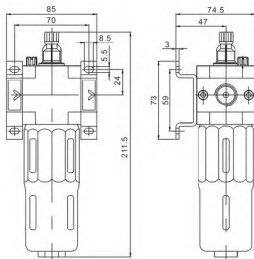


Note: The interface of M5 is without connecting block.

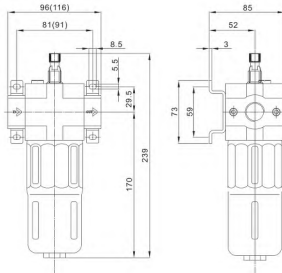
■ DL200-01, 02, 03



■ DL400-03, 04, 06



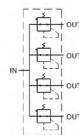
■ DL600-06, 08



Regulator combination



■ Symbol:

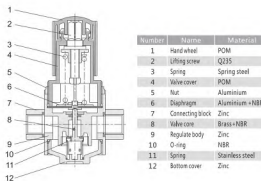


■ Product feature:

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

■ Inner structure drawing:

■ DRB200



■ Specification:

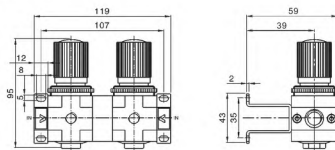
Type	DRB200-01, 02, 03	DRB200-03, 04, 06
Port size	1/8" 1/4" 3/8"	3/8" 1/2" 3/4"
Fluid	Compressed air	
Operating pressure(MPa)	0.15~1.2	
Ambient temperature(°C)	-10~60	
Max flow rate(L/min)	1700	3500

■ How to order:

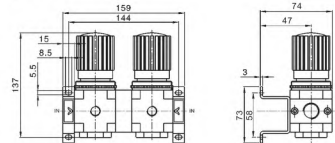
DRB 200 01 K2		
Specification DRB: Regulator combination	Series 200 Series 400 Series	Number of combinations K2: 2 K3: 3 K4: 4 K5: 5
		Port size 01: G1/8" 02: G1/4" 03: G3/8" 04: G1/2" 06: G3/4"

■ Dimension(mm):

■ DRB200



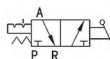
■ DRB400





DZ

Symbol:



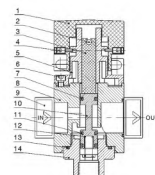
Product feature:

1. It is module design and can be used with D series F.R.L.
2. This valve can be used as manual 3/2 way valve.
3. This valve meets the standard on installation conducted by operator specified by OSHA (Occupational Safety & Health Administration). When the machinery is maintained and serviced, the purge valve (Safe on-off valve) for remaining pressure shall be used to eliminate the remaining pressure when the air source is cut off. Valve must be locked to prevent accidental operation by a third party during maintenance. This prevents accidental system pressurization & cylinder actuation which can result in injuries to the machine operator.



Inner structure drawing:

DZ200



Number	Name
1	Hand wheel
2	Roller
3	Lifting poker
4	Screw
5	Valve cover
6	Washer (oriented up screw)
7	Washer
8	Valve body
9	Connecting block
10	Valve core
11	Washer
12	Spring
13	O-ring
14	Bottom cover

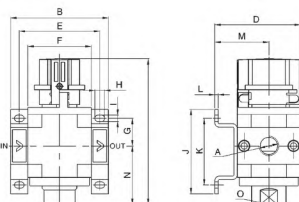
Specification:

Type	DZ200-01, 02, 03	DZ400-03, 04, 06	DZ600-06, 08
Port size(G)	1/8" - 1/4" - 3/8"	3/8" - 1/2" - 3/4"	3/4" - 1"
Fluid	Compressed air		
Operating pressure range(MPa)	0.15 ~ 1.2		
Ambient temperature(°C)	-5 ~ 60		
Acting type	Manual		
Position number	2 Way 3 Position		
Operation angle	90°		
Exhaust port size	1/8"	3/8"	1/2"
Suitable F.R.L type	DC200-01, 02, 03	DC400-03, 04, 06	DC600-06, 08

How to order:

DZ 200 01	
Specification	Port size
DZ Safe on-off Valve	01: G1/8"
Series	02: G1/4"
200 Series	03: G3/8"
400 Series	04: G1/2"
600 Series	06: G3/4"
	08: G1"

Dimension(mm):



Type	DZ200			DZ400			DZ600		
Symbol	01	02	03	03	04	06	06	08	08
A	1/8"	1/4"	3/8"	3/8"	1/2"	3/4"	3/4"	1"	1"
B	64				85				106
C	106				127				-
D	59				74.5				77.5
E	52				70				86
F	40				55				66
G	17.5				24				27.5
H	8				8.5				11.5
I	5				5.5				5.5
J	43				73.5				66.5
K	35				58				55
L	2				3				3
M	39				47				44.5
N	38.5				51				-
O	1/8"				3/8"				3/4"



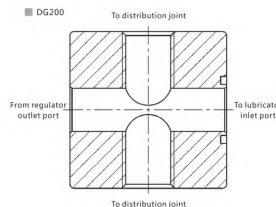
DG

Product feature:

1. It is installed between DC series regulator(or filter & regulator)and lubricator. The air flow is divided by the device that one enters lubricator to supply oil for lubrication and the other(the second way)directly enters the equipment.

Inner structure drawing:

DG200



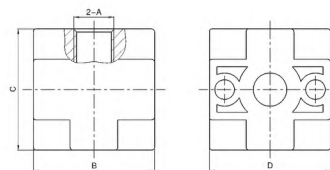
Specification:

Type	DG200-01, 02, 03	DG400-03, 04, 06	DG600-06, 08
Port size(G)	1/8" - 1/4" - 3/8"	3/8" - 1/2" - 3/4"	3/4" - 1"
Way number	Four		
Operating pressure range(MPa)	0 ~ 1.2		
Ambient temperature(°C)	-10 ~ 60		

How to order:

DG 200 01	
Specification	Port size
DG Gas-distribution Block	01: G1/8"
Series	02: G1/4"
200 Series	03: G3/8"
400 Series	04: G1/2"
600 Series	06: G3/4"
	08: G1"

Dimension(mm):



Type	DG200			DG400			DG600		
Symbol	01	02	03	03	04	06	06	08	08
A	1/8"	1/4"	3/8"	3/8"	1/2"	3/4"	3/4"	1"	1"
B	40				55				66
C	40				55				66
D	40				55				66



AC Filter+Regulator+Lubricator ----- Optional(M5,1/8",1/4",3/8",1/2",3/4",1") 024



AC Filter Regulator+Lubricator ----- Optional(M5,1/8",1/4",3/8",1/2",3/4",1") 026



AW Filter Regulator ----- Optional(M5,1/8",1/4",3/8",1/2",3/4",1") 028



AF Filter ----- Optional(M5,1/8",1/4",3/8",1/2",3/4",1") 030

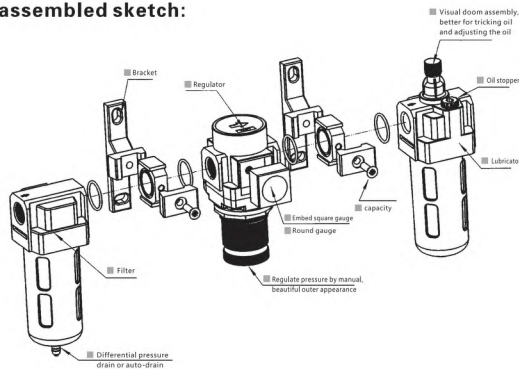


AR Relief Valve ----- Optional(M5,1/8",1/4",3/8",1/2",3/4",1") 032

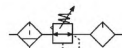


AL Atomized Lubricator ----- Optional(M5,1/8",1/4",3/8",1/2",3/4",1") 034

F.R.L assembled sketch:



Symbol:

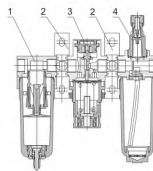


Product feature:

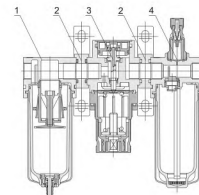
1. Oil dripping adopts the clearance seal to stabilize oil feeding.
2. Oil feeding is linear distribution and the quantity of oil is visible.
3. Fixed connection is fast reliable and easy for installation and using. Pressure adjust is stable and with high repeat precision.
4. High efficiency of removing water and solid particle.
5. Manual, differential pressure and automatic drain ways are optional.

Inner structure drawing:

AC200



AC300/400/500



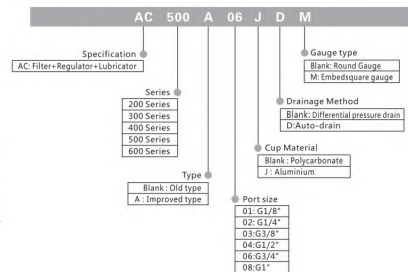
Number	Name
1	Filter
2	Connecting block
3	Regulator
4	Lubricator

Specification:

Type	AC200A-01, 02	AC300A-02, 03	AC400A-03, 04	AC500A-05, 06	AC600A-06, 08
Port size(G)	1/8"-1/4"	1/4"-3/8"	3/8"-1/2"	3/4"-1"	3/4"-1"
Gauge thread(G)	1/8"				
Fluid	Compressed air				
Operating pressure range(MPa)	0.15~0.85				
Max. Flow rate(L/min)	1000	2000	3500	5000	
Ambient temperature(°C)	-10~60				
Filter precision	5µm or 40µm				
Oil recommended	ISO VG32				
Cup material	Polycarbonate				
Structure	Overflow type				
Optional	Guard cup	-	•	•	•
Bracket	20T	30T	40T	50T	50T

Note1 : The guard cup of AC200A series can be optional. Note2 : Metal cups are optional.

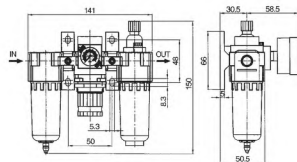
How to order:



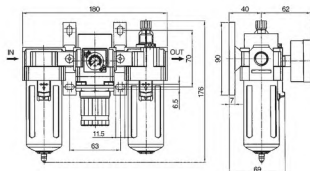
Filter+Regulator+Lubricator

■ Dimension(mm):

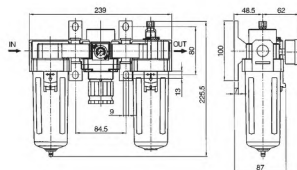
■ AC200A-01, 02



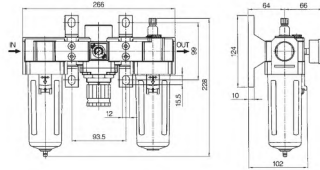
■ AC300A-02, 03



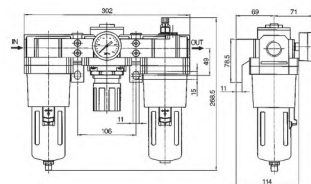
■ AC400A-03, 04



■ AC500A-06, 08



■ AC600A-06, 08



Filter Regulator+Lubricator

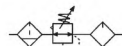


■ Specification:

Type	AC201A-01, 02	AC301A-02, 03	AC401A-03, 04	AC501A-06, 08	AC601A-06, 08		
Port size(G)	1/8"-1/4"	1/4"-3/8"	3/8"-1/2"	3/4"-1"	3/4"-1"		
Gauge thread(G)	1/8"						
Fluid	Compressed air						
Operating pressure range(MPa)	0.15~0.85						
Max.Flowrate(L/min)	900	2000	3500	5000			
Ambient temperature(°C)	-10~60						
Filter precision	5µm or 40µm						
Oil recommended	ISO VG32						
Cup material	Polycarbonate						
Structure	Overflow type						
Optional	Guard cup	-	•	•	•		
Bracket	20T	30T	40T	50T	50T		

Note1: The guard cup of AC201A series can be optional. Note2: Metal cups are optional.

■ Symbol:

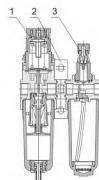


■ Product feature:

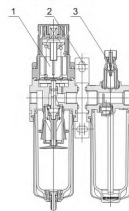
1. Oil dripping adopts the clearance seal to stabilize oil feeding.
2. Oil feeding is linear distribution and the quantity of oil is visible.
3. Fixed connection is fast reliable and easy for installation and using. Pressure adjust is stable and with high repeat precision.
4. High efficiency of removing water and solid particle.
5. Manual, differential pressure and automatic drain ways are optional.

■ Inner structure drawing:

■ AC201



■ AC301/401/501



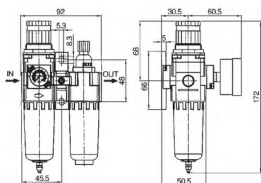
Number	Name
1	Filter Regulator
2	Connecting block
3	Lubricator

■ How to order:

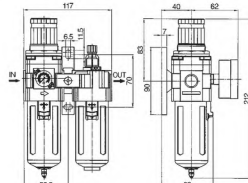
AC 501 A 06 J D M									
Specification				Gauge type					
AC Filter Regulator+Lubricator				Blank Round Gauge					
				M Embedsquare gauge					
				Drainage Method					
				Blank Differential pressure drain					
				D Auto-drain					
				Cup Material					
				Blank Polycarbonate					
				J Aluminum					
				Port size					
				01: G1/8"					
				02: G1/4"					
				03: G3/8"					
				04: G1/2"					
				06: G3/4"					
				08: G1"					

■ Dimension(mm):

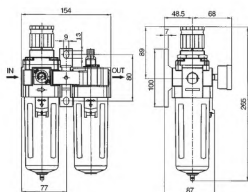
■ AC201A-01, 02



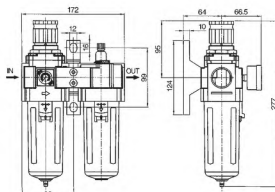
■ AC301A-02, 03



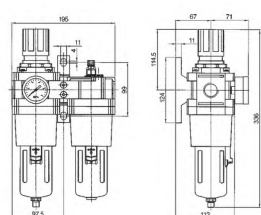
■ AC401A-03, 04



■ AC501A-06, 08



■ AC601A-06, 08



■ Symbol:

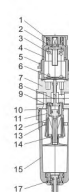


■ Product feature:

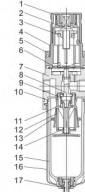
1. Hand wheel adopts the pressed self-locking mechanism to prevent the setting pressure from external disturbance and unusual action.
2. Pressure adjustment mechanism adopts the balance design with more stable adjustment and better characteristic.
3. Special guide structure makes the flowing gases spin properly to separate the water from gas and filter solid particle efficiently.
4. Filter precision 5 or 40 μ m is optional.
5. Manual, differential pressure and automatic drain ways are optional.

■ Inner structure drawing:

■ AW200



■ AW300/400/500

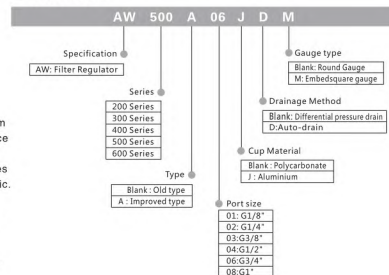


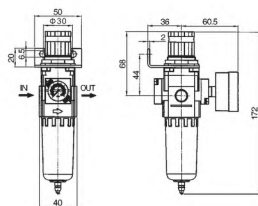
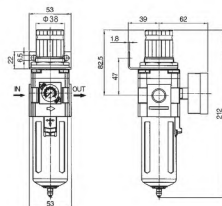
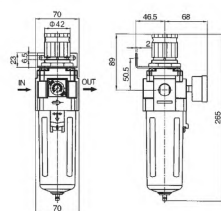
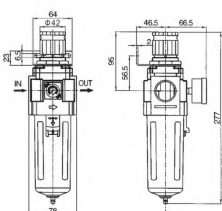
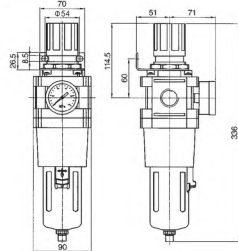
■ Specification:

Type	AW200A-01, 02	AW300A-01, 02	AW400A-01, 02	AW500A-01, 02	AW600A-01, 02
Port size(G)	1/8"-1/4"	1/4"-3/8"	3/8"-1/2"	3/4"-1"	3/4"-1"
Gauge thread(G)	1/8"				
Fluid	Compressed air				
Operating pressure range(MPa)	0.15~0.85				
Max Flowrate(L/min)	900	2000	3500	5000	
Ambient temperature(°C)	-10~60				
Filter precision	5 μ m or 40 μ m				
Cup material	Polycarbonate				
Guard cup	-	•	•	•	•

Note1: The guard cup of AW200A series can be optional. Note2: Metal cups are optional.

■ How to order:



Filter Regulator
Dimension(mm):
AW200A-01, 02

AW300A-02, 03

AW400A-03, 04

AW500A-06, 08

AW600A-06, 08

Filter
Specification:

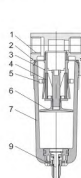
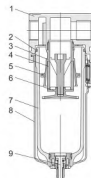
Type	AF200A-01, 02	AF300A-02, 03	AF400A-03, 04	AF500A-06, 08	AF600A-06, 08
Port size(G)	1/8"-1/4"	1/4"-3/8"	3/8"-1/2"	3/4"-1"	3/4"-1"
Fluid	Compressed air				
Operating pressure range(MPa)	0.15~0.85				
Max.Flowrate(L/min)	1200	2000	3500	5000	
Ambient temperature(°C)	-10~60				
Filter precision	5µm or 40µm				
Cup material	Polycarbonate				
Guard cup	-	•	•	•	•

Note1 : The guard cup of AF200A series can be optional. Note2 : Metal cups are optional.

Symbol:

Product feature:

- 1.Special guide structure makes the flowing gases spin properly to separate the water from gas and filter solid particle efficiently.
- 2.Low pressure loss and high division efficiency.
- 3.Filter precision 5 or 40 µm is optional.
- 4.Manual, differential pressure and automatic drain ways are optional.

Inner structure drawing:
AF200

AF300/400/500


Number	Name	Material
1	Regulate body	Aluminium
2	O-ring	NBR
3	Filter core pedestal	POM
4	Filter core	Polypropylene fiber
5	Impeller	POM
6	Filter core pedestal	POM
7	Water cup	PC
8	Guard cup	Cold rolled plate
9	Drainer	Assembly

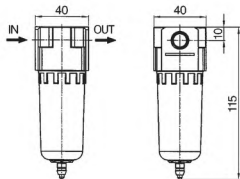
How to order:

AF 500 A 06 J D			
Specification	Series	Drainage Method	Cup Material
AF: Filter	200 Series 300 Series 400 Series 500 Series 600 Series	Blank: Differential pressure drain D: Auto-drain	Blank: Polycarbonate J: Aluminium
Type	Blank: Old type A: Improved type	Port size	01: G1/8" 02: G1/4" 03: G3/8" 04: G1/2" 06: G3/4" 08: G1"

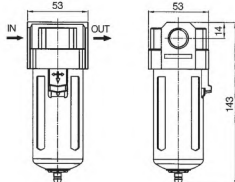
Filter

Dimension(mm):

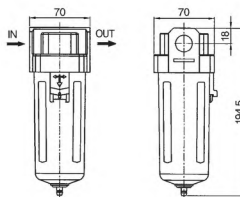
■ AF200A-01, 02



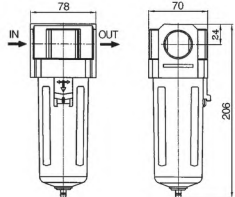
■ AF300A-02, 03



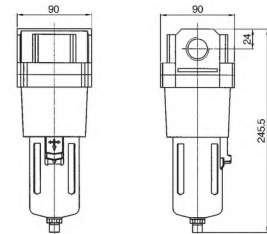
■ AF400A-03, 04



■ AF500A-06, 08



■ AF600A-06, 08



Regulator

Specification:

Type	AR200A-01, 02	AR300A-02, 03	AR400A-03, 04	AR500A-06, 08	AR600A-06, 08
Port size(G)	1/8"-1/4"	1/4"-3/8"	3/8"-1/2"	3/4"-1"	3/4"-1"
Gauge thread(G)	1/8"				
Fluid	Compressed air				
Operating pressure range(MPa)	0.15~0.85				
Max Flowrate(L/min)	1000	2000	3500	5000	
Ambient temperature(°C)	-10~60				

How to order:

AR 500 A 06 M					
Specification	AR: Regulator		Gauge type		
			Blank: Round Gauge M: Embedsquare gauge		
Series	200 Series 300 Series 400 Series 500 Series 600 Series		Port size		
			01: G1/8" 02: G1/4" 03: G3/8" 04: G1/2" 06: G3/4" 08: G1"		
Type	Blank: Old type A: Improved type				

Symbol:

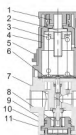


Product feature:

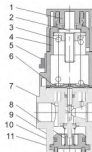
1. Hand wheel adopts the pressed self-locking mechanism to prevent the setting pressure from external disturbance and unusual action.
2. Pressure adjustment mechanism adopts the balance design with more stable adjustment and better characteristic.
3. Besides panel-mounting, fixed bracket installation is optional.

Inner structure drawing:

■ AR200



■ AR300/400/500

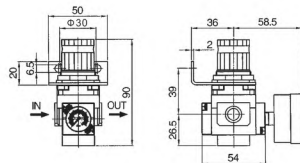


Number	Part name	Material
1	Hand wheel	POM
2	Lifting screw	Q235
3	Spring	Spring steel
4	Valve cover	POM
5	Nut	POM
6	Diaphragm	Q235+NBR
7	Valve core	HPb59-1+NBR
8	Spring	Stainless steel
9	O-ring	NBR
10	Valve body	Aluminium
11	Bottom cover	POM

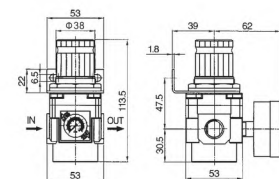
Regulator

■ Dimension(mm):

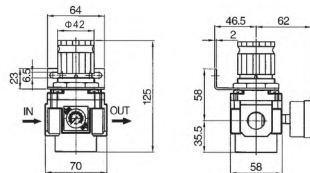
■ AR200A-01, 02



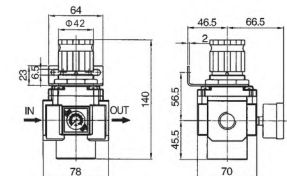
■ AR300A-02, 03



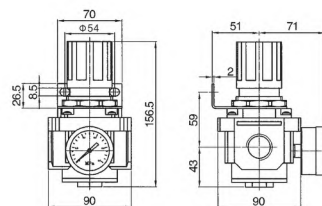
■ AR400A-03, 04



■ AR500A-06, 08



■ AR600A-06, 08



Lubricator

■ Specification:

Type	AL200A-01, 02	AL300A-02, 03	AL400A-03, 04	AL500A-06, 08	AL600A-06, 08
Port size G	1/8"-1/4"	1/4"-3/8"	3/8"-1/2"	3/4"-1"	3/4"-1"
Fluid	Compressed air				
Operating pressure range(MPa)	0.15~0.85				
Max Flowrate(L/min)	1200	2000	3500	5000	
Ambient temperature(°C)	-10~60				
Filter precision	ISO VG32				
Cup material	Polycarbonate				
Guard cup	-	•	•	•	•

Note1: The guard cup of AL200A series can be optional. Note2: Metal cups are optional.

■ Symbol:

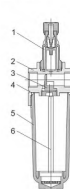


■ Product feature:

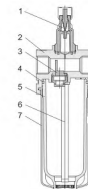
- 1.Oil dripping adopts the clearance seal to stabilize oil feeding.
- 2.Oil feeding is linear distribution and the quantity of oil is visible.
- 3.Special oil dripping structure leads to negative pressure at the exit of oil dripping and low fog flow.
- 4.Fixed bracket installation is optional.

■ Inner structure drawing:

■ AF200



■ AF300/400/500



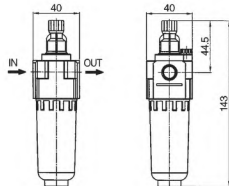
Number	Name	Material
1	Oil window	Assembly
2	Lubricator body	Aluminium
3	Damping fin	PJ
4	O-ring	NBR
5	Oil cup	PC
6	O-Ring	PJ
7	Guard cup	POM

■ How to order:

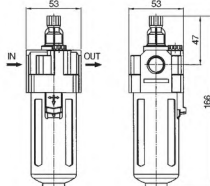
AL	500	A	06	J
Specification				
AL: Lubricator				
Series				
200 Series				
300 Series				
400 Series				
500 Series				
600 Series				
Type				
Blank: Old type				
A: Improved type				
Cup Material				
Blank: Polycarbonate				
J: Aluminium alloy				
Port size				
01: G1/8"				
02: G1/4"				
03: G3/8"				
04: G1/2"				
06: G3/4"				
08: G1"				

■ Dimension(mm):

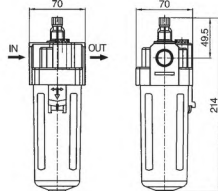
■ AL200A-01, 02



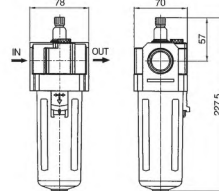
■ AL300A-02, 03



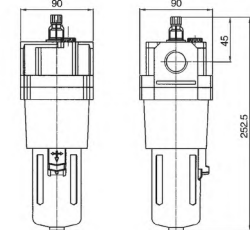
■ AL400A-03, 04



■ AL500A-06, 08



■ AL600A-06, 08



■ Symbol:



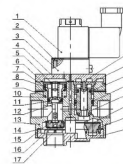
■ Product feature:

Soft start-up valve is used to input compressed air into pneumatic system slowly and has the effect of safety and protection. Air intake is connected with the input of Soft start-up valve.

If coil is energized, the 3/2 way valve opens. At this time, a little air comes to output A through throttle valve, which increases the pressure of the system gradually, when the output pressure is equal to the half of the input pressure, Soft start-up valve completely opens and the flow at this time reaches the highest value of itself.

When the coil is de-energized, air intake P closes, the air returns to R orifice through reflux valve and is quickly exhausted. The pressure of the system falls to zero, which protects the whole system.

■ Inner structure drawing:



Number	Name	Number	Name	Number	Name
1	Coil set	10	O ring	19	Spring
2	Sunk screw	11	Y seal	20	Y seal
3	Lead head set	12	Piston 1	21	Y seal
4	Body cover	13	Valve body	22	Piston 2
5	Split washer	14	Seal	23	Spool 2
6	Seal	15	O ring	24	Spring
7	Y seal	16	Valve rod	25	Bottom cover
8	O ring	17	Spool 1		
9	Spring	18	Cover		

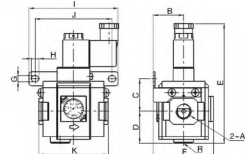
■ Specification:

Type	AV200-01, 02	AV300-02, 03	AV400-03, 04
Port size (G)	1/8" - 1/4"	1/4" - 3/8"	3/8" - 1/2"
Fluid	Compressed air		
Operating pressure range (MPa)	0.25 - 0.85		
Ambient temperature (°C)	-5 - 60		
Acting type	Electronic control		
Port size (G)	1/4"	3/8"	1/2"
Voltage range	±10		
Apply to FRL	AC200A.01, 02	AC300A.02, 03	AC400A.03, 04

■ How to order:

Specification	AV	300	02	M	AC220V	C	G
AV: Soft Start-up Valve							
Series		200 Series	300 Series	400 Series			
Port size		01: G1/8"	02: G1/4"	03: G3/8"	04: G1/2"	05: G3/4"	06: G1"
Thread type							
Blank: PT thread							
T: NPT thread							
G: G thread							
Wiring type							
Blank: White with ended							
C: Browns							
W: Lead wire type							
Coil Voltage							
DC24V							
AC220V 50/60Hz							
AC110V 50/60Hz							
Gauge type							
Blank: Round Gauge							
M: Embed square gauge							

■ Dimension(mm):



Symbol	Type	AV200		AV300		AV400	
		01	02	02	03	01	04
A	1/8"	24.5	1/4"	32.5	3/8"	40.5	1/2"
B	3/8"	30.5		34.5		39	
C	1/2"	34		34		40.5	
E	3/4"	123.5		130		142.5	
F	1"	57		64.5		70	
G	1 1/4"	5.5		6.5		8.5	
H	1 1/2"	8		8		11	
I	1 3/4"	80		95		120	
J	2"	67		82		102	
K	2 1/4"	59		74		90	
L	2 1/2"	1/4		3/8		1/2	



HVS

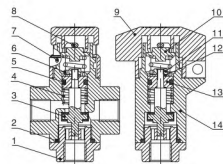
■ Symbol:



■ Product feature:

1. It is module design, with bracket can be used with AC series F.R.L.
2. This valve can be used as 2 position 3 way valve.
3. Specific EXH. / SUP. Switch logo is on the products.
4. This valve meets the standard on safe operation by operator specified by Occupational Safety & Health Administration. Before maintaining and servicing the equipment, turn off the air supply and release the residual pressure in the system. In order to prevent the third party during the maintenance of unintentional operation and put away the system pressure and action, so the provisions of the valve for this purpose must be coupled with safety locks.

■ Inner structure drawing:

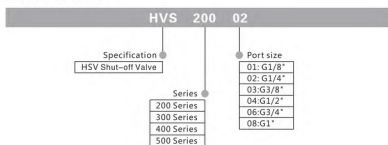


Number	Name	Material	Number	Name	Material
1	Bottom cover	Zinc NBR	8	Axis	Alloy steel
2	O-ring	NBR	9	Turn-knob	Zinc
3	Valve core rod	Valve core rod	10	Spring seat	Nickel-carbon steel
4	Reset spring	Stainless steel	11	Hex nut	Nickel-carbon steel
5	O-ring	NBR	12	Elastic gasket	Spring steel
6	Spring	SWC	13	Piston	Aluminium
7	Set screw	Nickel-carbon steel	14	Body	Cast aluminium

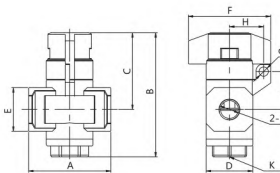
■ Specification:

Type	HVS200-01	HVS300-01	HVS300-02	HVS300-03	HVS400-01	HVS400-02	HVS400-03	HVS500-01	HVS500-02
Port size G	1/8"	1/4"	1/4"	3/8"	3/8"	1/2"	3/4"	1"	
Fluid	Compressed air								
Acting type	Manual								
Position number	2 Position 3Way								
Operating pressure range(MPa)	0~0.9								
Ambient temperature(℃)	-20~70								
Outlet diameter(mm)	8		10		15		25		
Max.pressure resistance(Mpa)	1.5								
Operation angle	90°								
Suitable F.R.L type	AC200A-01	AC200A-02	HVS300-02	AC300A-03	AC400A-03	AC400A-04	AC500A-06	AC500A-08	

■ How to order:



■ Dimension(mm):



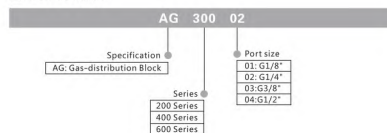
Name	A	B	C	D	E	F	G	H	I	J	K
HVS200-01	40	61	39	28	22	45	G1/8	18	18.5	5	G1/4
HVS200-02	40	61	39	28	22	45	G1/4	18	18.5	5	G1/4
HVS300-02	53	80	50	30	28	53	G1/4	22	24.4	6	G3/8
HVS300-03	53	80	50	30	28	53	G3/8	22	24.4	6	G3/8
HVS400-03	70	86	53	36	36	-	G3/8	-	-	-	G1/2
HVS400-04	70	86	53	36	36	-	G1/2	-	-	-	G1/2
HVS500-06	90	138	73	54	48	-	G1/2	-	-	-	G1
HVS500-08	90	138	73	54	48	-	G1	-	-	-	G1



■ Specification:

Type	AG200-01-02	AG300-02-03	AG400-03-04
Port size(G)	1/8" - 1/4"	1/4" - 3/8"	3/8" - 1/2"
Way number	Four		
Operating pressure range(MPa)	0~0.85		
Ambient temperature(°C)	-10~60		

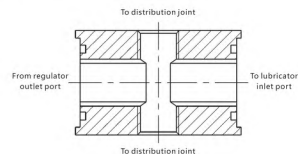
■ How to order:



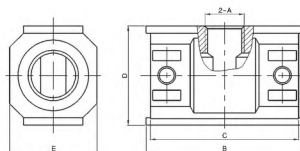
■ Product feature:

1. It is installed between AC series regulator(or filter & regulator)and lubricator. The air flow is divided by the device that one enters lubricator which supply oil for lubrication and the other (the second way) directly enters the equipment.
2. Using T bracket ,it can be connected with regulator and lubricator.

■ Inner structure drawing:

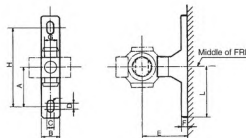


■ Dimension(mm):



Symbol	Type	AG200	AG300	AG400
		01-10	02-20	03-04
A	1/8"	1/4"	1/4"	3/8"
B	40	53	74	
C	42	50	70	
D	22	33.5	41.5	
E	27.5	29.5	36	

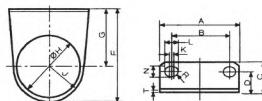
■ T type Bracket



Type	A	B	C	D	E	F	G	H	I	J	K	L	Applicable type
AC20T	24	15	5.5	3	30	5	10	48	2.75	33			AC200~AC201
AC30T	35	16	7	4	41	7	11	70	3.5	45			AC300~AC301
AC40T	40	22	9	4	50	7	14	80	4.5	50			AC400~AC401
AC50T	50	24	12	4	70	10	15	100	6.0	62.5			AC500~AC501

■ Y type Bracket

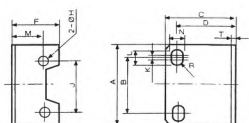
Appliesto AR, AW Series



Type	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Applicable type
AR20Y	50	35	20	12	50	36	30.5	15.3	2.3	8.7	5.4	3.2	2.3				AR/AW200
AR30Y	53	40	22	14	62	39	38.5	19.3	1.5	8	6.5	3.25	2.3				AR/AW300
AR40Y	70	54	27	18	75	49.2	42.5	21.3	2	10.5	8.5	4.25	2.3				AR/AW400
AR50Y	70	54	27	18	79.2	49.2	42.5	30	2	10.5	8.5	4.25	2.3				AR/AW500

■ J type Bracket

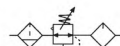
Appliesto AF, AL Series



Type	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Applicable type
AF20Y	40	27	33	27	18	4.5	26	3	8.4	14	5.4	2.7	2.3				AF/AL200
AF30Y	53	40	39	32	22.5	4.5	35	1.5	8	19	6.5	3.25	2.3				AF/AL300
AF40Y	70	54	47	38	31.5	5.5	47	2	10.5	20	8.5	4.25	2.3				AF/AL400
AF50Y	90	66	64	52	43	6.5	60	2	13	29	11	5.5	3.2				AF/AL500



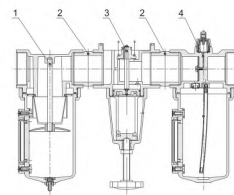
■ Symbol:



■ Product feature:

1. Oil dripping adopts the clearance seal to stabilize oil feeding.
2. Oil feeding is linear distribution and the quantity of oil is visible.
3. Fixed connection is fast reliable and easy for installation and using. Pressure adjust is stable and with high repeat precision.
4. High efficiency of removing water and solid particle.
5. Manual, differential pressure and automatic drain ways are optional.

■ Inner structure drawing:



Number	Name
1	Filter
2	Connecting block
3	Regulator
4	Lubricator

■ Specification:

Type	AC900-15	AC900S-15	AC900-20	AC900S-20
Portsize(G)	1 1/2"		2"	
Gauge thread(G)	1/4"			
Fluid	Compressed air			
Operating pressure range(MPa)	0.15~0.85			
Max. flow rate(L/min)	17500			
Ambient temperature(°C)	-10~60			
Filter precision	40µm			
Cup material	Polycarbonate, Die-casting Aluminum			

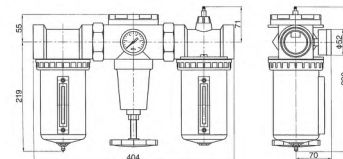
Note: Plastic cups are optional.

■ How to order:

AC	900	S	15	D
Specification	Series	Cup Material	Drainage Method	
AC: Filter+Regulator+Lubricator	900 Series	Blank: Aluminium S: Plastic	Blank: Differential pressure drain D: Auto-drain	
			Port size 15: G1/2" 20: G2"	

■ Dimension(mm):

■ AC900-15, 20



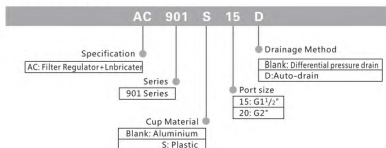


■ Specification:

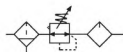
Type	AC901-15	AC901S-15	AC901-20	AC901S-20
Portsize(G)	1½"		2"	
Gaugethread(G)	1/4"			
Fluid	Compressed air			
Operating pressure(MPa)	0.15~0.85			
Max.flowrate(L/min)	17500			
Ambient temperature(°C)	-10~60			
Filter precision	40µm			
Cup material	Polycarbonate, Die-casting Aluminum			

Note: Plastic cups are optional.

■ How to order:



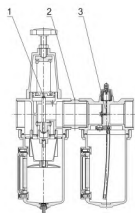
■ Symbol:



■ Product feature:

- Oil dripping adopts the clearance seal to stabilize oil feeding.
- Oil feeding is linear distribution and the quantity of oil is visible.
- Fixed connection is fast reliable and easy for installation and using. Pressure adjust is stable and with high repeat precision.
- High efficiency of removing water and solid particle.
- Manual, differential pressure and automatic drain ways are optional.

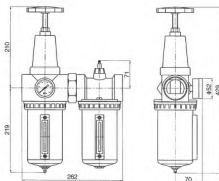
■ Inner structure drawing:



Number	Name
1	Connecting block
2	Filter Regulator
3	Lubricator

■ Dimension(mm):

■ AC901-15, 20



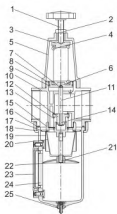
■ Symbol:



■ Product feature:

- Pressure adjustment mechanism adopts the balance design with more stable adjustment and better characteristic.
- Special guide structure makes the flowing gases spin properly to separate the water from gas and filter solid particle efficiently.
- Filter precision 5 or 40 µm is optional.
- Manual, differential pressure and automatic drain ways are optional.

■ Inner structure drawing:



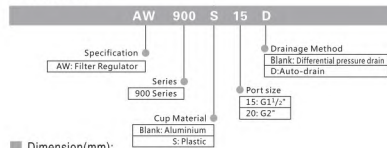
Number	Part Name	Material	Number	Part Name	Material
1	Hand wheel	POM+Q235	14	O-ring	NBR
2	Hex nut	Q235	15	Filter core	Aluminum
3	Spring seat	Q235	16	O-ring	NBR
4	Spring	Spring steel	17	Nut	Aluminum
5	Valve cover	Aluminum-Brass	18	Impeller	POM
6	Pinion	Aluminum	19	Filter core	POM
7	O-ring	NBR	20	Filter core	Isosintergarbis
8	Wearing ring	Composite bronze	21	Pull rod	Q235
9	O-ring	NBR	22	Impeller	POM
10	Valve body	Aluminum	23	O-ring	Aluminum+PC
11	Valve rod	Brass	24	Weld cup	Aluminum
12	Valve core	Brass+NBR	25	Drainer	Assembly
13	Spring	Spring steel			

■ Specification:

Type	AW900-15	AW900S-15	AW900-20	AW900S-20
Portsize(G)	1 1/2"		2"	
Gauge thread(G)	1/4"			
Fluid	Compressed air			
Operating pressure range(MPa)	0.15~0.85			
Max. flow rate(L/min)	17500			
Ambient temperature(°C)	-10~60			
Filter precision	40µm			
Cup material	Polycarbonate, Die-casting Aluminum			

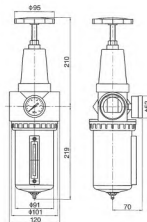
Note: Plastic cups are optional.

■ How to order:



■ Dimension(mm):

■ AW900-15, 20



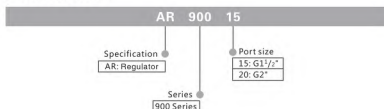
Regulator



■ Specification:

Type	AR900-15	AR900-20
Portsize(G)	1 1/2"	2"
Gauge thread(G)	1/4"	
Fluid	Compressed air	
Operating pressure range(MPa)	0.15~0.85	
Max. flow rate(L/min)	17500	
Ambient temperature(°C)	-10~60	

■ How to order:



■ Symbol:

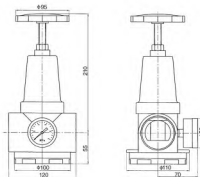


■ Product feature:

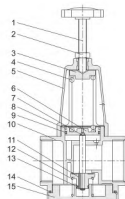
1. Pressure adjustment mechanism adopts the balance design with more stable adjustment and better characteristic.

■ Dimension(mm):

■ AR900-15, 20



■ Inner structure drawing:



Number	Name	Material
1	Hand wheel	ABS+Q235
2	Hex nut	Q235
3	Spring seat	Q235
4	Spring	Spring steel
5	Valve cover	Aluminium+Brass
6	Piston	Aluminium
7	O-ring	NBR
8	Wearing ring	Polycarbonate
9	O-ring	NBR
10	Valve body	Aluminium
11	Valve cone	Brass+NBR
12	Spring	Spring steel
13	O-ring	NBR
14	O-ring	NBR
15	Bottom cover	Aluminium

Filter

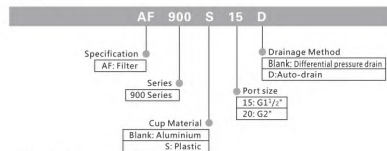


■ Specification:

Type	AF900-15	AF900S-15	AF900-20	AF900S-20
Portsize(G)	1 1/2"		2"	
Fluid	Compressed air			
Operating pressure range(MPa)	0.15~0.85			
Max. flow rate(L/min)	17500			
Ambient temperature(°C)	-10~60			
Filter precision	40µm			

Note: Plastic cups are optional.

■ How to order:



■ Symbol:

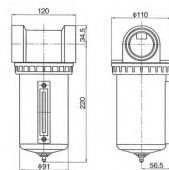


■ Product feature:

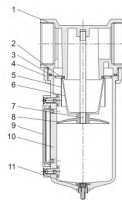
1. Special guide structure makes the flowing gases spin properly to separate the water from gas and filter solid particle efficiently.
2. Low pressure loss and high division efficiency.

■ Dimension(mm):

■ AF900-15, 20



■ Inner structure drawing:



Number	Name	Material
1	Valve body	Aluminium
2	Impeller	PCMC
3	O-ring	NBR
4	Wet cap	Aluminium
5	Filter cover cover	PCMC
6	Filter core	Bronze sintering particles
7	Screw rod	Q235
8	Thermoplastic	PCMC
9	Oil level displayer	Aluminium+PC
10	Metal oil cup	Aluminium
11	Drainer	Assembly

Lubricator



AL

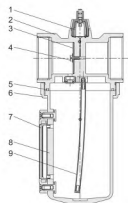
■ Symbol:



■ Product feature:

1. Oil dripping adopts the clearance seal to stabilize oil feeding.
2. Oil feeding is linear distribution and the quantity of oil is visible.
3. Special oil dripping structure leads to negative pressure at the exit of oil dripping and low fog flow.

■ Inner structure drawing:



Number	Name	Material
1	Oil window	PC
2	Valve body	Aluminium
3	Damping fin	NBR
4	Screw	Brass
5	O-ring95-3	NBR
6	Nut	Aluminium
7	Oil level displayer	Aluminium-PC
8	Metal oil cup	Aluminium
9	Oil tube	PU

■ Specification:

Type	AL900-15	AL900S-15	AL900-20	AL900S-20
Portsize(G)	1½"		2"	
Fluid	Compressed air			
Operating pressure range(MPa)	0.15~0.85			
Max.flow rate(L/min)	17500			
Ambient temperature(°C)	-10~60			
Cup material	Polycarbonate, Die-casting Aluminum			

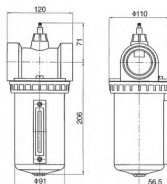
Note: Plastic cups are optional.

■ How to order:

AL	900	S	15
Specification	AL: Lubricator		Port size 15: G1 1/2" 20: G2"
Series	900 Series		Cup Material Blank: Aluminium S: Plastic

■ Dimension(mm):

■ AL900-15, 20



FRL, UFRL Filter+Regulator+Lubricator ----- Optional(1/4", 3/8", 1/2", 3/4", 1") 043



FR/L, UFR/L Filter Regulator+Lubricator ----- Optional(1/4", 3/8", 1/2", 3/4", 1") 045



FR, UFR Filter Regulator ----- Optional(1/4", 3/8", 1/2", 3/4", 1") 047



F, UF Filter ----- Optional(1/4", 3/8", 1/2", 3/4", 1") 049

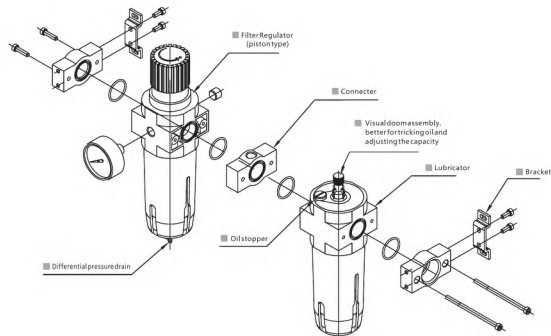


R, UR Relief Valve ----- Optional(1/4", 3/8", 1/2", 3/4", 1") 051



L, UL Atomized Lubricator ----- Optional(1/4", 3/8", 1/2", 3/4", 1") 053

F.R.L assembled sketch:

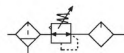


Filter+Regulator+Lubricator

■ Specification:

Type	UFRL-02	UFRL-02	UFRL-03	UFRL-04	UFRL-06	UFRL-08
Port size(G)	1/4"	1/4"	3/8"	1/2"	3/4"	1"
Gauge thread(G)	1/8"			1/4"		
Fluid	Compressed air					
Operating pressure range(MPa)	0.15~0.85					
Max.Flow rate(L/min)	1850		2800		7900	8100
Ambient temperature(°C)	-10~60					
Filter precision	5µm or 40µm					
Oil recommended	ISO VG32					
Cup material	Polycarbonate					
Structure	Piston type			Diaphragm type		
Optional	-	•	•	•	•	•

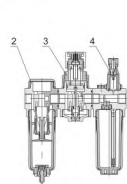
Note: Metal cups are optional.

■ Symbol:

■ Product feature:

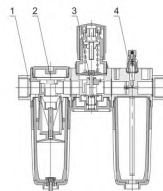
- Oil dripping adopts the clearance seal to stabilize oil feeding.
- Oil feeding is linear distribution and the quantity of oil is visible.
- Fixed connection is fast reliable and easy for installation and using. Pressure adjust is stable and with high repeat precision.
- High efficiency of removing water and solid particle.
- Manual, differential pressure and automatic drain ways are optional.

■ Inner structure drawing:

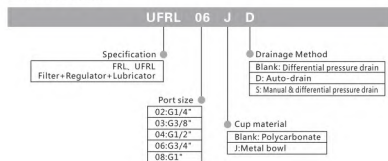
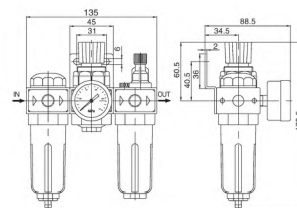
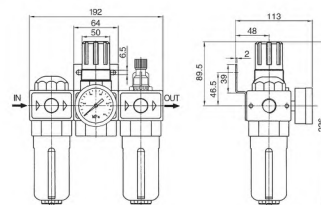
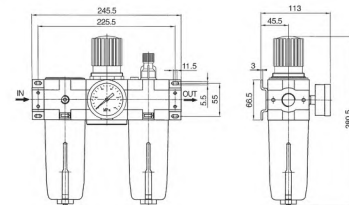
■ FRL-02



■ UFRL-06、08



Number	Name
1	Connecting block
2	Filter
3	Regulator
4	Lubricator

■ How to order:

Filter+Regulator+Lubricator
■ Dimension(mm)
■ FRL-02

■ UFRL-02、03、04

■ UFRL-06、08


Filter Regulator+Lubricator

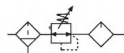


■ Specification:

Type	FR/L-02	UFR/L-02	UFR/L-03	UFR/L-04	UFR/L-06	UFR/L-08
Port size(G)	1/4"	1/4"	3/8"	1/2"	3/4"	1"
Gauge thread(G)	1/8"			1/4"		
Fluid	Compressed air					
Operating pressure range(MPa)	0.15~0.85					
Max. Flow rate(L/min)	1850		2800		7900	8100
Ambient temperature(°C)	-10~60					
Filter precision	5µm or 40µm					
Oil recommended	ISO VG32					
Cup material	Polycarbonate					
Structure	Piston type			Diaphragm type		
Optional	-	•	•	•	•	•

Note: Metal cups are optional.

■ Symbol:

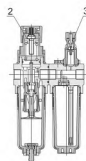


■ Product feature:

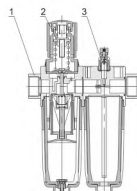
- Oil dripping adopts the clearance seal to stabilize oil feeding.
- Oil feeding is linear distribution and the quantity of oil is visible.
- Fixed connection is fast reliable and easy for installation and using. Pressure adjust is stable and with high repeat precision.
- High efficiency of removing water and solid particle.
- Manual, differential pressure and automatic drain ways are optional.

■ Inner structure drawing:

■ FR/L-02

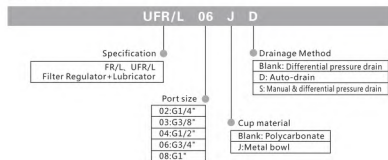


■ UFR/L-06、08



Number	Name
1	Connecting block
2	Filter Regulator
3	Lubricator

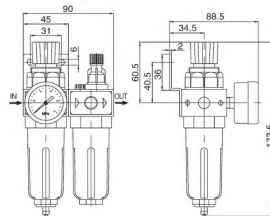
■ How to order:



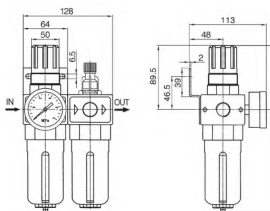
Filter Regulator+Lubricator

■ Dimension(mm)

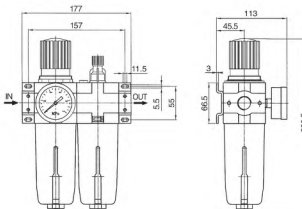
■ FR/L-02



■ UFR/L-02、03、04



■ UFR/L-06、08



Filter Regulator

FR
UFR

■ Symbol:

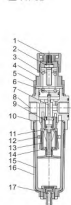


■ Product feature:

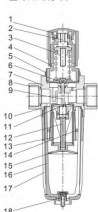
1. Hand wheel adopts the pressed self-locking mechanism to prevent the setting pressure from external disturbance and unusual action.
2. Pressure adjustment mechanism adopts the balance design with more stable adjustment and better characteristic.
3. Special guide structure makes the flowing gases spin properly to separate the water from gas and filter solid particle efficiently.
4. Filter precision 5 or 40 μ m is optional.
5. Manual, differential pressure and automatic drain ways are optional.

■ Inner structure drawing:

■ FR-02



■ UFR-06, 08



Number	Name	Material
1	Hand wheel	POM
2	Lifting screw	Brass
3	Spring	Spring steel
4	Valve cover	POM
5	Nut	POM
6	Piston	Aluminium
7	Valve body	Aluminium
8	Connecting block	Aluminium
9	Valve core	Brass+NBR
10	O-ring	NBR
11	Valve core Spring	Stainless steel
12	Filter core pedestal	POM
13	Filter core	Bronze sintering particles
14	Impeller	Polypropylene fiber
15	Filter core support	POM
16	Water cup	PC
17	Guard cup	POM
18	Drainer	Assembly

■ Specification:

Type	FR-02	UFR-02	UFR-03	UFR-04	UFR-06	UFR-08
Port size(G)	1/4"	1/4"	3/8"	1/2"	3/4"	1"
Gauge thread(G)	1/8"		1/4"			
Fluid	Compressed air					
Operating pressure range(MPa)	0.15~0.85					
Max. flow rate(L/min)	1850	2800	7900	8100		
Ambient temperature(°C)	-10~60					
Filter precision	5 μ m or 40 μ m					
Cup material	Polycarbonate					
Structure	Piston type			Diaphragm type		
Optional	-	•	•	•	•	•

Note: Metal cups are optional.

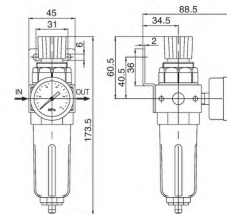
■ How to order:

UFR 06 J D			
Specification		Drainage Method	
FR: UFR: Filter Regulator		Blank: Differential pressure drain	
UFRH: Filter Regulator		D: Auto-drain	
		S: Manual & differential pressure drain	
Port size		Cup material	
02: G1/4"		Blank: Polycarbonate	
03: G3/8"		J: Metal bowl	
04: G1/2"			
06: G3/4"			
08: G1"			

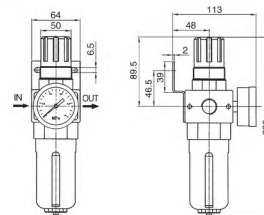
Filter Regulator

■ Dimension(mm)

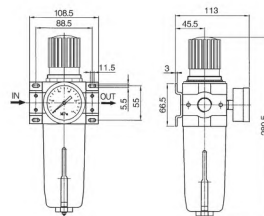
■ FR-02



■ UFR-02, 03, 04



■ UFR-06, 08





Specification:

Type	F-02	UF-02	UF-03	UF-04	UF-06	UF-08
Port size(G)	1/4"	1/4"	3/8"	1/2"	3/4"	1"
Fluid	Compressed air					
Operating pressure(MPa)	0.15~0.85					
Max.Flowrate(L/min)	1850	2800	7900	8100		
Ambient temperature(°C)	-10~60					
Filter precision	5µm or 40µm					
Cup material	Polycarbonate					
Optional	-	•	•	•	•	•

Note: Metal cups are optional.

Symbol:



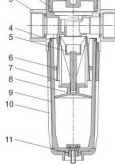
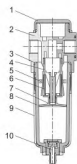
Product feature:

- 1.Special guide structure makes the flowing gases spin properly to separate the water from gas and filter solid particle efficiently.
- 2.Low pressure loss and high division efficiency.
- 3.Filter precision 5 or 40 µm is optional.
- 4.Manual, differential pressure and automatic drain ways are optional.

Inner structure drawing:

■ F-02

■ UF-06, 08



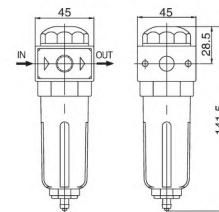
Number	Item	Material
1	Decorative cover	POM
2	Filter body	Aluminium
3	Connecting block	Aluminium
4	O-ring	NBR
5	Filter core pedestal	POM
6	Impeller	POM
7	Filter core	Bronze sintering particles Polypropylene fiber
8	Filter core pedestal	POM
9	Water cup	PC
10	Guard cup	POM
11	Drainer	Assembly

How to order:

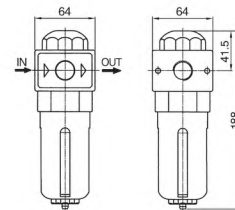
UF	06	J	D
Specification	F: UF Filter UFH: Filter	Drainage Method	Blank: Differential pressure drain D: Auto-drain S: Manual & differential pressure drain
Port size	02:G1/4" 03:G3/8" 04:G1/2" 06:G3/4" 08:G1"	Cup material	Blank: Polycarbonate J: Metal bowl

Dimension(mm)

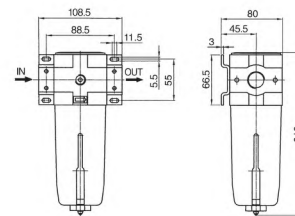
■ F-02



■ UF-02, 03, 04



■ UF-06, 08





R
UR

Symbol:

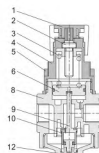


Product feature:

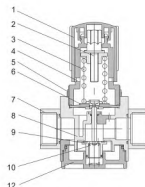
1. Hand wheel adopts the pressed self-locking mechanism to prevent the setting pressure from external disturbance and unusual action.
2. Pressure adjustment mechanism adopts the balance design with more stable adjustment and better characteristic.
3. Besides panel-mounting, fixed bracket installation is optional.

Inner structure drawing:

R-02



UR-06, 08



Number	Name	Material
1	Hand wheel	POM
2	Lifting screw	Q235
3	Spring	Spring steel
4	Valve cover	POM
5	Nut	POM
6	Piston	Aluminium
7	Connecting block	Aluminium
8	Regulate body	Aluminium
9	Filter core	Brass+NBR
10	Spring	Stainless steel
11	Filter core pedestal	POM
12	Bottom cover	Aluminium

Specification:

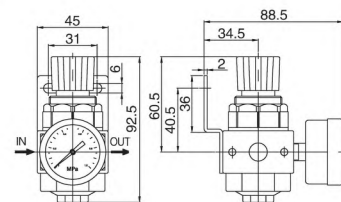
Type	R-02	UR-02	UR-03	UR-04	UR-06	UR-08
Port size(G)	1/4"	1/4"	3/8"	1/2"	3/4"	1"
Gauge thread(G)	1/8"				1/4"	
Fluid	Compressed air					
Operating pressure range(MPa)	0.15~0.85					
Max.Flow rate(L/min)	1850		2800		7900	8100
Ambient temperature(°C)	-10~60					
Structure	Piston type			Diaphragm type		

How to order:

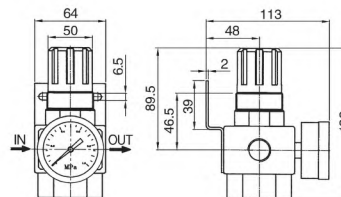
UR 06	
Specification	Port size
R: UR-Regulator	02: G1/4"
URH: Regulator	03: G3/8"
	04: G1/2"
	06: G3/4"
	08: G1"

Dimension(mm)

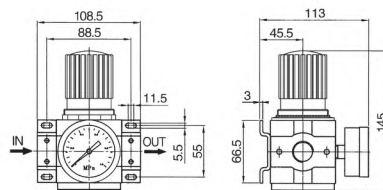
R-02



R-02, 03, 04



R-06, 08



Lubricator



Symbol:

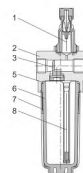


Product feature:

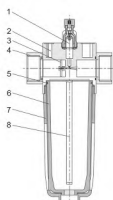
1. Oil dripping adopts the clearance seal to stabilize oil feeding.
2. Oil feeding is linear distribution and the quantity of oil is visible.
3. Special oil dripping structure leads to negative pressure at the exit of oil dripping and low fog flow.
4. Fixed bracket installation is optional.

Inner structure drawing:

■ L-02



■ UL-06, 08



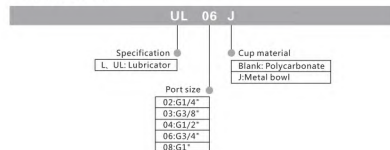
Number	Name	Material
1	Oil window	Assembly
2	Lubricator body	Aluminium
3	Damping fin	PU
4	Connecting block	Aluminium
5	O-ring	NBR
6	Oil cup	PC
7	Guard cup	POM
8	Oil tube	PU

Specification:

Type	L-02	UL-02	UL-03	UL-04	UL-06	UL-08
Port size G	1/4"	1/4"	3/8"	1/2"	3/4"	1"
Fluid	Compressed air					
Operating pressure(MPa)	0.15~0.85					
Max flow rate(L/min)	2500		3500		7900	8100
Ambient temperature(°C)	-10~60					
Oil recommended	ISO VG32					
Cup material	Polycarbonate					
Optional	-	•	•	•	•	•

Note: Metal cups are optional.

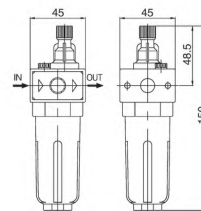
How to order:



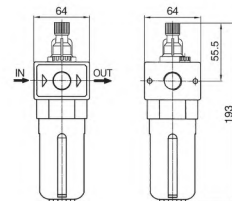
Lubricator

Dimension(mm)

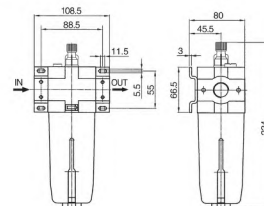
FR/L-02



UFR/L-02, 03, 04



UFR/L-06, 08





AC, BC Filter+Regulator+Lubricator ----- Optional(1/4",3/8",1/2") 056



AFC, BFC Filter Regulator+Lubricator ----- Optional(1/4",3/8",1/2") 057



AFR, BFR Filter Regulator ----- Optional(1/4",3/8",1/2") 058



AF, BF Filter ----- Optional(1/4",3/8",1/2") 059

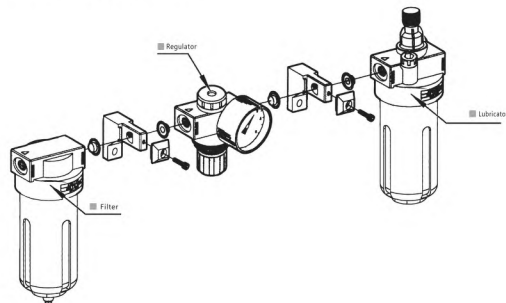


AR, BR Relief Valve ----- Optional(1/4",3/8",1/2") 060



AL, BL Atomized Lubricator ----- Optional(1/4",3/8",1/2") 061

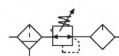
AC, BC assembled sketch:



Filter+Regulator+Lubricator



Symbol:

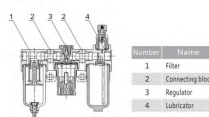


Product feature:

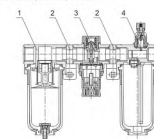
1. Oil dripping adopts the clearance seal to stabilize oil feeding.
2. Oil feeding is linear distribution and the quantity of oil is visible.
3. Fixed connection is fast reliable and easy for installation and using. Pressure adjust is stable and with high repeat precision.
4. High efficiency of removing water and solid particle.
5. Manual, differential pressure and automatic drain ways are optional.

