

PHEN
TCTIC

*Pneumatic Components & System
Fluid Control Parts*

NINGBO PHEN AUTOMATION CO.,LTD

NINGBO CHINA



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V.20.01







About Us

PHEN Automation is a company who manufactures the Pneumatic and Fluid Control Automation Parts. It was founded in Year 2017 as an associated company from 3 subsidiary companies, each of which has about 20 years of history. The Top Management Team of PHEN has more than 20 years experience in Industrial parts Design, Manufacturing, Quality control and Global business.

PHEN always dedicate themselves to Factory & Process Automation, High cost performance products supporting, Non-standard customized products developing, Automation system design & solution optimization, Supply chain optimization and Marketing support!

PHEN — Your reliable industrial automation partner of China.



Our Products

1. Standard Popular Pneumatic Components & Fluid Valve
2. Japan & Taiwan Brands Standard Pneumatic Products Trading Service
3. High Precision Customized Mechanical Parts
4. Customized Pneumatic Components & Fluid Valve
5. Customized Pneumatic System

Our Capability

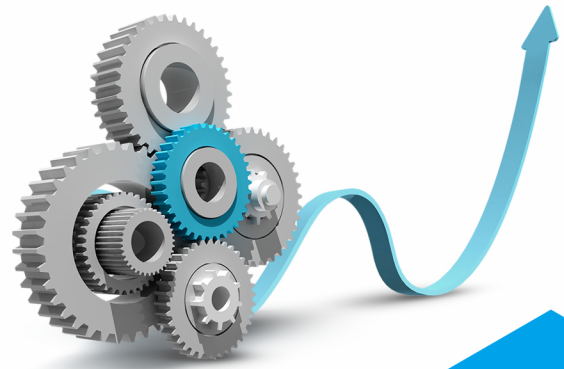
3 Sub companies of China Pneumatic Association Members

20 Years Experience In Pneumatic & Fluid Control Industry

150+ staff & 50+ High Precision CNC Machine Facilities

15 Engineers R&D Team

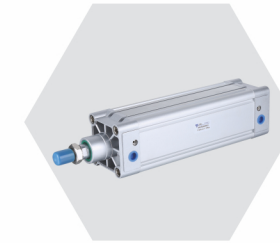
Products accepted in 15+ Global markets.



CATALOG

Our Advantage

- A** Jis & Iso Standard Products Direct Replacement & Fast Delivery
- B** Professional R&d And Sales Engineers Team , Your Best Customized Products Developer
- C** High Quality And Cost Performance Products, Positioning In China Middle To High Level Market
- D** Easy Replacement Policy, Your Responsible & Reliable Partner
- E** Flexible Cooperative Mode, Your Trustworthy Strategic Partner
- F** Platform Of Information & Resource-sharing In Various Industry In China



Air Cylinder

ISO & JIS Standard, High performance, high rigidity, all-round functional products
Complete range of specifications to increase the stability, the application options and to improve the product life.

07-36



Directional Valve

Small size, fast response, high flow rate, energy saving
With indicator light and voltage protection circuit, it has good safety, the air outlet can be changed, and it can be directly piped

37-56



FRL

Complete range of specifications, pipe diameter M5 to 1",
the best tool for factory air source treatment.
Modular structure design, low cost, high quality

57-64



Solenoid Fluid Valve

Various valves which match to different application requirement such as
High Pressure, High Temperature, Corrosive environment etc...
Complete dimensions range from 1/8" to 2" in different orifices
Customized product is optional

65-72



Accessory

Various material and wide product range
High stability and long life

73-92

Air Cylinder

ISO & JIS Standard, High performance, high rigidity, all-round functional products
Complete range of specifications to increase the stability, the application options
and to improve the product life.



DNC Series ISO Standard Cylinder

Ordering Code DNC 63 x 50 - 25 S - LB -

Tube Type
Blank: Square Type
M: Mickey Mouse Type

Series Code
DNC: ISO1552/6431 Standard Double Action Type
DNCD: ISO1552/6431 Standard Two Axis Double Action Type
DNCJ: ISO1552/6431 Two Axis Stroke Adjustable Type

Cylinder Bore

Stroke

Adjust Stroke
25:25mm
50:50mm
75:75mm

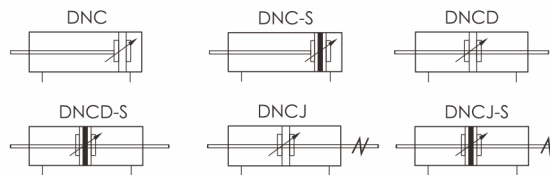
Magnet Code
Blank: Without Magnet
S: With Magnet

Mounting Type
Blank: No Mounting
LB: Front And Back Fixed Bracket
FA: Front Flange
FB: Back Flange
CA: Single Clevis
CB: Double Clevis
SDB: SDB Type

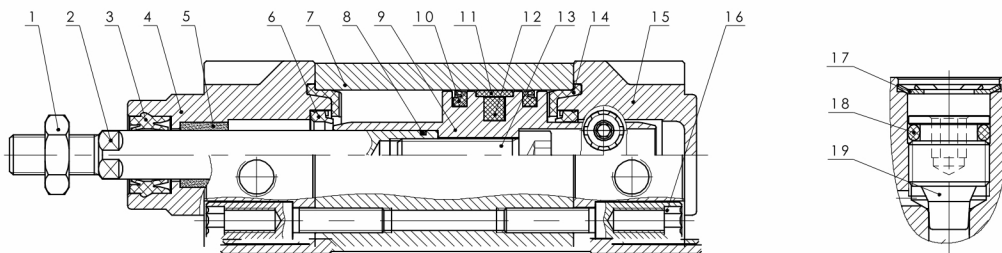
Thread
Blank: G Thread
T: NPT Thread
PT: BSPT Thread



Symbol



Internal Structure



No.	Part Name	Material	No.	Part Name	Material
1	Nut	Carbon steel	11	Wear ring	PTFE
2	Piston rod	S45C Hard chrome carbon steel	12	Magnet	Plastic
3	Piston rod seal	TPU	13	Hexagon screw	Carbon steel
4	Head cover	Aluminum alloy	14	Cushion pad	TPU
5	Composite bearing	Bronze powder	15	Rear cover	Aluminum alloy
6	Cushion seal	TPU	16	Bolt	Carbon steel
7	Barrel	Aluminum alloy	17	Retainer ring	Spring steel
8	O-ring	NBR	18	O-ring	NBR
9	Piston	Aluminum alloy	19	Cushion screw	Brass
10	Piston seal	TPU			

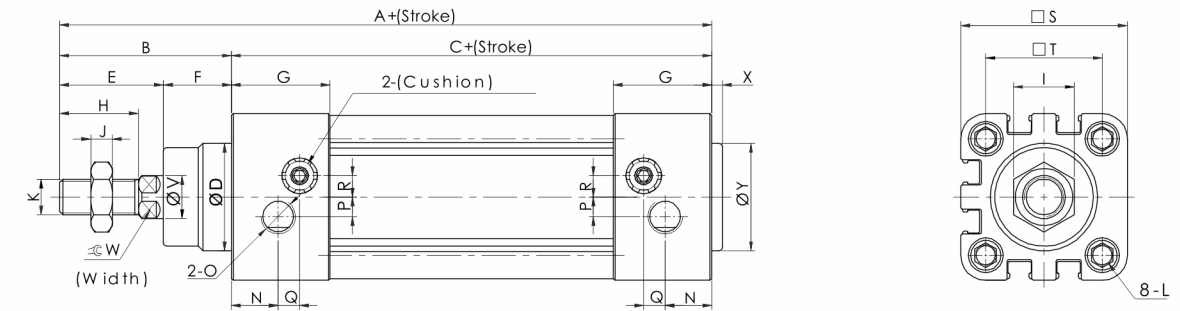
Specification

Basic Type

Bore	(mm)	32	40	50	63	80	100
Acting type		Double acting					
Working medium		Clean air(40μm filtration)					
Working pressure		0.1~1.0Mpa (14.5~145psi/1~10bar)					
Guaranteed pressure		1.5Mpa (215psi/15bar)					
Working temperature	(°C)	-20~80(No freezing)					
Speed range	(mm/s)	30~800					
Cushion type	(mm)	Air cushion					
Cushion stroke		27		30		36	
Mounting type		LB FA FB CA CB CR					
Port size	G/PT/NPT	1/8	1/4		3/8		1/2

Main Dimension

Basic Type



Bore	Sign	A	B	C	D	E	F	G	H	I	J	K
32	(mm)	142	48	94	30	29	19	27.5	22	17	6	M10x1.25
40	(mm)	159	54	105	35	33	21	32	24	17	7	M12x1.25
50	(mm)	175	69	106	40	42	27	31	32	23	8	M16x1.5
63	(mm)	190	69	121	45	42	27	33	32	23	8	M16x1.5
80	(mm)	214	86	128	45	53	33	33	40	26	10	M20x1.5
100	(mm)	229	91	138	55	55	36	37	40	26	10	M20x1.5

Bore	Sign	L	N	O	P	Q	R	S	T	V	W	X	Y
32	(mm)	M6 depth 16	13	1/8"	5.5	6	6	46.5	32.5	12	10	3	30
40	(mm)	M6 depth 16	17	1/4"	6	7.5	8.5	54	38	16	13	3.5	35
50	(mm)	M8 depth 16	15.5	1/4"	7.5	6.5	9.5	64	46.5	20	17	3.5	40
63	(mm)	M8 depth 16	16.5	3/8"	7.5	7.5	11.5	75	56.5	20	17	4	45
80	(mm)	M10 depth 17	16.5	3/8"	8	8.5	12.5	93	72	25	22	4	45
100	(mm)	M10 depth 17	19.5	1/2"	10	7	12	110	89	25	22	4	55

Note:
1. With magnet and no magnet, the dimensions are same.

SI Series ISO Standard Cylinder

Ordering Code **SI 32 x 50 - 25 S - LB - □**

Series Code
SI: ISO1552/6431 Standard Double Action Type
SID: ISO1552/6431 Standard Two Axis Double Action Type
SIJ: ISO1552/6431 Two Axis Stroke Adjustable Type

Cylinder Bore

Stroke

Adjust Stroke
25:25mm
50:50mm
75:75mm

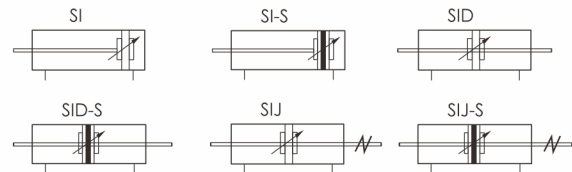
Magnet Code
Blank: Without Magnet
S: With Magnet

Mounting Type
Blank: No Mounting
LB: Front And Back Fixed Bracket
FA: Front Flange
FB: Back Flange
CA: Single Clevis
CB: Double Clevis
SDB: SDB Type

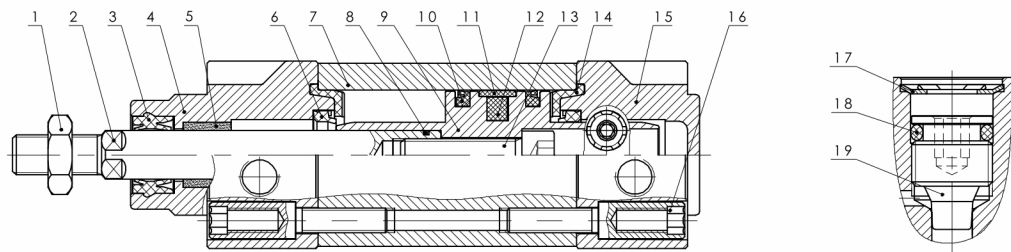
Thread
Blank: G Thread
T: NPT Thread
PT: BSPT Thread



Symbol



Internal Structure



No.	Part Name	Material	No.	Part Name	Material
1	Nut	Carbon steel	11	Wear ring	PTFE
2	Piston rod	S45C Hard chrome carbon steel	12	Magnet	Plastic
3	Piston rod seal	TPU	13	Hexagon screw	Carbon steel
4	Head cover	Aluminum alloy	14	Cushion pad	TPU
5	Composite bearing	Bronze powder	15	Rear cover	Aluminum alloy
6	Cushion seal	TPU	16	Bolt	Carbon steel
7	Barrel	Aluminum alloy	17	Retainer ring	Spring steel
8	O-ring	NBR	18	O-ring	NBR
9	Piston	Aluminum alloy	19	Cushion screw	Brass
10	Piston seal	TPU			

