

Series CR(CV)-AX

Clean Series Small Cylinder/Double Acting, Single Rod

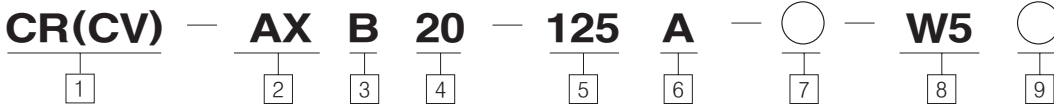
Bore Size : Ø20, Ø25, Ø32, Ø40



- CYLINDER IN LOW PARTICLE GENERATION FOR CLEAN ROOM
- PISTON ROD IS MADE IN THE MATERIAL QUALITY OF STAINLESS STEEL TO ENHANCE RESISTANCE AGAINST MOISTURE AND OTHER CHEMICALS.
- EXCLUSIVE GREASE USE, DUST GENERATION IS MINIMIZED WHEN CYLINDER IS ACTING.
- COMPACT APPEARANCE AND LIGHTWEIGHT, EASY INSTALLATION.

- CLEAN
- CR(CV) ARD
- CR(CV) AQ2/ADQ2
- CR(CV) AX**
- CR(CV) AGL
- CR(CV) NGQL
- CR(CV) NLCD
- LOW SPEED CYLINDER

How to Order



1 Clean Series

CR : Relief Port Type
CV : Vacuum Suction Type

2 Air Cylinder(Double Acting, Single Rod)

Basic type : Built-in magnet

3 Mounting

B : Basic type
L : Foot type in the axial direction
F : Type of flange at the rod side
G : Type of flange at the head side
BZ : Basic type of boss-cut
FZ : Flange type boss-cut

4 Bore Size

20 : 20mm 25 : 25mm
32 : 32mm 40 : 40mm

5 Stroke(mm)

20 : 25,50,75,100,125,150,175,200,250,300
25 : 25,50,75,100,125,150,175,200,250,300
32 : 25,50,75,100,125,150,175,200,250,300
40 : 25,50,75,100,125,150,175,200,250,300

6 Cushion

Blank : Rubber cushion type
A : Air cushion type
※ For boss-cut, only rubber cushion type is available.

7 Series

Blank : Standard type
XC16 : Copper-free

8 Auto Switch

Blank : None
(Cylinder with built-in magnet)
Reed switch
- Band attached type(grommet)
- W5
※ The standard length of lead wire is 0.5m
※ For length lead wire over 3m, L is added to the end of part number.
(EX) W5L
※ For length lead wire over 5m, please contact us.

9 Number of Auto Switches

Blank : 2 pcs
S : 1 pc
N : N pcs

Bracket/Parts Number

Bore size(mm)	20	25	32	40
Foot in the axial direction	TCM-L020B	TCM-L032B	TCM-L040B	
Flange	TCM-F020B	TCM-F032B	TCM-F040B	

※ Foot must be ordered in 2 units for 1 cylinder.

Band to Attach Auto Switch/Parts Number

Type of auto switch	Bore size(mm)			
	20	25	32	40
W5	TBM2-020	TBM2-025	TBM2-032	TBM2-040

Series CR(CV)-AX

■ Cautions for CR(CV)TCM2 Cylinder

This product is adapted in compliance with high purity. Make sure to read the manual prior to selecting and using the produce. Be sure to see the common cautions for clean room and actuator.

Precautions on Handling

⚠ Warning

- ① Rotating the cover is avoided.
When the cylinder is installed or a pipefitting is screwed into the poll, if the cover is loosened, the coupling portion of the cover could break.
- ② When attaching air cushion, do not use it until cushion valve is completely closed. Otherwise, Damaging cushion packing may occur. Use(-) screwdriver fitting to the hole so as to adjust cushion valve.
- ③ When attaching air cushion, it is preferred not to open cushion valve in excess. In event that cushion valve is used in the state of complete opening (more than 3 turns from complete closure), it may get same to cylinder without cushion and subject to excessive shock. With this phenomenon, damaging piston or cover may result. Be sure that if product is used while supplying compressed air without chocking the above matter, cushion valve may spring out from cover.
- ④ Since the snap ring may fly out, please be careful.
In event that the rod seal is replaced, be sure to carefully remove the snap ring, because the snap ring could fly out.
- ⑤ Touching the cylinder during operation should be avoided. If the cylinder is operating at a high frequency, it is needed to be check that the cylinder tube surface could become very hot creating the risk of burns.

Specifications

Bore size	Ø20, Ø25, Ø32, Ø40	
Model	Relief Port Type	
	Vacuum Suction Type	
Operation Type	Double acting, single rod(non-lubrication)	
Port Size	Ø20, 25, 32	Rc(PT) 1/8
	Ø40	Rc(PT) 1/4
Fluid	Air	
Proof Pressure	1.5MPa(15kgf/cm ²)	
Max. Operation Pressure	1.0MPa(9.9kgf/cm ²)	
Min. Operation Pressure	0.05MPa(0.5kgf/cm ²)	
Ambient and Fluid Temperature · °C(°F)	-10°C~70°C(anti freezing)	
Cushion	Rubber, air cushion	
Stroke Tolerance	Move $^{+1.4}_0$ mm	
Piston Speed	50~750mm/s	

Mounting type and parts list

Mounting type	Parts list	Standard type	
		Attaching nut	Rod end nut
Basic type		1EA	1EA
Axial direction foot type		2EA	1EA
Rod side flange type		1EA	1EA
head side flange type		1EA	1EA
Boss-cut basic type		1EA	1EA
Boss-cut flange type		1EA	1EA

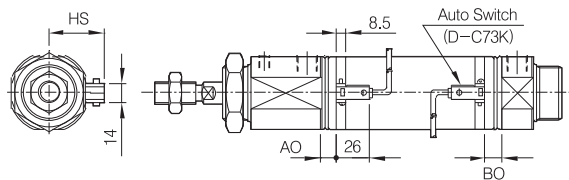
Compared to the Total Length of Cylinder

(Unit : mm)

Bore Size	Ø20	Ø25	Ø32	Ø40
Downsize Length	13	13	13	16

※ Boss-cut type
Boss for the head cover bracket is eliminated and the total length of the cylinder is shortened.

Auto Switch Set Position



Minimum Auto Switch Mountable Stroke

(Unit : mm)

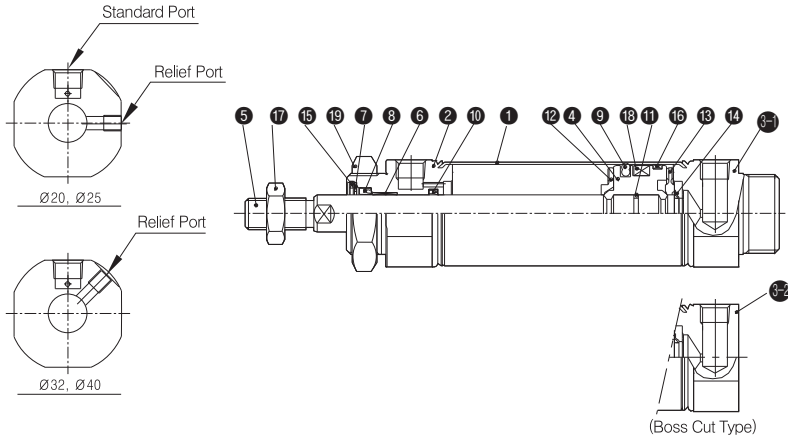
Auto Switch Type	No of Auto Switch				With 1 pcs.
	With 2 pcs.		With n pcs.		
W5	Different surface	Same surface	Different surface	Same surface	10
	15	50	$15+45\left(\frac{n-2}{n=2,4,6,8,\dots}\right)$	$50+45(n-2)$	