Inner structure drawing:

AC2000A



BC2000A/3000A/4000A



Specification:

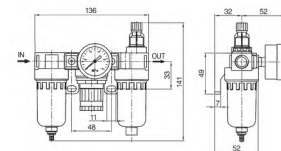
Type	AC2000A	BC2000A	BC3000A	BC4000A
Port size(G)	1/4"	1/4"	3/8"	1/2"
Gauge thread(G)	1/8"			
Fluid	Compressed air			
Operating pressure range(MPa)	0.15~0.85			
Max. Flow rate(L/min)	700		1400	
Ambient temperature(°C)	-10~60			
Filter precision	5µm or 40µm			
Oil recommended	ISO VG32			
Optional	-	•	•	•

How to order:

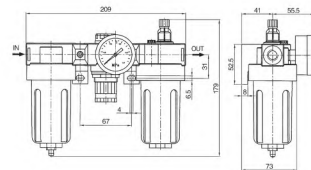
AC	2000	A	D
Specification AC: Filter+Regulator+Lubricator BC: Filter+Regulator+Lubricator		Drainage Method Blank: Differential pressure drain D: Auto-drain	
Port size 2000: G1/4" 3000: G3/8" 4000: G1/2"		Type Blank: Old type A: Improved type	

Dimension(mm)

AC2000A



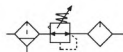
BC2000A/3000A/4000A





AFC
BFC

■ Symbol:

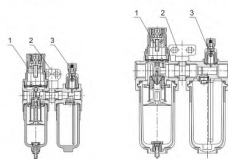


■ Product feature:

- Oil dripping adopts the clearance seal to stabilize oil feeding.
- Oil feeding is linear distribution and the quantity of oil is visible.
- Fixed connection is fast reliable and easy for installation and using. Pressure adjust is stable and with high repeat precision.
- High efficiency of removing water and solid particle.
- Manual, differential pressure and automatic drain ways are optional.

■ Inner structure drawing:

■ AFC2000A ■ BFC2000A/3000A/4000A



Number	Name
1	Connecting block
2	Filter Regulator
3	Lubricator

■ Specification:

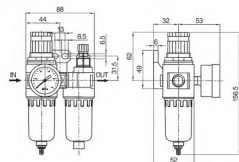
Type	AFC2000A	BFC2000A	BFC3000A	BFC4000A
Port size(G)	1/4"	1/4"	3/8"	1/2"
Gauge thread(G)		1/8"		
Fluid	Compressed air			
Operating pressure range(MPa)	0.15~0.85			
Max.Flow rate(L/min)	700		1400	
Ambient temperature(°C)	-10~60			
Filter precision	5µm or 40µm			
Oil recommended	ISO VG32			
Optional	-	•	•	•

■ How to order:

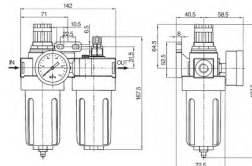
AFC	2000	A	D
Specification		Drainage Method	
AFC: Filter Regulator+Lubricator BFC: Filter Regulator+Lubricator		Blank: Differential pressure drain D: Auto-drain	
Port size		Type	
2000-G1/4" 3000-G3/8" 4000-G1/2"		Blank: Old type A: Improved type	

■ Dimension(mm)

■ AFC2000A



■ BFC2000A/3000A/4000A



AFR
BFR

■ Symbol:

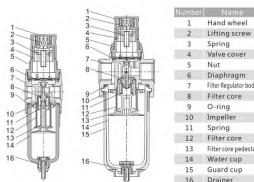


■ Product feature:

- Hand wheel adopts the pressed self-locking mechanism to prevent the setting pressure from external disturbance and unusual action.
- Pressure adjustment mechanism adopts the balance design with more stable adjustment and better characteristic.
- Special guide structure makes the flowing gases spin properly to separate the water from gas and filter solid particle efficiently.
- Filter precision 5 or 40 µm is optional.
- Manual, differential pressure and automatic drain ways are optional.

■ Inner structure drawing:

■ AFR2000A ■ BFR2000A/3000A/4000A



■ Specification:

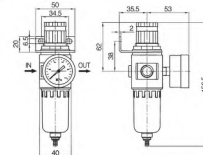
Type	AFR2000A	BFR2000A	BFR3000A	BFR4000A
Port size(G)	1/4"	1/4"	3/8"	1/2"
Gauge thread(G)		1/8"		
Fluid	Compressed air			
Operating pressure range(MPa)	0.15~0.85			
Max.Flow rate(L/min)	700		1400	
Ambient temperature(°C)	-10~60			
Filter precision	5µm or 40µm			
Optional	-	•	•	•

■ How to order:

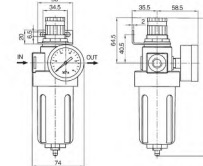
AFR	2000	A	D
Specification		Drainage Method	
AFR: Filter Regulator BFR: Filter Regulator		Blank: Differential pressure drain D: Auto-drain	
Port size		Type	
2000-G1/4" 3000-G3/8" 4000-G1/2"		Blank: Old type A: Improved type	

■ Dimension(mm)

■ AFR2000A



■ BFR2000A/3000A/4000A



Filter



Symbol:

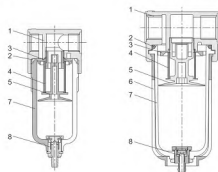


Product feature:

1. Special guide structure makes the flowing gases spin properly to separate the water from gas and filter solid particle efficiently.
2. Low pressure loss and high division efficiency.
3. Filter precision 5 or 40 μ m is optional.
4. Manual, differential pressure and automatic drain ways are optional.

Inner structure drawing:

■ AF2000A ■ BF2000A/3000A/4000A



Number	Name	Number	Name
1	Filter body	5	Guard cup
2	O-ring	6	Filter core pedestal
3	Impeller	7	Water cup
4	Filter core	8	Drainer

Specification:

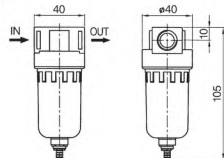
Type	AF2000A	BF2000A	BF3000A	BF4000A
Port size(G)	1/4"	1/4"	3/8"	1/2"
Fluid	Compressed air			
Operating pressure range(MPa)	0.15~0.85			
Max.Flow rate(L/min)	700	1400		
Ambient temperature(°C)	-10~60			
Filter precision	5µm or 40µm			
Optional	-	•	•	•

How to order:

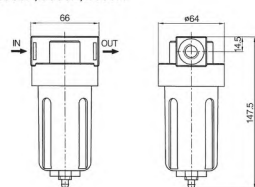
AF 2000 A D			
Specification	Port size	Type	Drainage Method
AF: Filter BF: Filter	2000-G1/4" 3000-G3/8" 4000-G1/2"	Blank: Old type A: Improved type	Blank: Differential pressure drain D: Auto-drain

Dimension(mm)

■ AF2000A



■ BF2000A/3000A/4000A



Regulator



Symbol:

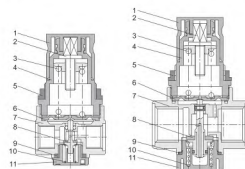


Product feature:

1. Hand wheel adopts the pressed self-locking mechanism to prevent the setting pressure from external disturbance and unusual action.
2. Pressure adjustment mechanism adopts the balance design with more stable adjustment and better characteristic.
3. Besides panel-mounting, fixed bracket installation is optional.

Inner structure drawing:

■ AF2000A ■ BF2000A/3000A/4000A



Number	Name	Number	Name
1	Hand wheel	7	Regulate body
2	Lifting screw	8	Valve core
3	Spring	9	O-ring
4	Valve cover	10	Spring
5	Nut	11	Bottom cover
6	Diaphragm		

Specification:

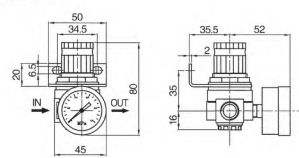
Type	AR2000A	BR2000A	BR3000A	BR4000A
Port size(G)	1/4"	1/4"	3/8"	1/2"
Gauge thread(G)	1/8"			
Fluid	Compressed air			
Operating pressure range(MPa)	0.15~0.85			
Max.Flow rate(L/min)	700	1400		
Ambient temperature(°C)	-10~60			

How to order:

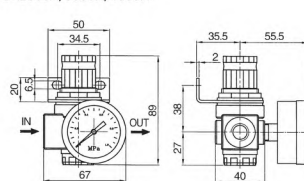
AR 2000 A			
Specification	Port size	Type	
AR: Regulator BR: Regulator	2000-G1/4" 3000-G3/8" 4000-G1/2"	Blank: Old type A: Improved type	

Dimension(mm)

■ AR2000A



■ BR2000A/3000A/4000A





■ Symbol:

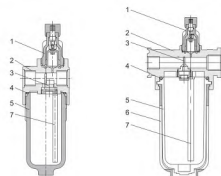


■ Product feature:

1. Oil dripping adopts the clearance seal to stabilize oil feeding.
2. Oil feeding is linear distribution and the quantity of oil is visible.
3. Special oil dripping structure leads to negative pressure at the exit of oil dripping and low fog flow.

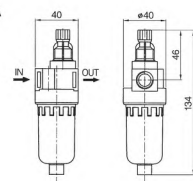
■ Inner structure drawing:

■ AL2000A

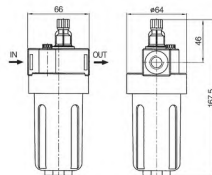


Number	Name	Number	Name
1	Oil window	5	Oil cup
2	Lubricator body	6	Guard cup
3	Damping fin	7	Oil tube
4	O-ring		

■ BL2000A/3000A/4000A



■ BL2000A/3000A/4000A



■ Specification:

Type	AL2000A	BL2000A	BL3000A	BL4000A
Port size(G)	1/4"	1/4"	3/8"	1/2"
Fluid	Compressed air			
Operating pressure range(MPa)	0.15~0.85			
Max.Flow rate(L/min)	700	1400		
Ambient temperature(°C)	-10~60			
Oil recommended	ISO VG32			
Optional	-	•	•	•

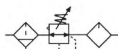
■ How to order:

AL	2000	A
Specification		Type
AL: Lubricator		Blank: Old type
BL: Lubricator		A: Improved type
Port size		
2000: G1/4"		
3000: G3/8"		
4000: G1/2"		

■ Dimension(mm)



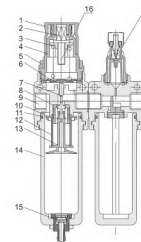
■ Symbol:



■ Product feature:

1. Oil dripping adopts the clearance seal to stabilize oil feeding.
2. Oil feeding is linear distribution and the quantity of oil is visible.
3. Fixed connection is fast reliable and easy for installation and using. Pressure adjust is stable and with high repeat precision.
4. High efficiency of removing water and solid particle.
5. Filter precision 5 or 40 μm is optional.
6. Manual, differential pressure and automatic drain ways are optional.

■ Inner structure drawing:



Number	Name
1	Hand wheel
2	Lifting screw
3	Spring
4	Valve cover
5	Nut
6	Diaphragm
7	Valve core
8	Spring
9	Filter Regulator body
10	Impeller
11	O-ring
12	Filter core
13	Filter core pedestal
14	Water cup
15	Drainer
16	Filter Regulator
17	Lubricator

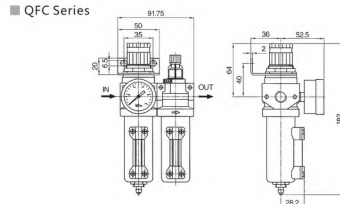
■ Specification:

Type	QFC200-02	QFR200-02
Port size(G)	1/4"	
Gauge thread(G)	1/8"	
Fluid	Compressed air	
Operating pressure(MPa)	0.15~0.85	
Max.Flow rate(L/min)	800	
Ambient temperature(°C)	-10~60	
Filter precision	5μm or 40μm	
Oil recommended	ISO VG32	

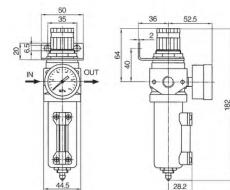
■ How to order:

QFC	200	02
Specification		Port size
QFC: Filter Regulator+Lubricator		02: G1/4"
QFR: Filter Regulator		
Series	200 Series	

■ Dimension(mm)



■ QFR Series

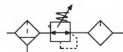


Filter Regulator+Lubricator, Filter Regulator



SFC
SFR

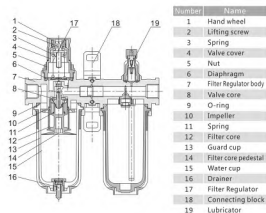
■ Symbol:



■ Product feature:

1. Oil dripping adopts the clearance seal to stabilize oil feeding.
2. Oil feeding is linear distribution and the quantity of oil is visible.
3. Fixed connection is fast reliable and easy for installation and using. Pressure adjust is stable and with high repeat precision.
4. High efficiency of removing water and solid particle.
5. Filter precision 5 or 40 μm is optional.
6. Manual, differential pressure and automatic drain ways are optional.

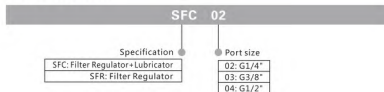
■ Inner structure drawing:



■ Specification:

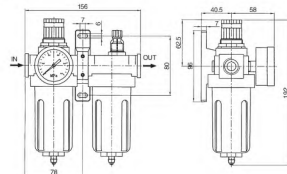
Type	SFC-02	SFC-03	SFC-04
Port size(G)	SFR-02	SFR-03	SFR-04
Gauge thread(G)	1/4"	3/8"	1/2"
Fluid	Compressed air		
Operating pressure range(MPa)	0.15~0.85		
Max.Flow rate(L/min)	1400		
Ambient temperature(°C)	-10~60		
Filter precision	5μm or 40μm		
Oil recommended	ISO VG32		

■ How to order:

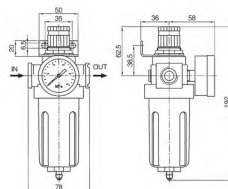


■ Dimension(mm)

■ SFC Series



■ SFR Series



Precision Regulator



■ Symbol:



■ Product feature:

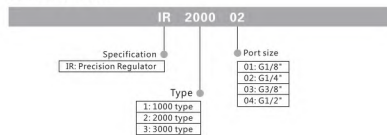
1. Compact and light weight.
2. Flow rate is 20% higher than that of traditional ones(Max.Flow Rate:1 l/min).
3. Exhaust rate is 5 times higher than that of traditional ones.
4. Precise pressure setting.
5. Easy for mounting, capable of mounting individually together with modular filter combination and mounting on panel.
6. Piloted exhaust and main exhaust are separated.
7. Applicable for clean room.

■ Specification:

Type	IR10: 0-01	IR20: 0-02	IR30: 0-02/03/04
Port size(G)	01: 1/8", 02: G1/4", 03: G3/8", 04: G1/2"		
Fluid	Compressed air		
Operating pressure range MPa	IR1000: 0.005~0.2 IR1010: 0.01~0.4 IR1020: 0.01~0.8	IR2000: 0.005~0.2 IR2010: 0.01~0.4 IR2020: 0.01~0.8	IR1000: 0.01~0.2 IR1010: 0.01~0.4 IR1020: 0.01~0.8
Ambient temperature(°C)	-5~60		
Sensitivity	Within 0.2% of full scale		
Repeated precision	Within ±0.5% of full scale		

Air consumption(at the pressure of 1.0Mpa) Max. within 4.4min(ANR) Max. within 4.4min(ANR) Max. within 11.5min(ANR)

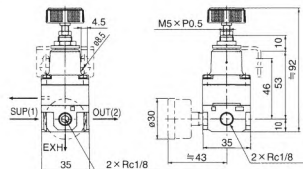
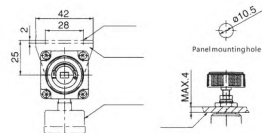
■ How to order:



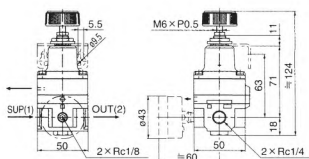
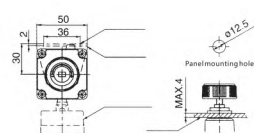
Precision Regulator

■ Dimension(mm)

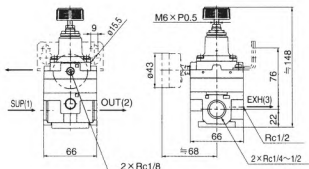
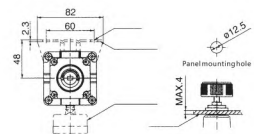
■ IR10□0-01



■ IR20□0-02



■ IR30□0-02, 03, 04



Filter Regulator



■ Symbol:



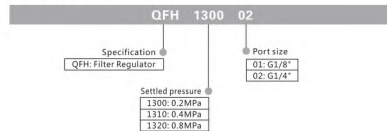
■ Product feature:

1. Pressure adjustment mechanism adopts the balance design with more stable adjustment and better characteristic.
2. Special guide structure makes the flowing gases spin properly to separate the water from gas and filter solid particle efficiently.
3. Filter precision 5 or 40 μ m is optional.
4. Manual, differential pressure and automatic drain ways are optional.

■ Specification:

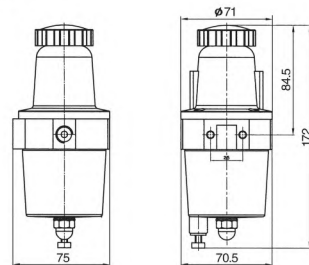
Type	QFH1300-01/02	QFH1310-01/02	QFH1320-01/02
Port size(G)	01:G1/8" 02:G1/4"		
Fluid	Compressed air		
Filter precision	5 μ m or 40 μ m		
Operating pressure range(MPa)	0.05~0.2	0.05~0.4	0.05~0.8
Ambient temperature(°C)	-5~60		
Drain	Manual		

■ How to order:



■ Dimension(mm)

■ QFH Series



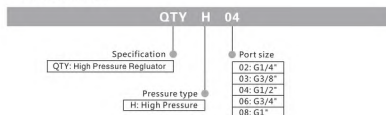
High Pressure Regulator



■ Specification:

Type	QTYH-02	QTYH-03	QTYH-04	QTYH-06	QTYH-08
Port size(G)	1/4"	3/8"	1/2"	3/4"	1"
Max working pressure(MPa)	4				
Operating pressure range(MPa)	0.05-3				
Fluid	Compressed air				
Ambient temperature(°C)	-5~60				

■ How to order:



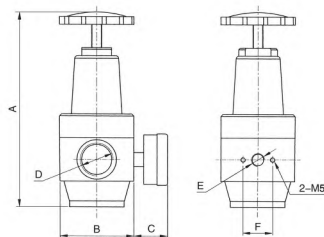
■ Symbol:



■ Product feature:

- Compressed air can be adusted from 4MPa to 3MPa and kept steady-going

■ Dimension(mm)



Nominal Diameter	type	A	B	C
02		150	55×55	35
03		150	55×55	35
04		150	55×55	35
06		224	75×75	35
08		224	75×75	35

Nominal Diameter	type	D	E	F
02		G1/4	G1/4	30
03		G3/8	G1/4	30
04		G1/2	G1/4	30
06		G3/4	G1/4	40
08		G1	G1/4	40

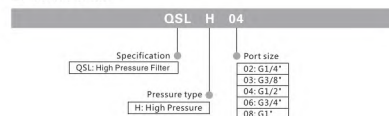
High Pressure Filter



■ Specification:

Type	QSLH-02	QSLH-03	QSLH-04	QSLH-06	QSLH-08
Port size (G)	1/4"	3/8"	1/2"	3/4"	1"
Fluid	Compressed air				
Ambient temperature(°C)	-5~60				
Max working pressure(MPa)	4				
Operating pressure range(MPa)	0.05-3				
Filter precision	5μm or 40μm				

■ How to order:



■ Symbol:

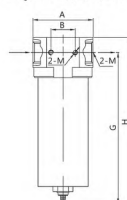


■ Product feature:

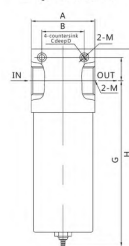
- Compressed air can be adusted from 4MPa to 3MPa and kept steady-going

■ Dimension(mm)

■ QSLH-02, 03, 04



■ QSLH-06, 08



Nominal Diameter	type	A	B	C	D	E
02		60×55	24	-	-	-
03		60×55	24	-	-	-
04		60×55	24	-	-	-
06		75×75	50	10.5	6.5	6.5
08		75×75	50	10.5	6.5	6.5

Nominal Diameter	type	F	G	H	M
02		-	150.5	165.5	G1/4
03		-	150.5	165.5	G3/8
04		-	150.5	165.5	G1/2
06		27.5	195.5	233	G3/4
08		27.5	195.5	233	G1



QFRH

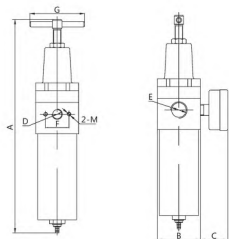
■ Symbol:



■ Product feature:

1. Compressed air can be adjusted from 4MPa to 3MPa and kept steady-going

■ Dimension(mm)



■ Specification:

Type	QFRH-02	QFRH-03	QFRH-04	QFRH-06	QFRH-08
Prot size (G)	1/4"	3/8"	1/2"	3/4"	1"
Fluid	Compressed air				
Max working pressure(MPa)	4				
Operating pressure range(MPa)	0.05~3				
Ambient temperature(°C)	-10~70				

■ How to order:

QFR	H	04
Specification		Port size
QFR: High Pressure Regulator		02: G1/4"
		03: G3/8"
		04: G1/2"
		06: G3/4"
		08: G1"
Pressure type		
H: High Pressure		

Normal Diameter	type	A	B	C
02		273	55×55	35
03		273	55×55	35
04		273	55×55	35
06		383	75×75	35
08		383	75×75	35

Normal Diameter	type	D	E	F	G
02	G1/4	G1/4	30	70	
03	G1/4	G3/8	30	70	
04	G1/4	G1/2	30	70	
06	G1/4	G3/4	40	100	
08	G1/4	G1	40	100	

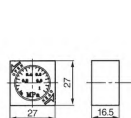


■ Symbol:

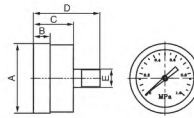


■ Dimension(mm)

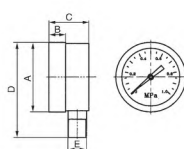
■ GM Series



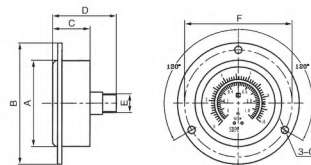
■ GS Series



■ GH Series



■ GF Series



■ Specification:

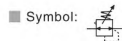
Type	GM-10	GS-40	GS-50	GH-40	GH-50	GF-40	GF-50	GF-60
Prot size (G)	-	1/4"	1/4"	1/8"	1/4"	1/8"	1/4"	1/4"
Fluid	Compressed air							
Operating pressure range(MPa)	0~10							
Max working pressure(MPa)	1							
Ambient temperature(°C)	-10~70							

■ How to order:

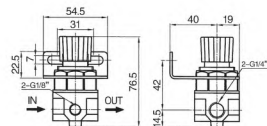
G	S	40
Series		Outer diameter
G: Gauge		40: 64.2mm
		50: 65.2mm
		60: 66.2mm
Type code		
M: Embed square gauge		
S: Axial		
H: Radial		
F: Panel mounting		

Type	A	B	C	D	E	F	G
GS-40	42	9	24	41	G1/4	-	-
GS-50	52	9	25	42	G1/4	-	-
GH-40	42	9	24	56	G1/8	-	-
GH-50	52	9	25	71	G1/4	-	-
GF-40	42	60	25	42	G1/8	53	3.1
GF-50	52	72	26	43	G1/4	62	4.2
GF-60	62	84	29	46	G1/4	72	5

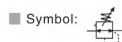
R200 Regulator



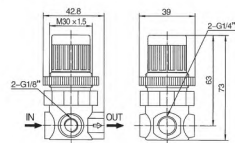
■ Dimension(mm)



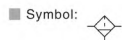
R07 Regulator



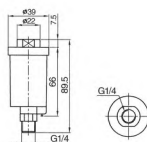
■ Dimension(mm)



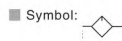
ZF-02 Filter



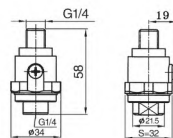
■ Dimension(mm)



ZL-02 Oiler



■ Dimension(mm)



Safety notice/Solenoid/caution for application

- Please read the safety notice carefully before using and pay attention to the safety caution of this product.
- Pay attention to the individual caution for various model series/read the cautions and safety notice in P1-2 for common cautions.)

Caution for design, selection

Warning:

- While designing the circuit, make thorough understanding of the characteristics of the compressed air and the application of this product.
- The air in use is compressed, please note that expandable and unstable pressure may fly out, burst out or leak.
- Beware of the fluid temperature, please follow the range defined by Specification Table (5-60c).
- While designing and selecting the machine model, please consider the incorrect shift of the driven object caused by emergency or transient power interruption which may impair safety. When closing the machine model, please have the competence of controlling model, and the fixed position or automatic shift model during power interruption under consideration.
- Excessive water in the pipeline will cause malfunction of the solenoid valve, please install water removing filter at front end.
- Carbon powder chip and debris will occur when the air compressor is running; malfunction of solenoid is possible when the attached amount is excessive. Filter is required to prevent jammed in side porting.
- Requirement of ambient environment:
 1. Avoid chemical, inflammable substance, corrosive, sea water, and high temperature in working environment
 2. Avoid application in place with heating and radiation heat.
 3. Follow the requirement of the Caution temperature range state in the Specification Table.
 4. Prevent malfunction caused by freezing while used in cold place. Avoid expose under outdoor sunlight, dusty condition which may cause unstable quality.
 5. Avoid application in places with oily, inflammable substance and explosion proof.

Caution:

1. While intermediate stop position in three positions and used in pressure holding, beware of the impact of position change caused by pressure drop while there is leakage in air supply piping and change in air source.

2. Take care of the impact of leak current that may affect the normal operation of other controller under machine work. Therefore proper circuit protection device is necessary; also need to avoid the error action of the solenoid valve.

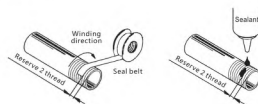
Allowable values

While used in DC12V	Below 1.5mA
While used in DC24V	Below 1.8mA
While used in AC100V	Below 1.5mA
While used in AC220V	Below 3.0mA

Caution for installation

Warning:

- Caution for manner of installation for the complex moving and three position model, please install in level.
- Prevent entrance of debris and dust foreign object into solenoid valve before piping laying in order to prevent failure and error action.
- Prevent debris and leak proof tape residue from entering the pipe while pipe laying and assembling the connector. Reserve 1-1.5 thread not wound with the tape.



- If the connector is sealed by using anoxic glue, avoid excessive amount and fluid glue from flowing in the body which may cause jammed and poor movement.
- Follow the torque in table below while laying the pipe (tighten the connector), never exceed the range of application to avoid damage of product.

Torque chart for piping

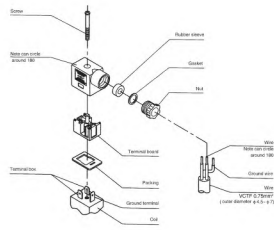
Size of pipe	Appropriate turning torque N.m (kgf.cm)
M5	1.5-2 (15-20)
G1/8	7-9 (70-90)
G1/4	12-14 (120-140)
G3/8	22-24 (220-240)
G1/2	28-30 (280-300)
G3/4	28-30 (280-300)
G1	36-38 (360-380)

- The exhaust of solenoid valve should be equipped with muffler to prevent excessive noise. If there is no muffler equipped, avoid to discharge the exhaust gas to peripheral and absorbed by foreign object; mount the exhaust pipe downward (avoid to face upward and suck in foreign object).
- Concentrated exhaust is needed exhaust while manifold is used. Fail to discharge completely will cause back pressure and affect the switch and normal operation of solenoid valve.
- Avoid the destruction of plastic material by water soluble solvent and coating equipment after installation, causing blockage and poor action.
- When using manifold to secure the solenoid valve, take care proper position of the manifold packing, and then tighten at both sides evenly to prevent leakage.
- Avoid lengthy distance between solenoid valve and cylinder; long pipeline will affect the activation effect and response.

Safety notice/Solenoid/caution for application

Caution:

- Connection of DIN terminal box
DIN terminal box is class IP67 water proof; please positioned and slot firmly when installing, there is no screw for tighten.



Caution for application

Warning:

- Don't switch the solenoid valve with manual button while the solenoid valve is energized; resume to normal position after the manual button is operated.
- Never apply incorrect voltage to the coil of solenoid valve to prevent from damage.
- The energizing of the compound movement solenoid valve, the energizing time at least 1 second.
- Provide voltage stabilization to power supply, rate voltage supply within 10%, avoid surge.

Caution:

- Heat dissipation should be taken into consideration after long period energizing.
- Take special attention to intermittent air tight solenoid valve for leakage between solenoid valve and cylinder and cause error action and displacement.

Caution for service and maintenance

Warning:

- Shut off the power switch and air source properly before service and maintenance, confirm that there is no residue pressure in the pipeline and start work after confirming the status is safe.
- The manual device (Series 3, 6, 8, 9) of solenoid valve must be resumed to home (initial position) and confirm that all are reset and then start the normal operation is allowed. (There is no such concern for it is auto reset type), because if the power is turning on before confirming for reset to home will cause abnormal action and led to hazard.
- The assemble and disassemble of solenoid valve should be carried by personnel who is familiar with structure of the product who know well the internal structure and principle, avoid error disassemble and cause safety concern on operation and application.

Caution:

- Keep the air source dry with moisture and debris, and pay attention for normal the front filter of the solenoid valve and strainer.
- Not oil is required for the solenoid valve as it is lubricated at assembly. In case of oiling is necessary, use ISO VG32 lubricant, consequent poor action if stop oiling (there is minor moisture in the air; lubrication is required at fast moving condition.)
- Service and maintenance should be performed regularly as schedule, and confirm the normal operation following:
 1. Is the compressed air supplied stably?
 2. Is the front filter of the solenoid valve and strainer normal?
 3. Is the connection portion or piping loosen accompany moving of object? Is the pipe connection portion normal?
 4. Is the action condition of the solenoid valve normal? Is there any delay and exhaust phenomena? Any strange noise?
 5. Whether the piping system connected to activator (or cylinder) normal? Terminal start and stop movement normal? Is the load system normal?
 6. Is the lubricant feeding system normal? Is the oil amount adjusted properly?
 7. Is the exhaust smooth? Any blockage? Are exhaust and speed normal?

Key Features

1. Internal exhausting structure, no pollution
2. Power consumption 0.85W, Lowest version can reach to 0.3W
3. Sliding-column structure, special seals and grease to increase lifetime. Well sealing performance and fast response time
4. Maximum working pressure up to 0.8MPa
5. Integrated installation to save space



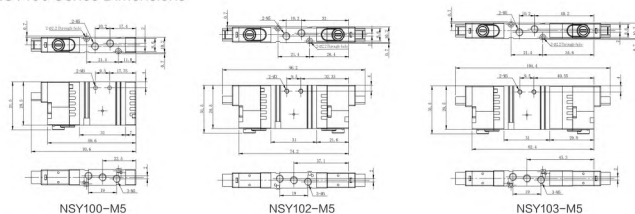
Specifications

Specifications	10mm series			15mm series		
	NSY100-M5	NSY102-M5	NSY103-M5	NSY150-06	NSY152-06	NSY153-06
Valve type	5/2 way			5/2 way		
Port size	Inlet=Outlet=Exhaust=M5			Inlet=Outlet=Exhaust=G1/8"		
CV value	CV=0.16		CV=0.13	CV=0.49		CV=0.42
Working medium	40 Micron filtered air					
Working pressure	0.15~0.8MPa	0.1~0.8MPa	0.2~0.8MPa	0.15~0.8MPa	0.1~0.8MPa	0.2~0.8MPa
Max pressure	1.2MPa					
Working temperature	-5°C~50°C					
Power consumption	0.85W					
Frequency	5/s					

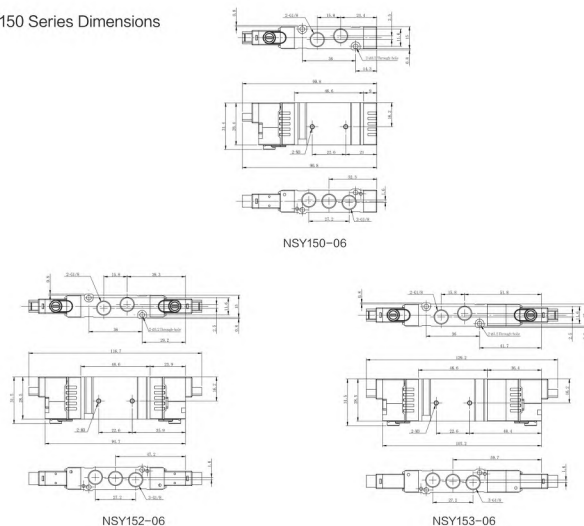
Order Code

NSY	10	0	M5	DC24V	L	M8	2F
Spec	Series	Function	Port	Voltage	Power	Connection	Position
10mm series	0	Single coil 5/2 way	M5; M5	DC24V	Blank: standard	Blank: horizontal wiring	Blank: single valve
15mm series	2	Double coil 5/2 way	06; 1/8"	DC12V	L: Low consumption	M8: M8 three-core plug	2F~20F
3C: Double coil 5/3 way-closed							
3E: Double coil 5/3 way-exhausted							
3P: Double coil 5/3 way-pressed							

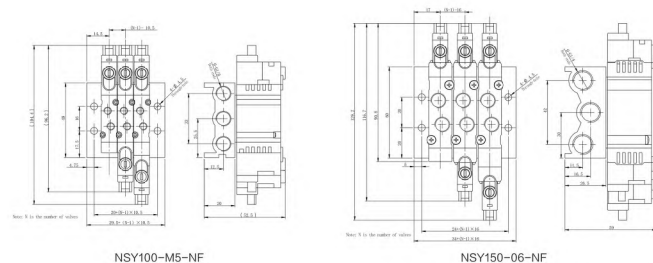
NSY100 Series Dimensions



NSY150 Series Dimensions

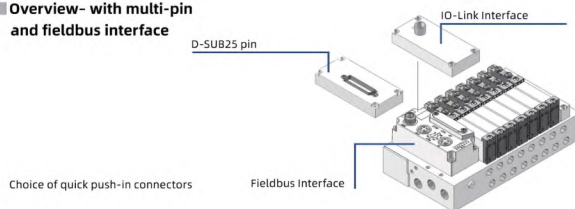


NSY100-M5-NF / NSY150-06-NF Series Dimensions



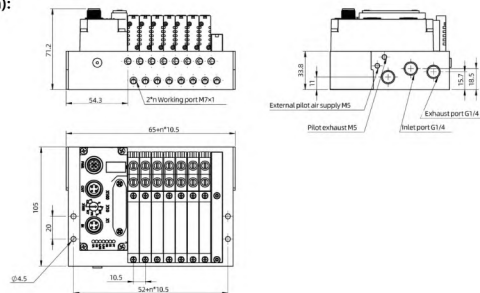


Overview - with multi-pin and fieldbus interface

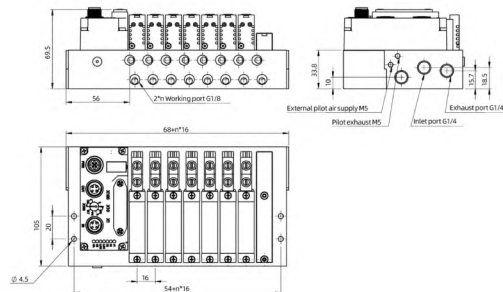


Dimensions(mm):

10mm



14mm



Product feature:

Exchangeable electrical control
 Extremely flexibility and expansibility
 14mm and 10mm widths with various functions optional
 Reduced power consumption by 70%
 Excellent comprehensive cost performance
 Up to 24 valve positions
 For modular pneumatic control system
 Internal and external pilot structure available

Specifications

Positions	4, 5, 6, 7, 8, 9, 10, 12, 16, 20, 24
Electrical Connection	D-SUB25 pin, IO-Link, ProfiNET, EtherCAT, EtherNET/IP, CC-Link IE Field Basic
Voltage	24VDC ±10%
Power Consumption	Single Coil Instant Max 1.3w
Flow Rate	Max 600L/min (According to the valve type)
Working Port	10mm: Supply=Exhaust=G1/4" Working=M7*1 14mm: Supply=Exhaust=G1/4" Working=G1/8"
Working Pressure	Refer to NT-FDF valve specification

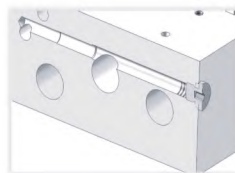
How to order:

NT-FD		C	14	E	1C	2D	SS	IOL
Type	Width	Pilot Air	Valve Quantity and Function	Communication				
C: Sub-base	10: 10mm	Blank: Internal	Letters represent the function	IOL: IO-Link				
F: Semi in-line	14: 14mm	E: External	Numbers represent the quantity	PNT: ProfiNET				
			C: 5/3 Mid-position closed	ECT: EtherCAT				
			E: 5/3 Mid-position exhausted	EIP: EtherNET/IP				
			P: 5/3 Mid-position pressurised	CIEB5: CC-Link IE Field Basic				
			D: Double solenoid 5/2-way valve	MC: D-SUB25 pin				
			S: Single solenoid 5/2-way valve					
			NC: 2x 3/2-way valve NC					
			NO: 2x 3/2-way valve NO					
			NOC: 3/2-way valve NC/NO					
			B: Blank plate					

Internal and External Pilot Switching



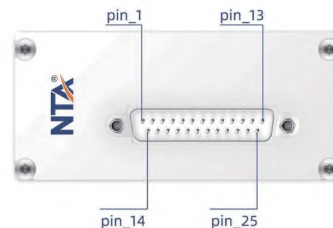
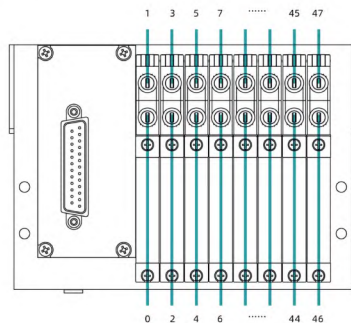
External Pilot



Internal Pilot

- Installing screw at the pilot switching hole can realize the external pilot function, pilot air through the M5 threaded hole at the end face of the bottom plate.
- Installing M5 plug at the pilot switching hole can realize the internal pilot function, pilot air directly through the air inlet of the bottom plate.

Multi-pin Plug Connection



- Valve terminal can control up to 24 coils depending on the connection mode. Each valve coil of the valve terminal corresponds to a pin on the multi-pin plug.

PIN	Position	Max Valve Position			
		4-12	16	20	24
		Valve No. /Coil Name			
1	0	0/14	0/14	0/14	0/14
2	1	0/12	0/12	0/12	23/14
3	2	1/14	1/14	1/14	1/14
4	3	1/12	1/12	1/12	22/14
5	4	2/14	2/14	2/14	2/14
6	5	2/12	2/12	2/12	21/14
7	6	3/14	3/14	3/14	3/14
8	7	3/12	3/12	3/12	20/14
9	8	4/14	4/14	4/14	4/14
10	9	4/12	4/12	19/14	19/14
11	10	5/14	5/14	5/14	5/14
12	11	5/12	5/12	18/14	18/14
13	12	6/14	6/14	6/14	6/14
14	13	6/12	6/12	17/14	17/14
15	14	7/14	7/14	7/14	7/14
16	15	7/12	7/12	16/14	16/14
17	16	8/14	8/14	8/14	8/14
18	17	8/12	15/14	15/14	15/14
19	18	9/14	9/14	9/14	9/14
20	19	9/12	14/14	14/14	14/14
21	20	10/14	10/14	10/14	10/14
22	21	10/12	13/14	13/14	13/14
23	22	11/14	11/14	11/14	11/14
24	23	11/12	12/14	12/14	12/14

NT-FD Valve Module

Solenoid Valve

NT-FD Valve Module

Solenoid Valve

IO-Link Module

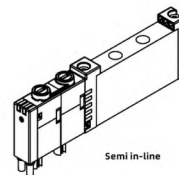
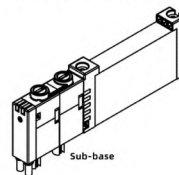


IO-Link Pin Distribution			
Interface	Pin	Distribution	Function
	1	24V EL/SEN(P5)	Supply Power
	2	24V BAL/OUT(PL)	Load Power
	3	0V EL/SEN(P5)	Supply Power
	4	C/IQ	Communication
	5	0V VAL/OUT(PL)	Load Power
		PE, Shell	Functional power

IO-Link LED Indicator		Drive File IO-Link		
Green light always on	Normal operation state	Specification	V1.1 (Compatible with V1.0)	2 bytes
Red light always on	24V load power failure or no IO-Link signal	Data transmission rate	COM2(38.4KBR)	4 bytes
Blue light always on	Open circuit or overload		At 2 and 4 bytes COM3 (230.4KBR)	6 bytes

*Please ask the seller for the corresponding IODD file

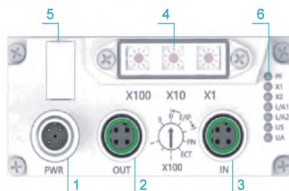
NT-DFD Solenoid Valve Specification



*For sub-base valve, 5 ports are connected to the valve via pneumatic links on sub-base. The supply ports for semi in-line valve are connected to the valve via pneumatic links. The working ports are on the valve.
All valves are external pilot, it can be realized by switching screw on the valve base plate if internal pilot is needed

Specification	Type	Width	Function	Symbol
NT-DFD-510	Sub-base	14	5/2-way valve Single solenoid	
NT-F14-510	Semi in-line			
NT-C10-510	Sub-base	10	5/2-way valve Double solenoid	
NT-F10-510	Semi in-line			
NT-C14-520	Sub-base	14	5/2-way valve Double solenoid	
NT-F14-520	Semi in-line			
NT-C10-520	Sub-base	10	5/3-way valve Mid-position closed	
NT-F10-520	Semi in-line			
NT-C14-530	Sub-base	14	5/3-way valve Mid-position closed	
NT-F14-530	Semi in-line			
NT-F10-530	Semi in-line	10	5/3-way valve Mid-position exhausted	
NT-C14-533	Sub-base	14		
NT-F14-533	Semi in-line		5/3-way valve Mid-position exhausted	
NT-C10-533	Sub-base	10		
NT-F10-533	Semi in-line		5/3-way valve Mid-position pressurised	
NT-C14-534	Sub-base	14		
NT-F14-534	Semi in-line		5/3-way valve Mid-position pressurised	
NT-C10-534	Sub-base	10		
NT-F10-534	Semi in-line		2x 3/2-way valve NC	
NT-C14-310	Sub-base	14		
NT-F14-310	Semi in-line		2x 3/2-way valve NC	
NT-C10-310	Sub-base	10		
NT-F10-310	Semi in-line		2x 3/2-way valve NO	
NT-C14-312	Sub-base	14		
NT-F14-312	Semi in-line		2x 3/2-way valve NO	
NT-C10-312	Sub-base	10		
NT-F10-312	Semi in-line		2x 3/2-way valve NC/NO	
NT-C14-314	Sub-base	14		
NT-F14-314	Semi in-line		2x 3/2-way valve NC/NO	
NT-C10-314	Sub-base	10		
NT-F10-310	Semi in-line	10		

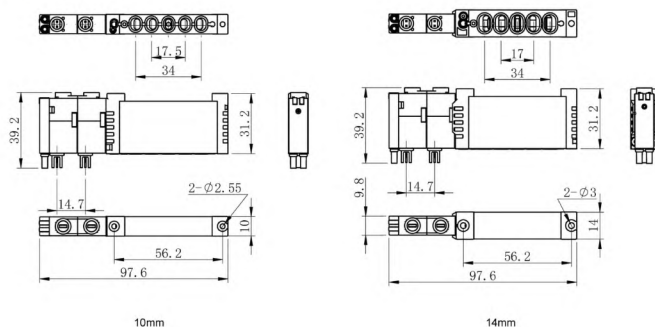
Fieldbus Module



No.	Name	Description
1	Power interface	M12 male A port 4 wire, Power supply of communication module and solenoid valve
2	Communication interface (OUT)	M12 female D port 4 wire, PROFINET, ETHERNET/IP, ETHERCAT, CIEB5
3	Communication interface (IN)	M12 female D port 4 wire, PROFINET, ETHERNET/IP, ETHERCAT, CIEB5
4	Dial switch	Protocol switching, IP address and coil setting
5	Sign board	Device identification board
6	LED indicator	Operation status

Power Source		Communication Interface (OUT)		Communication Interface (IN)	
Pin	Function	Pin	Function	Pin	Function
1	UA Actuator Power	1	Tx+ Transmit Data+	1	Tx+ Transmit Data+
2	GND Actuator Power	2	Rx+ Receive Data+	2	Rx+ Receive Data+
3	US Bus Power	3	Tx- Transmit Data-	3	Tx- Transmit Data-
4	GND Bus Power	4	Rx- Receive Data-	4	Rx- Receive Data-

Solenoid Valve Dimension



Solenoid Valve Parameter

Specification		Internal pilot		External pilot		Flow rate(L/min)
		Working pressure(bar)	Pilot pressure(bar)	Working pressure(bar)	Working pressure(bar)	
10mm	NT-FDF-510	2-8	2-8	0-8	300	
	NT-FDF-520	2-8	2-8	0-8	300	
	NT-FDF-530	3-8	3-8	0-8	260	
	NT-FDF-533	3-8	3-8	0-8	260	
	NT-FDF-534	3-8	3-8	0-8	260	
	NT-FDF-310	2.5-8	2.5-8	2-8	280	
	NT-FDF-312	2.5-8	2.5-8	2-8	280	
14mm	NT-FDF-314	2.5-8	2.5-8	2-8	280	
	NT-FDF-510	2-8	2-8	0-8	500	
	NT-FDF-520	2-8	2-8	0-8	500	
	NT-FDF-530	3-8	3-8	0-8	500	
	NT-FDF-533	3-8	3-8	0-8	500	
	NT-FDF-534	3-8	3-8	0-8	500	
	NT-FDF-310	2.5-8	2.5-8	2-8	480	
	NT-FDF-312	2.5-8	2.5-8	2-8	480	
	NT-FDF-314	2.5-8	2.5-8	2-8	480	



Product features:

1. Direct-acting type, quick response;
2. Poppet design, good sealing;
3. No lubrication required;
4. Manual Override facilitates machine set up;
5. Many voltages DC12V,DC24V,AC110V,AC220V are available.

How to order:

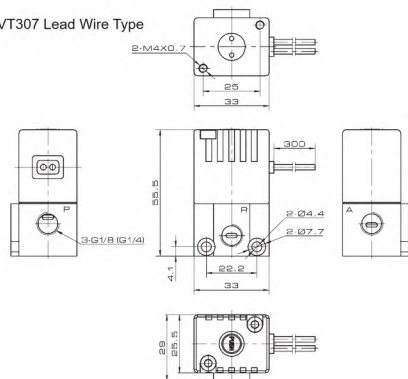
NVT307	06	DC24V	W	V	
Specification	Port Size	Voltage	Wiring	Sealing	Thread
NVT307 - Standard type	06: 1/8"	DC12V	Blank: Brown with light terminal	Blank: HNBR	Blank: G
NVT307H - High frequency	08: 1/4"	DC24V	W: Lead wire	V: VITON	P: PT
		AC110V			N: NPT
		AC220V			

Specification:

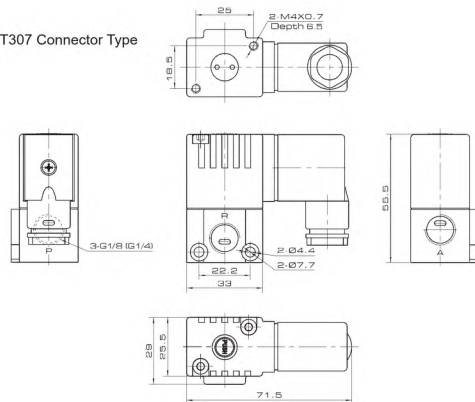
Model	NVT307-06	NVT307-08	NVT307H-06	NVT307H-08
Position number			2 position 3 way	
Port size	Input=output=exhaust=G1/8"	Input=output=exhaust=G1/4"	Input=output=exhaust=G1/8"	Input=output=exhaust=G1/4"
Fluid	40μm filtered and compressed air			
Acting type	Poppet type			
Working pressure(MPa)	0~1.0MPa			
Max pressure(MPa)	1.5MPa			
Ambient temperature(℃)	-20~80℃			
Flowrate(L/min)	180		120	
Lubrication	No need			
Voltage range	DC12V,DC24V,AC110V,AC220V			
Protection level	IP65			
Temperature class	H class			
Wiring/connector	Cable/lead wire or DIN connector			
Response time	12ms		7ms	
Switching frequency	40 cycles/sec		70 cycles/sec	

■ Dimensions(mm):

■ NVT307 Lead Wire Type



■ NVT307 Connector Type



■ Symbol:



■ Product feature:

Valve body using medical grade polymer polyester material imported from USA, it has wide range critical temperature
No pipe sleeve structure, using high-strength material for frame, low coefficient of friction, high abrasion performance
Coil using enamelled wire imported from Germany, temperature-resistant reaches 260 °C
Plastic material using high-strength resin imported from Japan, stable dimension and high temperature-resistant



■ Specification:

Type	NT10
Cv	P-A 0.008
	A-R 0.015
b	P-A 0.11
	A-R 0.35
C [dm ³ /s(bar)]	P-A 0.037
	A-R 0.054
Max frequency Hz	30(the limit=50)
Response time(ms/0.5MPa)	6-8
Working pressure	0 ~ 0.7MPa
Ambient temperature	-10 ~ 60°C (不冻结)
Fluid	Filtered and compressed air
Motion type	Direct operated
Power consumption	1.2W(different with optional)
Voltage range	AC:115V DC:10% (DC:140% optional)
IP class	Dust proof
Heat-resisting class	B
Life cycles	> 150 million cycles
Lubrication	not required

10 Series 10mm Direct Operated Solenoid Valve

Solenoid Valve



Expert in pneumatic
power transmission

How to order:

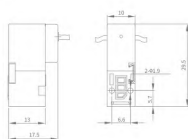
Watts	Voltage	Wiring type	PCB type	Manual pole
1: 1.2w 2: 0.8w 3: 0.3w 4: 1.7w 5: AC	A: DC24V B: DC12V C: AC110V D: AC220V E: DC5V F: DC6V	L: L type MM type G: lead wire type Signs	X:with LED P:with LED(nonpolarity) S:with LED and over-voltage protection circuit U:with LED and over-voltage protection circuit (nonpolarity) N:no PCB	Health manual pole E:without manual pole

PCB Applications

Watts	Voltage	PCB type
1	A B E F	P/S/U
2	B	S
3	A	X
4	A B C D	P/S/U P

Dimensions(mm):

Leadwire type



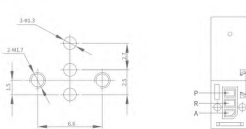
L type



M type



Mounting dimension



3000/5000/7000 Series Pilot Operated Solenoid Valve

Solenoid Valve



Expert in pneumatic
power transmission

Symbol:



Product feature:

Environmental design, low power consumption

Wave prevention design protecting input devices, PLC direct drive

With piston air reset function, long life cycles, good stability, fast reset speed

With overbottom pressure compensating design, with fast response speed

Using special processing process for inner hole and high quality grease, increasing

valve durability, storage time over 5 years

Using micro pilot head, reducing valve size

Using high life cycles design, stable life cycles reaching higher than 80 million cycles



Specification:

Type	3000 Series					5000 Series					7000 Series				
Port size	3120	3220	3320	3420	3520	5120	5220	5320	5420	5520	7120	7220	7320	7420	7520
	MS					G1/8"					G1/4"				
Position number	2 position 5 way					2 position 5 way					2 position 5 way				
Cv value P-A/B	0.15	0.13	0.13	0.13	0.15	0.49	0.49	0.45	0.41	0.61	0.93	0.93	0.70	0.65	0.97
Cv value A-B/R/S	0.18	0.13	0.13	0.13	0.13	0.61	0.61	0.46	0.59	0.46	0.81	0.81	0.63	0.82	0.58
Max frequency Hz	20	20	5	5	5	15	15	3	3	3	15	15	3	3	3
Response time (max.5MPa)	12	12	15	15	15	19	19	32	32	32	31	31	50	50	50
Working pressure	0.15 ~ 0.7MPa														
Ambient temperature	-10 ~ 60°C (F-58℉)														
Fluid	Filtered and compressed air														
Motion type	Internal pilot-actuated														
Power consumption	1.2W(different watts optional)														
Voltage range	AC: ±15% DC: ±10%														
IP class	Dust proof														
Heat-resisting class	B														
Life cycles	>80 million cycles														
Lubrication	not required														

How to order:

Series	Specification	Watts	Voltage	Wiring type	PCB type	Manual pole
3:3000 series	1: single coil two position	1: 1.2w	A: DC24V	L: L type	P: with LED (nonpolarity)	H: with manual pole
5:5000 series	2: two coils two position	2: 0.8w	B: DC12V	M: M type	U: with LED and over-voltage protection circuit	E: without manual pole
7:7000 series	3: three positions middle stop	5: AC	C: AC110V	G: lead wire type	U: with LED and over-voltage protection circuit (nonpolarity)	
	4: three positions middle outlet		D: DC220V			
	5: three positions middle pressure					

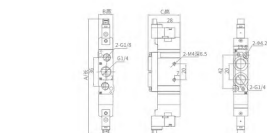
PCB Applications

Watts	Voltage	PCB type
1	A B E F	P/S/U
2	A B C	S
5	D	P

Dimensions(mm):

3000 series

Model	A/length			B/width	C/height
	wire lead type	M type	L type		
3120	65.8	67	72.3	10	31.1
3220	86.6	89	99.6	10	31.1
3320/3420/3520	95.1	97.5	108.1	10	31.1



5000 series

Model	A/length			B/width	C/height
	wire lead type	M type	L type		
5120	83.9	85.1	90.4	15	32.3
5220	103.2	105.6	116.2	15	32.3
5320/5420/5520	115.5	118.1	128.7	15	32.3

7000 series

Model	A/length			B/width	C/height
	wire lead type	M type	L type		
7120	99.2	100.4	105.7	18	40
7220	119.8	122.2	132.8	18	40
7320/7420/7520	132.8	135.2	145.8	18	40

Symbol:



Product feature:

Environmental design, low power consumption

Wave prevention design protecting input devices, PLC direct drive

With piston air reset function, long life cycles, good stability, fast reset speed

With overbortom pressure compensating design, with fast response speed

Using special processing process for inner hole and high quality grease, increasing

valve durability, storage time over 5 years

Using micro pilot head, reducing valve size

Using high life cycles design, stable life cycles reaching higher than 80 million cycles



Specification:

Type	3000 Series					5000 Series					7000 Series				
Port size	3140	3240	3340	3440	3540	5140	5240	5340	5440	5540	7140	7240	7340	7440	7540
	MS					G1/8"					G1/4"				
Position number	2 position 5 way		3 position 5 way			3 position 5 way			2 position 5 way			3 position 5 way			
Cv value P-A/B	0.24	0.24	0.18	0.18	0.29	0.64	0.64	0.5	0.44	0.85	1.1	1.1	0.8	0.71	1.3
Cv value A-B/R/S	0.26	0.26	0.19	0.24	0.24	0.66	0.66	0.47	0.72	0.48	1	1	0.72	1.1	0.63
Max frequency Hz	20	20	5	5	5	15	15	3	3	3	15	15	3	3	3
Response time (max.) (ms)	12	12	15	15	15	19	19	32	32	32	31	31	50	50	50
Working pressure	0.15 ~ 0.7MPa														
Ambient temperature	-10 ~ 60°C (F/R18)														
Fluid	Filtered and compressed air														
Motion type	Internal pilot-actuated														
Power consumption	1.2W (different watts optional)														
Voltage range	AC: ±15% DC: ±10%														
IP class	Dust proof														
Heat-resisting class	B														
Life cycles	>80 million cycles														
Lubrication	not required														

How to order:

Series	Specification	Watts	Voltage	Wiring type	PCB type	Manual pole
3:3000 series	1: single coil two position	1: 1.2w	A: DC24V	L: L type	Pwith LED(nonpolarity)	With manual pole
5:5000 series	2: two coils two position	2: 0.8w	B: DC12V	M: M type	Switch LED and over-voltage protection circuit	Without manual pole
7:7000 series	3: three positions middle stop	5: AC	C: AC110V	G: lead wire type	Uwith LED and over-voltage protection circuit (nonpolarity)	
	4: three positions middle outlet		D: AC220V			
	5: three positions middle pressure					

PCB Applications

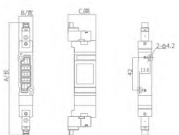
Watts	Voltage	PCB type
1	A	P/S/U
	B	
	E	
2	A	S
	B	
5	C	P
	D	

Dimensions(mm):



3000 series

Model	Wire lead type	Adlength	M type	L type	B/width	C/height
3140		65.8	67	72.3	10	31.1
3240		86.6	89	99.6	10	31.1
3340/3440/3540		95.1	97.5	108.1	10	31.1



5000 series

Model	Wire lead type	Adlength	M type	L type	B/width	C/height
5140		83.9	85.1	90.4	15	30.6
5240		103.2	105.6	116.2	15	30.6
5340/5440/5540		115.5	118.1	128.7	15	30.6

7000 series

Model	Wire lead type	Adlength	M type	L type	B/width	C/height
7140		99.2	100.4	105.7	18	36
7240		119.8	122.2	132.8	18	36
7340/7440/7540		132.8	135.2	145.8	18	36

Solenoid Valve



Specification:

Type	V3110-M5	V3120-M5	V3110-06	V3120-06
Position number	2 Position 3 Way			
Effective sectional	10mm ² (Cv=0.56)		12mm ² (Cv=0.67)	
Port size	input=output=exhaust=M5×0.8		input=output=exhaust=G1/8"	
Fluid	Filtered and compressed air			
Acting type	Internally pilot-actuated			
Working pressure(MPa)	0.15~0.8			
Ambient temperature(°C)	-5~50			
Voltage range	±10%			

How to order:

V3	1	10	06	NO	□	□	-W
Specification	V3: 2 Position 3 Way Solenoid Valve						Wiring type
Series	1-100 Series						Blank: Browns with LED B: White with LED H: Black W: Lead wire type
Number of coil and position	10 Single coil double position 20 Double coil double position						Thread type code
Port size	M5: M5×0.8 06: 1/8"						Blank: G thread T: NPT thread P: PT thread
Original state	Blank: Normally closed type NO: Normally open type						Coil voltage
							DC12V DC24V AC24V 50/60Hz AC110V 50/60Hz AC220V 50/60Hz AC380V 50/60Hz

Symbol:

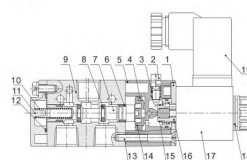


Product feature:

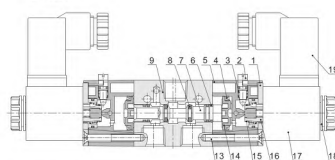
- Service life: 15 million cycle times.
- Slippery column type: large flow and rapid response.
- Double coil 2 position 3 way solenoid valve has the memory function.
- The inner bore specially processed within Ra0.1 roughness, has small friction and low starting air pressure.
- The valve rod and C-ring are installed with imported HNBR rubber, maximizing the abrasive and aging resistance.
- It can be integrated valves with the base, together with simplified and reliable connecting pipe.
- Varieties of standard voltage ranks are optional.

