

Free Mount Cylinder for Vacuum

ZCUK Series

A free mount cylinder with a vacuum passage in the rod to meet the requirements for **Air cylinder** + **Vacuum pad**.

A vacuum passage has been provided in the rod of the CUK cylinder to enable a vacuum pad to be installed on the end of the rod.



Not necessary to provide vacuum tubing space at the end of the rod.

The area around the vacuum pad is uncluttered.

● Non-rotating rod ●

A guide is provided as standard equipment

Non-rotating rod accuracy

(no load: when the rod is retracted on the detent plate side):

ø10, ø16 $\pm 0.8^\circ$

ø20, ø25, ø32 $\pm 0.5^\circ$

Do not apply a lateral load to the piston rod. Because the piston rod is a hollow rod, a lateral load can cause the piston rod to bend or break.

● Auto switch

Reed auto switch:

D-A9□ (Heavy-duty cord, in-line entry)

D-A9□V (Heavy-duty cord, perpendicular entry)

Solid state auto switch:

D-M9□, D-M9□W (Heavy-duty cord, in-line entry)

D-M9□V, D-M9□WV (Heavy-duty cord, perpendicular entry)

● How to provide piping to the vacuum side

Cap piping

The piston rod of the vacuum side does not protrude. Also, the vacuum outlet tube does not move when the piston is operating.

Vacuum port pressure range: -101 kPa to 0.6 MPa
Pressurize only when releasing the vacuum. At that time, use it under the cylinder operating pressure.

Rod piping

Lighter weight than the cap piping.

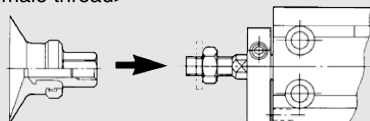
Can also be used for air blowing.

Vacuum port pressure range: -101 kPa to 0.6 MPa

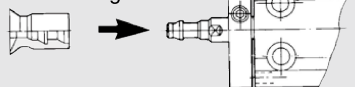
● Vacuum pad (Pad diameter: ø2 to ø50) ●

<Perpendicular female thread>

<Male thread>



<Direct mounting>



<Barb fitting>



CUJ

CU

CQS

JCQ

CQ2

RQ

CQM

CQU

MU

D-□

-X□

Technical
Data

Free Mount Cylinder for Vacuum

ZCUK Series

How to Order

With auto switch ZCDUK C 16 — 20 D — M9BW

Built-in magnet
Type (Tubing method in vacuum side/ (Rod end shape))

C	Cap piping/Male thread
D	Cap piping/Pad direct mounting
Q	Rod piping/Male thread
R	Rod piping/Pad direct mounting

Bore size

10	10 mm
16	16 mm
20	20 mm
25	25 mm
32	32 mm

Port thread type

Symbol	Type	Bore size
Nil	M5 x 0.8	ø10, ø16, ø20, ø25
	Rc1/8	ø32
TN	NPT1/8	ø32
TF (Note)	G1/8	ø32

Note: In the case of rod piping (Q, R), TF (G1/8) is not available.

Acting
D Double acting

Auto switch
Nil Without auto switch

* Refer to the table below for applicable auto switches.

Number of auto switches

Nil	2 pcs.
S	1 pc.

Built-in Magnet Cylinder Model
If a built-in magnet cylinder without an auto switch is required, there is no need to enter the symbol for the auto switch.
(Example) ZCDUKC20-20D

Cylinder standard stroke (mm)

10, 16	5, 10, 15, 20, 25, 30
20, 25, 32	5, 10, 15, 20, 25, 30, 40, 50

Applicable Auto Switches/Refer to pages 1575 to 1701 for the detailed specifications on auto switches.

Type	Special function	Electrical entry	Indicator light	Wiring (Output)	Load voltage		Auto switch model		Lead wire length (m)				Pre-wired connector	Applicable load		
					DC	AC	Perpendicular	In-line	0.5 (Nil)	1 (M)	3 (L)	5 (Z)				
Solid state auto switch	—	Grommet	Yes	3-wire (NPN)	24 V	5 V, 12 V	M9NV	M9N	●	●	●	○	○	IC circuit	Relay, PLC	
	3-wire (PNP)			12 V		M9PV	M9P	●	●	●	○	○				
	2-wire			5 V, 12 V		M9BV	M9B	●	●	●	○	○				
	3-wire (NPN)			12 V		M9NWV	M9NW	●	●	●	○	○				
	Diagnostic indication (2-color indicator)			3-wire (PNP)	5V, 12V	M9PWV	M9PW	●	●	●	○	○	IC circuit			
	Water resistant (2-color indicator)			2-wire	12 V	M9BWV	M9BW	●	●	●	○	○	—			
				3-wire (NPN)	5V, 12V	M9NAV*1	M9NA*1	○	○	●	○	○	IC circuit			
				3-wire (PNP)	12V	M9PAV*1	M9PA*1	○	○	●	○	○	—			
				2-wire	12V	M9BAV*1	M9BA*1	○	○	●	○	○	—			
	Reed auto switch			—	Grommet	Yes	3-wire (NPN equivalent)	—	5 V	—	A96V	A96	●	—		●
No		2-wire	24 V	12 V			100 V	A93V*2	A93	●	●	●	●	—	—	—
								100 V or less	A90V	A90	●	—	●	—	—	—

*1 Water resistant type auto switches can be mounted on the above models, but in such case SMC cannot guarantee water resistance. Consult with SMC regarding water resistant types with the above model numbers.

*2 1 m type lead wire is only applicable to D-A93.

* Lead wire length symbols: 0.5 m..... Nil (Example) M9NW
1 m..... M (Example) M9NWM
3 m..... L (Example) M9NWL
5 m..... Z (Example) M9NWW

* Solid state auto switches marked with "C" are produced upon receipt of order.

* Refer to pages 1648 and 1649 for the details on auto switches with a pre-wired connector.
* Auto switches are shipped together but not assembled.

How to Order Vacuum Pad

Note) Refer to page 676 for combination of cylinder and pad.

• In the case of rod end male

ZPT 02 U N - B4

Pad dia. (mm)

02	ø2
04	ø4
06	ø6
08	ø8
10	ø10
13	ø13
16	ø16
20	ø20
25	ø25
32	ø32
40	ø40
50	ø50

Pad type
Application:
Refer to "Table (1)".

U	Flat
C	Flat with ribs
D	Deep
B	Bellows

Vacuum entry (Mounting thread diameter)

Symbol	Thread dia.	ø2 to ø8	ø10 to ø16	ø20 to ø32	ø40, ø50
B4	M4 x 0.7	●	—	—	—
B5	M5 x 0.8	●	●	—	—
B6	M6 x 1	—	●	●	—
B8	M8 x 1.25	—	—	●	●
B10	M10 x 1.25	—	—	●	●

Material

N	NBR
S	Silicone rubber
U	Urethane rubber
F	FKM
GN	Conductive NBR (ø2 to ø16 only)
GS	Conductive silicone rubber (ø2 to ø16 only)

Table (1) Pad Dia./Pad Type

Type	Dia. (mm)	2	4	6	8	10	13	16	20	25	32	40	50
Flat		●	●	●	●	●	●	●	●	●	●	●	●
Flat with ribs		—	—	—	—	—	—	—	—	—	—	—	—
Deep		—	—	—	—	—	—	—	—	—	—	—	—
Bellows		—	—	●	●	●	●	●	●	●	●	●	●

• In the case of pad direct mounting

ZP 04 U N - X11

Pad dia. (mm)

02	ø2
04	ø4
06	ø6
08	ø8
10	ø10
13	ø13
16	ø16
20	ø20
25	ø25
32	ø32
40	ø40
50	ø50

Pad type

U	Flat
C	Flat with ribs
D	Deep
B	Bellows (Except "X11")

