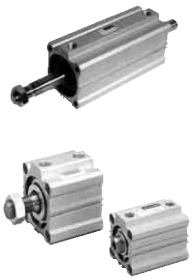
Series AQ
Compact Cylinder

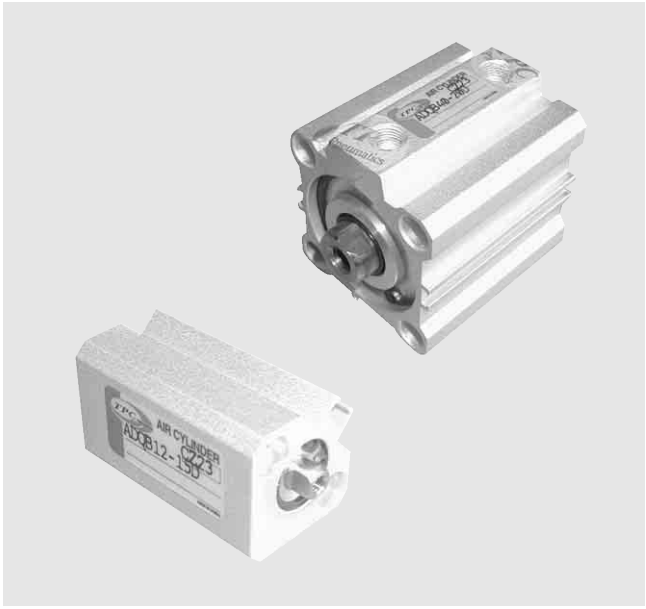
The cylinder is designed with ultra compact overall dimensions offering space saving features.
Ideal for use on applications requiring compact size fixtures and equipment.

Series Variation	Action	Style	Standard	Built-in magnet	Mounting thread(A) type	Rod end M thread	Rubber cushion	End boss	Copper free	Bore Size mm	Std Stroke (mm)
Standard 	Double Acting	Single Rod AQ	●	●	●	●	●	●	●	12, 16, 20, 25, 32, 40, 50, 63, 80, 100	ø12, ø16/5~30 ø20, ø25/5~50 ø32, ~40/5~100 ø50~ø100/10~100
		Double Rod AQW	●	●	●	●	●			20, 32, 40, 50, 63, 80, 100	ø32, ~40/5~50 ø50~ø100/10~50
	Single Acting	Extend/ Retraction AQ	●	●	●	●		●	●	20, 32, 40, 50	ø20, ~40/5, 10 ø50/10, 20
Non-Rotating Type 	Double Acting	Single Rod AQK	●	●	●	●				20, 32, 40, 50, 63	ø20/5~50 ø32, ø40/5~100 ø50~ø63/10~100
		Double Rod AQKW	●	●	●	●				20, 32, 40, 50, 63	ø20~ø40/5~50 ø50, ø63/10~50
Standard For Intense-Magnetism Resistant 	Double Acting	Single Rod ADQCP								50, 63	ø50, ø63/25~100
Special Option											
Special Option											

Series AQ

Compact Cylinder/Double Acting, Single Acting Type

Bore Size (mm) : ø12, ø16, ø20, ø25, ø32, ø40, ø50, ø63, ø80, ø100



- SPACE SAVING DESIGN
- LIGHT WEIGHT
- 10 BORE SIZES
- AUTO SWITCH CAPABLE
- CYLINDERS FOR SPECIAL APPLICATIONS
- MANUFACTURING CERTIFIED TO ISO 9001&9002 STANDARDS

How to Order

Standard Type

With Auto Switch

	1	2	3	4	5	6	7	8	9	10
AQ		W	B	20	30	D	C			
ADQ		W	B	20	30	D	C		W4	S

1 Built-in Magnet
For details, Please refer to Page A-179

2 Model
Blank : Single Rod
W : Double Rod
K : Non-Rotating

3 Type
B : Through Hole (Standard Type)
A : Both Ends Tapped
※ For the Dimensions of "A" type please refer to page A-196

4 Bore Size (mm)
12 : ø12
16 : ø16
20 : ø20
25 : ø25
32 : ø32
40 : ø40
50 : ø50
63 : ø63
80 : ø80
100: ø100

5 Cylinder Stroke(mm)
※ For stroke refer to page A-162

6 Action
D : Double Acting
S : Single Acting/Spring Return
T : Single Acting/Spring Extended

7 Body Option(See list below)
Blank: Standard
C : Rubber cushion
M : Rod end male thread
F : Rear boss mount

8 Special Option
Blank : Standard type
XC16 : Copper-free

9 Applicable Auto Switch
Blank:Without Auto Switch
W4 : W4(Reed Switch)
※ Suffix L for lead wire exceeding 3m length.
Example) W4L

10 Number of Auto Switch
Blank : 2 pcs.
S : 1 pc.

Standard/Specifications

Fluid	Air
Max. Operating Pressure	1.5MPa (9.9kgf/㎠)
Ambient and Fluid Temperature	-10~70℃
Lubrication	Not Required
Cushion	None
Rod End Thread	Female (Standard Type)
Stroke Tolerance	$^{+1.0}_{0}$ mm
Mounting	Through Hole (Standard)
Piston Speed	50~500 mm/sec

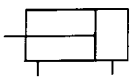
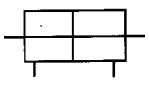
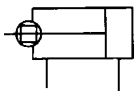
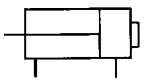
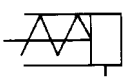
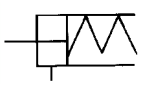
Body Option/Available

● - Standard O - Optional

Type	Action	Code	Single Rod								Double Rod			
			Blank	M	C	CM	F	FM	FC	FCM	Blank	M	C	CM
Standard Type	Double Acting	ø12~ø20	●	●	●	○	●	●	●	○	●	●	●	●
		ø32~ø100	●	●	●	●	●	●	●	●	●	●	●	●
	Single Acting	Spring return Spring extended	●	●	—	—	●	●	—	—	—	—	—	—
With Auto Switch	Double Acting	ø12	—	●	—	—	●	●	—	—	—	—	—	—
		ø16~ø25	●	●	●	○	●	●	●	○	●	○	○	○
		ø32~ø100	●	●	●	●	●	●	●	●	●	●	●	●

Note) Single Acting(Spring return / Spring extended) is optional.

