

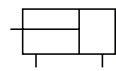
# KCK1 series



### Features

- Two types of clevis widths available.
- Three air port directions can be selected.
- The auto switch can be selected in three directions.
- No bellows required due to the use of a powerful scraper.
- Lightweight the product by optimizing the cover shape.
- Speed control valve is built in.

### Symbol



Double Acting/  
Single Rod

### How to order

KCK1 - A 50   - B 50 Y   -    

①    ②    ③    ④    ⑤    ⑥    ⑦    ⑧    ⑨    ⑩

#### ① Series

KCK1	Standard(No magnet)
KCK1G	Standard magnet built-in type
KCK1P	Strong magnetic built-in type

#### ② Width of clevis

A	16.5mm
B	19.5mm

#### ③ Tube size

50	63
∅50	∅63

#### ④ Port type

Nil	Rc(PT) 1/4
N	NPT 1/4
G	G 1/4

#### ⑤ Cushion

Nil	Head side cushion
B	Both side cushion

#### ⑥ Cylinder stroke(mm)

Bore size/ Stroke	Standard
∅50	50, 75, 100, 125, 150, 200
∅63	

※ Medium sizes other than Standard Stroke must be custom-produced.

#### ⑦ Rod end attachment

Nil	None
I	Single knuckle joint
Y	Double knuckle joint

#### ⑧ Additional options

Nil	None
B	Limited switch attachment
D	Cam mount
L	Foot

#### ⑨ Auto switch

Nil	None
R	S/W rod attached
B	S/W band attached

※ Refer to separate auto switch specifications.

#### ⑩ Number of auto switches

Nil	2pcs
S	1pcs
N	N pcs (N: 3, 4, 5...)

### Specifications(Cylinder)

Operating fluid	Air
Max. Proof pressure	15.3kgf/cm <sup>2</sup> (1.5MPa)
Max. Operating pressure	10.2kgf/cm <sup>2</sup> (1.0MPa)
Min. Operating pressure	0.5kgf/cm <sup>2</sup> (0.05MPa)
Ambient & Fluid temperature	-10 ~ 60℃
Operating piston speed	50 ~ 500mm/sec
Lubrication	Non-lubricant
Cushion	Head side: Air cushion attached
Speed controller	Both side attached
Standard stroke	50, 75, 100, 125, 150, 200
Tolerance of Stroke length	+1.0 0 mm
Mounting	Double clevis
Clevis width	16.5mm, 19.5mm

※ Clevis pin, Split pin, Flat washer included.

### Specifications(Auto switch)

Part No	D-P4
Electrical wiring type	2 wiring type
Power consumption	DC10 ~ 28V
Current Range	5 ~ 50mA
Contact Capacity (Max)	1.5W
Internal voltage drop (max)	5V
Leakage Current (Max)	1mA
Status light	Off: Unknown Red: Unstable detection range Green: Stable detection range
Lead wire	Ø5.4, 2C, PVC
Polarity	None
Operating time (max)	50ms
Ambient temperature	-10 ~ 60℃
Impact resistance	30G
Vibration resistance	9G
Lead wire length	1m, 3m, 5m