Suffix

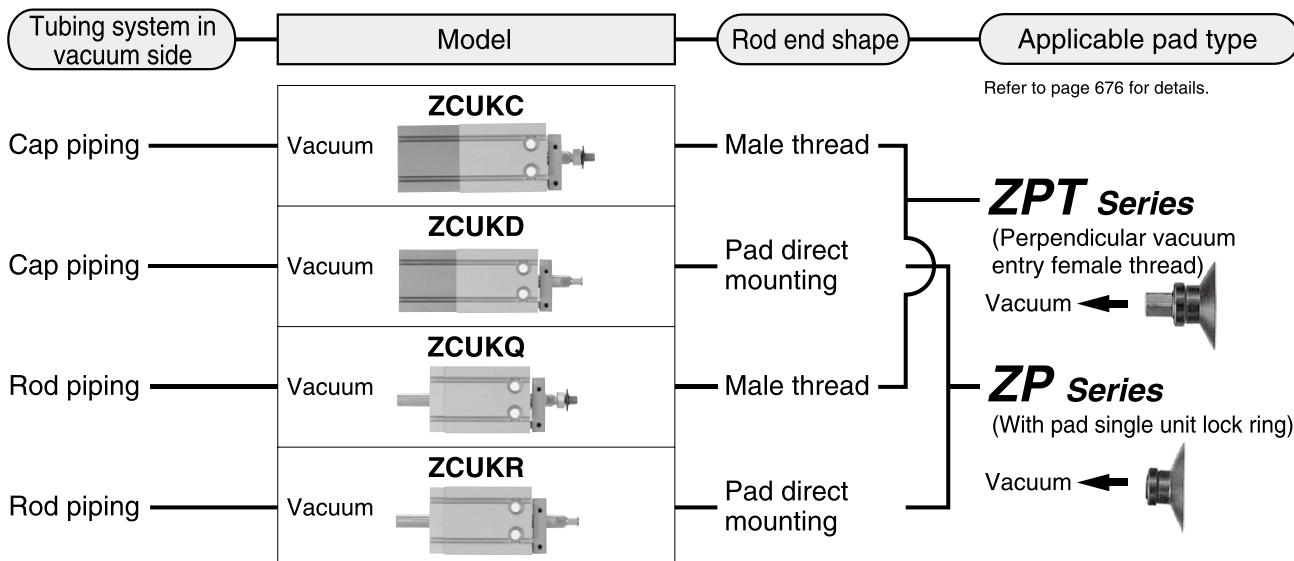
Symbol	Applicable cylinder model
X11	ZC(D)UK ^D _R 10
Nil	ZC(D)UK ^D _R 16 to 32

Note) -X11 pad: ø2 to ø8 diameter and flat type only.

Material

N	NBR
S	Silicone rubber
U	Urethane rubber
F	FKM
GN	Conductive NBR (ø2 to ø16 only)
GS	Conductive silicone rubber (ø2 to ø16 only)

Free Mount Cylinder for Vacuum **ZCUK Series**



Specifications

Bore size (mm)	ø10	ø16	ø20	ø25	ø32
Fluid	Air				
Proof pressure	1.05 MPa				
Maximum operating pressure	0.7 MPa				
Minimum operating pressure	0.13 MPa		0.11 MPa		
Vacuum port pressure	-101 kPa to 0.6 MPa (At vacuum release 0 to 0.6 MPa) ^{Note}				
Ambient and fluid temperature	Without auto switch: -10 to +70°C (No freezing) With auto switch: -10 to +60°C (No freezing)				
Lubrication	Not required				
Piston speed	50 to 500 mm/s				
Cushion	Rubber bumper on both sides				
Stroke allowance	^{+1.0} ₀				
Rod tip screw	With or without (Pad direct mounting)				
Mounting	Basic type				
Applicable pad	Refer to page 676 for details.				

Note) For a cap type, supply pressure only when vacuum is released. That pressure should be less than the cylinder pressure.

Non-rotating Rod Accuracy (No load/At retraction of the rod at the locking plate side)

Bore size (mm)	ø10	ø16	ø20	ø25	ø32
Non-rotating rod accuracy	±0.8°		±0.5°		

⚠ Precautions

- Be sure to read this before handling the products.
- Refer to back page 50 for Safety Instructions and pages 3 to 12 for Actuator and Auto Switch Precautions.

⚠ Caution

- Do not place your finger in the clearance between the detent plate and the cylinder tube. Never put your finger between the non-rotating plate and cylinder tube. Your finger may be pinched when the piston rod retracts. If your finger is caught, it could injure your finger because the cylinder outputs a considerable amount of force.
- Make sure that rotational torque is not applied to the piston rod. If this is unavoidable, operate the cylinder within the allowable rotational torque listed in the table below.

Allowable Rotational Torque

Bore size (mm)	ø10	ø16	ø20	ø25	ø32
Allowable rotational torque (N-m)	0.02	0.04	0.10	0.15	0.20

- To secure a workpiece to the end of the piston rod, tighten the workpiece onto the piston rod with the piston rod fully retracted so that torque is not applied to the piston rod.
- To install a cylinder, tighten it within the torque values indicated in the table below.

Proper Tightening Torque

Bore size (mm)	Hexagon socket head bolt diameter (mm)	Proper tightening torque (N-m)
ø10	M3	1.08 ± 10%
ø16	M4	2.45 ± 10%
ø20, ø25	M5	5.10 ± 10%
ø32	M6	8.04 ± 10%

Moisture Control Tube IDK Series

When operating an actuator with a small diameter and a short stroke at a high frequency, the dew condensation (water droplet) may occur inside the piping depending on the conditions. Simply connecting the moisture control tube to the actuator will prevent dew condensation from occurring. For details, refer to [the IDK series in the Best Pneumatics No. 6](#).



CUJ

CU

CQS

JCQ

CQ2

RQ

CQM

CQU

MU

D-□

-X□

Technical Data

ZCUK Series

Standard Stroke

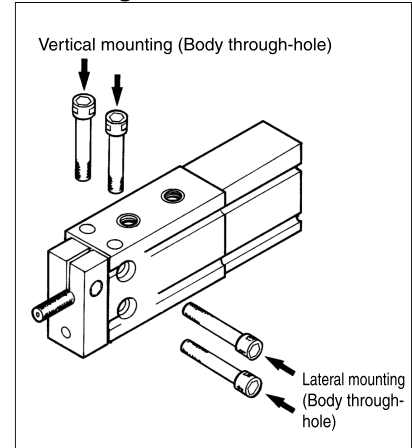
Applicable cylinder	Double acting type/Single rod type/Non-rotating rod							
Stroke (mm)	Stroke (mm)							
Bore size (mm)	5	10	15	20	25	30	40	50
10	●	●	●	●	●	●	—	—
16	●	●	●	●	●	●	—	—
20	●	●	●	●	●	●	●	●
25	●	●	●	●	●	●	●	●
32	●	●	●	●	●	●	●	●

Theoretical Output/Double Acting Type

Unit: N

Bore size (mm)	Rod dia. (mm)	Piston area (mm ²)	Operating pressure (MPa)		
			0.3	0.5	0.7
10	4	66.0	19.8	33	46.2
16	6	172	51.6	86	121
20	8	264	79.2	132	185
25	10	412	124	206	289
32	12	691	207	346	484

Mounting



Minimum Stroke for Mounting Auto Switch

Number of auto switches	Applicable auto switch		
	D-A9□, D-A9□V	D-M9□, D-M9□V	D-M9□W, D-M9□WV
1 pc.	5	5	5
2 pcs.	10	5	10

Cylinder/Applicable Pad

● In the case of rod end male thread

Use ZPT series pad (perpendicular vacuum entry/female thread mounting).