Model/Standard Stroke

Bore Size mm	Double Acting				Single Acting	
	Single Rod Type	Double Rod Type	Non-Rotating Rod Type	Rear Boss Mount Type	Spring Return Type	Spring Extended Type
						
	Standard Stroke (mm)				Standard Stroke (mm)	
ø12	5, 10, 15 20, 25, 30	–	–	5, 10, 15 20, 25, 30	–	–
ø16						
ø20	5, 10, 15, 20, 25, 30, 35, 40, 45, 50, 75	5, 10, 15, 20, 25, 30, 35, 40, 45, 50	5, 10, 15, 20, 25, 30, 35, 40, 45, 50	5, 10, 15, 20, 25, 30, 35, 40, 45, 50, 75	5, 10	5, 10
ø25					–	–
ø32	5, 10, 15, 20, 25, 30, 35, 40, 45, 50, 75, 100, 125, 150	5, 10, 15, 20, 25, 30, 35, 40, 45, 50, 75, 100	5, 10, 15, 20, 25, 30, 35, 40, 45, 50, 75	5, 10, 15, 20, 25, 30, 35, 40, 45, 50, 75, 100, 125, 150	5, 10	5, 10
ø40						
ø50	10, 15, 20, 25, 30, 35, 40, 45, 50, 75, 100, 125, 150	10, 15, 20, 25, 25, 30, 35, 40, 45, 50, 75, 100	10, 15, 20, 25, 25, 30, 35, 40, 45, 50, 75, 100	10, 15, 20, 25, 25, 30, 35, 40, 45, 50, 75, 100, 125, 150	10	10
ø63					–	–
ø80			–			
ø100						

• Intermediate Stroke

A spacer of 5, 10, 15 and 20mm is used for intermediate strokes between 55 and 100mm stroke(55, 60, 65...).
(Example) AQB50-55D is produced by installing 20mm spacer in AQB50-75.

Options

Name	Applicable Type
Cushion	Rubber Cushion/Double Acting Only
Rod End MaleThread	Optional
Boss Mount	Optional
Non-Rotating Piston Rod Type	Double Acting/Single Rod Type Only

Minimum Operating Pressure (kgf/cm²)

Type \ Bore Size (mm)	12	16	20	25	32	40	50	63	80	100
Double Acting (Single Rod)	0.7	0.7	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Single Acting (Spring Return, Spring Extended)	–	–	1.8	–	1.7	1.5	1.3	–	–	–

Non-Rotating Rod Accuracy

Bore Size (mm)	Ø20 • Ø25	Ø32	Ø40	Ø50	Ø63
Non-Rotating Rod Accuracy	±1°	±0.8°			

Cautions

① When mounting, completely flush piping, be careful that dust and chips do not enter the cylinder.
② The piston rod load should always be aligned with the cylinder axis.
- Cylinder installation requires accurate alignment.
- When used as a stopper, avoid side loading of the piston rod.

③ Prevent damage to the piston rod. A damaged piston rod can lead to failure of the rod packing and result in cylinder failure.
④ When disassembling, remove the retaining ring (C-type) with special tool. (Assembling tool for C-type retaining ring)

Theoretical Force

Single Acting (kgf)

Action	Bore Size mm	Operating pressure (kgf/cm) 3	5	7	Spring Force: Spring Extended Position	Spring Return Position	Rod and Max. Axial Load
Spring Return	20	7.8	14.1	20.3	1.6	0.6	0.67
	25	12.6	22.4	32.2	2.1	1.1	1.63
	32	21.7	37.8	53.8	2.4	1.5	1.77
	40	34.5	59.7	84.8	3.1	1.3	1.77
	50	52.9	92.1	131.4	5.5	2.5	3.1
Spring Extended	20	4.2	8.9	13.6	2.8	0.5	0.67
	25	8.3	15.8	23.4	3.0	1.0	1.63
	32	15.0	27.1	39.2	3.0	2.0	1.77
	40	28.6	49.7	70.8	3.0	2.0	1.77
	50	40.9	73.9	106.9	8.5	2.5	3.1

Auto Switch Mounting Bracket/PART No.

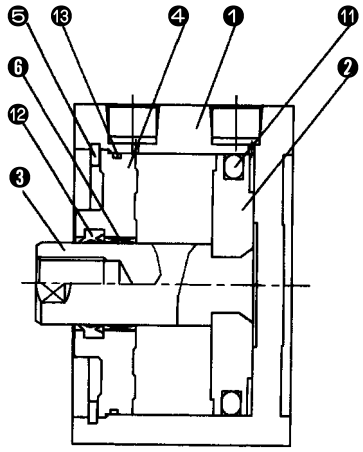
Bore Size (mm)	Mounting Band	Note	Applicable Auto Switch
12 • 16 • 20 • 25	BQ-1	• Auto Switch Mounting Screw (M3×0.5×8 *l*) • Square Nut	W4
32 • 40 • 50 • 63 • 80 • 100	BQ-2	• Auto Switch Mounting Screw (M3×0.5×10 *l*) • Auto Switch Spacer • Auto Switch Mounting Nut	

Double Acting Single Rod (kgf)