### Weight

Unit: kg

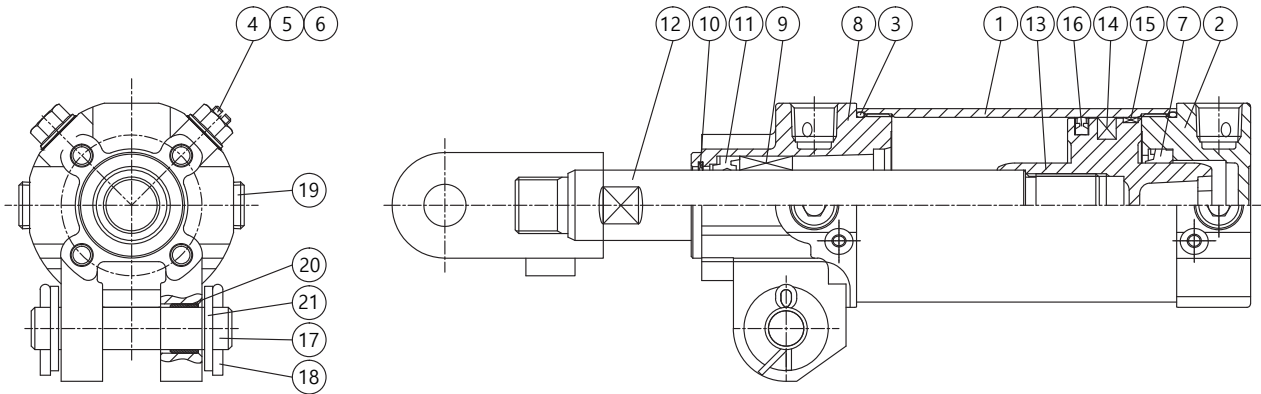
Bore size(mm)		50	63
KCK1(G)Cylinder	Standard weight	0.88	1.02
	Increased weight per 25 stroke	0.09	0.10
Single knuckle joint		0.20	
Double knuckle joint		0.31	
Limited switch attachment		0.23	
Cam mount		0.14	
Foot		0.24	

### Calculation method

Ex) KCK1G-A50-100Y  
Standard weight: 0.88 / Increased weight: 0.09/25 / Cylinder stroke: 100mm / Double knuckle joint:0.31  
 $0.88 + 0.09 \times 100/25 + 0.31 = 1.55\text{kg}$

Structure

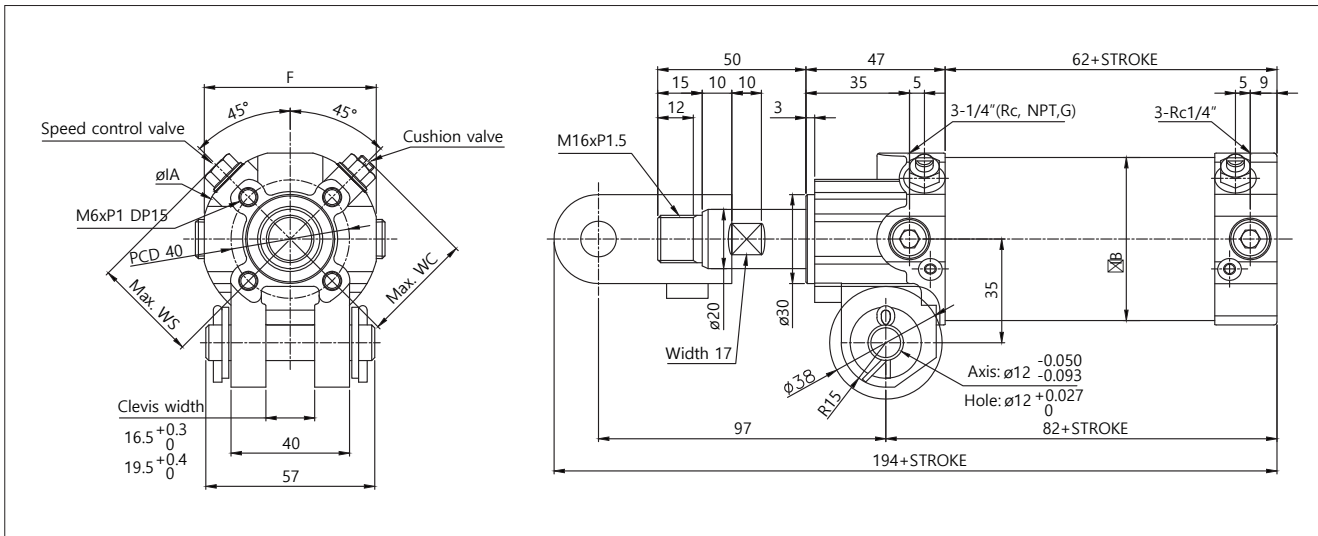
KCK1(G) 50, 63 Basic type



No	Parts	Material	Quantity	Remark
1	Tube	A6063-T5	1	Anodizing
2	Head cover	ALDC12	1	Chromate
3	Tube o-ring	NBR	2	-
4	Needle valve	STS303	4	-
5	Needle valve o-ring	NBR	4	-
6	Needle valve nut	SWCH	4	Nikel Plating
7	Cushion packing	NBR	1	-
8	Rod cover	ALDC12	1	Hard chromium plating
9	Bush	Copper alloy	1	-
10	Coil scraper	Phosphor bronze	1	-
11	Rod packing	NBR	1	-