Cylinder		Pad (ZPT02 to 50□□-B4 to 10)													Thread dia.
Model	Bore size (mm)	Rod dia. (mm)													
		2	4	6	8	10	13	16	20	25	32	40	50		
ZCUKC	10	●	●	●	●	—	—	—	—	—	—	—	—	M4 x 0.7	
	16	●	●	●	●	—	—	●	—	—	—	—	—	M5 x 0.8	
ZCDUKC	20	—	—	—	—	●	●	●	●	●	—	—	—	M6 x 1.0	
ZCDUKQ	25	—	—	—	—	—	—	—	●	●	●	●	—	M8 x 1.25	
	32	—	—	—	—	—	—	—	—	●	●	●	●	M10 x 1.25	

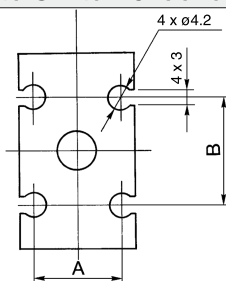
● In the case of pad direct mounting

Use ZP series pad (single unit).

Cylinder		Pad (ZP02 to 50□□)											
Model	Bore size	Rod dia. (mm)											
		2	4	6	8	10	13	16	20	25	32	40	50
ZCUKD ZCUKR ZCDUKD ZCDUKR	10 Note 1)	●	●	●	●	—	—	—	—	—	—	—	—
	16	●	●	●	●	—	—	—	—	—	—	—	—
	20	—	—	—	—	●	●	●	—	—	—	—	—
	25	—	—	—	—	—	—	—	●	●	●	—	—
	32	—	—	—	—	—	—	—	—	—	—	●	●

Note) When using "ZC(D)UK_R10", use ZP02 to 08U□-X11. Pad shape is flat only.

Auto Switch Groove

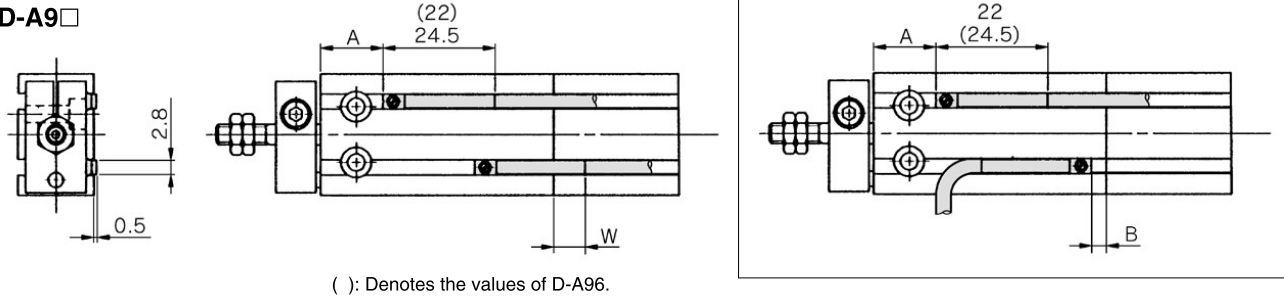


Bore size	A	B
10	10.3	13
16	15	18
20	21	23
25	27	25
32	35	27

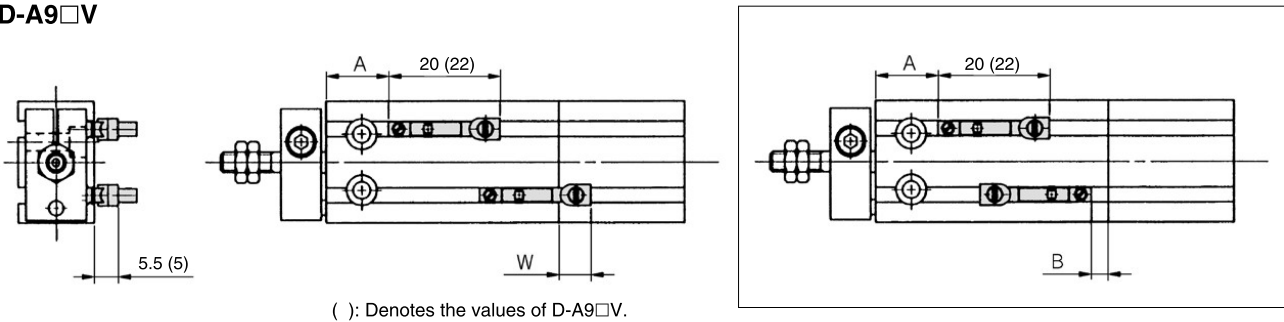
Auto Switch Mounting 1

Proper Auto Switch Mounting Position (Detection at stroke end) and Mounting Height

D-M9□
D-M9□W
D-M9□A
D-A9□



D-M9□V
D-M9□WV
D-M9□AV
D-A9□V



Bore size (mm)	D-A9□, D-A9□V			D-M9□, D-M9□W			D-M9□V, D-M9□WV			D-M9□A			D-M9□AV		
	A	B	W	A	B	W	A	B	W	A	B	W	A	B	W
10	12.5	3	-1.5 (1)	16.5	7.5	2.5	16.5	7.5	0.5	16.5	7.5	4.5	16.5	7.5	2.5
16	16	4	-2 (0.5)	20	8	1.5	20	8	0	20	8	3.5	20	8	2
20	20	6	-4 (-1.5)	24	10	0	24	10	-2	24	10	2	24	10	0
25	22.5	7	-5.5 (-3)	26.5	11.5	-1.5	26.5	11.5	-3.5	26.5	11.5	0.5	26.5	11.5	-1.5
32	23.5	8	-6.5 (-4)	27.5	12.5	-2.5	27.5	12.5	-4.5	27.5	12.5	-0.5	27.5	12.5	-2.5

Note 1) Figures in the table above are used as a reference when mounting the auto switches for stroke end detection. In the case of actually setting the auto switches, adjust them after confirming their operation.

Note 2) Negative figures in the table show dimensions mounted inside cylinder body.

Note 3) In the case of 5 mm stroke or the 10 mm stroke, there are times in which the auto switches will not turn OFF or 2 auto switches will turn ON simultaneously due to their movement range. Therefore, set the position approximately 1 to 4 mm outward from the values given in the table above. Then, perform an operation inspection to make sure that the auto switches operate normally (if 1 switch is used, make sure that it turns ON and OFF properly; if 2 auto switches are used, make sure that both switches turn ON).

Note 4) Figures in () in the table W are D-A90 and A93.

Operation Range

Auto switch model	Bore size				
	10	16	20	25	32
D-A9□, A9□V	6	9	11	12.5	14
D-M9□, M9□V D-M9□W, M9□WV D-M9□A, M9□AV	4	5	7	7	7

* Since this is the average value at a normal temperature including hysteresis (tolerance $\pm 30\%$), it is not guaranteed.

Figures may change substantially depending upon the surrounding environment.

CUJ

CU

CQS

JCQ

CQ2

RQ

CQM

CQU

MU

D-□

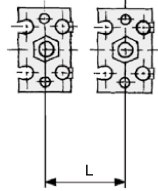
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Technical
Data

Mounting of Auto Switch

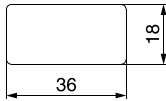
Cautions on Proximity Installation

When free mounting cylinders equipped with auto switches are used, the auto switches could activate unintentionally if the installed distance is less than the dimensions shown in the table. Therefore, make sure to provide a greater clearance. Due to unavoidable circumstances, if they must be used with less distance than the dimensions given in the table, the cylinders must be shielded. Therefore, affix a steel plate or a magnetic shielding plate (MU-S025) to the area on the cylinder that corresponds to the adjacent auto switch. (Please contact SMC for details.) Auto switches may malfunction if a shielding plate is not used.