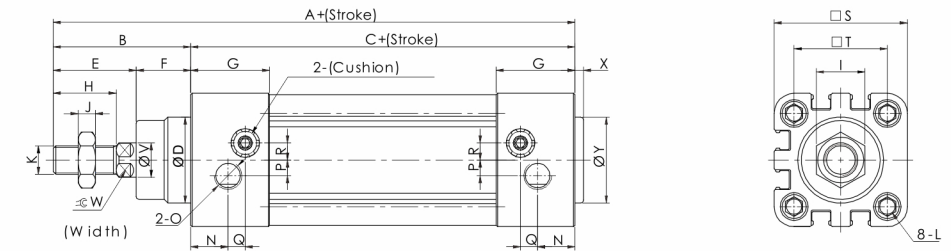
Specification

Basic Type

Bore (mm)	32	40	50	63	80	100	125	160	200	250
Acting type	Double acting									
Working medium	Clean air(40µm filtration)									
Working pressure	0.1~1.0Mpa (14.5~145psi/1~10bar)									
Guaranteed pressure	1.5Mpa (215psi/15bar)									
Working temperature (°C)	-20~80(No freezing)									
Speed range (mm/s)	30~800									
Cushion type	Air cushion									
Cushion stroke	27	30	32	34	35	42	50			
Mounting type	LB FA FB CA CB CR									
Port size G/PT/NPT	1/8	1/4	3/8	1/2	3/4	1				

Main Dimension

Basic Type

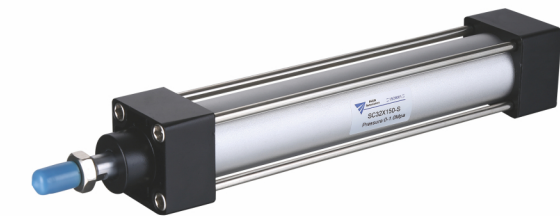


Bore	Sign	A	B	C	D	E	F	G	H	I	J	K
32	(mm)	142	48	94	30	29	19	27.5	22	17	6	M10x1.25
40	(mm)	159	54	105	35	33	21	32	24	17	7	M12x1.25
50	(mm)	175	69	106	40	42	27	31	32	23	8	M16x1.5
63	(mm)	190	69	121	45	42	27	33	32	23	8	M16x1.5
80	(mm)	214	86	128	45	53	33	33	40	26	10	M20x1.5
100	(mm)	229	91	138	55	55	36	37	40	26	10	M20x1.5
125	(mm)	279	119	160	60	74	45	46	54	41	13.5	M27x2.0
160	(mm)	332	152	180	65	94	58	50	72	55	18	M36x2.0
200	(mm)	347	167	180	75	110	57	50	72	55	18	M36x2.0
250	(mm)	388	188	200	90	121	67	52	83	65	21	M42x2.0

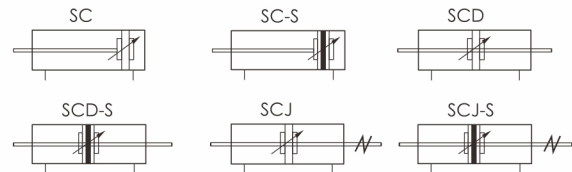
Bore	Sign	L	N	O	P	Q	R	S	T	V	W	X	Y
32	(mm)	M6 depth 16	13	1/8"	5.5	6	6	46.5	32.5	12	10	3	30
40	(mm)	M6 depth 16	17	1/4"	6	7.5	8.5	54	38	16	13	3.5	35
50	(mm)	M8 depth 16	15.5	1/4"	7.5	6.5	9.5	64	46.5	20	17	3.5	40
63	(mm)	M8 depth 16	16.5	3/8"	7.5	7.5	11.5	75	56.5	20	17	4	45
80	(mm)	M10 depth 17	16.5	3/8"	8	8.5	12.5	93	72	25	22	4	45
100	(mm)	M10 depth 17	19.5	1/2"	10	7	12	110	89	25	22	4	55
125	(mm)	M12 depth 20	23	1/2"	14	12	14	140	110	32	27	-	-
160	(mm)	M16 depth 24	25	3/4"	15	12	20	180	140	40	36	-	-
200	(mm)	M16 depth 24	25	3/4"	-	-	-	220	175	40	36	-	-
250	(mm)	M20 depth 25	26.5	1"	20.5	7.5	21	270	220	50	45	10	90

Note:
1. With magnet and no magnet, the dimensions are same.

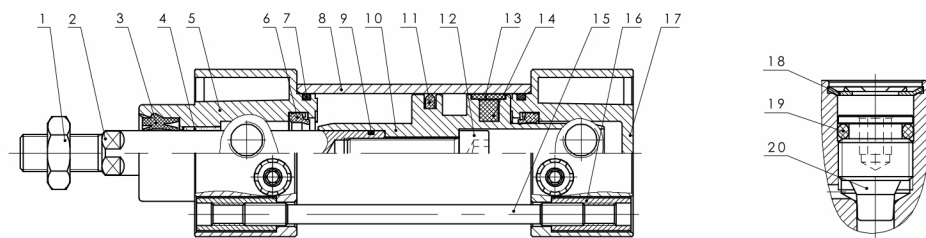
SC Series Tie-rod Type Cylinder



Symbol



Internal Structure



No.	Part Name	Material	No.	Part Name	Material
1	Nut	Carbon steel	11	Piston seal	NBR
2	Piston rod	Hard chrome carbon steel	12	Hexagon screw	Carbon steel
3	Piston rod seal	TPU	13	Wear ring	PTFE
4	Self lubricating bearing	Bronze powder	14	Magnet	Plastic
5	Head cover	Aluminum alloy	15	Tie rod	Carbon steel
6	Cushion seal	NBR	16	Tie rod cap	Carbon steel
7	O-ring	NBR	17	Rear cover	Aluminum alloy
8	Barrel	Aluminum alloy	18	Retainer ring	Spring steel
9	O-ring	NBR	19	O-ring	NBR
10	Piston	Aluminum alloy	20	Cushion screw	Brass

Ordering Code **SC** **32** x **50** **25** **S** - **LB** - □

Series Code
 SC: China Standard Double Action Type
 SCD: China Standard Two Axis Double Action Type
 SCJ: China Standard Two Axis Stroke Adjustable Type

Cylinder Bore

Stroke

Adjust Stroke
 25:25mm
 50:50mm
 75:75mm

Magnet Code
 Blank: Without Magnet
 S: With Magnet

Mounting Type
 Blank: No Mounting
 LB: Front And Back Fixed Bracket
 FA: Front Flange
 FB: Back Flange
 CA: Single Clevis
 CB: Double Clevis
 SDB: SDB Type

Thread
 Blank: G Thread
 T: NPT Thread
 PT: BSPT Thread

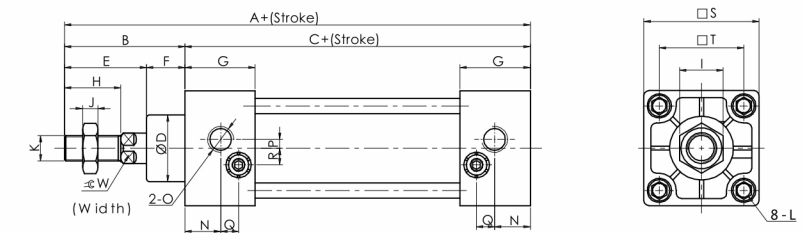
Specification

Basic Type

Bore (mm)	32	40	50	63	80	100	125	160	200	250
Acting type	Double acting									
Working medium	Clean air(40μm filtration)									
Working pressure	0.1~1.0Mpa (14.5~145psi/1~10bar)									
Guaranteed pressure	1.5Mpa (215psi/15bar)									
Working temperature (°C)	-20~80(No freezing)									
Speed range (mm/s)	30~800									
Cushion type (mm)	Air cushion									
Cushion stroke	27	30	32	34	35	42	50			
Mounting type	LB FA FB CA CB CR									
Port size G/PT/NPT	1/8	1/4	3/8	1/2	3/4	1				

Main Dimension

Basic Type



Bore	Sign	A	B	C	D	E	F	G	H	I	J	K
32	(mm)	140	47	93	26	32	15	27.5	22	17	6	M10X1.25
40	(mm)	142	49	93	32	34	15	27.5	24	17	7	M12X1.25
50	(mm)	150	57	93	38	42	15	27.5	32	23	8	M16X1.5
63	(mm)	153	57	96	38	42	15	27.5	32	23	8	M16X1.5
80	(mm)	182	75	107	46	54	21	33	40	26	10	M20X1.5
100	(mm)	188	75	113	46	54	21	33	40	26	10	M20X1.5
125	(mm)	203	88	115	52	68	20	38	54	41	13.5	M27X2.0
160	(mm)	239	113	126	62	88	25	38	72	55	18	M36X2.0
200	(mm)	244	118	126	62	88	30	38	72	55	18	M36X2.0
250	(mm)	294	141	153	86	106	35	48	84	65	21	M42X2.0

Bore	Sign	L	M	N	O	P	Q	R	S	T	V	W
32	(mm)	M6X1	13	14	1/8"	3.5	7	6.5	45	33	12	10
40	(mm)	M6X1	13	13.5	1/4"	5	5.5	8.5	50	37	16	14
50	(mm)	M6X1	13	14.5	1/4"	8.5	3	11	62	47	20	17
63	(mm)	M8X1.25	13	15	3/8"	7	5	9.5	75	56	20	17
80	(mm)	M10X1.5	15.5	16.5	3/8"	7	8	10	94	70	25	22
100	(mm)	M10X1.5	15.5	16.5	1/2"	7.5	8	13	112	84	25	22
125	(mm)	M12X1.75	20	20	1/2"	14	-	-	136	104	32	27
160	(mm)	M16X2.0	25	20	3/4"	15	-	-	174	134	40	36
200	(mm)	M16X2.0	30	20	3/4"	15	-	-	214	163	40	36
250	(mm)	M20X2.5	35	25.5	1	22	-	-	267	202	50	46

Note:
 1. With magnet and no magnet, the dimensions are same.

MA Series Mini Cylinder



Ordering Code MA L 63 x 50 - 25 S - CM - LB - □

MA: Double Acting Type
 MSA: Single Acting Spring Extend
 MTA: Single Acting Spring Return
 MAD: Double Shaft Double Acting
 MAC: Double Acting With Air Cushion
 MAJ: Double Shaft With Adjustable Stroke

Blank: Stainless Steel
 L: Aluminium

Cylinder Bore

Stroke

Adjust Stroke
 25:25mm
 50:50mm
 75:75mm

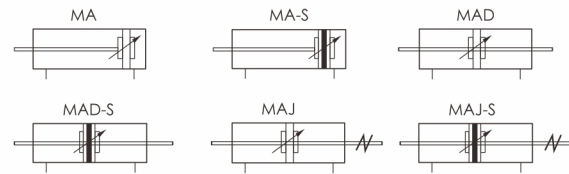
Magnet Code
 Blank: Without Magnet
 S: With Magnet

Tail Type
 Blank: Swiveling Tail
 U: Flat tail
 CM: Round Tail

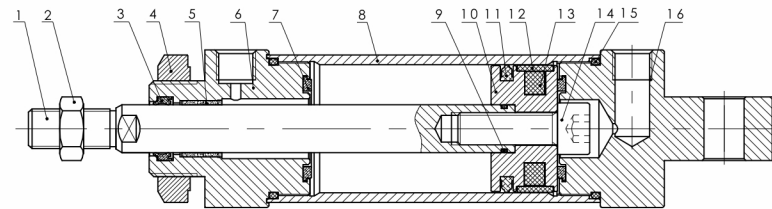
Mounting Type
 Blank: No Mounting
 LB: Front And Back Fixed Bracket
 FA: Front Flange
 SDB: SDB Type
 UJ: Float Joint
 PHS: Bearing Joint
 Y: Y Joint
 I: I Joint
 U: U Bracket

