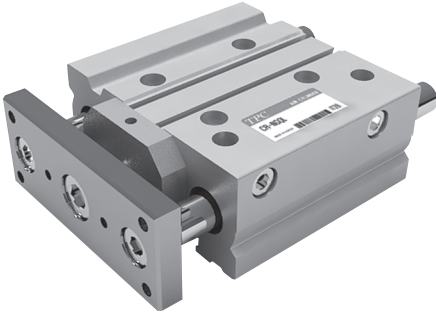


# Series CR(CV)-NGQL

## Clean Series Compact Guide Cylinder

Bore Size :  $\varnothing 12$ ,  $\varnothing 16$ ,  $\varnothing 20$ ,  $\varnothing 25$ ,  $\varnothing 32$ ,  $\varnothing 40$ ,  $\varnothing 50$ ,  $\varnothing 63$



- A LOW PARTICLE CYLINDER FOR CLEAN ROOM
- STAINLESS PISTON ROD IS APPLIED IN ORDER TO STRENGTH ENDURANCE AGAINST WATER OTHER CHEMICALS
- A SPECIAL GREASE MINIMIZES THE AMOUNT OF PARTICLE RELEASED AS THE CYLINDER IS OPERATED

CLEAN

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

### How to Order

CR(CV) — NGQL L 20 — 75 —  $\varnothing 12$  —  $\varnothing 16$  —  $\varnothing 20$  — W4 —  $\square$  —  $\square$

1 2 3 4 5 6 7 8 9 10 11

#### 1 Clean Series

CR : Relief Port Type  
CV : Vacuum Suction Type

#### 2 Compact Cylinder with Guide Magnet, Bumper, No Lubrication

#### 3 Bearing

L : Ball bush bearing

#### 4 Bore Size

12 : 12mm	16 : 16mm
20 : 20mm	25 : 25mm
32 : 32mm	40 : 40mm
50 : 50mm	63 : 63mm

#### 5 Stroke(mm)

Bore	Stroke(mm)
$\varnothing 12$ , $\varnothing 16$	10, 20, 30, 40, 50, 75, 100, 125, 150, 175, 200
$\varnothing 20$ , $\varnothing 25$	125, 150, 175, 200, 250, 300
$\varnothing 32$ , $\varnothing 40$ $\varnothing 50$ , $\varnothing 63$	25, 50, 75, 100, 125, 150, 175, 200, 250, 300

Note) For intermediate stroke, spacer can be used.

Note) Manufacturing middle stroke.

It is able to make a middle stroke cylinder by equipping a spacer to a standard stroke cylinder.

Ex) In case of NGQL 20-25, a 5mm spacer is equipped inside of NGQL 20-30

#### 6 Port Size

Bore	Blank	U Type	
$\varnothing 12$ , $\varnothing 16$	M5×0.8	UNF	
Bore	Blank	G Type	U Type
$\varnothing 20$ -100	RC	G	NPT

※ Contact us if you need European or American port type.

#### 7 Mounting

Blank : No side mounting hole  
H : Side mounting hole

#### 8 Series

Blank : Basic  
XC16 : Cooper free  
(Only L Type is available)

#### 9 Auto Switch

Blank : None  
(Built-in Magnetic)  
W4 : Reed switch

W2P : Magnetism resistant switch  
( $\varnothing 32$ - $\varnothing 100$ )

W8V : Reed switch (Vertical type)

W8H : Reed switch (Horizontal type)

W9V : Solid state switch (Vertical type)

W9H : Solid state switch (Horizontal type)

#### 10 Length of Lead Wire

Blank : 0.5m  
L : 3m

#### 11 Number of Auto Switches

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

#### Caution

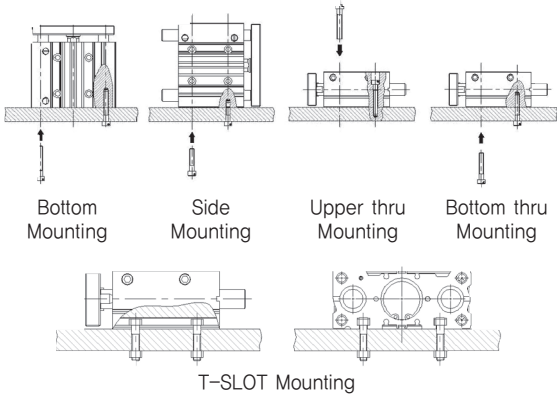
Manufacturing middle stroke.