No	Parts	Material	Quantity	Remark
12	Rod	SM45C	1	Hard chromium plating
13	Piston	ALDC12	1	-
14	Magnet	-	-	In case of KCK1G
15	Waring	POM	1	-
16	Piston packing	NBR	1	-
17	Pin	SM45C	2	Zinc plating
18	Split pin	SWRM	4	-
19	Plug	SCM435	4	Nikel Plating
20	Clevis Bush	SPCC	2	-
21	Flat washer	SK3	4	Zinc plating

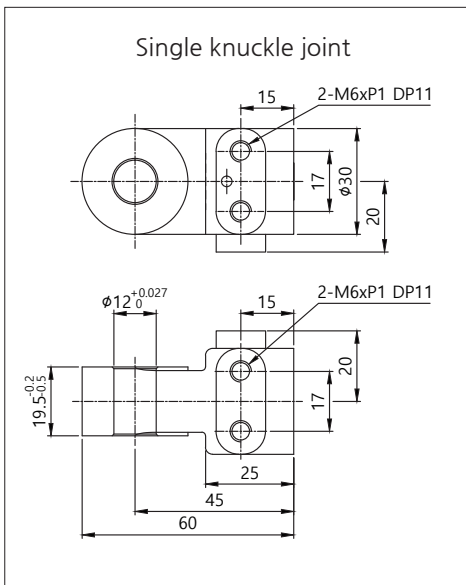
Dimensions



Unit:mm

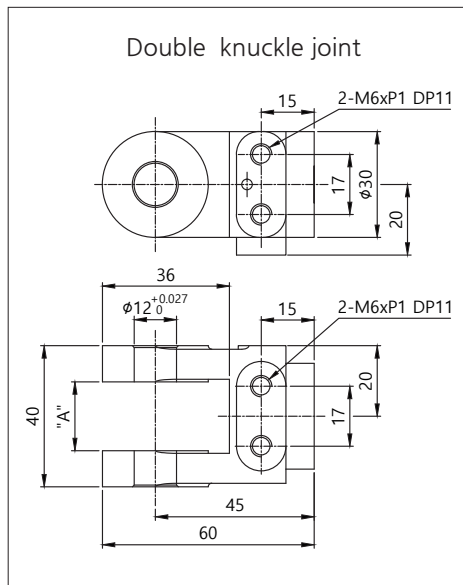
Bore size	F	øIA	øIB	WC	WS
ø50	58	60	55	38	37
ø63	70	72	68	44	43

Dimensions(Accessory bracket)



Material: Cast iron

Part No	Rod end symbol
KCK1B-I	I

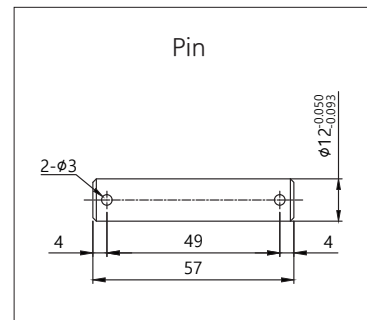


Material: Cast iron

Unit:mm

Part No	Rod end symbol	"A"	Clamp Cylinder
KCK1A-Y	Y	16.5 <sup>+0.3</sup> <sub>0</sub>	KCK1(*)A Series
KCK1B-Y		19.5 <sup>+0.4</sup> <sub>0</sub>	KCK1(*)B Series

※ Double Knuckle joints are equipped with knuckle pins, split pins and flat washers.