Thread
 Blank: G Thread
 T: NPT Thread
 PT: BSPT Thread

Symbol



Internal Structure



No.	Part Name	Material	No.	Part Name	Material
1	Piston rod	Hard chrome carbon steel	9	O-ring	NBR
2	Nut	Carbon steel	10	Piston	Aluminum alloy
3	Piston rod seal	TPU	11	Piston seal	TPU
4	Nut	Carbon steel	12	Wear ring	PTFE
5	Self lubricating bearing	Bronze powder	13	Magnet	Plastic
6	Head cover	Aluminum alloy	14	Hexagon screw	Carbon steel
7	Anti-bump base	TPU	15	O-ring	NBR
8	Barrel	Aluminum alloy	16	Rear cover	Aluminum alloy

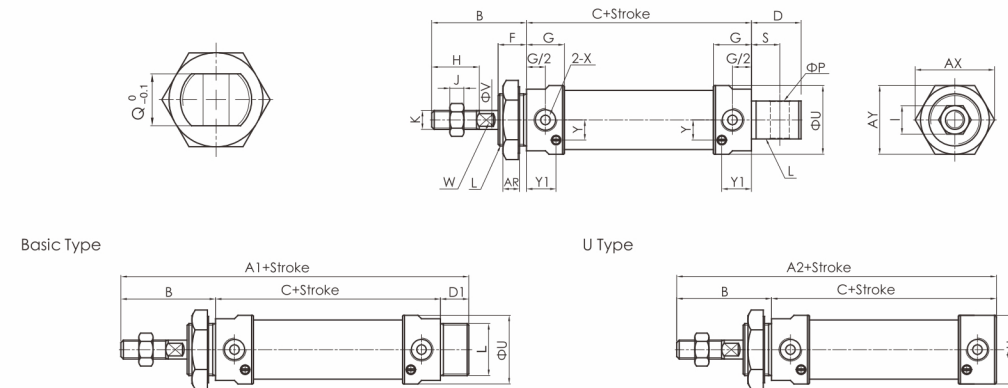
Specification

Basic Type

Bore (mm)	16	20	25	32	40
Acting type	Double acting/Single Acting				
Working medium	Clean air(40µm filtration)				
Working pressure	0.1~1.0Mpa (14.5~145psi/1~10bar)				
Guaranteed pressure	1.5Mpa (215psi/15bar)				
Working temperature (°C)	-20~80(No freezing)				
Speed range (mm/s)	30~800				
Cushion type	Air cushion				
Port size	G/PT/NPT	M5X0.8	1/8		1/4

Main Dimension

MA Φ16~Φ40 Basic Type



Bore	Sign	A1	A2	B	C	D	D1	F	G	H	I	J	K
16	(mm)	102	92	36	56	14	10	14	11	16	10	5	M6X1.0
20	(mm)	122	110	40	70	21	12	12	16	20	12	6	M8X1.25
25	(mm)	128	114	44	70	21	14	14	16	22	17	6	M10X1.25
32	(mm)	128	114	44	70	27	14	14	16	22	17	6	M10X1.25
40	(mm)	152	138	46	92	27	14	14	22	24	17	7	M12X1.25

Bore	Sign	L	P	Q	S	U	V	W	X	AR	AX	AY	Y	Y1
16	(mm)	M16X1.5	6	12	7	20	6	5	M5X0.8	6	25	22	6.3	8
20	(mm)	M22X1.5	8	16	12	29	8	6	1/8"	7	33	29	8.5	12.5
25	(mm)	M22X1.5	8	16	12	34	10	8	1/8"	7	33	29	10	12.5
32	(mm)	M24X2.0	10	16	15	39.5	12	10	1/8"	8	37	32	12	12
40	(mm)	M30X2.0	12	20	15	49.5	16	14	1/4"	9	47	41	16	18

Unit(mm)

MA6432 Series ISO Standard Cylinder

Ordering Code MA 6432 63 x 50 - 25 S - CM - LB - □

MA: Double Acting Type
 MSA: Single Acting Spring Extend
 MAD: Double Shaft Double Acting
 MAC: Double Acting With Air Cushion
 MAJ: Double Shaft With Adjustable Stroke

ISO 6432 Standard

Cylinder Bore

Stroke

Adjust Stroke
 25:25mm
 50:50mm
 75:75mm

Magnet Code
 Blank: Without Magnet
 S: With Magnet

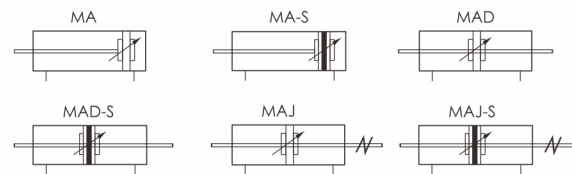
Tail Type
 Blank: Swiveling Tail
 U: Flat tail
 CM: Round Tail

Mounting Type
 Blank: No Mounting
 LB: Front And Back Fixed Bracket
 FA: Front Flange
 SDB: SDB Type
 UJ: Float Joint
 PHS: Bearing Joint
 Y: Y Joint
 I: I Joint
 U: U Bracket

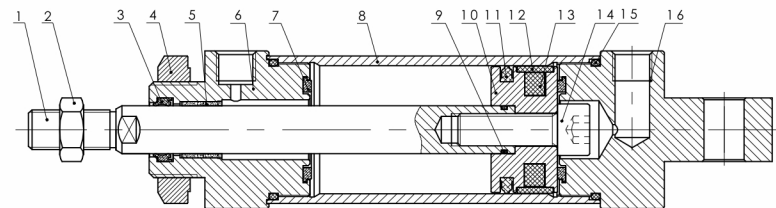
Thread
 Blank: G Thread
 T: NPT Thread
 PT: BSPT Thread



Symbol



Internal Structure



No.	Part Name	Material	No.	Part Name	Material
1	Piston rod	φ8-10:SUS304Hardchromecarbonsteel φ12-25: SUS45CHardchromecarbonsteel	9	O-ring	NBR
2	Nut	Carbon steel	10	Piston	Aluminum alloy
3	Piston rod seal	TPU	11	Piston seal	TPU
4	Nut	Carbon steel	12	Wear ring	PTFE
5	Self lubricating bearing	Bronze powder	13	Magnet	Plastic
6	Head cover	Aluminum alloy	14	Hexagon screw	Carbon steel
7	Anti-bump base	TPU	15	O-ring	NBR
8	Barrel	Stainless Steel	16	Rear cover	Aluminum alloy

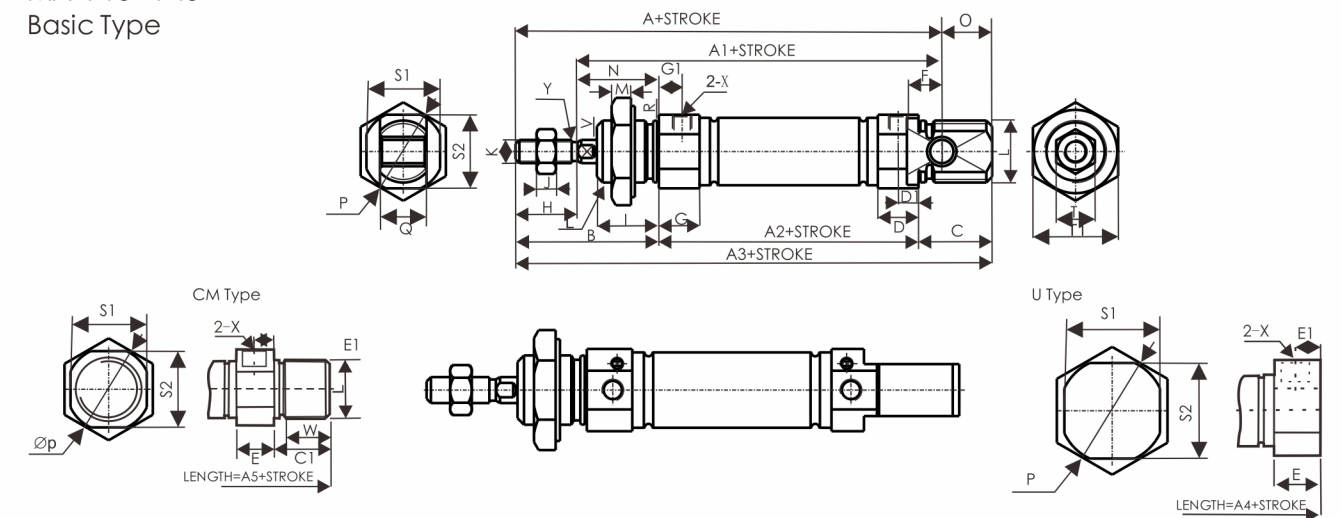
Specification

Basic Type

Bore (mm)	8	10	12	16	20	25
Acting type	Double acting/Single Acting					
Working medium	Clean air(40μm filtration)					
Working pressure	0.1~0.7Mpa (Double Acting)/0.2-0.7(Single Acting)			0.1~1.0Mpa (Double Acting)/0.2-1.0(Single Acting)		
Guaranteed pressure	1.5Mpa (215psi/15bar)					
Working temperature (°C)	-20~80(No freezing)					
Speed range (mm/s)	Double Acting:30~800 / Single Acting:50~800					
Cushion type	Rubber cushion			Rubber cushion(Standard)/Air cushion(Optional)		
Port size	G/PT/NPT			M5X0.8		1/8

Main Dimension

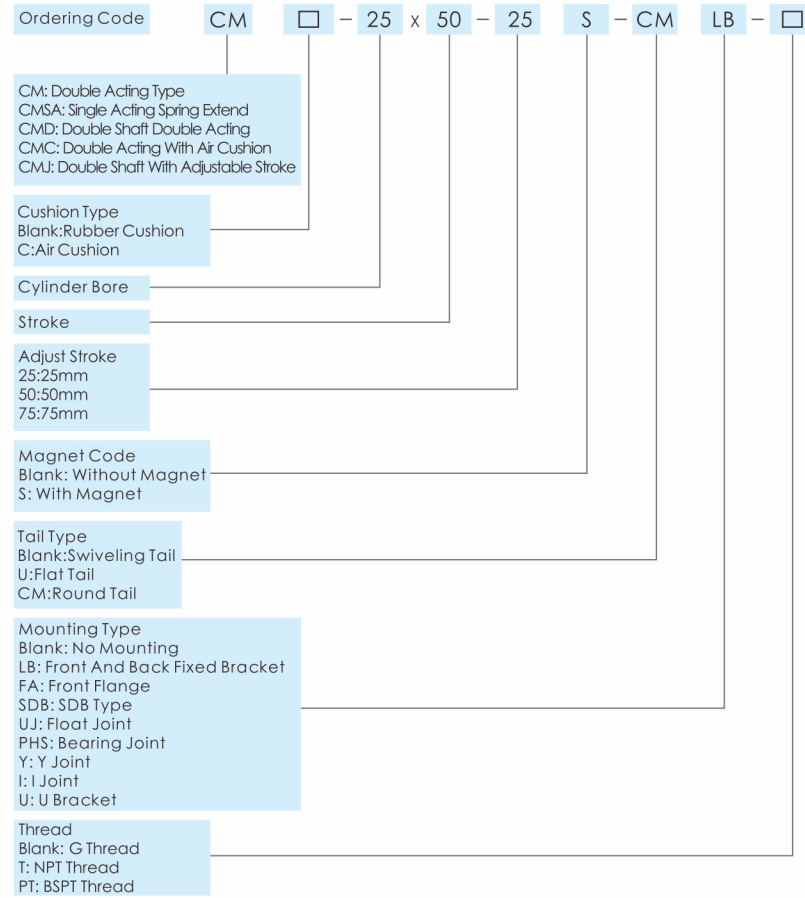
MA Φ16~Φ40 Basic Type



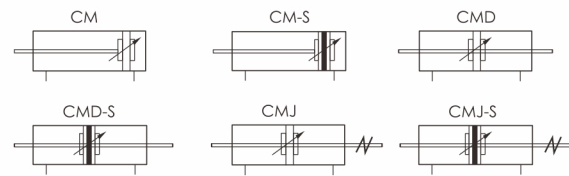
Bore	Sign	A	A1	A2	A3	A4	A5	B	C	C1	D	D1	E	E1	F	G	G1	H	I
8 (mm)		76	64	46	86	74	86	28	12	12	10	5.5	10	5.5	6	10	5.5	12	12
10 (mm)		76	64	46	86	74	86	28	12	12	10	5.5	10	5.5	6	10	5.5	12	12
12 (mm)		91	74	50	105	88	105	38	17	17	10	6	10	6	9	10	6	16	17
16 (mm)		98	82	55	111	92	111	37	19	19	10.5	6	10.5	6	9	10.5	6	16	16
20 (mm)		115	95	64	128	107	128	43	21	21	14	7.5	14	7.5	9	14	7.5	20	16
25 (mm)		126	104	66	137	116	137	50	21	21	15	8	15	8	12	15	8	22	22
Bore	Sign	J	K	L	M	O	P	P1	Q	R	S1	S2	T	T1	X	V	W	Y	
8 (mm)		6	M4X0.7	M12X1.25	6	16	10	17	8	12	15	15	7	17	M5X0.8	4	9.3	-	
10 (mm)		6	M4X0.7	M12X1.25	6	16	10	17	8	12	15	15	7	17	M5X0.8	4	9.3	-	
12 (mm)		5	M6X1	M16X1.5	6	22	14	21	12	16	19	19	10	24	M5X0.8	6	14	5	
16 (mm)		5	M6X1	M16X1.5	6	21	13	21	12	16	19	19	10	24	M5X0.8	6	15.5	5	
20 (mm)		6	M8X1.25	M22X1.5	7	23	13	30	16	22	27	28.5	12	29	G1/8	8	17.5	6	
25 (mm)		6	M10X1.25	M22X1.5	7	28	11	30	16	22	27	28.5	17	29	G1/8	10	17.5	8	