Inner structure drawing:

V3110



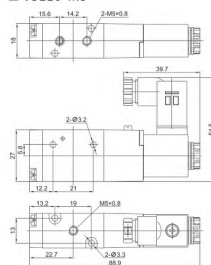
V3120



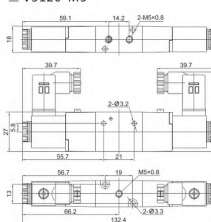
Number	Name	Number	Name	Number	Name	Number	Name	Number	Name	Number	Name
1	Fixed iron sheet	4	Y-ring	7	Valve rod	10	Spring	13	Screw	16	Movable iron core
2	Manual pin	5	Pilot seat	8	C-ring	11	Rear cover	14	Piston	17	Coil
3	Spring	6	Guide ring	9	Valve body	12	Diamond ring	15	Conical spring	18	Fixed nut
										19	Wiring box

■ Dimension(mm):

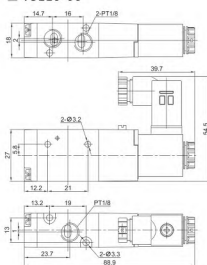
■ V3110-M5



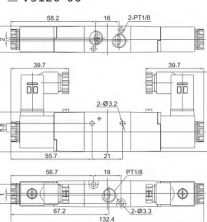
■ V3120-M5



■ V3110-06



■ V3120-06



■ Specification:

Type	V3210-06	V3220-06	V3210-08	V3220-08
Position number	2 Position 3 Way			
Effective sectional	14mm ² (Cv=0.78)		16mm ² (Cv=0.89)	
Port size	input=output=exhaust=G1/8"		input=output=G1/4"exhaust=G1/8"	
Fluid	Filtered and compressed air			
Acting type	Internally pilot-actuated			
Working pressure(MPa)	0.15-0.8			
Ambient temperature(°C)	-5-50			
Voltage range	±10%			

■ How to order:

V3 2 10 08 NO ■ ■ -W									
● Specification V3: 2 Position 3 Way Solenoid Valve				● Series 2-200 Series		● Wiring type Blank: Browns with LED B: White with LED W: Black W: Lead wire type			
● Number of coil and position 10 Single coil double position 20 Double coil double position				● Thread Type Code T: NPT thread P: PT thread					
● Port size 06: 1/8" 08: 1/4"				● Coil Voltage					
				DC12V					
				DC24V					
				AC24V 50/60Hz					
				AC110V 50/60Hz					
				AC220V 50/60Hz					
				AC380V 50/60Hz					
● Original state Blank Normally closed type NO Normally open type									

■ Symbol:

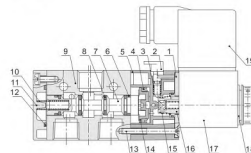


■ Product feature:

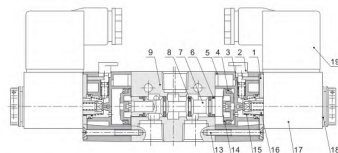
- Service life: 15 million cycle times.
- Slippery column type: large flow and rapid response.
- Double coil and 2 position 3 way solenoid valve has the memory function.
- The inner bore specially processed within Ra0.1 roughness, has small friction and low starting air pressure.
- The valve rod and C-ring are installed with imported HNBR rubber, maximizing the abrasive and aging resistance.
- It can be integrated valves with the base, together with simplified and reliable connecting pipe.
- Varieties of standard voltage ranks are optional.

■ Inner structure drawing:

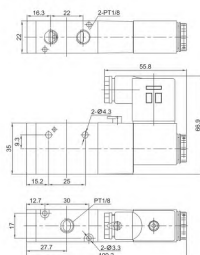
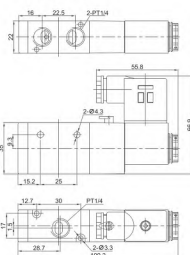
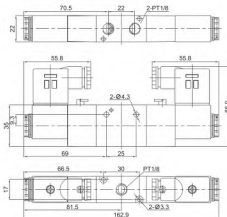
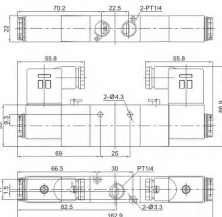
■ V3210



■ V3220



Number	Name	Number	Name	Number	Name	Number	Name	Number	Name	Number	Name
1	Fixed iron sheet	4	Y-ring	7	Valve rod	10	Spring	13	Screw	16	Movable iron core
2	Manual pin	5	Pilot seat	8	C-ring	11	Rear cover	14	Piston	17	Coil
3	Spring	6	Guide ring	9	Valve body	12	Diamond ring	15	Conical spring	18	Fixed nut
										19	Wiring box

Dimension(mm):
V3210-06

V3210-08

V3220-06

V3220-08

Specification:

Type	V3310-08	V3320-08	V3310-10	V3320-10
Position number	2 Position 3 Way			
Effective sectional	25mm ² (Cv=1.40)		30mm ² (Cv=1.68)	
Port size	input=output-exhaust=G1/4"		input-output=G1/8"exhaust=G1/4"	
Fluid	Filtered and compressed air			
Acting type	Internally pilot-actuated			
Working pressure(MPa)	0.15~0.8			
Ambient temperature(°C)	-5~50			
Voltage range	±10%			

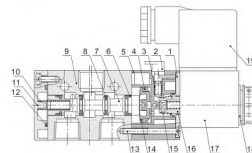
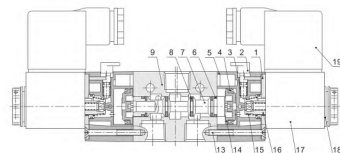
How to order:

V3 3 10 08 NO ■ ■ -W									
Specification		Series		Number of coil and position		Port size		Original state	
V3: 2 Position 3 Way Solenoid Valve		3-300 Series		10: Single coil double position 20: Double coil double position		08: 1/4" 10: 3/8"		Blank: Normally closed type NO: Normally open type	
Wiring type		Thread type code		Coil Voltage					
Blank: Browns with LED B: White with LED H: Black W: Lead wire type		Blank: G thread T: NPT thread P: PT thread		DC12V DC24V AC24V 50/60Hz AC110V 50/60Hz AC220V 50/60Hz AC380V 50/60Hz					

Symbol:

Product feature:

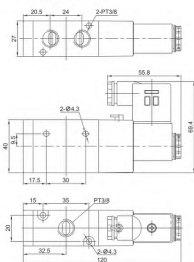
- Service life: 15 million cycle times.
- Slippery column type: large flow and rapid response.
- Double coil 2 position 3 way solenoid valve has the memory function.
- The inner bore specially processed within Ra0.1 roughness, has small friction and low starting air pressure.
- The valve rod and C-ring are installed with imported HNBR rubber, maximizing the abrasive and aging resistance.
- It can be integrated valves with the base, together with simplified and reliable connecting pipe.
- Varieties of standard voltage ranks are optional.

Inner structure drawing:
V3310

V3320


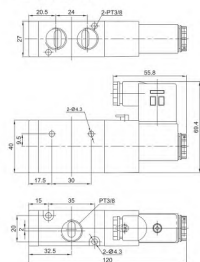
Number	Name	Number	Name	Number	Name	Number	Name	Number	Name	Number	Name
1	Fixed iron sheet	4	Y-ring	7	Valve rod	10	Spring	13	Screw	16	Moveable iron core
2	Manual pin	5	Pilot seat	8	C-ring	11	Rear cover	14	Piston	17	Coil
3	Spring	6	Guide ring	9	Valve body	12	Diamond ring	15	Conical spring	18	Fixed nut

■ Dimension(mm):

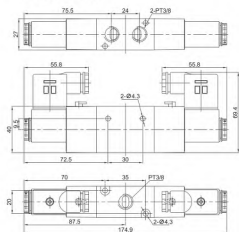
■ V3310-08



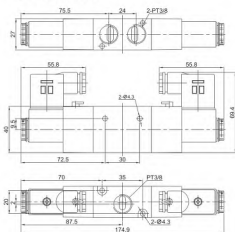
■ V3310-10



■ V3320-08



■ V3320-10



■ Specification:

Type	V3410-15	V3420-15
Position number	2 Position 3 Way	
Effective sectional	50mm ² (Cv=2.79)	
Port size	input=output=exhaust=PT1/2"	
Fluid	Filtered and compressed air	
Acting type	Internally pilot-actuated	
Working pressure(MPa)	0.15~0.8	
Ambient temperature(°C)	-5~50	
Voltage range	±10%	

■ How to order:

V3 4 10 15 NO ■ -W									
Specification	V3-2 Position 3 Way Solenoid Valve			Wiring type			Thread type code		
Series	4-400 Series			Blank: Browns with LED B: White with LED H: Black W: Lead wire type			Blank-G thread T: NPT thread P: PT thread		
Number of coil and position	10 Single coil double position 20 Double coil double position			Port size			Coil Voltage		
Original state	Blank: Normally closed type NO: Normally open type			10: 1/2"			DC12V DC24V AC24V 50/60Hz AC110V 50/60Hz AC230V 50/60Hz AC380V 50/60Hz		

■ Symbol:

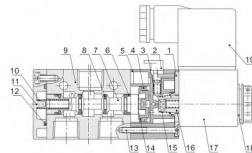


■ Product feature:

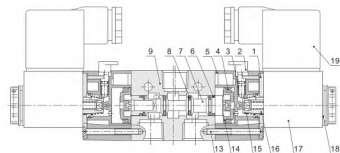
- Service life: 15 million cycle times.
- Slippery column type: large flow and rapid response.
- Double coil 2 position 3 way solenoid valve has the memory function.
- The inner bore specially processed within Ra0.1 roughness, has small friction and low starting air pressure.
- The valve rod and C-ring are installed with imported HNBR rubber, maximizing the abrasive and aging resistance.
- It can be integrated valves with the base, together with simplified and reliable connecting pipe.
- Varieties of standard voltage ranks are optional.

■ Inner structure drawing:

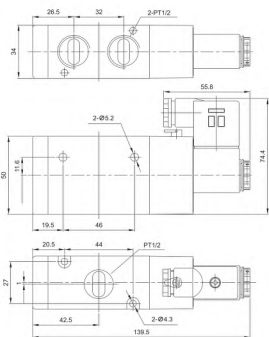
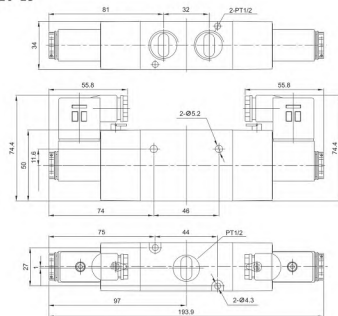
■ V3410



■ V3420



Number	Name	Number	Name	Number	Name	Number	Name	Number	Name	Number	Name	Number	Name	Number	Name
1	Fixed iron sheet	4	Y-ring	7	Valve rod	10	Spring	13	Screw	16	Mobile iron core	19	Wiring box		
2	Manual pin	5	Pilot seat	8	C-ring	11	Rear cover	14	Piston	17	Coil				
3	Spring	6	Guide ring	9	Valve body	12	Diamond ring	15	Conical spring	18	Fixed nut				

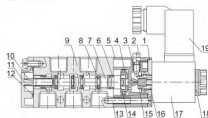
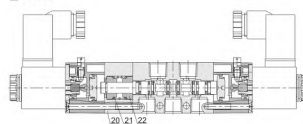
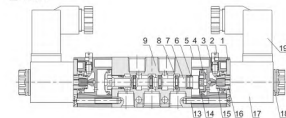
Dimension(mm):
V3410-15

V3420-15

Specification:

Type	V5110-M5 V5120-M5	V5130C-M5 V5130E-M5 V5130P-M5	V5110-06 V5120-06	V5130C-06 V5130E-06 V5130P-06
Position number	2 Position 5 Way	3 Position 5 Way	2 Position 5 Way	3 Position 5 Way
Effective sectional	10mm ² (Cv=0.56)	7mm ² (Cv=0.40)	12mm ² (Cv=0.67)	9mm ² (Cv=0.50)
Port size	input-output-exhaust=M5×0.8 input-output-exhaust=G1/8"			
Fluid	Filtered and compressed air			
Acting type	Internally pilot-actuated			
Working pressure(MPa)	0.15~0.8			
Ambient temperature(°C)	-5~50			
Voltage range	±10%			

Symbol:

Product feature:

1. Service life: 15 million cycle times.
2. Slippery column type: large flow and rapid response.
3. 3 position solenoid valves have three neutral functions to be optional.
4. Double coil 2 position 5 way solenoid valve has the memory function.
5. The inner bore specially processed within Ra0.1 roughness, has small friction and low starting air pressure.
6. The valve rod and C-ring are installed with imported HNBR rubber, maximizing the abrasive and aging resistance.
7. It can be integrated valves with the base, together with simplified and reliable connecting pipe.
8. Varieties of standard voltage ranks are optional.

Inner structure drawing:
V5110

V5130C

V5120


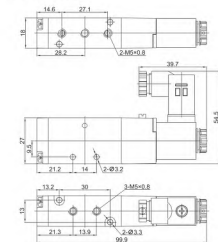
No.	Name	No.	Name	No.	Name
1	Fixed rod sheet	7	Valve rod	13	Screw
2	Main pin	8	C-ring	14	Piston
3	Spring	9	Valve body	15	Conical spring
4	Y-ring	10	Spring	16	Movable rod core
5	Pilot seat	11	Rear cover	17	Coil
6	Guiding	12	Diamond ring	18	Fixed nut
				19	Wiring box
				20	Side cover
				21	Spring
				22	Return seat

V5100 Series Control Valve

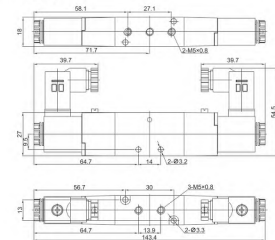
Solenoid Valve

Dimension(mm):

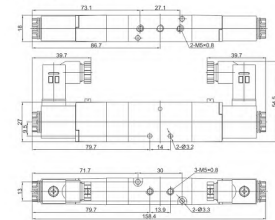
V5110-M5



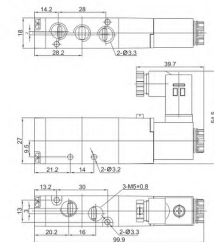
V5120-M5



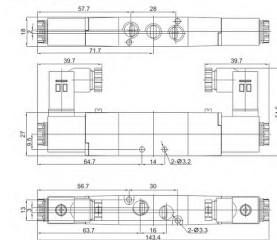
V5130-M5



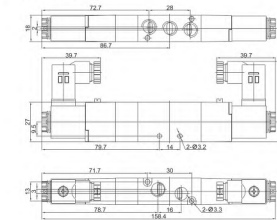
V5110-06



V5120-06



V5130-06



V5200 Series Control Valve

Solenoid Valve



Symbol:

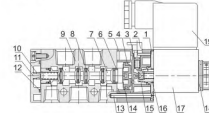


Product feature:

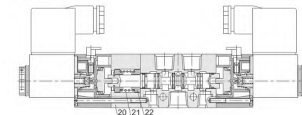
1. Service life: 15 million cycle times.
2. Slippery column type: large flow and rapid response.
3. 3 position solenoid valves have three neutral functions to be optional.
4. Double coil 2 position 5 way solenoid valve has the memory function.
5. The inner bore specially processed within Ra0.1 roughness, has small friction and low starting air pressure.
6. The valve rod and C-ring are installed with imported HNBR rubber, maximizing the abrasive and aging resistance.
7. It can be integrated valves with the base, together with simplified and reliable connecting pipe.
8. Varieties of standard voltage ranks are optional.

Inner structure drawing:

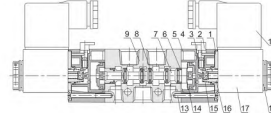
V5210



V5230C



V5220



No.	Name	No.	Name	No.	Name	No.	Name
1	Fixed iron sheet	7	Valve rod	13	Screw	19	Wiring box
2	Manifold pin	8	C-ring	14	Piston	20	Side cover
3	Spring	9	Valve body	15	Central spring	21	Spring
4	Y-ring	10	Spring	16	Movable iron core	22	Return seat
5	Pilot seat	11	Rear cover	17	Coil		
6	Guiding ring	12	Diamond ring	18	Fixed nut		

Specification:

Type	V5210-06 V5220-06	V5230C-06 V5230E-06 V5230P-06	V5210-08 V5220-08	V5230C-08 V5230E-08 V5230P-08
Position number	2 Position 5 Way	3 Position 5 Way	2 Position 5 Way	3 Position 5 Way
Effective sectional	14mm ² (Cv=0.78)	12mm ² (Cv=0.67)	16mm ² (Cv=0.89)	12mm ² (Cv=0.67)
Port size	input=output=exhaust=G1/8" input-output=G1/4" exhaust-G1/8"			
Fluid	Filtered and compressed air			
Acting type	Internally pilot-actuated			
Working pressure(MPa)	0.15~0.8			
Ambient temperature(°C)	-5~50			
Voltage range	±10%			

How to order:

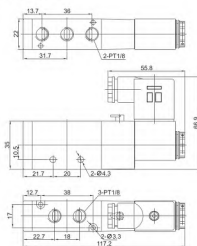
V5 2 10 08 □ □ -W									
Specification		Series		Number of coil and position		Port size		Wiring type	
VS: 2(3) Position 5 Way Solenoid Valve		2,200 Series		23double coil double acting 20 double coil 3 position 30C double coil 3 position exhaust type 30E double coil 3 position exhaust type 30P double coil 3 position press type		06: 1/8" 08: 1/4"		Blank: Brown with LED B: White with LED H: Black W: Lead wire type	
								Thread type code	
								Blank: G thread T: NPT thread P: PT thread	
								Coil Voltage	
								DC12V DC24V AC24V 50/60Hz AC110V 50/60Hz AC220V 50/60Hz AC380V 50/60Hz	

V5200 Series Control Valve

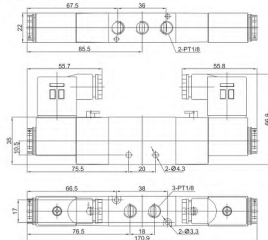
Solenoid Valve

Dimension(mm):

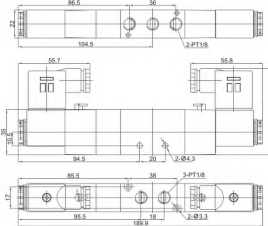
V5210-06



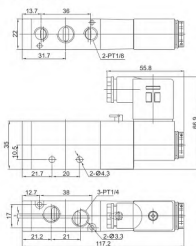
V5220-06



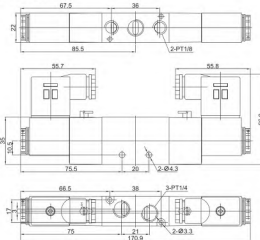
V5230-06



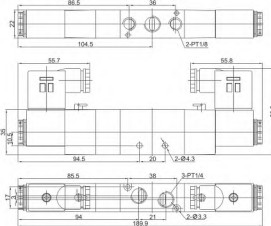
V5210-08



V5220-08



V5230-08



V5300 Series Control Valve

Solenoid Valve



Symbol:

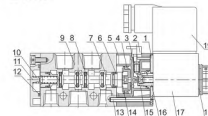


Product feature:

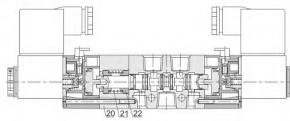
- Service life: 15 million cycle times.
- Slippery column type: large flow and rapid response.
- 3 position solenoid valve has three neutral functions to be optional.
- Double coil 2 position 5 way solenoid valve has the memory function.
- The inner bore specially processed within Ra0.1 roughness, has small friction and low starting air pressure.
- The valve rod and C-ring are installed with imported HNBR rubber, maximizing the abrasive and aging resistance.
- It can be integrated valves with the base, together with simplified and reliable connecting pipe.
- Varieties of standard voltage ranks are optional.

Inner structure drawing:

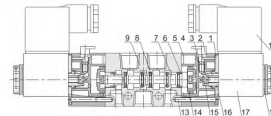
V5310



V5330C



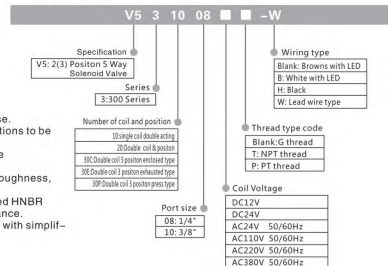
V5320



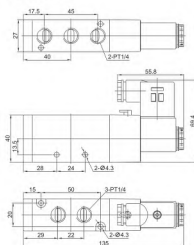
Specification:

Type	V5310-08 V5320-08	V5330C-08 V5330E-08 V5330P-08	V5310-10 V5320-10 V5330C-10 V5330E-10 V5330P-10	
Position number	2 Position 5 Way	3 Position 5 Way	2 Position 5 Way	3 Position 5 Way
Effective sectional	25mm ² (Cv=1.40)	18mm ² (Cv=1.00)	30mm ² (Cv=1.68)	18mm ² (Cv=1.00)
Port size	input=output=exhaust-G1/4"		input=output-G3/8" exhaust-G1/4"	
Fluid	Filtered and compressed air			
Acting type	Internally pilot-actuated			
Working pressure(MPa)	0.15~0.8			
Ambient temperature(°C)	-5~50			
Voltage range	±10%			

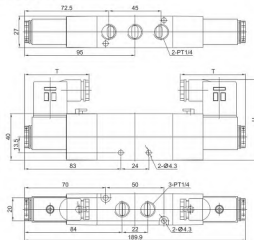
How to order:



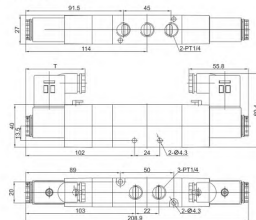
■ V5310-08



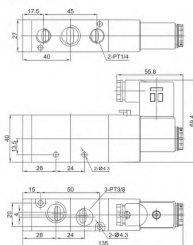
■ V5320-08



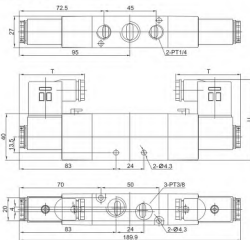
■ V5330-08



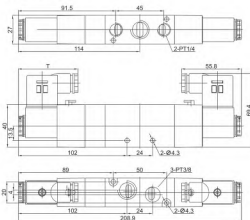
■ V5310-10



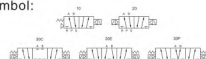
■ V5320-10



■ V5330-10

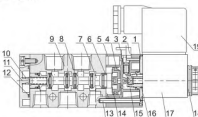


Type	V5410-15	V5420-15	V5430C-15	V5430E-15	V5430P-15
Position number	2 Position 5 Way			3 Position 5 Way	
Effective sectional	50mm ² (Cv=2.79)			30mm ² (Cv=1.68)	
Port size	input=output=exhaust=G1/2"				
Fluid	Filtered and compressed air				
Acting type	Internally pilot-actuated				
Working pressure(MPa)	0.15~0.8				
Ambient temperature(°C)	-5~50				
Voltage range	±10%				

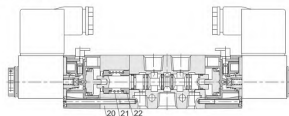


- Sevice life: 15 million cycle times.
- Slippery column type: large flow and rapid response.
- 3.3 position solenoid valves have three neutral functions to be optional.
- Double coil 2 position 5 way solenoid valve has the memory function.
- The inner bore specially processed within Ra0.1 roughness, has small friction and low starting air pressure.
- The valve rod and C-ring are installed with imported HNBR rubber, maximizing the abrasive and aging resistance.
- It can be integrated valves with the base, together with simplified and reliable connecting pipe.
- Varieties of standard voltage ranks are optional.

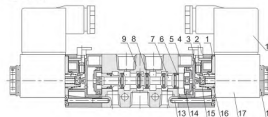
■ V5410



■ V5430C



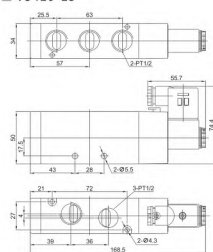
■ V5420



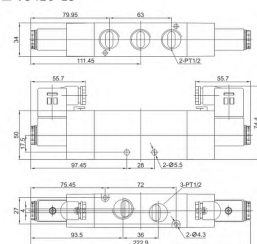
Item	Name	Item	Name	Item	Name	Item	Name
1	Fixed iron sheet	7	Valve rod	13	Screw	19	Wiring box
2	Main spring	8	C-ring	14	Piston	20	Side cover
3	Spring	9	Valve body	15	Central spring	21	Spring
4	Y-ring	10	Spring	16	Movable iron core	22	Return seat
5	Pilot seat	11	Rear cover	17	Coil		
6	Sliding ring	12	Diamond ring	18	Fixed nut		

■ Dimension(mm):

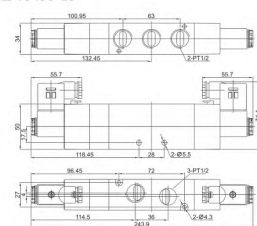
■ V5410-15



■ V5420-15



■ V5430-15



■ Specification:

Type	V5110A-M5	V5110A-06 V5210A-06	V5210A-08 V5310A-08	V5310A-10
Position number	2 Position 5 Way			
Effective sectional	14mm ² (Cv=0.78)	12mm ² (Cv=0.67)	16mm ² (Cv=0.89)	12mm ² (Cv=0.67)
Port size	input-output-reload-H011	input-output-reload-G1/8	input-output-G1/4 input-output-G3/8 exhaust-G1/4	input-output-G3/8 exhaust-G1/4
Fluid	Filtered and compressed air			
Acting type	Internally pilot-actuated			
Working pressure(MPa)	0.15~0.8			
Ambient temperature(°C)	-5~50			
Voltage range	±10%			

■ Symbol:



■ How to order:

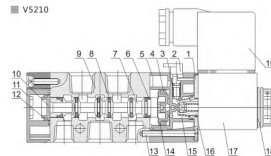
V5 2 10 A 08 ■ -W									
Specification			Series			Wiring type			
V5-321 Position 5 Way Solenoid Valve			1:100Series			Blank: Brown with LED			
			2:200Series			B: White with LED			
			3:300Series			H: Black			
						W: Lead wire type			
						Thread type code			
						Blank: G thread			
						T: NPT thread			
						P: PT thread			
						Coil Voltage			
						DC12V			
						DC24V			
						AC24V 50/60Hz			
						AC110V 50/60Hz			
						AC220V 50/60Hz			
						AC380V 50/60Hz			

■ Product feature:

- Service life: 15 million cycle times.
- Slippery column type: large flow and rapid response.
- The piston is gas reseted, improving the time lag and stability of traditional solenoid when reversing resetting under low and high voltage, prolonging the service life.
- The inner bore specially processed within Ra0.1 roughness, has small friction and low starting air pressure.
- The valve rod and C-ring are installed with imported HNBR rubber, maximizing the abrasive and aging resistance.
- It can be integrated valves with the base, together with simplified and reliable connecting pipe.
- Varieties of standard voltage ranks are optional.

■ Inner structure drawing:

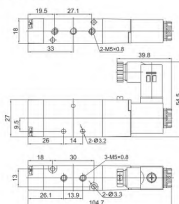
■ V5210



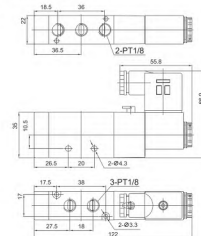
Order	Name	Order	Name	Order	Name	Order	Name
1	Fixed rod sheet	6	Guide ring	11	Rear cover	16	Block/cover
2	Manual pin	7	Valve rod	12	Y-ring	17	Coil
3	Spring	8	C-ring	13	Screw	18	Fixed nut
4	Y-ring	9	Valve body	14	Big piston	19	Wiring box
5	Plat seat	10	Small piston	15	Conical spring		

■ Dimension(mm):

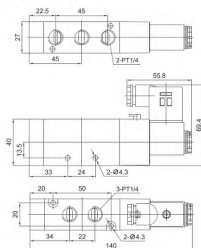
■ V5110A-M5



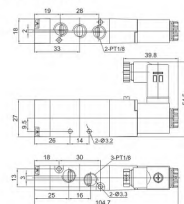
■ V5210A-06



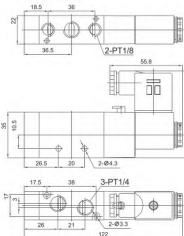
■ V5310A-08



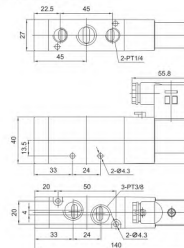
■ V5110A-06



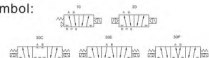
■ V5210A-08



■ V5310A-10



■ Symbol:

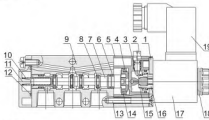


■ Product feature:

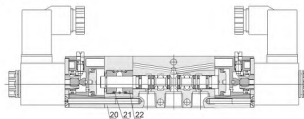
- 1.Service life: 15 million cycle times.
- 2.Slippy column type: large flow and rapid response.
- 3.position solenoid valves have three neutral functions to be optional.
- 4.Double coil 2 position 5 way solenoid valve has the memory function.
- 5.The inner bore specially processed within Ra0.1 roughness, has small friction and low starting air pressure.
- 6.The valve rod and C-ring are installed with imported HNBR rubber, maximizing the abrasive and aging resistance.
- 7.Side panel type installation helps to connect operation element directly to use.
- 8.Varieties of standard voltage ranks are optional.

■ Inner structure drawing:

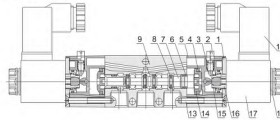
■ M5110



■ M5130C



■ M5120



No.	Name	No.	Name	No.	Name	No.	Name
1	Fixed iron sheet	7	Valve rod	13	Screw	19	Wiring box
2	Manual pin	8	C-ring	14	Piston	20	Side cover
3	Spring	9	Valve body	15	Central spring	21	Spring
4	Y-ring	10	Spring	16	Movable iron core	22	Return seat
5	Pilot seat	11	Rear cover	17	Coil		
6	Guiding ring	12	Diamond ring	18	Fixed nut		

■ Specification:

Type	M5110-M5 M5120-M3	M5130C-M5 M5130E-M5 M5130P-M5	M5110-06 M5120-06	M5130C-06 M5130E-06 M5130P-06
Position number	2 Position 5 Way	3 Position 5 Way	2 Position 5 Way	3 Position 5 Way
Effective sectional	10mm ² (Cv=0.56)	7mm ² (Cv=0.40)	12mm ² (Cv=0.67)	9mm ² (Cv=0.50)
Port size	input-output-exhaust=M5±0.8 input-output-exhaust=G1/8"			
Fluid	Filtered and compressed air			
Acting type	Internally pilot-actuated			
Working pressure(MPa)	0.15~0.8			
Ambient temperature(°C)	-5~50			
Voltage range	±10%			

■ How to order:

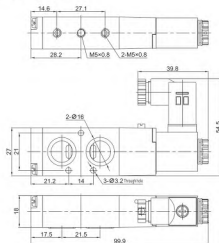
M5 1 10 06 ■ -W									
Specification									
M5: 2(3) Position 5 Way Solenoid Valve(NAMUR)									
Series									
1: 100 Series									
Number of coil and position									
1: Single coil double action									
2: Double coil & position									
3: Double coil 3 position enclosed type									
3: Double coil 3 position exhausted type									
3: Double coil 3 position pressure type									
Port size									
M5: M5±0.8									
06: 1/8"									
Wiring type									
Blank: Browns									
B: With ended									
H: Black									
W: Lead wire type									
Thread type code									
Blank: G thread									
T: NPT thread									
G: PT thread									
Coil Voltage									
DC12V									
DC24V									
AC24V 50/60Hz									
AC110V 50/60Hz									
AC220V 50/60Hz									
AC380V 50/60Hz									

M5100(NAMUR) Series Control Valve

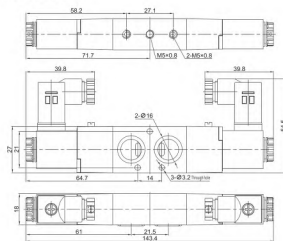
Solenoid Valve

Dimension(mm):

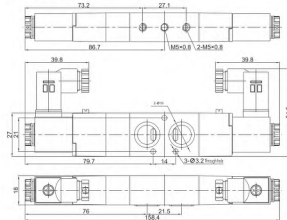
M5110-M5



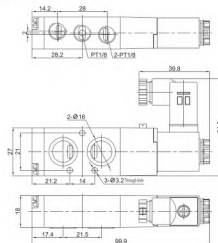
M5120-M5



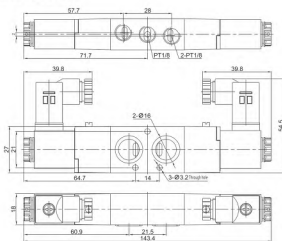
M5130-M5



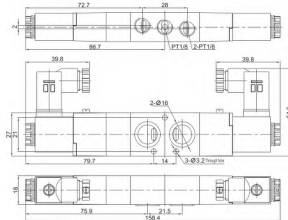
M5110-06



M5120-06



M5130-06

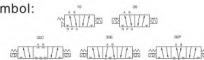


M5200(NAMUR) Series Control Valve

Solenoid Valve



Symbol:

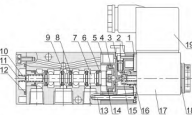


Product feature:

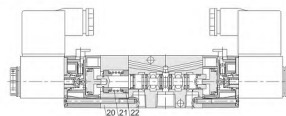
1. Service life: 15 million cycle times.
2. Slippery column type-large flow and rapid response.
3. 3 position solenoid valves have three neutral functions to be optional.
4. Double coil 2 position 5 way solenoid valve has the memory function.
5. The inner bore specially processed within Ra0.1 roughness, has small friction and low starting air pressure.
6. The valve rod and C-ring are installed with imported HNBR rubber, maximizing the abrasive and aging resistance.
7. Side panel type installation helps to connect operation element directly to use.
8. Varieties of standard voltage ranks are optional.

Inner structure drawing:

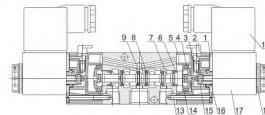
M5210



M5230C



M5220



Specification:

Type	M5210-06 M5220-06	M5230C-06 M5230P-06	M5210-08 M5220-08	M5230C-08 M5230P-08
Position number	2 Position 5 Way	3 Position 5 Way	2 Position 5 Way	3 Position 5 Way
Effective sectional area	14mm ² (Cv=0.78)	12mm ² (Cv=0.67)	16mm ² (Cv=0.89)	12mm ² (Cv=0.67)
Port size	input=output=exhaust=G1/8" input=output=G1/4" exhaust=G1/8"			
Fluid	Filtered and compressed air			
Acting type	Internally pilot-actuated			
Working pressure(MPa)	0.15~0.8			
Ambient temperature(°C)	-5~50			
Voltage range	±10%			

How to order:

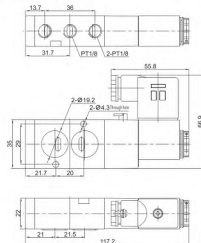
M5 2 10 08 ■ ■ -W									
Specification			Series			Wiring type			
M5: 2(3) Position 5 Way Solenoid Valve(NAMUR)			2200 Series			Blank: Browns			
Number of coil and position			Thread type code			Blank: PT thread			
10: Logical double acting			Coil voltage			T: NPT thread			
20: Double coil 2 position			Port size			G: G thread			
30C: Double coil 3 position enclosed type			DC12V						
30E: Double coil 3 position exhausted type			DC24V						
30P: Double coil 3 position spring type			AC24V 50/60Hz						
			06: 1/8"						
			08: 1/4"						
			11: 1/2"						
			16: 3/4"						
			20: 1"						
			25: 1 1/4"						
			32: 1 1/2"						
			40: 2"						
			50: 2 1/2"						
			63: 3"						
			80: 3 1/2"						
			100: 4"						
			125: 5"						
			160: 6 3/4"						
			200: 8"						
			250: 10"						
			315: 12 1/2"						
			400: 16"						
			500: 20"						
			630: 25"						
			800: 32"						
			1000: 40"						
			1250: 50"						
			1600: 63"						
			2000: 80"						
			2500: 100"						
			3150: 125"						
			4000: 160"						
			5000: 200"						
			6300: 250"						
			8000: 315"						
			10000: 400"						
			12500: 500"						
			16000: 630"						
			20000: 800"						
			25000: 1000"						
			31500: 1250"						
			40000: 1600"						
			50000: 2000"						
			63000: 2500"						
			80000: 3150"						
			100000: 4000"						
			125000: 5000"						
			160000: 6300"						
			200000: 8000"						
			250000: 10000"						
			315000: 12500"						
			400000: 16000"						
			500000: 20000"						
			630000: 25000"						
			800000: 31500"						
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			1250000: 50000"						
			1600000: 63000"						
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			12500000: 500000"						
			16000000: 630000"						
			20000000: 800000"						
			25000000: 1000000"						
			31500000: 1250000"						
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			50000000: 2000000"						
			63000000: 2500000"						
			80000000: 3150000"						
			100000000: 4000000"						
			125000000: 5000000"						
			160000000: 6300000"						
			200000000: 8000000"						
			250000000: 10000000"						

M5200(NAMUR) Series Control Valve

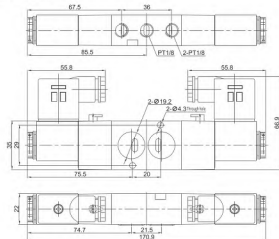
Solenoid Valve

■ Dimension(mm):

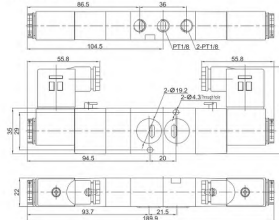
■ M5210-06



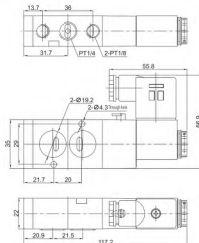
■ M5220-06



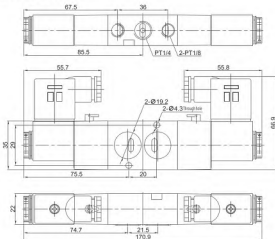
■ M5230-06



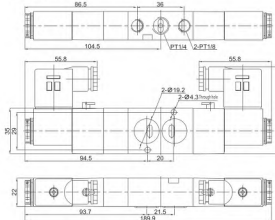
■ M5210-08



■ M5220-08



■ M5230-08

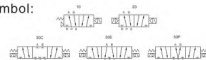


M5300(NAMUR) Series Control Valve

Solenoid Valve



■ Symbol:

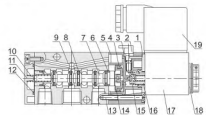


■ Product feature:

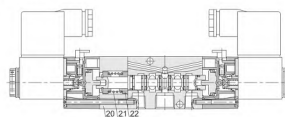
1. Service life: 15 million cycle times.
2. Slippery column type: large flow and rapid response.
3. 3 position solenoid valves have three neutral functions to be optional.
4. Double coil 2 position 5 way solenoid valve has the memory function.
5. The inner bore specially processed within Ra0.1 roughness, has small friction and low starting air pressure.
6. The valve rod and C-ring are installed with imported HNBR rubber, maximizing the abrasive and aging resistance.
7. Side panel type installation helps to connect operation element directly to use.
8. Varieties of standard voltage ranks are optional.

■ Inner structure drawing:

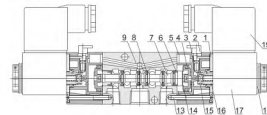
■ M5310



■ M5330C



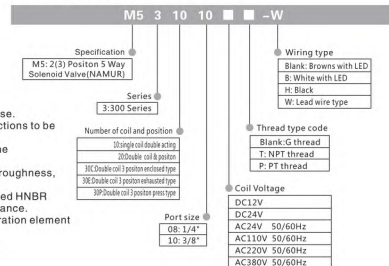
■ M5320



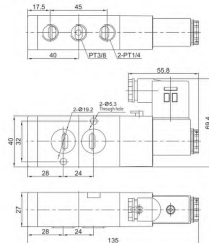
■ Specification:

Type	M5310-08 M5320-08	M5330C-08 M5330P-08	M5310-10 M5320-10	M5330C-10 M5330P-10
Position number	2 Position 5 Way	3 Position 5 Way	2 Position 5 Way	3 Position 5 Way
Effective sectional	25mm ² (Cv=1.40)	18mm ² (Cv=1.00)	30mm ² (Cv=1.68)	18mm ² (Cv=1.00)
Port size	input=output=exhaust=G1/4" input-output=G3/8" exhaust-G1/4"			
Fluid	Filtered and compressed air			
Acting type	Internally pilot-actuated			
Working pressure(MPa)	0.15~0.8			
Ambient temperature(°C)	-5~50			
Voltage range	±10%			

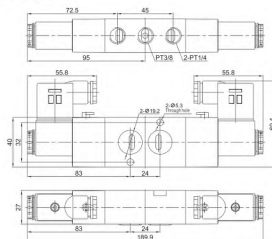
■ How to order:



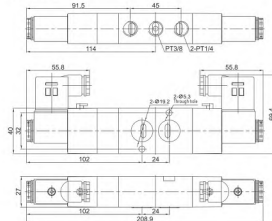
M5310-10



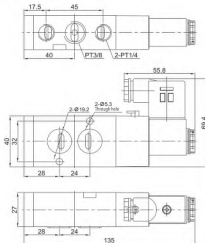
M5320-10



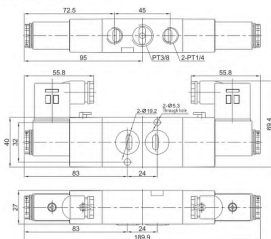
M5330-10



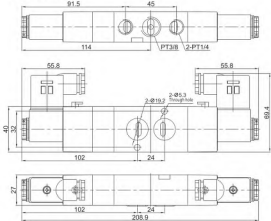
M5310-15



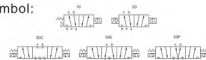
M5320-15



M5330-15

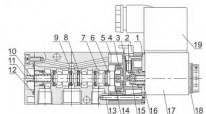


Type	M5410-15	M5420-15	M5430C-15	M5430E-15	M5430P-15
Position number	2 Position 5 Way		3 Position 5 Way		
Effective sectional	50mm ² (Cv=2.79)		30mm ² (Cv=1.68)		
Port size	input=output=exhaust=G1/2"				
Fluid	Filtered and compressed air				
Acting type	Internally pilot-actuated				
Working pressure(MPa)	0.15~0.8				
Ambient temperature(°C)	-5~50				
Voltage range	±10%				

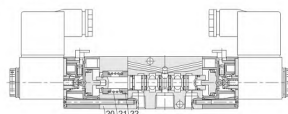


1. Service life: 15 million cycle times.
2. Slippery column type: large flow and rapid response.
3. 3 position solenoid valves have three neutral functions to be optional.
4. Double coil 2 position 5 way solenoid valve has the memory function.
5. The inner bore specially processed within Ra0.1 roughness, has small friction and low starting air pressure.
6. The valve rod and C-ring are installed with imported HNBR rubber, maximizing the abrasive and aging resistance.
7. Side panel type installation helps to connect operation element directly to use.
8. Varieties of standard voltage ranks are optional.

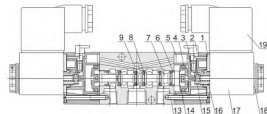
M5410



M5430C



M5420



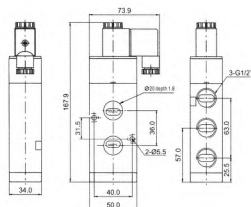
No.	Name	No.	Name	No.	Name	No.	Name
1	Fixed non-shut	7	Valve rod	13	Screw	19	Wiring box
2	Manalpin	8	C-ring	14	Piston	20	Side cover
3	Spring	9	Valve body	15	Centralizing	21	Spring
4	Y-ring	10	Spring	16	Movable non-cm	22	Return seat
5	Pilot seat	11	Rear cover	17	Coil		
6	Sliding	12	Diamond ring	18	Fixed nut		



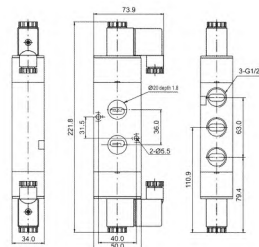
M5400

■ Dimension(mm):

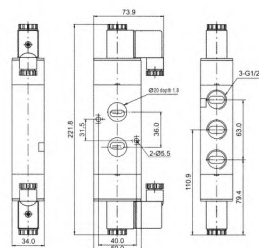
■ M5410-15



M5420-15



M5430-15



A3100 Series Control Valve

Air control valve



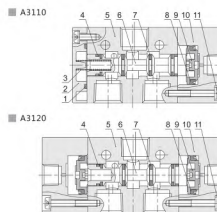
■ Symbol:



■ **Product feature:**

1. Control type: externally air control type.
2. Slippery column type: large flow and rapid response.
3. Double handle, 2 position 3 way air control valve has the memory function.
4. The inner bore specially processed within Ra0.1 roughness, has small friction and low starting air pressure.
5. The valve rod and C-ring are installed with imported HNBR rubber, maximizing the abrasive and aging resistance.
6. It can be integrated valves with the base, together with simplified and reliable connecting pipe.

■ Inner structure drawing:

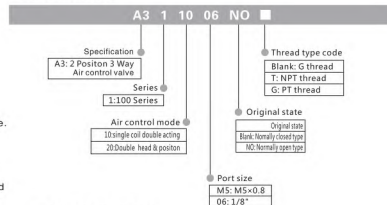


Number	Name	Number	Name	Number	Name
1	Diamond ring	5	Valve body	9	Piston
2	Rear cover	6	Valve rod	10	Pilot seat
3	Spring	7	c-ring	11	Screw
4	Guide ring	8	y-ring		

■ **Specification:**

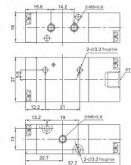
Type	A3110-M5	A3120-M5	A3110-06	A3120-06
Position number	2 Position 3 Way			
Effective sectional area	10mm ² (Cv=0.56)		12mm ² (Cv=0.67)	
Port size	input=output+exhaust=M5×0.8		input=output+exhaust=G1/8"	
Fluid	Filtered and compressed air			
Acting type	Internally pilot-actuated			
Working pressure(MPa)	0.15~0.8			
Ambient temperature(°C)	-5~50			
Voltage range	±10%			

■ **How to order:**

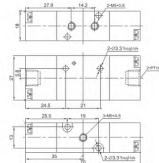


■ Dimension(mm):

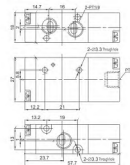
A3110-M5



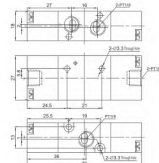
■ A3120-M5



A3110-06



A3120-06



A3100

A3200 Series Control Valve

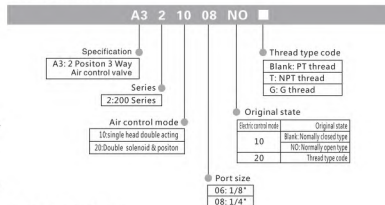
Air control valve



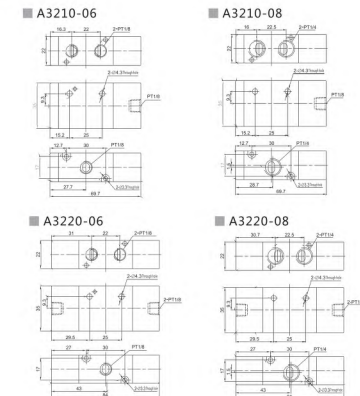
■ Specification:

Type	A3210-06	A3220-06	A3210-08	A3220-08
Position number	2 Position 3 Way			
Effective sectional area	14mm ² (Cv=0.78)		16mm ² (Cv=0.89)	
Port size	input=output=exhaust=PT1/8"		input=output=PT1/4"exhaust=PT1/8"	
Fluid	Filtered and compressed air			
Acting type	Internally pilot-actuated			
Working pressure(MPa)	0.15~0.8			
Ambient temperature(°C)	-5~50			
Voltage range	±10%			

■ How to order:



■ Dimension(mm):



A3300 Series Control Valve

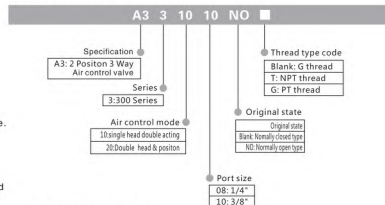
Air control valve



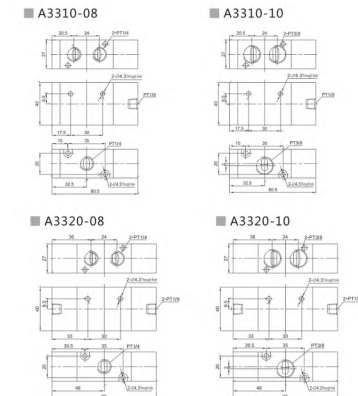
■ Specification:

Type	A3310-08	A3320-08	A3310-10	A3320-10
Position number	2 Position 3 Way			
Effective sectional	25mm ² (Cv=1.40)		30mm ² (Cv=1.68)	
Port size	input-output-exhaust=G1/4"		input-output=G3/8" exhaust=G1/4"	
Fluid	Filtered and compressed air			
Acting type	Internally pilot-actuated			
Working pressure(MPa)	0.15~0.8			
Ambient temperature(°C)	-5~50			
Voltage range	±10%			

■ How to order:



■ Dimension(mm):



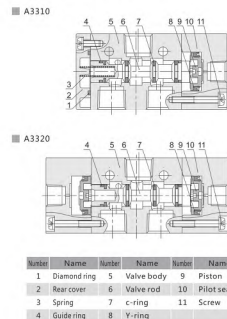
■ Symbol:



■ Product feature:

- Control type: externally air control type.
- Slippery column type-large flow and rapid response.
- Double head and 2 position 3 way air control valve has the memory function.
- The inner bore specially processed within Ra0.1 roughness, has small friction and low starting air pressure.
- The valve rod and C-ring are installed with imported HNBR rubber, maximizing the abrasive and aging resistance.
- It can be integrated valves with the base, together with simplified and reliable connecting pipe.

■ Inner structure drawing:



Number	Name	Number	Name	Number	Name
1	Diamond ring	5	Valve body	9	Piston
2	Rear cover	6	Valve rod	10	Pilot seat
3	Spring	7	C-ring	11	Screw
4	Guide ring	8	Y-ring		

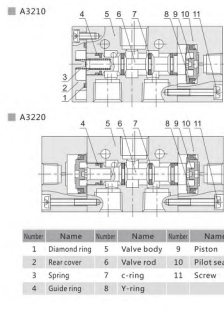
■ Symbol:



■ Product feature:

- Control type: externally air control type.
- Slippery column type-large flow and rapid response.
- Double electronic and 2 position 3 way solenoid valve has the memory function.
- The inner bore specially processed within Ra0.1 roughness, has small friction and low starting air pressure.
- The valve rod and C-ring are installed with imported HNBR rubber, maximizing the abrasive and aging resistance.
- It can be integrated valves with the base, together with simplified and reliable connecting pipe.

■ Inner structure drawing:



Number	Name	Number	Name	Number	Name
1	Diamond ring	5	Valve body	9	Piston
2	Rear cover	6	Valve rod	10	Pilot seat
3	Spring	7	C-ring	11	Screw
4	Guide ring	8	Y-ring		

A3400 Series Control Valve

Air control valve



Symbol:

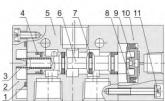


Product feature:

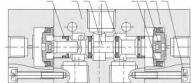
- Control type: externally air control type.
- Slippery column type: large flow and rapid response.
- Double head and 2 position 3 way air control valve has the memory function.
- The inner bore specially processed within Ra0.1 roughness, has small friction and low starting air pressure.
- The valve rod and C-ring are installed with imported HNBR rubber, maximizing the abrasive and aging resistance.
- It can be integrated valves with the base, together with simplified and reliable connecting pipe.

Inner structure drawing:

■ A3410



■ A3420

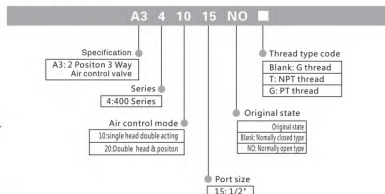


Number	Name	Number	Name	Number	Name
1	Diamond ring	5	Valve body	9	Piston
2	Rear cover	6	Valve rod	10	Pilot seat
3	Spring	7	c-ring	11	Screw
4	Guide ring	8	Y-ring		

■ Specification:

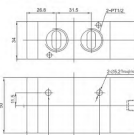
Type	A3410-15	A3420-15
Position number	2 Position 3 Way	
Effective sectional	50mm ² (Cv=2.79)	
Port size	input=output=exhaust=G1/2"	
Fluid	Filtered and compressed air	
Acting type	Internally pilot-actuated	
Working pressure(MPa)	0.15~0.8	
Ambient temperature(°C)	-5~50	
Voltage range	±10%	

■ How to order:

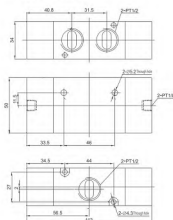


■ Dimension(mm):

■ A3410-15



■ A3420-15

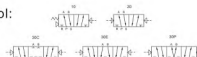


A5100 Series Control Valve

Air control valve



■ Symbol:

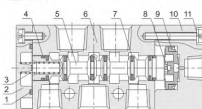


■ Product feature:

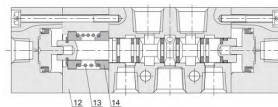
- Control type: externally air control type.
- Slippery column type: large flow and rapid response.
- Double head and 2 position 5 way air control valve has the memory function.
- 4.3 position solenoid valves have three neutral functions to be optional.
- The inner bore specially processed within Ra0.1 roughness, has small friction and low starting air pressure.
- The valve rod and C-ring are installed with imported HNBR rubber, maximizing the abrasive and aging resistance.
- It can be integrated valves with the base, together with simplified and reliable connecting pipe.

Inner structure drawing:

■ A5110



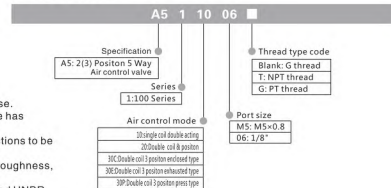
■ A5130C



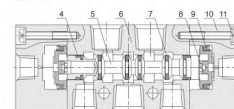
■ Specification:

Type	A5110-M5 A5120-M3	A5130C-M5 A5130E-M5 A5130P-M5	A5110-06 A5120-06	A5130C-06 A5130E-06 A5130P-06
Position number	2 Position 5 Way	3 Position 5 Way	2 Position 5 Way	3 Position 5 Way
Effective sectional	10mm ² (Cv=0.56)	7mm ² (Cv=0.40)	12mm ² (Cv=0.67)	9mm ² (Cv=0.50)
Port size	input=output=exhaust=M5x0.8		input=output=exhaust=G1/8"	
Fluid	Filtered and compressed air			
Acting type	Internally pilot-actuated			
Working pressure(MPa)	0.15~0.8			
Ambient temperature(°C)	-5~50			
Voltage range	±10%			

■ How to order:



■ A5120

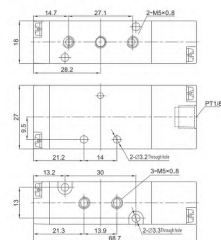


Number	Name	Number	Name	Number	Name	Number	Name
1	Diamond ring	5	Valve rod	9	V-ring	13	Spring
2	Rear cover	6	Valve body	10	Pilot seat	14	Return seat
3	Spring	7	c-ring	11	Screw		
4	Guide ring	8	Piston	12	Side cover		

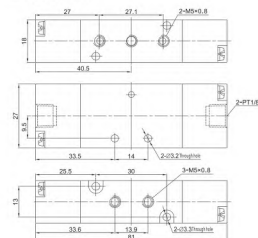
Air control valve

Dimension(mm):

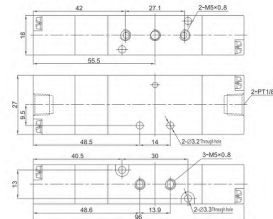
A5110-M5



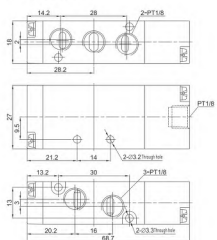
A5120-M5



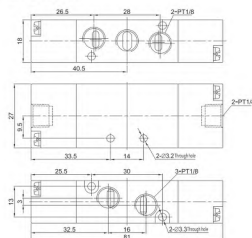
A5130-M5



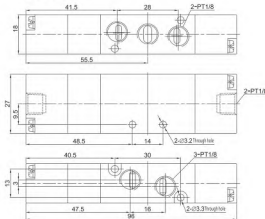
A5110-06



A5120-06



A5130-06

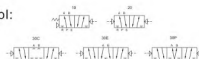


Air control valve

Specification:

Type	A5210-06 A5220-06	A5230C-06 A5230E-06 A5230P-06	A5210-08 A5220-08	A5230C-08 A5230E-08 A5230P-08
Position number	2 Position 5 Way	3 Position 5 Way	2 Position 5 Way	3 Position 5 Way
Effective sectional	14mm ² (Cv=0.78)	12mm ² (Cv=0.67)	16mm ² (Cv=0.89)	12mm ² (Cv=0.67)
Port size	input=output=exhaust=G1/8" input=output=G1/4" exhaust-G1/8"			
Fluid	Filtered and compressed air			
Acting type	Internally pilot-actuated			
Working pressure(MPa)	0.15~0.8			
Ambient temperature(°C)	-5~50			
Voltage range	±10%			

Symbol:

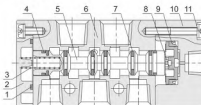


Product feature:

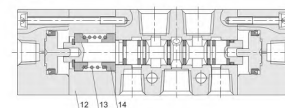
- Control type: externally air control type.
- Slippery column type: large flow and rapid response.
- Double head and 2 position 5 way air control valve has the memory function.
- 3 position solenoid valves have three neutral functions to be optional.
- The inner bore specially processed within Ra0.1 roughness, has small friction and low starting air pressure.
- The valve rod and C-ring are installed with imported HNBR rubber, maximizing the abrasive and aging resistance.
- It can be integrated valves with the base, together with simplified and reliable connecting pipe.

Inner structure drawing:

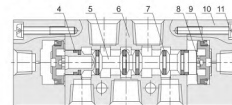
A5210



A5230C

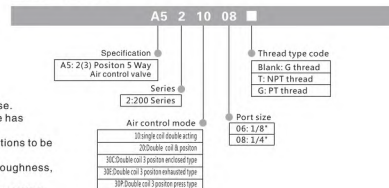


A5220



Serial	Name	Serial	Name	Serial	Name	Serial	Name
1	Diamond ring	5	Valve rod	9	V-ring	13	Spring
2	Rear cover	6	Valve body	10	Pilot seat	14	Return seat
3	Spring	7	c-ring	11	Screw		
4	Guide ring	8	Piston	12	Side cover		

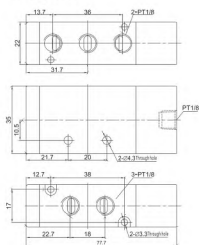
How to order:



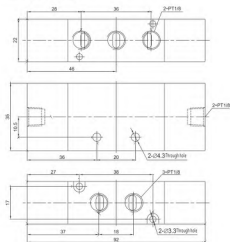
Air control valve

■ Dimension(mm):

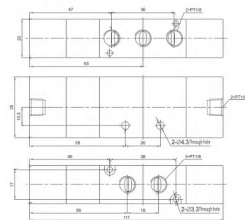
■ A5210-06



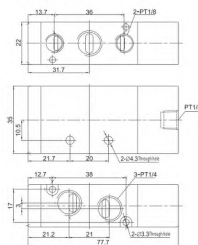
■ A5220-06



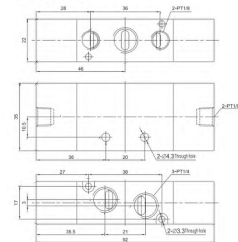
■ A5230-06



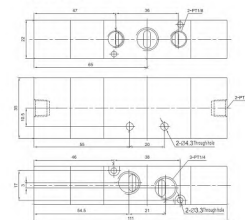
■ A5210-08



■ A5220-08



■ A5230-08

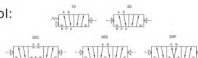

Air control valve

■ Specification:

Type	A5310-08 A5320-08	A5330C-08 A5330P-08	A5310-10 A5320-10	A5330C-10 A5330P-10
Position number	2 Position 5 Way	3 Position 5 Way	2 Position 5 Way	3 Position 5 Way
Effective sectional	25mm ² (Cv=1.40)	18mm ² (Cv=1.00)	30mm ² (Cv=1.68)	18mm ² (Cv=1.00)
Port size	input=output=exhaust=G1/4"			
Fluid	Filtered and compressed air			
Acting type	Internally pilot-actuated			
Working pressure(MPa)	0.15~0.8			
Ambient temperature(°C)	-5~50			
Voltage range	±10%			



■ Symbol:

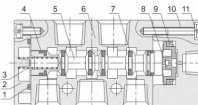


■ Product feature:

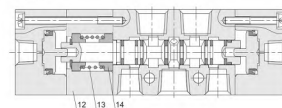
1. Control type: externally air control type.
2. Slippery column type: large flow and rapid response.
3. Double head and 2 position 5 way air control valve has the memory function.
4. 3 position solenoid valves have three neutral functions to be optional.
5. The inner bore specially processed within Ra0.1 roughness, has small friction and low starting air pressure.
6. The valve rod and C-ring are installed with imported HNBR rubber, maximizing the abrasive and aging resistance.
7. It can be integrated valves with the base, together with simplified and reliable connecting pipe.