It is able to make a middle stroke cylinder by equipping a spacer to a standard stroke cylinder.

Ex) In case of NGQL 20-25, a 5mm spacer is equipped inside of NGQL 20-30

# Series CR(CV)-NGQL

## Mounting



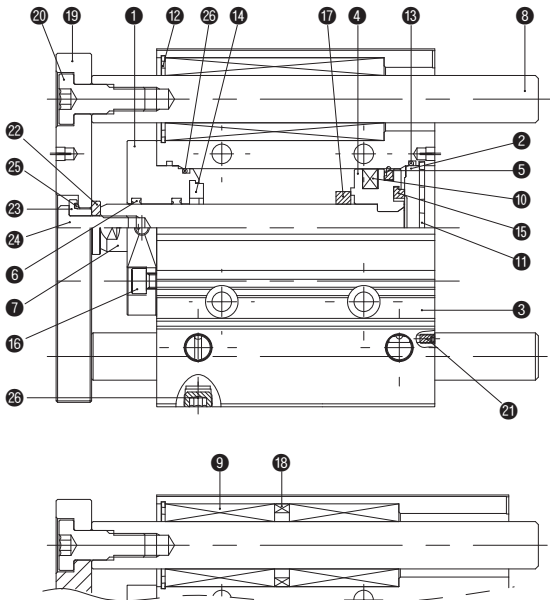
### Caution

1. Scratch or gouging the sliding portion of the piston rod and the guide rod should be avoided. Otherwise, this will cause the seals to become damaged, leading to air leaks.
2. Being mounted on the bottom of the cylinder, the guide rod protrudes from the bottom at the retraction stroke end. Drill holes for the hexagon socket bolts used for mounting purposes, and relief holes for the guide rods. Also, for an application in which impacts such as those of a stopper are applied, be sure to check that the screw-in depth for the mounting bolts is 1.5d.

## Specifications

Fluid		Air	
Action		Double Acting	
Proof Pressure		1.5MPa(15kgf/cm <sup>2</sup> )	
Proof Pressure	Max. Operation Pressure	1.0MPa(9.9kgf/cm <sup>2</sup> )	
	Min. Operation Pressure	∅12, ∅16	0.12MPa(1.2kgf/cm <sup>2</sup> )
		∅20~∅63	0.1MPa(1.0kgf/cm <sup>2</sup> )
Ambient and fluid temperature		-10°C~+60°C	
Lube		Non Lube	
Cushion		Both Side Rubber Cushion	
Tube		2 Direction Tube	
Mounting		Bottom, Side, Upper thru, Bottom thru T-Slot Mounting, Bottom Mounting	
AUTO S/W		Micro AUTO S/W(W8+, W9+), W4 Magnetic Resistance AUTO S/W(W2P)	
Piston Speed		50~500mm/s	
Stroke Tolerance		+1.5 0 mm	