Unit(mm)

CM Series JIS Standard Cylinder



Symbol

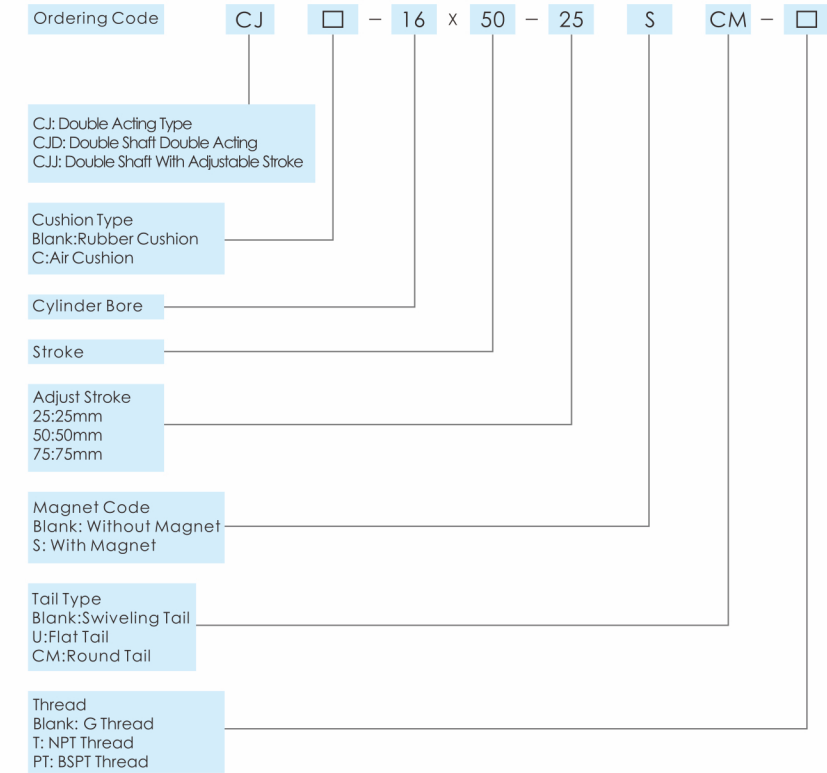


Specification

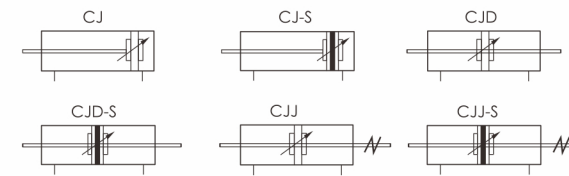
Basic Type

Bore (mm)	20	25	32	40
Acting type	Double acting/Single Acting			
Working medium	Clean air(40μm filtration)			
Working pressure	0.1~1.0Mpa (14.5~145psi/1~10bar)			
Guaranteed pressure	1.5Mpa (215psi/15bar)			
Working temperature (°C)	-20~80(No freezing)			
Speed range (mm/s)	30~800			
Cushion type	Rubber Cushion (Standard) / Air cushion (Optional)			
Port size	G/PT/NPT 1/8		1/4	

CJ Series JIS Standard Cylinder



Symbol

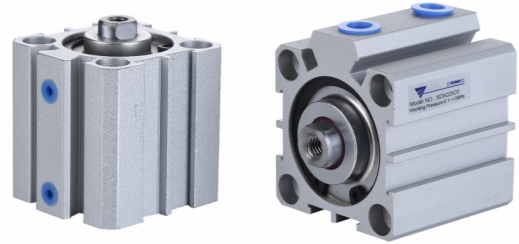


Specification

Basic Type

Bore (mm)	6	10	16
Acting type	Double acting/Single Acting		
Working medium	Clean air(40μm filtration)		
Working pressure	0.1~0.7Mpa (14.5~101.5psi/1~7bar)		
Guaranteed pressure	1.0Mpa (145psi/15bar)		
Working temperature (°C)	-20~80(No freezing)		
Speed range (mm/s)	50~750		
Cushion type	Rubber Cushion		
Port size	G/PT/NPT M5X0.8		

SDA Series Compact Cylinder



Ordering Code SDA 20 x 30 - 5 S - M - □

SDA: Double Acting Type
 SSA: Single Acting Spring Extend
 SST: Single Acting Spring Return
 SDAD: Double Shaft Double Acting
 SDAJ: Double Shaft With Adjustable Stroke

Cylinder Bore 20

Stroke 30 - 5

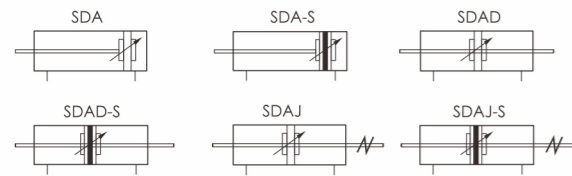
Adjust Stroke
 25:25mm
 50:50mm
 75:75mm

Magnet Code
 Blank: Without Magnet
 S: With Magnet

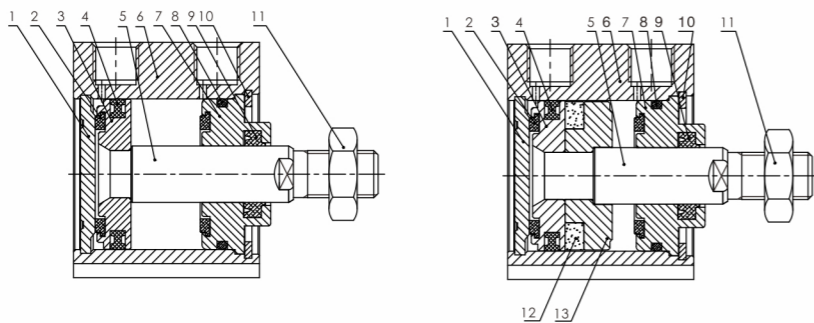
Piston Rod Thread Type
 Blank: Female Thread
 M: Male Thread
 N: No Thread

Thread
 Blank: G Thread
 T: NPT Thread
 PT: BSPT Thread

Symbol



Internal Structure



No.	Part Name	Material	No.	Part Name	Material
1	Rear cover	Aluminum alloy	8	O-ring	NBR
2	Anti-bump base	TPU	9	Piston rod seal	TPU
3	Piston	Aluminum alloy	10	C type retainer ring	Spring steel
4	Piston seal	NBR	11	Nut	Carbon steel
5	Piston rod	Hard chrome carbon steel	12	Magnet(Optional)	RbFeb
6	barrel	Aluminum alloy	13	Magnet base	Aluminum alloy
7	Head cover	Aluminum alloy			

Specification

Basic Type

Bore (mm)	12	16	20	25	32	40	50	63	80	100	
Acting type	Double acting/Single Acting										
Working medium	Clean air(40μm filtration)										
Working pressure	Double acting: 0.1~1.0Mpa (14.5~145psi/1~10bar) /Double acting: 0.2~1.0Mpa (29~145psi/1~10bar)										
Guaranteed pressure	1.5Mpa (215psi/15bar)										
Working temperature (°C)	-20~80(No freezing)										
Speed range (mm/s)	30~500										
Cushion type	Rubber cushion										
Port size	G/PT/NPT			M5X0.8			1/8		1/4		3/8

Main Dimension

SDA

Φ12、Φ16

Φ20~Φ100

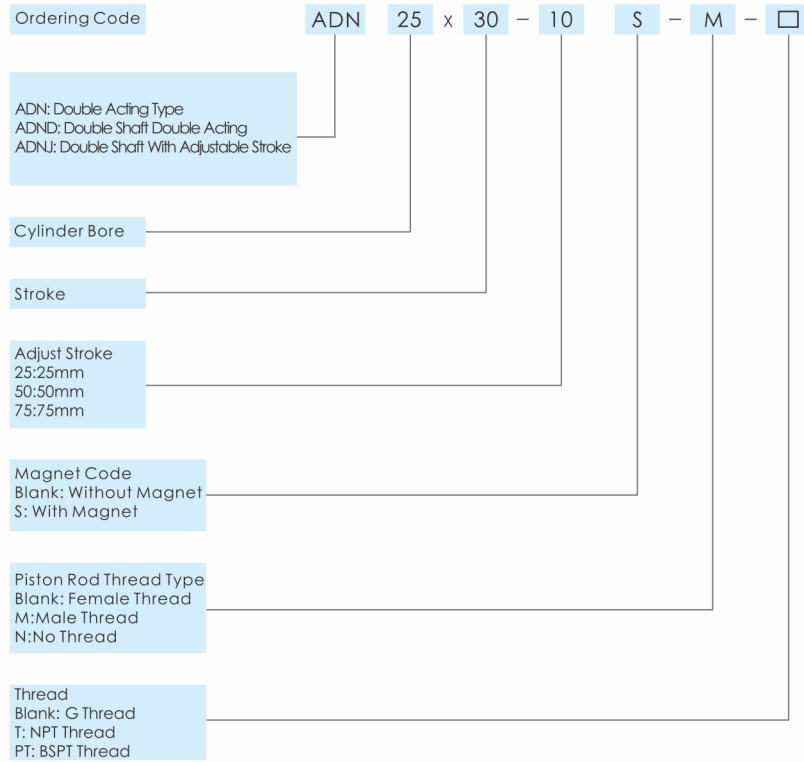


Bore	Sign	A		C		B1	D	E	F	G	K1	L	M	N1		N2	
		Standard	With magnet	Standard	With magnet									St=5	St>5	St=5	St>5
12	(mm)	22	32	17	27	5	-	6	4	1	M3X0.5	10.2	3	7.5	7.5	5	5
16	(mm)	24	34	18.5	28.5	5.5	-	6	4	1.5	M3X0.5	10	3	8	8	5	5.5
20	(mm)	25	35	19.5	29.5	5.5	36	8	4	1.5	M4X0.7	13	3	8.2	9	5	5.5
25	(mm)	27	37	21	31	6	42	10	4	2	M5X0.8	17	3	9	9	5.5	5.5
32	(mm)	31.5	41.5	24.5	34.5	7	50	12	4.5	2.5	M6X1.0	22	3	9	9	6.5	9
40	(mm)	33	43	26	36	7	58.5	12	4	3	M8X1.25	28	3	9.5	9.5	7.5	7.5
50	(mm)	37	47	28	38	9	71.5	15	5	4	M10X1.5	38	3	8	10.5	8	10.5
63	(mm)	41	51	32	42	9	84.5	15	5	4	M10X1.5	40	3	9.5	12	9.5	11
80	(mm)	52	62	41	51	11	104	20	6	5	M14X1.5	45	4	14.5	14.5	14.5	14.5
100	(mm)	63	73	51	61	12	124	20	7	5	M18X1.5	55	4	20.5	20.5	20.5	20.5