■ Inner structure drawing:

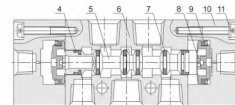
■ A5310



■ A5330C

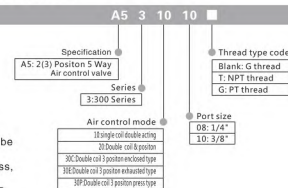


■ A5320



Model	Name	Number	Name	Number	Name	Number	Name
1	Diamond ring	5	Valve rod	9	V-ring	13	Spring
2	Rear cover	6	Valve body	10	Pilot seat	14	Return seat
3	Spring	7	C-ring	11	Screw		
4	Guiding ring	8	Piston	12	Side cover		

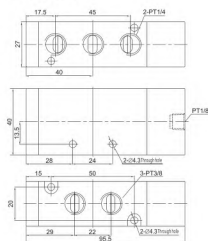
■ How to order:



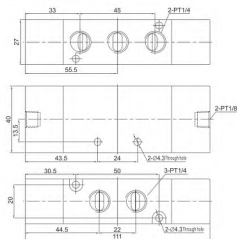
Air control valve

Dimension(mm):

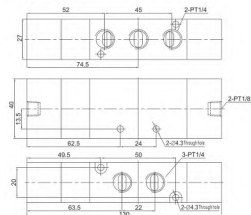
A5310-08



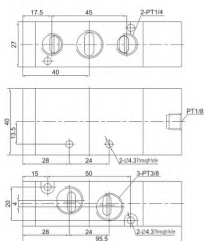
A5320-08



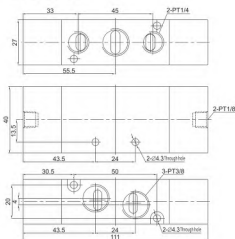
A5330-08



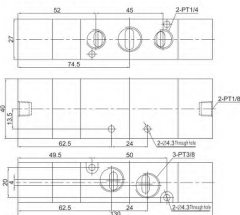
A5310-10



A5320-10



A5330-10

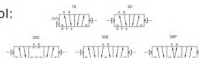


Air control valve

Specification:

Type	A5410-15	A5420-15	A5430C-15	A5430E-15	A5430P-15
Position number	2 Position 5 Way			3 Position 5 Way	
Effective sectional	50mm ² (Cv=2.79)			30mm ² (Cv=1.68)	
Port size	input=output=exhaust=G1/2"				
Fluid	Filtered and compressed air				
Acting type	Internally pilot-actuated				
Working pressure(MPa)	0.15~0.8				
Ambient temperature(°C)	-5~50				
Voltage range	±10%				

Symbol:

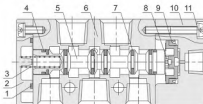


Product feature:

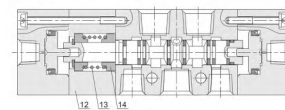
1. Control type: externally air control type.
2. Slippery column type: large flow and rapid response.
3. Double head 2 position 5 way air control valve has the memory function.
4. 3 position solenoid valves have three neutral functions to be optional.
5. The inner bore specially processed within Ra0.1 roughness, has small friction and low starting air pressure.
6. The valve rod and C-ring are installed with imported HNBR rubber, maximizing the abrasive and aging resistance.
7. It can be integrated valves with the base, together with simplified and reliable connecting pipe.

Inner structure drawing:

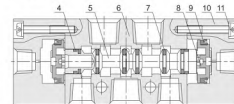
A5410



A5430C

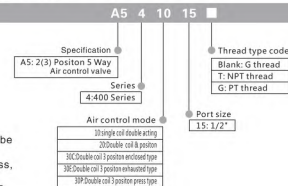


A5420



Model	Name	Model	Name	Model	Name	Model	Name
1	Diamond ring	5	Valve rod	9	V-ring	13	Spring
2	Rear cover	6	Valve body	10	Pilot seat	14	Return seat
3	Spring	7	C-ring	11	Screw		
4	Guiding ring	8	Piston	12	Side cover		

How to order:

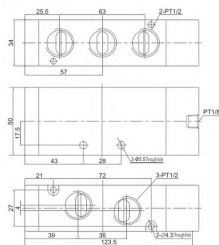




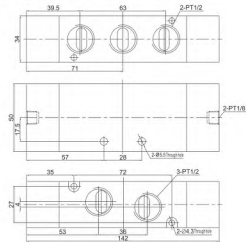
A5400

■ Dimension(mm):

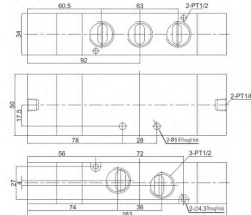
A5410-15



A5420-15



A5430-15



Direct Acting Solenoid Valve



■ Symbol:

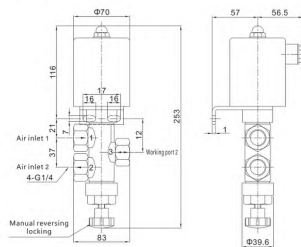


■ **Product feature:**

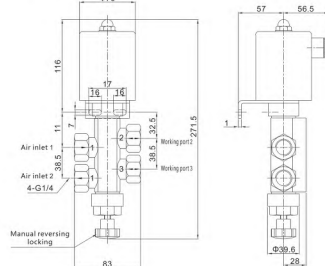
1. This series valve adopts shut sealing structure. It is driven by electromagnet directly to be used as a switch (0 Mpa without differential pressure) thus can be used in the vacuum 1.33×10^{-6} Mpa.
2. This valve with varieties of functions (various ways of connecting pipes) is adapted to air, water and oil.

■ Dimension(mm):

■ DFL23-08, 15



■ DFL24-08、15



■ **Specification:**

Type	DFL23-8	DFL23-15	DFL24-8	DFL24-15
Position number	2 Position 3 Way		2 Position 4 Way	
Port size	1/4"	1/2"	1/4"	1/2"
Fluid	Air, Water, Oil			
Acting type	Direct acting			
Working pressure(MPa)	0~1.5	0~1.0	0~1.5	0~1.0
Max. pressure resistance(MPa)	1.5			
Ambient temperature(°C)	-5~50			
Voltage range	±10%			

■ **How to order:**

DFL 23 A 8 T AC220

- Specification**
DFL Direct Acting Sinter Valve
- Position number**
23: 2 Position 3 Way
24: 2 Position 4 Way
- Action form**
Blank: with lock
A: Inching
- Port size**
B: G1/4"
AC: G1/2"
- Material**
Blank: Aluminum
T: Copper
- Coil voltage**
DC: 24V
AC: 220V



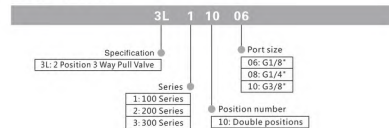
DFL

[illegible]

■ **Specification:**

Type	3L110-06	3L210-08	3L310-10
Position number	2 Position 3 Way		
Fluid	Compressed air		
Port size(G)	G1/8"	G1/4"	G3/8"
Orifice size(Cv)	12mm ² (Cv=0.67)	16mm ² (Cv=0.89)	30mm ² (Cv=1.67)
Working pressure(MPa)	0~0.8		
Ambient temperature(°C)	-5~60		

■ **How to order:**

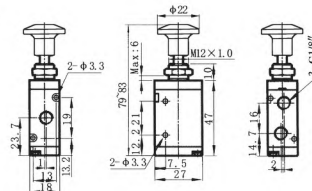


■ Symbol:

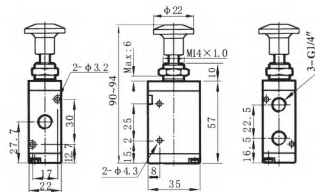


■ Dimension(mm):

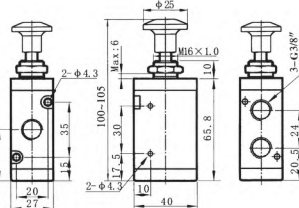
■ 3L110



3L210



3L310



4L Series Control Valve

Hand Valve

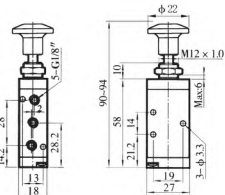


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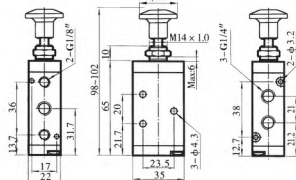


Dimension(mm):

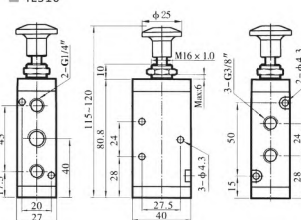
4L110



4L210



4L310



Specification:

Type	4L110-06	4L210-08	4L310-10
Position number	2 Position 5 Way		
Fluid	Compressed air		
Port size(G)	G1/8"	G1/4"	G3/8"
Orifice size(Cv)	12mm ² (Cv=0.67)	16mm ² (Cv=0.89)	30mm ² (Cv=1.67)
Working pressure(MPa)	0-0.8		
Ambient temperature(°C)	-5-60		

How to order:

4L	1	10	06
Specification			
4L 2 Position 5 Way Pull Valve			
Series			
1: 100 Series 2: 200 Series 3: 300 Series			
Port size			
06: G1/8" 08: G1/4" 10: G3/8"			
Position number			
10: Double positions			

4H Series Control Valve

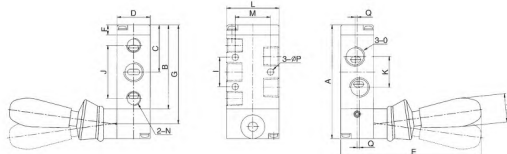
Hand-pull Valve



Symbol:



Dimension(mm):



Specification:

Type	4H210-06	4H210-08	4H210-10	4H210-15	4H210-15	4H210-15	4H210-15	4H210-15	4H210-15
Position number	2 Position 5 Way								
Fluid	Compressed air								
Acting type	Directly								
Port size(G)	input, output, exhaust-G1/8"	input, output, exhaust-G1/8"	input, output, exhaust-G1/4"	input, output, exhaust-G1/8"	input, output, exhaust-G1/4"	input, output, exhaust-G1/8"	input, output, exhaust-G1/4"	input, output, exhaust-G1/8"	input, output, exhaust-G1/2"
Working pressure(MPa)	0-0.8								
Ambient temperature(°C)	-5-60								

How to order:

4H	2	10	06
Specification			
4H 2(3) Position 5 Way Hand-pull Valve			
Series			
2: 200 Series 3: 300 Series 4: 400 Series			
Port size			
06: G1/8" 08: G1/4" 10: G3/8" 15: G1/2"			
Position number			
10: Double position 30: Three position			

Type/Symbol	4H210-08(06)	4H230-08(06)	4H260-08	4H310-10(08)	4H330-10(08)	4H410-15	4H430-15
		(Auto-reset)			(Auto-reset)		(Auto-reset)
A	80.5	95	84.5	96	115	126	147
B	56.5	75.5	56.5	72	91	102	123
C	31.5	31.5	31.5	40	60	55.5	76.5
D	22	22	26	27	34	34	34
E	95	95	95	100	100	110	110
F	6.5	6.5	6.5	7.5	7.5	7.5	7.5
G	66.5	85.5	72.5	84	103	114	135
H	18	18	21	18	18	18	18
I	20	20	21	24	24	28	28
J	36	36	37	45	45	63	63
K	21	21	23	24	24	36	36
L	35	35	35	40	40	50	50
M	21	21	-	27	27	35	35
N	G1/8	G1/8	G1/8	G3/8	G3/8	G1/2	G1/2
O	G1/4(G1/8)	G1/4(G1/8)	G1/4	G3/8(G1/4)	G3/8(G1/4)	G1/2	G1/2
P	4.3	4.3	4.2	4.3	4.3	5.5	5.5
Q	1.5(-)	1.5(-)	-	2(-)	2(-)	-	-



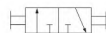
■ Specification:

Type	HSV-06 HSN-06	HSV-08 HSN-08	HSV-10 HSN-10	HSV-15 HSN-15	HSV-20 HSN-20	HSV-25 HSN-25
Port size(G)	1/8"	1/4"	3/8"	1/2"	3/4"	1"
Fluid	Compressed air					
Working pressure(MPa)	0.2~0.8					
Ambient temperature(°C)	-5~60					

■ How to order:

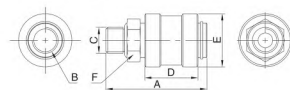
HSV	08	SS
Specification		
HSV: Male thread Hand Valve HSN: Female thread Hand Valve		
Thread type		
Blank: Standard type SS: Double male thread FF: Double female thread SF: Male and female thread		
Port size		
06: 1/8" 08: 1/4" 10: 3/8" 15: 1/2" 20: 5/8" 25: 3/4"		

■ Symbol:

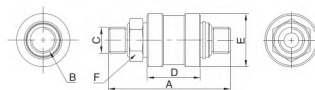


■ Dimension(mm):

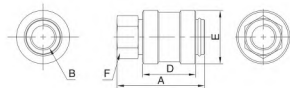
■ Standard type



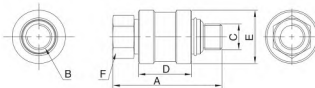
■ Double male thread type



■ Double female thread type



■ Male and female



Type	A		B	C	D	E	F
HSV, HSN-06	38	46	G1/8"	G1/8"	20	20	14
HSV, HSN-08	58	68	G1/4"	G1/4"	32	26	18
HSV, HSN-10	58	69	G3/8"	G3/8"	32	32.5	22
HSV, HSN-15	80	93	G1/2"	G1/2"	40	38.5	27
HSV, HSN-20	85	101	G5/8"	G5/8"	45	46.5	34
HSV, HSN-25	85	101	G3/4"	G3/4"	45	51	38



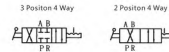
■ Specification:

Type	HV2□□-08	HV3□□-08	HV3□□-10	HV3□□-15
Position number	2 Position 4 Way/3 Position 4 Way			
Fluid	Compressed air			
Port size(G)	G1/4"	G3/8"	G1/2"	
Working pressure(MPa)	0~0.8			
Ambient temperature(°C)	-5~60			
Operating angle	90°			

■ How to order:

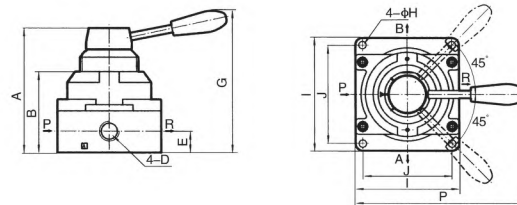
HV	B	2	30	08	T
Specification					
HV: Hand-Switching Valve					
Sealing form					
Blank: Ordinary type B: Ceramic seal					
Series					
2: 2 Series 3: 3 Series					
Port size					
08: G1/4" 10: G3/8" 15: G1/2"					
Position number					
10: 2 Position 4 Way 30: 3 Position 4 Way					
Type					
Blank: Side mounting T: Bottom mounting					

■ Symbol:



■ Dimension(mm):

■ Panel mounting type



Type	A	B	D	E	G	H	I	J	P
HV2□□-08	72.6	45	G1/4	11.5	92.5	5	62	49	120
HV3□□-08	88.5	56	G1/4	13.5	104	6.6	74	62	140
HV3□□-10	88.5	56	G3/8	13.5	104	6.6	74	62	140
HV3□□-15	88.5	56	G1/2	13.5	104	6.6	74	62	140

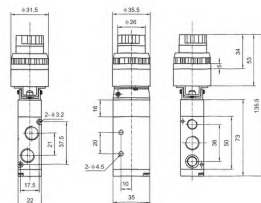
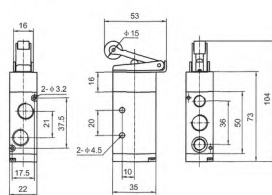
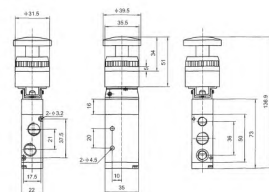
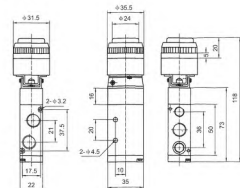

Specification:

Type	JMJ-01	JMJ-02	JMJ-03	JMJ-04
Fluid	Compressed air			
Port size(G)	G1/4"			
Working pressure(MPa)	0~0.8			
Ambient temperature(°C)	-5~60			

How to order:

JMJ	01
Series	Type
JMJ: 2 Position 5 Way Mechanical Valve	01: Selector type
	02: Roller type
	03: Mushroom button
	04: Flat headed button

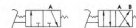
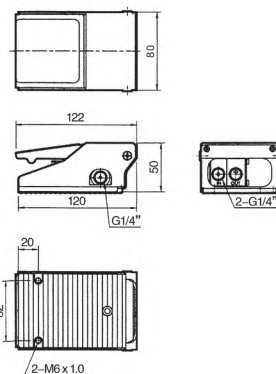
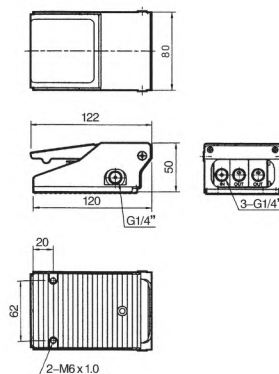
Symbol:

Dimension(mm):
JMJ-01

JMJ-02

JMJ-03

JMJ-04

Specification:

Type	FV230	FV240
Position number	2 Position 3 Way	2 Position 4 Way
Fluid	Compressed air	
Port size(G)	G1/4"	
Working pressure(MPa)	0~0.8	
Ambient temperature(°C)	-5~60	

How to order:

FV	230
Specification	Position number
FV: Foot Valve	230: 2 Position 3 Way
	240: 2 Position 4 Way

Symbol:

Dimension(mm):
FV230

FV240


Foot Valve

■ Specification:

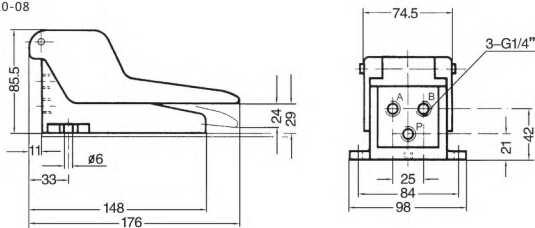
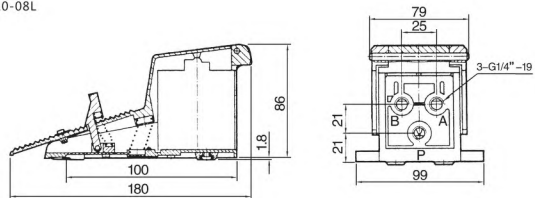
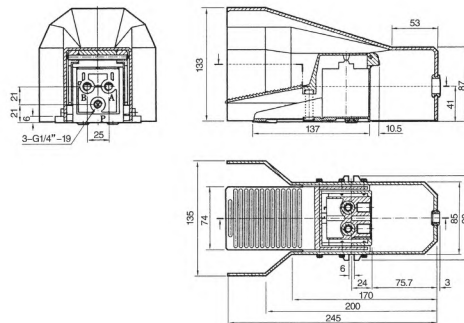
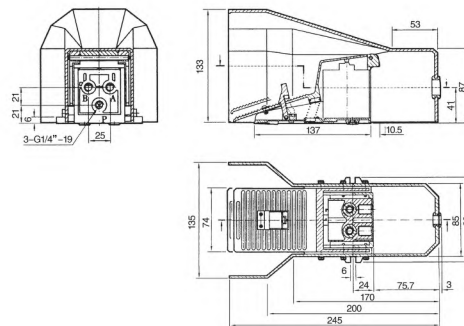
Type	4F210-08	4F210-08L	4F210-08G	4F210-08LG
Fluid	Compressed air			
Port size(G)	G1/4"			
Acting type	Directly operated			
Working pressure(MPa)	0~0.8			
Ambient temperature(°C)	-5~60			

■ How to order:

4F 210 08 L

Specification 4F: Foot Valve	Accessories L Lock G Guard LG Lock&Guard
Position number 210: 2 Position 5 Way	Port size 08: G1/4"

■ Symbol:

■ Dimension(mm):
■ 4F210-08

■ 4F210-08L

Foot Valve
■ Dimension(mm):
■ 4F210-08G

■ 4F210-08GL


Check Valve



■ Specification:

Type	KA-06	KA-08	KA-10	KA-15	KA-20	KA-25
Calibre Code	06	08	10	15	20	25
Port size(G)	G1/8"	G1/4"	G3/8"	G1/2"	G3/4"	G1"
Fluid	Compressed air					
Working pressure(MPa)	0.1~0.8					
Ambient temperature(°C)	-5~60					

■ How to order:

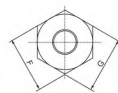
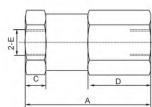
KA	08
Specification	Port size
KA: Check Valve	06: G1/8"
	08: G1/4"
	10: G3/8"
	15: G1/2"
	20: G3/4"
	25: G1"

■ Symbol:

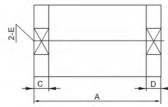


■ Dimension(mm):

■ KA-06, 08



■ KA-10, 15, 20, 25



Type	A	C	D	E	F	G
KA-06	48	8	24	G1/8"	21	21
KA-08	48	8	24	G1/4"	21	21
KA-10	68.5	8	8	G3/8"	32	Φ35
KA-15	68.5	8	8	G1/2"	32	Φ35
KA-20	95.5	8	8	G3/4"	47	Φ50
KA-25	95.5	8	8	G1"	47	Φ50

Quick Exhaust Valve



■ Specification:

Type	SE-06	SE-08	SE-10	SE-15	SE-20	SE-25
Calibre Code	06	08	10	15	20	25
Port size(G)	G1/8"	G1/4"	G3/8"	G1/2"	G3/4"	G1"
Fluid	Compressed air					
Working pressure(MPa)	0.2~0.8					
Ambient temperature(°C)	-5~60					

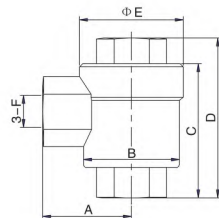
■ How to order:

SE	06
Specification	Port size
SE: Quick Exhaust Valve	06: G1/8"
	08: G1/4"
	10: G3/8"
	15: G1/2"
	20: G3/4"
	25: 1"

■ Symbol:



■ Dimension(mm):



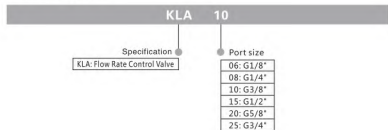
Type	A	B	C	D	E	F
SE-06	27	30	42	50	Φ32	G1/8"
SE-08	27	30	42	50	Φ32	G1/4"
SE-10	36	41	51	62	Φ45	G3/8"
SE-15	44	48	64	76	Φ55	G1/2"
SE-20	55	66	112	109	72	G5/8"
SE-25	55	66	112	109	72	G3/4"



■ Specification:

Type	KLA-06	KLA-08	KLA-10	KLA-15	KLA-20	KLA-25
Port size(G)	G1/8"	G1/4"	G3/8"	G1/2"	G5/8"	G3/4"
Fluid	Compressed air					
Working pressure(MPa)	0.05~0.8					
Ambient temperature(°C)	-5~60					
Material	Aluminum alloy					

■ How to order:

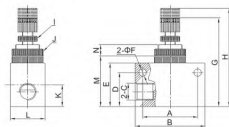


■ Symbol:

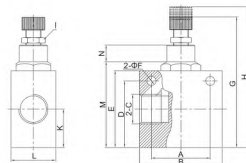


■ Dimension(mm):

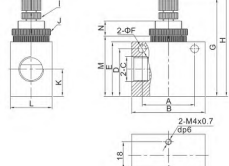
■ KLA-06, 08



■ KLA-20, 25



■ KLA-10, 15



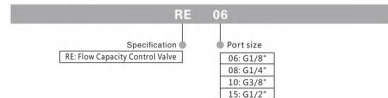
Type	A	B	C	D	E	F	G	H	I	J	K	L	M	N
KLA-06	30	40	G1/8"	23	26	4.3	50.8	56.3	M6×0.5	M12×0.75	13.5	18	30	8.6
KLA-08	30	40	G1/4"	23	26	4.3	50.8	56.3	M6×0.5	M12×0.75	13.5	18	30	8.6
KLA-10	35	48.5	G3/8"	32	36	5.3	65	74	M8×0.75	M16×1	17.5	28	40	10.2
KLA-15	35	48.5	G1/2"	32	36	5.3	65	74	M8×0.75	M16×1	17.5	28	40	10.2
KLA-20	46	65	G5/8"	52	60	7	102	110	M12×1	-	30	35	67	13
KLA-25	46	65	G1"	52.5	60	7	103	112.5	M12×1	-	30	43.5	67	13



■ Specification:

Type	RE-06	RE-08	RE-10	RE-15
Port size(G)	G1/8"	G1/4"	G3/8"	G1/2"
Fluid	Compressed air			
Working pressure(MPa)	0.05~0.8			
Ambient temperature(°C)	-5~60			
Material	Aluminum alloy			

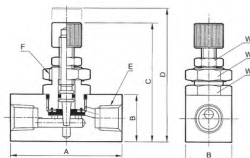
■ How to order:



■ Symbol:



■ Dimension(mm):



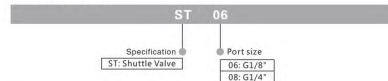
Type	A	B	C	D	E	F	W1	W2	W3
RE-06	45	19	46	53	G1/8"	M14×1	11	17	23
RE-08	45	19	46	53	G1/4"	M14×1	11	17	23
RE-10	55	25	52	59	G3/8"	M18×1	11	17	23
RE-15	55	25	52	59	G1/2"	M18×1	11	17	23

ST Shuttle Valve

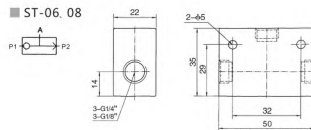
■ Specification:

Type	ST-06	ST-08
Port size(G)	G1/8"	G1/4"
Fluid	Compressed air	
Operating pressure(Mpa)	0.05~0.8	
Ambient temperature(°C)	-5~60	

■ How to order:



■ Dimension(mm):



Theoretical force output form pressure mutual calculate form

Cylinder force output :

$$F = P \times A - f$$

F: Cylinder force output(kgf)
P: Work pressure(kgf/cm²)
A: Piston area(cm²)
f: Friction resistance(kgf)

Cylinder theoretical force output form:

	Bore(mm)					
	12	16	20	25	32	40
Axes Bore(mm)	6	6	8	10	12	16
Piston area(cm ²)	A1	1.1	2.0	3.1	4.9	8.0
	A2	0.8	1.7	2.6	4.1	6.9
1	A1	1.1	2.0	3.1	4.9	8.0
	A2	0.8	1.7	2.6	4.1	6.9
2	A1	2.3	4.0	6.3	9.8	16.1
	A2	1.7	3.5	5.3	8.2	13.8
3	A1	3.4	6.0	9.4	14.7	24.1
	A2	2.5	5.2	7.9	12.4	20.7
4	A1	4.5	8.0	12.6	19.6	32.2
	A2	3.4	6.9	10.6	16.5	27.6
5	A1	5.7	10.1	15.7	24.5	40.2
	A2	4.2	8.6	13.2	20.6	34.6
6	A1	6.8	12.1	18.9	29.5	48.3
	A2	5.1	10.4	15.8	24.7	41.5
7	A1	7.9	14.1	22.0	34.4	56.3
	A2	5.9	12.1	18.5	28.9	48.4
8	A1	9.0	16.1	25.1	39.3	64.3
	A2	6.8	13.8	21.1	33.0	55.5
9	A1	10.2	18.1	28.3	44.2	72.4
	A2	7.6	15.6	23.7	37.1	62.2

	Bore(mm)					
	250	300	350	400	450	500
Axes Bore(mm)	40	50	50	55	63	80
Piston area(cm ²)	A1	314.2	314.2	490.9	490.9	804.2
	A2	301.6	294.5	471.2	471.2	773.1
1	A1	314.2	314.2	490.9	490.9	804.2
	A2	301.6	294.5	471.2	471.2	773.1
2	A1	628.3	628.3	981.7	981.7	1608.4
	A2	603.2	589.0	942.5	942.5	1546.1
3	A1	942.5	942.5	1472.6	1472.6	2412.7
	A2	904.8	883.5	1401.3	1401.3	2319.2
4	A1	1256.6	1256.6	1963.4	1963.4	3216.9
	A2	1206.3	1178.1	1884.9	1884.9	3092.2
5	A1	1570.8	1570.8	2454.3	2454.3	4021.1
	A2	1507.9	1472.6	2356.1	2356.1	3865.3
6	A1	1884.9	1884.9	2945.2	2945.2	4825.3
	A2	1809.5	1767.1	2827.4	2802.6	4638.3
7	A1	2199.1	2199.1	3436.0	3436.0	5629.6
	A2	2061.6	2061.6	3298.6	3269.7	5411.4
8	A1	2513.2	2513.2	3926.8	3926.9	6413.8
	A2	2356.1	2356.1	3769.8	3736.8	6184.4
9	A1	2827.4	2827.4	4417.7	4417.7	7238.0
	A2	2650.6	2650.6	4241.0	4203.9	6957.5

Note: Above all are theory datas, so before operation, please pay attention to the friction force and the mechanical efficiency and also calculate the actual figures.

- Please read the safety notice carefully before using and pay attention to the safety caution of this product
- Pay attention to the individual caution for various model series(read the cautions and safety notice in p1-2 for common cautions)

Caution for design, selection



Warning:

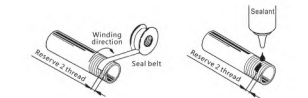
- Make thorough understanding to the characteristic of the compressed air and the application of this product while designing circuit
- Please use only the fluid stated on the catalog, don't use the fluid other than limited, in order to prevent damage of product and affect the operation safety
- The air used is compressed air, please note that expandable and unstable pressure will fly out, burst out, or leak.
- Please used as per specification and within the specified conditions: use exceeds the specification may cause hazard, please used as per the specification stated on the catalog, exceeding the pressure beyond the specification, temperature and condition will cause poor action and affect the operation safety.
- Due to the mechanical design with the variation of possible movement of the cylinder, please pay attention to flying objects and possible crash hazard of you limbs, resulting in body injury and mechanical damage and so on, take precaution upon designing.
- The movable range of cylinder may contact our body and cause injury, should be protected by safety guard to prevent direct contact to body hazard.
- For longer mechanism or long stroke object, the selected cylinder must equip with buffer device and provide with deceleration circuit to reduce and smooth the impact of the mechanism device.



Warning:

- Take the emergency or transient cut off power source, or power failure, air source circuit pressure drop causing holding force drop, vertical movement stop and resulting in damage of mechanical device, and human safety into account upon designing, so safety countermeasure should be taken in design.
- Take the driving mechanism and circuit control system combination into account upon designing to avoid residue pressure in circuit. Failure to completely positioning and lateral pressure and other factors may cause high speed out of the object, these situations are very possible to cause body injury limbs crashed and damage of mechanism, countermeasure of protective circuit is necessary.
- Emergency stop device for mechanism is essential in case of malfunction, in addition to protective device, emergency stop device should be provided in order to prevent body injury and damage of equipment
- Re-start after emergency stop should confirm safety position of all mechanism, avoid interference and impact due to human error, and damage the equipment, there should have safety precaution countermeasure for restarting after emergency stop upon design.
- While applying three positions intermediate stop control in cylinder. Take the expansion property of air and low hydraulic operation, the precise intermediate position difficulty into account for long period stop position, consider the displacement caused by air leak, please contact the safe limit of use in case of special application.
- Requirement of peripheral environment:
 - 1. avoid to be used in environment with chemical, inflammable, corrosive and sea water, high temperature;
 - 2. avoid to be used in the place with heating and irradiative heat.
 - 3. follow the requirement stated in the specification for ambient temperature;
 - 4. prevent corrosion caused by frozen while use in cold climate;
 - 5. avoid the environment in outdoor with sun and dusty place, which cause unstable in quality;
 - 6. avoid to be used in oily, inflammable and explosion proof place.

- Prevent debris and leak proof tape residue from entering the pipe while laying and assembling the connector reserve 1-1.5 thread not wound with tape while wiring the tape.



- If the connector is sealed by using anaerobic glue, avoid excessive amount and fluid glue from flowing in the body, which may cause jammed and poor movement.
- Caution for installation and application of sensor:
 - 1. confirm the specification and voltage value before usage;
 - 2. the location of the band shouldn't be tilted and skew aligned;
 - 3. when the sensor is connected to safety with length of wire exceed 10m, equip one extra insulation sensor nearby the sensor in order to prevent pulse and prevent contact to release;
 - 4. please don't exceed the specified voltage and current;
 - 5. add protective circuit when connected to induction load;
 - 6. if the lead size of the solenoid switch is pulled by force, twisted, wobbled or put heavy object on top, serious condition may cause short and damage of mechanism;
 - 7. there is 0.5mm error between responses of solenoid switch.
- Please be careful and check all parts for securing before operation.

Caution for service and maintenance



Warning:

- Shut off the power switch and air source properly before service and maintenance, confirm that there is no residue pressure in the pipeline and start work after confirming the status is safe.
- The cylinder is coated with small amount of oil at initial using state, it will decrease after a period of usage. And it should be added up with appropriate amount of oil according to actual application condition. Lubricant is essential in high speed moving. Limit to use ISO-VG32 lubricant, feed by oil applicator, may cause poor action stop oil when it is required.
- While removing the cylinder shaft end, it should work at position with piston pushing in the cylinder (don't pull the cylinder end to serve installing and removing turning), and apply the force evenly to tighten in balance, and push by hand to confirm there is no interference and then start to supply air.



- Service and maintenance should be performed regularly as schedule, and confirm the normal operation of following:
 - 1. Is the compressed air supplied stably?
 - 2. Is the front filter and strainer normal?
 - 3. Is the connection port or piping loose accompany movement of object?
 - 4. Is the pipe connection portion normal?
 - 5. Is the action condition of the cylinder normal?
 - 6. Is there any delay phenomena and exhaust normal?
 - 7. Any strange noises?
 - 8. Whether the piping system connection is solenoid valve (governor) normal?
 - 9. Terminal and wiring system normal?
 - 10. Is the oil system normal?
 - 11. Is the lubricant feeding system normal?
 - 12. Is the oil amount adjusted properly?

NFPA Standard



Designing and Making Customized Cylinder is Our Speciality

ISO Standard



NFPA Standard Cylinder



■ Specification:

Bore inch	1.50	2.00	2.50	3.25	4.00	5.00
Motion	Double acting					
Series	4MA					
Fluid	Compressed air					
Working pressure range(MPa)	0.1~1.2MPa					
Operating speed(mm/sec)	50~500					
Ambient temperature(°C)	-10~70					
Cushion	Adjustable air cushion					
Port size(NPT)	3/8"	3/8"	3/8"	3/8"	1/2"	1/2"

■ How to order:

2.00	K	4MA	U	5.000
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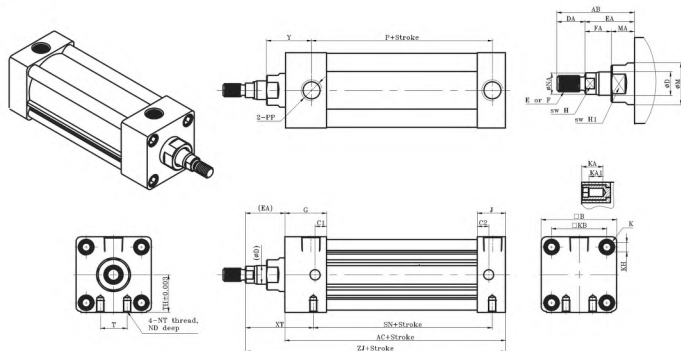
■ Symbol:



■ Product feature:

1. Industry leading aluminum NFPA Interchangeable cylinder with flexible construction
2. Bore sizes – 1.50", 2.00", 2.50", 3.25", 4.00" and 5.00"
3. Removable bronze alloy gland/bearing for easy maintenance
4. Available in any practical stroke length
5. Single rod end or double rod ends
6. Adjustable air cushions at both ends or fixed air cushions optional

■ Dimension(inch):



Bore size	Rod dia. D	E	F	DA	A8	B	C1	C2	EA	FA	G	H	H1	J	K	KA	KA1
1.50	0.630	1/2 - 20	7/16 - 20	0.750	1.750	2.000	1.000	0.500	1.000	0.385	1.438	1/2	1	0.938	1/4 - 28	0.562	0.374
	0.984	7/8 - 14	3/4 - 16	1.125	2.500	2.000	-	0.500	1.375	0.510	1.438	7/8	1-3/8	0.938	1/4 - 28	0.562	0.374
2.00	0.630	1/2 - 20	7/16 - 20	0.750	1.750	2.500	1.000	0.562	1.000	0.385	1.375	1/2	1	0.937	5/16 - 24	0.562	0.362
	0.984	7/8 - 14	3/4 - 16	1.125	2.500	2.500	1.000	0.562	1.375	0.510	1.375	7/8	1-3/8	0.937	5/16 - 24	0.562	0.362
2.50	0.630	1/2 - 20	7/16 - 20	0.750	1.750	2.950	1.000	0.594	1.000	0.385	1.344	1/2	1	0.938	5/16 - 24	0.562	0.362
	0.984	7/8 - 14	3/4 - 16	1.125	2.500	2.950	1.000	0.594	1.375	0.510	1.344	7/8	1-3/8	0.938	5/16 - 24	0.562	0.362
3.25	0.984	7/8 - 14	3/4 - 16	1.125	2.500	3.700	1.188	0.719	1.375	0.510	1.594	7/8	1-3/8	1.125	3/8 - 24	0.700	0.500
	1.260	1-1/4 - 12	1 - 14	1.625	3.250	3.700	1.188	0.719	1.625	0.635	1.594	1-1/8	1-7/8	1.125	3/8 - 24	0.700	0.500
4.00	0.984	7/8 - 14	3/4 - 16	1.125	2.500	4.500	1.188	0.719	1.375	0.510	1.594	7/8	1-3/8	1.125	3/8 - 24	0.700	0.500
	1.260	1-1/4 - 12	1 - 14	1.625	3.250	4.500	1.188	0.719	1.625	0.635	1.594	1-1/8	1-7/8	1.125	3/8 - 24	0.700	0.500
5.00	0.984	7/8 - 14	3/4 - 16	1.125	2.500	5.500	1.188	0.813	1.375	0.510	1.594	7/8	1-3/8	1.219	1/2 - 20	0.781	0.531
	1.260	1-1/4 - 12	1 - 14	1.625	3.250	5.500	1.188	0.813	1.625	0.635	1.594	1-1/8	1-7/8	1.219	1/2 - 20	0.781	0.531

Bore size	Rod dia. D	KB	KH	+0.000 -0.002 M	MA	NA	ND	NT	PP (NPTF)	T	+0.003 -0.003 TH	XT	Y	AC	Add stroke P	SN	ZJ
1.50	0.630	1.430	1/4	1.124	0.615	0.563	0.375	1/4-20	3/8	0.625	0.993	1.938	1.875	3.625	2.313	2.250	4.625
	0.984	1.430	1/4	1.499	0.865	0.938	-	-	3/8	-	0.993	-	2.250	3.625	2.313	-	5.000
2.00	0.630	1.840	5/16	1.124	0.615	0.563	0.438	5/16-18	3/8	0.875	1.243	1.938	1.875	3.625	2.313	2.250	4.625
	0.984	1.840	5/16	1.499	0.865	0.938	0.375	5/16-18	3/8	0.875	1.243	2.313	2.250	3.625	2.313	2.250	5.000
2.50	0.630	2.190	5/16	1.124	0.615	0.563	0.625	3/8-16	3/8	1.250	1.493	1.938	1.938	3.750	2.375	2.375	4.750
	0.984	2.190	5/16	1.499	0.865	0.938	0.625	3/8-16	3/8	1.250	1.493	2.313	2.313	3.750	2.375	2.375	5.125
3.25	0.984	2.760	3/8	1.499	0.865	0.938	0.750	1/2-13	1/2	1.500	1.868	2.438	2.438	4.250	2.625	2.625	5.625
	1.260	2.760	3/8	1.999	0.990	1.313	0.750	1/2-13	1/2	1.500	1.868	2.688	2.688	4.250	2.625	2.625	5.875
4.00	0.984	3.320	3/8	1.499	0.865	0.938	0.750	1/2-13	1/2	2.063	2.243	2.438	2.438	4.250	2.625	2.625	5.625
	1.260	3.320	3/8	1.999	0.990	1.313	0.750	1/2-13	1/2	2.063	2.243	2.688	2.688	4.250	2.625	2.625	5.875
5.00	0.984	4.100	1/2	1.499	0.865	0.938	0.938	5/8-11	1/2	2.688	2.743	2.438	2.438	4.500	2.875	2.875	5.875
	1.260	4.100	1/2	1.999	0.990	1.313	0.938	5/8-11	1/2	2.688	2.743	2.688	2.688	4.500	2.875	2.875	6.125

Round Body Pneumatic Cylinder



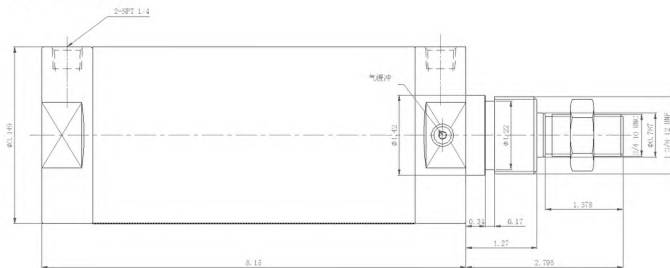
Symbol:



Product feature:

1. Repairable design, aluminum construction
2. Double-acting, spring-return and spring-extend models available
3. Maximum working pressure: 150psi/10Bar
4. Bore size 50mm available at the moment

Dimension(mm):



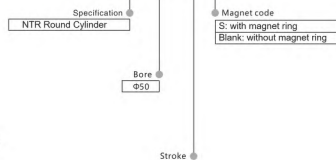
Drawing is NTR50x70, please contact sales@titan-automation.com for other models

Specification:

Type	50
Motion	Double acting
Series	NTR
Fluid	Compressed air
Working pressure range(MPa)	0.1~1.0MPa
Operating speed(mm/sec)	50~500
Ambient temperature(°C)	-10~70
Cushion	Adjustable air cushion
Port size(NPT)	1/4"

How to order:

NTR 50 X 70 S



ISO15552, VDMA24562 Cylinder

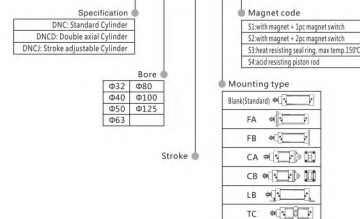


Specification:

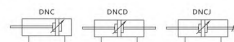
Type	32	40	50	63	80	100	125
Motion	Double acting						
Series	DNC,DNCD,DNCJ						
Fluid	Compressed air						
Working pressure range(MPa)	0.1~1						
Operating speed(mm/sec)	50~500						
Ambient temperature(°C)	-10~70						
Cushion	Adjustable cushion at both ends						
Port size (G)	1/8"	1/4"	3/8"	1/2"			

How to order:

DNC 50 × 100 FA S



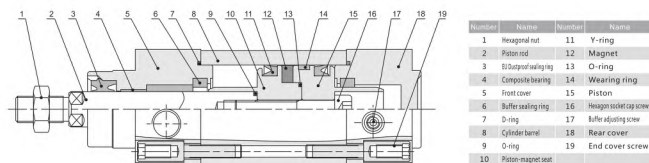
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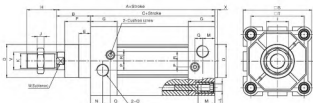
Product feature:

1. The front and rear covers are finished by aluminum die-casting and CNC mechanically processed, with high precision and international standard quality.
2. With aluminum tube used, it's friction and corrosion resistant and stainless forever.
3. Adopt imported non oil feeding and seal to have long time service and no lubricating maintenance.
4. Unique cushion design makes the machines work more smoothly.
5. Sensor equipment can be added to make the electrical wiring and control easily.
6. With no pull rod and good corrosion resistance.

Inner structure drawing:

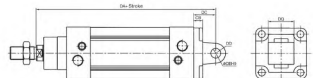


■ Dimension(mm):

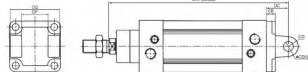
DNC Series
■ Φ32~Φ125

Bore/Symbol	A	B	C	D	E	F	G	H	I	J	K	L
32	120	26	94	30	10	18	25	22	17	6	M10-1.25	M6
40	135	30	105	35	10	21.5	30	24	17	7	M12-1.25	M6
50	145	37	106	40	12	28	29.5	32	23	8	M16-1.5	M8
63	158	37	121	45	12	28.5	35.5	32	23	8	M16-1.5	M8
80	174	46	128	45	16	34.5	36	40	26	10	M20-1.5	M10
100	189	51	138	55	16	38	40	40	26	10	M20-1.5	M10
125	225	65	160	60	20	46	45.5	54	41	11	M27-2	M12

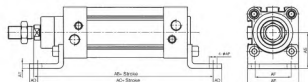
Bore/Symbol	M	N	O	P	Q	R	S	T	U	V	W	X
32	16	14	G1/8"	6	3	5	45	32.5	32	10	4	
40	16	14	G1/8"	6	3	6	54	38	16	13	4	
50	17	14	G1/4"	9	5	8	65	46.5	20	17	4	
63	17	17	G3/8"	11	6	10	74	56.5	20	17	4	
80	17	17	G3/8"	12	10	10	85	72	25	22	4	
100	17	19	G1/2"	12	10	10	110	89	25	22	4	
125	22	19	G1/2"	13	14	10	135	110	32	27	6	

CA-Single-ear mounting type
■ Φ32~Φ125

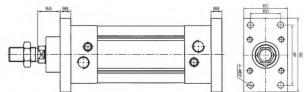
Bore/Symbol	CA	CC	CB	CD	CE	CF	CG
32	142	22	9	10	10	26	
40	160	25	9	12	12	28	
50	170	27	11	12	12	32	
63	190	32	11	16	16	40	
80	210	36	14	16	16	50	
100	230	41	14	20	20	60	
125	275	50	20	30	25	70	

CB-Double-ear mounting type
■ Φ32~Φ125

Bore/Symbol	CA	CC	CB	CD	CE	CF	CG
32	142	22	9	10	10	26	44.5
40	160	25	9	12	12	28	51.5
50	170	27	11	12	12	32	60
63	190	32	11	16	16	40	70
80	210	36	14	16	16	50	90
100	230	41	14	20	20	60	106
125	275	50	20	30	25	70	130

LB-Foot bracket mounting type
■ Φ32~Φ125

Bore/Symbol	AB	AC	AD	AE	AF	AG	AH
32	144	142	6.5	45	32	7	32
40	163	161	8	54	36	10	36
50	175	170	10.5	64	45	10	45
63	190	185	12.5	75	50	10	50
80	215	210	15	93	63	12	63
100	230	220	17.5	110	75	14.5	71
125	270	250	22	131	90	16.5	90

FA, FB-Front&rear flange mounting type
■ Φ32~Φ125

Bore/Symbol	FA	FB	FC	BD	BE	BF	BP
32	16	10	50	32	80	64	7
40	20	10	55	36	90	72	9
50	25	12	65	45	110	90	9
63	25	12	75	50	125	100	9
80	30	16	100	63	154	126	12
100	35	16	120	75	186	150	14
125	45	20	150	90	220	180	16

■ Specification:

Type	32	40	50	63	80	100	125	160	200
Motion	Double acting								
Series	DNG, DL, DNGD, DNGJ								
Fluid	Compressed air								
Working pressure range(MPa)	0.1~1								
Operating speed(mm/sec)	50~500								
Ambient temperature(°C)	-10~70								
Cushion	Adjustable cushion at both ends								
Port size (G)	1/8"	1/4"	3/8"						

■ How to order:

DNG 50 x 100 FA S	
Specification	Magnet code
DNG: Standard Cylinder	S1 with magnet + 1pc magnet switch
DL Tie-rod hidden Cylinder	S2 with magnet + 2pc magnet switch
DNGD: Double end Cylinder	S3 heat-resisting pad ring, max temp 150°C
DNGJ: Stroke adjustable Cylinder	S4 rod-resisting piston rod
Bore	Mounting type
Φ32 Φ100	Blank(Standard) FA
Φ40 Φ125	FA
Φ50 Φ160	FB
Φ63 Φ200	CA
Φ80	CB
	LB
	TC
Stroke	

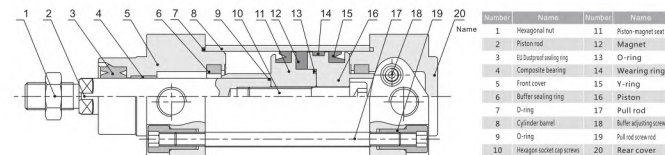
■ Symbol:



■ Product feature:

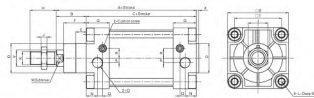
1. Front and rear caps are finished by aluminum die-casting, CNC mechanically processed with high precision.
2. Aluminum tube is imported, stainless forever with friction & corrosion resistance.
3. Adopt imported none lubrication, long time service and no need lubrication maintenance.
4. Unique cushion technique makes smooth action.
5. May add the sensor equipment to easily control.
6. In terms of DI series, pull-rod is hidden inside.

■ Inner structure drawing:



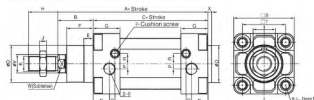
Number	Name	Number	Name
1	Hexagonal nut	11	Piston magnet seat
2	Piston rod	12	Magnet
3	Bufferstop sealing ring	13	O-ring
4	Composite bearing	14	Wearing ring
5	Front cover	15	Y-ring
6	Buffer sealing ring	16	Piston
7	O-ring	17	Pull rod
8	Cylinder barrel	18	Buffer-resisting piston
9	O-ring	19	Full rod screw
10	Hexagon socket cap screw	20	Rear cover

■ Dimension(mm):

DNG Series
■ Φ32~Φ200

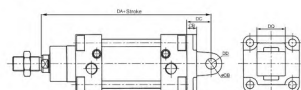
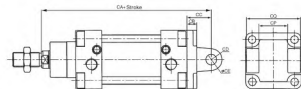
Stroke/mm	Φ32	Φ40	Φ50	Φ63	Φ80	Φ100	Φ125	Φ160	Φ200
32	220	26	94	30	10	19	26	32	17
40	335	30	105	35	10	21.5	26	34	17
50	142	37	104	40	12	28.5	29	32	23
63	158	37	121	45	12	28.5	35.5	32	23
80	174	46	128	45	16	34.5	35.5	40	26
100	189	51	138	55	16	37.5	38.5	40	26
125	225	65	160	60	20	44.5	46.5	54	31
160	260	80	180	65	20	48	50	72	35
200	275	95	180	75	20	65	50	72	35

Stroke/mm	M	N	Q	P	R	S	T	V	W	X
32	12	9	G1/8"	2	7	7	50	32.5	12	10
40	12	11	G1/4"	2	5	9	55	38	16	13
50	18	17	G1/4"	5	2	11	65	46.5	20	17
63	18	18	G3/8"	6	5	14	75	56.5	20	17
80	19	18	G1/2"	7	8	15	93	72	25	22
100	19	18	G1/2"	8	11	14	130	89	25	22
125	25	18	G1/2"	8	14	13	138	110	32	27
160	30	24	G3/4"	12	14	22	180	140	40	36
200	25	25	G1/4"	16	14	20	230	175	40	36

DI Series
■ Φ32~Φ160

Stroke/mm	Φ32	Φ40	Φ50	Φ63	Φ80	Φ100	Φ125	Φ160
32	20	26	94	30	10	19	26	32
40	335	30	105	35	10	21.5	26	34
50	142	38	104	40	12	28.5	29	32
63	158	37	121	45	12	28.5	35.5	32
80	174	46	128	45	16	34.5	35.5	40
100	189	51	138	55	16	37.5	38.5	40
125	225	65	160	60	20	44.5	46.5	54
160	260	80	180	65	20	48	50	72

Stroke/mm	M	N	Q	P	R	S	T	V	W	X
32	16	9	G1/8"	2	7	7	50	32.5	12	10
40	16	11	G1/4"	2	5	9	55	38	16	13
50	20	17	G1/4"	5	2	11	65	46.5	20	17
63	20	18	G3/8"	6	5	14	75	56.5	20	17
80	25	18	G1/2"	8	11	14	130	89	25	22
100	28	18	G1/2"	8	14	13	138	110	32	27
125	30	18	G1/2"	8	14	13	138	110	32	27
160	35	24	G3/4"	12	14	22	180	140	40	36

CA-Single-ear mounting type
■ Φ32~Φ160CB-Double-ear mounting type
■ Φ32~Φ160

Stroke/mm	DA	DB	DC	DD	DE	DF	CG	CH	CI	CJ	CK	CL	CM	CN	CO
32	142	22	9	10	10	26	142	22	9	10	10	26	44.5		
40	160	25	9	12	12	32	160	25	9	12	12	32	51.5		
50	169	27	11	12	12	32	169	27	11	12	12	32	60		
63	180	32	11	14	14	40	180	32	11	14	14	40	70		
80	210	36	14	16	16	50	210	36	14	16	16	50	90		
100	230	41	14	20	20	60	230	41	14	20	20	60	110		
125	275	50	25	25	25	70	275	50	25	25	25	70	130		
160	315	55	20	25	30	90	315	55	20	25	30	90	175		

LB-Foot bracket mounting type
■ Φ32~Φ160FA, FB-Front&rear flange mounting type
■ Φ32~Φ160

Stroke/mm	FA	FB	FC	FD	FE	FF	FG	FH	FI	FJ	FK	FL	FM	FN	FO
32	144	142	8	48	32	7	32	5	16	10	50	32	90	64	7
40	163	161	12	53	36	10	36	5	20	10	55	36	90	72	9
50	175	170	13	63	45	10	45	6	26	12	65	45	110	90	9
63	190	185	13	73	50	10	50	6	25	12	75	50	125	100	9
80	215	210	19	93	63	12	63	6	30	16	93	63	154	126	12
100	250	228	19	110	75	14.5	71	6	35	16	110	75	186	150	14
125	270	250	20	138	90	16.5	90	8	45	20	138	90	220	180	16
160	320	300	15	184	115	18.5	115	9	60	20	180	115	280	230	18



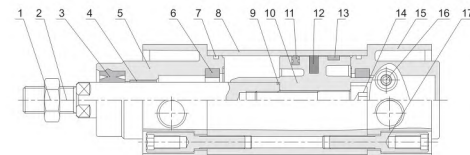
■ Symbol:



■ Product feature:

- The front and rear covers are finished by aluminum die-casting and CNC mechanically processed, with high precision and international standard quality.
- With aluminum tube used, it's friction and corrosion resistant and stainless forever.
- Adopt imported non oil feeding and seal to have long time service and no lubricating maintenance.
- Unique cushion design makes the machines work more smoothly.
- Sensor equipment can be added to make the electrical wiring and control easily.
- The cylinder barrel is M type with no pull rod and good corrosion resistance

■ Inner structure drawing:



Number	Name	Number	Name
1	Hexagonal nut	10	Piston
2	Piston rod	11	O-ring
3	Buffered sealing ring	12	Magnet
4	Composite bearing	13	Wearing ring
5	Front cover	14	Hexagon socket cap screws
6	Buffer sealing ring	15	Rear cover
7	O-ring	16	Buffer adjusting screw
8	Cylinder barrel	17	End cover screw
9	O-ring		

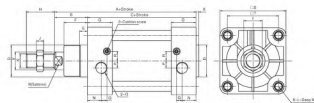
■ Specification:

Type	32	40	50	63	80	100
Motion	Double acting					
Series	SI, SID, SU					
Fluid	Compressed air					
Working pressure range(MPa)	0.1~1					
Operating speed(mm/sec)	50~500					
Ambient temperature(°C)	-10~70					
Cushion	Adjustable cushion at both ends					
Port size (G)	1/8"	1/4"	3/8"			

■ How to order:

SI 50 x 100 FA S	
Specification	Magnet code
SI Standard Cylinder	S1 with magnet + 2pc magnet switch
SID Double axial Cylinder	S2 with magnet + 2pc magnet switch
SU Stroke adjustable Cylinder	S3 Heat resisting sealing ring, max temp 150°C
	S4 Sealless piston rod
Bore	Mounting type
Φ32	Blank/Standard
Φ40	FA
Φ50	FB
	CA
	CB
	LB
	TC
Stroke	

■ Dimension(mm):

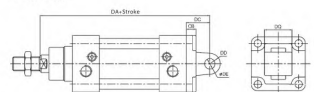
SI Series
■ Ø32~Ø100

Series/Stroke	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y
32	120	26	94	30	10	18	27.5	22	17	6	M10	1.25	M6												
40	135	30	105	35	10	21.5	32	24	17	7	M12	1.25	M6												
50	143	37	106	40	12	28	31	32	23	8	M16	1.5	M8												
63	158	37	121	45	12	28.5	33	32	23	8	M16	1.5	M8												
80	174	46	128	45	16	34.5	33	40	26	10	M20	1.5	M10												
100	189	51	138	55	16	38	37	40	26	10	M20	1.5	M10												

Series/Stroke	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y
32	13	13	G1/8"	5.5	6	6	47	32.5	12	10	4														
40	17	17	G1/4"	6	7.5	8.5	53	38	16	13	4														
50	15.5	15.5	G1/4"	7.5	6.5	9.5	65	46.5	20	17	4														
63	16.5	16.5	G1/8"	7.5	7.5	11.5	75	56.5	20	17	4														
80	16.5	16.5	G1/8"	9	7.5	13.5	95	72	25	22	4														
100	18.5	18.5	G1/2"	9.5	8.5	13.5	115	89	25	22	4														

CA-Single-ear mounting type

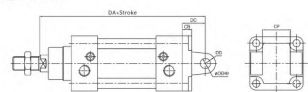
■ Ø32~Ø100



Series/Stroke	DA	DB	DC	DE	DF	DG	DH	DI	DJ	DK	DL	DM	DN	DO	DP	DQ
32	142	22	9	10	10	26										
40	160	25	9	12	12	28										
50	170	27	11	12	12	32										
63	190	32	11	16	16	40										
80	200	36	14	16	16	50										
100	230	41	14	20	20	60										

CB-Double-ear mounting type

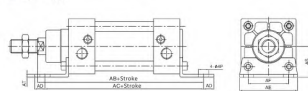
■ Ø32~Ø100



Series/Stroke	DA	DB	DC	DE	DF	DG	DH	DI	DJ	DK	DL	DM	DN	DO	DP	DQ
32	142	22	9	10	10	26										
40	160	25	9	12	12	28										
50	170	27	11	12	12	32										
63	190	32	11	16	16	40										
80	200	36	14	16	16	50										
100	230	41	14	20	20	60										

LB-Foot bracket mounting type

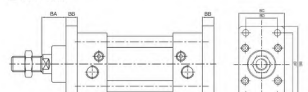
■ Ø32~Ø100



Series/Stroke	AB	AC	AD	AE	AF	AG	AH	AI	AJ	AK	AL	AM	AN	AO	AP	AQ
32	160	142	8	47	32	7	32	3								
40	182	161	10	53	36	9	36	3								
50	197	170	10	65	45	9	45	3								
63	210	185	12	75	50	9	50	3								
80	227	210	19	95	63	12.5	63	4								
100	260	228	19	115	75	14.5	71	4								

FA, FB-Front&rear flange mounting type

■ Ø32~Ø100



Series/Stroke	FA	FB	FC	FD	FE	FF	FG	FH	FI	FJ	FK	FL	FM	FN	FO	FP
32	16	10	47	32	80	64	7									
40	20	10	53	36	90	72	9									
50	25	12	65	45	108	90	9									
63	25	12	75	50	118	100	9									
80	30	16	95	63	150	126	12.5									
100	40	16	115	75	176	150	14.5									



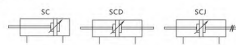
■ Specification:

Type	32	40	50	63	80	100	125	160	200
Motion	Double acting								
Series	SC, SCD, SCJ, SU								
Fluid	Compressed air								
Working pressure (MPa)	0.1~1								
Operating speed (mm/sec)	50~500								
Ambient temperature (°C)	-10~70								
Cushion	Adjustable cushion at both ends								
Port size (G)	1/8"	1/4"	3/8"	1/2"					

■ How to order:

SC 50 x 100 FA S	
Specification	Magnet code
SC: Standard Cylinder	S1: with magnet + 1pc magnet switch
SCD: Double axial Cylinder	S2: with magnet + 2pc magnet switch
SCJ: Stroke adjustable Cylinder	S3: heat sensitive oil ring, max temp 130°C
SU: Tie-rod hidden Cylinder	S4: static resisting piston rod
Bore	Stroke
Ø32 Ø40 Ø50 Ø63 Ø80	10 20 30 40 50 60 80 100 125 160 200
Series	Stroke
FA FB CA CB LB TC	10 20 30 40 50 60 80 100 125 160 200

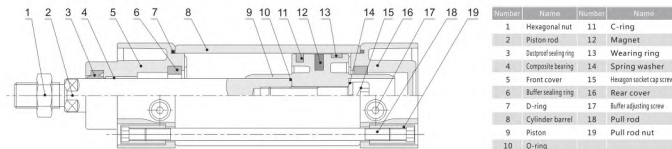
■ Symbol:



■ Product feature:

1. Front and rear caps are finished by aluminum die-casting. CNC mechanically processed with high precision.
2. Aluminum tube is imported, stainless forever with friction/corrosion resistance.
3. Adopt imported non lubrication, long time service and no need lubrication maintenance.
4. Unique cushion technique makes smooth action.
5. May add the sensor equipment to easily control.
6. In terms of SU series, pull-rod is hidden inside.