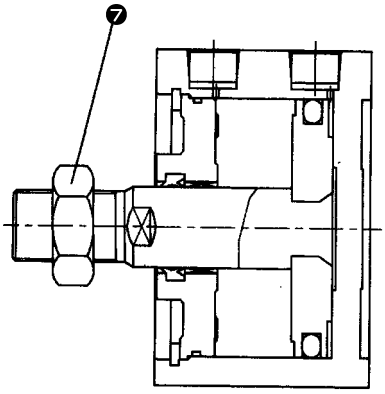
Bore size	Rod direction	Operating pressure kgf/cm 3	5	7
12	IN	2.5	4.2	5.9
	OUT	3.3	5.6	7.9
16	IN	4.5	7.5	10.5
	OUT	6	10	14
20	IN	7	11.7	16.4
	OUT	9.4	15.7	21.9
25	IN	11.3	18.8	26.4
	OUT	14.7	24.5	34.3
32	IN	18	30	42
	OUT	24	40	56
40	IN	31	52	73
	OUT	37	62	87
50	IN	49	82	115
	OUT	58	98	137
63	IN	84	140	196
	OUT	93	155	218
80	IN	136	227	317
	OUT	150	251	352
100	IN	214	357	500
	OUT	236	393	550

Construction/Parts List

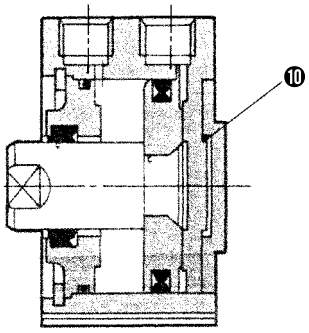
Double Acting/Single Rod Type



Standard Type



Rod End Male Thread Type



Rear boss mount type

Parts List

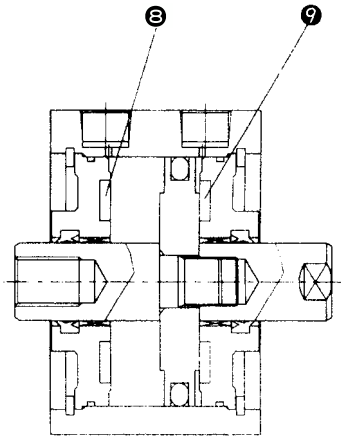
No.	Description	Material	Note
❶	Cylinder Tube	Aluminum Alloy	
❷	Piston	Aluminum Alloy	Chromate
❸	Piston Rod	Carbon Steel	ø32~ø100, Hard chrome
❹	Collar	Aluminum Bearing Alloy	ø12~ø40
		Aluminum Alloy Casting	ø50~ø100
❺	Retaining Ring	Carbon Tool Steel	Phosphate Casting

No	Description	Material	Note
❻	Bushing	Lead Bronze Casting	Only above ø50
❼	Rod end nut	Carbon steel	Nickel Plated
❽	A Bumper	Polyurethane rubber	
❾	B Bumper	Polyurethane rubber	
❿	Boss mount adapter	Aluminum alloy	ø20~ø100

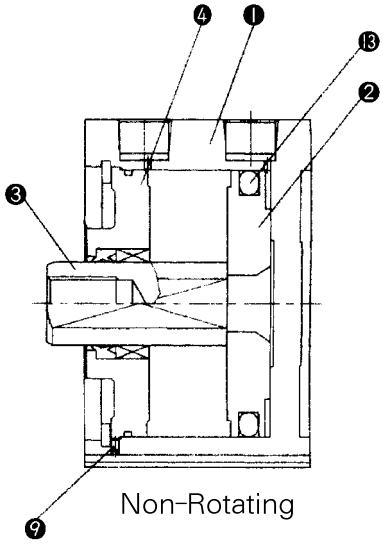
Seals List

No	Description	Material	Parts No.									
			ø12	ø16	ø20	ø25	ø32	ø40	ø50	ø63	ø80	ø100
⓫	Piston packing	NBR	NLP-12	NLP-16A	NLP-20A	NLP-25A	NLP-32A	NLP-40A	NLP-50A	NLP-63A	NLP-80A	NLP-100A
⓬	Rod packing	NBR	DYR-6K	DYR-8K	DYR-10SK	DYR-12	DYR-16	PDU-16Z	PDU-20Z	PDU-20Z	PDU-25Z	PDU-30Z
⓭	Gasket	NBR	SO-013-6	C14	C18	C22	C29	C36	C46	C60	C75	C95

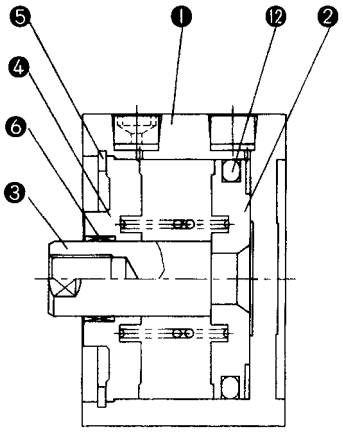
Construction/Parts List



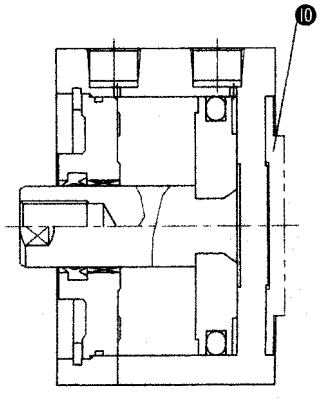
Double Rod Type



Non-Rotating



Spring Return Type



Spring Extended Type

Parts List

No.	Description	Material	Note
❶	Cylinder Tube	Aluminum Alloy	
❷	※ Piston	Aluminum Alloy	Chromate
❸	※ Piston Rod	Carbon Steel	
❹	Collar	Aluminum Bearing Alloy	
		Aluminum Alloy Casting	
❺	Retaining Ring	Carbon Tool Steel	Phosphate Coating

※ø12~ø25 Piston rod···One piece construction(Stainless steel)

No	Description	Material	Note
❻	Bushing	Lead Bronze Casting	Only above ø50
❼	Rod End Nut	Carbon Steel	Nickel Plating
❽	A Bumper	Polyurethane Rubber	
❾	B Bumper	Polyurethane Rubber	
❿	Boss Mount Adapter	Aluminum Alloy	