Bore size (mm)	Mounting pitch L (mm)
10	20
16	33
20	40
25	46
32	56

Shielding plate (MU-S025) dimensions



Material: Ferrite stainless steel, Thickness: 0.3 mm
The product is attached to the cylinder since the bottom side is pre-treated with adhesive glue.

Weight

Basic Type/With Auto Switch (): Denotes the values with D-A93.

Unit: g

Model	Bore size (mm)	Cylinder stroke (mm)							
		5	10	15	20	25	30	40	50
ZC(D)UKC	10	63 (68)	69 (79)	75 (85)	81 (91)	87 (97)	93 (103)	—	—
	16	103 (128)	115 (145)	127 (157)	139 (169)	151 (181)	163 (193)	—	—
	20	180 (214)	204 (244)	228 (267)	252 (292)	276 (316)	300 (340)	348 (388)	396 (436)
	25	304 (358)	343 (402)	382 (441)	421 (480)	460 (519)	499 (558)	577 (636)	655 (714)
	32	514 (587)	574 (652)	634 (712)	694 (772)	754 (832)	814 (892)	934 (1012)	1054 (1132)
ZC(D)UKQ	10	49 (54)	53 (63)	57 (67)	61 (71)	65 (75)	69 (79)	—	—
	16	79 (104)	86 (116)	93 (123)	100 (130)	107 (137)	114 (144)	—	—
	20	145 (179)	159 (198)	173 (212)	187 (226)	201 (240)	215 (254)	243 (282)	271 (310)
	25	259 (313)	279 (338)	299 (358)	319 (378)	339 (398)	359 (418)	399 (458)	439 (498)
	32	421 (494)	451 (529)	481 (559)	511 (589)	541 (619)	571 (649)	631 (709)	691 (769)

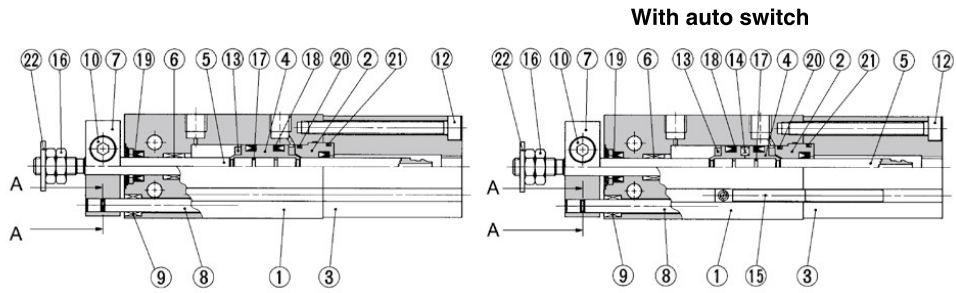
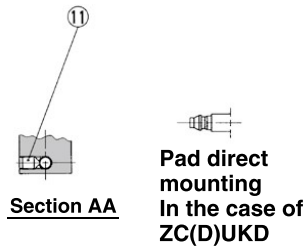
Besides the models listed in How to Order, the following auto switches are applicable.

- * For solid state switches, auto switches with a pre-wired connector are also available. Refer to pages 1648 and 1649 for details.
- * Normally closed (NC = b contact), solid state switch (D-F9G/F9H type) are also available. Refer to page 1593 for details.

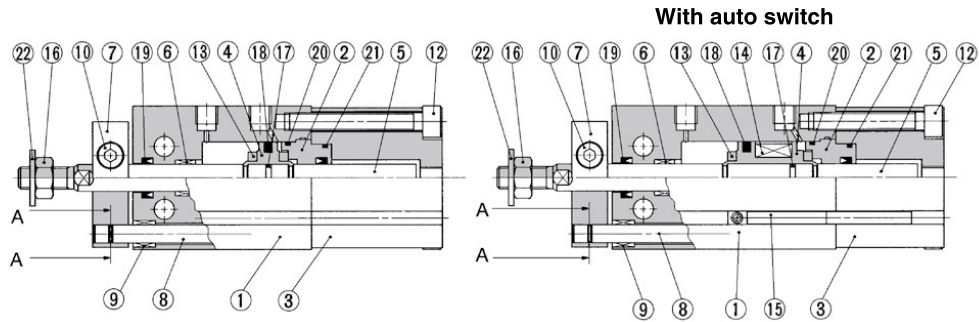
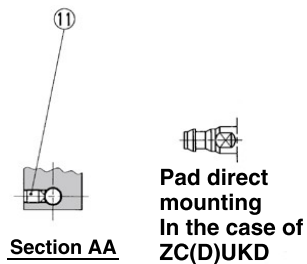
Construction

Cap piping/Male thread: ZC(D)UKC

ø10



ø16 to ø32



Component Parts

No.	Description	Material	Note
1	Cylinder tubing	Aluminum alloy	Hard anodized
2	Rod cover B	Aluminum alloy	Chromated
3	Cap	Aluminum alloy	Anodized
4	Piston	Aluminum alloy	Chromated
5	Piston rod	Stainless steel	
6	Bush	Bearing alloy	
7	Plate	Aluminum alloy	Nickel plated
8	Guide rod	Stainless steel	
9	Bush	Bearing alloy	
10	Hexagon socket head cap screw	Carbon steel	Chromated
11	Hexagon socket set screw	Carbon steel	Chromated
12	Hexagon socket head cap screw	Carbon steel	Nickel plated

Component Parts

No.	Description	Material	Note
13	Bumper	Urethane	
14	Magnet	—	
15	Auto switch	—	
16	Rod end nut	Carbon steel	Chromated
17	Piston gasket	NBR	
18*	Piston seal	NBR	
19*	Rod seal		
20*	Gasket		
21*	Gasket for cap		
22	Seal washer	Rolled steel/NBR	

Replacement Parts: Seal Kit

Cap piping

Kit no.	Bore size / Part no.				
	ø10	ø16	ø20	ø25	ø32
	ZCU10-PS	ZCU16-PS	ZCU20-PS	ZCU25-PS	ZCU32-PS

* Seal kit includes (18, 19, 20 and 21). Order the seal kit based on each bore size.

* Seal kit includes a grease pack (10 g).

Order with the following part number when only the grease pack is needed.

Grease pack part no.: GR-S-010 (10 g)

CUJ
CU
CQS
JCQ
CQ2
RQ
CQM
CQU
MU

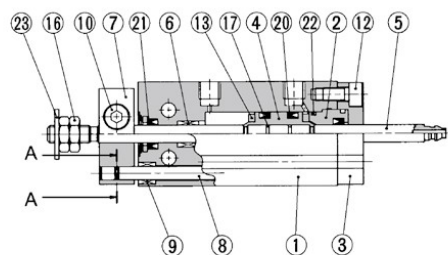
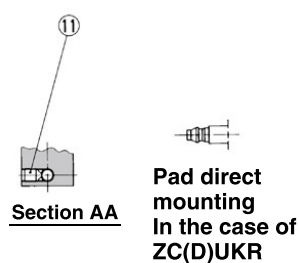
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Technical
Data

ZCUK Series

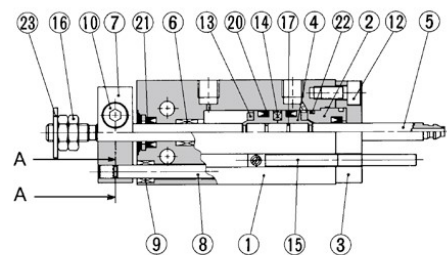
Construction

Rod piping-Male thread: ZC(D)UKQ

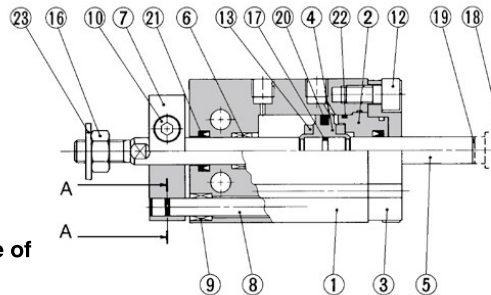
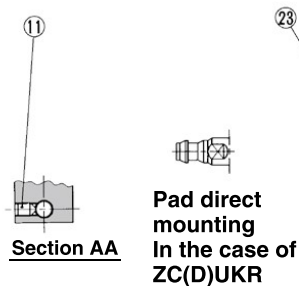
ø10