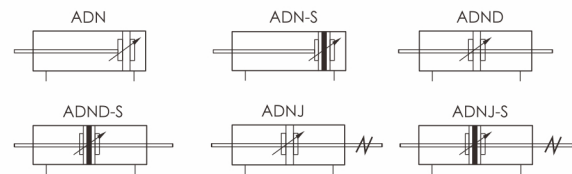
Bore	Sign	O	P1	P3	P4	R	S	T1	T2	V	W
16	(mm)	M5X0.8	Counter bore:Φ6.5 Thread: M5X0.8 Through Hole:Φ4.2	12	4.5	-	29	19.8	28	6	5
20	(mm)	M5X0.8	Counter bore:Φ6.5 Thread: M5X0.8 Through Hole:Φ4.2	14	4.5	2	34	24	-	8	6
25	(mm)	M5X0.8	Counter bore:Φ8.2 Thread: M6X1.0 Through Hole:Φ5.2	15	5.5	2	40	28	-	10	8
32	(mm)	1/8"	Counter bore:Φ8.2 Thread: M6X1.0 Through Hole:Φ5.2	16	5.5	6	44	34	-	12	10
40	(mm)	1/8"	Counter bore:Φ10 Thread: M8X1.25 Through Hole:Φ6.8	20	7.5	6.5	52	40	-	16	14
50	(mm)	1/4"	Counter bore:Φ11 Thread: M8X1.25 Through Hole:Φ6.8	25	8.5	9.5	62	48	-	20	17
63	(mm)	1/4"	Counter bore:Φ11 Thread: M8X1.25 Through Hole:Φ6.8	25	8.5	9.5	75	60	-	20	17
80	(mm)	3/8"	Counter bore:Φ14 Thread: M12X1.75 Through Hole:Φ9.2	25	10.5	10	94	74	-	25	22
100	(mm)	3/8"	Counter bore:Φ17.5 Thread: M14X2.0 Through Hole:Φ11.3	30	13	10	114	90	-	32	27

Unit(mm)

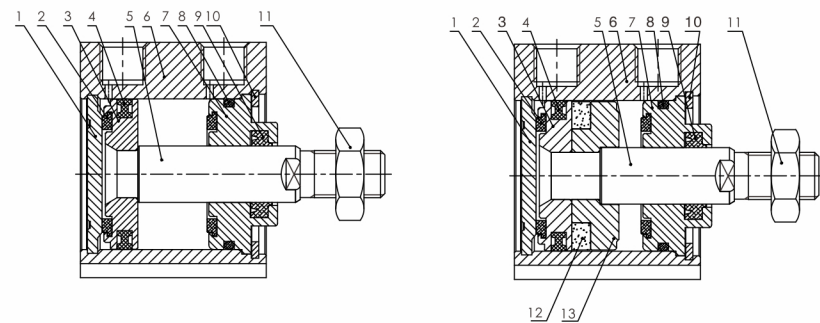
AND Series ISO Compact Cylinder



Symbol



Internal Structure



No.	Part Name	Material	No.	Part Name	Material
1	Rear cover	Aluminum alloy	8	O-ring	NBR
2	Anti-bump base	TPU	9	Piston rod seal	TPU
3	Piston	Aluminum alloy	10	C type retainer ring	Spring steel
4	Piston seal	NBR	11	Nut	Carbon steel
5	Piston rod	Hard chrome carbon steel	12	Magnet(Optional)	RbFeb
6	barrel	Aluminum alloy	13	Magnet base	Aluminum alloy
7	Head cover	Aluminum alloy			

Specification

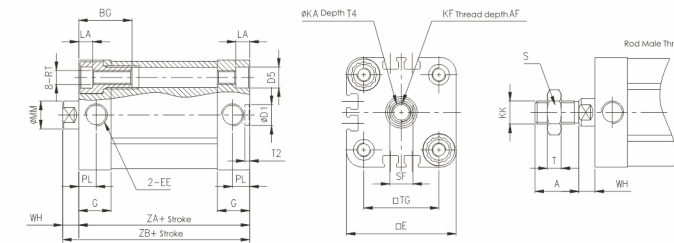
Basic Type

Bore (mm)	20	25	32	40	50	63	80	100
Acting type	Double acting/Single Acting							
Working medium	Clean air(40μm filtration)							
Working pressure	Double acting: 0.1~1.0Mpa (14.5~145psi/1~10bar) /Double acting: 0.2~1.0Mpa (29~145psi/1~10bar)							
Guaranteed pressure	1.5Mpa (215psi/15bar)							
Working temperature (°C)	-20~80(No freezing)							
Speed range (mm/s)	30~500							
Cushion type	Rubber cushion							
Port size	G/PT/NPT		M5X0.8			1/8		

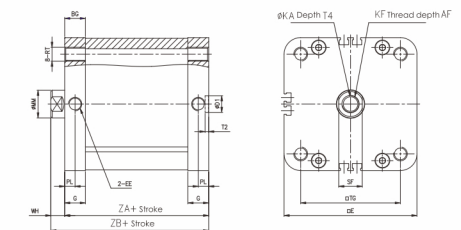
Main Dimension

ADN
Φ20~Φ100

Basic Type
Bore Size: Φ20~Φ63



Basic Type
Bore Size: Φ80~Φ100



Bore	Sign	Stroke	A	AF	BG	D1	D5	E	EE	G	KA	KF	KK	LA	MM	PL	RT	S	ST	T	T2	T4	TG	WH	ZA	ZB
20 (mm)	5~200	16	14	15				36	M5	10.5	6.5	M6X1	M8X1.25		10	5	M5X0.8	12	9	5	2.1	2.6	22	6	37	43
40								11		26												39	45			
32 (mm)		19	19	16	9	9	47.5	G1/8	14	10.5	M8X1.25	M10X1.25	5	12		M6X1	17	10	6	2.1	3.3	32.5	7	44	51	
55		38	52																							
40 (mm)		22	20	16			12	66	15	10.5	M10X1.5	M12X1.25		16	7.5	M8X1.25	17	13	7	2.6	4.7	46.5	8	45	53	
78.3																					56.5	49		57		
63 (mm)		28					12	96	21	2.5	M12X1.75	M16X1.5		20		M10X1.5	23	17	8	2.6	6.1	72	10	54	64	
116																					89	67		77		

Unit(mm)

CQ Series JIS Standard Compact Cylinder



Ordering Code: CQ □ 25 x 30 - 10 S - M - □

- CQ:** Double Acting Type
- CQS:** Single Acting Spring Extend
- CQT:** Single Acting Spring Return
- CQD:** Double Shaft Double Acting
- CQJ:** Double Shaft With Adjustable Stroke

Mounting Type
 Blank: Through Hole
 A: Female Thread At Both Ends

Cylinder Bore

Stroke

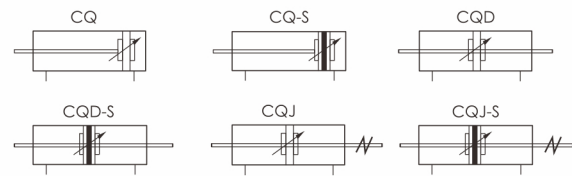
Adjust Stroke
 25:25mm
 50:50mm
 75:75mm

Magnet Code
 Blank: Without Magnet
 S: With Magnet

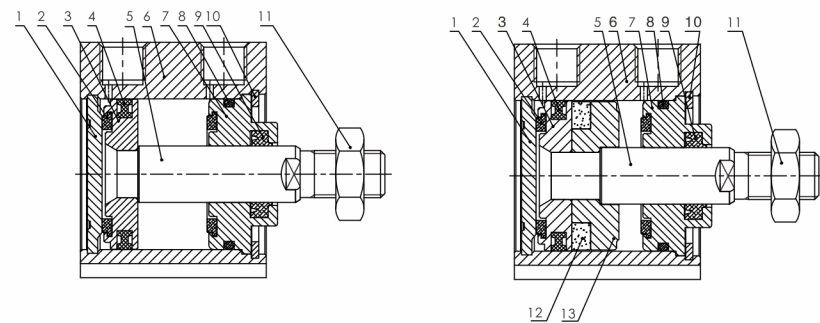
Piston Rod Thread Type
 Blank: Female Thread
 M: Male Thread
 N: No Thread

Thread
 Blank: G Thread
 T: NPT Thread
 PT: BSPT Thread

Symbol



Internal Structure



No.	Part Name	Material	No.	Part Name	Material
1	Rear cover	Aluminum alloy	8	O-ring	NBR
2	Anti-bump base	TPU	9	Piston rod seal	TPU
3	Piston	Aluminum alloy	10	C type retainer ring	Spring steel
4	Piston seal	NBR	11	Nut	Carbon steel
5	Piston rod	Hard chrome carbon steel	12	Magnet(Optional)	RbFeb
6	barrel	Aluminum alloy	13	Magnet base	Aluminum alloy
7	Head cover	Aluminum alloy			

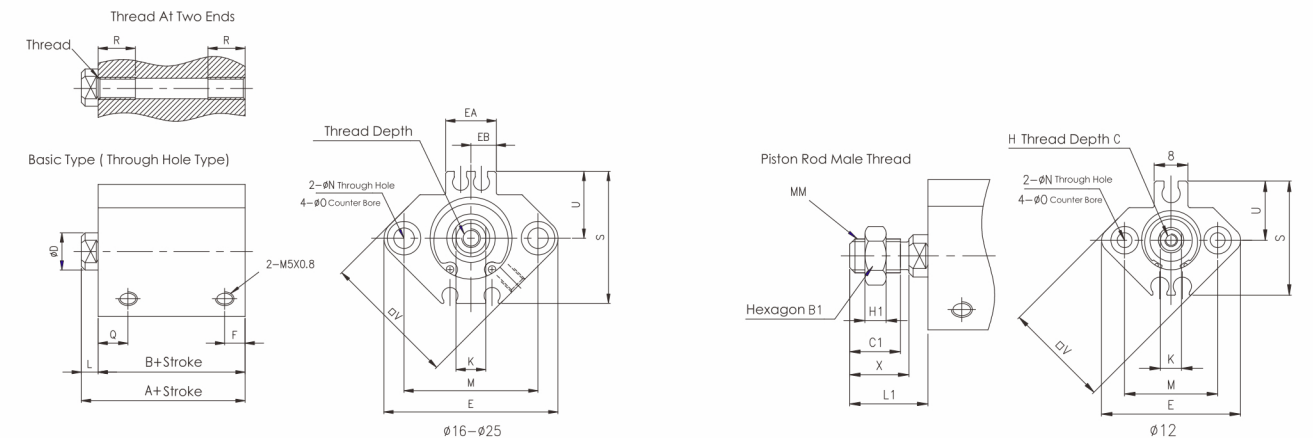
Specification

Basic Type

Bore (mm)	12	16	20	25	32	40	50	63	80	100	
Acting type	Double acting/Single Acting										
Working medium	Clean air(40μm filtration)										
Working pressure	Double acting: 0.1~1.0Mpa (14.5~145psi/1~10bar) /Double acting: 0.2~1.0Mpa (29~145psi/1~10bar)										
Guaranteed pressure	1.5Mpa (215psi/15bar)										
Working temperature (°C)	-20~80(No freezing)										
Speed range (mm/s)	30~500										
Cushion type	Rubber cushion										
Port size	G/PT/NPT			M5X0.8			1/8		1/4		3/8