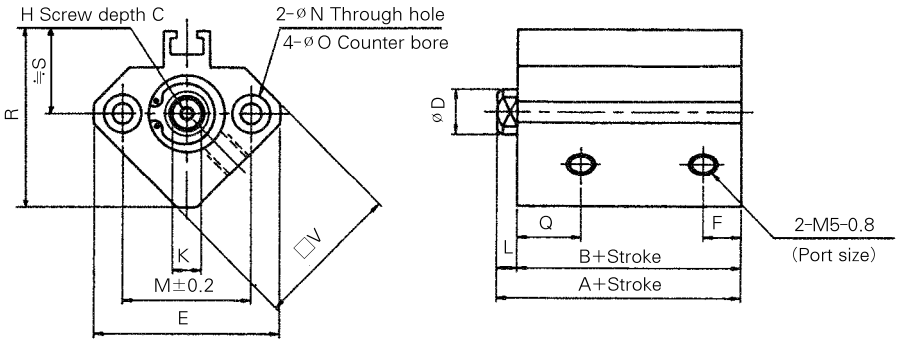
Seals List

No	Description	Material	Parts No.									
			12	16	20	25	32	40	50	63	80	100
⓫	Piston Packing	NBR	NLP-12	NLP-16A	NLP-20A	NLP-25A	NLP-32A	NLP-40A	NLP-50A	NLP-63A	NLP-80A	NLP-100A
⓬	Rod Packing	NBR	DYR-6K	DYR-8K	DYR-10SK	DYR-12	DYR-16	PDU-16Z	PDU-20Z	PDU-20Z	PDU-25Z	PDU-30Z
⓭	Gasket	NBR	SO-013-6	C14	C18	C22	C29	C36	C46	C60	C75	C95

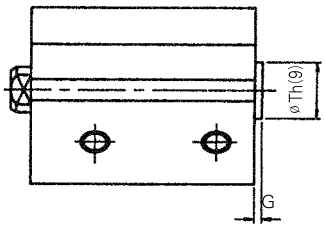
Double Acting/Single Rod Type : Dimensions

Bore Size : ø12~ø25

For the Dimension of
"A" type (Both End Tapped)
Please refer to Page A-196



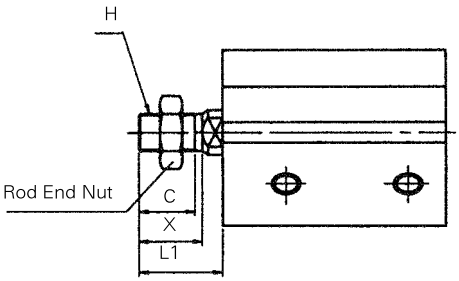
Rear Both Mount



Rear Boss Mount (mm)

Bore size (mm)	G	Th(9)
ø12	1.5	$15\ ^{0}_{-0.043}$
ø16	1.5	$20\ ^{0}_{-0.052}$
ø20	2	$13\ ^{0}_{-0.043}$
ø25	2	$15\ ^{0}_{-0.043}$

Rod End Male Thread



Rod End Male Thread (mm)

Bore size (mm)	C	X	H	L1
ø12	9	10.5	M5×0.8	14.0
ø16	10	12	M6×1.0	15.5
ø20	12	14	M8×1.25	18.5
ø25	15	17.5	M10×1.25	22.5

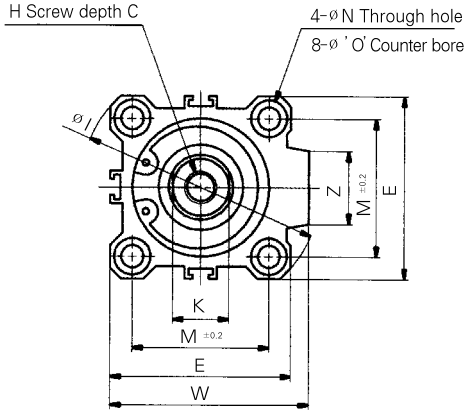
Standard Type (Unit : mm)

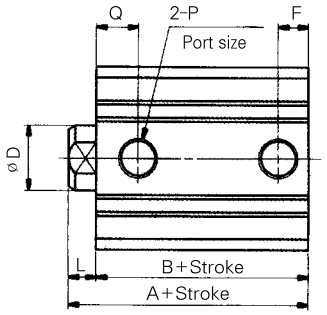
Bore size (mm)	Stroke Range (mm)	A	B	C	D	E	F	H	K	L	M	N	ø O	Q	R	S	□V
ø12	5~30	20.5	17	6	6	32	5	M3×0.5	5	3.5	22	3.5	6.5 Depth3.5	11	35.5	19.5	25
ø16	5~30	22	18.5	8	8	38	5.5	M4×0.7	6	3.5	28	3.5	6.5 Depth3.5	10	41.5	22.5	29
ø20	5~50	24	19.5	7	10	47	5.5	M5×0.8	8	4.5	36	5.5	9 Depth 7	10.5	48	24.5	36
ø25	5~50	27.5	22.5	12	12	52	5.5	M6×1.0	10	5	40	5.5	9 Depth 7	11	53.5	27.5	40

Double Acting/Single Rod Type : Dimensions

Bore Size : ø32~ø100

For the Dimension of
"A" type (Both End Tapped)
Please refer to Page A-196

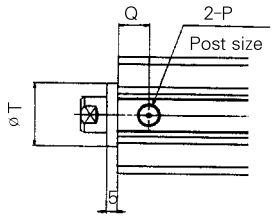


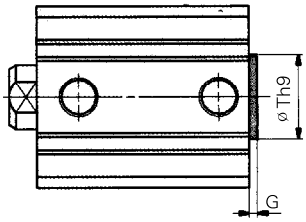


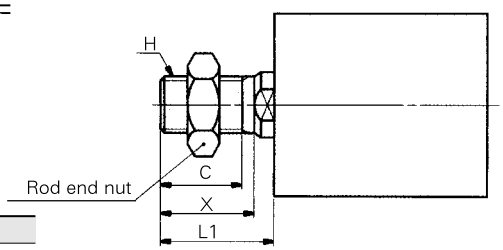
Rear Boss Mount (mm)