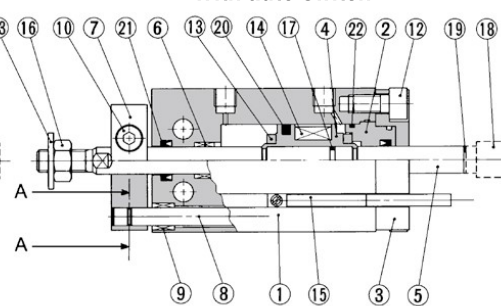
With auto switch



ø16 to ø32



With auto switch



Component Parts

No.	Description	Material	Note
1	Cylinder tubing	Aluminum alloy	Hard anodized
2	Rod cover B	Aluminum alloy	Chromated
3	Rod cover retainer plate	Aluminum alloy	Anodized
4	Piston	Aluminum alloy	Chromated
5	Piston rod	Stainless steel	
6	Bush	Bearing alloy	
7	Plate	Aluminum alloy	Nickel plated
8	Guide rod	Stainless steel	
9	Bush	Bearing alloy	
10	Hexagon socket head cap screw	Carbon steel	Chromated
11	Hexagon socket set screw	Carbon steel	Chromated
12	Hexagon socket head cap screw	Carbon steel	Nickel plated

Component Parts

No.	Description	Material	Note
13	Bumper	Urethane	
14	Magnet	—	
15	Auto switch	—	
16	Rod end nut	Carbon steel	Chromated
17	Piston gasket	NBR	
18	Socket	Carbon steel	ø16 only
19	Gasket		ø16 only
20*	Piston seal	NBR	
21*	Rod seal		
22*	Gasket		
23	Seal washer	Rolled steel/NBR	

Replacement Parts: Seal Kit Rod piping

Kit no.	Bore size / Part no.				
	ø10	ø16	ø20	ø25	ø32
	CUW10D-PS	CUW16D-PS	CUW20D-PS	CUW25D-PS	CUW32D-PS

* Seal kit includes 20, 21 and 22. Order the seal kit based on each bore size.

* Seal kit includes a grease pack (10 g).

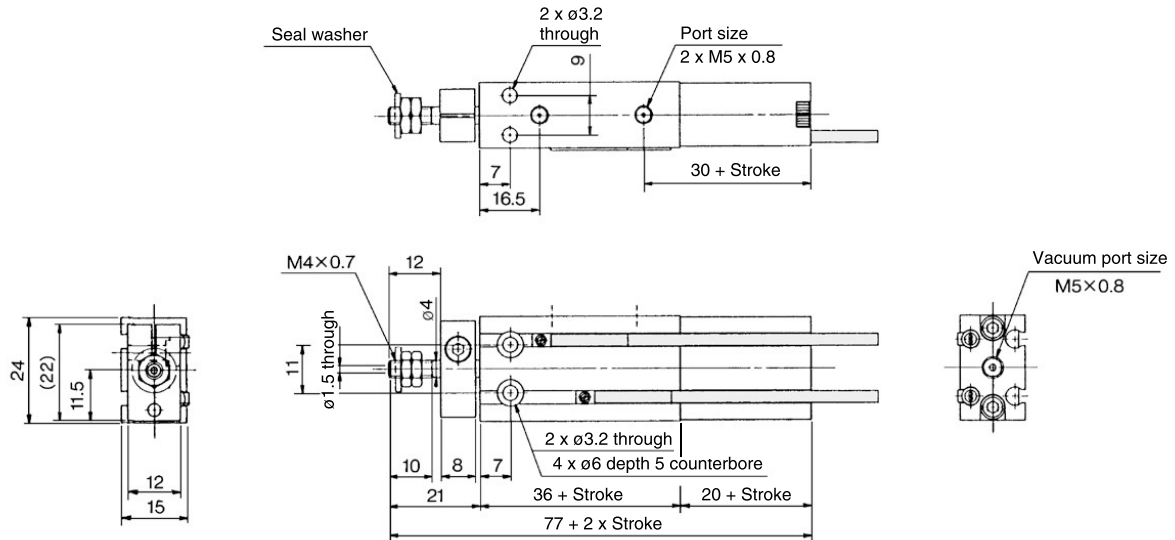
Order with the following part number when only the grease pack is needed.

Grease pack part no.: GR-S-010 (10 g)

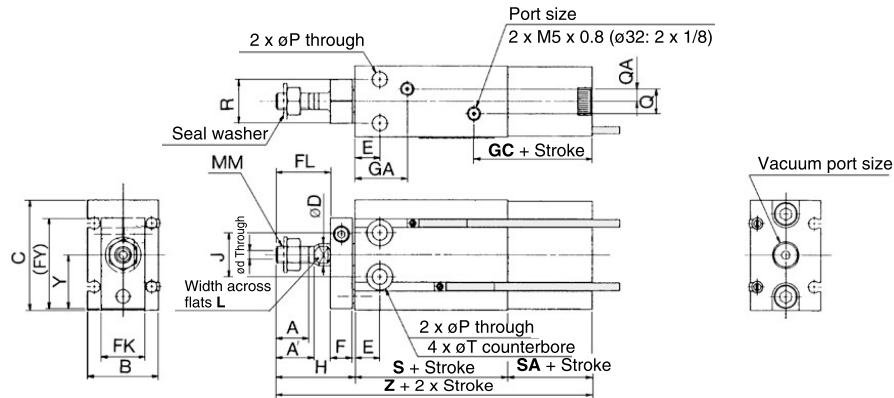
Vacuum Piping: Cap Piping/Rod End Shape: Male Thread

ZC(D)UKC Cylinder bore — Stroke **D**

ø10



ø16 to ø32



Model	Port size		Stroke range (mm)	A	A'	B	C	ød	øD	E	F	FK	FL	FY	GA	GC
	Air port	Vacuum port														
ZC(D)UKC16	M5 x 0.8	M5 x 0.8	5 to 30	11	12.5	20	32	2	6	7	8	13	17	28	16.5 ^{Note 1)}	31
ZC(D)UKC20	M5 x 0.8	1/8	5 to 50	12	14	26	40	3	8	9	8	16	20	33	19	33.5
ZC(D)UKC25	M5 x 0.8	1/8	5 to 50	15.5	18	32	50	4	10	10	10	20	22	43.5	21.5	34
ZC(D)UKC32	1/8	1/8	5 to 50	19.5	22	40	62	5	12	11	12	24	29	51.5	23	34.5

Model	H	J	L	MM	øP	Q	QA	R	S	SA	øT	Y	Z
ZC(D)UKC16	26	14	5	M5 x 0.8	4.5	4	2	12	30 (40)	19.5	7.6 depth 6.5	15.5	75.5 (85.5)
ZC(D)UKC20	29	16	6	M6 x 1.0	5.5	9	4.5	16	36 (46)	21	9.3 depth 9	19.5	86 (96)
ZC(D)UKC25	33	20	8	M8 x 1.25	5.5	9	4.5	20	40 (50)	21	9.3 depth 8	24.5	94 (104)
ZC(D)UKC32	42	24	10	M10 x 1.25	6.6	13.5	4.5	24	42 (52)	22	11 depth 11.5	30.5	106 (116)

(): In the case of a mounted auto switch.

Note 1) In the case of ZCUK16-5D: 14.5 mm.