Main Dimension

CQ Φ12~Φ25 With Magnet

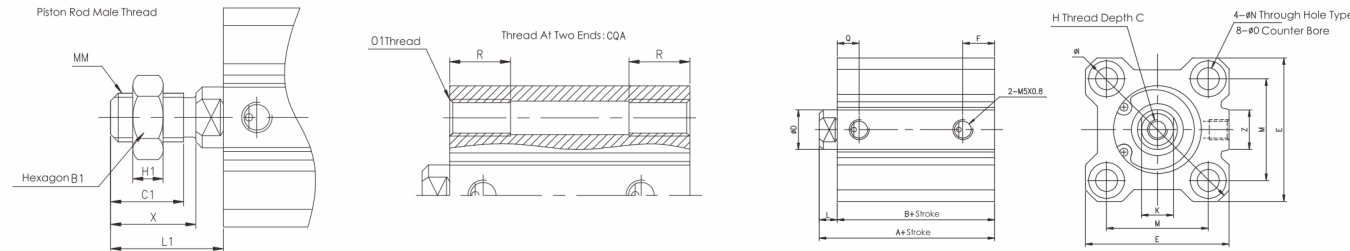


Bore	Sign	Stroke	Dimensions (mm)																								
			A	B	C	D	E	EA	EB	F	H	K	L	M	N	O	Q	S	U	V	B1	C1	H1	L1	MM	X	Ø1
12 (mm)	5~30	1.5	328	6	6	33	-	-	7	M3x0.5	5	3.5	22	3.5	6.5Depth3.5	9	27.5	14	25	8	9	4	14	M5x0.8	10.5	M4x0.7	7
16 (mm)	5~30	34	30.5	8	8	37	13.2	6.6	5.5	M4x0.7	6	3.5	28	3.5	6.5Depth3.5	9.5	29.5	15	29	10	10	5	15.5	M6x0.1	12	M6x0.7	7
20 (mm)	5~30	36	31.5	7	10	47	13.6	6.8	5.5	M5x0.8	8	4.5	36	5.5	9Depth7	8	35	18	36	13	12	5	18.5	M8x1.25	14	M6x1	10
25 (mm)	5~30	7.5	32.5	12	12	52	13.6	6.8	5.5	M6x1	10	5	40	5.5	9Depth7	9	40.5	21	40	17	15	6	22.5	M10x1.25	17.5	M6x1	10

Unit(mm)

Main Dimension

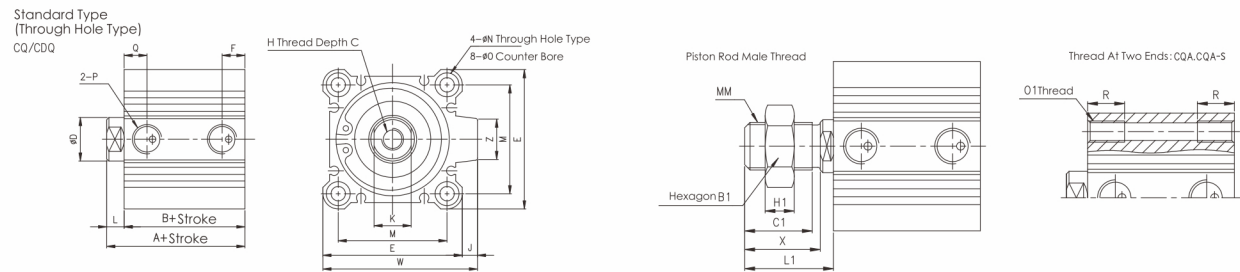
CQ
Φ12~Φ25 Without Magnet



Sign Bore	Stroke	A	B	C	D	E	F	H	I	K	L	M	N	O	Q	Z	B1	C1	H1	L1	MM	X	O1	R
12 (mm)	5~30	20.5	17	6	6	25	5	M3x0.5	32	5	3.5	15.5	3.5	6.5Depth3.5	7.5	-	8	9	4	4	M5x0.8	10.5	M4x0.7	7
16 (mm)	5~30	22	18.5	8	8	29	5.5	M4x0.7	38	6	3.5	20	3.5	6.5Depth3.5	8	10	10	10	5	5	M6x1	12	M4x0.7	7
20 (mm)	5~30	24	19.5	7	10	36	5.5	M5x0.8	47	8	4.5	25.5	5.5	9Depth7	9	10	13	12	5	5	M8x1.25	14	M6x1	10
25 (mm)	5~30	27.5	22.5	12	12	40	5.5	M6x1	52	10	5	28	5.5	9Depth7	9	10	17	15	6	6	M10x1.25	17.5	M6x1	10

Unit(mm)

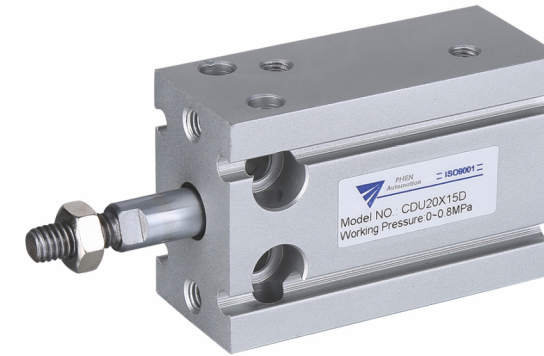
CQ
Φ32~Φ100 With/Without Magnet



Bore	Sign	Stroke	Without Magnet				With Magnet				C	D	E	H	J	K	L	M	N	O	P	W	Z	B1	C1	H1	L1	MM	X	O1	R
			A	B	F	Q	A	B	F	Q																					
32	(mm)	5	30	23	6.5	7.5	40	33	7.5	10	13	16	45	M8x1.25	4.5	14	7	34	5.5	9Depth7	1/8	49.5	14	22	20.5	8	28.5	M14x1.5	23.5	M6x1	10
		10~50	30	23	6.5	7.5	40	33	7.5	10	13	16	45	M8x1.25	4.5	14	7	34	5.5	9Depth7	1/8	49.5	14	22	20.5	8	28.5	M14x1.5	23.5	M6x1	10
		50~100	40	33	7.5	10	40	33	7.5	10	13	16	45	M8x1.25	4.5	14	7	34	5.5	9Depth7	1/8	49.5	14	22	20.5	8	28.5	M14x1.5	23.5	M6x1	10
40	(mm)	5	36.5	29.5	8	11	46.5	39.5	7.5	12.5	13	16	52	M8x1.25	5	14	7	40	5.5	9Depth7	1/8	57	15	22	20.5	8	28.5	M14x1.5	23.5	M6x1	10
		10~50	36.5	29.5	8	11	46.5	39.5	7.5	12.5	13	16	52	M8x1.25	5	14	7	40	5.5	9Depth7	1/8	57	15	22	20.5	8	28.5	M14x1.5	23.5	M6x1	10
		50~100	46.5	39.5	9	12	46.5	39.5	7.5	12.5	13	16	52	M8x1.25	5	14	7	40	5.5	9Depth7	1/8	57	15	22	20.5	8	28.5	M14x1.5	23.5	M6x1	10
50	(mm)	5	38.5	30.5	9	9	48.5	40.5	10.5	10.5	15	20	64	M10x1.5	7	17	8	50	6.6	11Depth8	1/4	71	19	27	26	11	33.5	M18x1.5	28.5	M8x1.25	14
		10~50	38.5	30.5	9	9	48.5	40.5	10.5	10.5	15	20	64	M10x1.5	7	17	8	50	6.6	11Depth8	1/4	71	19	27	26	11	33.5	M18x1.5	28.5	M8x1.25	14
		50~100	48.5	40.5	10.5	10.5	48.5	40.5	10.5	10.5	15	20	64	M10x1.5	7	17	8	50	6.6	11Depth8	1/4	71	19	27	26	11	33.5	M18x1.5	28.5	M8x1.25	14
63	(mm)	5	44	36	9.5	14	54	46	10.5	15	15	20	77	M10x1.5	7	17	8	60	9	14Depth10.5	1/4	84	19	27	26	11	33.5	M18x1.5	28.5	M10x1.5	18
		10~50	44	36	9.5	14	54	46	10.5	15	15	20	77	M10x1.5	7	17	8	60	9	14Depth10.5	1/4	84	19	27	26	11	33.5	M18x1.5	28.5	M10x1.5	18
		50~100	54	46	10.5	15	54	46	10.5	15	15	20	77	M10x1.5	7	17	8	60	9	14Depth10.5	1/4	84	19	27	26	11	33.5	M18x1.5	28.5	M10x1.5	18
80	(mm)	5	53.5	43.5	12.5	16	63.5	53.5	12.5	16	21	25	98	M16x2	6	22	10	77	11	17.5Depth13.5	3/8	104	25	32	32.5	13	43.5	M22x1.5	35.5	M12x1.75	22
		10~50	53.5	43.5	12.5	16	63.5	53.5	12.5	16	21	25	98	M16x2	6	22	10	77	11	17.5Depth13.5	3/8	104	25	32	32.5	13	43.5	M22x1.5	35.5	M12x1.75	22
		50~100	63.5	53.5	12.5	16	63.5	53.5	12.5	16	21	25	98	M16x2	6	22	10	77	11	17.5Depth13.5	3/8	104	25	32	32.5	13	43.5	M22x1.5	35.5	M12x1.75	22
100	(mm)	5	65	53	13	23	75	63	13	23	27	32	117	M20x2.5	6.5	27	12	94	11	17.5Depth13.5	3/8	123.5	25	41	32.5	16	43.5	M26x1.5	35.5	M12x1.75	22
		10~50	65	53	13	23	75	63	13	23	27	32	117	M20x2.5	6.5	27	12	94	11	17.5Depth13.5	3/8	123.5	25	41	32.5	16	43.5	M26x1.5	35.5	M12x1.75	22
		50~100	75	63	13	23	75	63	13	23	27	32	117	M20x2.5	6.5	27	12	94	11	17.5Depth13.5	3/8	123.5	25	41	32.5	16	43.5	M26x1.5	35.5	M12x1.75	22

Unit(mm)

CU Series JIS Standard Free Mount Cylinder



Ordering Code: CU 16 x 50 - 25 S - □

CU: Double Acting Type
 CUSA: Single Acting Spring Extend
 CUST: Single Acting Spring Return
 CUD: Double Shaft Double Acting
 CUC: Double Acting With Air Cushion
 CUJ: Double Shaft With Adjustable Stroke

Cylinder Bore

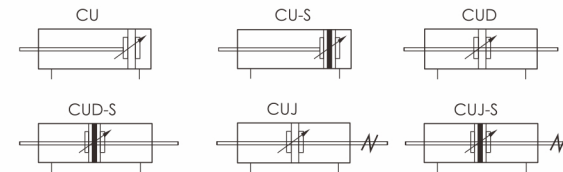
Stroke

Adjust Stroke
 25:25mm
 50:50mm
 75:75mm

Magnet Code
 Blank: Without Magnet
 S: With Magnet

Thread
 Blank: G Thread
 T: NPT Thread
 PT: BSPT Thread

Symbol

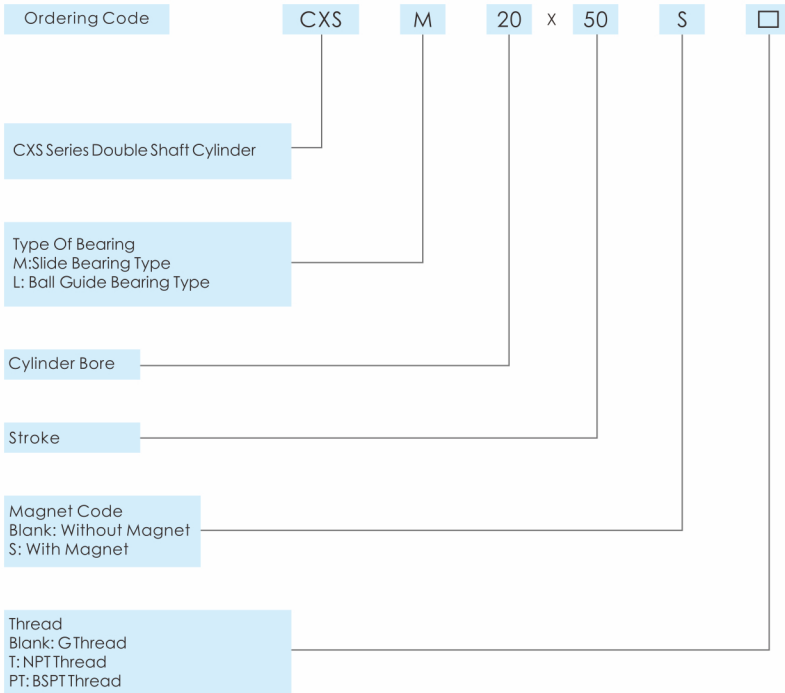


Specification

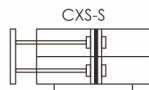
Basic Type

Bore (mm)	6	10	16	20	25	32
Acting type	Double acting/Single Acting					
Working medium	Clean air(40μm filtration)					
Working pressure	0.1~1.0Mpa (14.5~145psi/1~10bar)					
Guaranteed pressure	1.5Mpa (21.5psi/1.5bar)					
Working temperature (°C)	-20~80(No freezing)					
Speed range (mm/s)	30~500					
Cushion type	Rubber cushion					
Port size	G/PT/NPT M5X0.8					1/8