Bore size (mm)	G	Th9
ø32	2	21 $^{0}_{-0.052}$
ø40	2	28 $^{0}_{-0.052}$
ø50	2	35 $^{0}_{-0.062}$
ø63	2	35 $^{0}_{-0.062}$
ø80	2	43 $^{0}_{-0.062}$
ø100	2	59 $^{0}_{-0.074}$

Long Stroke (125st or more)







Bore size(mm)	T
ø32	22 $^{0}_{-0.052}$
ø40	28 $^{0}_{-0.052}$
ø50, ø63	35 $^{0}_{-0.062}$
ø80	43 $^{0}_{-0.062}$
ø100	59 $^{0}_{-0.074}$

Rod End Male Thread (mm)

Bore size(mm)	C	X	H	L1※
ø32	20.5	23.5	M14×1.5	28.5(38.5)
ø40	20.5	23.5	M14×1.5	28.5(38.5)
ø50	26	28.5	M18×1.5	33.5(43.5)
ø63	26	28.5	M18×1.5	33.5(43.5)
ø80	32.5	35.5	M22×1.5	43.5(53.5)
ø100	32.5	35.5	M26×1.5	43.5(53.5)

※( ) : 125st or more

Standard Type (Unit : mm)

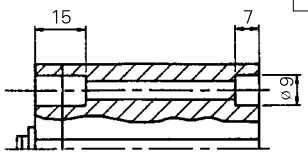
Bore size (mm)	Stroke range (mm)	A	B	C	D	E	F	H	I	J	K	L	M	N	ø O	P	Q	W	Z
ø32	5	30	23	13	16	45	5.5	M8×1.25	60	4.5	14	7	34	5.5	9Depth7	M×0.8 1/8 Rc(PT)	11.5	49.5	18
	10~50						7.5										10.5		
	75,100	40	33									17							
	125, 150	62.5	45.5				12.5										12.5	58.5	
ø40	5~50	36.5	29.5	13	16	52	8	M8×1.25	69	5	14	7	40	5.5	9Depth7	M×0.8 1/8 Rc(PT)	11	57	18
	75,100	46.5	39.5									17							
	125, 150	72	55				14										14	66	
ø50	10~50	38.5	30.5	15	20	64	10.5	M10×1.5	86	7	17	8	50	6.6	11Depth8	M×0.8 1/4 Rc(PT)	10.5	71	22
	75,100	48.5	40.5									18							
	125, 150	73.5	55.5				14										14	80	
ø63	10~50	44	36	15	20	77	10.5	M10×1.5	103	7	17	8	60	9	14Depth10.5	M×0.8 1/4 Rc(PT)	15	84	22
	75,100	54	46									18							
	125, 150	75	57				16.5										16.5	93	
ø80	10~50	53.5	43.5	21	25	98	12.5	M16×2.0	132	6	22	10	77	11	17.5Depth13.5	M×0.8 3/8 Rc(PT)	16	104	26
	75,100	63.5	53.5									20							
	125, 150	86	66				19										19	112.5	
ø100	10~50	65	53	27	30	117	13	M20×2.5	156	6.5	27	12	94	11	17.5Depth13.5	M×0.8 3/8 Rc(PT)	23	123.5	26
	75,100	75	63									22							
	125, 150	97.5	75.5				23											132.5	

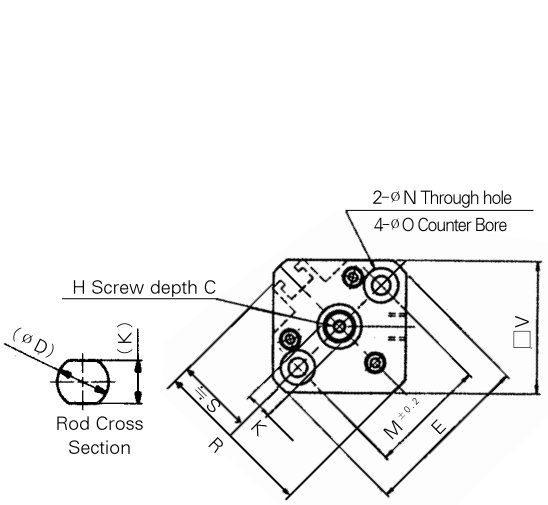
Double Acting/Non-Rotating Piston Rod/Single Rod Type : Dimensions

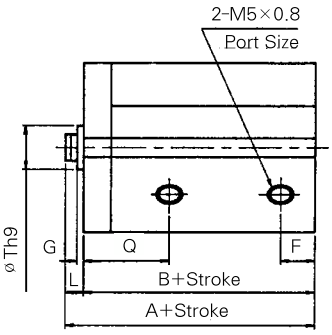
Bore Size : ø20 ~ ø25

For the Dimension of "A" type (Both End Tapped) Please refer to Page A-196

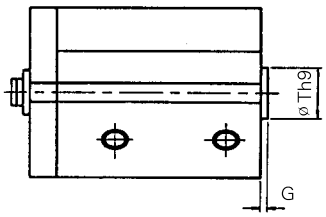
Through Hole







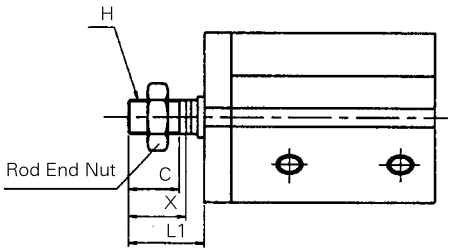
Rear Boss Mount



Rear Boss Mount (mm)

Bore Size (mm)	G	Th9
Ø20	2	$13^{\ 0}_{-0.043}$
Ø25	2	$15^{\ 0}_{-0.043}$

Rod End Male Thread



Rod End Male Thread (mm)