■ Inner structure drawing:

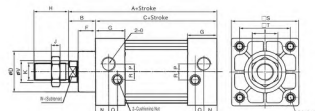


Number	Name	Number	Name
1	Hexagonal nut	11	C-ring
2	Piston rod	12	Magnet
3	Detonating ring	13	Wearing ring
4	Compressed bearing	14	Spring washer
5	Front cover	15	Recess socket cap screw
6	Buffer sealing ring	16	Rear cover
7	D-ring	17	Buffer adjusting screw
8	Cylinder barrel	18	Pull rod
9	Piston	19	Pull rod nut
10	O-ring		

■ Dimension(mm):

Standard Dimension

■ Φ32-Φ200

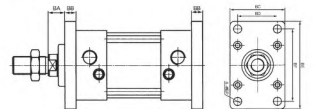


Base/Symbol	A	B	C	D	E	F	G	H	I	J	K	L
32	118	25	93	28	15	27.5	22	17	6	M12×1.25	M6	
40	118	25	93	32	15	27.5	24	17	7	M12×1.25	M6	
50	118	25	93	38	16	27.5	32	23	8	M16×1.5	M8	
63	121	26	95	38	16	27.5	32	23	8	M16×1.5	M8	
80	143.5	36.5	107	43	21	33	40	26	10	M20×1.5	M10	
100	148	35	113	43	21	33	40	26	10	M20×1.5	M10	
125	171	47	124	56	32	45	41	11	M27×2	M12		
160	195	50	145	64	32	40	50	15	13	M36×2	M16	
200	201	54	147	66	35	41	60	55	13	M36×2	M16	

Base/Symbol	C1	C2	D1	E1	F1	G1	H1	I1	J1	K1	L1
32	13	12	G1/8"	6	8	6	45.5	33	12	10	
40	13	12	G1/4"	6	8	7	50	37	16	13	
50	13	12	G1/4"	7	8	8	62	47	20	17	
63	13	14	G3/8"	7	8	8	75	56	20	17	
80	14	16	G3/8"	10	10	14	94	70	25	22	
100	16	16	G1/2"	10	10	11	112	84	25	22	
125	15	17	G1/2"	11	6	11	140	110	32	27	
160	18	24	G1/2"	11	5	12	178	140	40	36	
200	18	24	G1/2"	12	6	11	220	175	40	36	

FA, FB Dimension

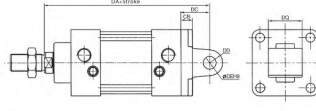
■ Φ32-Φ200



Base/Symbol	FA	FB	FC	FD	FE	FF	FP
32	15	10	47	33	80	58	7
40	15	10	53	36	90	70	7
50	15	10	65	47	104	86	9
63	14	12	75	56	118	98	9
80	19	16	95	70	140	119	11
100	19	16	115	84	160	138	11
125	27	20	139	90	218	180	16.5
160	30	26	180	115	280	230	18.5
200	29	25	220	135	320	270	22

CA Dimension

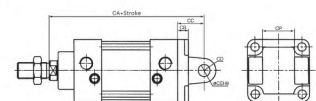
■ Φ32-Φ200



Base/Symbol	CA	CB	CC	CD	CE	CF	CG
32	152	34	9	10.5	12	16	
40	152	34	9	11.5	14	20	
50	152	34	10	12	14	20	
63	155	34	10	12.5	14	20	
80	191.5	48	14	16.5	20	32	
100	196	48	14	17	20	32	
125	221	50	15	22	25	70	
160	250	55	20	30	30	90	
200	261	60	25	30	30	90	

CB Dimension

■ Φ32-Φ200

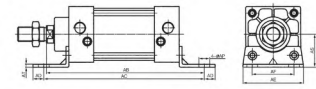


Base/Symbol	CA	CB	CC	CD	CE	CF	CG
32	137	19	9	10.5	12	16	
40	137	19	9	11.5	14	20	
50	137	19	10	12	14	20	
63	140	19	10	12.5	14	20	
80	175.5	32	14	16.5	20	32	
100	180	32	14	17	20	32	
125	221	50	15	25	25	70	
160	250	55	20	30	30	90	
200	261	60	25	30	30	90	

■ Dimension(mm):

LB Dimension

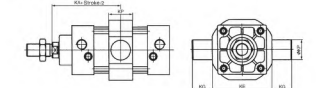
■ Φ32-Φ200



Base/Symbol	LB	LC	LD	LE	LF	LG	LH	LI	LJ	LK	LL
32	138.5	134	9.5	50	33	28	3	9			
40	141.5	140	14.5	57	36	30	3	12			
50	146	149	12	68	47	36.5	3	12			
63	153	158	13	80	56	41	3	12			
80	172.5	167	16	97	70	49	4	14			
100	178	172	18	112	84	57	4	14			
125	216	214	15	140	90	90	5	16			
160	238.5	216	35	178	115	115	5	18			
200	265.5	275	26.5	220	175	135	6	22			

TC Dimension

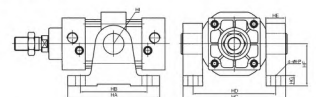
■ Φ32-Φ200



Base/Symbol	TE	TF	TF	TF	TF	TF	TF
32	55	16	16	71.5	30		
40	63	25	25	71.5	30		
50	76	25	25	71.5	29		
63	88	25	25	73	30		
80	114	25	25	89	35		
100	132	25	25	92	40		
125	158	25	30	109	39		
160	205	32	32	120	38		
200	248	35	36	130	50		

TC Foot mounting typeDimension

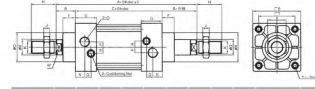
■ Φ40-Φ100



Base/Symbol	TE	TF	TF	TF	TF	TF	TF
40	103	80	109	86	23	50	12
50	103	80	122	99	23	50	12
63	103	80	134	111	23	70	12
80	120	85	160	137	23	70	12
100	130	85	178	155	23	70	12

SCD Standard Dimension

■ Φ32-Φ200

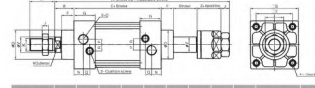


Base/Symbol	A	B	C	D	E	F	G	H	I	J	K	L
32	143	25	93	28	15	27.5	22	17	6	M10×1.25	M6	
40	143	25	93	32	15	27.5	24	17	7	M12×1.25	M6	
50	143	25	93	38	16	27.5	32	23	8	M16×1.5	M6	
63	147	26	95	38	16	27.5	32	23	8	M16×1.5	M8	
80	178	35	108	43	21	33	40	26	10	M20×1.5	M10	
100	183	35	113	43	21	33	40	26	10	M20×1.5	M10	
125	218	47	124	56	32	45	41	11	M27×2	M12		
160	245	50	145	64	32	40	50	15	13	M36×2	M16	
200	256	54	148	66	35	41	60	55	13	M36×2	M16	

Base/Symbol	C1	C2	D1	E1	F1	G1	H1	I1	J1	K1	L1
32	13	12	G1/8"	6	8	6	45.5	33	12	10	
40	13	12	G1/4"	6	8	7	50	37	16	13	
50	13	12	G1/4"	7	8	8	62	47	20	17	
63	13	14	G3/8"	7	8	8	75	56	20	17	
80	14	16	G3/8"	10	10	14	94	70	25	22	
100	16	16	G1/2"	10	10	11	112	84	25	22	
125	15	17	G1/2"	11	6	11	140	110	32	27	
160	18	24	G1/2"	11	5	12	178	140	40	36	
200	18	24	G1/2"	12	6	11	220	175	40	36	

SCJ Standard Dimension

■ Φ32-Φ200



32	160	25	93	28	15	27.5	22	17	6	M10×1.25	M6
40	161	25	93	32	15	27.5	24	17	7	M12×1.25	M6
50	165	25	93	38	16	27.5	32	23	8	M16×1.5	M6
63	168	26	95	38	16	27.5	32	23	8	M16×1.5	M8
80	203	35	108	43	21	33	40	26	10	M20×1.5	M10
100	208	35	113	43	21	33	40	26	10	M20×1.5	M10
125	249	47	124	56	32	45	41	11	M27×2	M12	
160	280	50	145	64	32	40	50	15	13	M36×2	M16
200	290	54	148	66	35	41	60	55	13	M36×2	M16

Base/Symbol	C1	C2	D1	E1	F1	G1	H1	I1	J1	K1	L1
32	13	12	G1/8"	6	8	6	45.5	33	12	10	
40	13	12	G1/4"	6	8	7	50	37	16	13	
50	13	12	G1/4"	7	8	8	62	47	20	17	
63	13	14	G3/8"	7	8	8	75	56	20	17	
80	14	16	G3/8"	10	10	14	94	70	25	22	
100	16	16	G1/2"	10	10	11	112	84	25	22	
125	15	17	G1/2"	11	6	11	140	110	32	27	
160	18	24	G1/2"	11	5	12	178	140	40	36	
200	18	24	G1/2"	12	6	11	220	175	40	36	

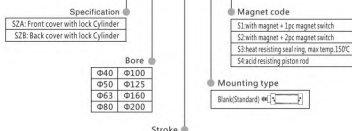


■ **Specification:**

Type	40	50	63	80	100	125	160	200
Motion	Double acting							
Series	SZA, SZB							
Fluid	Compressed air							
Working pressure range (MPa)	0.1~1							
Operating speed (mm/sec)	50~500							
Ambient temperature (°C)	-10~70							
Cushion	Adjustable cushion at both ends							
Port size (G)	1/4"		3/8"		1/2"			

■ **How to order:**

SZA 50 x 100 FA S



■ Symbol:

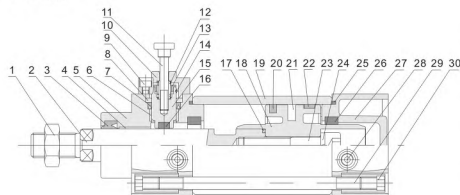


■ **Product feature:**

1. Front and rear caps are finished by aluminum die-casting, CNC mechanically processed with high precision.
2. Aluminum tube is imported, stainless forever with friction & corrosion resistance.
3. Adopt imported none lubrication, long time service and no need lubrication maintenance.
4. Unique cushion technique makes smooth action.
5. May add the sensor equipment to easily control.

■ Inner structure drawing:

■ SZA type

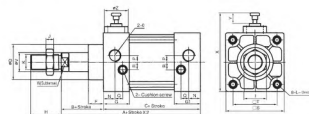


Number	Name	Number	Name
1	Hexagonal nut	16	Gasket
2	Piston rod	17	O-ring
3	Dustproof sealing ring	18	Piston
4	Composite bearing	19	Cylinder barrel
5	Front cover	20	C-ring
6	Composite bearing	21	Magnet
7	Y-ring	22	Wearing ring
8	Pressure ring	23	Hexagonal socket cap screw
9	Hexagonal socket cap screws	24	Elastic washers
10	Lock cover	25	D-ring
11	Handle	26	Buffer sealing ring
12	Spring	27	Rear cover
13	Fenders	28	Buffer adjusting screw
14	Steel wire retaining ring for shaft	29	Pull rod
15	Lock shaft	30	Pull rod nut

■ Dimension(mm):

SZA Dimension

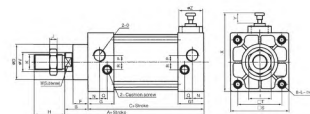
■ $\Phi 40 \sim \Phi 200$



Year/Panel	A	B	C	D	E	F	G	H	I	J	K	L	M	N
40	120	25	9.5	3.2	10	27.5	24	7	M12+25	M6				
50	122	25	9.7	38	16	31.5	27.5	32	23	8	M16+15	M8		
63	125	26	9.9	38	16	31.5	27.5	32	23	8	M16+15	M8		
80	144	35	11.9	41	21	39	31	40	26	10	M27+25	M12		
100	148	35	11.9	41	21	39	31	40	26	10	M27+25	M12		
125	181	47	13.4	56	32	42	45	41	30	13	M30+25	M12		
160	197	50	14.7	64	32	42	40	50	35	13	M36+2	M12		
200	211	54	15.7	65	32	40	40	55	33	13	M36+2	M12		
Year/Panel	A	B	C	D	E	F	G	H	I	J	K	L	M	N
40	16	12	61/4*	7	5	57	37	16	13	11	10	25		
50	16	12	61/4*	7	8	62	47	20	17	83	10	30		
63	16	14	63/8*	7	8	75	56	20	17	96	8	30		
80	18	16	63/8*	10	10	14	74	70	25	121	8	33		
100	18	16	61/2*	10	11	112	84	25	22	134	8	33		
125	15	17	61/2*	11	6	146	110	32	27	165	10	40		
160	12	14	61/2*	11	11	178	146	40	30	205	10	47		
200	18	24	61/2*	12	6	210	175	40	36	247	10	47		

SZB Dimension

■ $\Phi 40 \sim \Phi 200$



Area/entry	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	aa	ab	ac	ad	ae	af	ag	ah	ai	aj	ak	al	am	an	ao	ap	aq	ar	as	at	au	av	aw	ax	ay	az	ba	bb	bc	bd	be	bf	bg	bh	bi	bj	bk	bl	bm	bn	bo	bp	bq	br	bs	bt	bu	bv	bw	bx	by	bz	ca	cb	cc	cd	ce	cf	cg	ch	ci	cj	ck	cl	cm	cn	co	cp	cq	cr	cs	ct	cu	cv	cw	cx	cy	cz	da	db	dc	dd	de	df	dg	dh	di	dj	dk	dl	dm	dn	do	dp	dq	dr	ds	dt	du	dv	dw	dx	dy	dz	ea	eb	ec	ed	ee	ef	eg	eh	ei	ej	ek	el	em	en	eo	ep	eq	er	es	et	eu	ev	ew	ex	ey	ez	fa	fb	fc	fd	fe	ff	fg	fh	fi	fj	fk	fl	fm	fn	fo	fp	fq	fr	fs	ft	fu	fv	fw	fx	fy	fz	ga	gb	gc	gd	ge	gf	gg	gh	gi	gj	gk	gl	gm	gn	go	gp	gq	gr	gs	gt	gu	gv	gw	gx	gy	gz	ha	hb	hc	hd	he	hf	hg	hh	hi	hj	hk	hl	hm	hn	ho	hp	hq	hr	hs	ht	hu	hv	hw	hx	hy	hz	ia	ib	ic	id	ie	if	ig	ih	ii	ij	ik	il	im	in	io	ip	iq	ir	is	it	iu	iv	iw	ix	iy	iz	ja	jb	jc	jd	je	jf	jj	jk	jl	jm	jn	jo	jp	jq	jr	js	jt	ju	jv	jw	jx	ky	kz	la	lb	lc	ld	le	lf	lg	lh	li	lj	lk	ll	lm	ln	lo	lp	lq	lr	ls	lt	lu	lv	lw	lx	ly	lz	ma	mb	mc	md	me	mf	mg	mh	mi	mj	mk	ml	mn	mo	mp	mq	mr	ms	mt	mu	mv	mw	mx	my	mz	na	nb	nc	nd	ne	nf	ng	nh	ni	nj	nk	nl	nm	nn	no	np	nq	nr	ns	nt	nu	nv	nw	nx	ny	nz	oa	ob	oc	od	oe	of	og	oh	oi	oj	ok	ol	om	on	oo	op	oq	or	os	ot	ou	ov	ow	ox	oy	oz	pa	pb	pc	pd	pe	pf	pg	ph	pi	pj	pk	pl	pm	pn	po	pp	pq	pr	ps	pt	pu	pv	pw	px	py	pz	qa	qb	qc	qd	qe	qf	qg	qh	qi	qj	qk	ql	qm	qn	qo	qp	qq	qr	qs	qt	qu	qv	qw	qx	qy	qz	ra	rb	rc	rd	re	rf	rg	rh	ri	rj	rk	rl	rm	rn	ro	rp	rq	rr	rs	rt	ru	rv	rw	rx	ry	rz	sa	sb	sc	sd	se	sf	sg	sh	si	sj	sk	sl	sm	sn	so	sp	sq	sr	ss	st	su	sv	sw	sx	sy	sz	ta	tb	tc	td	te	tf	tg	th	ti	tj	tk	tl	tm	tn	to	tp	tq	tr	ts	tt	tu	tv	tw	tx	ty	tz	ua	ub	uc	ud	ue	uf	ug	uh	ui	uj	uk	ul	um	un	uo	up	uq	ur	us	ut	uu	uv	uw	ux	uy	uz	va	vb	vc	vd	ve	vf	vg	vh	vi	vj	vk	vl	vm	vn	vo	vp	vq	vr	vs	vt	vu	vv	vw	wx	wy	wz	xa	xb	xc	xd	xe	xf	xg	xh	xi	xj	xk	xl	xm	xn	xo	xp	xq	xr	xs	xt	xu	xv	xw	xx	xy	xz	ya	yb	yc	yd	ye	yf	yg	yh	yi	yj	yk	yl	ym	yn	yo	yp	yq	yr	ys	yt	yu	yv	yw	yx	yy	yz	za	zb	zc	zd	ze	zf	zg	zh	zi	zj	zk	zl	zm	zn	zo	zp	zq	zr	zs	zt	zu	zv	zw	zx	zy	zz
40	120.5	25	95.5	32	15	27.5	30	24	17	7	M12+15	M6																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																										



■ Specification:

Type	32	40	50	63	80	100
Motion	Double acting					
Series	GPM					
Fluid	Compressed air					
Working pressure range (MPa)	0.1~1					
Operating speed (mm/sec)	50~500					
Ambient temperature (°C)	-10~70					
Cushion	Adjustable cushion at both ends					
Port size (G)	1/8"	1/4"	3/8"	1/2"		

■ How to order:

GPM 50 × 100 FA S

Specification

GPM: Standard Cylinder

Bore

 Φ40 | Φ100
 Φ50 | Φ125
 Φ63 | Φ160

Stroke

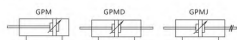
Magnet code

 S1 with magnet + 1pc magnet switch
 S2 with magnet + 2pc magnet switch
 S3 heat resisting seal ring, max temp 150°C
 S4 acid resisting piston rod

Mounting type

Base(Standard) FA FB CA CB LB TC 

■ Symbol:



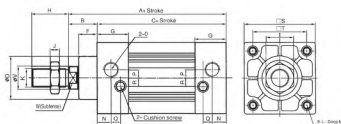
■ Product feature:

1. The front and rear covers are finished by aluminum die-casting and CNC mechanically processed, with high precision and international standard quality.
2. With aluminum tube used, it's friction and corrosion resistant and stainless forever.
3. Adopt imported non oil feeding and seal to have long time service and no lubricating maintenance.
4. Unique cushion design makes the machines work more smoothly.
5. Sensor equipment can be added to make the electrical wiring and control easily.
6. With no pull rod and good corrosion resistance.

■ Inner structure drawing:

Standard Cylinder

■ Φ32~Φ100



Note: The sizes of accessories are same as SC's



■ Specification:

Type	32	40	50	63	80	100	125	160
Motion	Double acting							
Series	QGB							
Fluid	Compressed air							
Working pressure range (MPa)	0.1~1							
Operating speed (mm/sec)	50~500							
Ambient temperature (°C)	-10~70							
Cushion	Adjustable cushion at both ends							
Port size (G)	1/8"	1/4"	3/8"	1/2"		3/4"		

■ How to order:

QGB 50 × 100 FA S

Specification

QGB: Standard Cylinder

Bore

 Φ32 | Φ80
 Φ40 | Φ100
 Φ50 | Φ125
 Φ63 | Φ160

Stroke

Magnet code

 S1 with magnet + 1pc magnet switch
 S2 with magnet + 2pc magnet switch
 S3 heat resisting seal ring, max temp 150°C
 S4 acid resisting piston rod

Mounting type

Base(Standard) FA CA LB CB 

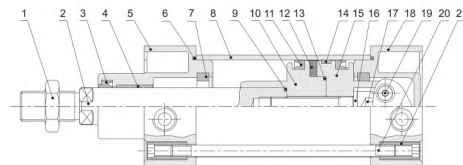
■ Symbol:



■ Product feature:

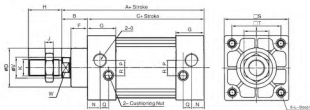
1. Front and rear caps are finished by aluminum die-casting, CNC mechanically processed with high precision.
2. Adopt imported none lubrication, long time service and no need lubrication maintenance.
3. Unique cushion technique makes smooth action.
4. May add the sensor equipment to easily control.

■ Inner structure drawing:



Number	Name	Number	Name
1	Hexagonal nut	12	Magnet ring
2	Piston rod	13	O-ring
3	Dustproof seal ring	14	Wearing
4	Composite bearing	15	Piston
5	Front cover	16	Spring washer
6	Bushing	17	Hexagon socket cap screw
7	Buffer seal ring	18	Rear cover
8	Cylinder barrel	19	Buffer adjusting screw
9	O-ring	20	Pull rod
10	Piston magnet seat	21	Pull rod nut
11	Ring		

Dimension(mm):

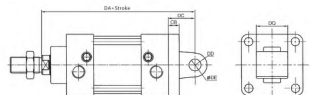
Standard Dimension
■ Φ32~Φ160

Bar/Symbol	A	B	C	D	E	F	G	H	I	J	K	L	M
32	118	25	93	28	15	27.5	22	17	6	M10×1.25	M6		
40	135	30	105	30	23	28	24	17	7	M12×1.25	M6		
50	145	35	110	35	25	28	32	23	8	M16×1.5	M6		
63	162	37	125	40	25	32	32	23	8	M16×1.5	M6		
80	174	46	128	50	30	32	40	26	10	M20×1.5	M10		
100	189	51	138	50	35	37.5	40	26	10	M20×1.5	M10		
125	225	65	160	60	44.5	46.5	54	41	11	M27×2	M12		
160	260	80	180	65	48	50	72	35	13	M36×2	M16		

Bar/Symbol	M	N	O	P	Q	R	S	T	U	V	W
32	14	11	G3/8"	6	9	6	45.5	35	12	10	
40	14	11	G3/4"	7	9	7	53	42	16	18	
50	14	11	G3/4"	7	9	7	65	48	20	17	
63	14	14	G3/8"	8	10	8	80	58	20	17	
80	16	14	G3/8"	12	10	10	100	75	25	22	
100	17	16	G3/2"	12	13	10	120	90	25	22	
125	18	23	G3/2"	12	13	18	136	110	32	27	
160	18	24	G3/4"	12	13	22	180	145	40	36	

CA Dimension

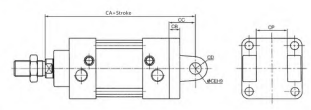
■ Φ32~Φ160



Bar/Symbol	CA	CB	CC	CD	CE	CF	CG	CH	CI	CJ	CK	CL	CM
32	140	22	10	10	10	10	10	26					
40	160	25	10	10	10	10	10	28					
50	170	25	10	10	10	10	10	32					
63	190	32	12	12	15	16	16	40					
80	210	36	16	15	16	15	16	50					
100	230	41	16	20	20	20	20	60					
125	275	53	20	25	25	25	25	70					
160	315	57	20	30	30	30	30	90					

CB Dimension

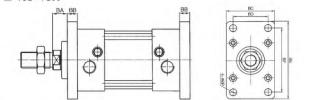
■ Φ32~Φ160



Bar/Symbol	CA	CB	CC	CD	CE	CF	CG	CH	CI	CJ	CK	CL	CM
32	140	22	10	10	10	10	10	26					
40	160	25	10	10	10	10	10	28					
50	170	25	10	10	10	10	10	32					
63	190	32	12	12	15	16	16	40					
80	210	36	16	15	16	15	16	50					
100	230	41	16	20	20	20	20	60					
125	275	53	20	25	25	25	25	70					
160	315	57	20	30	30	30	30	90					

FA Dimension

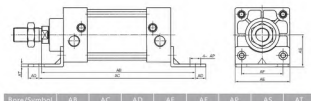
■ Φ32~Φ160



Bar/Symbol	BA	BB	BC	BD	BE	BF	BG	BH	BI	BJ	BK	BL	BM
32	15	10	48	33	80	64	7						
40	20	10	55	36	90	72	9						
50	25	10	65	45	110	90	9						
63	25	12	80	50	130	9							
80	30	16	100	63	155	126	12						
100	35	16	115	75	180	150	14						
125	45	20	145	90	215	180	16						
160	60	20	190	115	270	230	18						

LB Dimension

■ Φ32~Φ160





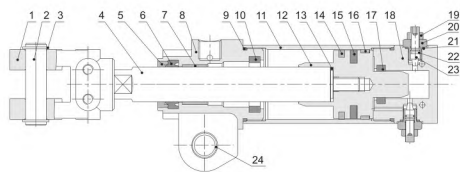
■ Symbol:



■ Product feature:

Front and rear caps are finished by aluminum die-casting, processed with high precision. Three side are settled air port, easy for installation. The flow-limiting valve in front and back sides, movement speed is adjustable. Adjustable air cushion in the front and back sides, interface of double-toggle is special designing for welder when weld the car body.

■ Inner structure drawing:



Number	Name	Number	Name
1	Y connector	13	O-ring
2	Lock shaft	14	C-ring
3	Circlip for shaft	15	Magnet
4	Piston rod	16	Wearing ring
5	Steel sleeve	17	Buffer sealing ring
6	Dustproof sealing ring	18	Rear cover
7	Composite bearing	19	Fixed nut
8	Front cover	20	Adjusting nut
9	O-ring	21	O-ring
10	Buffer sealing ring	22	O-ring
11	Cylinder barrel	23	Adjusting screw
12	Piston	24	Composite bearing

■ Specification:

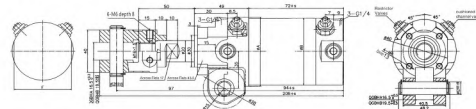
Type	40	50	63	80
Port size	1/4"			3/8"
Fluid	Compressed air			
Working pressure range (MPa)	0.1~1			
Operating speed (mm/sec)	50~500			
Ambient temperature(°C)	5~60			
Cushion	Attach two sides			
Oil	Luicbration Needless(Oil spray luicbration)			
Mounting	Two Ears			

■ How to order:

QGBH A 50 x 75			
Specification		Stroke	
QGBH: Clamp Cylinder			
Clamp Cylinder		Bore	
A Series: 16.5		Φ50	
B Series: 19.5		Φ50	
		Φ63	
		Φ80	

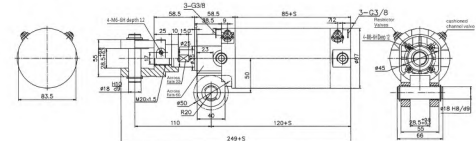
■ Dimension (mm):

QGBH40、50、63

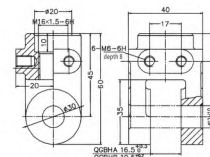


Port	L	ΦA	ΦB
40	42	Φ52	Φ45
50	51.5	Φ60	Φ55
63	68.5	Φ74	Φ72

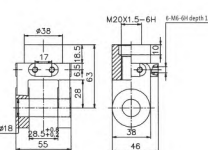
QGBH80



QGBH40、50、63 Dimension of joint shape



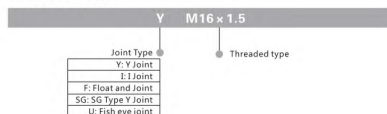
QGBH80 Dimension of joint shape



Accessories of Cylinder Joint

Accessories of Cylinder Joint

How to order:

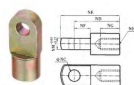


Joint Dimension(mm):

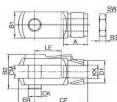
Y Joint



I Joint

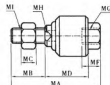


SG Type Y Joint



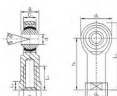
Type	Thread	MA	MB	MC	MD	ME	MF	MG	MH	MI	MJ	MK	ML	MN	MO	MP	MQ	MR	RS
Y-M10x1.25	M10x1.25	19	10	40	52	20	10	20	52	26.2	20								
Y-M12x1.25	M12x1.25	25.4	12	48	67	20	12	24	62	32.8	26.5								
Y-M16x1.5	M16x1.5	33	16	64	89	23	16	32	83	39.3	33								
Y-M20x1.5	M20x1.5	44.4	20	80	112	30	20	40	105	53.3	45								
Y-M20x1.5	M20x1.5	44.4	20	80	112	30	20	40	105	53.3	45								
Y-M27x2	M27x2	64	20	99	119	56	32	50	119	73	67								
Y-M36x2	M36x2	82	28	125	155	72	41	60	155	90	83								
Y-M36x2	M36x2	82	28	125	155	72	41	60	155	90	83								

Float and Joint



Type	MA	MB	MC	MD	ME	MF	MG	MH	MI
F-M8x1.25	50	19	5	24	12				
F-M10x1.25	60	22	7	30	15				
F-M12x1.25	67	22	8	35.5	17				
F-M14x1.5	73	22	8	42	17				
F-M16x1.5	92	24.5	8	55.5	24				
F-M18x1.5	92	24.5	8	41.5	24				
F-M20x1.5	100	31	8	57.5	29				
F-M27x2	121	35	10	71	34				
F-M36x2	168	52	12	98	49				

Fish eye joint



Type	Thread	A	B1	B2	C1	C2	C3	C4	C5	C6	C7	C8	C9	C10	C11	C12	C13	C14	C15
U-M6x1	M6x1	6	20	13	11	9	5	6.75	30	12	10	45							
U-M8x1.25	M8x1.25	8	24	16	14	12	5	9	36	16	12.5	48							
U-M10x1.25	M10x1.25	10	28	19	17	14	6.5	10.5	43	20	15	57							
U-M12x1.25	M12x1.25	12	32	22	19	16	6.5	12	50	22	17.5	66							
U-M16x1.5	M16x1.5	14	36	25	22	19	8	13.5	57	25	20	75							
U-M16x1.5	M16x1.5	16	40	27	22	21	8	15	64	28	22	84							
U-M18x1.5	M18x1.5	18	46	31	27	23	10	16.5	71	32	25	94							
U-M20x1.5	M20x1.5	20	50	34	30	25	10	18	77	33	27.5	102							
U-M22x1.5	M22x1.5	22	54	37	32	28	12	20	84	37	30	111							
U-M24x2	M24x2	25	60	42	38	31	12	22	94	42	33.5	124							
U-M27x2	M27x2	28	66	46	41	35	14	24	103	41	37	136							
U-M36x2	M36x2	35	70	50	41	43	15	25	130	51	40	145							

SR Series Cylinder

Inch Bore Stainless Steel Round Cylinder



Specification:

Bore inch	5/16	7/16	9/16	3/4	7/8	1-1/16	1-1/4	1-1/2	1-3/4	2
Motion	Double acting									
Series	SR									
Fluid	Compressed air									
Working pressure range(MPa)	0.1-1.0MPa									
Operating speed(mm/sec)	50-500									
Ambient temperature(°C)	-10~70									
Cushion	Bumper									
Port size(NPTF)	#10-32					1/8"			1/4"	

Product feature:

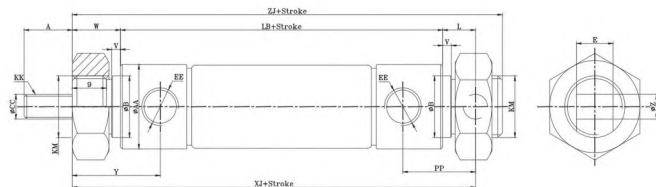
1. SR Series cylinders are designed to be dimensionally interchangeable with other major stainless steel cylinders.
 2. Both hard chromium-plating carbon steel and stainless steel rods are optional
 3. Precision double-rolled unilized construction provides durable, leak-proof service and long life.
 4. Type 304 stainless steel barrel, polished to a micro-inch finish on the I.D. provides low friction and long life.
- A matte finish on the O.D. provides smudge resistance.

How to order:

2.00	C	SR	Y	C	2.00
● Bore	● Cushion	● Series	● Rod	● Cushion	● Stroke
5/16	Use "C" when cushion head is required.	SR SRM	Specify Y for SS rod	Use "C" when cushion head is required.	Specify in inches
7/16		Without magnet With magnet			
9/16					
3/4					
7/8					
1-1/16					
1-1/4					
1-1/2					
1-3/4					
2					

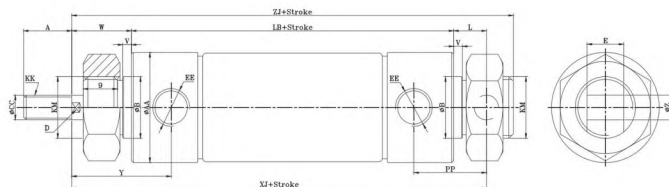
■ For bore sizes

5/16"
7/16"
3/4"



■ For bore sizes

9/16"
7/8"
1-1/16"
1-1/4"
1-1/2"
1-3/4"
2"



■ Dimensions(inch)

Bore size inch	A	AA	B	CC	D	E	EE	KK	KM
5/16	0.38	0.50	-	0.157	-	0.25	#10-32	#5-40 UNC	3/8-24
7/16	0.50	0.74	0.437	0.197	-	0.31	#10-32	#10-32 UNF	7/16-20
9/16	0.50	0.62	0.437	0.197	-	0.31	#10-32	#10-32 UNF	7/16-20
3/4	0.50	0.86	0.624	0.236	-	0.38	1/8NPTF	1/4-28 UNF	5/8-18
7/8	0.50	0.93	0.624	0.236	-	0.38	1/8NPTF	1/4-28 UNF	5/8-18
1-1/16	0.50	1.12	0.624	0.315	0.25	0.38	1/8NPTF	5/16-24 UN	5/8-18
1-1/4	0.75	1.34	0.749	0.472	0.38	0.50	1/8NPTF	7/16-20 UN	3/4-16
1-1/2	0.75	1.56	0.749	0.472	0.38	0.62	1/8NPTF	7/16-20 UN	3/4-16
1-3/4	0.88	1.84	1.031	0.472	7/16	0.62	1/4NPTF	1/2-20 UNF	1-14
2	0.88	2.08	1.374	0.630	0.50	0.75	1/4NPTF	1/2-20 UNF	1-1/4-12

Bore size inch	L	LB	PP	V	W	XJ	Y	Z	ZJ
5/16	0.19	-	0.34	-	0.31	2.03	-	0.125	2.19
7/16	0.25	1.94	0.44	0.05	0.38	2.56	0.72	0.157	2.81
9/16	0.25	-	0.38	0.06	0.38	2.56	0.78	0.157	2.75
3/4	0.34	2.91	0.62	0.09	0.5	3.75	0.97	0.251	4.03
7/8	0.34	-	0.62	0.09	0.5	3.56	0.97	0.251	3.84
1-1/16	0.34	-	0.62	0.09	0.62	3.84	1.19	0.251	4.12
1-1/4	0.41	-	0.78	0.09	0.88	4.72	1.62	0.251	5.12
1-1/2	0.50	-	0.81	0.09	0.88	4.38	1.50	0.376	4.75
1-3/4	0.50	-	1.12	0.09	1.06	5.75	1.94	0.376	6.25
2	0.56	-	1.03	0.12	1.19	5.62	-	0.376	6.06

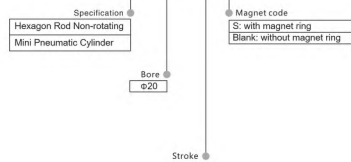
Hexagon Rod Non-rotating Mini Pneumatic Cylinder



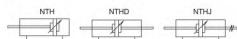
■ **Specification:**

Type	20
Motion	Double acting/Single acting
Series	NTH
Fluid	Compressed air
Working pressure range(MPa)	0.1~1.0MPa
Operating speed(mm/sec)	50~800
Ambient temperature(℃)	-10~80
Cushion	Fixed bumper
Port size(NPT)	1/8"

■ **How to order:**

NTH 20 X 100 S

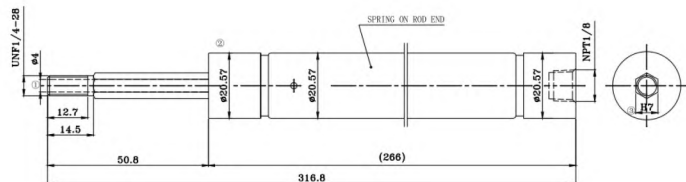
■ Symbol:



■ **Product feature:**

1. Using hexagon piston rod, non-rotating
2. 304 stainless steel cylinder body, non repairable construction
3. Single acting and double acting are available
4. Bore sizes 20mm available at the moment

■ Dimension(mm):



Drawing is NTH20x114.3, please contact sales@titan-automation.com for other models

ISO6432 Standard Mini Cylinder



■ **Specification:**

Type	8	10	12	16	20	25	32	40
Motion	Double acting							
Series	MI, MID, MIJ							
Fluid	Compressed air							
Operating pressure range (Mpa)	0.1~1							
Operating speed (mm/sec)	50~800							
Ambient temperature (°C)	-20~80							
Cushion	Adjustable cushion at both ends							
Port size (G)	M5×0.8		1/8"				1/4"	

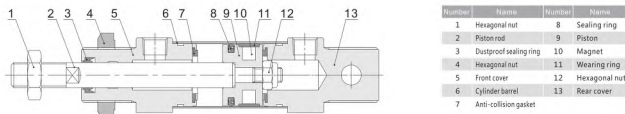
■ **How to order:**

MI 10 x 40 S

■ **Product feature:**

1. Accord with ISO6342 standard($\Phi 8 - \Phi 25$).
2. The front and rear covers with fixed bumper can reduce the reversing impact of cylinder.
3. Various rear cover forms makes cylinder installation more convenient.
4. The front and rear covers and stainless steel cylinder body adopt riveting roll package structure with reliable connection.
5. Stainless steel piston rod and cylinder body help cylinder adapt to general corrosive working environment.
6. Various standard cylinders and installing accessories are optional for customers.

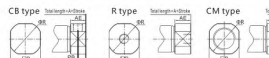
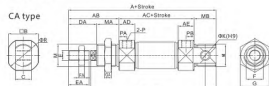
■ Inner structure drawing:



Dimension(mm):

MI Standard Dimension

Φ8~Φ40



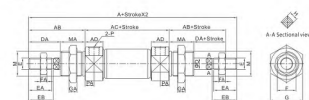
Stroke Symbol	A				AB	AC	AD	AE	AF	B	C	D	DA	E
Rear cover	CA	U	R	CM			CA	U/R/CH						
8	86	74	-	-	28	46	11.5	9.5	9.5	64	15	8	4	16 M4x7
10	86	74	-	-	28	46	11.5	9.5	9.5	64	15	8	4	16 M4x7
12	105	88	-	-	38	50	12.5	10.5	10.5	75	18	12	6	21 M6x1
16	111	94	94	111	38	56	12.5	10.5	10.5	82	20	12	6	21 M6x1
20	126	106	106	126	44	62	14.5	14.5	14.5	95	25	16	8	24 M8x1.25
25	137	114	114	137	50	65	16	16	16	104	30	16	10	28 M10x1.25
32	-	125	126	140	58	-	16.5	-	16.5	-	34.5	-	12	34 M12x1.25
40	158	158	174	169	-	22	-	-	-	42.5	-	16	34	M12x1.25

Part/Stroke/Symbol	EA	EB	F	FA	G	GA	H	K	KA	M	MA/MS	P	PA	PB	CA	R
Rear cover	CA	CU	R	CM	CA	CU	R	CM	CA	CU	R	CM	CA	CU	R	
8	105	12	7	2.2	17	6	-	4	10	M12x1.25	12	M5x0.8	7	5	17	
10	105	12	7	2.2	17	6	-	4	10	M12x1.25	12	M5x0.8	7	5	17	
12	14	16	10	5	22	6	Stroke	6	14	M6x1.5	17	M5x0.8	8	6	20	
16	145	16	10	5	22	6	Stroke	6	13	M6x1.5	17	M5x0.8	8	6	22	
20	18	10	12	6	29	7	Stroke	8	11	M20x1.5	20	P11/8"	7.5	7.5	26	
25	205	22	17	6	29	7	Stroke	8	11	M20x1.5	22	P11/8"	8	8	30.5	
32	175	20	17	6	36	7	Stroke	8	11	M20x1.5	30	P11/8"	9	9	37.5	
40	21	24	17	6	46	8	Stroke	8	11	M20x1.5	35	P11/4"	12	-	46.5	

Notes: With or without magnet, the dimensions are the same.

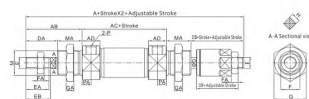
MID Standard Dimension

Φ8~Φ40



MIJ Standard Dimension

Φ8~Φ40



Stroke Symbol	A		AB	AC	AD	D	DA	DB	E	EA	EB
Rear Cover	MA	MI									
8	104	103	28	48	11.5	4	16	15	M4x0.7	10.5	12
10	104	103	28	48	11.5	4	16	15	M4x0.7	10.5	12
12	128	128	38	52	12.5	6	21	21	M6x1	14	16
16	134	134	38	58	12.5	6	21	21	M6x1	14.5	16
20	150	151	44	62	14.5	8	24	25	M8x1.25	18	20
25	165	164	50	65	16	10	28	27	M10x1.25	20	22
32	184	183	58	68	16.5	12	28	27	M10x1.25	23.5	26
40	227	221	69	89	22	16	34	28	M12x1.25	21	24

Stroke Symbol	F	CA	S	CU	-	M	MA	P	DA
Rear Cover	CA	CU	R	CM	CA	CU	R	CM	CA
8	7	2.2	17	6	-	M12x1.25	12	M5x0.8	7
10	7	2.2	17	6	-	M12x1.25	12	M5x0.8	7
12	10	5	22	6	Stroke section	M16x1.5	17	M5x0.8	8
16	10	5	22	6	Stroke section	M16x1.5	17	M5x0.8	8
20	12	6	29	7	Stroke section	M22x1.5	20	P11/8"	7.5
25	17	6	29	7	Stroke section	M22x1.5	22	P11/8"	8
32	17	6	36	7	Stroke section	M30x1.5	30	P11/8"	9
40	17	7	46	8	Stroke section	M38x1.5	35	P11/8"	12

Notes: With or without magnet, the dimensions are the same.



Specification:

Type	16	20	25	32	40
Motion	Double acting				
Series	MA, MAD, MAJ				
Fluid	Compressed air				
Working pressure (MPa)	0.1~1				
Operating speed (mm/sec)	50~800				
Ambient temperature (°C)	-20~80				
Cushion	Adjustable cushion at both ends				
Port size (G)	M5x0.8 1/8"				

How to order:

MA	20	50	S
Specification	MA, Standard Mini Cylinder MAD, Double axial Mini Cylinder MAJ, Stroke adjustable Mini Cylinder		
Magnet code	Blank / without magnet S / with magnet		
Stroke	Bore Φ16 Φ20 Φ25 Φ32 Φ40		

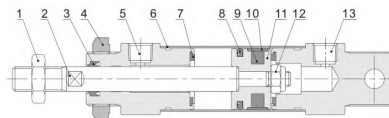
Symbol:



Product feature:

1. Execute the enterprise standards.
2. The piston seal adopts special two-way sealing structure with compact size and oil storing function.
3. The front and rear covers with fixed bumper can reduce the reversing impact of cylinder.
4. Various rear cover forms makes cylinder installation more convenient.
5. The front and rear covers and stainless steel cylinder body adopt riveting roll package structure with reliable connection.
6. The cylinder body adopts high precision stainless steel tube with high strength and corrosion resistance.
7. Various standard cylinders and installing accessories are optional for customers.

Inner structure drawing:

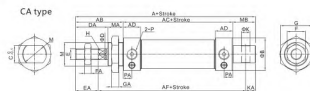


Number	Name	Number	Name
1	Hexagonal nut	8	Sealing Ring
2	Piston rod	9	Piston
3	Outproof sealing ring	10	Magnet
4	Hexagonal nut	11	Wearing ring
5	Front cover	12	Hexagonal nut
6	Cylinder barrel	13	Rear cover
7	Anti-collision gasket		

■ Dimension(mm):

MA Standard Dimension

■ Φ16~Φ40



CM type



U type

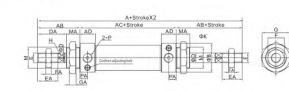


Bore/Stroke	A	AS	AC	AD	AE	B	C	D	DA	EA	FA
16	114	114	98	38	60	10	91	21	12	6	22
20	137	128	116	40	76	16	108	27	16	8	28
25	141	134	120	44	76	16	110	30	16	10	30
32	147	134	120	44	76	16	113	35	16	12	32
40	149	136	122	46	76	16	115	41.5	20	16	32

Bore/Stroke	F	FA	G	GA	H	M	MA	MB	P	PA
16	10	5	22	6	5	9	M16×1.5	16	16	M5×0.8
20	12	6	24	7	6	12	M22×1.5	12	21	P11/8"
25	17	6	29	7	8	12	M22×1.5	14	21	P11/8"
32	17	6	32	8	10	15	M24×2.0	14	27	P11/8"
40	17	7	41	9	14	12	M30×2.0	14	27	P11/8"

MAD Standard Dimension

■ Φ16~Φ40

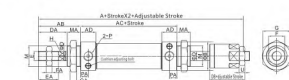


Bore/Stroke	A	AS	AC	AD	B	D	DA	E	EA
16	136	38	60	10	21	6	22	M6×1.0	16
20	156	40	76	16	27	8	28	M8×1.25	20
25	164	44	76	16	30	10	30	M10×1.25	22
32	164	44	76	16	35	12	30	M12×1.25	22
40	168	46	76	16.5	41.5	16	32	M12×1.25	24

Bore/Stroke	F	FA	G	GA	H	M	MA	P	PA
16	10	5	22	6	5	M16×1.5	16	M5×0.8	5
20	12	6	29	7	6	M22×1.5	12	P11/8"	8
25	17	6	29	7	8	M22×1.5	14	P11/8"	8
32	17	6	32	8	10	M24×2.0	14	P11/8"	8
40	17	7	41	9	14	M30×2.0	20	P11/8"	8

MAJ Standard Dimension

■ Φ16~Φ40



Bore/Stroke	A	AS	AC	AD	B	D	DA	E	EA	F	FA
16	135	38	60	10	21	6	22	21	M6×1.0	16	10
20	153	40	76	16	27	8	28	25	M8×1.25	20	12
25	161	44	76	16	30	10	30	27	M10×1.25	22	17
32	161	44	76	16	35	12	30	27	M12×1.25	22	17
40	164	46	76	16.5	41.5	16	32	28	M12×1.25	24	17

Stroke	F	M	M2	G	GA	EA	EA	EA
16	5	M16×1.5	16	M5×0.8	5	22	6	M6×1.0
20	6	M22×1.5	12	P11/8"	8	29	7	M8×1.25
25	8	M22×1.5	14	P11/8"	8	29	7	M10×1.25
32	10	M24×2.0	14	P11/8"	8	32	8	M10×1.25
40	14	M30×2.0	14	P11/8"	8	41	9	M12×1.25



■ Specification:

Type	16	20	25	32	40
Motion	Double acting				
Series	MAL, MALD, MALJ				
Fluid	Compressed air				
Working pressure (MPa)	0.1~1				
Operating speed (mm/sec)	50~500				
Ambient temperature (°C)	-10~70				
Cushion	Bumper				
Port size (G)	M5		1/8"		1/4"

■ How to order:

MAL 20 × 100 CA LB S	
Specification	Magnet code
MAL: Standard Mini Cylinder	① with magnet + 1pc magnet switch
MALD: Double acting Mini Cylinder	② with magnet + 2pc magnet switch
MALJ: Stroke adjustable Mini Cylinder	③ Heat resisting oil ring, max temp. 130°C
	Stroke resisting piston rod
Bore	Mounting type
Φ16	Blank/Standard: ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⑩ ⑪ ⑫ ⑬ ⑭ ⑮ ⑯ ⑰ ⑱ ⑲ ⑳ ㉑ ㉒ ㉓ ㉔ ㉕ ㉖ ㉗ ㉘ ㉙ ㉚ ㉛ ㉜ ㉝ ㉞ ㉟ ㊱ ㊲ ㊳ ㊴ ㊵ ㊶ ㊷ ㊸ ㊹ ㊺ ㊻ ㊼ ㊽ ㊾ ㊿
Φ20	Blank/Standard: ㉞ ㉟ ㊱ ㊲ ㊳ ㊴ ㊵ ㊶ ㊷ ㊸ ㊹ ㊺ ㊻ ㊼ ㊽ ㊾ ㊿
Φ25	Blank/Standard: ㊿ ㉞ ㉟ ㊱ ㊲ ㊳ ㊴ ㊵ ㊶ ㊷ ㊸ ㊹ ㊺ ㊻ ㊼ ㊽ ㊾ ㊿
Φ32	Blank/Standard: ㊿ ㉞ ㉟ ㊱ ㊲ ㊳ ㊴ ㊵ ㊶ ㊷ ㊸ ㊹ ㊺ ㊻ ㊼ ㊽ ㊾ ㊿
Φ40	Blank/Standard: ㊿ ㉞ ㉟ ㊱ ㊲ ㊳ ㊴ ㊵ ㊶ ㊷ ㊸ ㊹ ㊺ ㊻ ㊼ ㊽ ㊾ ㊿
Stroke	Blank/Standard: ㊿ ㉞ ㉟ ㊱ ㊲ ㊳ ㊴ ㊵ ㊶ ㊷ ㊸ ㊹ ㊺ ㊻ ㊼ ㊽ ㊾ ㊿
Rear cover	Blank: Flat tail
	U: Flat tail
	CM: Rounded tail

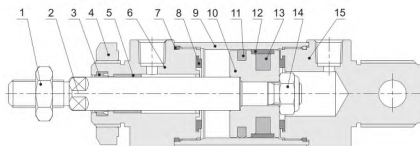
■ Symbol:



■ Product feature:

1. Adopt imported aluminum tube, light, precise, friction & corrosion endurable.
2. Use imported non-lubrication oil seal, fits for high speed movement.
3. Has aluminum covers, CNC machined, surface anodized, better anti-corrosion.
4. Has non-lubrication bearing, no need maintenance for long time working with longer life time than usual one.
5. Magnet in piston, whole series can be attached with sensor switch

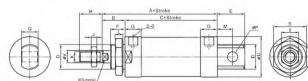
■ Inner structure drawing:



Number	Name	Number	Name
1	Hexagonal nut	9	Cylinder barrel
2	Piston rod	10	Piston
3	Outprotruding ring	11	PZ ring
4	Hexagonal nut	12	Wearing ring
5	Composite bearing	13	Magnet
6	Front cover	14	Hexagonal nylon locknut
7	O-ring	15	Rear cover
8	Fenders		

Dimension(mm):

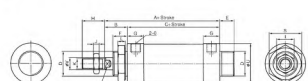
Fishtail type

■ $\Phi 16 \sim \Phi 40$ 

Base/Symbol	A	B	C	D	E	F	G	H	I
16	75.6	20	55.6	M16×1.5	14	12	11	17	10
20	90	20	70	M22×1.5	21	12	16	20	12
25	92	22	70	M22×1.5	21	14	16	22	17
32	92	22	70	M24×1.5	27	14	16	22	17
40	114	22	92	M30×1.5	27	14	22	24	17

Base/Symbol	K	L	M	O	P	Q	S	U	V	W
16	M6	7	5	M5	6	12	24	22	6	-
20	M8×1.25	12	3	PT1/8"	8	16	27	27	8	6
25	M10×1.25	12	12	PT1/8"	8	16	29	32	10	8
32	M10×1.25	15	14	PT1/8"	10	16	39.5	39	12	10
40	M12×1.25	15	16	PT1/4"	12	20	49.5	47	16	14

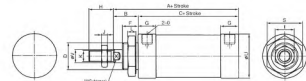
Rounded type

■ $\Phi 16 \sim \Phi 40$ 

Base/Symbol	A	B	C	D	E	F	G	H	I	J
16	75.6	20	55.6	M16×1.5	14	2	11	17	10	5
20	90	20	70	M22×1.5	21	12	16	20	12	6
25	92	22	70	M22×1.5	21	14	16	22	17	6
32	92	22	70	M24×1.5	27	14	16	22	17	6
40	114	22	92	M30×1.5	27	14	22	24	17	7

Base/Symbol	K	L	O	S	U	V	W
16	M6	7	M5	24	22	6	-
20	M8×1.25	12	PT1/8"	29	27	8	6
25	M10×1.25	12	PT1/8"	29	32	10	8
32	M10×1.25	15	PT1/8"	32	39	12	10
40	M12×1.25	15	PT1/4"	41	47	16	14

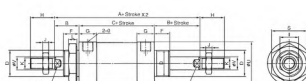
Flat type

■ $\Phi 16 \sim \Phi 40$ 

Base/Symbol	A	B	C	D	E	F	G	H	I
16	75.6	20	55.6	M16×1.5	12	11	17	10	5
20	90	20	70	M22×1.5	12	16	20	12	6
25	92	22	70	M22×1.5	14	16	22	17	6
32	92	22	70	M24×1.5	14	16	22	17	6
40	114	22	92	M30×1.5	14	22	24	17	7

Base/Symbol	K	L	O	S	U	V	W
16	M6	7	M5	24	22	6	-
20	M8×1.25	12	PT1/8"	29	27	8	6
25	M10×1.25	12	PT1/8"	29	32	10	8
32	M10×1.25	15	PT1/8"	32	39	12	10
40	M12×1.25	15	PT1/4"	41	47	16	14

MALD type

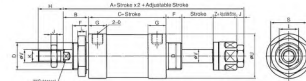
■ $\Phi 16 \sim \Phi 40$ 

Base/Symbol	A	B	C	D	E	F	G	H	I	J
16	95.6	20	55.6	M16×1.5	12	11	17	10	5	
20	110	20	70	M22×1.5	12	16	20	12	6	
25	116	22	70	M22×1.5	14	16	22	17	6	
32	114	22	70	M24×1.5	14	16	22	17	6	
40	136	22	92	M30×1.5	14	22	24	17	7	

Base/Symbol	K	L	O	S	U	V	W
16	M6	7	M5	24	22	6	-
20	M8×1.25	12	PT1/8"	29	27	8	6
25	M10×1.25	12	PT1/8"	29	32	10	8
32	M10×1.25	15	PT1/8"	32	39	12	10
40	M12×1.25	15	PT1/4"	41	47	16	14

Dimension(mm):

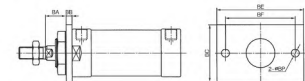
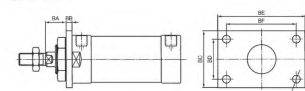
MALJ type

■ $\Phi 16 \sim \Phi 40$ 

Base/Symbol	A	B	C	D	E	F	G	H	I	J
16	111.6	20	55.6	M16×1.5	12	11	17	10	5	
20	127	20	70	M22×1.5	12	16	20	12	6	
25	133	22	70	M22×1.5	14	16	22	17	6	
32	133	22	70	M24×1.5	14	16	22	17	6	
40	156	22	92	M30×2	14	22	24	17	7	

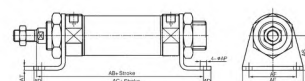
Base/Symbol	K	L	O	S	U	V	W	Z
16	M6	7	M5	24	22	6	-	19
20	M8×1.25	12	PT1/8"	29	27	8	6	18
25	M10×1.25	12	PT1/8"	29	32	10	8	21
32	M10×1.25	15	PT1/8"	32	39	12	10	21
40	M12×1.25	15	PT1/4"	41	47	16	14	21

FA type

■ $\Phi 16 \sim \Phi 20$ ■ $\Phi 32 \sim \Phi 40$ 

Base/Symbol	BA	BB	BC	BD	BE	BF	BP
20	16	4	38	-	64	50	6.5
25	18	4	38	-	64	50	6.5
32	18	4	47	33	72	58	6.5
40	18	4	50	36	84	119	6.5

LB type

■ $\Phi 20 \sim \Phi 40$ 

Base/Symbol	AB	AC	AD	AE	AF	AG	AL
20	105	100	8	54	40	6.5	25
25	107	100	8	54	40	6.5	25
32	117	120	8	59	45	6.5	32
40	139	142	8	64	50	6.5	36



■ Specification:

Type	12	16	20	25	32	40	50	63	80	100
Motion	Double acting									
Series	SDA SDAJ									
Fluid	Compressed air									
Working pressure range (MPa)	0.1~1									
Operating speed (mm/sec)	50~500									
Ambient temperature (°C)	-10~70									
Cushion	Bumper									
Port size (G)	M5		1/8"		1/4"		3/8"			

■ How to order:

SDA 20 × 100 B S									
Specification									
SDA: Standard Mini Cylinder									
SDAJ: Double axial Mini Cylinder									
SDA: Double adjustable Mini Cylinder									
Bore									
Φ12 Φ16 Φ20 Φ25 Φ32 Φ40 Φ50 Φ63 Φ80 Φ100									
Stroke									
Magnet code									
S1 with magnet + 2pc magnet switch									
S2 with magnet + 2pc magnet switch									
S3 feel resting seal ring, max temp 150°C									
S4 self-adjusting piston rod									
Thread code									
Blank: Female thread									
B: Male thread									
N: Without thread									

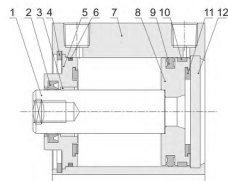
■ Symbol:



■ Product feature:

- The cylinder body and rear covers; piston and piston rod adopt compact and reliable riveting roll package structure.
- After inner diameter's rolling processing, the cylinder body is hard oxidation treated with good wear durability.
- The piston seal adopts special two-way sealing structure with compact size and oil storing function.
- The compact structure helps to save the installation space.
- With magnetic induction switch tank surrounding the cylinder body, it's convenient to install the induction switch.
- Various standard cylinder types are optional.