CXS Series JIS Double Shaft Cylinder



Symbol



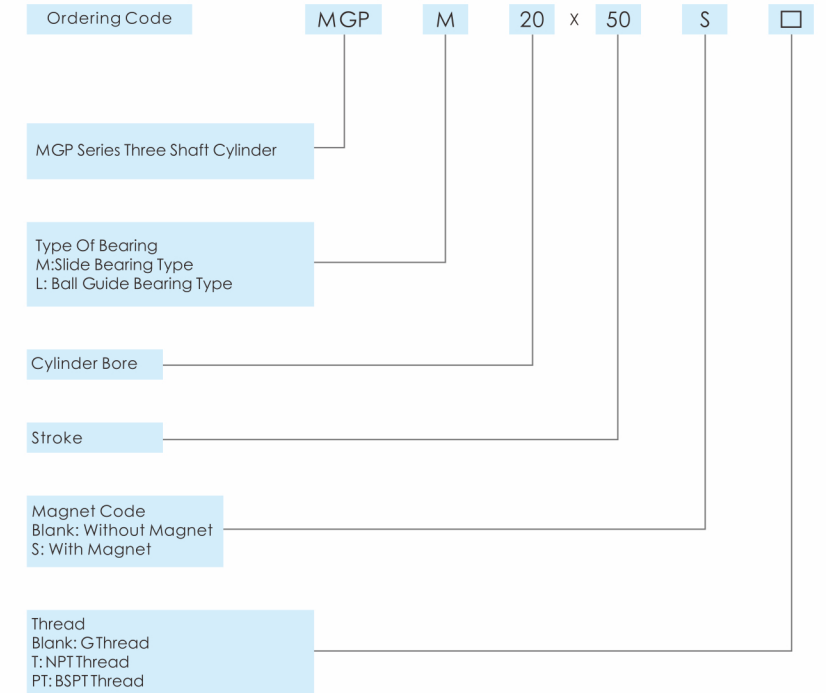
Specification

Bore (mm)	6	10	16	20	25	32
Acting type	Double acting					
Working medium	Clean air(40µm filtration)					
Working pressure	0.1~1.0Mpa (14.5~145psi/1~10bar)					
Guaranteed pressure	1.5Mpa (215psi/15bar)					
Working temperature (°C)	-20~80(No freezing)					
Speed range (mm/s)	30~500					
Cushion type	Rubber cushion					
No-return precision (mm)	±0.2	±0.15			±0.1	
Adjustable stroke (mm)	-5~0					
Port size	G/PT/NPT				M5X0.8	1/8

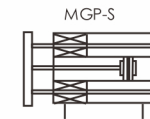
Unit(mm)

Bore (mm)	Standard Stroke (mm)	Max. Stroke (mm)
6	10 20 25 30 40 50	50
10	10 20 25 30 40 50 60 70 75 80 90 100	100
16~32	10 20 25 30 40 50 60 70 75 80 90 100 125 150 175 200	200

MGP Series JIS Three Shaft Cylinder



Symbol



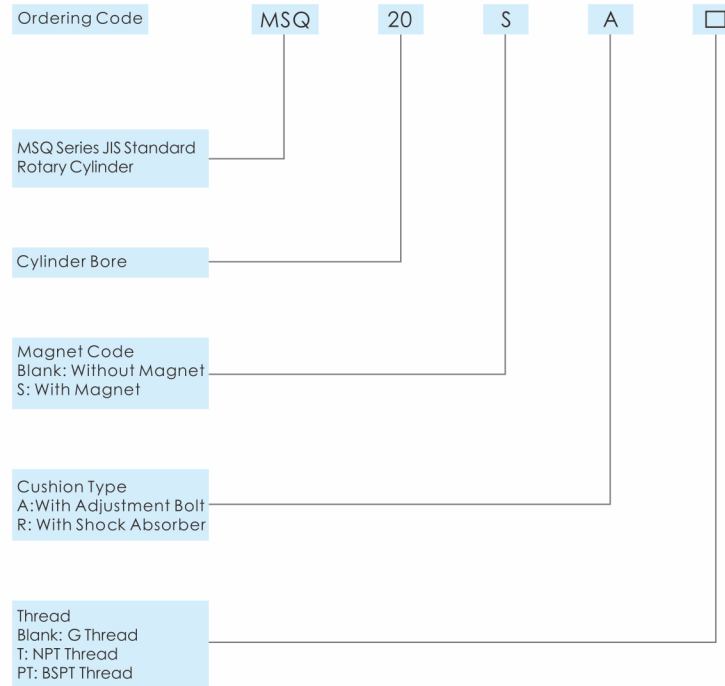
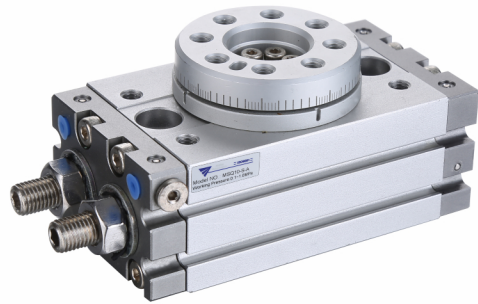
Specification

Bore (mm)	12	16	20	25	32	40	50	63
Acting type	Double acting							
Working medium	Clean air(40µm filtration)							
Working pressure	0.1~1.0Mpa (14.5~145psi/1~10bar)							
Guaranteed pressure	1.5Mpa (215psi/15bar)							
Working temperature (°C)	-20~80(No freezing)							
Speed range (mm/s)	30~500							
Cushion type	Bubber cushion							
Stroke tolerance (mm)	+1.0 0							
Non-rotating tolerance	Slide bearing	±0.08°		±0.07°		±0.06°		±0.05°
	Linear bearing	±0.10°		±0.09°		±0.08°		±0.06°
Port size	G/PT/NPT			M5X0.8			1/8	1/4

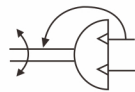
Unit(mm)

Bore (mm)	Standard Stroke (mm)	Max. Stroke (mm)
12	10 20 25 30 40 50 60 70 75 80 90 100 125 150	150
16	10 20 25 30 40 50 60 70 75 80 90 100 125 150 175 200	200
20/25	20 25 30 40 50 60 70 75 80 90 100 125 150 175 200 225 250	250
32~63	25 30 40 50 60 70 75 80 90 100 125 150 175 200 225 250	250

MSQ Series JIS Standard Rotary Cylinder



Symbol



Specification

Bore (mm)	10	20	30	50
Acting type	Double cylinder, rack & pinion style, double acting			
Working medium	Clean air(40µm filtration)			
Working pressure	With angle adjustable screw 0.1~1.0Mpa (14.5~145psi/1~10bar) / with shock absorber 0.1~0.6Mpa (14.5~87psi/1~6 bar)			
Guaranteed pressure	1.5Mpa (215psi/15bar)			
Working temperature (°C)	-0~60(No freezing)			
Angle adjustable range	0~190°			
Repeat accuracy	With angle adjustable screw 0.2° /with shock absorber 0.05°			
Theoretical torque(nm)(0.5mpa)	1.1	2.2	2.8	5.0
Cushion type	Rubber Cushion (Standard) / Shock Absorber (Optional)			
Port size	Front port	M5X0.8		1/8
	Side port			M5X0.8

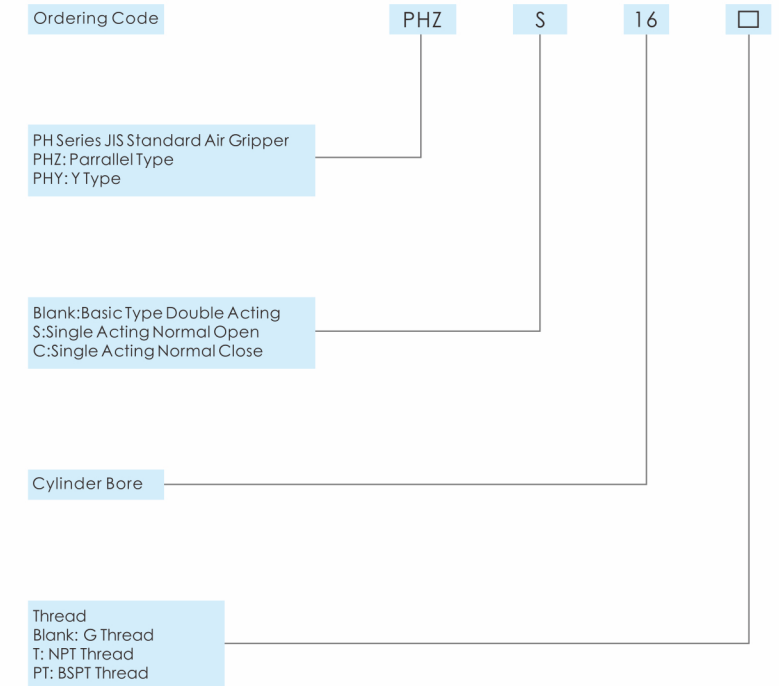
Note: When setting the rotation angle for the rotary tables with shock absorbers, following the above tables. Failing to follow the guide may result in a decrease in energy absorption capacity.

Allowable Kinetic Energy And Rotation Time Adjustment Range

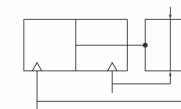
Model	Allowable Kinetic Energy(J)		Rotation Time Adjustment Range For Stable Operation(S/90°)	
	With Adjustable Bolt	With Shock Absorber	With Adjustable Bolt	With Shock Absorber
EMQ10	0.01	0.04	0.2-1.0	0.2-0.7
EMQ20	0.025	0.12	0.2-1.0	0.2-0.7
EMQ30	0.05	0.12	0.2-1.0	0.2-0.7
EMQ50	0.08	0.30	0.2-1.0	0.2-0.7

Note 1. If Operated where the kinetic energy exceeds the allowable value, this may cause damage to the internal parts and result in product failure. Please pay special attention to kinetic energy levels when design and during operation to avoid exceeding the allowable limit. 2. When the rotation time of the type with an internal absorber is set longer than the time shown in the table above, energy absorption of the shock absorber greatly decreases.