Bore Size	D-C73K		
	AO	BO	HS
20	7	6	22.5
25	7	6	25
32	8	7	28.5
40	13	12	32.5

Series CR(CV)-AX

Construction / Parts List

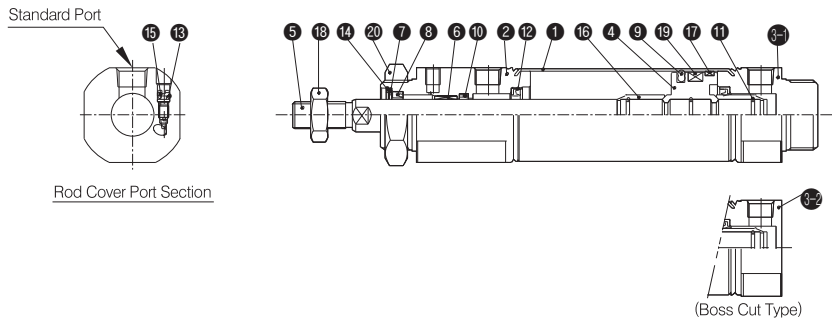
Rubber Cushion Type



No.	Description	Quantity	Material	Note
1	Cylinder tube	1	Stainless Steel	Hard White Aluminum
2	Rod cover	1	Aluminum Alloy	Hard White Aluminum
3-1	Head cover-A	1	Aluminum Alloy	Hard White Aluminum
3-2	Head cover-B	1	Aluminum Alloy	Hard White Aluminum
4	Piston	1	Aluminum Alloy	Chromate
5	Piston rod	1	Hard Chrome Plated	
6	Bush	1	Sintered Metal	
7	Packing nose	1	Nickel Plated	
8	Rod packing	1	NBR	
9	Piston packing	1	NBR	

No.	Description	Quantity	Material	Note
10	Mini-y packing	1	NBR	
11	Piston gasket	1	NBR	
12	Damper-A	1	Urethane	Rod Side Attaching
13	Damper-B	1	Urethane	Head Side Attaching
14	Stopper	1	Carbon Tool Steel	
15	Snap ring A	1	Carbon Tool Steel	Nickel Plated
16	Wear ring	1	Resin	
17	Rod end nut	1	Carbon Steel	Nickel Plated
18	Magnet ring	1	Magnet	
19	Mounting Nut	1	Nickel Plated	

Air Cushion Type



No.	Description	Quantity	Material	Note
1	Cylinder tube	1	Stainless Steel	Hard White Aluminum
2	Rod cover	1	Aluminum Alloy	Hard White Aluminum
3-1	Head cover-A	1	Aluminum Alloy	Hard White Aluminum
3-2	Head cover-B	1	Aluminum Alloy	Hard White Aluminum
4	Piston	1	Aluminum Alloy	Hard Chrome Plated
5	Piston rod	1	Hard Chrome Plated	
6	Bush	1	Sintered Metal	
7	Packing nose	1	Nickel Plated	
8	Rod packing	1	NBR	
9	Piston packing	1	NBR	
10	Mini-y packing	1	NBR	

No.	Description	Quantity	Material	Note
11	Piston gasket	3	NBR	
12	Cushion packing	2	NBR	
13	Cushion valve O-ring	2	NBR	
14	Snap ring A	1	Carbon Tool Steel	Nickel Plated
15	Cushion valve	2	Free Cutting Steel	Nickel Plated
16	Cushion ring	2	Carbon Steel	Nickel Plated
17	wear ring	1	Resin	
18	Rod end nut	1	Carbon Steel	Nickel Plated
19	Magnet ring	1	NBR+Ba Ferrite	
20	Mounting nut	1	Nickel Plated	

CLEAN

CR(CV)
ARD

CR(CV)
AQ2/ADQ2

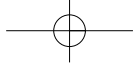
CR(CV)
AX

CR(CV)
AGL

CR(CV)
NGQL

CR(CV)
NLCD

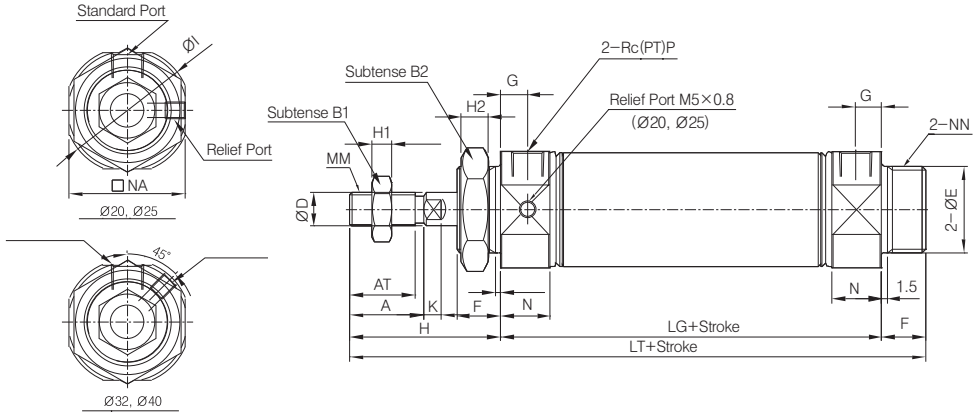
LOW SPEED
CYLINDER



Series CR(CV)-AX

Basic Type (B)

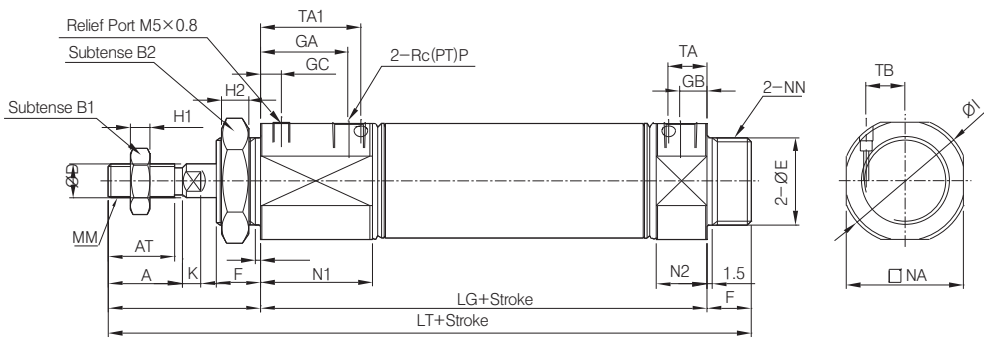
Rubber Cushion Type



(Unit : mm)

Bore Size	Standard Stroke	A	AT	B1	B2	D	E	F	G	H	H1	H2	Ø1	K	MM	N	NA	NN	P	LG	LT
20	25, 50	18	15.5	13	26	8	20 ⁰ _{-0.033}	13	8	41	5	8	27	5	M8×1.25	15	24	M20×1.5	1/8	62	116
	75, 100	22	19.5	17	32	10	26 ⁰ _{-0.033}	13	8	45	6	8	33	5.5	M10×1.25	15	30	M26×1.5	1/8	62	120
32	125, 150	22	19.5	17	32	12	26 ⁰ _{-0.033}	13	8	45	6	8	37.5	5.5	M10×1.25	15	34.5	M26×1.5	1/8	64	122
	175, 200	24	21	22	41	14	32 ⁰ _{-0.033}	16	11	50	8	10	46.5	7	M14×1.5	21.5	42.5	M32×2	1/4	88	154

Air Cushion Type



(Unit : mm)