■ Inner structure drawing:

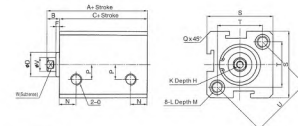


Number	Name	Number	Name
1	Piston rod	7	Cylinder barrel
2	Support bearing	8	Piston
3	Composite bearing	9	C-ring
4	Circlet for hole	10	Wearing ring
5	Front cover	11	Fenders
6	O-ring	12	Rear cover

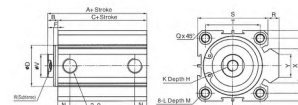
■ Dimension (mm):

Standard Dimension

■ Φ12~Φ16



■ Φ20~Φ100

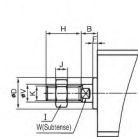


Type	Standard			With magnet			D	F	H	K
Stroke (mm)	A	B	C	A	B	C	D	F	H	K
12	22	5	17	32	5	27	10.2	1	6	M3±0.5
16	24	5.5	18.5	34	5.5	28.5	10.5	1.5	6	M3±0.5
20	25	5.5	19.5	35	5.5	29.5	11	1.5	8	M4±0.7
25	27	6	21	37	6	31	17	2	10	M5±0.8
32	31.5	7	24.5	41.5	7	34.5	22	3.5	12	M6±1
40	33	7	26	43	7	36	28	3	12	M6±1.25
50	37	9	28	47	9	38	36	5	15	M10±1.5
63	41	9	32	51	9	42	38	3.5	15	M10±1.5
80	52	11	41	62	11	51	45	4	15	M14±1.5
100	63	12	51	73	12	61	50	5	18	M18±1.5

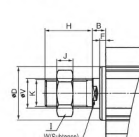
Bore (mm)	L	M	N1	N2	O	Q	R	S	T	U	V	W	X	Y
12	M3	12	7.5	7.5	5	M5	1.6	-	25	16.2	23	6	5	-
16	M3	12	8	8	5.5	M5	1.6	-	28	19.8	28	6	5	-
20	M4	14	8.5	8.5	5.5	M5	2.1	2.2	34	24	-	8	6	11.3
25	M5	20.5	9	9	5.5	M5	3.1	2	40	28	-	10	8	12
32	M6	20.5	9	9	6.5	PT1/8"	2.1	6	43.7	34	-	12	10	18.3
40	M8	22.5	9	9	7.5	PT1/2"	2.2	6.7	52.1	40	-	16	14	21.3
50	M10	28.5	8	10.5	8	10.5	PT1/2"	4.2	6.7	61.8	48	-	20	17
63	M10	24	8.5	11	8.5	11	PT1/2"	3.2	8.7	74.6	60	-	20	17
80	M12	25	11.5	13	11.5	13	PT3/8"	3.6	10	94.4	74	-	25	22
100	M14	33	13.5	17	13.5	17	PT3/8"	3.6	10	114.4	90	-	32	27

Male thread Dimension

■ Φ12~Φ16



■ Φ20~Φ100

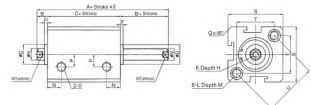


Bore (mm)	B	D	F	H	I	J	K	L	M	N	V	W
12	5	10.2	1	12	8	4	M5	6	5			
16	5.5	10.2	1.5	12	8	4	M5	6	5			
20	5/5	15	1.5	15	10	5	M6	8	6			
25	6	17	2	17	12	6	M8	10	8			
32	7	22	3.5	18	17	6	M10±1.25	12	10			
40	7	28	3	28	19	8	M14±1.5	16	14			
50	9	36	5	28	27	11	M18±1.5	20	17			
63	9	38	3.5	28	27	11	M18±1.5	20	17			
80	11	45	4	33	32	13	M22±1.5	25	22			
100	12	50	5	38	36	13	M26±1.5	32	27			

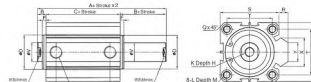
Dimension(mm):

SDAP Standard Dimension

■ Φ12~Φ16



■ Φ20~Φ100

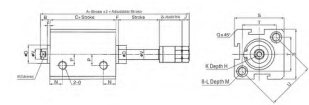


Type	Standard			With magnet			D			F	H	K
Bore Symbol	A	B	C	A	B	C	D	E	F	G	H	K
12	27	5	17	37.5	5	27	10.2	1	6			M3+0.5
16	29.5	5.5	18.5	39.5	5.5	28.5	10.5	1.5	6			M3+0.5
20	30.5	5.5	19.5	40.5	5.5	29.5	11	1.5	5	85mm(3.35in)		M3+0.5
25	33	6	21	43	6	31	17	2	11			M4+0.7
32	38.5	7	24.5	48.5	7	34.5	22	3.5	8	12		M6+1
40	40	7	26	50	7	36	28	3	9	12		M6+1.25
50	46	9	28	56	9	38	36	5	11	15		M10+1.5
63	50	9	32	60	9	42	38	5.5	11	15		M10+1.5
80	63	11	41	73	11	51	45	4	14	20		M14+1.5
100	75	12	51	85	12	61	50	5	18	20		M18+1.5

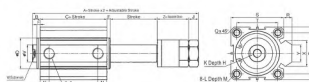
Item Symbol	L	M	N1	N2	Q	Q	R	S	T	U	V	W	X	Y	
12	M3	12	55	65	5	M5	1.6	-	25	16.2	23	6	5	-	
16	M3	12	65	75	5	M5	1.6	-	29	19.8	28	6	5	-	
20	M4	14	7	85	55	M5	1.1	2.2	34	24	-	8	6	11.3	
25	M5	20.5	7.5	9	55	M5	1.1	2	40	28	-	10	8	12	
32	M6	20.5	8	9	65	PT1/8"	2.1	6	43.7	34	-	12	10	18.3	
40	M8	22.5	9	75	75	PT1/8"	2.2	6.7	52.1	40	-	16	14	21.3	
50	M10	28.5	8	105	8	105	PT1/8"	4.2	9.7	61.8	48	-	20	17	30
63	M10	28.5	10	115	10	115	PT1/8"	4.2	9.7	74.8	60	-	20	17	38.7
80	M12	34	11	135	11	135	PT3/8"	3.6	10	94.4	74	-	25	22	36
100	M14	33	13	155	13	155	PT3/8"	3.6	10	114.4	90	-	32	27	35

SDAJ Standard Dimension

■ Φ12~Φ16



■ Φ20~Φ100



Type	Standard			With magnet			D	F	H	K
Bore symbol	A	B	C	A	B	C			Mounting height	
12	40	5	17	50	5	27	10.2	1	6	M3+0
16	42.5	5.5	18.5	52.5	5.5	28.5	10.5	1.5	6	M3+0
20	47.5	5.5	19.5	57.5	5.5	29.5	11	1.5	5	M3+0
25	54	6	21	64	6	31	17	2	11	M5+0
32	62	7	24.5	72	7	34.5	22	3.5	8	M6+1
40	65	7	26	75	7	36	28	3	9	M6+1
50	74	9	28	84	9	38	36	5	11	M10+1
63	76.5	9	32	86.5	9	42	38	5.5	11	M10+1
80	93	11	41	103	11	51	45	4	14	M14+1
100	105	12	51	115	12	61	50	5	18	M18+1

Size/Type	L	M	N1	N2		O	Q	R	S	T	U	V	W	X	Y
			10x10x5												
12	M3	12	55	65	5	M5	1.6	-	-	25	16.2	23	6	5	-
16	M3	12	65	75	5	M5	1.6	-	-	29	19.8	28	6	5	-
20	M4	14	7	85	55	M5	1.1	2.2	34	-	-	8	6	11.3	10
25	M5	20.5	7.5	9	55	M5	1.1	2	40	28	-	10	8	12	10
32	M6	20.5	8	9	65	PT1/8"	2.1	6	43.7	34	-	12	10	18.3	15
40	M8	22.5	9	9	75	PT1/8"	2.2	6.7	52.1	40	-	16	14	21.3	16
50	M10	28.5	8	105	8	PT1/8"	4.2	9.7	61.8	48	-	20	17	30	20
63	M10	28.5	10	115	10	PT1/8"	4.2	9.7	74.8	60	-	20	17	38.7	20
80	M12	34	11	135	11	PT3/8"	3.6	10	94.4	74	-	25	22	36	26
100	M14	33	13	155	13	PT3/8"	3.6	10	114.4	90	-	32	27	35	26



Symbol:

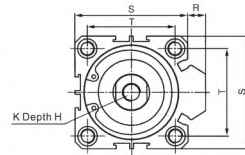
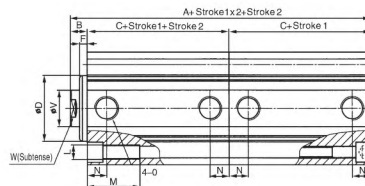


Product feature:

Making the combined cylinder have multi-position. Connecting two cylinders which have the same bore, but different stroke. Pay attention to the stroke that the later acting longer than former acting, i.e. stroke2 > stroke1, if special requirements, we can supply combination which have two or more cylinders, total stroke not more than 2000mm.

Attention: its pull force is similar to single cylinder.

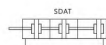
Dimension(mm):



type	with magnet		with magnet		D	F	G	K1	O	P	P1	P3	P4	S	T1	V	W			
Bore/symbol	A	C2	A	C2																
25	49	22	59	32	21	42	10	4	2	M3+0.8	M5+0.8	8.2	M6+1	15	5.5	40	28	10	8	
40	60	27	70	37	26	59	12	4	3	M8+1.25	PT1/8"	10	M8+1.25	20	7.5	52	40	16	14	
63	74	33	84	43	32	84.5	15	5	4	M10+1.5	PT1/4"	11	M8+1.25	25	8.5	75	60	20	17	
80	94	42	104	52	41	104	15	20	6	5	M14+1.5	PT3/8"	14	M12+1.75	25	10.5	94	74	25	22
100	115	52	125	62	51	124	18	20	7	5	M18+1.5	PT3/8"	17.5	M14+2	30	13	114	90	32	27



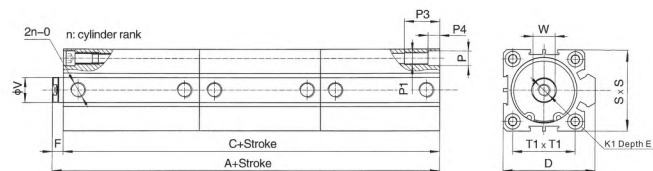
Symbol:



Product feature:

- By connecting 2,3 or 4 cylinders which have the same bore and stroke, make the push force as 2,3 or 4 times than one cylinder.
- Only need two air ports.
- Attention: Draw-in force is the same as one cylinder.

Dimension(mm):



Type Bore/Stroke	Without magnet		With magnet		C1	E		F	K1	O	P	P1	P3	P4	S	T1	V	W
	A	C	A	C		<10	≥10											
25	22n+5	22n+1	22n+15	22n+9	42	10	6	M5~0.8	M5~0.8	8.2	M6~1	15	5.5	40	28	10	8	
40	27n+6	27n+1	27n+16	27n+9	52	32	7	M8~1.25	PT1/8"	10	M8~1.25	20	7.5	52	40	16	14	
63	33n+8	33n+1	33n+18	33n+9	84.5	15	9	M10~1.5	PT1/4"	11	M8~1.25	25	8.5	75	60	20	17	
80	42n+10	42n+1	42n+20	42n+9	104	15	20	11	M14~1.5	PT3/8"	14	M12~1.75	25	10.5	94	74	25	22
100	52n+11	52n+1	52n+21	52n+9	124	18	20	12	M18~1.5	PT3/8"	17.5	M14~2	30	13	114	90	32	27

Specification:

Type	25	40	50	63	80	100
Fluid	Compressed air					
Structure character	Piston type cylinder					
Working pressure range (MPa)	0.1~1					
Ambient temperature(°C)	-10~70					

How to order:

Specification	SDAT	40 × 100	3	B	S
SDAT Multi-pressure Compact Cylinder					
Bore	Φ25	Φ80	Φ40	Φ63	
Stroke					
Cylinder qty					
Magnet code					
Blank: Female thread					
B: Male thread					
N: Without thread					
Thread code					
Blank: Female thread					
B: Male thread					
N: Without thread					



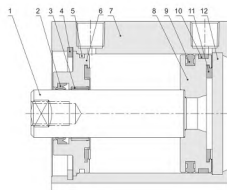
Symbol:



Product feature:

- The cylinder body and rear covers; piston and piston rod adopt compact and reliable riveting roll package structure.
- After inner diameter's a rolling processing, the cylinder body is hard oxidation treated with good wear durability.
- The piston seal adopts special two-way sealing structure with compact size and oil storing function.
- The compact structure helps to save the installation space.
- With magnetic induction switch tank surrounding the cylinder body, it's convenient to install the induction switch.
- Various standard cylinder types are optional.

Inner structure drawing:



Number	Name
1	Piston rod
2	Dustproof sealing ring
3	Composite bearing
4	Cotter for hole
5	O-ring
6	Front cover
7	Cylinder barrel
8	Piston
9	C-ring
10	Wearing ring
11	Fender
12	Rear cover

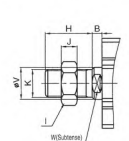
Specification:

Type	12	16	20	25	32	40	50	63	80	100	125
Motion	Double acting										
Series	CQ, CQD										
Fluid	Compressed air										
Working pressure range (MPa)	0.1~1										
Operating speed (mm/sec)	50~500										
Ambient temperature(°C)	-10~70										
Cushion	Bumper										
Port size (G)	M5										

How to order:

Specification	CQ	20 × 100	B	S
CQ: Standard Cylinder				
CQD: Double axial Cylinder				
Bore	Φ12	Φ50	Φ16	Φ63
Stroke	Φ20	Φ80	Φ25	Φ100
	Φ32	Φ125	Φ40	
Magnet code				
Blank: Female thread				
B: Male thread				
N: Without thread				
Thread code				
Blank: Female thread				
B: Male thread				
N: Without thread				

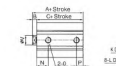
Outer thread Dimension
 ■ Φ12~Φ12.5(Stroke<100)



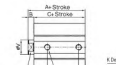
Base/Symbol	B	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W
12	3.5	10.5	8	4	4	MS	6	5													
16	3.5	12	10	5	5	M6	8	6													
20	4.5	14	12	6	6	M8	10	8													
25	5	17.5	17	6	6	M10x1.25	12	10													
32	5	22.5	19	8	8	M12x1.5	16	14													
40	5	23.5	19	8	8	M14x1.5	16	14													
50	5	28.5	27	11	11	M18x1.5	20	17													
63	5	28.5	27	11	11	M18x1.5	20	17													
80	8	35.5	32	13	13	M22x1.5	25	22													
100	8	35.5	36	13	13	M26x1.5	32	27													
125	-	45	46	14	14	M30x1.5	36	32													

Base/Symbol	B	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W
32	15	22	5	23.5	19	8	M14x1.5	16	14												
40	15	28	5	23.5	19	8	M14x1.5	16	14												
50	15	35	5	28.5	27	11	M18x1.5	20	17												
63	15	35	5	28.5	27	11	M18x1.5	20	17												
80	18	43	5	35.5	32	13	M22x1.5	25	22												
100	18	59	5	35.5	36	13	M26x1.5	32	27												
125	18	63	5	45	46	14	M30x1.5	36	32												

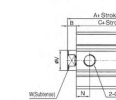
Standard Dimensions
 ■ Φ12~Φ16



■ Φ20~Φ25



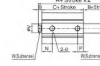
■ Φ32~Φ125(Stroke<100)



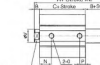
type	Standard	Stroke	Width magnet	S	H	R	L
Base/Symbol	A	B	C	D	E	F	G
12	20.5	-	17	-	31.5	28	3.5
16	22	-	18.5	-	34	30.5	3.5
20	24	19.5	29.5	16	31.5	4.5	7
25	27.5	37.5	22.5	32.5	37.5	12.5	5
32	30	40	23	33	40	13	7
40	36.5	46.5	29.5	39.5	46.5	19.5	7
50	38.5	48.5	30.5	40.5	48.5	20.5	8
63	44	54	36	46	54	26	15
80	53.5	63.5	43.5	53.5	63.5	33	20
100	65	75	53	63	75	43	26
125	99	99	99	83	16	30	M22

type	Standard	Stroke	Width magnet	S	H	R	L
Base/Symbol	A	B	C	D	E	F	G
12	11	7.5	9	M5	5	7	-
16	11	8	9.5	M5	5.5	-	29
20	17	9	9.5	M5	5.5	-	36
25	17	11	M5	5.5	-	40	28
32	17	17	10.5	P11/8"	6.5	7.5	4.5
40	17	11	P11/8"	8	4	53	40
50	22	18	P11/4"	8	10.5	7	64
63	28.5	14	P11/4"	8.5	10.5	7	77
80	35.5	16	P13/8"	14	6	98	77
100	35.5	20	P13/8"	17.5	6.5	117	94
125	43.4	24.5	P13/8"	24.5	11	142	114

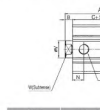
COD Dimensions
 ■ Φ12~Φ16



■ Φ20~Φ25



■ Φ32~Φ125(Stroke<100)



type	Standard	Stroke	Width magnet	S	H	R	L
Base/Symbol	A	B	C	D	E	F	G
12	32	25.2	39.4	32.4	3.5	6	M3
16	33	26	43	36	3.5	8	M4
20	35	28	47	38	4.5	7	M5
25	39	29	49	39	5	12	M6
32	44.5	30.5	54.5	40.5	7	13	M8
40	54	40	64	50	7	13	M8
50	56.5	40.5	66.5	50.5	8	15	M10
63	58	42	68	52	8	12	M10
80	71	51	81	61	10	24	M16
100	84.5	60.5	94.5	60.5	12	28	M20
125	115	115	115	16	22.5	30	M22

type	Standard	Stroke	Width magnet	S	H	R	L
Base/Symbol	A	B	C	D	E	F	G
12	3.5	M5	-	25	15.5	6	6
16	3.5	M5	-	29	20	8	6
20	4.5	M5	-	36	21.5	7	10
25	5	M5	-	40	28	12	10
32	7	P11/8"	4.5	45	34	13	16
40	7	P11/8"	4	53	40	13	16
50	8	P11/4"	7	64	50	15	20
63	16	P11/4"	7	77	60	-	20
80	16	P13/8"	6	98	77	-	25
100	21	P13/8"	6.5	117	94	-	32
125	24.5	P13/8"	11	142	114	-	36



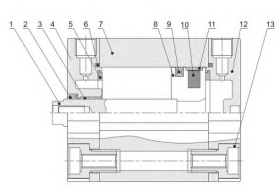
■ Symbol:



■ **Product feature:**

1. The cylinder body is connected with the front and rear covers threads, with good strength and convenient maintenance.
2. After inner diameter's finishing machining, the cylinder body is hard oxidation treated with good wear durability.
3. The piston seal adopts special two-way sealing structure with compact size and oil storing function.
4. The compact structure helps to save the installation space.
5. With magnetic induction switch tank surrounding the cylinder body, it's convenient to install the induction switch.
6. Various standard cylinder types are optional

■ Inner structure drawing:



■ **Specification:**

Type	12	16	20	25	32	40	50	63	80	100	125
Motion	Double acting										
Series	ADVU, ADVUD, ADVUJ										
Fluid	Compressed air										
Working pressure range(MPa)	0.1~1										
Operating speed(mm/sec)	50~500										
Ambient temperature(℃)	-10~70										
Cushion	Bumper										
Port size (G)	M5			1/8"		1/4"			3/8"		

■ **How to order:**

ADVU 50 x 40 B S

Specification

- ADVU: Standard Cylinder
- ADVUD: Double axial Cylinder
- ADVUI: Skid adjustable Cylinder

Bore

Ø20	063
Ø25	080
Ø32	100
Ø40	125
Ø50	

Magnet code

- 1: with magnet - 1pc magnet switch
- 2: with magnet - 2pc magnet switch
- 3: heat-resisting and ring, max temp 120°C
- Skid: resisting piston rod

Thread code

- Blank: Female thread
- B: Male thread
- N: Without thread

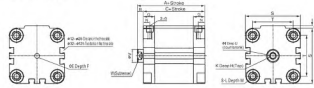
Stroke

ADVU Series Cylinder

Compact Cylinder

Standard Dimensions

■ Φ20~Φ125

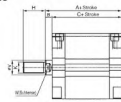


Row Number	A	B	C	D	E	F	G	H	I	J	K	L	M	N
12	42.5	4.5	38	6	4	11.5	6	3.3	M3	M4				
16	42.5	4.5	38	6	4	11.5	8	4.5	M4	M4				
20	42.5	4.5	38	6	4	11.5	12	5.5	M5	M5				
25	45	5.5	39.5	5	4	11.5	12	5.5	M5	M5				
32	50.5	6	44.5	6	4	14	14	6.5	M6	M6				
40	52	6.5	45.5	6	4	14	14	6.5	M6	M6				
50	53	7.5	45.5	6	4	14	16	8.5	M8	M8				
63	57.5	7.5	50	8	4	15	16	8.5	M8	M10				
80	64	8	56	8	4	16	20	10.5	M10	M10				
100	76.5	10	66.5	8	4	19	24	12.5	M12	M10				
125	92	11	81	8	4	20	24	12.5	M12	M10				

Year/Symbol	M	N	O	R	S	T	U	V	W
12	18	7	M5	1	18	28.5	1.5	6	5
16	18	7	M5	1	18	28.5	1.5	8	
20	18.5	7	M5	1.5	36	22	2	10	8
25	18.5	7	M5	1.5	40	26	2	10	8
32	21.5	8	P13/8"	2	50	32	2.6	12	10
40	21.5	8	P13/8"	2.5	60	42	2.6	12	10
50	22	8	P13/8"	3	68	50	3.3	16	13
63	24.5	8	P13/8"	4	87	62	3.3	16	13
80	27.5	8.5	P13/8"	4	107	82	4.7	20	17
100	32.5	10.5	P14/4"	5	128	103	6.1	25	22
125	32.5	10.5	P14/4"	-	134	110	6.1	25	22

ADVUB Dimensions

■ Φ20~Φ125

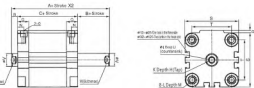


Row/Symbol	A	B	C	H	K	V	W
12	42.5	4.5	38	16	M6=1	6	5
16	42.5	4.5	38	20	M8=1.25	8	6
20	42.5	4.5	38	22	M10=1.25	10	8
25	45	5.5	39.5	22	M10=1.25	10	8
32	50.5	6	44.5	22	M10=1.25	12	10
40	52	6.5	45.5	22	M10=1.25	12	10
50	53	7.5	45.5	24	M12=1.25	16	13
63	57.5	7.5	50	24	M12=1.25	16	13
80	64	8	56	32	M16=1.5	20	17

100	76.5	10	66.5	40	M20×1.5	25	22
125	92	11	81	40	M20×1.5	25	22

ADVUD Dimensions

■ $\Phi 12 \sim \Phi 125$

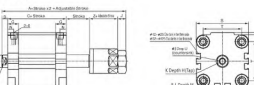


Color	A	B	C	D	E	F	G	H	I	J	K	L
12	47	4.5	38	11.5	8	3.3	M3	M4				
16	47	4.5	38	11.5	10	4.5	M4	M6				
20	47	4.5	38	11.5	12	5.5	M5	M5				
25	50.5	5.5	39.5	11.5	12	5.5	M5	M5				
32	56.5	6	44.5	14	14	6.5	M6	M6				
40	58.5	6.5	45.5	14	14	6.5	M6	M6				
50	60.5	7.5	45.5	14	16	8.5	M8	M8				
63	65	7.5	50	15	16	8.5	M8	M10				
80	72	8	56	16	20	10.5	M10	M10				
100	86.5	10	66.5	19	24	12.5	M12	M10				
125	103	11	81	20	24	12.5	M12	M10				

Case/Symbol	M	N	O	P	S	T	U	V	W
12	18.5	7	M5	1	29	18	1.5	6	5
16	18.5	7	M5	1	29	18	1.5	8	8
20	18.5	7	M5	1.5	36	22	2	10	8
25	18.5	7	M5	1.5	40	26	2	10	8
32	21.5	8	PT1/8"	2	50	32	2.6	12	10
40	21.5	8	PT1/8"	2.5	60	42	2.6	12	10
50	22	8	PT1/8"	3	68	50	3.3	16	13
63	24.5	8	PT1/8"	4	87	62	3.3	16	13
80	27.5	8.5	PT1/8"	4	107	82	4.7	20	17
100	32.5	10.5	PT1/4"	5	128	103	6.1	25	22
125	32.5	10.5	PT1/4"	-	134	110	6.1	25	22

ADVUJ Dimensions

■ $\Phi 12 \sim \Phi 125$



Row/Column	A	B	C	D	E	F	G	H	I	J	K	L	M
12	63.5	4.5	38	11.5	8	3.3	M3	M4	M5				
16	67.5	4.5	38	11.5	10	4.5	M4	M4	M8				
20	69.5	4.5	38	11.5	12	5.5	M5	M5	M5	M5			
25	72	5.5	39.5	11.5	12	5.5	M5	M5	M5	M5			
12	77.5	6	44.5	14	14	6.5	M6	M6	M6	M6			
40	79	6.5	45.5	14	14	6.5	M6	M6	M6	M6			
50	81	7.5	45.5	14	16	8.5	M8	M8	M8	M8			
63	85.5	7.5	50	15	16	8.5	M8	M8	M10	M10			
80	95	8	56	16	20	10.5	M10	M10	M10	M10			
100	115.5	10	66.5	19	24	12.5	M12	M12	M10	M10			
125	131	11	81	20	24	12.5	M12	M10	M10	M10			

Row/Symbol	N	O	R	S	T	U	V	W	Z
12	7	MS	1	29	18	1.5	6	5	19
16	7	M5	1	29	18	1.5	8	6	19
20	7	M5	1.5	36	22	2	10	8	21
25	7	M5	1.5	40	26	2	10	8	21
32	8	PT1/8"	2	50	32	2.6	12	10	21
40	8	PT1/8"	2.5	60	42	2.6	12	10	21
50	8	PT1/8"	3	68	50	3.3	16	13	21
63	8	PT1/8"	4	87	62	3.3	16	13	21
80	8.5	PT1/8"	4	107	82	4.7	20	17	23
100	10.5	PT1/4"	5	128	103	6.1	25	22	29

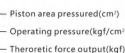


■ Symbol:



■ Theroretic force output fomulate:

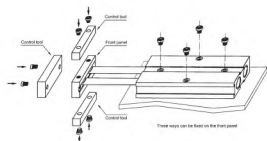
$$F = 2 \times P \times A$$



■ **Product feature:**

1. Double piston rods make good anti-bend and torsion, warrant its life and preeminent guiding performance.
2. Assemble the groove in advance, make it easier when assemble, set and adjust sensor switch.
3. No need parts and save the space.
4. Has simple design and easy maintenance and disassembly.

■ Mounting type:



■ **Specification:**

Type	10	16	20	25	32
Motion			Double acting		
Fluid			Compressed air		
Working pressure range (MPa)			0.1-1		
Variant: endure-pressure (MPa)			1		
Ambient temperature range (°C)			-5-60		
Speed range (mm/s)			100-500		
Stroke adjustable (mm)			-10-0		
Cushion			Bumper		
Port size			M5×0.8		
					1/8"

■ **How to order:**

The diagram shows a shaft-housing assembly. The shaft is labeled with 'TN' and '20 x 50 S'. The housing is labeled with 'S'. The shaft has a 'Bore' section with diameters: $\Phi 10$, $\Phi 16$, $\Phi 20$, $\Phi 25$, and $\Phi 32$. The shaft has a 'Stroke' section. The housing has a 'Magnet' section. The 'Specification' is 'TN: Double Shaft Cylinder'. The 'Magnet code' is 'S1 with magnet + 1pc: magnet switch', 'S2 with magnet + 2pc: magnet switch', 'S3 heat resisting seal ring, max temp 150°C', and 'S4 acid resisting piston rod'.

Specification

TN: Double Shaft Cylinder

Magnet code

- S1 with magnet + 1pc: magnet switch
- S2 with magnet + 2pc: magnet switch
- S3 heat resisting seal ring, max temp 150°C
- S4 acid resisting piston rod

Bore

- $\Phi 10$
- $\Phi 16$
- $\Phi 20$
- $\Phi 25$
- $\Phi 32$

Stroke

■ **Stroke:**

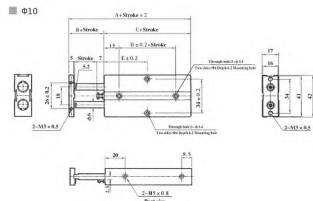
Bore(mm)	Standard Stroke														Max. Stroke	Stroke Length
16	10	20	30	40	50	60	70								70	100
10	10	20	30	40	50	60	70	80	90	100	125	150			150	200
20	10	20	30	40	50	60	70	80	90	100	125	150			150	200
25	10	20	30	40	50	60	70	80	90	100	125	150			150	200
32	10	20	30	40	50	60	70	80	90	100	125	150			150	200

■ Theroretic force output fig:

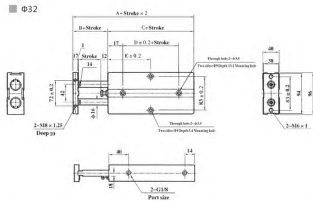
Baromet.	Piston rod dia (mm)	Acting type	Compound unit	Air pressure (kg/cm ²)							
				1	2	3	4	5	6	7	
10	6	Double acting	Hydraulic	1.57	-	3.14	4.70	6.28	7.84	9.42	10.99
16	8	Double acting	Hydraulic	4.02	4.02	8.04	12.06	16.08	20.10	24.12	28.14
		Double acting	Hydraulic	3.01	3.01	6.02	9.03	12.04	15.05	18.06	21.07
20	10	Double acting	Hydraulic	6.28	6.28	12.56	18.84	25.12	31.40	37.68	43.96
		Double acting	Hydraulic	4.71	4.71	9.42	14.13	18.84	23.55	28.26	32.97
25	12	Double acting	Hydraulic	9.81	9.81	19.62	29.43	39.24	49.05	58.86	68.67
		Double acting	Hydraulic	7.55	7.55	15.10	22.65	30.20	37.75	45.30	52.85
32	16	Double acting	Hydraulic	16.07	16.07	32.14	48.21	64.28	80.35	96.42	112.49
		Double acting	Hydraulic	12.05	12.05	24.10	36.15	48.20	60.25	72.30	84.35

Double Shaft Cylinder

■ Dimension(mm):

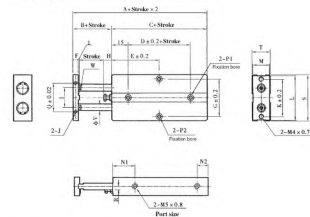


Symbol	A	B	C	D	E						
Base/Symbol					10	20	30	40	50	60	70
10	58	12	46	10	30	30	35	40	45	50	55



Symbol	A	B	C	D	E											
Bar/Symbol					10	20	30	40	50	60	70	80	90	100	125	15
32	108	30	78	35	45	50	55	60	65	70	75	80	85	90	102.5	11

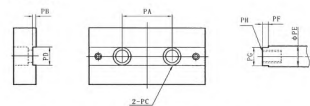
■ $\Phi 16 \sim \Phi 25$



Symbol	A	B	C	E												F	G	H
Base/Symbol				10	20	30	40	50	60	70	80	90	100	125	150			
16	68	15	53	20	30	35	40	45	50	60	65	70	75	87.5	100	8	47	6
20	78	20	58	20	35	35	40	45	50	60	65	70	75	87.5	100	10	55	9
25	81	19	62	30	35	40	45	50	55	60	65	70	75	87.5	100	10	66	8
Base/Symbol	J	K	L	M	N1	N2	P1	P2	Q	R	S	T	U	V				
16	M4=73gmm	47	53	20	22	11	Double Expansion Gauss M3	Double Expansion Gauss M3	34	4	54	21	8					
20	M4=73gmm	55	61	24	25	12	Double Expansion Gauss M3	Double Expansion Gauss M3	46	6	62	25	10					
25	M4=73gmm	66	72	29	29	12	Double Expansion Gauss M3	Double Expansion Gauss M3	56	7	73	30	12	1				

Front board dimension

■ Φ10~Φ32



Boze/Symbol	PA	PR	PC	PD	PE	PF	PG	PH
16	18	0.7	Double: 96.2dipr3.5m; Clearance: 04.5	5.2	6	3	5.2	M3+0.5depth3.5m
10	24	1	Double: 87.8dipr4.6m; Clearance: 04.5	6.2	8	3	6.2	M4+0.7depth3.5m
20	28	1	Double: 81.1dipr6.8m; Clearance: 04.5	8.2	10	3	8.2	M6+1.0depth3.5m
25	34	1	Double: 81.1dipr6.8m; Clearance: 04.5	10.2	12	3	10.2	M6+1.0depth3.5m
32	42	2	Double: 81.1dipr12m; Clearance: 04.5	14	16	3	14	M8+1.25depth3.5m



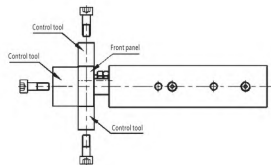
Symbol:



Product feature:

1. Embedded type body installs fixed forms to save installation space.
2. With a certain bending and torsion resistance, it can bear a certain side load.
3. The three sides of the fixed plate all install holes to help multiposition loading conveniently.
4. The front fenders can adjust cylinders' stroke and ease the impact.
5. The standard configuration for cylinder is with magnet attached. Without magnet is not optional.

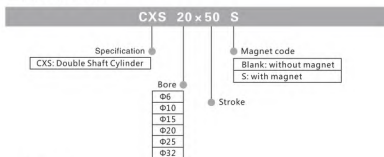
Mounting type



Specification:

Type	6	10	15	20	25	32
Motion	Double acting					
Fluid	Compressed air					
Working Pressure (MPa)	0.1~1					
Variant endure pressure (MPa)	1					
Ambient temperature range(°C)	-5~60					
Speed range (mm/s)	100~500					
Stroke adjustable (mm)	-10~0					
Cushion	Bumper					
Port size	M5×0.8			1/8"		

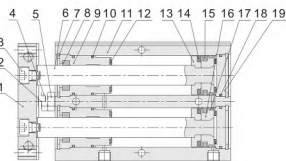
How to order:



Stroke:

Bore(mm)	6	10	20	30	40	50	60	70	80	90	100	125	150	175	200
Standard Stroke	6	10	20	30	40	50	60	70	80	90	100	125	150	175	200
Max. Stroke	50	100	200	200	200	200	200	200	200	200	200	200	200	200	200

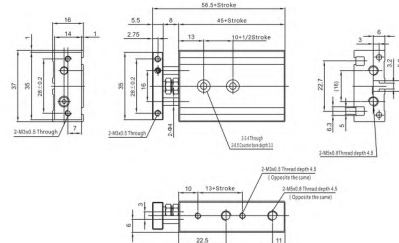
Inner structure drawing:



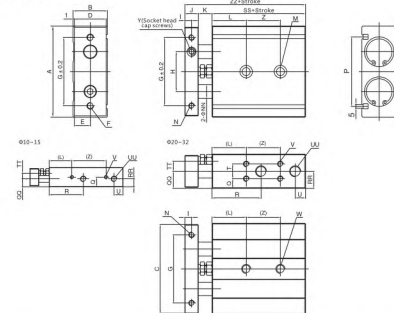
Number	Name	Number	Name	Number	Name
1	Fixed plate	8	Outport sealing ring	15	Sealing ring
2	Fenders	9	Front cover	16	Piston
3	Hexagon socket cap screws	10	O-ring	17	Wear-resistant belt
4	Adjustable bolt	11	Cylinder barrel	18	O-ring
5	Hexagonal nut	12	Anti-collision gasket	19	Rear cover
6	Piston rod	13	Magnet seat		
7	Circlip for hole	14	Magnet		

Dimension (mm):

Φ6



Φ10~Φ32



Back	Stroke	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T
10	40	17	44	15	15	14	14	15	15	15	15	15	15	15	15	15	15	15	15	15	15
15	50	20	56	18	9	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16
20	64	25	62	23	11.5	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16
25	80	30	78	28	14	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16
32	96	38	96	36	18	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16



■ Symbol:

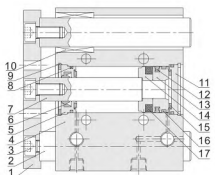


■ Product feature:



1. Execute JIS standard.
2. Two guide rods made of special bearing steel are guiding through linear bearing or bronze bearing with high torsion and lateral loading resistance.
3. The driver element and guiding element are in the same body with no extra accessory, smallest need of space, input port optional and more convenient installation.
4. The bottom and rear of the body and fixed plate are all equipped with two accurate dowel holes to supply higher accuracy of positioning installation in a place of requirement on accuracy.
5. Four magnetic inductive switch grooves are on the body to supply various installation ways for inductive switch.
6. Special design on the body supply multidirectional installation of fixed type.

■ Inner structure drawing:

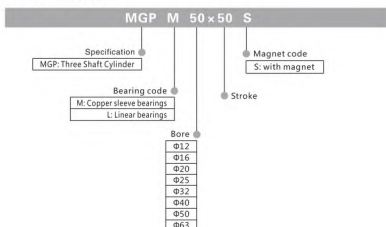


Number	Name	Number	Name
1	Fixed plate	10	Linear bearings/Copper sleeve bearings
2	Guide rod	11	Rear cover
3	Hexagor socket cap screws	12	Sealing ring
4	Cylinder barrel	13	Piston
5	Front cover	14	Magnet seat
6	Dustproof sealing ring	15	Fenders
7	Piston rod	16	Wear-resistant belt
8	O-ring	17	Magnet
9	Retaining ring for hole		

■ **Specification:**

Type	12	16	20	25	32	40	50	63
Motion	Double acting							
Fluid	Compressed air							
Working Pressure (MPa)	0.1~1							
Warrant endure-pressure (MPa)	1.5							
Ambient temperature range (°C)	-20~70							
Speed range (mm/s)	30~500							
Cushion	Bumper							
Port size	M5×0.8			1/8"			1/4"	

■ **How to order:**



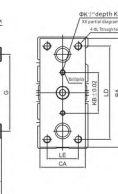
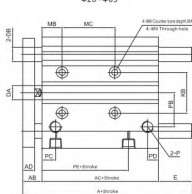
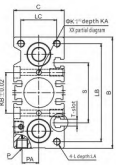
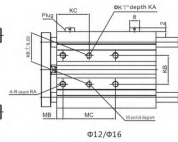
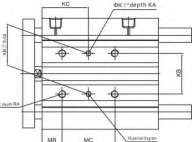
■ Dimension(mm):



XX partial diagram



T-slot partial view

[illegible]



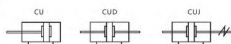
■ Specification:

Type	6	10	16	20	25	32
Motion	Double acting					
Series	CU, CUD, CUJ					
Fluid	Compressed air					
Working Pressure (MPa)	0.1~1					
Speed range (mm/s)	50~800					
Ambient temperature range (°C)	-20~80					
Cushion	Bumper					
Port size	M5×0.8					
	1/8"					

■ How to order:

CU 32 x 30 S	
Specification	Magnet code
CU Multi-positional Fixed Cylinder	Blank: without magnet
CUD Double-rod Multi-positional Fixed Cylinder	S: with magnet
CUJ Double-rod adjustable Multi-positional Fixed Cylinder	
Bore	Stroke
Φ6	
Φ10	
Φ16	
Φ20	
Φ25	
Φ32	

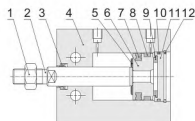
■ Symbol:



■ Product feature:

1. The body with various fixed types is easy for installation and using.
2. Varieties of cylinders can be fixed together to save the installation space.
3. The piston rod has high guiding precision and no need of extra lubricant.
4. Various standard cylinders are optional for customers.
5. Choosing high temperature resistant seal materials to ensure cylinders can work normally under the temperature of 150°C.

■ Inner structure drawing:

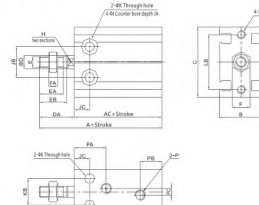


Number	Name	Number	Name
1	Hexagonal nut	7	C-ring
2	Piston rod	8	Wear-resistant belt
3	Supporting ring	9	Fenders
4	Cylinder barrel	10	O-ring
5	Fenders	11	Rear cover
6	Piston	12	Circuip for hole

■ Dimension(mm):

CU Standard Dimension

■ Φ6~Φ32

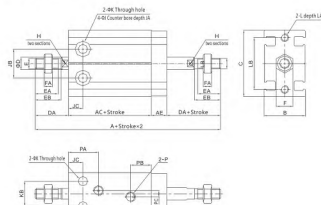


Bore/Symbol	Min-stroke	Stroke	Max-stroke	Min-stroke	B	C	D	DA	E	LA	LB	F
6	46	46	33	33	16.5	22	3	13	M3×0.5	7	8	5.5
10	52	52	36	36	16.5	24	4	16	M4×0.7	10	11	7
16	56	56	30	40	20	32	6	16	M5×0.8	11	12.5	8
20	55	65	36	46	26	40	8	19	M6×1.0	12	14	10
25	63	73	40	50	32	50	10	23	M8×1.25	15.5	18	12
32	69	79	42	52	40	62	12	27	M10×1.25	19.5	22	17

Bore/Symbol	PA	H	J	JA	JB	JC	K	X	KB	L	LA	LB	P	PA	PB	PC
6	2.5	-	6	5	10	7	3.3	7	M3×0.5	5	17	M5×0.8	14	10	-	-
10	2	-	6	5.5	11	7	3.3	9	M3×0.5	5	18	M5×0.8	15.5	10	-	-
16	4	5	7.5	6.5	14	7	4.5	12	M4×0.7	5	25	M5×0.8	14.5	10	3	-
20	5	6	8.5	8	16	9	5.5	16	M5×0.8	7.5	30	M5×0.8	19	11	9	-
25	6	8	9.5	9	20	10	5.5	20	M5×0.8	8	38	M5×0.8	21.5	8.5	12	-
32	6	10	11	11.5	24	11	6.5	24	M6×1.0	9	48	PT1/8"	23	12.5	13	-

CUD Standard Dimension

■ Φ6~Φ32

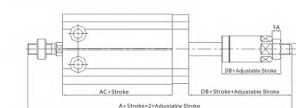


Bore/Symbol	Min-stroke	Stroke	Max-stroke	Min-stroke	AE	B	C	D	DA	E	LA	LB	F
6	70	70	38	38	6	16.5	22	3	13	M3×0.5	7	8	5.5
10	74	74	36	36	6	16.5	24	4	16	M4×0.7	10	11	7
16	69.5	79.5	30	40	7.5	20	32	6	16	M5×0.8	11	12.5	8
20	83	93	36	46	9	26	40	8	19	M6×1.0	12	14	10
25	95	105	40	50	10	32	50	10	23	M8×1.25	15.5	18	12
32	106	116	42	52	10	40	62	12	27	M10×1.25	19.5	22	17

Bore/Symbol	PA	H	J	JA	JB	JC	K	KB	L	LA	LB	P	PA	PB	PC
6	2.5	-	6	5	10	7	3.3	7	M3×0.5	5	17	M5×0.8	14	10	-
10	2	-	6	5.5	11	7	3.3	9	M3×0.5	5	18	M5×0.8	15.5	10	-
16	4	5	7.5	6.5	14	7	4.5	12	M4×0.7	5	25	M5×0.8	14.5	10	3
20	5	6	8.5	8	16	9	5.5	16	M5×0.8	7.5	30	M5×0.8	19	11	9
25	6	8	9.5	9	20	10	5.5	20	M5×0.8	8	38	M5×0.8	21.5	8.5	12
32	6	10	11	11.5	24	11	6.5	24	M6×1.0	9	48	PT1/8"	23	12.5	13

CUJ Standard Dimension

■ Φ6~Φ32

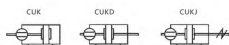


Bore/Symbol	Min-stroke	Stroke	Max-stroke	Min-stroke	DA	EA
6	70	70	38	38	11	M3×0.5
10	73	73	36	36	15	M4×0.7
16	70.5	80.5	30	40	17	M5×0.8
20	85	95	36	46	21	M6×1.0
25	97	107	40	50	25	M8×1.25
32	106	116	42	52	27	M10×1.25

Note: Unspecified dimensions are the same as standard.



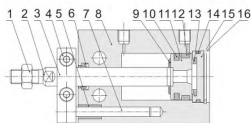
■ Symbol:



■ **Product feature:**

1. The body with various fixed types is easy for installation and using.
2. Varieties of cylinders can be fixed together to save the installation space.
3. The piston rod has high guiding precision and no need of extra lubricant.
4. The fixed block of piston rod is equipped to prevent piston rod from rotation.
5. Various standard cylinders are optional for customers.
6. Choosing high temperature resistant seal materials to ensure cylinders can work normally under the temperature of 150°C.

■ Inner structure drawing:



Number	Name	Number	Name
1	Hexagonal nut	9	Fixed plate
2	Piston rod	10	Sealing ring
3	Fixed plate	11	Piston
4	Hexagon socket cap screws	12	Wearing ring
5	Axle sleeve	13	Fixed plate
6	Dustproof sealing ring	14	O-ring
7	Guide rod	15	Rear cover
8	Cylinder barrel	16	Circclip for hole

■ **Specification:**

Type	6	10	16	20	25	32
Motion				Double acting		
Series			CUK, CUKD, CUKJ			
Fluid			Compressed air			
Working Pressure (MPa)			0.1~1			
Speed range (mm/s)			50~800			
Ambient temperature range (°C)			-20~80			
Cushion			Bumper			
Port size			M5×0.8			1/8"

■ **How to order:**

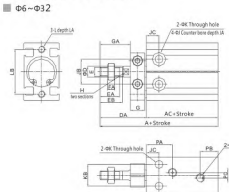
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CUK Series Cylinder

Multi-positional Fixed Cylinder

■ Dimension(mm):

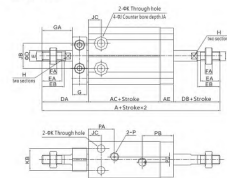
CUK Standard Dimension

[illegible]

Size/Symbol	P	PA	PB	PC
6	M5×0.8	14	10	-
10	M5×0.8	15.5	10	-
16	M5×0.8	14.5	10	3
20	M5×0.8	19	11	9
25	M5×0.8	21.5	8.5	12
32	PT3/8"	23	12.5	13

CUKD Standard Dimension

■ Φ6~Φ32

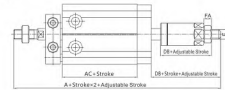


Series Symbol	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	AA	AB	AC	AD	AE	AF	AG	AH	AI	AJ	AK	AL	AM	AN	AO	AP	AQ	AR	AS	AT	AU	AV	AW	AX	AY	AZ	BA	BB	BC	BD	BE	BF	BG	BH	BI	BJ	BK	BL	BM	BN	BO	BP	BQ	BR	BS	BT	BU	BV	BW	BX	BY	BZ	CA	CB	CC	CD	CE	CF	CG	CH	CI	CJ	CK	CL	CM	CN	CO	CP	CQ	CR	CS	CT	CU	CV	CW	CX	CY	CZ	DA	DB	DC	DD	DE	DF	DG	DH	DI	DJ	DK	DL	DM	DN	DO	DP	DQ	DR	DS	DT	DU	DV	DW	DX	DY	DZ	EA	EB	EC	ED	EE	EF	EG	EH	EI	EJ	EK	EL	EM	EN	EO	EP	EQ	ER	ES	ET	EU	EV	EW	EX	EY	EZ	FA	FB	FC	FD	FE	FF	FG	FH	FI	FJ	FK	FL	FM	FN	FO	FP	FQ	FR	FS	FT	FU	FV	FW	FX	FY	FZ	GA	GB	GC	GD	GE	GF	GG	GH	GI	GJ	GK	GL	GM	GN	GO	GP	GQ	GR	GS	GT	GU	GV	GW	GX	GY	GZ	HA	HB	HC	HD	HE	HF	HG	HH	HI	HJ	HK	HL	HM	HN	HO	HP	HQ	HR	HS	HT	HU	HV	HW	HX	HY	HZ	IA	IB	IC	ID	IE	IF	IG	IH	II	IJ	IK	IL	IM	IN	IO	IP	IQ	IR	IS	IT	IU	IV	IW	IX	IY	IZ	JA	JB	JC	JD	JE	JF	JG	JH	JI	IJ	JK	KL	KM	KN	KO	KP	KQ	KR	KS	KT	KU	KV	KW	KX	KY	KZ	LA	LB	LC	LD	LE	LF	LG	LH	LI	LJ	LK	LL	LM	LN	LO	LP	LQ	LR	LS	LT	LU	LV	LW	LX	LY	LZ	MA	MB	MC	MD	ME	MF	MG	MH	MI	MI	MJ	MK	ML	MM	MN	MO	MP	MQ	MR	MS	MT	MU	MV	MW	MX	MY	MZ	NA	NB	NC	ND	NE	NF	NG	NH	NI	NJ	NK	NL	NM	NN	NO	NP	NQ	NR	NS	NT	NU	NV	NW	NX	NY	NZ	OA	OB	OC	OD	OE	OF	OG	OH	OI	OJ	OK	OL	OM	ON	OO	OP	OQ	OR	OS	OT	OU	OV	OW	OX	OY	OZ	PA	PB	PC	PD	PE	PF	PG	PH	PI	PJ	PK	PL	PM	PN	PO	PP	PQ	PR	PS	PT	PU	PV	PW	PX	PY	PZ	QA	QB	QC	QD	QE	QF	QG	QH	QI	QJ	QK	QL	QM	QN	QO	QP	QQ	QR	QS	QT	QU	QV	QW	QX	QY	QZ	RA	RB	RC	RD	RE	RF	RG	RH	RI	RJ	RK	RL	RM	RN	RO	RP	RQ	RR	RS	RT	RU	RV	RW	RX	RY	RZ	SA	SB	SC	SD	SE	SF	SG	SH	SI	SJ	SK	SL	SM	SN	SO	SP	SQ	SR	SS	ST	SU	SV	SW	SX	SY	SZ	TA	TB	TC	TD	TE	TF	TG	TH	TI	TJ	TK	TL	TM	TN	TO	TP	TQ	TR	TS	TT	TU	TV	TW	TX	TY	TZ	UA	UB	UC	UD	UE	UF	UG	UH	UI	UJ	UK	UL	UM	UN	UO	UP	UQ	UR	US	UT	UU	UV	UW	UX	UY	UZ	VA	VB	VC	VD	VE	VF	VG	VH	VI	VJ	VK	VL	VM	VN	VO	VP	VQ	VR	VS	VT	VU	VV	VW	VX	VY	VZ	WA	WB	WC	WD	WE	WF	WG	WH	WI	WJ	WK	WL	WM	WN	WO	WP	WQ	WR	WS	WT	WU	WV	WW	WX	WY	WZ	XA	XB	XC	XD	XE	XF	XG	XH	XI	XJ	XK	XL	XM	XN	XO	XP	XQ	XR	XS	XT	XU	XV	XW	XX	XY	XZ	YA	YB	YC	YD	YE	YF	YG	YH	YI	YJ	YK	YL	YM	YN	YO	YP	YQ	YR	YS	YT	YU	YV	YW	YX	YY	YZ	ZA	ZB	ZC	ZD	ZE	ZF	ZG	ZH	ZI	ZJ	ZK	ZL	ZM	ZN	ZO	ZP	ZQ	ZR	ZS	ZT	ZU	ZV	ZW	ZX	ZY	ZZ	AA
6	75	75	38	38	6	165	22	3	18	13																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																												

Score/Symbol	P	PA	PB	PC
6	M5+0.8	14	16	-
10	M5+0.8	15.5	16	-
16	M5+0.8	14.5	17.5	3
20	M5+0.8	19	20	9
25	M5+0.8	21.5	17.5	12
32	PT1/8"	23	22.5	13

CUKJ Standard Dimension

■ Φ6~Φ32



Score/Symbol	AIW/acc/score	AIW/bw/score	AIW/bw/score	AIW/bw/score	DB	E	FA
6	75	75	38	38	13	M3+0.5	2.5
10	78	78	36	36	14.7	M4+0.7	2
16	80.5	90.5	30	40	17	M5+0.8	4
20	95	105	36	46	21	M6+1.0	5
25	107	117	40	50	25	M8+1.25	6
32	121	131	42	52	27	M10+1.25	6

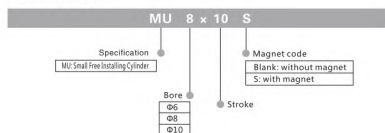
Note: The unspecified dimension is the same as double shaft type



■ Specification:

Type	6	8	10
Motion	Double acting		
Series	MU		
Fluid	Compressed air		
Working Pressure (MPa)	0.1~1		
Speed range (mm/s)	50~800		
Ambient temperature (°C)	-20~80		
Cushion	-		
Port size	M3×0.5		

■ How to order:



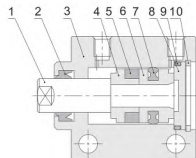
■ Symbol:



■ Product feature:

1. Execute JIS standard.
2. Body can be fixed from four directions and is easy for installation and using.
3. Varieties of cylinders can be fixed together to save the installation space.
4. The front of the cylinder with guiding convex platform is accurate and reliable for locating.
5. After inner diameter's finishing machining, the cylinder body is hard oxidation treated with good wear durability.
6. Magnet is optional with position sensor function.
7. Inductive switch grooves are on the body to install inductive switches conveniently and flexibly.
8. The piston seal adopts special two-way sealing structure with compact size and oil storing function.

■ Inner structure drawing:

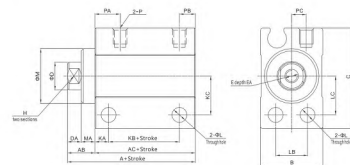


Number	Name
1	Piston rod
2	Sealing ring
3	Cylinder barrel
4	Magnet seat
5	Magnet
6	Piston
7	Sealing element
8	Rear cover
9	O-ring
10	Clip for hole

■ Dimension(mm):

MU Standard Dimension

■ Φ6~Φ10

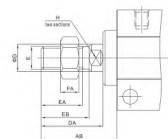


Score/Symbol	Stroke	Stroke type	AB	EWtype	EWtype	B	C	D	DA	S	EA	H
6	24	19	18	13	13	19	4	3	M2.5×0.45	5	3.5	
8	24	19	18	13	13	21	5	3	M3×0.5	6	4.5	
10	24	19	18	13	13.5	22	6	3	M3×0.5	6	5	

Score/Symbol	K	KA	BBtype	EWtype	KC	L	LB	LC	M	K	P	PA	PB	PC
6	3.3	3	11.5	6.5	7	3.3	7	7	9	3	M3×0.5	5.5	3.5	3
8	3.3	3	11.5	6.5	8	3.3	7	8	11	3	M3×0.5	5.5	3.5	3
10	3.3	3	11.5	6.5	8.5	3.3	7	8.5	12	3	M3×0.5	5.5	3.5	3.5

MU-B

■ Φ6~Φ10



Series/Type	AB	DA	FA	EA	LA	PA	PB	PC	PD	PE	PF	PG	PH	PI	PJ	PK	PL	PM	PN	PO	PP	PQ	PR	PS	PT	PU	PV	PW	PX	PY	PZ
6	12.5	4	9.5	M3×0.5	5.5	6.5	2.4	3.5																							
8	14.5	5	11.5	M4×0.7	7	8.5	3	4.5																							
10	16.5	6	13.5	M5×0.8	9	10.5	4	5																							

Note: The unspecified dimension is the same as internal thread type.



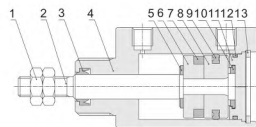
■ Symbol:



■ **Product feature:**

1. With compact structure, small size and light weight it can save the space.
2. Varieties of cylinders can be fixed together to save the installation space.
3. Various standard cylinders and installing accessories are optional for customers with flexible installation.
4. Magnet is optional with position sensor function.
5. Inductive switch grooves are on the body to install inductive switches conveniently and flexibly.
6. Various standard bores are optional for customers.

■ Inner structure drawing:



■ **Specification:**

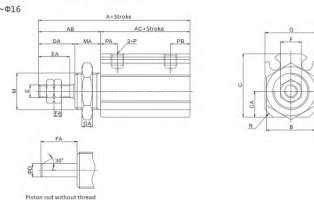
Type	6	8	10	12	16
Motion	Double acting				
Series	MPG				
Fluid	Compressed air				
Working Pressure (MPa)	0.1~1				
Speed range (mm/s)	30~500				
Ambient temperature range (°C)	-20~80				
Cushion	Bumper				
Port size	M3×0.5		M5×0.8		

■ **How to order:**

Figure 1 illustrates the dimensions and specifications of the MPC and MPGH. The main dimensions are 10 x 30 mm. The diagram includes labels for Specification (MPC Standard Panel Type Cylinder, MPGH Hinge Mounted Cylinder), Magnet code (Blank: without magnet, S: with magnet), Bore (Ø6, Ø8, Ø10, Ø12, Ø16), and Stroke.

■ Dimension(mm):

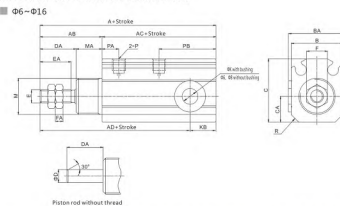
MPG/MPG-S Standard Dimension



Zone/Symbol	SPR (mm)	CRS (mm)	AB	CRS (mm)	B	C	CA	D	DA	F	FA
6	38	33	17	21	16	14	16.5	6	3	9	M3+0.5
8	43	38	20	23	18	14.5	17.5	7	4	12	M4+0.7
10	44.5	39.5	20	24.5	19.5	15	19	7	4	12	M4+0.7
12	48.5	43.5	24	24.5	19.5	17	21.5	8.5	6	14	M5+0.8
16	48.5	43.5	24	24.5	19.5	20	24.5	10	6	14	M5+0.8

Score/Symbol	F	FA	G	GA	M	MA	P	PA	PB	R
6	5.5	2.4	13	3	M10>1.0	8	M3+0.5	5.5	6.5	2
8	7	2.2	17	3	M12>1.0	8	M3+0.5	6	7	2
10	7	2.2	17	3	M12>1.0	8	M3+0.5	6	7	2.5
12	8	3	19	4	M14>1.0	10	M5+0.8	6.5	7.5	2.5
16	8	3	19	4	M14>1.0	10	M5+0.8	6.5	7.5	3

MPGH/MPGH-S Standard Dimension



Id	Symbol	CR	CRtype	AB	CRtype	CRtype	CRtype	B	BA	C	CA	D	DA
6	43	38	17	26	21	39	34	14	-	16.5	6	3	9
8	51	46	20	31	26	46	41	14.5	-	17.5	7	4	12
10	55.5	50.5	20	35.5	30.5	49	44	15	17	19	7	4	12
12	63	58	24	39	34	53	48	17	19	21.5	8.5	6	14
16	63	58	24	39	34	53	48	20	23	24.5	8	6	14

Score/Symbol	E	EA	F	FA	K	KB	M	MA	P	PA	PB	R
6	M3+0.5	7	5.5	2.4	3 ^{0.005}	4	M10+1.0	8	M3+0.5	5.5	11.5	2.0
8	M4+0.7	10	7	2.2	4 ^{0.005}	5	M12+1.0	8	M3+0.5	6	15	2.0
10	M4+0.7	10	7	2.2	5 ^{0.005}	6.5	M12+1.0	8	M3+0.5	6	18	2.0
12	M5+0.8	12	8	3	6 ^{0.005}	10	M14+1.0	10	M5+0.8	6.5	22	2.0
16	M5+0.8	12	8	3	6 ^{0.005}	10	M14+1.0	10	M5+0.8	6.5	22	2.0



■ Specification:

Type	4	6	10	12	16
Motion	Double acting				
Series	PB, PBD, PBJ				
Fluid	Compressed air				
Working Pressure (MPa)	0.1~1				
Speed range (mm/s)	50~800				
Ambient temperature (°C)	-20~80				
Cushion	Bumper				
Port size	Pipe connection type M5×0.8				

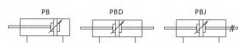
■ How to order:

PB 10 × 30 S

Specification	Magnet code
PB Pen Type Cylinder	Blank: without magnet
PBD Double and Pen Type Cylinder	S: with magnet
PBJ Double and adjustable Pen Type Cylinder	

Bore	Stroke
Φ4	
Φ6	
Φ10	
Φ12	
Φ16	

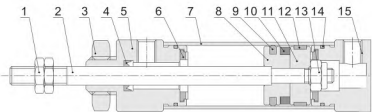
■ Symbol:



■ Product feature:

- Execute JIS standard.
- It's belong to miniature small cylinder with compact structure, small size and light weight.
- The piston rod has high guiding precision and the guiding bearing has no need of extra lubricant.
- PB4 and PB6 can only have the front cover installation while PB10, PB12 and PB16 can be installed either in the front or rear covers.
- Stainless steel piston rod and cylinder body help cylinder adapt to general corrosive working environment.
- Various standard cylinders and installing accessories are optional for customers.
- Small bore and rapid response can help it adapt to high frequency work environment.

■ Inner structure drawing:

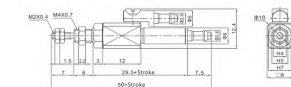


Number	Name	Number	Name
1	Hexagonal nut	9	Sealing ring
2	Piston rod	10	Magnet
3	Hexagonal nut	11	Wearing ring beat
4	Sealing ring	12	Wearing ring
5	Front cover	13	Hexagonal nut
6	Fenders	14	O-ring
7	Cylinder barrel	15	Rear cover
8	Piston		

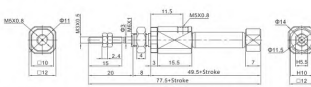
■ Dimension(mm):

PB Standard Dimension

■ Φ4(Whit magnet)(R type)



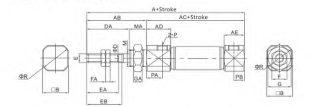
■ Φ6(R type)



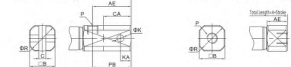
Note: The rear cover of Φ4, Φ6 bore only have axial inlet type (R type)

■ Φ10~Φ16

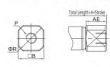
U type(Radial intake type)



CR type(Double ear type)



R type(have axial inlet type)



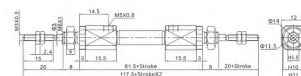
Bore/Symbol	A	AB	AC	AD	B	D	DA	D8	E
Rear Cover	F	FA	GA	K	KA	M	MA	P	PA
Front cover	U	UA	UB	UC					
10	74	87	74	28	46	11.5	9.5	22.5	13
12	74	92	74	28	46	11.5	9.5	22.5	13
16	74	92	74	28	46	11.5	9.5	22.5	13

Bore/Symbol	F	FA	G	GA	K	KA	M	MA	P	PA	U	UA	UB	UC	
Rear cover															
10	7	2.2	11	4	3.3	5	M8×1	8	M5×0.8	7.5	5	18	14		
12	8	4	14	4	5	8	M10×1	8	M5×0.8	7.5	5	23	17		
16	8	4	14	4	5	8	M10×1	8	M5×0.8	7.5	5	23	20		

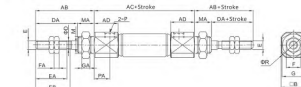
Notes: With or without magnet, the dimensions are the same.