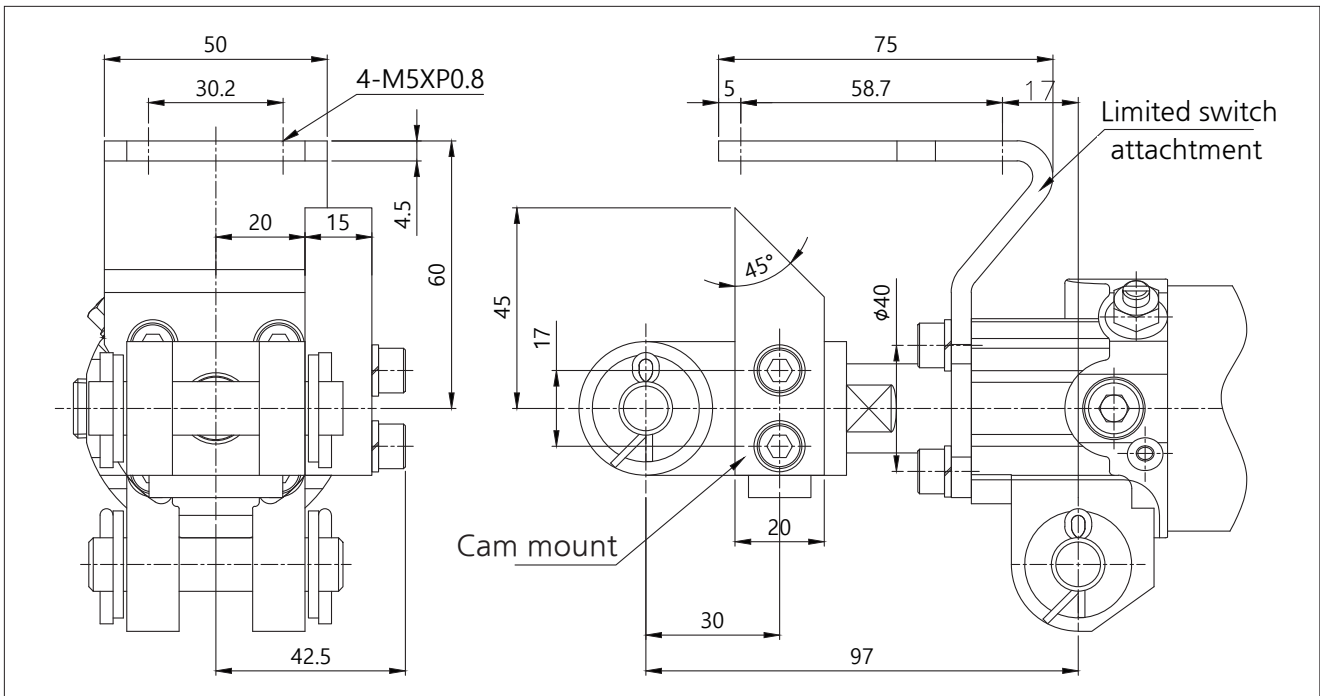


Material: Carbon steel

Part No	Apply
KCK1-P	Knuckle Pin, Clevis Pin

※ The pins are equipped with a split pin and flat washer.

Dimensions (Limited switch attachment / Cam mount)