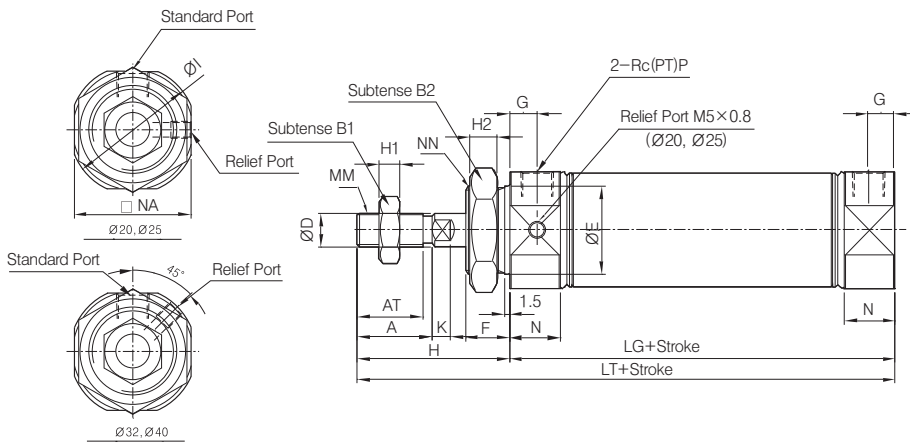
Bore Size	Standard Stroke	A	AT	B1	B2	D	E	F	GA	GB	GC	H	H1	H2	Ø1	K	MM	N1	N2	NA	NN
20	25, 50	18	15.5	13	26	8	20 ⁰ _{-0.033}	13	26	8	6	41	5	8	27	5	M8×1.25	33	15	24	M20×1.5
	75, 100	22	19.5	17	32	10	26 ⁰ _{-0.033}	13	26	8	6	45	6	8	33	5.5	M10×1.25	33	15	30	M26×1.5
32	125, 150	22	19.5	17	32	12	26 ⁰ _{-0.033}	13	26	8	6	45	6	8	37.5	5.5	M10×1.25	33	15	34.5	M26×1.5
	175, 200	24	21	22	41	14	32 ⁰ _{-0.033}	16	31	11	6	50	8	10	46.5	7	M14×1.5	41.5	21.5	42.5	M32×2

Bore Size	Standard Stroke	P	LG	WA1	WA	WB	LT
20	25, 50	1/8	80	29.5	11.5	8.5	134
	75, 100	1/8	80	29.5	11.5	10	138
32	125, 150	1/8	82	29.5	11.5	11.5	140
	175, 200	1/4	108	34.5	14.5	15	174



Series CR(CV)-AX

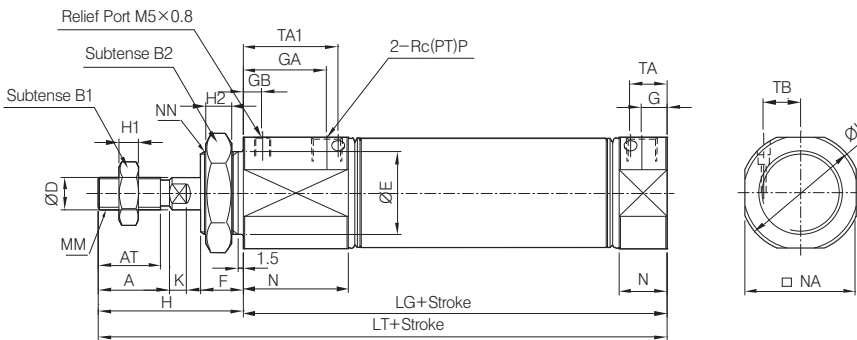
Rubber Cushion Boss-Cut Type/CR-AXBZ, CV-AXBZ



(Unit : mm)

Bore Size	Standard Stroke	A	AT	K	D	N	F	E	B1	B2	MM	H1	H2	G	P	NN	ØI	NA	H	LG	LT
20	25, 50	18	15.5	5	8	15	13	20 ⁰ _{-0.033}	13	26	M8×1.25	5	8	8	1/8	M20×1.5	27	24	41	62	103
	75, 100	22	19.5	5.5	10	15	13	26 ⁰ _{-0.033}	17	32	M10×1.25	6	8	8	1/8	M26×1.5	33	30	45	62	107
32	125, 150	22	19.5	5.5	12	15	13	26 ⁰ _{-0.033}	17	32	M10×1.25	6	8	8	1/8	M26×1.5	37.5	34.5	45	64	109
	175, 200	24	21	7	14	21.5	16	32 ⁰ _{-0.033}	22	41	M14×1.5	8	10	11	1/4	M32×2	46.5	42.5	50	88	138

Air Cushion Boss-Cut Type/CR-AXBZ, CV-AXBZ

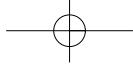


(Unit : mm)

Bore Size	Standard Stroke	A	AT	K	F	N1	N	D	E	B1	B2	MM	H1	H2	G	GA	GB	P	NN	ØI	NA
20	25, 50	18	15.5	5	13	33	15	8	20 ⁰ _{-0.033}	13	26	M8×1.25	5	8	8	26	6	1/8	M20×1.5	27	24
	75, 100	22	19.5	5.5	13	33	15	10	26 ⁰ _{-0.033}	17	32	M10×1.25	6	8	8	26	6	1/8	M26×1.5	33	30
32	125, 150	22	19.5	5.5	13	33	15	12	26 ⁰ _{-0.033}	17	32	M10×1.25	6	8	8	26	6	1/8	M26×1.5	37.5	34.5
	175, 200	24	21	7	16	41.5	21.5	14	32 ⁰ _{-0.033}	22	41	M14×1.5	8	10	11	31	6	1/4	M32×2	46.5	42.5

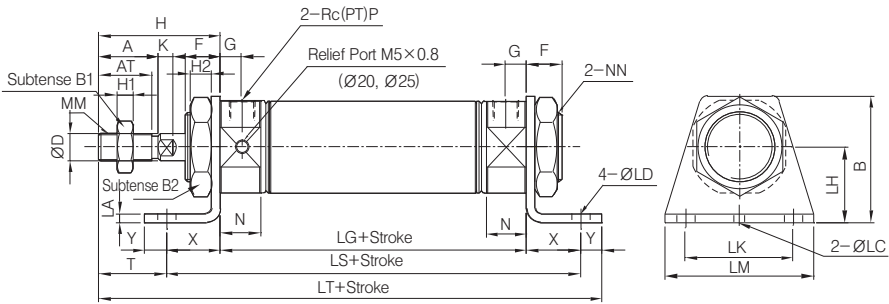
Bore Size	Standard Stroke	H	LG	WA1	WA	WB	LT
20	25, 50	41	80	29.5	11.5	8.5	121
	75, 100	45	80	29.5	11.5	10	125
32	125, 150	45	82	29.5	11.5	11.5	127
	175, 200	50	108	34.5	14.5	15	158

- CLEAN
- CR(CV) ARD
- CR(CV) AQ2/AQ2
- CR(CV) AX**
- CR(CV) AGL
- CR(CV) NGQL
- CR(CV) NLCD
- LOW SPEED CYLINDER



Series CR(CV)-AX

Rubber Cushion Axial Direction Foot Mounting Type/CR-AXL, CV-AXL

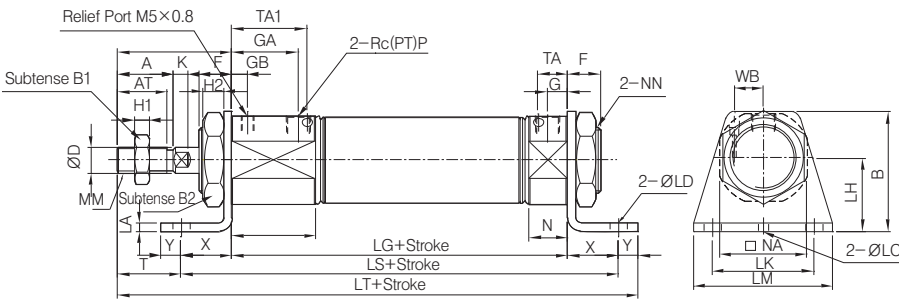


(Unit : mm)