PH Series JIS Standard Air Gripper



Symbol

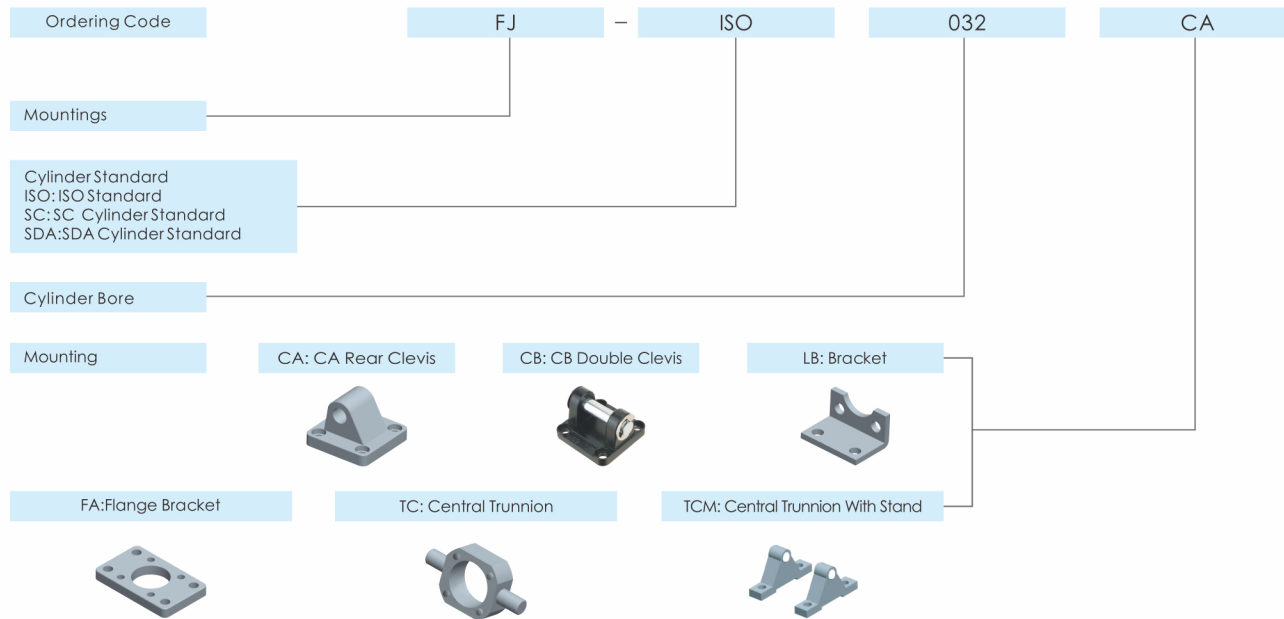


Specification

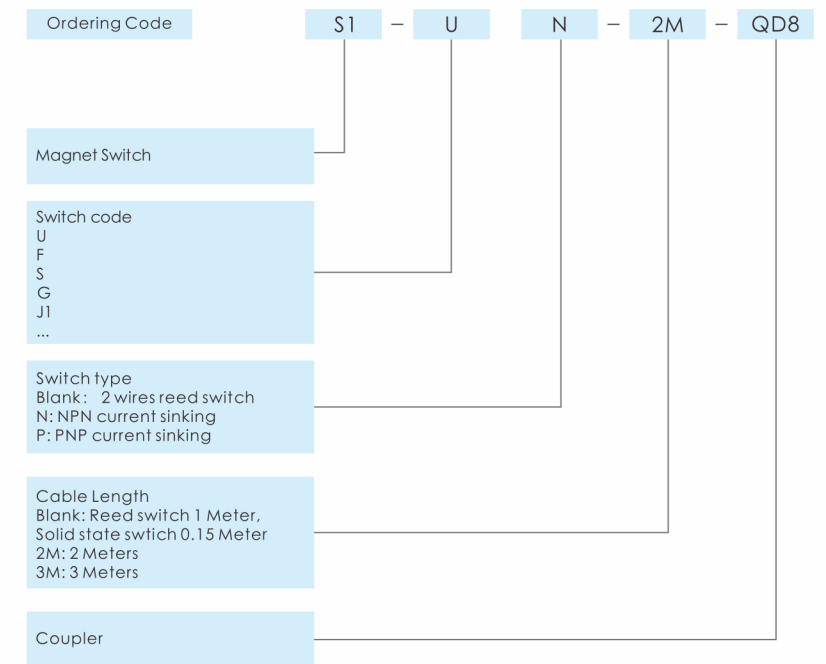
Basic Type

Bore (mm)	10	16	20	25	32	40
Acting type	Double acting/Single Acting: Normal open, Normal Close					
Working medium	Clean air(40µm filtration)					
Min Working pressure	Double Acting	0.2Mpa (29psi/2 bar)	0.1Mpa (14.5psi/1 bar)			
	Single Acting	0.35Mpa (51psi/3.5bar)	0.25Mpa (36psi/2.5bar)			
Working pressure	0.7Mpa (101.5psi/7 bar)					
Working temperature (°C)	-20~80(No freezing)					
Max. Acting frequency	180(C.P.M)			60(C.P.M)		
Magnet	Always have					1/8
Lubrication	Not required					
Port size	G/PT/NPT	M3X0.5	M5X0.8			

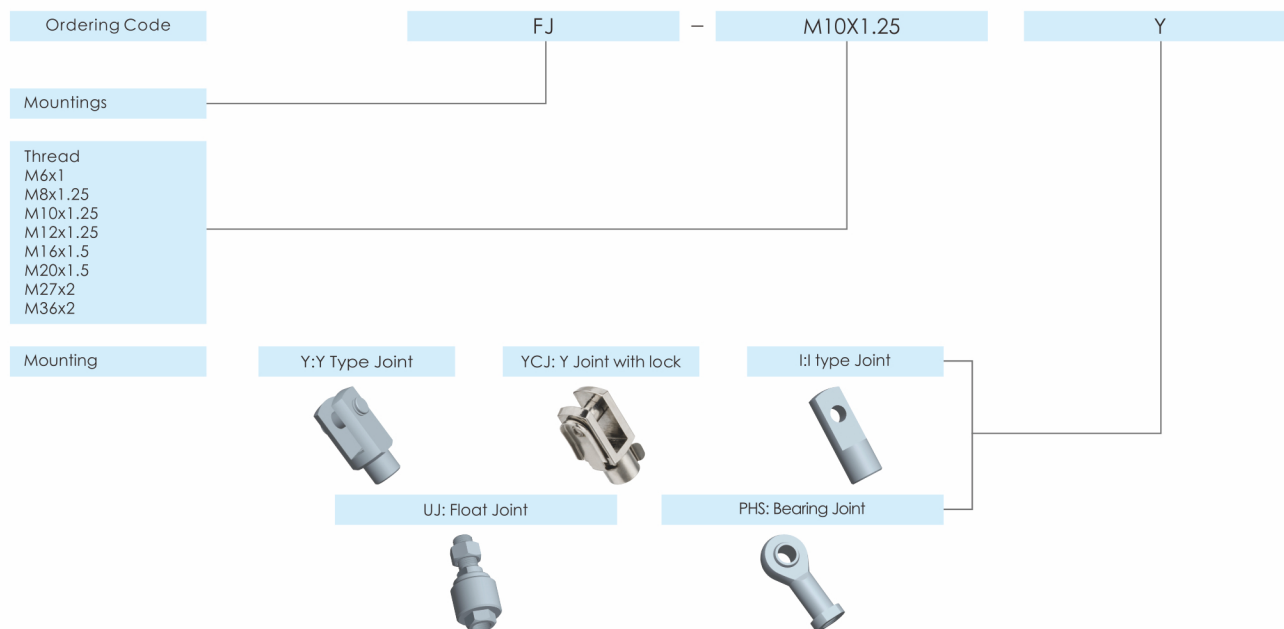
Cylinder Cap & Barrel Mounting



Cylinder Magnet Switch

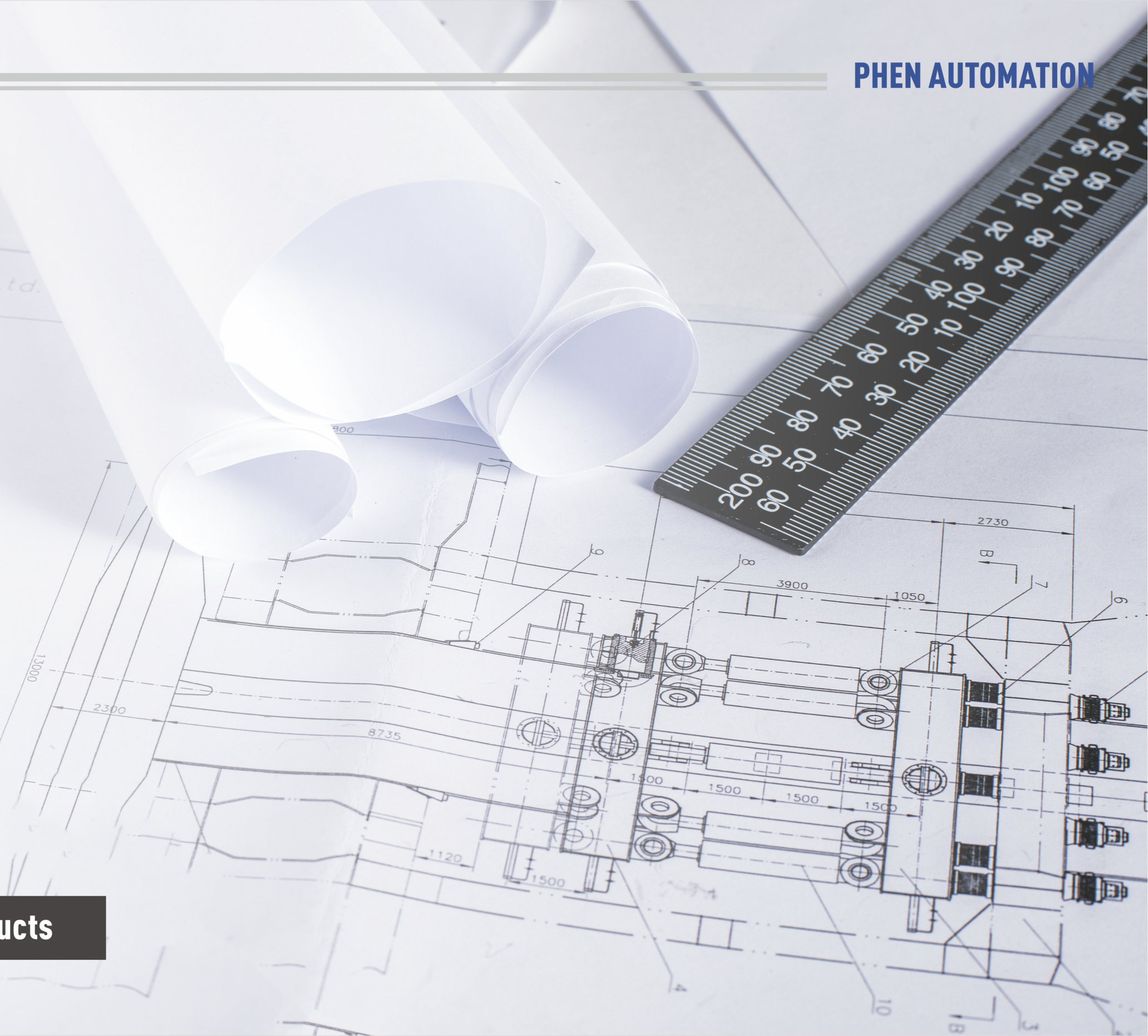
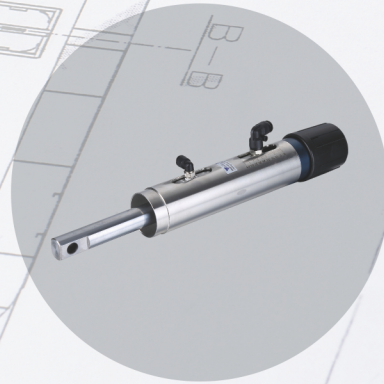
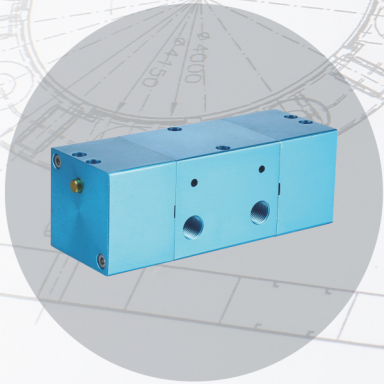
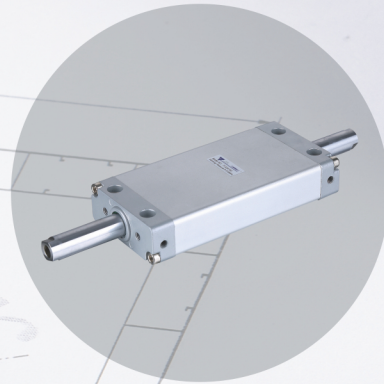
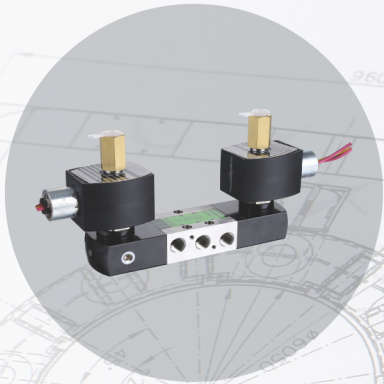


Cylinder Piston Rod Mounting



Air Cylinder and Switch Table

Air Cylinder Type	2 wires Reed Switch	3 wires NPN Switch	3 Wires PNP Switch	Picture
SC,SI	S1-U	S1-UN	S1-UP	
SC,SI	S1-F	S1-FN	S1-FP	
MA,CM,CJ	S1-S	S1-SN	S1-SP	
SDA,ACQ	S1-G	S1-GN	S1-GP	
CQ	S1-J1	S1-J1N	S1-J1P	
DNC	S1-M	S1-MN	S1-MP	
CXS,MGP	S1-H	S1-HN	S1-HP	



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