CUJ
CU
CQS
JCQ
CQ2
RQ
CQM
CQU
MU

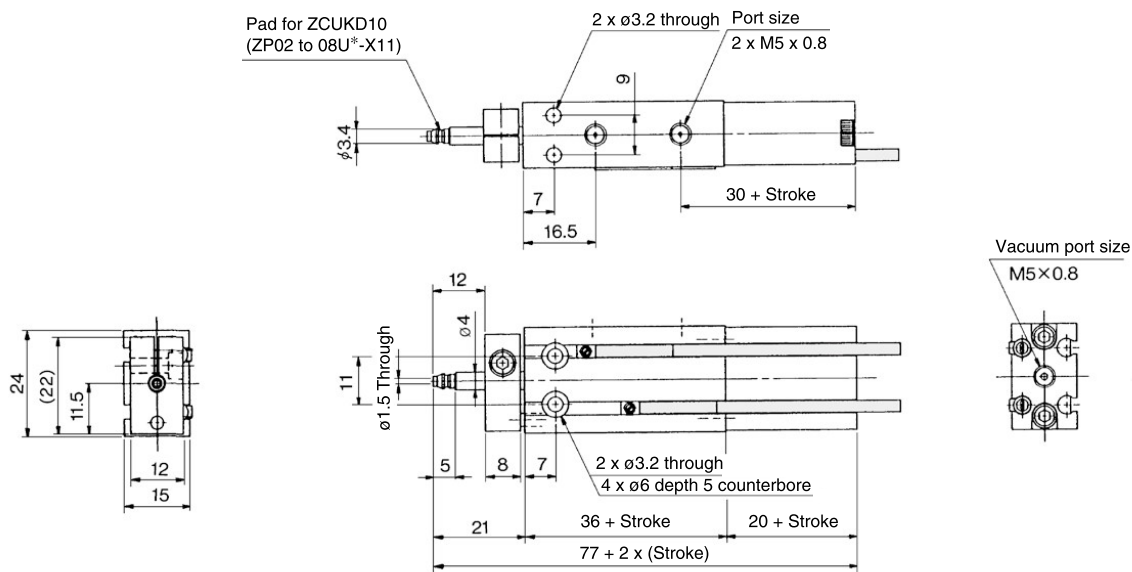
D-☐
-X☐
Technical Data

ZCUK Series

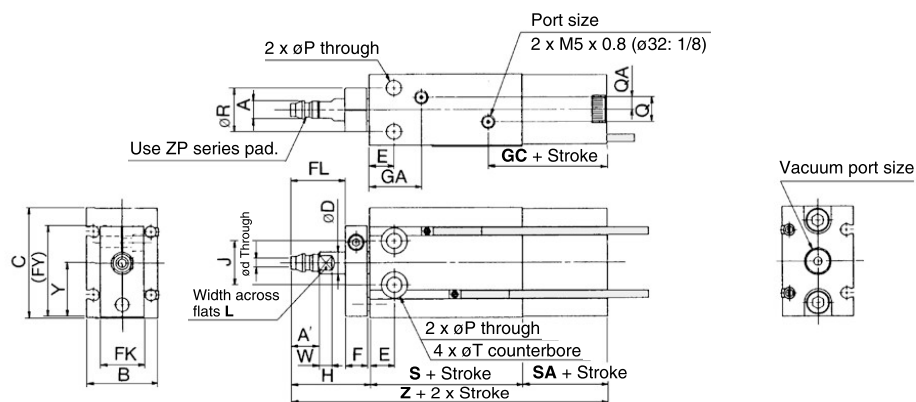
Vacuum Piping: Cap Piping/Rod End Shape: Pad Direct Mounting

ZC(D)UKD **Cylinder bore** – **Stroke** **D**

Ø10



Ø16 to Ø32



Model	Port size		Stroke range (mm)	øA	A'	B	C	ød	øD	E	F	FK	FL	FY	GA	GC
	Air port	Vacuum port														
ZC(D)UKD16	M5 x 0.8	M5 x 0.8	5 to 30	5	7	20	32	2	6	7	8	13	17	28	16.5 ⁽¹⁰⁾	31
ZC(D)UKD20	M5 x 0.8	1/8	5 to 50	6.6	8	26	40	3	8	9	8	16	20	33	19	33.5
ZC(D)UKD25	M5 x 0.8	1/8	5 to 50	8	9	32	50	4	10	10	10	20	22	43.5	21.5	34
ZC(D)UKD32	1/8	1/8	5 to 50	11.5	10.5	40	62	5	12	11	12	24	29	51.5	23	34.5

Model	H	J	L	øP	Q	QA	R	S	SA	øT	W	Y	Z
ZC(D)UKD16	26	14	5	4.5	4	2	12	30 (40)	19.5	7.6 depth 6.5	3.5	15.5	75.5 (85.5)
ZC(D)UKD20	29	16	6	5.5	9	4.5	16	36 (46)	21	9.3 depth 8	5	19.5	86 (96)
ZC(D)UKD25	33	20	8	5.5	9	4.5	20	40 (50)	21	9.3 depth 9	5	24.5	94 (104)
ZC(D)UKD32	42	24	10	6.6	13.5	4.5	24	42 (52)	22	11 depth 11.5	5	30.5	106 (116)

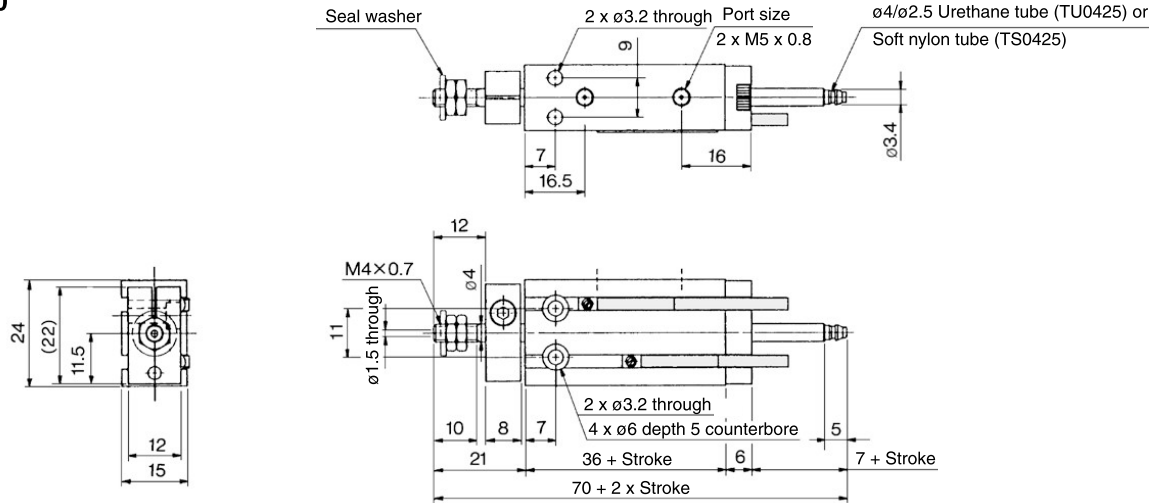
(): In the case of a mounted auto switch.

Note 1) In the case of ZCUKD16-5D: 14.5 mm.