PBD Standard Dimension

■ Φ6

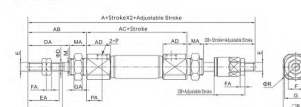


■ Φ10~Φ16



PBJ Standard Dimension

■ Φ10~Φ16



Bore/Symbol	A	AB	AC	AD	B	D	DA	D8	E
Rear Cover	F	FA	GA	K	KA	M	MA	P	PA
Front cover	U	UA	UB	UC					
10	74	87	74	28	46	11.5	9.5	22.5	13
12	74	92	74	28	46	11.5	9.5	22.5	13
16	74	92	74	28	46	11.5	9.5	22.5	13

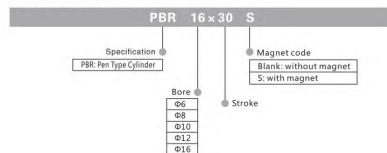
Notes: With or without magnet, the dimensions are the same.



■ Specification:

Type	6	8	10	12	16
Motion	Double acting				
Series	PBR				
Fluid	Compressed air				
Pressure range (Kg/cm ²)	0.1~0.7				
Speed range (mm/s)	50~500				
Ambient temperature range(°C)	-20~80				
Cushion type	Bumper				
Port size	M5×0.8				

■ How to order:



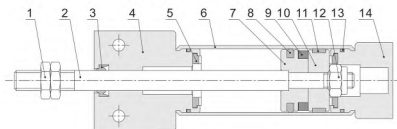
■ Symbol:



■ Product feature:

1. Execute JIS standard.
2. It's belong to miniature small cylinder with compact structure, small size and light weight.
3. The piston rod has high guiding precision and the guiding bearing has no need of extra lubricant.
4. Stainless steel piston rod and cylinder body help cylinder adapt to general corrosive working environment.
5. Small bore and rapid response can help it adapt to high frequency work environment.

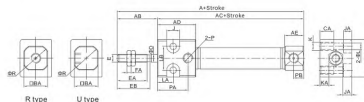
■ Inner structure drawing:



Number	Name	Number	Name
1	Hexagonal nut	8	Sealing ring
2	Piston rod	9	Magnet
3	Sealing ring	10	Wearing ring beat
4	Front cover	11	Wearing ring
5	Fenders	12	Hexagonal nut
6	Cylinder barrel	13	O-ring
7	Piston	14	Rear cover

■ Dimension(mm):

PBR Standard Dimension

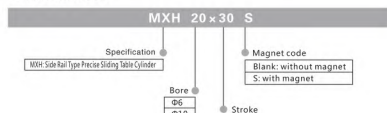
■ $\Phi 6-\Phi 16$ 

Stroke(mm)	A	AB	AC	AD	AE	AF	AG	AH	AI	AK	AL	AM	AN	AO	AP	AQ	AR	AS	AT	AV	AW	AX	AY	AZ	BA	BB	BC	BD	BE	BF	BG	BH	BI	BJ	BK	BL	BM	BN	BO	BP	BQ	BR	BS	BT	BV	BW	BX	BY	BZ	CA	CB	CC	CD	CE	CF	CG	CH	CI	CJ	CK	CL	CM	CN	CO	CP	CQ	CR	CS	CT	CU	CV	CW	CX	CY	CZ	DA	DB	DC	DD	DE	DF	DG	DH	DI	DJ	DK	DL	DM	DN	DO	DP	DQ	DR	DS	DT	DV	DW	DX	DY	DZ	EA	EB	EC	ED	EE	EF	EG	EH	EI	EJ	EK	EL	EM	EN	EO	EP	EQ	ER	ES	ET	EV	EW	EX	EY	EZ	FA	FB	FC	FD	FE	FF	FG	FH	FI	FJ	FK	FL	FM	FN	FO	FP	FQ	FR	FS	FT	FV	FW	FX	FY	FZ	GA	GB	GC	GD	GE	GF	GG	GH	GI	GJ	GK	GL	GM	GN	GO	GP	GQ	GR	GS	GT	GV	GW	GX	GY	GZ	HA	HB	HC	HD	HE	HF	HG	HH	HI	HJ	HK	HL	HM	HN	HO	HP	HQ	HR	HS	HT	HV	HW	HX	HY	HZ	IA	IB	IC	ID	IE	IF	IG	IH	II	IJ	IK	IL	IM	IN	IO	IP	IQ	IR	IS	IT	IV	IW	IX	IY	IZ	JA	JB	JC	JD	JE	JF	JG	JH	JI	IJ	JK	KL	KM	KN	KO	KP	KQ	KR	KS	KT	KV	KW	KX	KY	KZ	LA	LB	LC	LD	LE	LF	LG	LH	LI	LJ	LK	LL	LM	LN	LO	LP	LQ	LR	LS	LT	LV	LW	LX	LY	LZ	MA	MB	MC	MD	ME	MF	MG	MH	MI	MJ	MK	ML	MM	MN	MO	MP	MQ	MR	MS	MT	MV	MW	MX	MY	MZ	NA	NB	NC	ND	NE	NF	NG	NH	NI	NJ	NK	NL	NM	NN	NO	NP	NQ	NR	NS	NT	NV	NW	NX	NY	NZ	OA	OB	OC	OD	OE	OF	OG	OH	OI	OJ	OK	OL	OM	ON	OO	OP	OQ	OR	OS	OT	OV	OW	OX	OY	OZ	PA	PB	PC	PD	PE	PF	PG	PH	PI	PJ	PK	PL	PM	PN	PO	PP	PQ	PR	PS	PT	PV	PW	PX	PY	PZ	QA	QB	QC	QD	QE	QF	QG	QH	QI	QJ	QK	QL	QM	QN	QO	QP	QQ	QR	QS	QT	QV	QW	QX	QY	QZ	RA	RB	RC	RD	RE	RF	RG	RH	RI	RJ	RK	RL	RM	RN	RO	RP	RQ	RR	RS	RT	RV	RW	RX	RY	RZ	SA	SB	SC	SD	SE	SF	SG	SH	SI	SJ	SK	SL	SM	SN	SO	SP	SQ	SR	SS	ST	SV	SW	SX	SY	SZ	TA	TB	TC	TD	TE	TF	TG	TH	TI	TJ	TK	TL	TM	TN	TO	TP	TQ	TR	TS	TT	TV	TW	TX	TY	TZ	UA	UB	UC	UD	UE	UF	UG	UH	UI	UJ	UK	UL	UM	UN	UO	UP	UQ	UR	US	UT	UV	UW	UX	UY	UZ	VA	VB	VC	VD	VE	VF	VG	VH	VI	VJ	VK	VL	VM	VN	VO	VP	VQ	VR	VS	VT	VV	VW	VX	VY	VZ	WA	WB	WC	WD	WE	WF	WG	WH	WI	WJ	WK	WL	WM	WN	WO	WP	WQ	WR	WS	WT	WV	WW	WX	WY	WZ	XA	XB	XC	XD	XE	XF	XG	XH	XI	XJ	XK	XL	XM	XN	XO	XP	XQ	XR	XS	XT	XV	XW	XX	XY	XZ	YA	YB	YC	YD	YE	YF	YG	YH	YI	YJ	YK	YL	YM	YN	YO	YP	YQ	YR	YS	YT	YV	YW	YX	YZ	ZA	ZB	ZC	ZD	ZE	ZF	ZG	ZH	ZI	ZJ	ZK	ZL	ZM	ZN	ZO	ZP	ZQ	ZR	ZS	ZT	ZV	ZW	ZX	ZY	ZZ
6	70	20	50	19	7	17.2	10	14	7	3	M3-0.5	15	16	5																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																		

Note: 1. With or without magnet, the dimensions are the same.
2. The rear cover of $\Phi 6$ bore only have axial inlet type (R type)

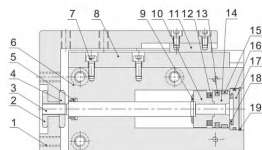

Specification:

Type	6	10	16	20
Guide rail width(mm)	5	7	9	12
Motion	Double acting			
Fluid	Compressed air			
Working Pressure (MPa)	6: 0.15~0.7; Other: 0.1~0.7			
Warrant endure-pressure (MPa)	1			
Ambient temperature range(°C)	-20~70			
Speed range(mm/s)	30~500			
Cushion type	Fixed bumper on both ends			
Port size	M5×0.8			

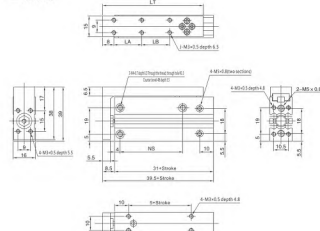
How to order:

Symbol:

Product feature:

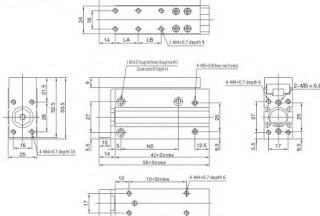
1. Miniature recirculating ball linear guideway and cylinder integration design.
2. It possesses great straightness and no-rotation precision to be more suitably used in precision assembly situation.
3. It can install fixed cylinders from four directions.
4. It can tube from three directions.

Inner structure drawing:


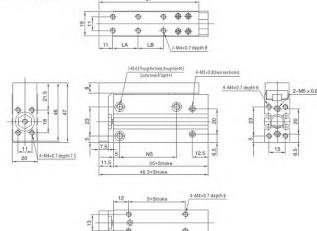
Number	Name	Number	Name
1	Slide	11	Slide block
2	Hexagonal nut(with bolt)	12	Magnet
3	Piston rod	13	sealing ring
4	Hexagonal nut	14	Piston
5	Dustproof sealing ring	15	Wear-resistant belt
6	Cylinder barrel	16	O-ring
7	Hexagon socket cap screw	17	Rear cover
8	Guide	18	Fenders
9	Fenders	19	Retaining ring for hole
10	Magnet seat		

Dimension(mm):
MXH6


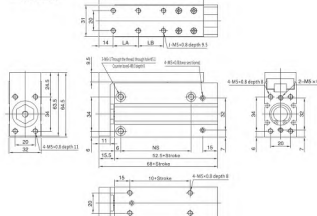
Stroke/Stroke	F	LA	LB	LT	NB
5	4	10	—	42	14
10	4	10	—	42	14
15	4	20	—	52	24
20	4	20	—	52	24
25	4	30	—	62	30
30	4	30	—	62	30
40	6	20	20	72	45
50	6	25	25	82	55
60	6	30	30	92	60

MXH16


Stroke/Stroke	F	LA	LB	LT	NB
5	4	10	—	58	20
10	4	10	—	58	20
15	4	20	—	68	30
20	4	20	—	68	30
25	4	30	—	78	40
30	4	30	—	78	40
40	6	20	20	88	50
50	6	25	25	98	60
60	6	30	30	108	60

MXH10


Stroke/Stroke	F	LA	LB	LT	NB
5	4	10	—	49	14
10	4	10	—	49	14
15	4	20	—	59	24
20	4	20	—	59	24
25	4	30	—	69	30
30	4	30	—	69	30
40	6	20	20	79	45
50	6	25	25	89	55
60	6	30	30	99	60

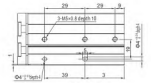
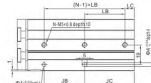
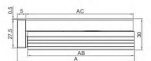
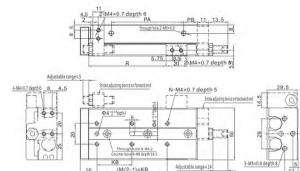
MXH20


Stroke/Stroke	F	LA	LB	LT	NB
5	4	10	—	64	20
10	4	10	—	64	20
15	4	20	—	74	30
20	4	20	—	74	30
25	4	30	—	84	40
30	4	30	—	84	40
40	6	20	20	94	50
50	6	25	25	104	70
60	6	30	30	114	70

Biaxial Type Precise Sliding Table Cylinder (Recirculating Roller)

■ Dimension(mm):

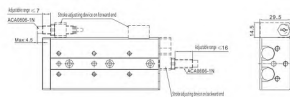
■ MXQ12



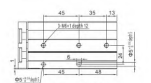
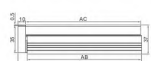
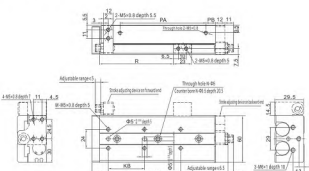
MXQ12X40

Stroke(mm)	A	B	AC	AD	AE	AF	AG	AL	LC	M	N	PA	PB
10	76	66	67	32	18	28	32	18	4	2	32.5	13	35
20	76	66	67	32	18	28	32	18	4	2	32.5	13	45
30	86	76	77	40	20	38	40	20	4	2	42.5	13	55
40	103	93	94	39	38	34	Seifgen Seifgen	6	3	59.5	13	65	
50	113	103	104	39	48	34	39	9	6	3	69.5	13	75
75	137	147	148	72	59	36	23	8	4	4	113.5	13	99
100	182	172	173	72	84	36	36	12	10	6	134.5	17	124

MXQ12(with hydraulic buffer)



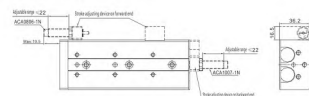
■ MXQ16



MXQ16X50

Stroke(mm)	A	AB	AC	AD	AE	AF	AG	AL	LC	M	N	PA	PB
10	89	77	78	39	18	38	39	18	4	2	40.5	12	28.5
20	89	77	78	39	18	38	39	18	4	2	40.5	12	38.5
30	99	87	88	48	19	48	48	19	4	2	50.5	12	48.5
40	109	97	98	58	19	58	58	19	4	2	60.5	12	58.5
50	125	115	114	45	48	40	Seifgen	Seifgen	6	3	70.5	18	68.5
75	157	145	146	52	73	46	52	21	6	3	108.5	12	93.5
100	200	188	189	88	80	44	44	36	8	4	151.5	12	118.5
125	225	213	214	88	105	44	44	17	10	5	176.5	12	143.5

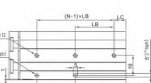
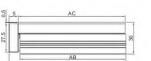
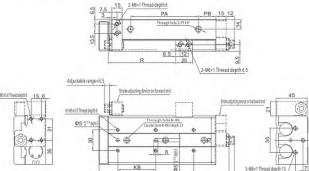
MXQ16(with hydraulic buffer)



Biaxial Type Precise Sliding Table Cylinder (Recirculating Roller)

■ Dimension(mm):

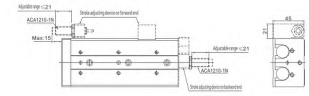
■ MXQ20



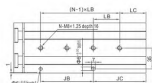
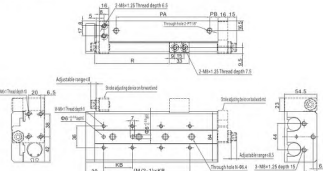
MXQ20X50

Stroke(mm)	A	B	AC	AD	AE	AF	AG	AL	LC	M	N	PA	PB
10	108	92.5	94	50	18	45	46	22	4	2	46.5	16	32.5
20	108	92.5	94	50	18	40	46	22	4	2	46.5	16	42.5
30	108	92.5	94	50	18	48	46	22	4	2	46.5	16	52.5
40	118	102.5	104	56	22	58	56	22	4	2	56.5	16	62.5
50	116	100.5	102	48	52	Seifgen Seifgen	6	3	72.5	18	72.5		
75	160	153.5	155	56	73	55	56	37	6	3	98.5	25	92.5
100	226	210.5	212	112	74	50	56	18	8	4	155.5	25	122.5
125	254	238.5	240	118	96	55	59	37	8	4	183.5	25	147.5
150	282	266.5	268	124	118	62	62	56	8	4	211.5	25	172.5

MXQ20(with hydraulic buffer)



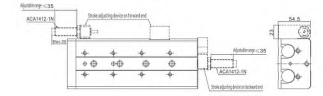
■ MXQ25



MXQ25X75

Stroke(mm)	A	B	AC	AD	AE	AF	AG	AL	LC	M	N	PA	PB
10	123	105.5	107	55	23	55	55	23	4	2	58	12	35
20	123	105.5	107	55	23	46	55	23	4	2	58	12	45
30	123	105.5	107	55	23	55	55	23	4	2	58	12	55
40	133	115.5	117	65	23	65	65	23	4	2	68	12	65
50	157	139.5	141	80	32	75	80	32	4	2	92	14	75
75	182	164.5	166	65	72	60	Seifgen Seifgen	6	3	117	12	100	
100	221	203.5	205	88	88	44	44	44	8	4	156	12	125
125	274	256.5	258	132	97	60	66	31	8	4	209	12	150
150	299	281.5	283	132	122	65	66	56	8	4	234	12	175

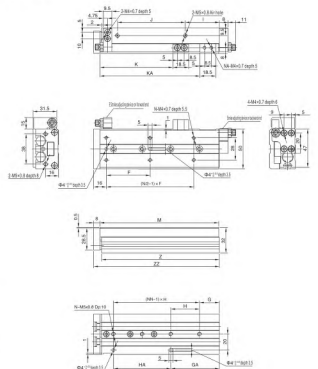
MXQ25(with hydraulic buffer)



Biaxial Type Precise Sliding Table Cylinder (Cross Roller Guide)

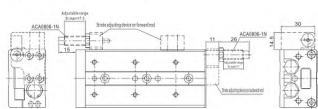
■ Dimension(mm):

■ MXS12

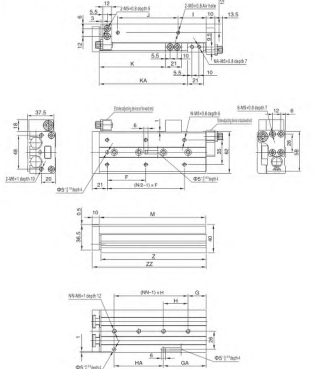


Stroke	F	N	G	H	MV	GA	HA	I	J	K	KA	NA	M	Z	ZZ
10	35	4	15	40	2	15	40	10	40	26.5	—	2	71	70	80
20	35	4	15	40	2	15	40	10	40	36.5	—	2	71	70	80
30	35	4	15	40	2	15	40	10	40	46.5	—	2	71	70	80
40	50	4	17	25	3	42	25	10	52	56.5	—	2	83	82	92
50	35	6	15	36	3	51	36	22	60	66.5	—	2	103	102	112
75	55	6	25	36	4	61	72	43	85	91.5	125.5	4	149	148	158
100	65	6	35	38	5	111	76	52	130	116.5	179.5	4	201	202	212

MXS12(with hydraulic buffer)

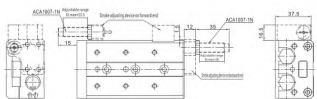


■ MXS16



Stroke	F	N	G	H	NN	GA	SA	I	V	KA	NA	M	Z	ZZ
10	35	4	16	40	2	16	40	10	40	29	—	2	76	75 87
20	35	4	16	40	2	16	40	10	40	39	—	2	76	75 87
30	35	4	16	40	2	16	40	10	40	49	—	2	76	75 87
40	40	4	16	50	2	16	50	10	50	59	—	2	86	85 97
50	30	6	21	30	3	51	30	15	60	69	—	2	101	100 112
75	55	6	26	35	4	61	70	40	85	94	125	4	151	150 162
100	65	6	39	35	5	109	70	55	118	173	4	199	198	210
125	70	8	19	35	7	159	70	68	155	144	223	4	249	248 260

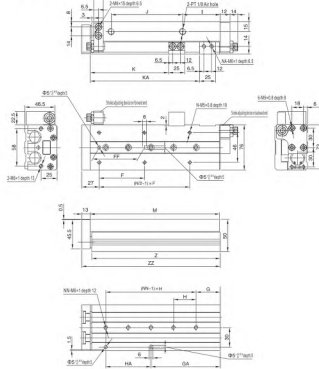
MXS16(with hydraulic buffer)



Biaxial Type Precise Sliding Table Cylinder (Cross Roller Guide)

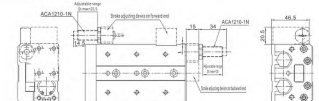
■ Dimension(mm):

■ MXS20

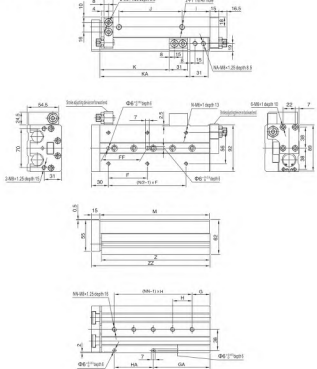


Stroke	T	F	N	G	M	HN	GA	HA	I	K	KA	NA	M	T	Z
10	50	40	4	15	45	2	25	35	10	44	31	—	2	83	81.5
20	50	40	4	15	45	2	25	35	10	44	41	—	2	83	81.5
30	50	40	4	15	45	2	25	35	10	44	51	—	2	83	81.5
40	60	50	4	15	55	2	35	35	10	54	61	—	2	93	91.5
50	35	35	6	15	35	3	50	35	10	60	71	—	2	108	106.5
75	60	60	6	19	35	4	54	70	10	108	96	—	2	147	145.5
100	70	70	6	37	35	5	107	70	58	113	121	169	4	200	198.5
125	70	70	8	41	38	6	155	76	70	155	146	223	4	254	252.5
150	80	80	8	19	44	7	195	88	87	190	171	275	4	304	306

MXS20(with hydraulic buffer)

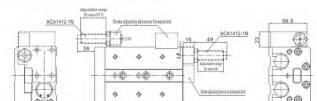


■ MXS25



Stroke	F	FF	N	E	M	NN	GA	HA	I	J	K	KA	MA	T	Z	ZZ
10	50	40	4	22	45	2	22	45	12	47	35	—	2	92	90.5	108
20	50	40	4	22	45	2	22	45	12	47	45	—	2	92	90.5	108
30	50	40	4	22	45	2	22	45	12	47	55	—	2	92	90.5	108
40	60	50	4	22	55	2	22	55	12	57	65	—	2	102	100.5	118
50	35	35	6	20	35	3	55	35	12	70	75	—	2	115	113.5	131
75	60	60	6	26	35	4	61	70	38	90	100	—	2	156	154.5	172
100	70	70	6	32	35	5	102	70	50	114	125	162	4	197	195.5	213
125	75	75	8	40	38	6	154	76	67	155	150	218	4	255	253.5	271
150	80	80	8	30	40	7	190	80	82	180	175	258	4	295	293.5	311

MXS25(with hydraulic buffer)





■ Specification:

GDS 50	
Series	● Bore ● GDS ● GDH ● GDM
	● Ø12 ● Ø16 ● Ø20 ● Ø25 ● Ø32
	● Ø40 ● Ø50 ● Ø63 ● Ø80 ● Ø100

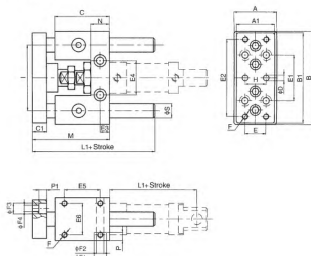
■ Product feature:

- Oriented equipment can avoid piston rod rotating and can afford higher load torque.
- Oriented equipments show high precision guide on workpiece transmission and another applications.
- Two guiding forms: rolling bearings and sliding bearings.
- There are mounting ports with multiple direction for multiple- directed install.
- Oriented equipment can be connected with ISO6432 cylinder or ISO6431 cylinder when using.

■ Dimension(mm):

GDS Dimension

■ Ø12-Ø16

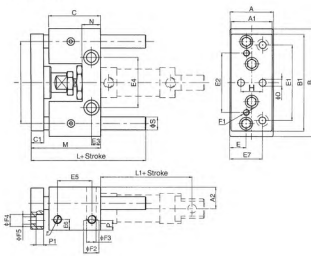


Bore/Symbol	A	A1	B	B1	C	C1	D	E	E1	E2	E3	E4	E5
10	30	27	65	63	38	10	4	15	32	54	6.5	24	25
16	30	27	85	83	38	10	4	15	32	54	6.5	24	25

Bore/Symbol	E6	E7	E8	E9	E10	E11	E12	E13	E14	E15	E16	E17	E18
10	22	M4	8.5	5.1	7.5	4.5	15	46	70	53	54	13	5.5
16	22	M4	8.5	5.1	7.5	4.5	15	46	70	60	54	13	5.5

GDS Dimension

■ Ø20-Ø25



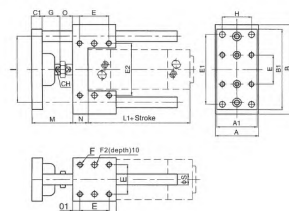
Bore/Symbol	A	A1	A2	B	B1	C	C1	D	E	E1	E2	E3	E4	E5
20	40	38	24	100	90	48	12	6	15	70	55	8.5	46.5	32
25	40	38	24	100	90	48	12	6	15	70	55	8.5	46.5	32

Bore/Symbol	E6	E7	E8	E9	E10	E11	E12	E13	E14	E15	E16	E17	E18
20	30	M8	24	14	9	11	6.5	20	76	77	71	65	17
25	30	M8	24	14	9	11	6.5	20	76	77	76	71	17

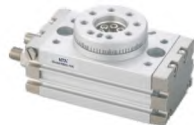
■ Dimension(mm):

GDS Dimension

■ Ø32-Ø100



Bore/Symbol	A	A1	B	B1	C	C1	C2	D	E	E1	F
32	48	45	100	90	48	12	12	6	32.5	78	54
40	56	53	106	105	58	15	15	6	38	84	66
50	66	63	125	120	59	15	16	6	46.5	100	80
63	76	73	132	127	76	15	16	6	56.5	105	95
80	98	95	165	160	90	16	20	6	50	130	110
100	118	115	185	180	110	16	20	6	70	150	150



■ Symbol:



■ Product feature:

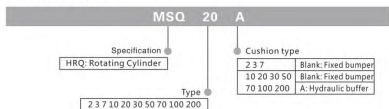
1. With pinion and rack structure, it runs smoothly.
2. Double cylinders structure can get double output.
3. The workbench with high process precision and accurate positioning is convenient for loading and installation.
4. Through hole is in the middle of the workbench for tubulation.
5. The two sides(10~200) or bottom(2~7) of the cylinder body both have dowel holes and are easy for installation and using.
6. Adjusting screw fixed buffer and oil buffer are optional. And the biggest buffer energy of the oil buffer is 3 to 5 times larger than that of adjusting screw fixed buffer with better buffering effect.

Notes:HRQ2, 3, 7 only has adjusting screw fixed buffer, no oil buffer.

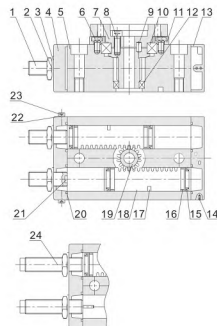
■ Specification:

Type	2	3	7	10	20	30	50	70	100	200
Motion	Double piston rack and pinion double acting type									
Fluid	Compressed Air									
Working Pressure (MPa)	With adjusting screw: 0.1~0.7 With adjusting screw: 0.1~1 With hydraulic buffer: 0.1~0.6									
Warrant endure pressure (MPa)	1.5									
Ambient temperature range (°C)	0~60									
Theoretical torque (Nm/0.3MPa)	0.2	0.33	0.63	1.1	2.2	2.8	5.0	7.5	11.0	22.0
Rotation angle range °	0~190									
Cushion type	With adjusting screw: Bumper					With adjusting screw: Bumper. With hydraulic buffer				
Port size	Front Side MS×0.8					G1/8* MS×0.8				

■ How to order:



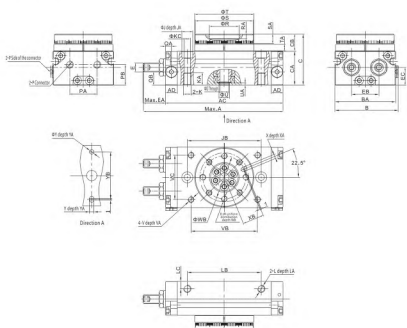
■ Inner structure drawing:



Number	Item	Number	Item
1	Adjusting screw	13	Rear cover
2	Nut	14	Steel ball
3	Sealing gasket	15	Y-ring
4	Front cover	16	Wearing ring
5	Cylinder barrel	17	Magnet
6	Socket head cap screws	18	Rack
7	Dial	19	Gear
8	Socket head cap screws	20	O-ring
9	Locating pin	21	Fenders
10	Ball bearing	22	O-ring
11	Platen	23	Hexagon screws
12	Ball bearing	24	Hydraulic buffer

■ Dimension(mm):

MSQ2,3,7



Item/Symbol	A	AC	AD	B	BA	C	CA	CB	E	EA	EB	EC	D
2	76	64	8	32	30	28	18	10	MS×0.8	12	12	9.5	4
3	82	70	8	36.5	34.4	30.5	20.5	10	MS×0.8	12	15.5	10.5	5
7	94.5	79.5	8	43	41	34.5	23	11.5	M6×1.0	15	18.5	12	6

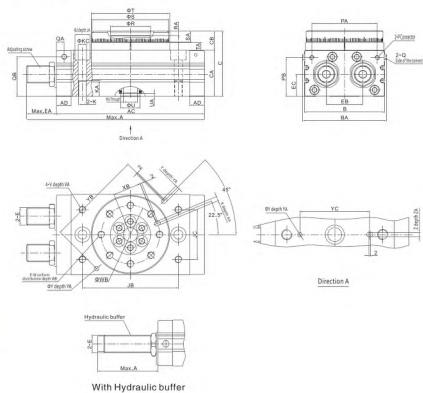
Item/Symbol	F	FA	FB	K	KA	KB	L	LA	LB	LC	P	PA
2	6	3.5	37	M4×0.7	7.5	3.5	M4×0.7	4	35	4.5	MS×0.8	12.5
3	7.5	4.5	43	MS×0.8	8.5	4.5	M4×0.7	4	40	4.5	MS×0.8	15.5
7	7.5	4.5	50	MS×0.8	8.5	4.5	MS×0.8	5	50	7	MS×0.8	18.5

Item/Symbol	CA	C	CB	CA	CB	CA	CB	CA	CB
2	10	MS×0.8	4	6	14(H9)	2.5	29(H9)	5.5	25.5(H9)
3	12	MS×0.8	4	7.5	17(H9)	2.5	33(H9)	5.5	24(H9)
7	14	MS×0.8	4	9	20(H9)	3	39(H9)	6.5	40(H9)

Item/Symbol	V	VA	VB	VC	W	WA	WB	X	XA	XB	Y	YA	YB
2	M3×0.5	3.5	34	18.5	M3×0.5	5.5	21	20(H)	2	10.5	2(H)	2	24
3	M3×0.5	3.5	38	23	M3×0.5	5.5	25	20(H)	2	12.5	2(H)	2	28
7	M4×0.7	4.5	45	30	M4×0.7	6.5	29	30(H)	3	14.5	3(H)	3	32

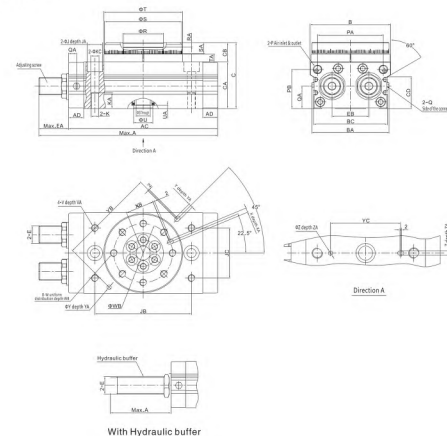
■ Dimension(mm):

MSQ10-50



■ Dimension(mm):

MSQ70-200



With Hydraulic buffer

Series/Stroke	Aluminum series	Aluminum buffer	AC	AD	B	BA	C	CA	CB	E					
10	120.5	109.5	92	9.5	50	54	47	37	13	M10×1.0					
20	156	143	117	11	65	69	54	37	17	M12×1.0					
30	165.5	152.5	127	11.5	70	74	57	40	17	M12×1.0					
50	209	193.5	152	15	80	84	66	46	20	M14×1.5					
Series/Stroke	Aluminum series	Aluminum buffer	AC	AD	B	BA	C	CA	CB	E					
10	28.5	17.5	20.5	15.5	5	11	6.5	40	27	M8×1.25					
20	32	26	27.5	16	9	14	8.5	76	34	M10×1.5					
30	38.5	25.5	29	18.5	9	14	8.5	84	37	M10×1.5					
50	51	31.5	38	22	10	18	10.5	100	50	M12×1.25					
Series/Stroke	KA	KC	P	PA	PB	Q	QA	QB	R	RA	S	SA	T		
10	12	6.5	M5×0.8	34.5	28	M5×0.8	4.5	29	20(H9)	4.5	45(H9)	8	46(H9)		
20	15	8.5	M5×0.8	47	30	M5×0.8	6	30	28(H9)	6.5	60(H9)	10	61(H9)		
30	15	8.5	PT1/8"	50	32	M5×0.8	6.5	34	32(H9)	5	65(H9)	10	67(H9)		
50	18	10.5	PT1/8"	63	38	M5×0.8	10	38	35(H9)	5.5	75(H9)	12	77(H9)		
Series/Stroke	KA	KC	P	PA	PB	Q	QA	QB	R	RA	S	SA	T		
10	4.5	15(H9)	3	M5×0.8	8	M5×0.8	8	32	15(H9)	3.5	14	3(H9)	3.5	16	40
20	6.5	17(H9)	2.5	M6×1.0	8	M6×1.0	10	41	4(H9)	4.5	23.5	4(H9)	4.5	74	50
30	6.5	22(H9)	3	M6×1.0	8	M6×1.0	10	48	4(H9)	5	24	4(H9)	4.5	80	58
50	7.5	26(H9)	3	M8×1.25	8	M8×1.25	12	55	5(H9)	6	27.5	5(H9)	5.5	92	68

Series/Stroke	Aluminum series	Aluminum buffer	AC	AD	B	BA	C	CA	CB	CD					
70	204	238	170	17	92	88	84	75	53	22	36				
100	223	257	189	17	102	99	95	86	59	27	42				
200	276.5	314.5	240	24	120	117	113	106	74	32	57				
Series/Stroke	E	Aluminum series	Aluminum buffer	EB	G	J	JA	JB	JC	K	KA	KC			
70	M20×1.5	34	68	42	16	17.5	10.5	110	57	M12×1.75	18	10.5			
100	M20×1.5	34	68	50	19	17.5	10.5	130	66	M12×1.75	18	10.5			
200	M27×1.5	36.5	74.5	60	24	20	12.5	150	80	M16×2.0	25	14			
Series/Stroke	E	PA	PB	Q	QA	R	RA	S	T	TA	TB	TC	TD	TE	TF
70	PT1/8"	75	44.5	M5×0.8	25.5	46(H9)	5	88(H9)	12.5	90(H9)	9	22(H9)	M8×1.25	10	
100	PT1/8"	85	50.5	M5×0.8	29.5	56(H9)	6	98(H9)	14.5	100(H9)	12	24(H9)	M8×1.25	10	
200	PT1/8"	103	63	M5×0.8	36.5	64(H9)	9	116(H9)	16.5	118(H9)	15	32(H9)	M12×1.75	13	
Series/Stroke	W	WA	WB	X	XA	XB	Y	YA	YB	YC	Z	ZA			
70	M8×1.25	12.5	67	5(H9)	5.5	33.5	5(H9)	3.5	110	80	5(H9)	3.5			
100	M8×1.25	14.5	77	6(H9)	6.5	38.5	6(H9)	4.5	120	100	6(H9)	4.5			
200	M12×1.75	16.5	90	8(H9)	8.5	45	8(H9)	4.5	140	110	8(H9)	6.5			



Symbol:



Product feature:

1. The material of the seal ensures cylinder can be used in various conditions with reliable performance.
2. With three guiding grooves structure, it has high guiding precision.
3. Working ways: unilateral and bilateral(90°).
4. Rotating ways: left and right; 90° and 180°.
5. The material of the piston rod is special alloy steel. After being heat treatment, it will have a long service life.

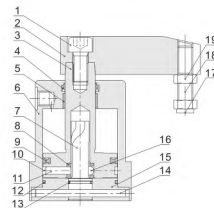
Specification:

Type	25	32	40	50	63
Motion	Double acting				
Fluid	Compressed air				
Working Pressure (MPa)	0.15~1				
Ambient temperature range(°C)	-20~80				
Speed range (mm/s)	50~200				
Stroke tolerance range	+1.8 0				
Rotation angle tolerance range*	±1.5				
Cushion type	No				
Port size	M5×0.8 1/8"				

How to order:

ACK L 25×90	
Specification	Corner code
ACK: Angle Cylinder	90° 90°
ACKD: Angle Cylinder(Bilateral plate)	180° 180°
Veer code	Bore
L: Press down and turn left	25
R: Press down and turn right	32
	40
	50
	63

Inner structure drawing:

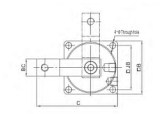
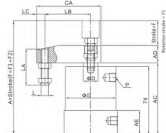


Number	Name	Number	Name
1	Hexagon socket cap screw	11	Locating pin
2	Platen	12	O-ring
3	Piston rod	13	O-ring
4	Dustproof sealing ring	14	Cotter pin
5	Composite bearing	15	Rear cover
6	Cylinder barrel	16	Steel ball
7	Guide rod	17	Gasket
8	Guide rod seat	18	Bolt
9	Sealing ring	19	Hexagonal nut
10	Wearing ring		

Dimension(mm):

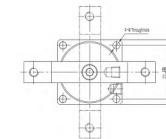
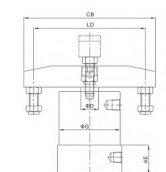
ACK Series

Φ25~Φ63



ACKD Series

Φ25~Φ63



Area/Symbol	A	AC	AD	AI	B	BC	C	CA	Cb	D	F(90°/180°)	F(180°)
25	85	65	16	23	40	16	58	48	76	14	26	14
32	85	73	19	23	54	19	86	70	118	16	26	14
40	97	74	19	26	58	19	88	70	118	16	27	15
50	109.5	80	25.5	26	68	25.5	114	93	160	20	29	15
63	115.5	86	25.5	30	82	25.5	121	93	160	20	29	15

Row/Symbol	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																											
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																												
25	20	12	6	35	4.5	30	M6×1.0	29.5	30	8	60	M5×0.8																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																			



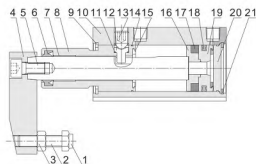
Symbol:



Product feature:

- With piston rod finished by OPR, the performance of surface welding slag resistance is better than the piston rod finished by chrome. It is adapt to welding surroundings.
- The front cover with stainless steel dust scraping ring is sturdy and durable. It prevent cylinder from the damage of dust and splash slag and is more reliable than dirt-proof boots.
- Bores of $\Phi 32$ to $\Phi 62$ with powerful magnet are adapt to strong magnetic field work surroundings.
- The installation dimensions and ways of this series are the same as CQ series so it can use the installing accessories of CQ series.

Inner structure drawing:



Number	Name	Number	Name
1	Gasket	12	Rotating block
2	Bolt	13	Hexagon set screw
3	Hexagonal nut	14	O-ring
4	Platen	15	Fenders
5	Piston rod	16	Magnet seat
6	Dustproof sealing ring	17	Magnet
7	Composite bearing	18	O-ring
8	Front cover	19	Piston
9	Retaining ring for hole	20	Rear cover
10	Cylinder barrel	21	Circlip for hole
11	O-ring		

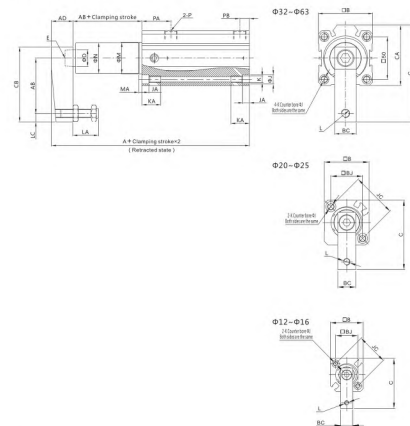
Type	12	16	20	25	32	40	50	63
Motion	Double acting							
Fluid	Compressed air							
Working Pressure (MPa)	0.15~1							
Ambient temperature range(℃)	-20~80							
Speed range (mm/s)	50~200							
Rotation angle*	90 ±10							
Rotation direction	Left or right							
Rotation stroke(mm)	7.5		9.5		15		19	
Clamping stroke(mm)	10 20		10 20 30		10 20 30 50			
Stroke tolerance range	+1.0 0							
Cushion type	Cushion sheet							
Port size	M5×0.8				1/8"		1/4"	

How to order:

MK L 32 × 20 S FB			
Specification	Mounting type		
QCK Rotary Clamping Cylinder	Blank: No mounting accessories		
	FB: Rear flange connecting plate		
Stroke	Magnet code		
12	S: with magnet		
16			
20			
25			
32			
40			
50			
63			

Dimension(mm):

MK Series

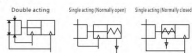


Item/System	A	AB	AC	AD	B	BC	C	CA	CB	D	E	G	I	JA	JB	JC
12	55	10.5	35.5	9	25	9	36.5	-	29	6	M3×0.5	3.3	6.5	3.5	15.5	22
16	59	10.5	35.5	13	29	11	44.5	-	36	8	M4×0.8	3.3	6.5	3.5	20	28
20	86	8	62	16	36	16	60	-	51	12	M8×1.25	5	9	7	25.5	36
25	87	8	63	16	40	16	62	-	51	12	M8×1.25	5	9	7	28	40
32	108	17.5	71.5	19	45	19	82	49.5	67	16	M10×1.5	5	9	7	34	-
40	109	25	65	19	53	19	85.5	57	67	16	M10×1.5	5	9	7	40	-
50	133	31	76.5	25.5	64	25.5	114	71	88	20	M12×1.75	6.5	11	8	50	-
63	136	30.5	80	25.5	77	25.5	120.5	84	88	20	M12×1.75	6.5	14	10.5	60	-

Item/System	K	KA	L	LA	LC	M	MA	N	NA	PA	PB
12	M4×0.7	11	M4×0.7	7~13	20	4	11	3	10.8	M5×0.8	13.5
16	M4×0.7	11	M4×0.7	7~13	25	5	14	3	12.8	M5×0.8	15
20	M6×1.0	17	M6×1.0	9.5~20.5	35	7	18	3	17.8	M5×0.8	30
25	M6×1.0	17	M6×1.0	9.5~20.5	35	7	23	6	22.5	M5×0.8	30
32	M6×1.0	17	M8×1.25	13.5~25.5	45	10	30	7	29.5	PT1/8	34.5
40	M6×1.0	17	M8×1.25	13.5~25.5	45	10	30	3	29.5	PT1/8	26.5
50	M8×1.25	22	M10×1.5	14.5~30	65	10	37	3.5	36.5	PT1/4	34
63	M10×1.5	28.5	M10×1.5	14.5~30	65	10	48	3.5	47.5	PT1/4	34.5



■ Symbol:



■ **Product feature:**

1. Adopt the integrated design of linear guideway with high rigidity and precision.
2. Positioning pin is at the bottom of the linear guideway to prevent positional pin deviating from the body.
3. The body attaches fixed benchmark centering hole to improve the fixed-precision and repeating disassembling positioning consistency.
4. According to customers' actual using requirement, the original position of the clamping jaw can be customized to meet the different needs of different operating conditions.



■ **Specification:**

Type	6	10	16	20	25	32	40
Fluid	Compressed air						
Working pressure (Mpa)	Single acting	0.15-0.7	0.2-0.7		0.1-0.7		
	Double acting	0.3-0.7	0.35-0.7		0.25-0.7		
Ambient and fluid temperature(°C)	-10-60						
Repeated precision (mm)	±0.01					±0.02	
Maximum frequency of use (c.p.m)	180(MHZ12 series 120)						60
Oil feeding	Not required						
Acting way	Double acting - Single acting						
Magnetic switch (optional)	Non-contact magnetic switch (MHZ22 without magnetic switch)						
Port size	M3×0.5			M5×0.8			

■ **How to order:**

MHZ 16 D

M9B

Type

- Blank: Standard type
- A: Small type
- L: Long stroke type
- J: With dust cover type

Bore

Φ6: 6mm
Φ10: 10mm
Φ16: 16mm
Φ20: 20mm
Φ25: 25mm
Φ32: 32mm
Φ40: 40mm

Motion

- D: Double acting
- S: Single acting (Normally open)
- C: Single acting (Normally closed)

Optical gripper

Blank: Standard type
I: Side screw hole mounting
2: Open and Close direction through bottom mounting type

Flat gripper type

The type of claw is optional

Blank: Standard type

- M: Terminal block type Axial
- N5: Through hole (single acting)
- E: Terminal block type side piping (double acting / single acting)
- H: Terminal block type With Φ4 Axial through hole if hose connector (single acting)

Number of magnetic switches

Blank: 2

S: 1

Magnetic switch model

- Blank: No magnetic switch
- ZA: No magnetic switch

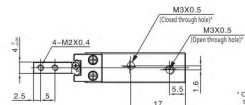
Cylinder color

- Blank: Hard oxygen natural color
- A: Hard oxygen black
- B: Hard oxygen gold
- C: Hard oxygen pink
- D: Please contact the sales person for special colors.

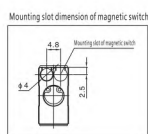
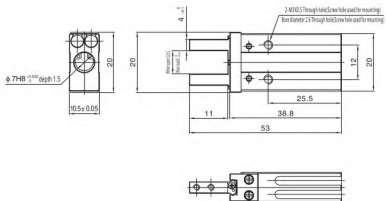


■ Dimension(mm):

■ MHZ2-6

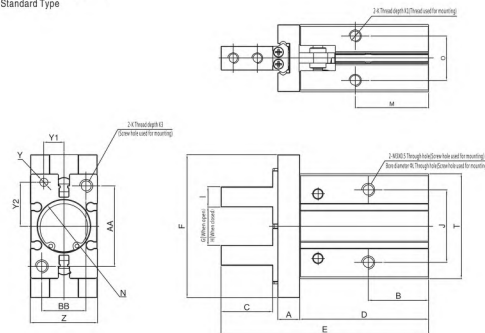
Double acting/Single acting
Standard Type

* Location of a single acting, one side of the through hole becomes a breathing hole.

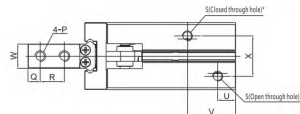
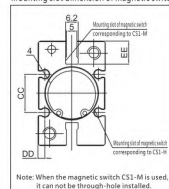


■ Dimension(mm):

■ MHZ-□□

Double acting/Single acting
Standard Type

Mounting slot dimension of magnetic switch



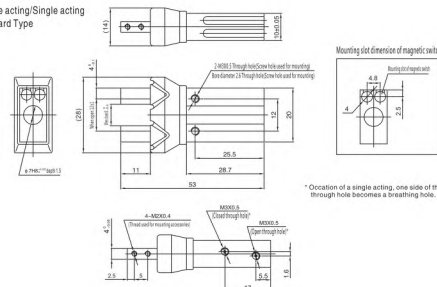
10	6	23	12	37.8	67	29	16.2	11.2	4.1	16	MX0.5	6	5.5	6	2.6	27	Φ11H9/f9	11.4	MX0.05	9	5.7	MX0.5	29	9
16	7.5	24.5	15	62.5	67.3	36	20.3	14.9	5.1	24	MX0.7	4.5	8	3.4	30	Φ17H9/f9	16	MX0.5	4	7	MX0.8	30.8	7.5	9
20	9.5	29	20	62.8	64.8	50	26.3	16.3	8.1	30	MX0.8	8	10	4.3	35	Φ21H9/f9	19.6	MX0.7	5	9	MX0.8	42	10	10
25	11	30	25	63.8	150.7	63	33.3	19.3	10.1	36	MX0.1	10	12	5.1	36.5	Φ24H9/f9	29	MX0.8	6	12	MX0.8	52	10.7	12
32	12	40.09	29	67.76	113.02	97	48	26.1	12.2	46	MX0.1	10	13	5.1	40.03	Φ34H9/f9	26	MX0.1	7	14	MX0.8	60	11	14
40	15	49.62	36	83.06	150.15	119	60	30	14.1	56	MX0.25	13	16	7.6	50.77	Φ42H9/f9	32	MX0.15	9	17	MX0.8	72	12	16

Size	Y	Z	X	Y	Z	X	Y	Z	A ₁	B ₁	C ₁	D ₁	E ₁
10	19	5 ¹ ₁₆	11	Φ24H9/f9	depth 3	5.2 ± 0.02	7.6 ± 0.02	16.4 ± 0.05	18	12			5.4
16	19	8 ¹ ₁₆	13	Φ34H9/f9	depth 3	6.5 ± 0.02	11 ± 0.02	23.6 ± 0.05	22	15	11.6	2.1	5.8
20	23	10 ¹ ₁₆	15	Φ44H9/f9	depth 4	7.5 ± 0.02	16.8 ± 0.02	27.6 ± 0.05	32	18	14	2.1	9
25	23.5	12 ¹ ₁₆	20	Φ44H9/f9	depth 4	10 ± 0.02	21.8 ± 0.02	33.6 ± 0.05	40	22	19	3.6	11.5
32	31(37)	15 ¹ ₁₆	24	Φ54H9/f9	depth 5	12 ± 0.02	23 ± 0.02	40 ± 0.1	46	26	24	3.3	11.5
40	36(46)	18 ¹ ₁₆	26	Φ54H9/f9	depth 5	14 ± 0.02	29 ± 0.02	48 ± 0.1	56	32	29.4	3.7	13

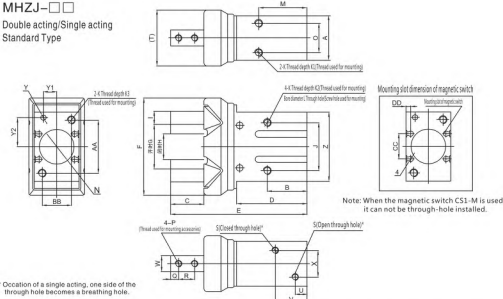
Note: When the dimension inside the brackets is single acting.

■ Dimension(mm):

■ MHZJ-6□

Double acting/Single acting
Standard Type

■ MHZJ-□□

Double acting/Single acting
Standard Type

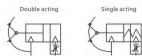
* Occation of a single acting, one side of the through hole becomes a breathing hole.

Bore	A	B	C	D	E	F	G	H	I	J	K	K1	K2	K3	SL	M	N
10	16.4±0.05	23	12	31	57	34	15.2 ^{+2.0} _{-2.0}	11.2 ^{+2.9} _{-2.9}	4 ^{+0.1} _{-0.1}	16	MX0.5	6	5.5	6	2.6	27	Φ11H9/f9 ^{0.045} depth 2
16	23.6±0.05	24.5	15	34.8	67.3	45	20.9 ^{+2.6} _{-2.6}	14.7 ^{+4.7} _{-4.7}	5 ^{+0.1} _{-0.1}	24	MX0.7	4.5	8	8	3.4	30	Φ17H9/f9 ^{0.045} depth 2
20	27.6±0.05	29	20	43.5	84.8	58	26.3 ^{+2.6} _{-2.6}	16.3 ^{+4.7} _{-4.7}	8 ^{+0.1} _{-0.1}	30	MX0.8	8	10	10	4.3	35	Φ21H9/f9 ^{0.045} depth 3
25	33.6±0.05	30	25	53	102.7	73	33.3 ^{+2.6} _{-2.6}	19.3 ^{+4.7} _{-4.7}	10 ^{+0.1} _{-0.1}	36	MX0.1	10	12	12	5.1	36.5	Φ24H9/f9 ^{0.045} depth 3

Bore	O	P	Q	R	S	T	U	V	W	X	Y	Y1	Y2	Z	AA	BB	CC	DD
10	11.4	M2.5X0.45	3	5.7	M3X0.5	21	7	19	5 ⁰ _{0.01}	11	Φ24H9/f9 ^{0.03} _{0.01}	5.2±0.02	7.6±0.02	23	18	12	18	8.2
16	16	M3X0.5	4	7	M5X0.8	29.6	7.5	19	8 ⁰ _{0.01}	13	Φ30H9/f9 ^{0.03} _{0.01}	6.5±0.02	11±0.02	30.6	32	15	11.6	2.1
20	18.6	M4X0.7	5	9	M5X0.8	34.5	8.5	23	10 ⁰ _{0.01}	15	Φ44H9/f9 ^{0.03} _{0.01}	7.5±0.02	16.9±0.02	42	32	18	14	2.1
25	22	M5X0.8	6	12	M5X0.8	42	9	24	12 ⁰ _{0.01}	20	Φ44H9/f9 ^{0.03} _{0.01}	10±0.02	21.8±0.02	52	40	22	19	3.5



Symbol:



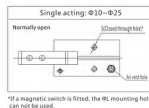
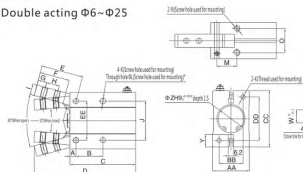
Product feature:

1. Adopt single piston structure with big clamping torque.
2. It comes with variable throttle valve to adjust the opening and closing speed of the clamping jaw conveniently.
3. Reasonable clamping angle makes the actual using range wide.
4. Accurate positioning precision makes picking up the workpieces more accurate and reliable.
5. Various forms of installation are convenient for the use of different occasions.
6. All series attached with magnet are convenient for control.

Dimension(mm):

MHC-6

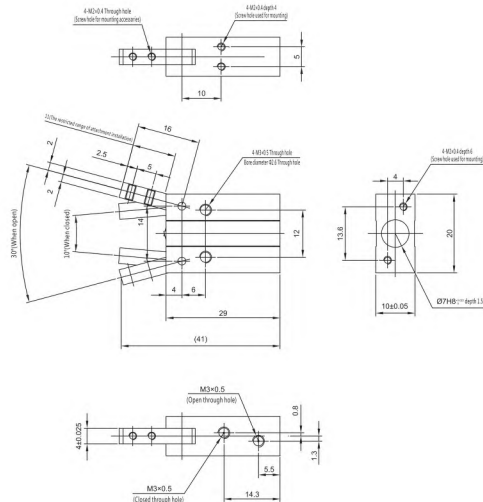
Double acting $\Phi 6 \sim \Phi 25$



Bore (mm)	PORT SIZE															
	A	B	C	D	E	F	G	H	J	K	L	M	N	O	P	
6	4	6	29	41	16	11	2.5	5	2	12	MX0.5	1/8" 1/4"	2.6	-	MX0.4	5
8	6	8	29	41	16	11	2.5	5	2	12	MX0.5	1/8" 1/4"	2.6	8.8	MX0.5	1/4"
10	8	10	29	41	16	11	2.5	5	2	12	MX0.5	1/8" 1/4"	2.6	11.4	MX0.5	1/4"
12	10	12	29	41	16	11	2.5	5	2	12	MX0.5	1/8" 1/4"	2.6	14.0	MX0.5	1/4"
16	16	16	29	41	16	11	2.5	5	2	12	MX0.5	1/8" 1/4"	2.6	16.0	MX0.5	1/4"
20	20	20	29	41	16	11	2.5	5	2	12	MX0.5	1/8" 1/4"	2.6	18.0	MX0.5	1/4"
25	25	25	29	41	16	11	2.5	5	2	12	MX0.5	1/8" 1/4"	2.6	20.0	MX0.5	1/4"

Dimension(mm):

MHCA-6



Pivot Open and Close Type/ Cam Type 180° Open and Close



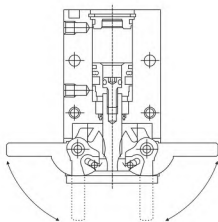
■ Symbol:



■ Product Feature:

1. With magnetic ring inside, it can install magnetic switch.
2. 180° open and close type simplifies the pick-and-place action.
3. It can be used in special environment. The open and close part of the fingers are specially designed to prevent small objects from getting in.
4. It is easy for installation with dowel holes.

■ Inner structure drawing:



■ Specification:

Type	MHY-10D	MHY-16D	MHY-20D	MHY-25D
Fluid	Compressed Air			
Motion	Double acting			
Maximum working pressure(Mpa)	0.6			
Minimum working pressure(Mpa)	0.1			
Ambient and fluid temperature(°C)	-10~60			
Repeated precision (mm)	±0.2			
Maximum frequency of use (c.p.m)	60			
Clamping torque(Nm)	0.16	0.54	1.10	2.28
Oil feeding	Not required			
Port size	M5×0.8			

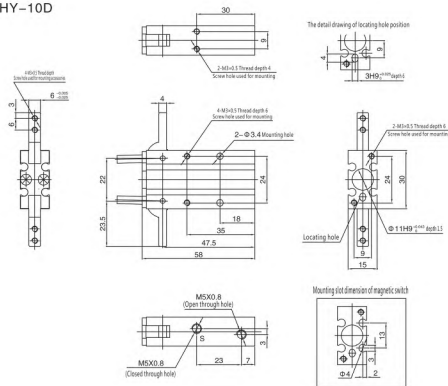
■ How to order:

MHY 16 D 2 M9NL				
Type	Blank: Standard Type	Blank: Standard Type		
Pivot Open and Close Type				
Bore	Φ10: 10mm Φ16: 16mm Φ20: 20mm Φ25: 25mm			
Motion	D: Double acting			
Magnetic switch model	Blank: No magnetic switch M9N(V) M9B(V)			
Gripper installing form	Blank: Screw hole mounting (standard) 2: Through-hole installation on open and close direction			
Number of magnetic switches	Blank: 2 5: 1			

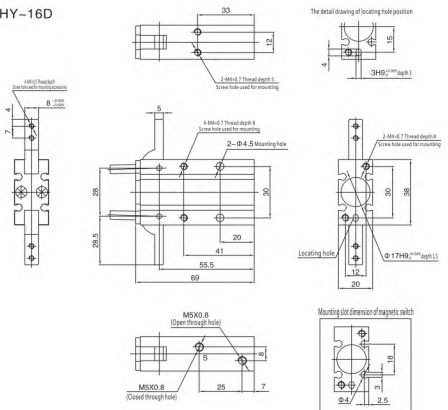
Pivot Open and Close Type/ Cam Type 180° Open and Close

■ Dimension(mm):

■ MHY-10D

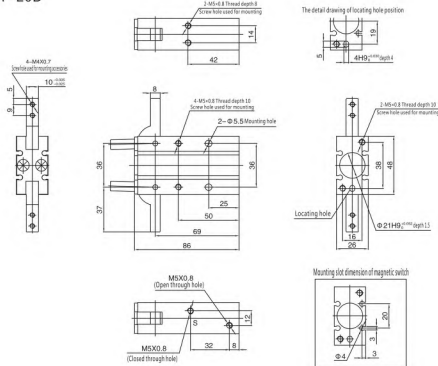


■ MHY-16D

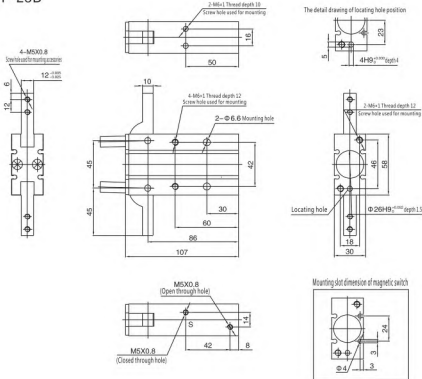


■ Dimension(mm):

■ MHY-20D



■ MHY-25D



Parallel Open and Close Type



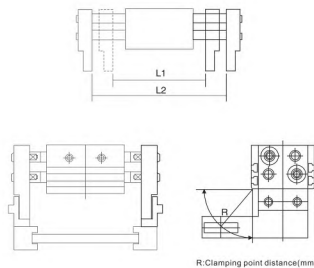
■ Symbol:



■ **Product feature:**

1. The stroke of fingers are long enough to clamp bulky items.
2. Two pistons design can increase the retentivity.
3. Pinion and rack operation can make fingers open and close at the same time.
4. Adopt dustproof design with special seals.