## Structure, Part List : CR-NGQL 12~40/CV-NGQL 12~40

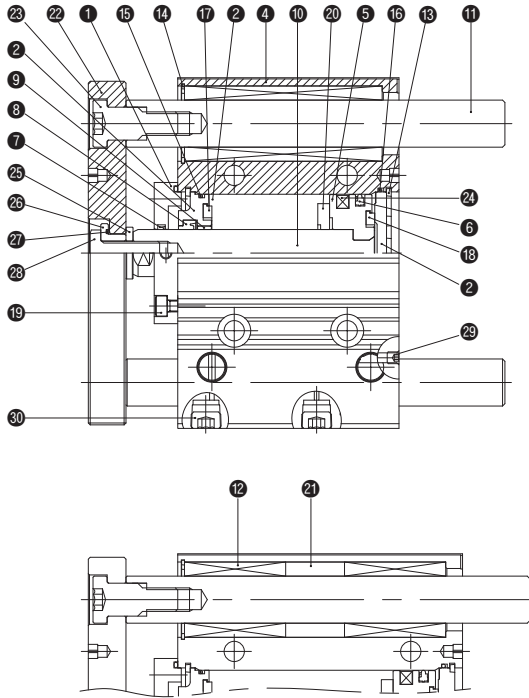


No	Description	Quantity	Material	Note
1	Rod Cover	1	Aluminum Alloy	
2	Head Cover	1	Aluminum Alloy	
3	Cylinder Tube	1	Aluminum Alloy	
4	Piston	1	Aluminum Alloy	
5	Piston Packing	1	NBR	
6	Rod Racking	1(2)	NBR(CR-Type)	
7	Piston Rod	1	Stainless Steel	
8	Guide Rod	1	Bearing Steel	
9	Ball Bearing	2(4)	Bearing Steel	
10	Magnet Ring	1	Rubber+Ferrite	
11	Snap Ring-A	1	Carbon Steel	
12	Snap Ring-B	1	Carbon Steel	
13	Head Cover Gasket	1	NBR	
14	Bumper-A	1	Polyurethane	
15	Bumper-B	1	Polyurethane	
16	Mounting Bolt	2	Stainless Steel	
17	Spacer	1	Aluminum Alloy	
18	Guide Spacer-L	1	Aluminum Alloy	
19	Plate	1	Carbon Steel	
20	Guide Rod Bolt	2	Carbon Steel	
21	Set Screw	1	Carbon Steel	
22	Retainer Washer	1	Carbon Steel	
23	Retainer	1	Carbon Steel	
24	Plate Mounting Bolt	1	Carbon Steel	
25	Gasket	1	NBR	
26	Port Plug	2	Carbon Steel	

- Ball bearing, Guide spacer-L are added if a length of cylinder stroke is longer than certain length.
- A spacer is added in case of manufacturing 5mm middle stroke cylinder.

## Series CR(CV)-NGQL

### Structure, Part List : CR-NGQL 50~63/ CV-NGQL 50~63



No	Description	Quantity	Material	Note
1	Rod Cover-A	1	Aluminum Alloy	
2	Rod Cover-B	1	Aluminum Alloy	
3	Head Cover	1	Aluminum Alloy	
4	Piston	1	Aluminum Alloy	
5	Cylinder Tube	1	Aluminum Alloy	
6	Piston Packing	1	NBR	
7	Rod Packing-A	(1)	NBR(CR-Type)	
8	Rod Packing-B	1	NBR	
9	Bush	1	Brass	
10	Piston Rod	1	Stainless Steel	
11	Guide Rod	1	Bearing Steel	
12	Ball Bearing	1	Bearing Steel	
13	Snap Ring-A	1	Carbon Steel	
14	Snap Ring-B	1	Carbon Steel	
15	Gasket	1	NBR	
16	Head Cover Gasket	1	NBR	
17	Bumper-A	1	Polyurethane	
18	Bumper-B	1	Polyurethane	
19	Mounting Bolt	1	Stainless Steel	
20	Spacer	2	Aluminum Alloy	
21	Guide spacer-L	3	Aluminum Alloy	
22	Plate	1	Carbon Steel	
23	Guide Rod Bolt	2	Carbon Steel	
24	Magnet Ring	1	Sr FERRITE+NBR	
25	Retainer Washer	1	Carbon Steel	
26	Retainer	1	Carbon Steel	
27	Gasket	1	NBR	
28	Plate Mounting Bolt	1	Carbon Steel	
29	Set Screw	1	Carbon Steel	
30	Port Plug	2	Carbon Steel	

- Ball bearing, Guide spacer-L are added if a length of cylinder stroke is longer than certain length.
- A spacer is added in case of manufacturing 5mm middle stroke cylinder.

CLEAN

CR(CV)  
ARD

CR(CV)  
AQ2/ADQ2

CR(CV)  
AX

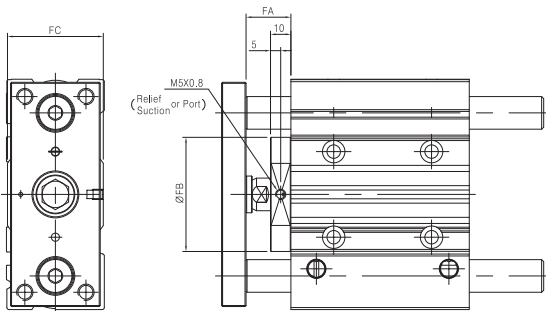
CR(CV)  
AGL

CR(CV)  
NGQL

CR(CV)  
NLCD

LOW SPEED  
CYLINDER

### CR-NGQL 12~63, CV-NGQL 12~63



Bore Size(mm)	FA	FB	FC
12	18	29.5	25
16	18	34.5	29
20	19	44	35
25	19	49.5	40
32	22	55	47
40	22	59	53
50	23	60	60
63	23	71	71

Note) The other options same as standard option.  
\* NGQL Ø12~Ø63