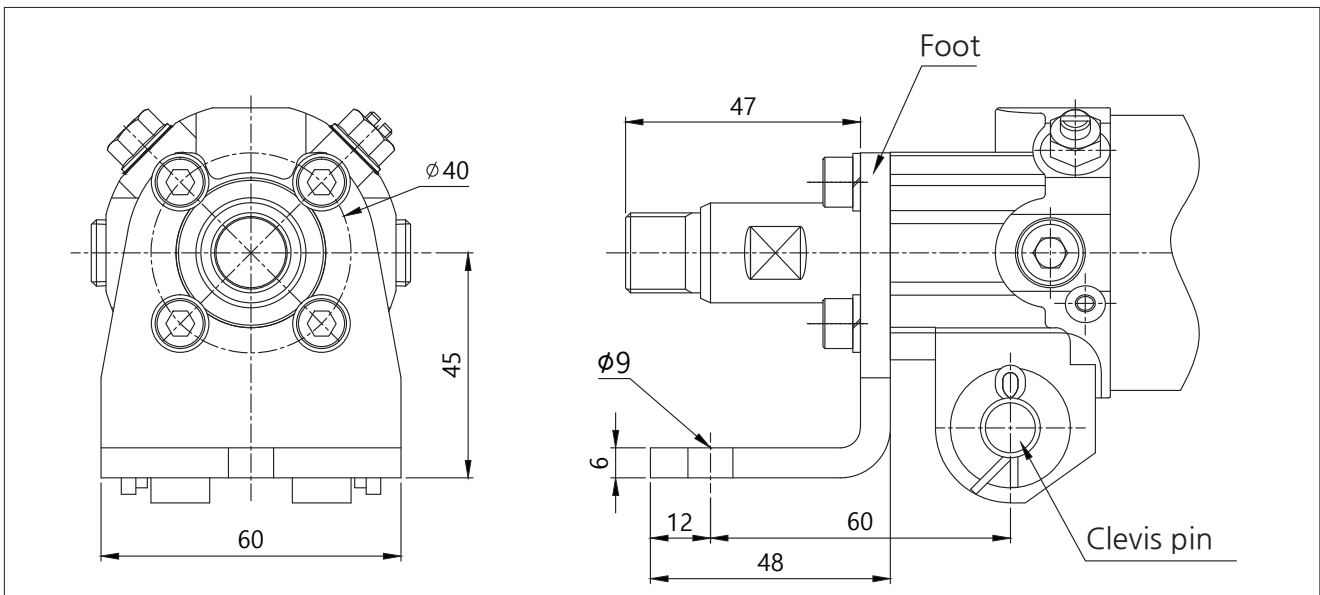


Material: Rolled steel

Part No	Rod end symbol	Parts
KCK1-B	B	Limited switch attachment
KCK1-D	D	Cam mount

- ※ Remove the hexagon wrench bolts and change the limited switch attachment and cam mount in any position.
- ※ When ordering limit switch mounting bracket and dog bracket as parts, mounting bolts (hexagon wrench bolts) and spring washers are standard.

Dimensions(Foot)