Bore Size	Standard Stroke	A	AT	K	F	N	D	B1	B2	MM	H1	H2	G	P	NN	LC	LH	LK	LM	B	H
20	25, 50	18	15.5	5	13	15	8	13	26	M8×1.25	5	8	8	1/8	M20×1.5	4	25	40	55	40	41
	75,100	22	19.5	5.5	13	15	10	17	32	M10×1.25	6	8	8	1/8	M26×1.5	4	28	40	55	47	45
25	125,150	22	19.5	5.5	13	15	12	17	32	M10×1.25	6	8	8	1/8	M26×1.5	4	28	40	55	47	45
	175,200	24	21	7	16	21.5	14	22	41	M14×1.5	8	10	11	1/4	M32×2	4	30	55	75	54	50

Bore Size	Standard Stroke	S	LG	LA	Y	X	T	LS	LT
20	25, 50	62	3.2	6.8	8	20	21	102	131
	75,100	62	3.2	6.8	8	20	25	102	135
25	125,150	64	3.2	6.8	8	20	25	104	137
	175,200	88	3.2	7.0	10	23	27	134	171

Air Cushion Axial Direction Foot Mounting Type/CR-AXL, CV-AXL



(Unit : mm)

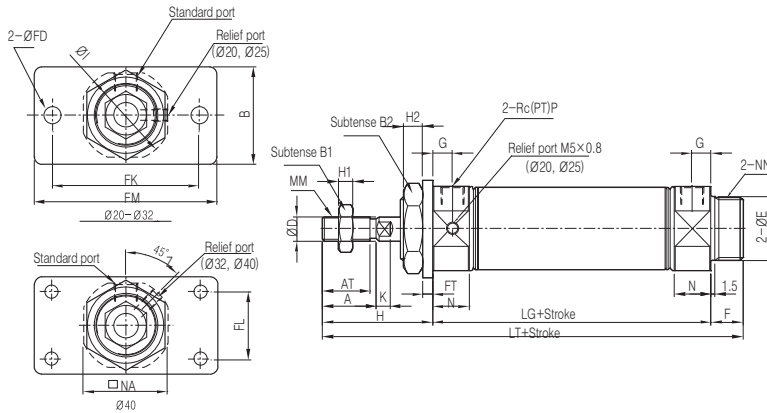
Bore Size	Standard Stroke	A	AT	K	F	N1	N	D	B1	B2	MM	H1	H2	GB	GA	G	P	NN	LC	NA	LH
20	25, 50	18	15.5	5	13	33	15	8	13	26	M8×1.25	5	8	6	26	8	1/8	M20×1.5	4	24	25
	75,100	22	19.5	5.5	13	33	15	10	17	32	M10×1.25	6	8	6	26	8	1/8	M26×1.5	4	30	28
25	125,150	22	19.5	5.5	13	33	15	12	17	32	M10×1.25	6	8	6	26	8	1/8	M26×1.5	4	34.5	28
	175,200	24	21	7	16	41.5	21.5	14	22	41	M14×1.5	8	10	6	31	11	1/4	M32×2	4	42.5	30

Bore Size	Standard Stroke	LK	LM	B	H	LG	LA	LD	Y	X	WA1	WB	WA	T	LS	LT
20	25, 50	40	55	40	41	80	3.2	6.8	8	20	29.5	8.5	11.5	21	120	149
	75,100	40	55	47	45	80	3.2	6.8	8	20	29.5	10	11.5	25	120	153
25	125,150	40	55	47	45	82	3.2	6.8	8	20	29.5	11.5	11.5	25	122	155
	175,200	55	75	54	50	108	3.2	7.0	10	23	34.5	15	14.5	27	154	191



Series CR(CV)-AX

Rubber Cushion Rod Side Flange Mounting Type/CR-AXF, CV-AXF

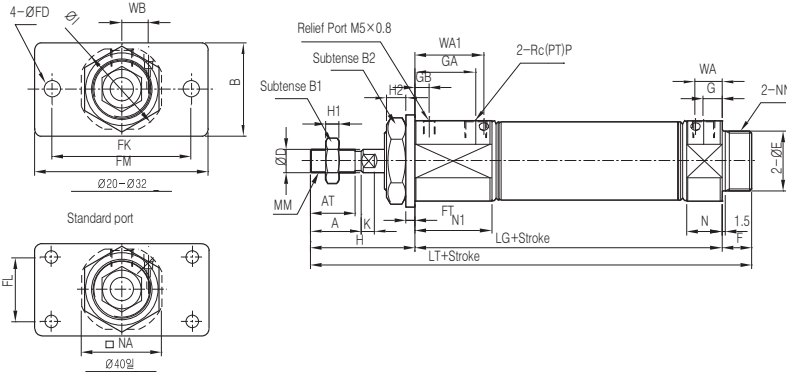


(Unit : mm)

Bore Size	Standard Stroke	A	AT	K	F	FT	N	D	E	G	B1	B2	MM	H1	H2	G	P	NN	Ø1	FD	NA	FL
20	25, 50	18	15.5	5	13	4	15	8	20 ⁰ _{-0.033}	8	13	26	M8×1.25	5	8	8	1/8	M20×1.5	27	7	24	-
	75, 100	22	19.5	5.5	13	4	15	10	26 ⁰ _{-0.033}	8	17	32	M10×1.25	6	8	8	1/8	M26×1.5	33	7	30	-
32	125, 150	22	19.5	5.5	13	4	15	12	26 ⁰ _{-0.033}	8	17	32	M10×1.25	6	8	8	1/8	M26×1.5	37.5	7	34.5	-
	175, 200	24	21	7	16	5	21.5	14	32 ⁰ _{-0.033}	11	22	41	M14×1.5	8	10	11	1/4	M32×2	46.5	7	42.5	36

Bore Size	Standard Stroke	FK	FM	B	H	LG	LT
20	25, 50	60	75	34	41	62	116
	75, 100	60	75	40	45	62	120
32	125, 150	60	75	40	45	64	122
	175, 200	66	82	52	50	88	154

Air Cushion Rod Side Flange Mounting Type/CR-AXF, CV-AXF



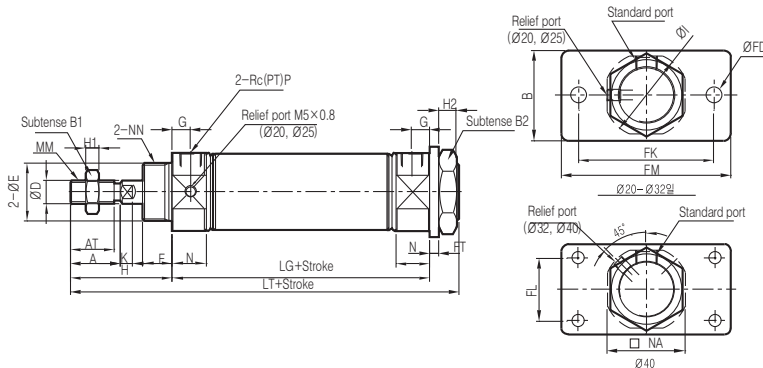
(Unit : mm)

Bore Size	Standard Stroke	A	AT	K	F	FT	N1	N	D	E	B1	B2	MM	H1	H2	GB	GA	G	P	NN
20	25, 50	18	15.5	5	13	4	33	15	8	20 ⁰ _{-0.033}	13	26	M8×1.25	5	8	6	26	8	1/8	M20×1.5
	75, 100	22	19.5	5.5	13	4	33	15	10	26 ⁰ _{-0.033}	17	32	M10×1.25	6	8	6	26	8	1/8	M26×1.5
32	125, 150	22	19.5	5.5	13	4	33	15	12	26 ⁰ _{-0.033}	17	32	M10×1.25	6	8	6	26	8	1/8	M26×1.5
	175, 200	24	21	7	16	5	41.5	21.5	14	32 ⁰ _{-0.033}	22	41	M14×1.5	8	10	6	31	11	1/4	M32×2