■ Stroke table



■ **Specification:**

Type	10	16	20	25	32	40
Fluid	Compressed air (No oil feeding)					
Motion	Double acting					
Maximum working pressure(Mpa)	0.6					
Minimum working pressure(Mpa)	0.15	0.1				
Ambient and fluid temperature(°C)	-10~60					
Repeated precision (mm)	±0.1					
Comping torque(N)	14	45	74	131	228	396
Port size	M5×0.8				Rc1/8	

■ **How to order:**

MHL 16 D 1 Y59A

Type
Blank: Standard Type
Parallel Open and Close Type

Bore
Ø10.10mm
Ø12.16mm
Ø15.25mm
Ø20.20mm
Ø26.16mm
Ø32.32mm
Ø40.40mm

Motion
D: Double action

Gripper open and closed stroke

bore	Ø10	Ø16	Ø20	Ø25	Ø32	Ø40
Blank	20	30	40	50	70	100
1	40	60	80	100	120	160
2	60	80	100	120	160	200

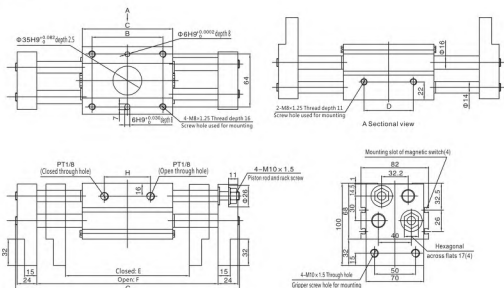
Magnetic switch model
Blank: No magnetic switch

Number of magnetic switches
Blank: 2
S: 1

Type	Bore (mm)	Rotational frequency (r.p.m)	Opened and closed stroke (L, C-L)	Open width (mm L)	Closed width (mm L)
MHL-10D			20	56	78
MHL-10D1	10	40	40	78	118
MHL-10D2		40	60	96	156
MHL-16D		60	30	68	98
MHL-16D1	16	40	80	110	170
MHL-16D2		40	80	130	210
MHL-20D		60	40	82	122
MHL-20D1	20	40	80	142	222
MHL-20D2		60	50	162	262
MHL-25D1		60	50	100	150
MHL-25D2	25	40	100	182	282
MHL-32D1		40	120	200	320
MHL-32D		30	70	150	220
MHL-32D1	32		20	120	198
MHL-32D2		20	160	242	402
MHL-40D		30	100	188	288
MHL-40D1	40		160	246	406
MHL-40D2		20	200	286	486

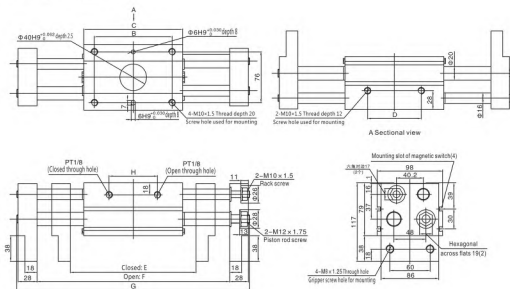
■ Dimension(mm):

■ MHL-32D□



Type	B	C	D	E	F	G	H
MHL-32D	86	110	60	150	220	272	56
MHL-32D1	134	158	108	198	318	370	104
MHL-32D2	178	202	152	242	402	454	148

MHL-40D



Type	B	C	D	E	F	G	H
MHL-40D	116	148	80	188	288	348	72
MHL-40D1	174	206	138	246	406	466	130
MHL-40D2	214	246	178	286	486	546	170



■ Symbol:



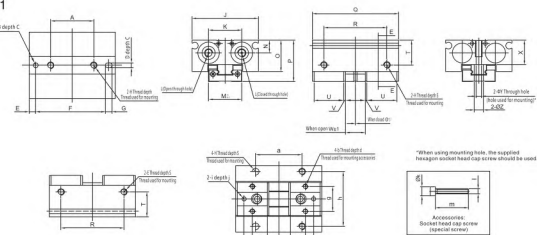
■ **Product feature:**

1. Compared with CKZ series, the height of MHF series is 1/3 decreased.
2. It saves space, reduces moment of force and recuvation, increases the precision.
3. Each opening and closing stroke of the cylinder bore has three types of long, middle and short.

■ Dimension(mm):

■ MHF-8D/8D1

■ MHF-12D

[illegible]

■ **Specification:**

Type	8	12	16	20
Fluid	Compressed air (No oil feeding)			
Acting way	Double acting			
Working pressure(Mpa)	0.15-0.7		0.1-0.7	
Ambient and fluid temperature(°C)	-10-60 (but not frozen)			
Repeated precision (mm)	±0.05			
Maximum frequency of use (c.p.m)	Short stroke, medium stroke: 120; long stroke: 60			
Clamping torque(Nm)	18	24	90	141
Open and closed bore sizes(mm)	8, 16, 32	12, 24, 48	16, 32, 64	20, 40, 80

■ **How to order:**

The diagram illustrates the selection of a hydraulic cylinder model based on various parameters. The parameters are listed in boxes and connected by lines to a central selection point. The parameters include:

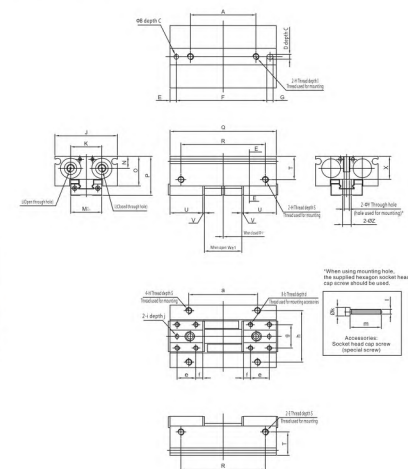
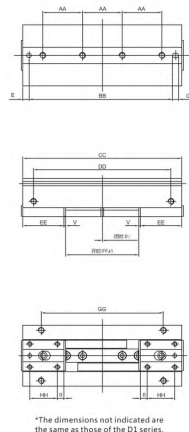
- Type**: Blank: Standard Type, Parallel Open and Close Type
- Bore**: Ø8: 8mm, Ø12: 12mm, Ø16: 16mm, Ø20: 20mm
- Motion**: D: Double acting
- Stroke**: Blank: Short stroke, 1: Medium stroke, 2: Long stroke
- Connecting type**: Blank: Axial piping, R: Side piping
- Magnetic switch model**: Blank: No magnetic switch
- Number of magnetic switches**: Blank: 2, S: 3

The parameters are grouped into three main categories: MHF, 12, D, and M9B.



■ Dimension(mm):

■ MHF-12D1, 16D, 16D1, 20D, 20D1,

■ MHF-8D2, 12D2
■ MHF-16D2, 20D2

*The dimensions not indicated are the same as those of the D1 series.

Type	AA	BB	CC	DD	EE	FF	GG	HH	II
MHF-8D	17	64.3	72	58	18	32	50	8	5
MHF-12D2	26	94	104	90	27	48	80	18	4.5
MHF-16D2	36	127.5	142	122	37	64	106	26	5.5
MHF-20D2	42	159	174	144	46	80	128	30	6

Type	W	X	Y	Z	a	b	c	d	e	f	g	h	i	j	k	l	m
MHF-12D1	24	14.8	3.4	5.5	44	M3×0.5	4	12	4.5	15	33	2.5H9 ^{h7} /d9 ^{h8}	2.5	9.5	M3×0.5	20	-
MHF-16D	16	20	4.3	7.5	36	M4×0.7	4	15	5	20	43	3H9 ^{h8} /d9 ^{h8}	3	-	-	-	-
MHF-16D1	32	20	4.3	7.5	58	M4×0.7	4	18	5.5	20	43	3H9 ^{h8} /d9 ^{h8}	3	-	-	-	-
MHF-20D	20	25	5.2	10	40	M4×0.7	4	16	7.5	24	52	3H9 ^{h8} /d9 ^{h8}	3	-	-	-	-
MHF-20D1	40	25	5.2	10	68	M4×0.7	4	20	8	24	52	3H9 ^{h8} /d9 ^{h8}	3	-	-	-	-

Type	AA	BB	CC	DD	EE	FF	GG	HH	II
MHF-8D	17	64.3	72	58	18	32	50	8	5
MHF-12D2	26	94	104	90	27	48	80	18	4.5
MHF-16D2	36	127.5	142	122	37	64	106	26	5.5
MHF-20D2	42	159	174	144	46	80	128	30	8



■ Specification:

Type	16	20	25	32	40	50	63	80	100	125
Fluid	Compressed air									
Acting way	Double acting									
Working pressure(MPa)	0.2~0.6					0.1~0.6				
Ambient and fluid temperature(°C)						-10~60				
Repeated precision (mm)						±0.01				
Maximum frequency of use (1/c.p.m)	120			60			30			
Oil feeding	Not required									
Clamping torque(Nm)	14	25	42	74	118	187	335	500	750	1270
Clamping force(N)	16	28	47	82	130	204	359	525	780	1320
Port size	M3×0.5			M5×0.8			1/8 1/4 3/8			
Magnetic switch	Built-in magnet ring type									

■ Symbol:

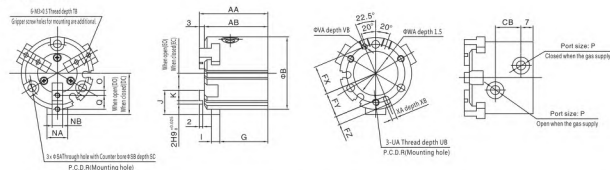


■ Product feature:

- The interior adopts wedge structure to get larger clamping force.
- The front cover of the piston with fenders can reduce metallic sound when the clamping jaw releases.
- The bottom of the body is equipped with dowel holes to improve installation accuracy and repeating disassembling positioning consistency.
- With high clamping repeating precision, it is easy for automation equipment to install and use.
- Various series and standard pneumatic finger types are optional for customers to clamp different kinds of working pieces.

■ Dimension(mm):

■ MHS3-16D-25D



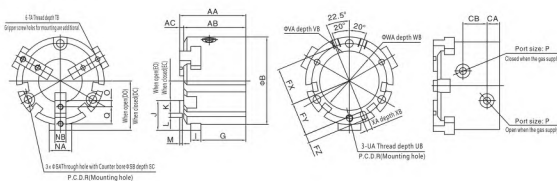
Type	AA	AB	B	CB	DC	DO	EC	EO	FX	FY	FZ	G	I	J	K	NA	NB	O	P	Q	R
MHS3-16D	35	32	30	11	15	17	5	7	12.5	11	3	25	4	10	4	8	5H9 ^{h8} /d9 ^{h8}	2	M3X0.5	6	25
MHS3-20D	38	35	36	13	18	20	6	8	14.5	13	3	27	5	12	5	10	6H9 ^{h8} /d9 ^{h8}	2.5	M5X0.8	7	29
MHS3-25D	40	37	42	15	21	24	7	10	17	14.5	5	28	5	14	6	12	6H9 ^{h8} /d9 ^{h8}	3	M5X0.8	8	34

Type	SA	SB	GC	TB	UA	UB	VA	VB	WA	XA	XB
MHS3-16D	3.4	6.5	8	5	M3X0.5	4.5	2H9 ^{h8} /d9 ^{h8}	2	17H9 ^{h8} /d9 ^{h8}	2H9 ^{h8} /d9 ^{h8}	2
MHS3-20D	3.4	6.5	8.5	6	M3X0.5	6	2H9 ^{h8} /d9 ^{h8}	2	21H9 ^{h8} /d9 ^{h8}	2H9 ^{h8} /d9 ^{h8}	2
MHS3-25D	4.5	8	10	6	M4X0.7	6	3H9 ^{h8} /d9 ^{h8}	3	26H9 ^{h8} /d9 ^{h8}	3H9 ^{h8} /d9 ^{h8}	3

Parallel Open and Close Type

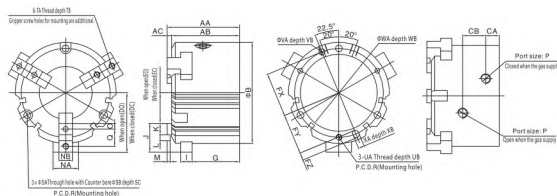
■ Dimension(mm):

■ MHS3-32D-80D



Type	AA	AB	AC	B	CA	CB	CC	DC	DO	EC	EO	FX	FY	FZ	G	H	I	J	K	L	M	NA	NB
MHS3-32D	44	41	3	52	8	16	28	32	8	12	22	19.5	5	30.5	6	20	9	2H9 ^{+0.025} ₀	2	14	B9 ^{+0.036} ₀		
MHS3-40D	47	44	3	62	9	17	31	35	10	14	26.5	23.5	6	32	7	21	9	3H9 ^{+0.025} ₀	2	16	B9 ^{+0.036} ₀		
MHS3-50D	55	52	3	70	9	20	35	41	11	17	31	28	6	37.5	9	24	10	4H9 ^{+0.030} ₀	2	18	10H ^{+0.036} ₀		
MHS3-63D	66	62	4	86	12	22	43	51	15	23	38	34.5	7	44	11	28	11	6H9 ^{+0.030} ₀	3	24	12H ^{+0.040} ₀		
MHS3-80D	82	77	5	106	13.5	27	53.5	63.5	21.5	31.5	47.5	43.5	8	56	12	32	12	8H9 ^{+0.034} ₀	4	28	14H ^{+0.040} ₀		
Type	OA	OB	OC	OD	OE	OF	OG	OH	OI	OJ	OK	OL	OM	ON	OO	OP	OQ	OR	OS	OT	OU	OV	OW
MHS3-32D	4.5	M5×0.8	11	44	4.5	8	9	M4×0.7	8	M4×0.7	6	3H9 ^{+0.025} ₀	3	34H9 ^{+0.040} ₀	2	3H9 ^{+0.025} ₀	3	6					
MHS3-40D	4.5	M5×0.8	12	53	5.5	9.5	9	M4×0.7	8	M5×0.8	7.5	4H9 ^{+0.030} ₀	4	42H9 ^{+0.040} ₀	2	4H9 ^{+0.030} ₀	4	8					
MHS3-50D	5	M5×0.8	14	62	5.5	9.5	12	M5×0.8	10	M5×0.8	10	4H9 ^{+0.030} ₀	4	52H9 ^{+0.040} ₀	2	4H9 ^{+0.030} ₀	4	7					
MHS3-63D	5.5	M5×0.8	17	76	6.6	11	14	M5×0.8	10	M6×1	9	5H9 ^{+0.030} ₀	5	65H9 ^{+0.040} ₀	2.5	5H9 ^{+0.030} ₀	5	7.5					
MHS3-80D	6	PT1/8	20	95	6.6	11	19	M6×1	12	M6×1	12	6H9 ^{+0.030} ₀	6	82H9 ^{+0.040} ₀	3	6H9 ^{+0.030} ₀	6	8					

■ MHS3-100D-125D

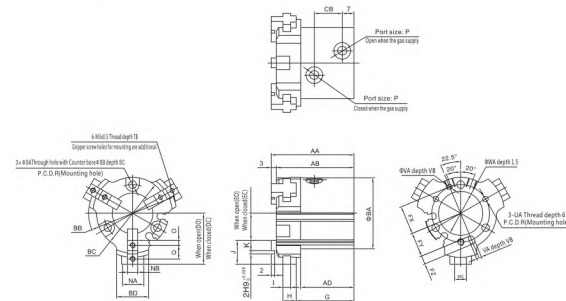


Type	AA	AB	AC	B	CA	CB	CC	DC	DO	EC	EO	FX	FY	FZ	G	H	I	J	K	L	M	NA	NB
MHS3-100D	96	90	6	134	18	30.6	66	78	28	40	59	54	10	63	15	38	15	8H9 ^{+0.036} ₀	4	34	18H ^{+0.040} ₀		
MHS3-125D	122	114	8	166	23.5	38	82	98	30	46	74	68	12	84	18	52	21	10H9 ^{+0.036} ₀	6	40	22H ^{+0.040} ₀		
Type	OA	OB	OC	OD	OE	OF	OG	OH	OI	OJ	OK	OL	OM	ON	OO	OP	OQ	OR	OS	OT	OU	OV	OW
MHS3-100D	7.5	PT1/4	23	118	9	14	21	M6×1.25	16	M8×1.25	16	8H9 ^{+0.036} ₀	8	102H9 ^{+0.040} ₀	4	8H9 ^{+0.036} ₀	4						
MHS3-125D	10.5	PT3/8	31	148	11	17.5	34	M10×1.5	20	M10×1.5	20	10H9 ^{+0.036} ₀	8	130H9 ^{+0.040} ₀	6	10H9 ^{+0.036} ₀	8						

Parallel Open and Close Type

■ Dimension(mm):

■ MHSL3-16D-25D



Type	AA	AB	AD	BA	BB	BC	BD	CB	CD	DO	DC	EO	EC	FX	FY	FZ	G	H	I	J	K	NA
MHSL3-16D	43.5	40.5	28	30	40	30.6	12	14	23.5	18.5	13.5	8.5	12.5	11	3	30.5	7	4	10	4	8	
MHSL3-20D	46	43	29	36	45	36.6	16	14	26	21	14	9	14.5	13	3	32	8	4	12	5	11	
MHSL3-25D	49	46	31.5	42	52	42.6	19	16.5	30	24	16	10	17	14.5	5	34.2	7.8	4.5	14	6	13	
Type	NB	NC	O	P	Q	R	SA	SB	SC	TD	UA	VA	VB	WA	XA	XB						
MHSL3-16D	5h9 ^{+0.006} ₀	5	2	M3×0.5	6	25	3.4	6.5	5	5	M3×0.5	2H9 ^{+0.005} ₀	2	17H9 ^{+0.040} ₀	2H9 ^{+0.005} ₀	2						
MHSL3-20D	6h9 ^{+0.006} ₀	7	2.5	M5×0.8	7	29	3.4	6.5	8	6	M3×0.5	2H9 ^{+0.005} ₀	2	21H9 ^{+0.040} ₀	2H9 ^{+0.005} ₀	2						
MHSL3-25D	6h9 ^{+0.006} ₀	7	3	M5×0.8	8	34	4.5	8	8	6	M4×0.7	3H9 ^{+0.005} ₀	3	26H9 ^{+0.052} ₀	3H9 ^{+0.005} ₀	3						



Symbol:

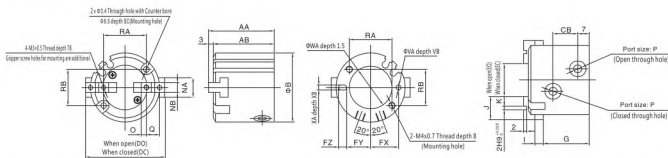


Product feature:

1. The interior adopts wedge structure to get larger clamping force.
2. The front cover of the piston with fenders can reduce metallic sound when the clamping jaw releases.
3. The bottom of the body is equipped with dowel holes to improve installation accuracy and repeating disassembling positioning consistency.
4. With high clamping repeating precision, it is easy for automation equipment to install and use.
5. Various series and standard pneumatic finger types are optional for customers to clamp different kinds of working pieces.

Dimension(mm):

MHS2-16-25D



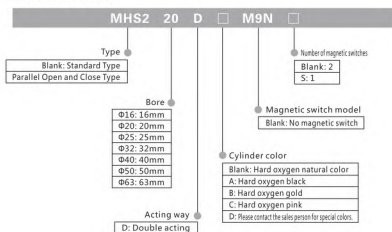
Type	AA	AB	B	CA	CB	DC	DO	EC	EO	FX	FY	FZ	G	I	J	H	NA	NB	O	P	Q
MHS2-16D	35	32	30	11	30	34	10	14	12.5	11	3	25	4	10	4	8	6h9 ^{+0.015} _{-0.010}	2	M3X0.5	6	M3X0.5
MHS2-20D	38	35	36	13	36	40	12	16	14.5	13	3	27	5	12	5	10	6h9 ^{+0.015} _{-0.010}	2.5	M5X0.8	7	M5X0.8
MHS2-25D	40	37	42	15	42	48	14	20	17	14.5	5	28	5	14	6	12	6h9 ^{+0.015} _{-0.010}	3	M5X0.8	8	M5X0.8

Type	RA	RB	SC	TB	VA	VB	WA	XA	XB
MHS2-16D	18	16	8	5	2H9 ^{+0.015} _{-0.010}	2	17H9 ^{+0.015} _{-0.010}	2H9 ^{+0.015} _{-0.010}	2
MHS2-20D	24	18	9.5	6	2H9 ^{+0.015} _{-0.010}	2	21H9 ^{+0.015} _{-0.010}	2H9 ^{+0.015} _{-0.010}	2
MHS2-25D	26	22	10	6	3H9 ^{+0.015} _{-0.010}	3	26H9 ^{+0.015} _{-0.010}	3H9 ^{+0.015} _{-0.010}	3

Specification:

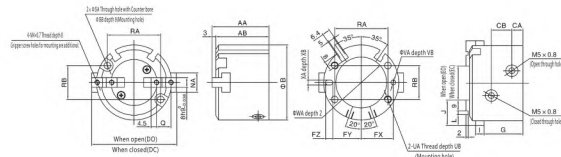
Type	16	20	25	32	40	50	63
Fluid	Compressed air						
Acting way	Double acting						
Working pressure(MPa)	0.2~0.6			0.1~0.6			
Ambient and fluid temperature(°C)				-10~60			
Repeated precision (mm)				±0.01			
Maximum frequency of use (c.p.m)	120			60			
Oil feeding							
Clamping torque(Nm)	21	37	63	111	177	280	502
Israted clamping	23	42	71	123	195	306	537
Port size	M3×0.5			M5×0.8			
Magnetic switch	Built-in magnet ring type						

How to order:



Dimension(mm):

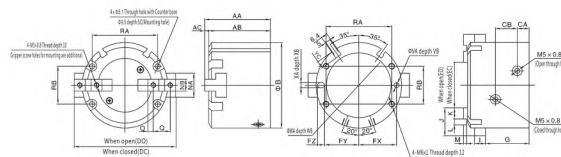
MHS2-32D-40D



Type	AA	AB	B	CA	CB	DC	DO	EC	EO	FX	FY	FZ	G	I	J	L
MHS2-32D	44	41	56	8	16	56	64	16	24	23	20.5	5	30.5	6	20	2H9 ^{+0.015} _{-0.010}
MHS2-40D	47	44	62	9	17	62	70	20	28	26.5	23.5	6	32	7	21	3H9 ^{+0.015} _{-0.010}

Type	NA	Q	RA	RB	SA	SB	UA	UB	VA	VB	WA	XA	XB
MHS2-32D	14	11	38	25	4.5	8	M5X0.8	10	3H9 ^{+0.015} _{-0.010}	3	34H9 ^{+0.015} _{-0.010}	3H9 ^{+0.015} _{-0.010}	3
MHS2-40D	16	12	44	28	5.5	9.5	M6x1	12	4H9 ^{+0.015} _{-0.010}	4	42H9 ^{+0.015} _{-0.010}	4H9 ^{+0.015} _{-0.010}	4

MHS2-50D-63D



Type	AA	AB	AC	B	CA	CB	CC	DO	EC	EO	FX	FY	FZ	G	I	J	K	L
MHS2-50D	55	52	3	70	9	20	70	82	22	34	31	28	6	37.5	9	24	10	4H9 ^{+0.015} _{-0.010}
MHS2-63D	66	62	4	86	12	22	86	102	30	46	38	34.5	7	44	11	28	11	6H9 ^{+0.015} _{-0.010}

Type	M	NA	NB	O	Q	RA	RB	SC	VA	VB	WA	WB	XA	XB	YC
MHS2-50D	2	18	10H9 ^{+0.015} _{-0.010}	5	14	52	34	12	4H9 ^{+0.015} _{-0.010}	4	52H9 ^{+0.015} _{-0.010}	2.5	4H9 ^{+0.015} _{-0.010}	4	7
MHS2-63D	3	24	12H9 ^{+0.015} _{-0.010}	5.5	17	66	38	14	5H9 ^{+0.015} _{-0.010}	5	65H9 ^{+0.015} _{-0.010}	2.5	5H9 ^{+0.015} _{-0.010}	5	7.5



■ Symbol:



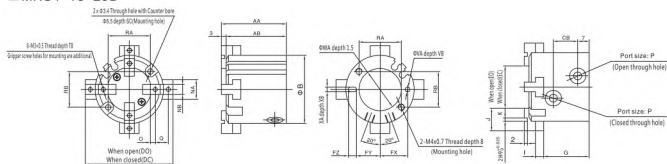
■ **Product feature:**



1. The interior adopts wedge structure to get larger clamping force.
2. The front cover of the piston with fenders can reduce metallic sound when the clamping jaw releases.
3. The bottom of the body is equipped with dowel holes to improve installation accuracy and repeating disassembling positioning consistency.
4. With high clamping repeating precision, it is easy for automation equipment to install and use.
5. Various series and standard pneumatic finger types are optional for customers to clamp different kinds of working pieces.

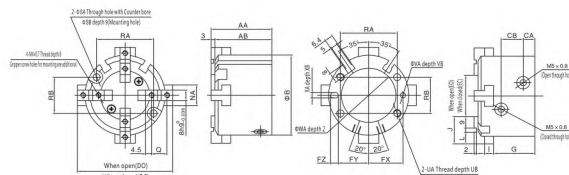
■ Dimension(mm):

■ MHS4-16~25D

[illegible]

■ Dimension(mm):

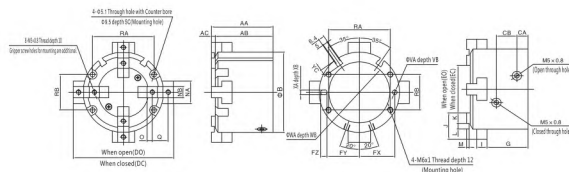
■ MHS4-32~40D



Type	AA	AB	B	CA	CB	DC	DO	EC	EO	FX	FY	FZ	G	I	J	L
MHS4-32D	44	41	56	8	16	60	68	20	28	23	20.5	5	30.5	6	20	2H9 ^{+0.025} ₀
MHS4-40D	47	44	62	9	17	66	74	24	32	26.5	23.5	6	32	7	21	3H0 ^{+0.025} ₀

Type	NA	O	RA	RB	SA	SB	UA	UB	VA	VB	WA	XA	XB
MHS4-32D	14	11	38	25	4.5	8	M5×0.8	10	3H9 ^{+0.025} ₀	3	34H9 ^{+0.062} ₀	3H9 ^{+0.025} ₀	3
MHS4-40D	16	12	44	28	5.5	9.5	M6×1	12	4H9 ^{+0.030} ₀	4	42H9 ^{+0.062} ₀	4H9 ^{+0.030} ₀	4

■ MHS4-50~63D



Type	AA	AB	AC	B	CA	CB	DC	DO	EC	EO	FX	FY	FZ	G	I	J	K	L	M
MHS4-50D	55	52	3	70	9	20	74	86	26	38	31	28	6	37.5	9	24	10	4H9 ^{+0.030} ₀	2
MHS4-63D	66	62	4	86	12	22	91	107	35	51	38	34.5	7	44	11	28	11	6H9 ^{+0.030} ₀	3

Type	NA	NB	C	Q	RA	RB	SC	VA	VB	WA	WB	XA	XB	YC
MHS4-50D	18	10h9	5	14	52	34	12	4H9 ^{+0.030} ₀	4	52H9 ^{+0.074} ₀	2	4H9 ^{+0.030} ₀	4	7
MHS4-63D	24	12h9	5.5	17	66	38	14	5H9 ^{+0.033} ₀	5	65H9 ^{+0.074} ₀	2.5	5H9 ^{+0.030} ₀	5	7.5



■ Specification:

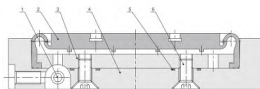
Type	EV-20/75-5	EV-20/120-5
Fluid	Compressed air	
Structure Feature	Diaphragm cylinder	
Working pressure (Mpa)	0.5	
Ambient temperature (°C)	-20~40	

Note: Various specifications can be customized.

■ Product feature:

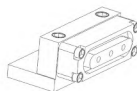
EV series without piston rod, with diaphragm and a significantly shorter stroke, clamps workpiece with rough surface quickly, suitable for all types of attaching & detaching tools. Flat structure and strong clamp force, especially for slender workpiece. Only work with close fitting the workpiece and with reset function for high speed movement, due to no cushioning.

■ Inner structure drawing:

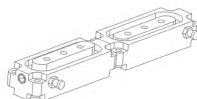


Number	Name	Number	Name	Number	Name
1	Membran seal set screw	3	Platen	5	O-ring
2	Membrane	4	Cylinder barrel	6	Membran seal set screw

■ Accessories mounting type:

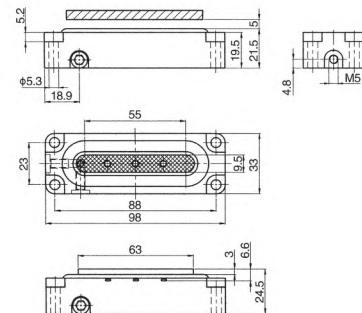


■ Mounting type:

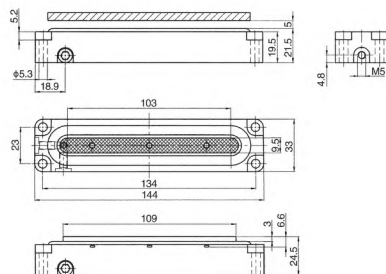


■ Dimension(mm):

■ EV-20/75-5



■ EV-20/120-5





Symbol:



Product feature:

1. Magnetic coupling rodless cylinder: No mechanical connection between piston and slide block with excellent sealing performance.
2. The action of the piston is transmitted to the external slide blocks through magnetic coupling force without piston rod. The installation space is smaller than ordinary cylinder while the maximum stroke is bigger than ordinary cylinder.
3. Both ends of the cylinder are equipped with adjustable buffer and fixed buffer device. So the reversing action is steady without impact to avoid mechanical damage.
4. The piston chamber separates from slide block to prevent dust and dirt from getting into the system and prolong the service life of the cylinder.

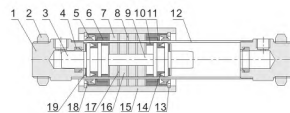
Specification:

Type	16	20	25	32	40
Motion	Double acting				
Fluid	Compressed air				
Working pressure (MPa)	0.15~0.7				
Warrant endure pressure (MPa)	1				
Ambient temperature range (°C)	-10~60				
Speed range (mm/s)	50~400				
Cushion type	Adjustable cushion+fixed bumper				
Port size	M5x0.8	1/8"	1/8"	1/4"	1/4"
Safety Retention Force (N)	140	200	360	550	850

How to order:

CY3B R 20 x 200 LB			
Specification	Installation type	Mounting type	
CY3B Magnetic Coupling Rodless Cylinder	Blank: Standard type P: Size specification P type F: Size specification F type	Blank: No mounting accessories LB: Foot fixed type FA: Flange fixed type	
	Stroke		
	Bore		
	Φ6 Φ32		
	Φ10 Φ40		
	Φ15 Φ50		
	Φ20 Φ63		
	Φ25		

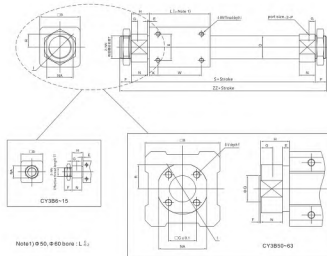
Inner structure drawing:



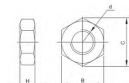
Number	Name	Number	Name	Number	Name
1	Guide rod end cover	8	Magnet spacer	15	Body
2	Nut	9	Connecting rod	16	Magnet
3	Piston	10	Wearing ring	17	Magnet spacer
4	Buffer sealing ring	11	End cover	18	Flat washer
5	Dustproof	12	Stainless steel tube	19	Fenders
6	Wearing ring	13	Retaining ring for hole		
7	Magnet	14	Sealing ring		

Dimension(mm):

CY3B



2 Nuts used for mounting



Type	Φ	W	H	Q
CY3B5	M6x1	4	8	9.2
CY3B10, CY3B15	M10x1	4	14	16.2
CY3B20	M20x1.5	8	26	30
CY3B25, CY3B32	M26x1.5	8	32	37
CY3B40	M32x2	10	41	47.3

Port/Type	B	C	D	E	F	G	H	I	J	K	L	M	N	MM	N	MM
6	17	-	7.6	4	8	5	13.5	-	4.5	5	35	M3X0.5	9.5	10		
10	25	-	12	1.5	9	5	12.5	-	4.5	4	38	M3X0.5	11	14		
15	35	-	16.6	2	10	5.5	13	-	6	11	57	M4X0.7	11	17		
20	36	-	21.6	2	13	7.5	20	28	6	8	66	M4X0.7	18	24		
25	46	-	26.4	2	13	7.5	20.5	34	8	10	70	M5X0.8	18.5	30		
32	60	-	33.6	2	16	8	22	40	8	15	80	M6X1	20	36		
40	70	-	41.6	3	16	11	29	50	10	16	92	M6X1	26	46		
50	86	32	52.4	8	2	14	33	58	12	25	110	M8X1.25	25	55		
63	100	38	65.4	8	2	14	33	72	12	26	122	M8X1.25	25	69		

Port/Type	NN	Q	R	S	T	V	W	X	Y	Z	P	
6	M6X1	-	-	62	6.5	-	25	10	-	78	M3X0.5	
10	M10X1	-	-	63	7.5	-	30	16	-	81	M5X0.8	
15	M10X1	-	-	83	8	-	35	19	-	103	M5X0.8	
20	M20X1.5	-	-	12	106	10	-	50	25	-	332	PT1/8
25	M26X1.5	-	-	15	111	10	-	50	30	-	137	PT1/8
32	M26X1.5	-	-	18	124	13	-	50	40	-	156	PT1/8
40	M32X2	-	-	23	150	13	-	60	40	-	182	PT1/4
50	-	30	27.5	176	-	M8X1.25	60	60	16	180	PT1/4	
63	-	32	34.5	188	-	M10X1.5	70	70	16	192	PT1/4	

Magnetic Coupling Rodless Cylinder(Guiding Rod Type)



■ Symbol:



■ Product feature:

1. Magnetic coupling rodless cylinder: No mechanical connection between piston and slide block with excellent sealing performance.
2. The action of the piston is transmitted to the external slide blocks through magnetic coupling force without piston rod. The installation space is smaller than ordinary cylinder while the maximum stroke is bigger than ordinary cylinder.
3. Both ends of the cylinder are equipped with adjustable buffer and fixed buffer device. So the reversing action is steady without impact to avoid mechanical damage.
4. The piston chamber separates from slide block to prevent dust and dirt from getting into the system and prolong the service life of the cylinder.
5. With double guiding rod structure and high guiding precision, it can bear a certain lateral or eccentric load.

■ Specification:

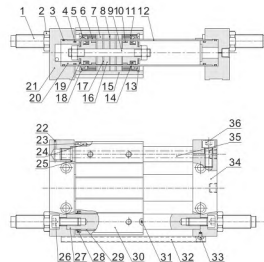
Type	15	20	25	32	40
Motion	Double acting				
Fluid	Compressed air				
Working pressure (MPa)	0.18~0.7				
Warrant endure pressure (MPa)	1				
Ambient temperature range (°C)	-10~60				
Speed range (mm/s)	50~400				
Cushion type	Adjustable buffer + oil buffer				
Port size	M5x0.8	1/8"			1/4"
Safety Retention Force (N)	140	200	360	550	850

■ How to order:

CY1SG 20x100 S A			
Specification CY1SG Magnetic Coupling Rodless Cylinder (Guiding Rod Type)	Bore Φ15 Φ20 Φ25 Φ32 Φ40	Cushion type	Blank: 2 adjusting screws A: 2 hydraulic buffer
		Magnet code	Blank: without magnet S: with magnet
		Stroke	

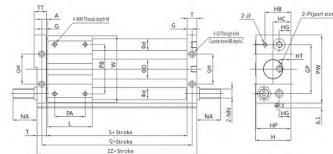
Magnetic Coupling Rodless Cylinder(Guiding Rod Type)

■ Inner structure drawing:



■ Dimension(mm):

■ CY1SG



Port Symbol	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z
15	7.5	9.5	5.4	16.6	12	6.5	52	40	28	29.5	20.5	15	39	20.5	MAX0.7	60										
20	10	9.5	5.4	21.6	16	8.5	62	46	36	37.5	24	19	45	20	MAX1	70										
25	10	11	6.5	26.4	16	8.5	70	54	40.5	40.5	27.5	15	53	21	MAX1	70										
32	12.5	14	8.6	33.6	20	9.5	86	66	50	50	33	26	64	24	MAX1.25	85										
40	12.5	14	8.6	41.6	25	10.5	104	76	55.5	55.5	38	27	74	27	MAX1.25	95										

Port Symbol	LD	M	MM	NA	NN	P	PA	PB	PW	Q	QW	S	T	TF	W	Z
15	5.8	8	MSX0.8	28	MAX1	MSX0.8	30	50	75	75	30	62	12.5	17.5	73	92
20	5.8	10	MAX1	28	MAX1	PT1/8"	40	70	89	90	36	73	16.5	21.5	87	111
25	7	10	MAX1	49	MAX1.5	PT1/8"	40	70	98	90	42	73	16.5	21.5	96	111
32	9	12	MAX1.25	52	MAX1.5	PT1/8"	40	75	118	110	50	91	18.5	24.5	116	134
40	9	12	MAX1.25	51	MAX1.5	PT1/4"	65	105	141	120	64	99	20.5	26.5	139	146

Number	Name	Number	Name	Number	Name
1	Hydraulic buffer	13	Retaining ring for hole	25	O-ring
2	Nut	14	Y-ring	26	Socket head cap screw
3	O-ring	15	Body	27	Guide rod 2
4	O-ring	16	Magnet	28	Dustproof leading ring
5	Dustproof	17	Magnet spacer	29	Bearing
6	Wearing ring	18	Flat washer	30	Body
7	Magnet	19	Fenders	31	Anti-collision block
8	Magnet spacer	20	End cover	32	Inductive switch fixed stop
9	Connecting rod	21	End plate specified on left	33	Screw
10	Wearing ring	22	Steel ball	34	End plate specified on right
11	End cover	23	Locating gasket	35	Guide rod 1
12	Stainless steel tube	24	Magnet	36	Socket head cap screw

Magnetic Coupling Rodless Cylinder(Accurate Guiding Rod Type)

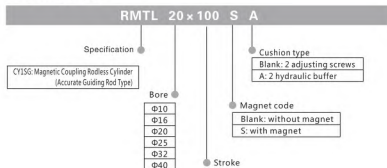
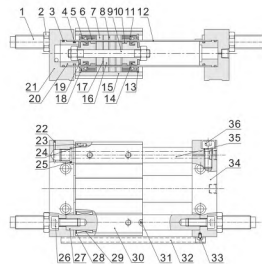
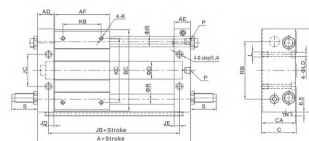
Symbol:

Product feature:

1. Magnetic coupling rodless cylinder: No mechanical connection between piston and slide block with excellent sealing performance.
2. The action of the piston is transmitted to the external slide blocks through magnetic coupling force without piston rod. The installation space is smaller than ordinary cylinder while the maximum stroke is bigger than ordinary cylinder.
3. Both ends of the cylinder are equipped with adjustable buffer and fixed buffer device. So the reversing action is steady without impact to avoid mechanical damage.
4. The piston chamber separates from slide block to prevent dust and dirt from getting into the system and prolong the service life of the cylinder.
5. With double guiding rod structure and high guiding precision, it can bear a certain lateral or eccentric load.

Specification:

Type	10	16	20	25	32	40
Motion	Double acting					
Fluid	Compressed air					
Working pressure (MPa)	0.18~0.7					
Warrant endure pressure (MPa)	1					
Ambient temperature range (°C)	-10~60					
Speed range (mm/s)	50~400					
Cushion type	Adjustable buffer + oil buffer					
Port size	M5×0.8		1/8"		1/4"	
Safety Retention Force (N)	60	140	200	320	550	850

How to order:

Magnetic Coupling Rodless Cylinder(Accurate Guiding Rod Type)
Inner structure drawing:

Dimension(mm):
Φ10~Φ40


Inner Symbol	A	AD	AE	AF	B	BC	C	CA	Q	J	JA	JB	JC	JD	JE
10	111	20.5	20.5	68	80	77	34	33	11.2	8	4	85	26	7.5	7.5
16	122	22.5	22.5	75	95	92	40	39	14	8.5	5	90	30	8.5	8.5
20	139	25.5	25.5	86	120	117	46	45	22.8	9.5	5	105	40	8.5	8.5
25	159	25.5	25.5	86	130	127	54	53	27.8	11	6.5	105	50	8.5	8.5
32	159	28.5	28.5	100	160	157	66	64	35	14	8	121	60	9.5	9.5
40	209	35.5	33.5	136	190	187	78	74	43	14	8	159	84	10.5	10.5

Inner Symbol	K	KB	KL	L	LD	P	R	RB	S
10	M4×0.7depth8	30	60	M5×0.8depth9.5	4.5	M5×0.8	10	52	16.5
16	M5×0.8depth10	45	70	M6×1.0depth9.5	5.5	M6×0.8	12	65	14.5
20	M6×1.0depth10	50	90	M6×1.0depth9.5	5.5	PT1/8"	16	80	21.5
25	M6×1.0depth10	60	100	M8×1.25depth10	7	PT1/8"	16	90	39.5
32	M8×1.25depth12	70	120	M10×1.5depth15	8.5	PT1/8"	20	110	57.5
40	M8×1.25depth12	90	140	M10×1.5depth15	8.5	PT1/4"	25	130	49.5



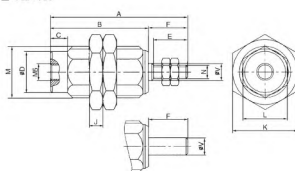
Symbol:



Product feature:

1. With the whole cylinder body surface attaching screw thread, it can be adapt to various occasions.
2. This series cylinders are especially suitable for the functions of clamping, fixing, limiting and positioning.
3. Adjusting the screw-in depth can change the stroke terminal position of the cylinder.

Dimension(mm):

 LWD Dimension
 ■ Φ12~Φ16


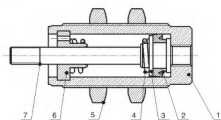
Specification:

type	6	8	10	16
Motion	Single acting type			
Fluid	Compressed air			
Stroke	5,10,15			
Working pressure (MPa)	0.2~0.8			
Ambient temperature (°C)	-10~60			
Port size	M5×0.8			

How to order:

LWD 6 x 10 M	
● Specification	● Screw thread type
LWD: Screw Thread Cylinder	M: top of piston with screw thread Blank: top of piston without screw thread
● Bore	● Stroke
Φ6	5
Φ8	7
Φ10	10
Φ16	15

Inner structure drawing:



Number	Name
1	Cu tube with nickel
2	NBR Y-ring
3	Al piston
4	Stainless steel spring
5	steel screw cap with nickel
6	Cu axial with nickel
7	Stainless steel piston rod



SSC series all stainless steel tie rod cylinder

Bore (mm)	32	40	50	63	80	100
Motion	Double acting					
Series	SSC,SSCD,SSCJ					
Working pressure range(MPa)	0.1~1.0MPa					
Operating speed(mm/sec)	30~800					
Ambient temperature(°C)	-20~80					
Cushion	Adjustable air cushion on both ends					
Port size(G)	1/8"	1/4"	3/8"	1/2"		

NPT and BSPT port threads are optional

Product application and Dimension:



SCG1 series all stainless steel round cylinder

Bore (mm)	20	25	32	40	50	63	80	100
Motion	Double acting							
Fluid	Compressed air							
Series	0.05~1.0MPa							
Working pressure range(MPa)	50~1000							
Operating speed(mm/sec)	With auto switch:-10~+60,Without auto switch:-10~+7							
Ambient temperature(°C)	Adjustable air cushion on both ends/bumper							
Cushion	Adjustable air cushion on both ends/bumper							
Port size(G)	1/8"	1/4"	3/8"	1/2"				

NPT and BSPT port threads are optional



SMAL series all stainless steel round cylinder

Bore (mm)	20	25	32	40
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Motion	Double acting		
Fluid	Compressed air		
Series	SMSAL,SMTAL		
Working pressure range(MPa)	Single acting 0.2~1.0MPa, double acting 0.1~1.0MPa		
Operating speed(mm/sec)	50~1000		
Ambient temperature(°C)	With auto switch -10~+60,Without auto switch -10~+70		
Cushion	Bumper		
Port size(G)	1/8"		1/4"
NPT and BSPT port threads are optional			



SMAL



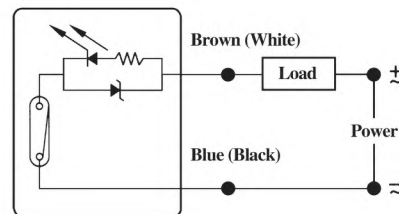
SSDA series all stainless steel compact cylinder

Bore (mm)	20	25	32	40	50	63	80	100
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Motion	Double acting, single acting			
Fluid	Compressed air			
Series	SSDA, SSDAD, SSDAJ			
Working pressure range(MPa)	Single acting 0.2~1.0MPa, double acting 0.1~1.0MPa			
Operating speed(mm/ sec)	Double acting 30~500, single acting 50~500			
Ambient temperature(℃)	-20~80			
Cushion	Bumper			
Port size(G)	M5x0.8	1/8"	1/4"	3/8"
NPT and BSPT port threads are optional				

Magnet Switch

■ Wiring diagram:



■ Technical parameter:

Sensor switch type	Spring voltage range	Max Flow switch	Max contact rating	Impact resistance	Vibration resistance	Ambient temperature	Protection grade	Indicator light	Wire length
CS1-U	5~240V DC/AC	100A Max	10W Max	30G	9G	-10~70°C	IP-67	LED	2M
CS1-F	5~240V DC/AC	100A Max	10W Max	30G	9G	-10~70°C	IP-67	LED	2M
CS1-S	5~240V DC/AC	100A Max	10W Max	30G	9G	-10~70°C	IP-67	LED	2M
CS1-J	5~240V DC/AC	100A Max	10W Max	30G	9G	-10~70°C	IP-67	LED	2M
CS1-J1	5~240V DC/AC	100A Max	10W Max	30G	9G	-10~70°C	IP-67	LED	2M
CS1-G	5~240V DC/AC	100A Max	10W Max	30G	9G	-10~70°C	IP-67	LED	2M
CS1-H	5~240V DC/AC	100A Max	10W Max	30G	9G	-10~70°C	IP-67	LED	2M

■ Product application and Dimension:

Product application and dimension	Match magnet switch type	Switch Size	Switch Installation Drawing	Clamp Name & Code
SC DNG QGB	CS1-U			 PAM - 63 Accessories Type Inner diameter of Cylinder
SU SI	CS1-F			 PI - 63 Accessories Type Inner diameter of Cylinder

Magnet Switch
■ Product application and Dimension:

Product application and dimension	Match magnet switch type	Switch Size	Switch Installation Drawing	Clamp Name & Code
MS MAL	CS1-S			 BK buckle fastener General type: Suitable for cylinder with 63 bore, bigger than 63 bore, can make to order
DNC	CS1-M			Clamp Needless
SDA	CS1-J			Clamp Needless
SDA ADVU	CS1-G			Clamp Needless
CQ	CS1-J1 CS1-H			Clamp Needless

DNC, DNI Series Spare parts of Cylinder: ϕ 32~100

- Conforms to ISO15552 and VDMA24562 Standards
- Bore sizes: ϕ 32,40,50,63,80,100
- Adjustable cushioning at both the ends

DNG, D Series Spare parts of Cylinder: ϕ 32~160

- Conforms to ISO15552 and VDMA24562 Standards
- Bore sizes: ϕ 32,40,50,63,80,100,125,160
- Adjustable cushioning at both the ends

SC Series Spare parts of Cylinder: ϕ 32~200

- Bore sizes: ϕ 32,40,50,63,80,100,125,160,200
- Adjustable cushioning at both the ends

MS Series Spare parts of Cylinder: ϕ 12~40

- Conforms to ISO6432 Standards
- Bore sizes: ϕ 12,16,20,25,32,40

MAL Series Spare parts of Cylinder: ϕ 20~40

- Conforms to ISO6432 Standards
- Bore sizes: ϕ 20,25,32,40

SDA Series Spare parts of Cylinder: ϕ 12~100

- Bore sizes: ϕ 12,16,20,25,32,40,50,63,80,100
- Standard strokes upto 100mm

How to Order

NVBA 40A - 04

Body size

10A	1/4", Knob-operated type
20A	3/8", Knob-operated type
40A	1/2", Knob-operated type
22A	3/8", Air-operated type
42A	1/2", Air-operated type
43A	1/2", Max. operating pressure 1.6 MPa
11A ^{Note 1)}	1/4", Knob-operated type

Pressure increase ratio: Twice

Pressure increase ratio: 2 to 4 times

Thread type ^{Note 1)}

Symbol	Thread type
Nll	Rc
F	G
N	NPT
T	NPTF

Port size

Symbol	Port size	Applicable series
02	1/4	NVBA1 □A
03	3/8	NVBA2 □A
04	1/2	NVBA4 □A

Semi-standard

Symbol	Semi-standard
Nll	Standard product
Z ^{Note 2)}	- Pressure unit on the product name label: psi - Pressure unit on the pressure gauge: MPa and psi

Option

Symbol	Option
Nll	None
G	Pressure gauge
N	Silencer
S	High-noise reduction silencer ^{Note 3)}
GN	Pressure gauge, Silencer
GS	Pressure gauge, High-noise reduction silencer ^{Note 4)}
LN	Elbow silencer ^{Note 5)}
LS	Elbow high-noise reduction silencer ^{Note 5)}
GLN	Pressure gauge, Elbow silencer ^{Note 5)}
GLS	Pressure gauge, Elbow high-noise reduction silencer ^{Note 5)}

Note 1) Refer to "Combination of Thread type and Options."

Pressure gauge



Silencer

Pressure gauge



Elbow silencer

Standard Specifications

Model	NVBA10A-02 NVBA20A-03 NVBA40A-04 NVBA22A-03 NVBA42A-04 NVBA43A-04 NVBA11A-02						
Fluid	Compressed air						
Pressure increase ratio	Twice					2 to 4 times ^{Note 4)}	
Pressure adjustment mechanism	Knob-operated with relief mechanism ^{Note 2)}			Air-operated		Knob-operated with relief mechanism ^{Note 2)}	
Max. flow rate ^{Note 3)} (L/min (ANR))	230	1000	1900	1000	1900	1600	70
Set pressure range (MPa)	0.2 to 2.0	0.2 to 1.0		0.2 to 1.0		0.2 to 1.6	0.4 to 2.0
Supply pressure range (MPa)	0.1 to 1.0	0.1 to 0.9			0.1 to 1.0		
Proof pressure (MPa)	3	1.5			2.4		3
Port size (Rc) (IN/OUT/EXH: 3 locations)	1/4	3/8	1/2	3/8	1/2		1/4
Pressure gauge port size (Rc) (IN/OUT: 2 locations)	1/8						
Tank connection port (with plug) ^{Note 5)}	1/4	3/8	1/2	3/8	1/2	1/4	
Ambient and fluid temperature (°C)	2 to 50 (No freezing)						
Installation	Horizontal						
Lubrication	Grease (Non-lube)						
Weight (kg)	0.84	3.9	8.6	3.9	8.6	8.6	0.89

Note 1) Be sure to secure an air supply capacity of the minimum operating pressure (0.1 MPa) or more.

Note 2) If the OUT pressure is higher than the set pressure by the knob, excess pressure is exhausted from the back of the knob.

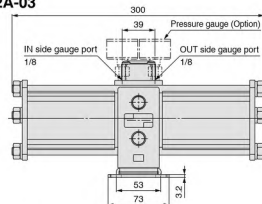
Note 3) Flow rate at IN: OUT = 0.5 MPa. The pressure varies depending on the operating conditions.

Note 4) Set the pressure increase ratio to 2 or more.

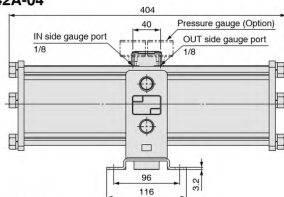
Note 5) The tank connection port cannot be used for applications other than the connection with NVBAT.

Dimensions

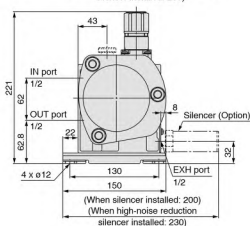
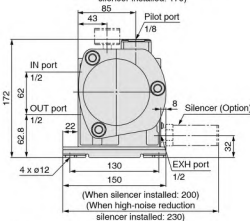
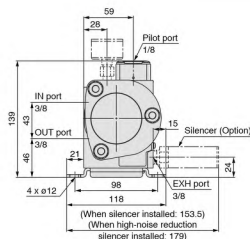
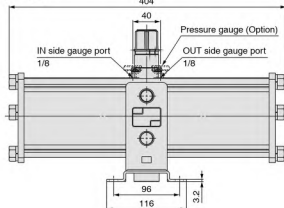
NVBA22A-03



NVBA42A-04



NVBA43A-04



How to Order

- Compact connections are possible with booster regulators.
- It can be used alone as a tank.
- Also partially compatible with overseas standards

NVBAT 05 A1-U-X104

Tank capacity	
Symbol	Internal capacity
05	5 L
10	10 L
20	22 L
38	38 L

Material	
Symbol	Material
A1	Carbon steel
S1	Stainless steel

Safety valve/Pressure gauge set (Note)

Symbol	Applicable model
U	NVBAT05A1, NVBAT10A1, NVBAT05S1, NVBAT10S1
T	NVBAT20A1, NVBAT38A1, NVBAT20S1, NVBAT38S1

Note) When a drain valve is required, please order it separately.
Drain valve part no.: NVBAT-V1
Note) The safety valve/pressure gauge set is not RoHS compliant.



Specifications

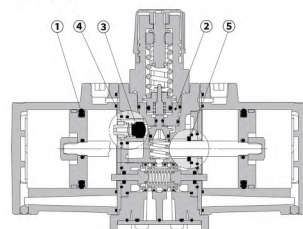
Model	NVBAT05□1-U-X10	AT10□1-U-X10	AT20□1-T-X10	NVBAT38□1-T-X104	
Fluid	Compressed air				
Tank capacity (L)	NVBAT A1-□1-X104 NVBAT S1-□1-X104	5	10	22	38
Max. operating pressure (MPa)	1.5		1.0		
IN port size	3/8		1/2		
OUT port size	3/8	1/2	1/2	3/4	
Proof pressure (MPa)	NVBAT A1-□1-X104 NVBAT S1-□1-X104	2.39	2.05		
Ambient and fluid temperature (°C)	2.40		1.58		
		0 to 75			
Installation	Horizontal (Floor mounting)				
Weight (kg)	NVBAT A1-□1-X104 NVBAT S1-□1-X104	6.6 4.6	11.5 8.5	14 13.9	26 19.6
Material	NVBAT A1-□1-X104 NVBAT S1-□1-X104	Carbon steel (Note 1) (Equivalent to SS400) Stainless steel (Equivalent to stainless steel 304)			
Paint	NVBAT A1-□1-X104 NVBAT S1-□1-X104	Outside: Silver gray, Inside: Phosphate coated treatment			
Surface treatment	NVBAT A1-□1-X104 NVBAT S1-□1-X104	—			
		Outside: Acid cleaning, Sandblasting Inside: Acid cleaning (Note 2)			
Included parts	● Safety valve/Pressure gauge set: Safety valve, Pressure gauge, Piping for tank connections ● Accessories: O-ring, Drain port plug, NVBA connection screw (4 pcs.), Drain port bolt (4 pcs.: only 22 L/38 L) ● Product certificates: Product certificate, Product safety performance supervision test certificate, Product weight certificate, Manufacture license, Product manual, Completion drawing ● Operation manual				

Note 1) Rust may occur in the air tank (carbon steel). It can be removed by installing an air filter (AF series) on the OUT port of the air tank. If the presence of rust may cause problems, we recommend selecting the stainless steel specification.

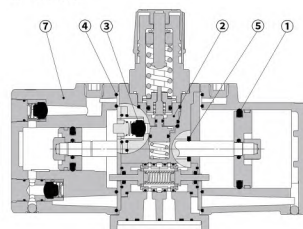
Note 2) There may be scratches, rubbing, stains, or discoloration on the surface of the product which do not affect its function or performance. The external appearance of the welded portion may also vary, but this does not affect the performance of the product.

Construction/Replacement Parts

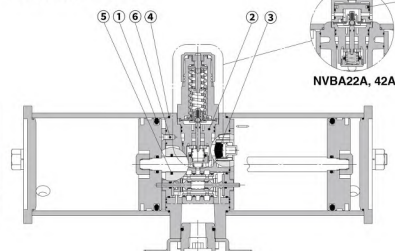
NVBA10A



NVBA11A



NVBA20A, 22A, NVBA40A, 42A, 43A

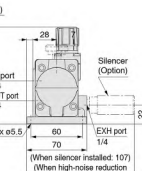
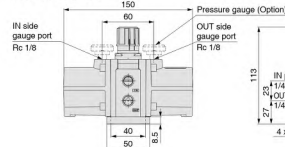


Air-operated type

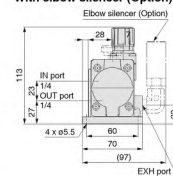
NVBA22A, 42A

Dimensions

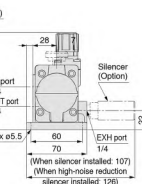
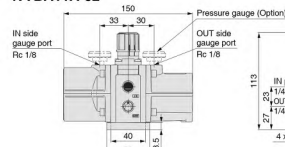
NVBA10A-02



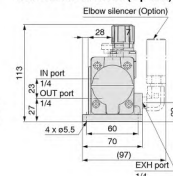
With elbow silencer (Option)



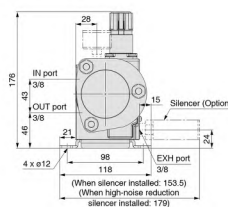
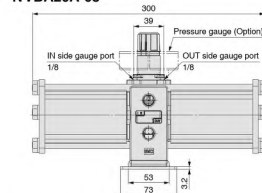
NVBA11A-02



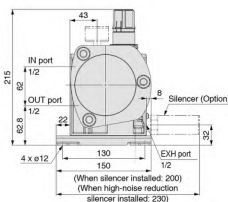
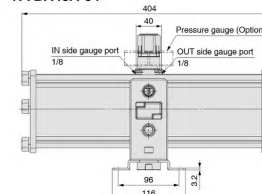
With elbow silencer (Option)



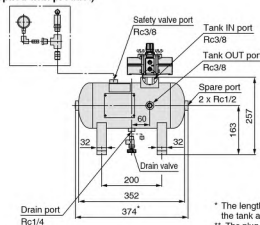
NVBA20A-03



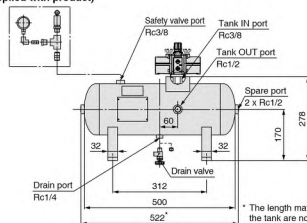
NVBA40A-04



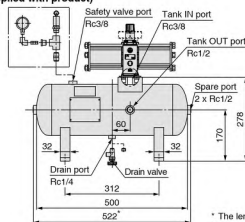
Dimensions

NVBAT05A1-U-X104 **Material: Carbon steel**Safety valve/Pressure gauge set
(Supplied with product)

* The length may be longer than the specification if the plugs mounted on the tank are not fit to the end.
 ** The plug in the spare port has been firmly secured with adhesive. When removing the plug to use the port, be careful so as not to damage the plug.

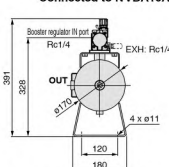
NVBAT10A1-U-X104 **Material: Carbon steel**Safety valve/Pressure gauge set
(Supplied with product)

* The length may be longer than the specification if the plugs mounted on the tank are not fit to the end.
 ** The plug in the spare port has been firmly secured with adhesive. When removing the plug to use the port, be careful so as not to damage the plug.

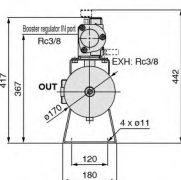
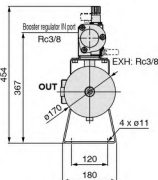
Safety valve/
Pressure gauge set
(Supplied with product)

* The length may be longer than the specification if the plugs mounted on the tank are not fit to the end.
 ** The plug in the spare port has been firmly secured with adhesive. When removing the plug to use the port, be careful so as not to damage the plug.

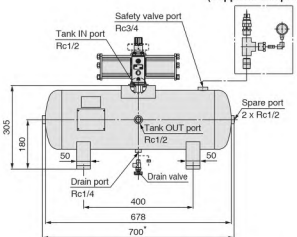
Connected to NVBA10A



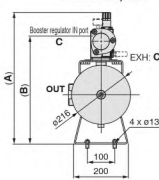
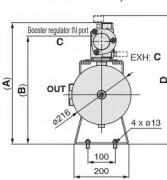
Connected to NVBA20A



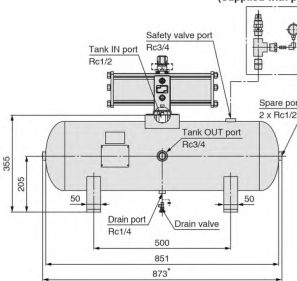
Dimensions

NVBAT20A1-T-X104 **Material: Carbon steel**Safety valve/Pressure gauge set
(Supplied with product)

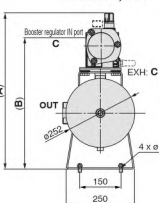
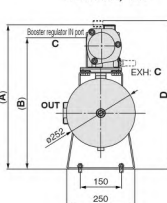
* The length may be longer than the specification if the plugs mounted on the tank are not fit to the end.
 ** The plug in the spare port has been firmly secured with adhesive. When removing the plug to use the port, be careful so as not to damage the plug.

Connected to
NVBA20A, 40AConnected to
NVBA22A, 42A

Booster regulator model	A	B	C	D
NVBA20A	481	394	Rc3/8	—
NVBA40A	520	429.8	Rc1/2	—
NVBA22A	444	394	Rc3/8	469
NVBA42A	477	429.8	Rc1/2	493

NVBAT38A1-T-X104 **Material: Carbon steel**Safety valve/Pressure gauge set
(Supplied with product)

* The length may be longer than the specification if the plugs mounted on the tank are not fit to the end.
 ** The plug in the spare port has been firmly secured with adhesive. When removing the plug to use the port, be careful so as not to damage the plug.

Connected to
NVBA20A, 40AConnected to
NVBA22A, 42A

Booster regulator model	A	B	C	D
NVBA20A	531	444	Rc3/8	—
NVBA40A	570	479.8	Rc1/2	—
NVBA22A	494	444	Rc3/8	519
NVBA42A	527	479.8	Rc1/2	543