Bore Size (mm)	C	H	L1	X
Ø20	12	M8×1.25	18.5	14
Ø25	15	M10×1.25	22.5	17.5

Standard Type

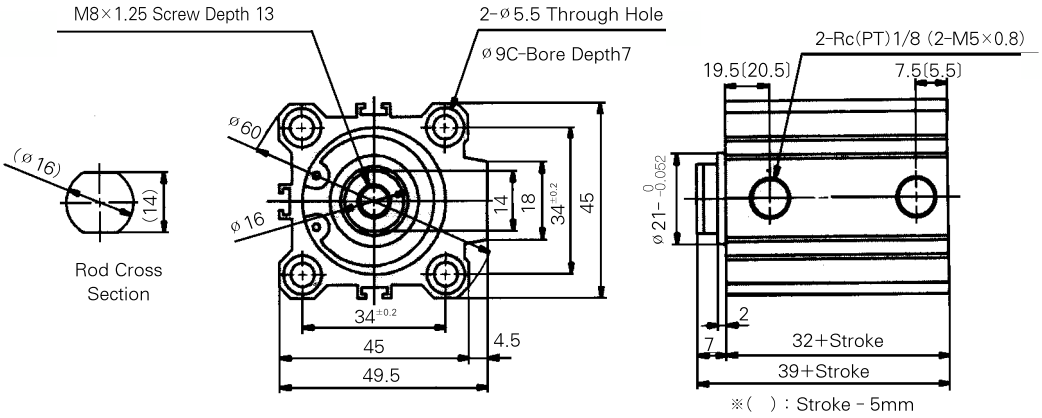
Bore size (mm)	Stroke range (mm)	A	B	C	D	E	F	G	H	K	L	M	N	O	Q	R	S	V
ø20	5~50	32	27.5	7	10	47	5.5	2	M5×0.8	8	4.5	36	5.5	M6×1.0	17	48	24.5	36
ø25	5~50	35.5	30.5	12	12	52	5.5	2	M6×1.0	10	5	40	5.5	M6×1.0	19	53.5	27.5	40

Double Acting/Non-Rotating Rod/Single Rod Type : Dimensions

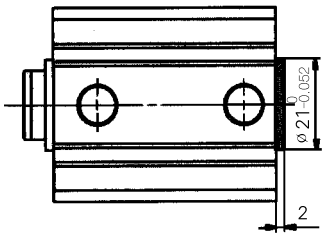
Bore Size : ø 32

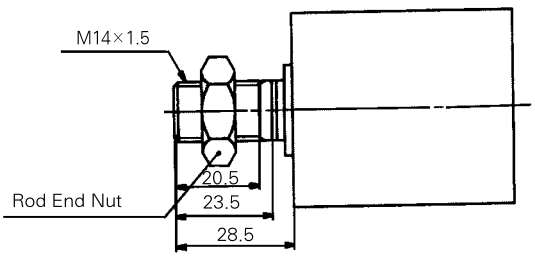
For the Dimension of
"A" type (Both End Tapped)
Please refer to Page A-196

Through Hole



Rear Boss Mount

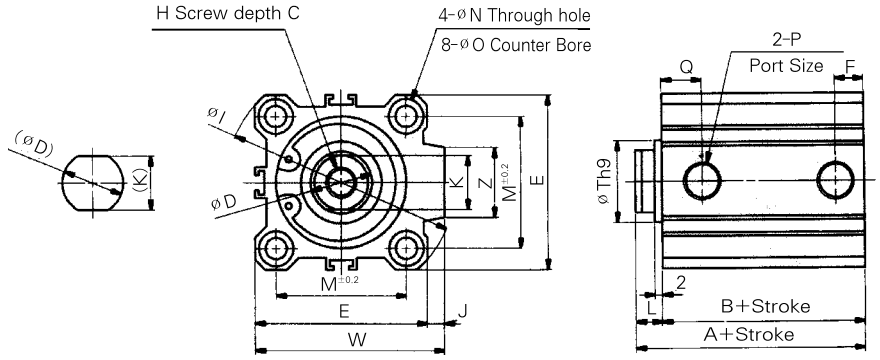




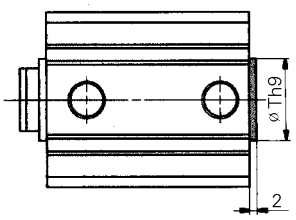
Double Acting/Non-Rotating Piston Rod/Single Rod Type : Dimensions

Bore Size : ø40~ø63

For the Dimension of
"A" type (Both End Tapped)
Please refer to Page A-196



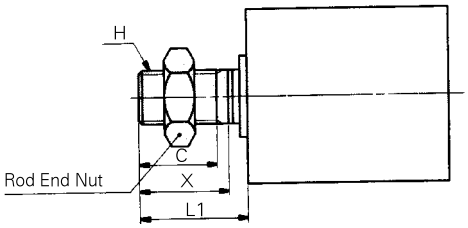
Rear Boss Mount



Rear Boss Mount (mm)

Bore Size (mm)	Th9
ø40	$28^{0}_{-0.052}$
ø50	$35^{0}_{-0.062}$
ø63	$35^{0}_{-0.062}$

Rod End Male Thread



Rod End Male Thread (mm)

Bore Size (mm)	C	H	L1	X
ø40	20.5	M14×1.5	28.5	23.5
ø50	26	M18×1.5	33.5	28.5
ø63	26	M18×1.5	33.5	28.5