Bore Size	Standard Stroke	Ø1	FD	NA	FL	FK	FM	B	H	LG	WA1	WA	WB	LT
20	25, 50	27	7	24	-	60	75	34	41	80	29.5	11.5	8.5	134
	75, 100	33	7	30	-	60	75	40	45	80	29.5	11.5	10	138
32	125, 150	37.5	7	34.5	-	60	75	40	45	82	29.5	11.5	11.5	140
	175, 200	46.5	7	42.5	36	66	82	52	50	108	34.5	14.5	15	174

Series CR(CV)-AX

Rubber Cushion Head Side Flange Mounting Type/CR-AXG, CV-AXG

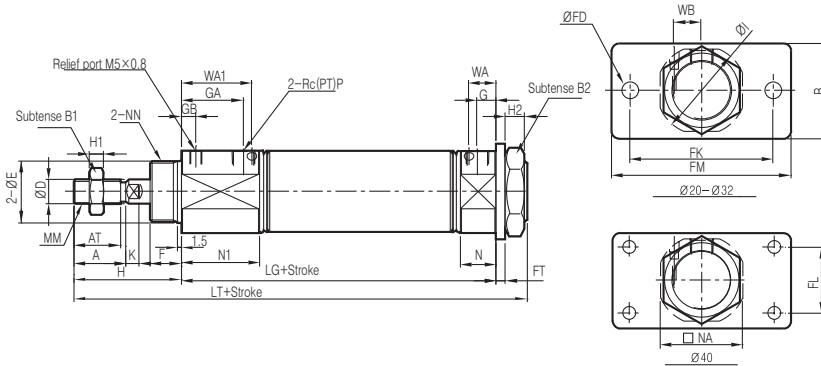


(Unit : mm)

Bore Size	Standard Stroke	A	AT	C	F	FT	N	D	E	B1	B2	MM	H1	H2	G	P	NN	I	FD	NA	FL
20	25, 50	18	15.5	5	13	4	15	8	20 ⁰ _{-0.033}	13	26	M8×1.25	5	8	8	1/8	M20×1.5	27	7	24	-
	75,100	22	19.5	5.5	13	4	15	10	26 ⁰ _{-0.033}	17	32	M10×1.25	6	8	8	1/8	M26×1.5	33	7	30	-
25	125,150	22	19.5	5.5	13	4	15	12	26 ⁰ _{-0.033}	17	32	M10×1.25	6	8	8	1/8	M26×1.5	37.5	7	34.5	-
	175,200	24	21	7	16	5	21.5	14	32 ⁰ _{-0.033}	22	41	M14×1.5	8	10	11	1/4	M32×2	46.5	7	42.5	36

Bore Size	Standard Stroke	FK	FM	B	H	LG	LT
20	25, 50	60	75	34	41	62	116
	75,100	60	75	40	45	62	120
25	125,150	60	75	40	45	64	122
	175,200	66	82	52	50	88	154

Air Cushion Head Side Flange Mounting Type/CR-AXG, CV-AXG



(Unit : mm)

Bore Size	Standard Stroke	A	AT	K	F	FT	N1	N	D	E	B1	B2	MM	H1	H2	GB	GA	G	P	NN
20	25, 50	18	15.5	5	13	4	33	15	8	20 ⁰ _{-0.033}	13	26	M8×1.25	5	8	6	26	8	1/8	M20×1.5
	75,100	22	19.5	5.5	13	4	33	15	10	26 ⁰ _{-0.033}	17	32	M10×1.25	6	8	6	26	8	1/8	M26×1.5
25	125,150	22	19.5	5.5	13	4	33	15	12	26 ⁰ _{-0.033}	17	32	M10×1.25	6	8	6	26	8	1/8	M26×1.5
	175,200	24	21	7	16	5	41.5	21.5	14	32 ⁰ _{-0.033}	22	41	M14×1.5	8	10	6	31	11	1/4	M32×2

Bore Size	Standard Stroke	ØI	FD	NA	FL	FK	FM	B	H	LG	WA1	WA	WB	LT
20	25, 50	27	7	24	-	60	75	34	41	80	29.5	11.5	8.5	134
	75,100	33	7	30	-	60	75	40	45	80	29.5	11.5	10	138
25	125,150	37.5	7	34.5	-	60	75	40	45	82	29.5	11.5	11.5	140
	175,200	46.5	7	42.5	36	66	82	52	50	108	34.5	14.5	15	174

Series CR(CV)-AXW

Clean Series Air Cylinder/Double Acting, Double Rod

Bore Size : $\varnothing 20$, $\varnothing 25$, $\varnothing 32$, $\varnothing 40$



- CYLINDER IN LOW PARTICLE GENERATION FOR CLEAN ROOM
- PISTON ROD IS MADE IN THE MATERIAL QUALITY OF STAINLESS STEEL TO ENHANCE RESISTANCE AGAINST MOISTURE AND OTHER CHEMICALS.
- EXCLUSIVE GREASE USE, DUST GENERATION IS MINIMIZED WHEN CYLINDER IS ACTING.
- COMPACT APPEARANCE AND LIGHTWEIGHT, EASY INSTALLATION.

CLEAN

CR(CV)
ARDCR(CV)
AQ2/ADQ2CR(CV)
AXCR(CV)
AGLCR(CV)
NGQLCR(CV)
NLCDLOW SPEED
CYLINDER

How to Order

CR(CV) — AXW B 20 — 125 — \bigcirc — W5 \bigcirc

1 2 3 4 5 6 7 8

1 Clean Series

CR : Relief Port Type
CV : Vacuum Suction Type

2 Air Cylinder(double acting, single rod)

Basic type : Built-in magnet

3 Mounting

B : Basic type
L : Foot type in the axial direction
F : Type of flange at the rod side

4 Bore Size

20 : 20mm 25 : 25mm
32 : 32mm 40 : 40mm

5 Stroke(mm)

20 : 25,50,75,100,125,150,175,200,250,300
25 : 25,50,75,100,125,150,175,200,250,300
32 : 25,50,75,100,125,150,175,200,250,300
40 : 25,50,75,100,125,150,175,200,250,300

6 Series

Blank : Standard Type
XC16 : Anti Freezing

7 Auto switch

Blank : None
(cylinder with built-in magnet)
Reed switch
- Band attached type(grommet)
- W5
※ The standard length of lead wire is 0.5m
※ For length lead wire over 3m, L is added to the end of part number. (EX) W5L
※ For length lead wire over 5m, please contact us.

8 Number of Auto Switches

Blank : 2 pcs
S : 1 pc
N : N pcs

Bracket/Parts Number

Bore size	20	25	32	40
Foot in the axial direction	TCM-L020B	TCM-L032B	TCM-L040B	
Flange	TCM-F020B	TCM-F032B	TCM-F040B	

※ Foot must be ordered in 2 units for 1 cylinder.

Band to Attach Auto Switch/Parts Number

Type of Auto Switch	Bore size(mm)			
	20	25	32	40
W5	TBM2-020	TBM2-025	TBM2-032	TBM2-040

Series CR(CV)-AXW

■ Cautions for CR(CV)AXCylinder

This product is adapted in compliance with high purity. Make sure to carefully read the manual prior to selecting and using the produce. It is needed to see the common cautions for clean room and actuator.

Precautions on Handling

⚠ Warning

- Do not rotate the cover.
While the cylinder or screwing a pipefitting into the poll is being installed, if the cover is loosened, the coupling portion of the cover could break.
- If air cushion is attached, using it is avoided until cushion valve is completely closed. Otherwise, damaging cushion packing results. Use(-) screwdriver fitting to the hole so as the adjust cushion valve.
- When air cushion is attached, opening cushion valve in excess should be avoided. When it is needed to use cushion valve in the state of complete opening(more than 3 turns from complete closure), it gets same to cylinder without cushion and subject to excessive shock. With this phenomenon, damaging piston or cover results. If product is used while supplying compressed air without chocking the above matter, cushion valve may spring out from cover.
- Be careful with the snap ring that could fly out. In order to replace the rod seal, it is needed to be careful with the removal of the snap ring because the snap ring could fly out.
- Touching the cylinder during operation should be avoided. When the cylinder is operating at a high frequency, it is needed to be aware that the cylinder tube surface could become very hot creating the risk of burns.