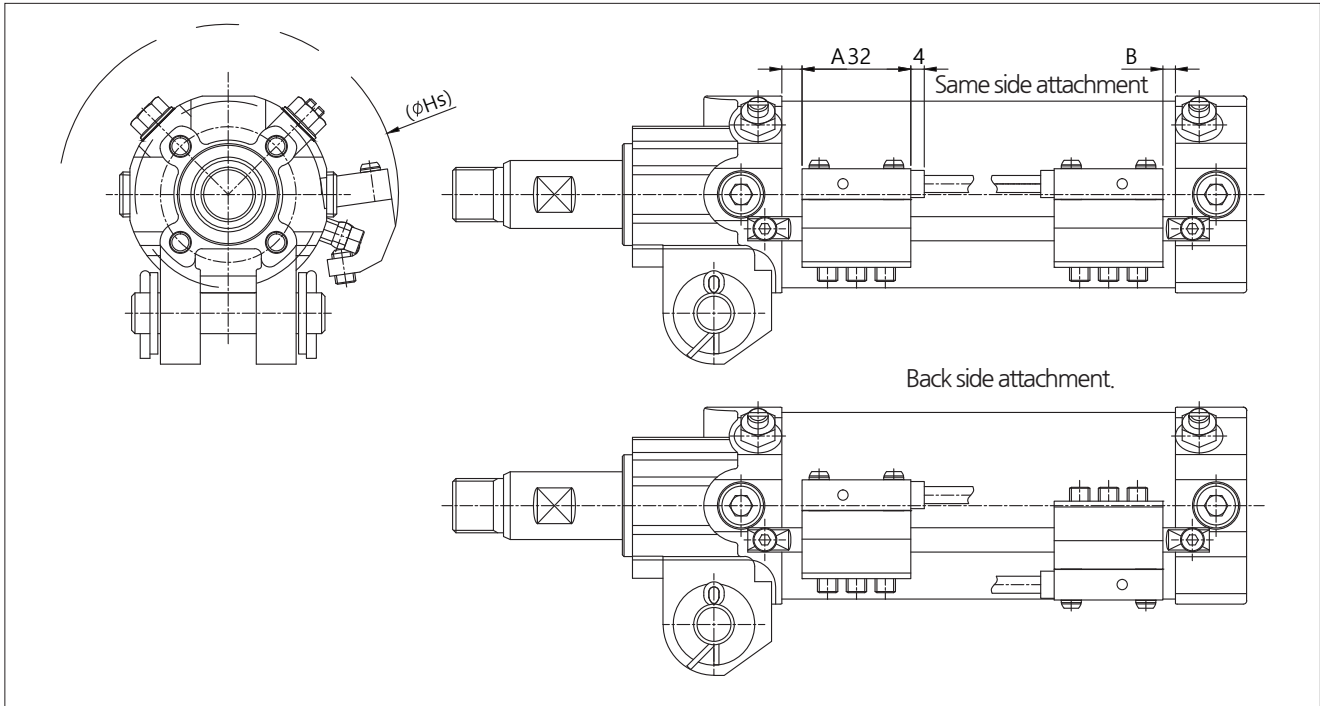


Material: Rolled steel

Part No	Mounting bracket symbol
KCK1-L	L

- ※ The foot is equipped with mounting bolts (hexagon wrench bolts) and spring washers as standard.
- ※ Use foot and clevis pin for cylinder installation.
- ※ Do not use the foot separately because it can cause damage.

Auto switch mounting position (rod mounting type)

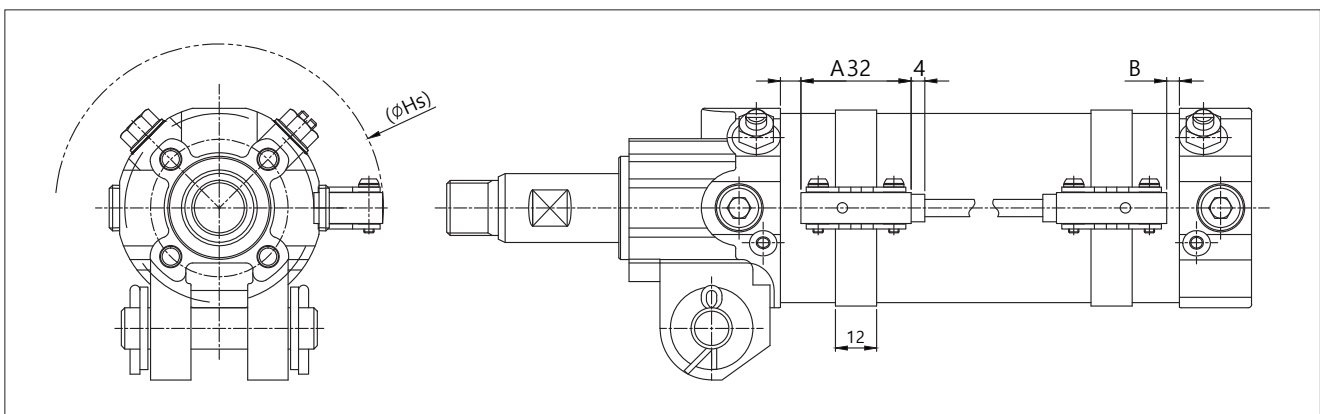


Unit:mm

Bore size	A	B	$\phi Hs$
$\phi 50$	5.5	4.2	100.3
$\phi 63$	6	3.7	112.9

- ※ Mounting position is the standard for auto switch mounting position when detecting stroke end.  
Adjust the auto switch after confirming the operating conditions in the actual setting.
- ※ The shipment will be temporarily fixed. Change the auto switch mounting position according to the equipment.