Standard Type

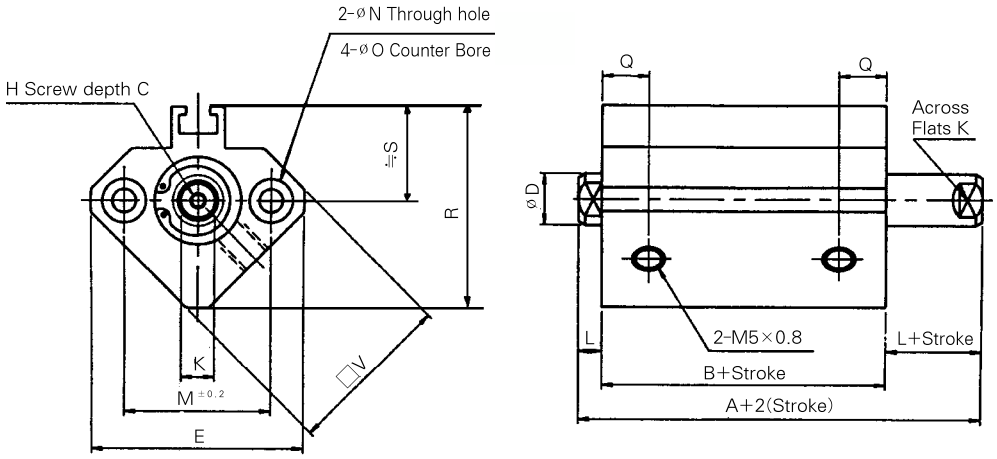
(Unit : mm)

Bore size (mm)	Stroke range (mm)	A	B	C	D	E	F	H	I	J	K	L	M	N	øO	P	Q	Th9	W	Z
ø40	5~50	36.5	29.5	13	16	52	8	M8×1.25	69	5	14	7	40	5.5	9Depth7	Rc(PT) 1/8	11	$28^{0}_{-0.052}$	57	18
	75, 100	46.5	39.5																	
ø50	10~50	38.5	30.5	15	20	64	10.5	M10×1.5	86	7	18	8	50	6.6	11Depth8	Rc(PT) 1/4	10.5	$35^{0}_{-0.062}$	71	22
	75, 100	48.5	40.5																	
ø63	10~50	44	36	15	20	77	10.5	M10×1.5	103	7	18	8	60	9	14Depth10.5	Rc(PT) 1/4	15	$35^{0}_{-0.062}$	84	22
	75, 100	54	46																	

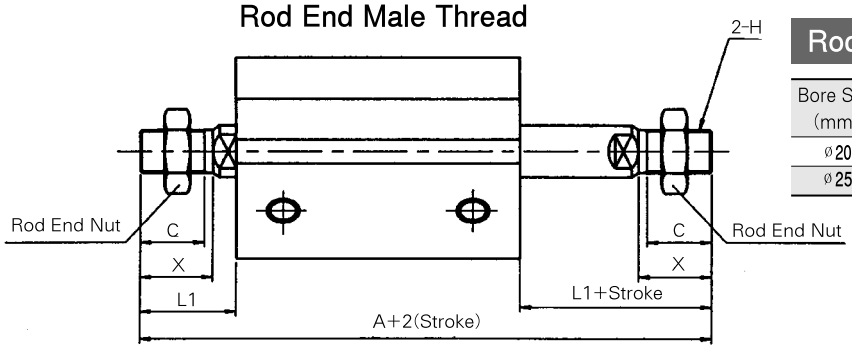
Double Acting/Double Rod Type : Dimensions

Bore Size : ø20~ø25

For the Dimension of
"A" type (Both End Tapped)
Please refer to Page A-196



Rod End Male Thread



Rod End Male Thread (mm)

Bore Size (mm)	A	C	H	L1	X
ø20	63	12	M8×1.25	18.5	14
ø25	74	15	M8×1.25	22.5	17.5

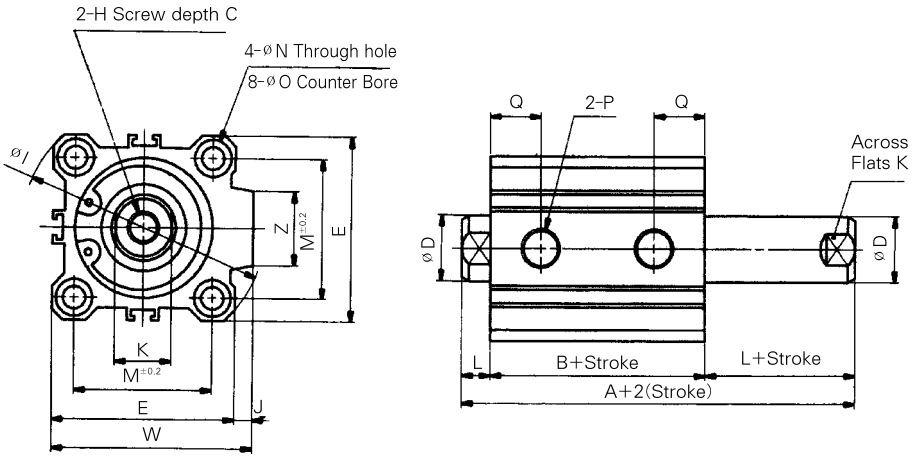
Standard Type

(Unit : mm)

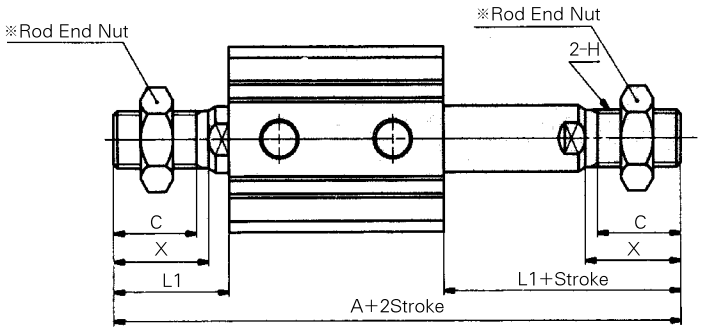
Bore size (mm)	Stroke range (mm)	A	B	C	D	E	H	K	L	M	N	øO	Q	R	S	□V
ø20	5~50	35	26	7	10	47	M8×1.25	8	4.5	36	5.5	9Depth7	9.5	48	24.5	36
ø25	5~50	39	29	12	12	52	M8×1.25	10	5	40	5.5	9Depth7	11	53.5	27.5	40

Double Acting/Double Rod Type : Dimensions

Bore Size : Ø32~Ø100



Rod End Male Thread



Rod End Male Thread (mm)