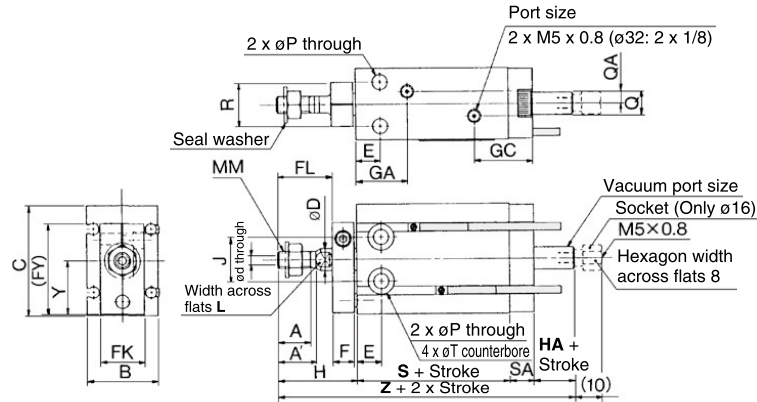
Vacuum Piping: Rod Piping/Rod End Shape: Male Thread

ZC(D)UKQ Cylinder bore — Stroke **D**

ø10



ø16 to ø32



Model	Port size		Stroke range (mm)	A	A'	B	C	ød	øD	E	F	FK	FL	FY	GA	GC
	Air port	Vacuum port														
ZC(D)UKQ16	M5 x 0.8	M5 x 0.8 ^{Note 2)}	5 to 30	11	12.5	20	32	2	6	7	8	13	17	28	16.5 ^{Note 1)}	19
ZC(D)UKQ20	M5 x 0.8	M5 x 0.8	5 to 50	12	14	26	40	3	8	9	8	16	20	33	19	21.5
ZC(D)UKQ25	M5 x 0.8	M5 x 0.8	5 to 50	15.5	18	32	50	4	10	10	10	20	22	43.5	21.5	22
ZC(D)UKQ32	1/8	1/8	5 to 50	19.5	22	40	62	5	12	11	12	24	29	51.5	23	22.5

Model	H	HA	J	L	MM	øP	Q	QA	R	S	SA	øT	Y	Z
ZC(D)UKQ16	26	5	14	5	M5 x 0.8	4.5	4	2	12	30 (40)	7.5	7.6 depth 6.5	15.5	68.5 (78.5)
ZC(D)UKQ20	29	5	16	6	M6 x 1.0	5.5	9	4.5	16	36 (46)	9	9.3 depth 8	19.5	79 (89)
ZC(D)UKQ25	33	5	20	8	M8 x 1.25	5.5	9	4.5	20	40 (50)	9	9.3 depth 9	24.5	87 (97)
ZC(D)UKQ32	42	5	24	10	M10 x 1.25	6.6	13.5	4.5	24	42 (52)	10	11 depth 11.5	30.5	99 (109)

(): In the case of a mounted auto switch.

Note 1) In the case of ZCUK16-5D: 14.5 mm.

Note 2) In the case of socket equipped type.

CUJ
CU
CQS
JCQ
CQ2
RQ
CQM
CQU
MU

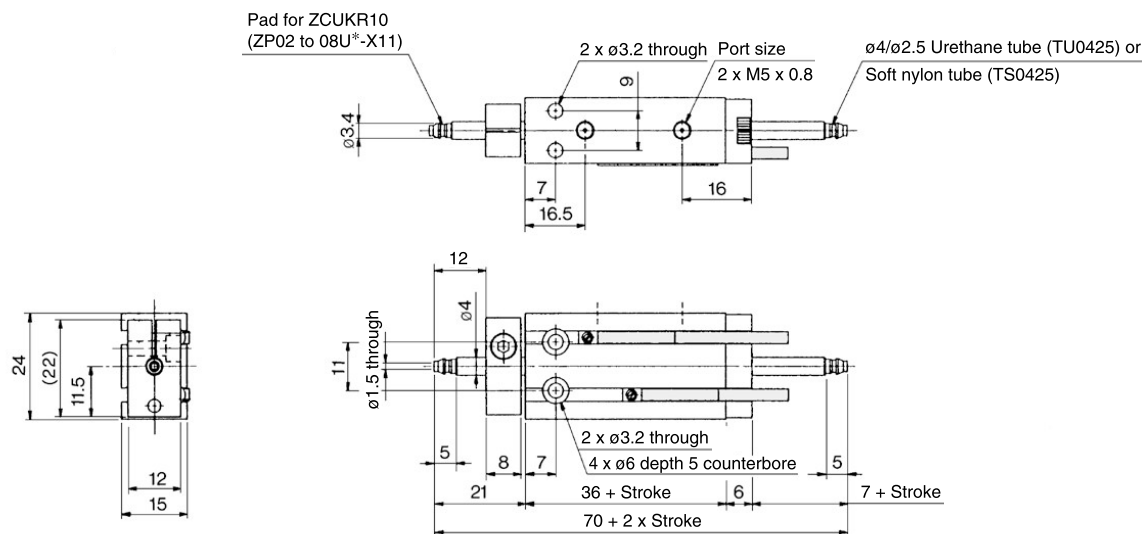
D-□
-X□
Technical Data

ZCUK Series

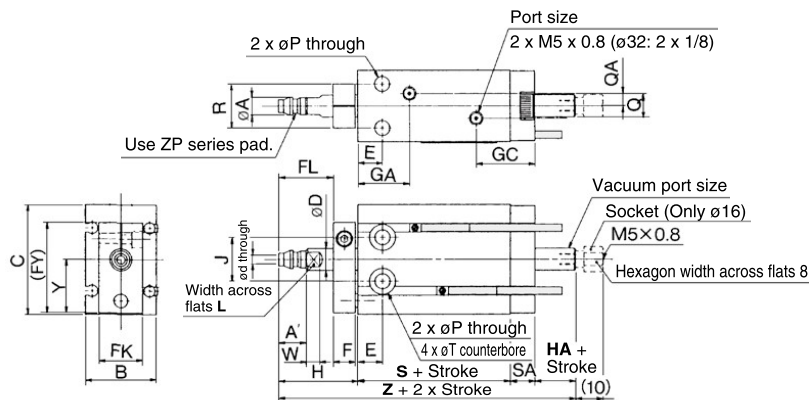
Vacuum Piping: Rod Piping/Rod End Shape: Pad Direct Mounting

ZC(D)UKR Cylinder bore – Stroke **D**

ø10



ø16 to ø32



Model	Port size		Stroke range (mm)	øA	A	B	C	ød	øD	E	F	FK	FL	FY	GA	GC
	Air port	Vacuum port														
ZC(D)UKR16	M5 x 0.8	M5 x 0.8 ^{Note 2)}	5 to 30	5	7	20	32	2	6	7	8	13	17	28	16.5 ^{Note 1)}	19
ZC(D)UKR20	M5 x 0.8	M5 x 0.8	5 to 50	6.6	8	26	40	3	8	9	8	16	20	33	19	21.5
ZC(D)UKR25	M5 x 0.8	M5 x 0.8	5 to 50	8	9	32	50	4	10	10	10	20	22	43.5	21.5	22
ZC(D)UKR32	1/8	1/8	5 to 50	11.5	10.5	40	62	5	12	11	12	24	29	51.5	23	22.5

Model	H	HA	J	L	øP	Q	QA	R	S	SA	øT	W	Y	Z
ZC(D)UKR16	26	5	14	5	4.5	4	2	12	30 (40)	7.5	7.6 depth 6.5	3.5	15.5	68.5 (78.5)
ZC(D)UKR20	29	5	16	6	5.5	9	4.5	16	36 (46)	9	9.3 depth 8	5	19.5	79 (89)
ZC(D)UKR25	33	5	20	8	5.5	9	4.5	20	40 (50)	9	9.3 depth 9	5	24.5	87 (97)
ZC(D)UKR32	42	5	24	10	6.6	13.5	4.5	24	42 (52)	10	11 depth 11.5	5	30.5	99 (109)

(): In the case of a mounted auto switch.

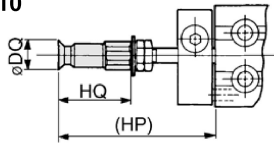
Note 1) In the case of ZCUKQ16-5D: 14.5 mm.

Note 2) In the case of socket equipped type.