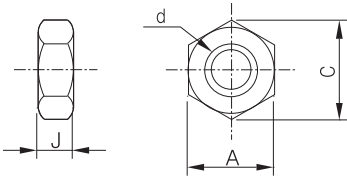
Specifications

Bore size		Ø20, Ø25, Ø32, Ø40
Model		Relief Port Type
		Vacuum Suction Type
Action		Double acting, single rod(non-lubrication)
Port Size	Ø20, 25, 32	Rc(PT) 1/8
	Ø40	Rc(PT) 1/4
Fluid		Air
Proof Pressure		1.5MPa(15.3kgf/cm ²)
Max. Operation Pressure		1.0MPa(9.9kgf/cm ²)
Min. Operation Pressure		0.05MPa(0.5kgf/cm ²)
Ambient and Fluid Temperature · °C(°F)		-10°C~70°C(anti freezing)
Cushion		Rubber, Air Cushion
Stroke Tolerance		^{+1.4} ₀ mm
Piston Speed		50~400mm/s

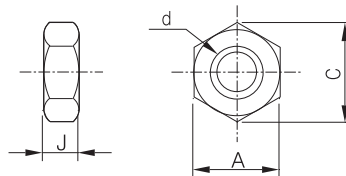
Mounting Type and Parts List

Mounting Type	Parts List	Standard Type	
		Attaching Nut	Red End Nut
Basic Type		1EA	2EA
Axial Direction Foot Type		2EA	2EA
Flange Type		1EA	2EA

Rod End Nut



Attaching Nut



(Unit : mm)

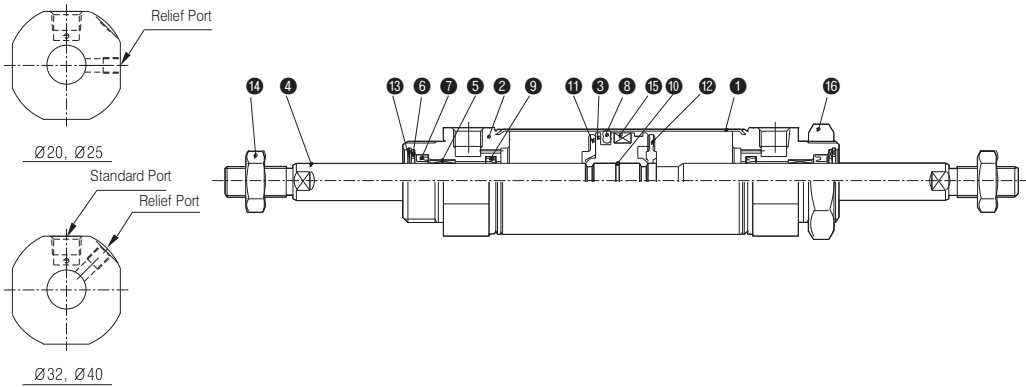
No.	Bore Size(mm)	A	C	D	d	J
TNT-02	20	13	15.5	12.5	M8×1.25	5
TNT-03	25, 32	17	19.6	16.5	M10×1.25	6
TNT-04	40	22	25.4	21.0	M14×1.5	8

(Unit : mm)

No.	Bore Size(mm)	A	C	D	d	J
TSN-020B	20	26	30	25.5	M20×1.5	8
TSN-032B	25, 32	32	37	31.5	M26×1.5	8
TSN-040B	40	41	47.3	40.5	M32×2.0	10

Series CR(CV)-AXW

Construction/Parts List



No.	Description	Quantity	Material	Note
1	Cylinder tube	1	Stainless Steel	
2	Rod cover	2	Aluminum Alloy	Hard White Aluminum
3	Piston	1	Aluminum Alloy	Chromate
4	Piston rod	1	Stainless Steel	Hard Chrome Plated
5	Bush	2	Sintered Alloy	
6	Packing nose	2	Rolled Steel	Nickel Plated
7	Rod packing	2	NBR	
8	Piston packing	1	NBR	

No.	Description	Quantity	Material	Note
9	Mini_y packing	2	NBR	
10	Piston gasket	1	NBR	
11	Damper-A	1	Urethane	Rod Side Attaching
12	Damper-B	1	Urethane	Head Side Attaching
13	Snap ring A	2	Carbon Tool Steel	Nickel Plated
14	Rod end nut	2	Carbon Steel	Nickel Plated
15	Magnet ring	1	NBR+Ba Ferrite	
16	Mounting nut	1	Carbon Steel	

CLEAN

CR(CV)
ARD

CR(CV)
AQ2/AQ2

CR(CV)
AX

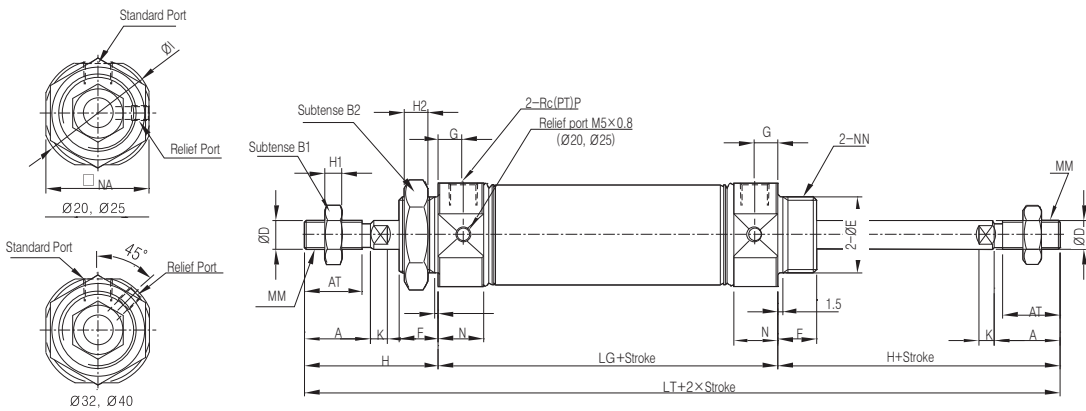
CR(CV)
AGL

CR(CV)
NGQL

CR(CV)
NLCD

LOW SPEED
CYLINDER

Basic Type/CR-AXWB, CV-AXWB

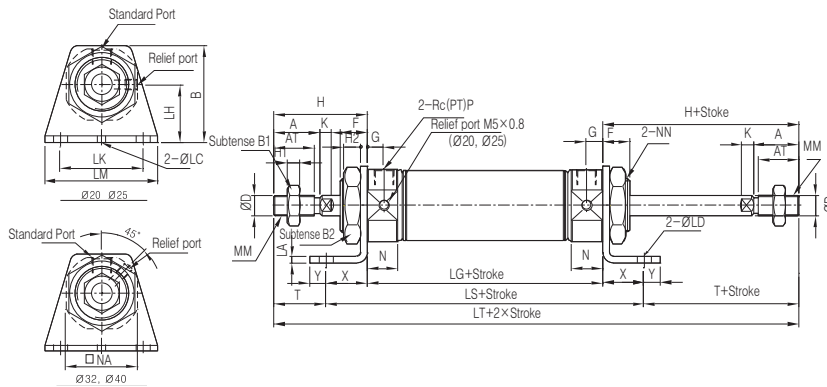


(Unit : mm)

Bore Size	Standard Stroke	A	AT	B1	B2	D	E	F	G	H	H1	H2	Ø1	K	MM	N	NA	NN	P	LG	LT
20	25, 50	18	15.5	13	26	8	20 ⁰ _{-0.033}	13	8	41	5	8	27	5	M8×1.25	15	24	M20×1.5	1/8	62	144
	75, 100	22	19.5	17	32	10	26 ⁰ _{-0.033}	13	8	45	6	8	33	5.5	M10×1.25	15	30	M26×1.5	1/8	62	152
25	125, 150	22	19.5	17	32	12	26 ⁰ _{-0.033}	13	8	45	6	8	37.5	5.5	M10×1.25	15	34.5	M26×1.5	1/8	64	154
	175, 200	24	21	22	41	14	32 ⁰ _{-0.033}	16	11	50	8	10	46.5	7	M14×1.5	21.5	42.5	M32×2	1/4	88	188