Auto switch mounting position (band mounting type)



Unit:mm

Bore size	A	B	$\phi Hs$
$\phi 50$	5.5	4.2	95.4
$\phi 63$	6	3.7	108.4

- ※ Mounting position is the standard for auto switch mounting position when detecting stroke end.  
Adjust the auto switch after confirming the operating conditions in the actual setting.
- ※ The shipment will be temporarily fixed. Change the auto switch mounting position according to the equipment.

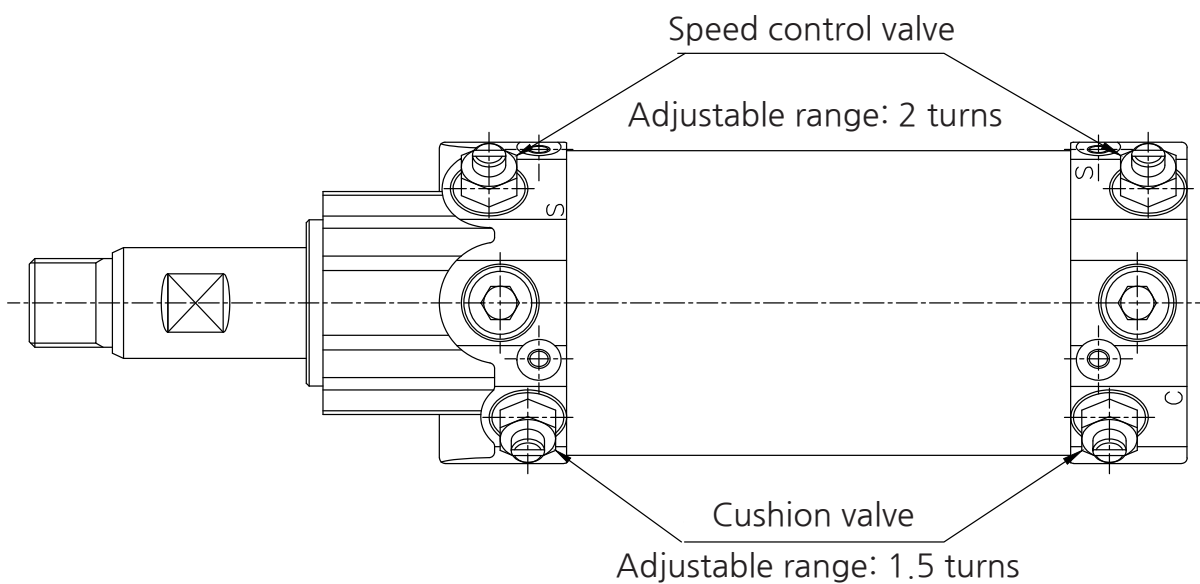
How to adjust the cushion and speed control valve

**Cushion valve adjustment**

1. KCK1 series has air cushion built into the head.  
(It can also be installed on the rod side when an option is selected)
2. This cushion is already well adjusted, but please readjust it when you use it.  
(Cushion valve nut tightening torque: 4.7 ~ 5.3 Nm)
3. Tighten the cushion valve clockwise to increase the cushion effect.

**Speed control valve adjustment**

1. KCK1 series equip with speed control valves on the head and rod side.
2. This speed control valve is already well adjusted, but please readjust it when you use it.  
(Speed control valve nut tightening torque: 4.7 ~ 5.3Nm)
3. The speed control valve slows down when tightening clockwise.



Air port and switch mounting rod position change

**Change air port location**

1. The air port can assemble in 3 directions.  
(Standard position is center)
2. When changing the air port position, assemble Teflon seal tape on the plug to prevent air leakage.  
(Tightening torque: 15.8 ~ 20.1Nm)

**Changing the switch mounting rod position**

1. The switch mounting rod can assemble in three directions.  
(Standard position is center)
2. Remove the switch mounting rod, spacer, and mounting bolts and assemble them in a straight line in the desired direction.  
(Tightening torque: 1.0 to 1.2 Nm)