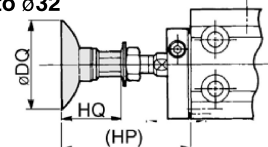
Dimensions of Pad Mounted Model

Rod end shape: Male thread

Tubing bore: $\phi 10$



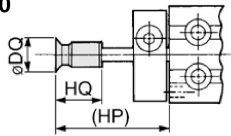
Tubing bore: $\phi 16$ to $\phi 32$



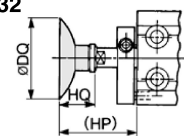
Model	Flat/Flat with ribs														Deep				Bellows										Applicable pad model
	Dia.(mm)	2	4	6	8	10	13	16	20	25	32	40	50	10	16	25	40	6	8	10	13	16	20	25	32	40	50		
ZC(D)UKC10 ZC(D)UKQ10	øDQ	2.6	4.8	7	9	—	—	—	—	—	—	—	—	—	—	—	—	7	9	—	—	—	—	—	—	—	—	ZPT□□□-B4	
	HQ	19.5	19.5	19.5	19.5	—	—	—	—	—	—	—	—	—	—	—	—	20.5	20.5	—	—	—	—	—	—	—	—		
	HP	36.5	36.5	36.5	36.5	—	—	—	—	—	—	—	—	—	—	—	—	—	37.5	37.5	—	—	—	—	—	—	—		—
ZC(D)UKC16 ZC(D)UKQ16	øDQ	2.6	4.8	7	9	12	15	18	—	—	—	—	—	12	18	—	—	7	9	12	15	18	—	—	—	—	—	ZPT□□□-B5	
	HQ	19.5	19.5	19.5	19.5	21	21	21.5	—	—	—	—	—	24	25	—	—	20.5	20.5	25	27.5	29	—	—	—	—	—		
	HP	41.5	41.5	41.5	41.5	44	42	42.5	—	—	—	—	—	—	45	46	—	—	42.5	42.5	46	48.5	50	—	—	—	—		—
ZC(D)UKC20 ZC(D)UKQ20	øDQ	—	—	—	—	12	15	18	23	28	35	—	—	12	18	28	—	—	—	12	15	18	22	27	34	—	—	ZPT□□□-B6	
	HQ	—	—	—	—	21	21	21.5	23	23	23.5	—	—	24	25	29	—	—	—	25	27.5	29	32.5	33	38	—	—		
	HP	—	—	—	—	44	44	44.5	46	46	46.5	—	—	47	48	52	—	—	—	48	50.5	52	55.5	56	61	—	—		
ZC(D)UKC25 ZC(D)UKQ25	øDQ	—	—	—	—	—	—	—	23	28	35	43	53	—	—	28	43	—	—	—	—	—	—	22	27	34	43	53	ZPT□□□-B8
	HQ	—	—	—	—	—	—	—	29	29	29.5	32	33	—	—	35	42.5	—	—	—	—	—	—	38.5	39	44	47.5	51.5	
	HP	—	—	—	—	—	—	—	54	54	54.5	57	58	—	—	60	67.5	—	—	—	—	—	—	63.5	64	69	72.5	76.5	
ZC(D)UKC32 ZC(D)UKQ32	øDQ	—	—	—	—	—	—	—	23	28	35	43	53	—	—	28	43	—	—	—	—	—	—	22	27	34	43	53	ZPT□□□-B10
	HQ	—	—	—	—	—	—	—	32	32	32.5	35	36	—	—	38	45.5	—	—	—	—	—	—	41.5	42	47	50.5	54.5	
	HP	—	—	—	—	—	—	—	64	64	64.5	67	68	—	—	70	77.5	—	—	—	—	—	—	—	73.5	74	79	82.5	

Rod end shape: Pad direct mounting

Tubing bore: $\phi 10$



Tubing bore: $\phi 16$ to $\phi 32$

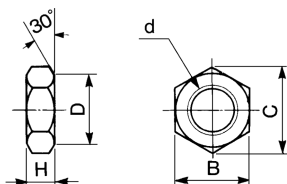


Model	Flat/Flat with ribs														Deep				Bellows										Applicable pad model
	Dia.(mm)	2	4	6	8	10	13	16	20	25	32	40	50	10	16	25	40	6	8	10	13	16	20	25	32	40	50		
ZC(D)UKD10 ZC(D)UKR10	øDQ	2.6	4.8	7	9	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	Note) ZP□U□-X11	
	HQ	10	10	10	10	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—		
ZC(D)UKD16 ZC(D)UKR16	øDQ	2.6	4.8	7	9	—	—	—	—	—	—	—	—	—	—	—	—	7	9	—	—	—	—	—	—	—	—	ZP□□□	
	HQ	12	12	12	12	—	—	—	—	—	—	—	—	—	—	—	—	13	13	—	—	—	—	—	—	—	—		
	HP	31	31	31	31	—	—	—	—	—	—	—	—	—	—	—	—	32	32	—	—	—	—	—	—	—	—		
ZC(D)UKD20 ZC(D)UKR20	øDQ	—	—	—	—	12	15	18	—	—	—	—	—	12	18	—	—	—	—	12	15	18	—	—	—	—	—	ZP□□□	
	HQ	—	—	—	—	12	12	12.5	—	—	—	—	—	15	16	—	—	—	—	16	18.5	20	—	—	—	—	—		
	HP	—	—	—	—	33	33	33.5	—	—	—	—	—	36	37	—	—	—	—	37	39.5	41	—	—	—	—	—		
ZC(D)UKD25 ZC(D)UKR25	øDQ	—	—	—	—	—	—	—	23	28	35	—	—	—	28	—	—	—	—	—	—	—	22	27	34	—	—	ZP□□□	
	HQ	—	—	—	—	—	—	—	14	14	14.5	—	—	—	20	—	—	—	—	—	—	—	23.5	24	29	—	—		
	HP	—	—	—	—	—	—	—	38	38	38.5	—	—	—	44	—	—	—	—	—	—	—	47.5	48	53	—	—		
ZC(D)UKD32 ZC(D)UKR32	øDQ	—	—	—	—	—	—	—	—	—	—	43	53	—	—	43	—	—	—	—	—	—	—	—	—	43	53	ZP□□□	
	HQ	—	—	—	—	—	—	—	—	—	—	18.5	19.5	—	—	29	—	—	—	—	—	—	—	—	—	34	38		
	HP	—	—	—	—	—	—	—	—	—	—	50	51	—	—	60.5	—	—	—	—	—	—	—	—	—	65.5	69.5		

Note) ZP□□□-X11: Flat type only.

Accessory Dimensions (Attached only to a rod end male thread type.)

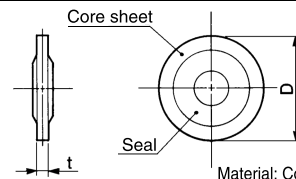
Rod end nut



Material: Carbon steel

Part no.	Applicable cylinder bore (mm)	d	H	B	C	D
NTP-010	10	M4 x 0.7	2.4	7	8.1	6.8
NTJ-015A	16	M5 x 0.8	4	8	9.2	7.8
NT-015A	20	M6 x 1.0	5	10	11.5	9.8
NT-02	25	M8 x 1.25	5	13	15.0	12.5
NT-03	32	M10 x 1.25	6	17	19.6	16.5

Seal washer



Material: Core sheet — Rolled steel
Seal — NBR

Part no.	Applicable cylinder bore (mm)	t	D
WCS4 x 0.7	10	1.2	11.5
WCS5 x 0.8	16	1.2	12.5
WCS6 x 1	20	1.2	14.0
WCS8 x 1	25	1.6	15.5
WCS10 x 1	32	1.6	18.0

CUJ
CU
CQS
JCQ
CQ2
RQ
CQM
CQU
MU

D-□
-X□
Technical Data