Series CR(CV)-AXW

Rubber Cushion Axial Direction Foot Mounting Type/CR-AXWL, CV-AXWL

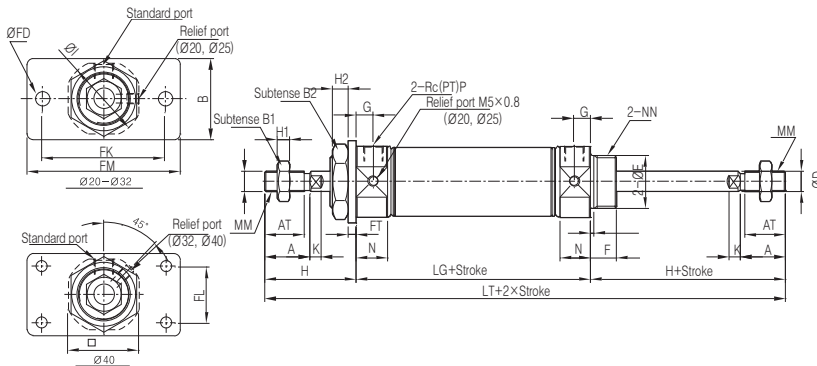


(Unit : mm)

Bore Size	Standard Stroke	A	AT	K	F	N	D	B1	B2	MM	H1	H2	G	P	NN	LC	NA	LH	LK	LM	B
20	25, 50	18	15.5	5	13	15	8	13	26	M8×1.25	5	8	8	1/8	M20×1.5	4	24	25	40	55	40
	75, 100	22	19.5	5.5	13	15	10	17	32	M10×1.25	6	8	8	1/8	M26×1.5	4	30	28	40	55	47
32	125, 150	22	19.5	5.5	13	15	12	17	32	M10×1.25	6	8	8	1/8	M26×1.5	4	34.5	28	40	55	47
	175, 200	24	21	7	16	21.5	14	22	41	M14×1.5	8	10	11	1/4	M32×2	4	42.5	30	55	75	54

Bore Size	Standard Stroke	H	LG	LA	LD	Y	X	T	LS	LT
20	25, 50	41	62	3.2	6.8	8	20	21	102	144
	75, 100	45	62	3.2	6.8	8	20	25	102	152
32	125, 150	45	64	3.2	6.8	8	20	25	104	154
	175, 200	50	88	3.2	7.0	10	23	27	134	188

Flange Mounting Type/CR-AXWF, CV-AXWF



(Unit : mm)

Bore Size	Standard Stroke	A	AT	C	F	FT	N	D	E	B1	B2	MM	H1	H2	G	P	NN	∅1	FD	NA	FL
20	25, 50	18	15.5	5	13	4	15	8	20 ⁰ _{-0.033}	13	26	M8×1.25	5	8	8	1/8	M20×1.5	27	7	24	-
	75, 100	22	19.5	5.5	13	4	15	10	26 ⁰ _{-0.033}	17	32	M10×1.25	6	8	8	1/8	M26×1.5	33	7	30	-
32	125, 150	22	19.5	5.5	13	4	15	12	26 ⁰ _{-0.033}	17	32	M10×1.25	6	8	8	1/8	M26×1.5	37.5	7	34.5	-
	175, 200	24	21	7	16	5	21.5	14	32 ⁰ _{-0.033}	22	41	M14×1.5	8	10	11	1/4	M32×2	46.5	7	42.5	36

Bore Size	Standard Stroke	FK	FM	B	H	LG	LT
20	25, 50	60	75	34	41	62	144
	75, 100	60	75	40	45	62	152
32	125, 150	60	75	40	45	64	154
	175, 200	66	82	52	50	88	188

Series CR(CV)-AXR

Clean Series Small Cylinder/Direct Mount Cylinder

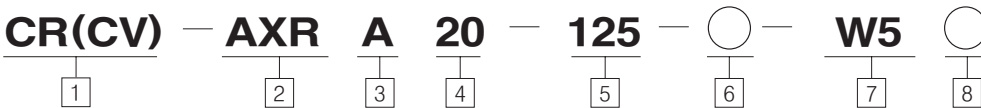
Bore Size : Ø20, Ø25, Ø32, Ø40



- CYLINDER IN LOW PARTICLE GENERATION FOR CLEAN ROOM
- PISTON ROD IS MADE IN THE MATERIAL QUALITY OF STAINLESS STEEL TO ENHANCE RESISTANCE AGAINST MOISTURE AND OTHER CHEMICALS.
- EXCLUSIVE GREASE USE, DUST GENERATION IS MINIMIZED WHEN CYLINDER IS ACTING.

- CLEAN
- CR(CV) ARD
- CR(CV) AQ2/ADQ2
- CR(CV) AX**
- CR(CV) AGL
- CR(CV) NGQL
- CR(CV) NLCD
- LOW SPEED CYLINDER

How to Order



1 Clean Series

CR : Relief Port Type
CV : Vacuum Suction Type

2 Small Cylinder(Direct Mount)

Basic type : Built-in magnet

3 Mounting

A : Bottom side mounting
B : Front side mounting

4 Bore Size

20 : 20mm 25 : 25mm
32 : 32mm 40 : 40mm

5 Stroke(mm)

20 : 25,50,75,100,125,150,175,200,250,300
25 : 25,50,75,100,125,150,175,200,250,300
32 : 25,50,75,100,125,150,175,200,250,300
40 : 25,50,75,100,125,150,175,200,250,300

6 Series

Blank : Standard Type
XC16 : Copper-free

7 Auto switch

Blank : None
(cylinder with built-in magnet)
Reed switch
- Band attached type(grommet)
- W5
※ The standard length of lead wire is 0.5m
※ For length lead wire over 3m, L is added to the end of part number. (EX) W5L
※ For length lead wire over 5m, please contact us.

8 Number of Auto Switches

Blank : 2 pcs
S : 1 pc
N : N pcs

Band to Attach Auto Switch/Parts Number

Type of auto switch	Bore Size(mm)			
	20	25	32	40
W5	TBM2-020	TBM2-025	TBM2-032	TBM2-040

Series CR(CV)-AXR

■ Cautions for CR(CV)AX Cylinder

This product is usable in compliance with high purity. Be sure to read the manual before selecting and using the product. Refer to the common cautions for clean room and actuator.

Precautions on handling

⚠ Warning

- Touching the cylinder during operation should be avoided when the cylinder is operating at a high frequency, it is needed to be aware that the cylinder tube surface could become very hot, creating the risk of burns.

Feature

1. Space saving configuration.
Without using brackets, because it is a directly mounted style, its overall length is shorter, and its installation pitch can be made smaller. Therefore, the space needed for installation has been significantly reduced.
2. Installation accuracy and strength improved.
3. Two styles of installation.
There are two styles of installation, and the styles can be selected according to the purpose; thus the front mounting style and the bottom mounting style.