Bore Size (mm)	A	C	H	L1	X
Ø32	87.5	20.5	M14×1.5	28.5	23.5
Ø40	97	20.5	M14×1.5	28.5	23.5
Ø50	107.5	26	M18×1.5	33.5	28.5
Ø63	109	26	M18×1.5	33.5	28.5
Ø80	138	32.5	M22×1.5	43.5	35.5
Ø100	147.5	32.5	M22×1.5	43.5	35.5

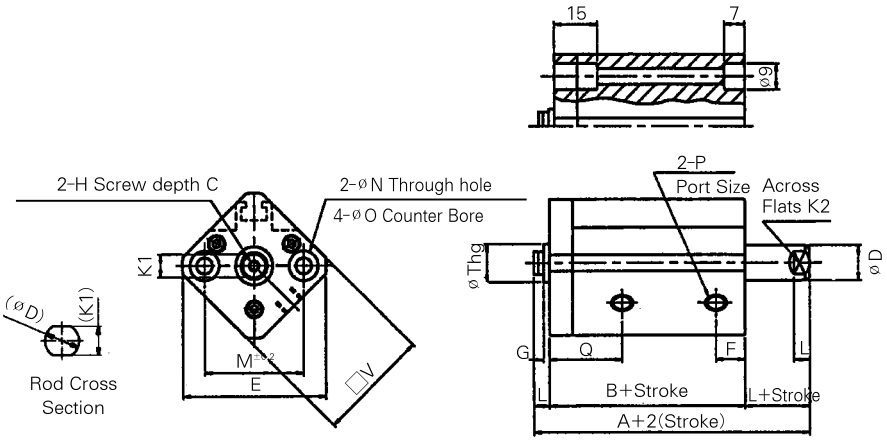
Standard Type (Unit : mm)

Bore size (mm)	Stroke range (mm)	A	B	C	D	E	H	I	J	K	L	M	N	ØO	P	Q	W	Z
Ø32	5 10~100	44.5	30.5	13	16	45	M8×1.25	60	4.5	14	7	34	5.5	9Depth7	M5×0.8 1/8 Rc(PT)	12.5	49.5	18
Ø40	5~100	54	40	13	16	52	M8×1.25	69	5	14	7	40	5.5	9Depth7	M5×0.8 1/8 Rc(PT)	14	57	18
Ø50	10~100	56.5	40.5	15	20	64	M10×1.5	86	7	17	8	50	6.6	11Depth8	M5×0.8 1/4 Rc(PT)	14	71	22
Ø63	10~100	58	42	15	20	77	M10×1.5	103	7	17	8	60	9	14Depth10.5	M5×0.8 1/4 Rc(PT)	15.5	84	22
Ø80	10~100	71	51	21	25	98	M16×2.0	132	6	22	10	77	11	17Depth13.5	M5×0.8 3/8 Rc(PT)	18	104	26
Ø100	10~100	84.5	60.5	27	30	117	M20×2.5	156	6.5	27	12	94	11	17Depth13.5	M5×0.8 3/8 Rc(PT)	22	123.5	26

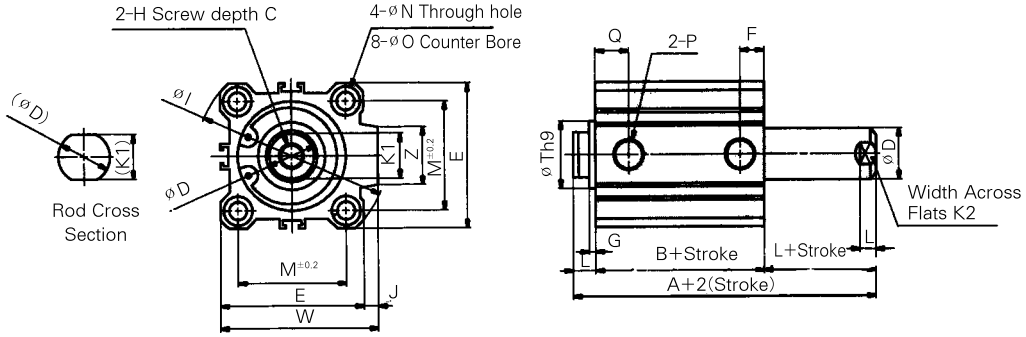
Double Acting/Non-Rotating Piston Rod/Double Rod Type : Dimensions

Bore Size : ø20 ~ ø25

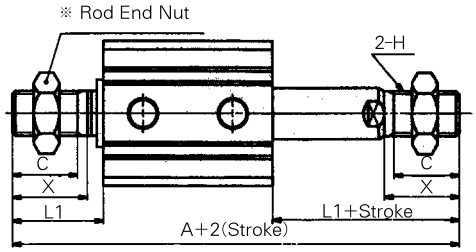
Through Hole



Bore size : ø32



Rod End Male Thread



Rod End Male Thread (mm)

Bore Size (mm)	A	C	H
ø20	71	12	M8×1.25
ø25	82	15	M10×1.25
ø32	96.5	20.5	M14×1.25

Bore Size (mm)	L1	X
ø20	18.5	14
ø25	22.5	17.5
ø32	28.5	23.5

Standard Type

(Unit : mm)

Bore size (mm)	Stroke range (mm)	A	B	C	D	E	F	G	H	I	J	K1	K2	L	M	N	P	Q	R	S	Th9	W	Z	V
ø20	5~50	43	34	7	10	47	9.5	2	M8×1.0	-	-	8	8	4.5	36	5.5	M5×0.8	17.5	48	24.5	$13^{0}_{-0.043}$	-	-	36
ø25	5~50	47	37	12	12	52	11	2	M6×1.0	-	-	10	10	5	40	5.5	M8×0.8	19	53.5	27.5	$15^{0}_{-0.043}$	-	-	40
ø32	5	53.5	39.5	13	16	45	12.5	2	M8×1.25	60	4.5	14	14	7	34	5.5	M5×0.8	21.5	-	-	$21^{0}_{-0.052}$	49.5	18	-
	10~75																Rc(PT)1/8							