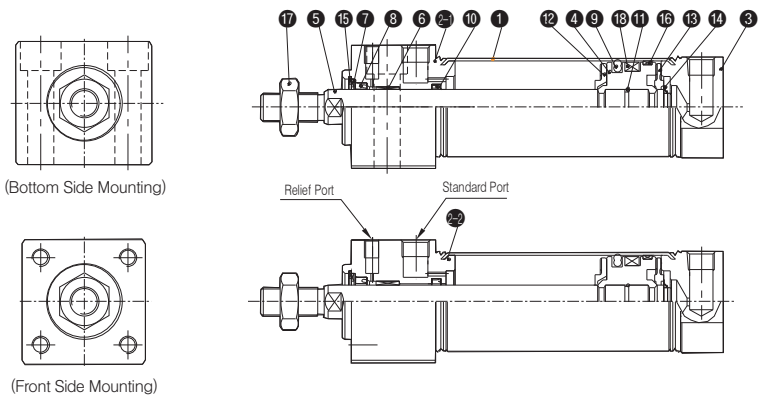
Specifications

Bore size	Ø20, Ø25, Ø32, Ø40
Model	Relief Port Type
	Vacuum Suction Type
Action	Double Acting, Single Rod(non-lubrication)
Port Size	Ø20, 25, 32
	Ø40
Fluid	Air
Proof Pressure	1.5MPa(15.3kgf/cm ²)
Max. Operation Pressure	1.0MPa(9.9kgf/cm ²)
Min. Operation Pressure	0.05MPa(0.5kgf/cm ²)
Ambient and Fluid Temperature · °C(°F)	-10°C~70°C(anti freezing)
Cushion	Rubber cushion basic
Stroke Tolerance	^{+1.4} ₀ mm
Piston Speed	50~400mm/s
Mounting	Bottom side, front side mounting type

Mounting type and ports list

Mounting Type	Ports List	Standard type
		Red End Nut
Bottom Side Mounting Type		1EA
Front Side Mounting Type		1EA

Construction / Parts List

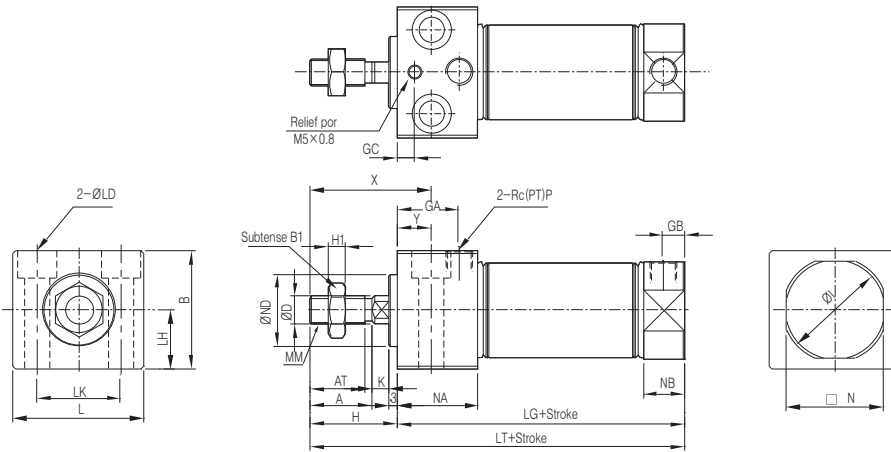


No.	Description	Quantity	Material	Note
1	Cylinder tube	1	Stainless Steel	
2-1	Rod cover-A	1	Aluminum alloy	Hard white aluminum
2-2	Rod cover-B	1	Aluminum alloy	Hard white aluminum
3	Head cover-B	1	Aluminum alloy	Hard white aluminum
4	Piston	1	Aluminum alloy	Chromate
5	Piston rod	1	Stainless Steel	Hard chrome Plated
6	Bush	1	Sintered alloy	
7	Packing nose	1	Rolled steel	Nickel Plated
8	Rod packing	1	NBR	
9	Piston packing	1	NBR	

No.	Description	Quantity	Material	Note
10	Mini_y packing	1	NBR	
11	Piston gasket	1	NBR	
12	Damper-A	1	Urethane	Rod side attaching
13	Damper-B	1	Urethane	Head side attaching
14	Stopper	1	Carbon Tool Steel	
15	Snap ring A	1	Carbon Tool Steel	Nickel Plated
16	Wear ring	1	Resin	
17	Rod end nut	1	Carbon steel	Nickel Plated
18	Magnet ring	1	NBR+Ba Ferrite	

Series CR(CV)-AXR

Bottom Side Mounting Type/CR-AXRA, CV-AXRA

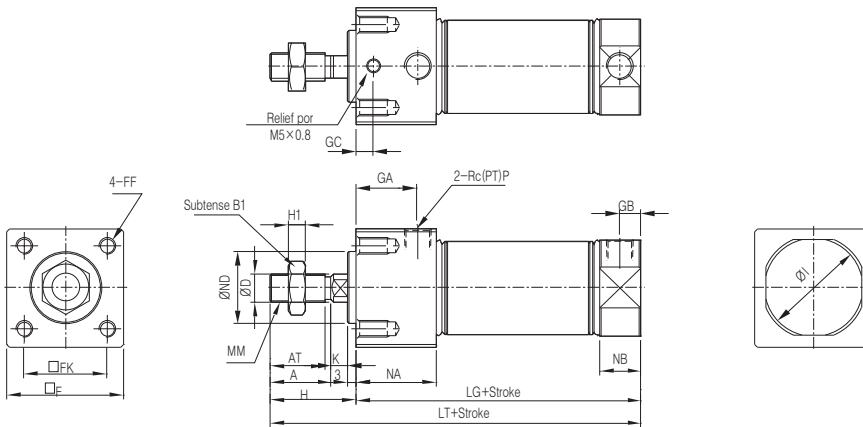


(Unit : mm)

Bore Size	Standard Stroke	A	AT	B	B1	D	GA	GB	GC	H	H1	Ø1	K	L	LD	LH	LK	MM	N
20	25, 50	18	15.5	30.3	13	8	22	8	6	27	5	27	5	33.5	Ø5.5, C/BØ9.5 Depth 6.5	15	21	M8×1.25	24
	75, 100	22	19.5	36.3	17	10	22	8	6	31	6	33	5.5	39	Ø6.6, C/BØ11 Depth 7.5	18	25	M10×1.25	30
32	125, 150	22	19.5	42.3	17	12	22	8	7	31	6	37.5	5.5	47	Ø9, C/BØ14 Depth 10	21	30	M10×1.25	34.5
	175, 200	24	21	52.3	22	14	27	11	9	34	8	46.5	7	58.5	Ø11, C/BØ17.5 Depth 12.5	26	38	M14×1.5	42.5

Bore Size	Standard Stroke	NA	NB	ND	P	LG	X	Y	LT
20	25, 50	29	15	20 ⁰ _{-0.033}	1/8	76	39	12	103
	75, 100	29	15	26 ⁰ _{-0.033}	1/8	76	43	12	107
32	125, 150	29	15	26 ⁰ _{-0.033}	1/8	78	43	12	109
	175, 200	37.5	21.5	32 ⁰ _{-0.033}	1/4	104	49	15	138

Front Side Mounting Type/CR-AXRB, CV-AXRB



(Unit : mm)

Bore Size	Standard Stroke	A	AT	F	FF	FK	B1	D	GA	GB	GC	H	H1	Ø1	K	MM	N	NA	NB	ND	P	LG	LT
20	25, 50	18	15.5	30.4	M5×0.8, Depth 9	22	13	8	22	8	6	27	5	27	5	M8×1.25	24	29	15	20 ⁰ _{-0.033}	1/8	76	103
	75, 100	22	19.5	36.4	M6×1, Depth 11	26	17	10	22	8	6	31	6	33	5.5	M10×1.25	30	29	15	26 ⁰ _{-0.033}	1/8	76	107
32	125, 150	22	19.5	42.4	M6×1, Depth 11	30	17	12	22	8	7	31	6	37.5	5.5	M10×1.25	34.5	29	15	26 ⁰ _{-0.033}	1/8	78	109
	175, 200	24	21	52.4	M8×1.25, Depth 14	36	22	14	27	11	9	34	8	46.5	7	M14×1.5	42.5	37.5	21.5	32 ⁰ _{-0.033}	1/4	104	138

CLEAN

CR(CV)
ARD

CR(CV)
AQ2/ADQ2

CR(CV)
AX

CR(CV)
AGL

CR(CV)
NGQL

CR(CV)
NLCD

LOW SPEED
CYLINDER