



Pneumatic Cylinders I  
Catalog No. CB-029S

Small bore size cylinder

# CMK2-FP1 Series

● Bore size:  $\varnothing 20/\varnothing 25/\varnothing 32/\varnothing 40$



## Specifications

Item	CMK2			
Bore size mm	$\varnothing 20$	$\varnothing 25$	$\varnothing 32$	$\varnothing 40$
Actuation	Double acting			
Working fluid	Compressed air			
Max. working pressure MPa	1.0			
Min. working pressure MPa	0.1			
Proof pressure MPa	1.6			
Ambient temperature °C	-10 to 60 (no freezing)			
Port size	Rc1/8			
Stroke tolerance mm	$^{+2.0}_0$ (up to 200), $^{+2.4}_0$ (More than 200)			
Working piston speed mm/s	50 to 500			
Cushion	Rubber cushion			
Lubrication	Not required			
Allowable absorbed energy J	0.166	0.308	0.424	0.639

\*1: The specifications above are for double acting/single rod.

Each item differs depending on variation. For details, PneumaticConfirm with Cylinders I (CB-029SA).

## Stroke

● Variation: blank, R, C, B, M, Z, G2, G3, with air cushion: \*C

Bore size(mm)	Standard stroke (mm)	Max. Stroke (mm)		Min. stroke (mm)	
		Without bellows	With bellows	Without bellows Bellows "L"	Bellows "J"
$\varnothing 20$	25/50/75/100/ 150/200/250/ 300	750	650	5	25
$\varnothing 25$					
$\varnothing 32$					
$\varnothing 40$					

\*1: The custom stroke length is available in 1 mm increments.

\*2: One side foot (LS) has the max. stroke length of 50 mm.

\*3: Contact CKD when stroke length shorter than 25 mm is required for "J" bellows.

\*4: With bellows are not available for variations G2 and G3.

● Variation: S, SR

Bore size (mm)	Standard stroke (mm)	Max. Stroke (mm)		Min. stroke (mm)	
		Without bellows	With bellows	Without bellows Bellows "L"	Bellows "J"
$\varnothing 20$	25/50/75/100/150	300	300	5	25
$\varnothing 25$					
$\varnothing 32$	25/50/75/100/				
$\varnothing 40$	150/200				

\*1: The custom stroke length is available in 1 mm increments.

\*2: One side foot (LS) has the max. stroke length of 50mm.

\*3: Contact CKD when stroke length shorter than 25mm is necessary for "J" bellows.

● Variation: P

Bore size(mm)	Standard stroke (mm)	Max. stroke (mm)		Min. stroke (mm)		
		Without bellows	With bellows	Without bellows	With bellows	
ø20	25/50/75/100/150/ 200/250/300	430	350	25	25	
ø25						
ø32		400				
ø40						

\*1: The custom stroke length is available in 1 mm increments.

\*2: One side foot (LS) has the max. stroke length of 50mm.

\*3: Contact CKD when stroke length is shorter than 25 mm.

● Variation: D

Bore size (mm)	Standard stroke (mm)	Max. stroke (mm)		Min. stroke (mm)				
		Without bellows	With bellows	Without bellows Bellows "L"	Bellows "J"			
ø20	25/50/75/100/ 150/200/250/ 300	480	300	5	25			
ø25								
ø32		450						
ø40								

\*1: The custom stroke length is available in 1 mm increments.

\*2: One side foot (LS) has the max. stroke length of 50mm.

\*3: Contact CKD whenever stroke length shorter than 25mm is necessary for "J" bellows.

How to order (Variation: blank, S, SR, C, D, M, Z, G2, G3)

Without switch

CMK2 - M - 00 - 20 - 100 - FP1 Y

With switch

CMK2 - M - 00 - 20 - 100 - T0H - R - V FP1 Y

A Variation

E Stroke  
\*1

F Switch model No.

B Mounting  
\*1

C Bore size

D Port thread

G Switch quantity  
\*7

H Option  
\*3

I Accessory  
\*4

### ⚠ Precautions for model No. selection

- \*1: One side foot (LS) has the max. stroke length of 50mm.
- \*2: Refer to Pneumatic Cylinders I (CB-029SA) for the min. stroke length with switch.
- \*3: The instantaneous max. temperature is the temperature when sparks and cutting chips, etc., instantaneously contact the bellows.
- \*4: "I" and "Y" cannot be selected together.
- \*5: Refer to Pneumatic Cylinders I (CB-029SA) for made-to-order specifications of rod end form.
- \*6: Refer to Pneumatic Cylinders I (CB-029SA) for combinations of variations and options.
- \*7: Up to three built-in switches can be used. If four or more switches are required, switch mounting brackets for the extra switches must be prepared separately.
- \*8: For 20 or 25 bore size, the rod material is stainless steel as standard and the rod nut is zinc chromate. If a stainless steel rod nut is necessary, select the "M" option code.
- \*9: For variations G2 and G3, the option M is unavailable.

[Model No. example]

**CMK2-M-00-20-100-T0H-R-VFP1Y**

Model: Small bore cylinder Food-grade grease specifications

- A Variation : Double acting/rotation-stop
- B Mounting : Basic
- C Bore size :  $\phi 20$  mm
- D Port thread : Rc thread
- E Stroke : 100 mm
- F Switch model No. : Reed T0H switch, lead wire 1m
- G Switch quantity : 1 on rod side
- H Option : Boss cutoff
- I Accessory : Rod clevis

For dimensions, refer to the CMK2 Series in "Pneumatic Cylinders I (CB-029SA)".

Code	Description
<b>A Variation</b>	
Blank	Double acting/single rod
S	Single acting/push
SR	Single acting/pull
C	Double acting/air cushioned
D	Double acting/double rod
M	Double acting/rotation-stop
Z	Double acting/built-in speed controller
G2	Double acting/coolant proof (packing NBR)
G3	Double acting/coolant proof (packing FKM)
<b>B Mounting</b>	
00	Basic
LB	Axial foot (both sides)
LS	Axial foot (one side)
FA	Rod side flange
FB	Head side flange
CA	Eye bracket
CC	Eye bracket integrated
CC1	Eye bracket, bush pressfit
CB	Clevis Bracket (pin and split washer pin included)
TA	Rod side trunnion
TB	Head side trunnion
<b>C Bore size (mm)</b>	
20	$\phi 20$ *8
25	$\phi 25$ *8
32	$\phi 32$
40	$\phi 40$
<b>D Port thread</b>	
Blank	Rc thread
NN	NPT thread (made to order)
GN	G thread (made-to-order product)
<b>E Stroke length (mm)</b>	
Refer to the stroke length table on page 29.	
<b>F Switch model No.</b>	
Refer to the switch model No. on page 34.	
<b>G Switch quantity</b>	
R	1 on rod side
H	1 on head side
D	2
T	3
<b>H Option</b>	
	Max. ambient temp. : Instantaneous max. temp.
J	Bellows : 100°C : 200°C
L	Bellows : 250°C : 400°C
M	Piston rod material (stainless steel) *8/*9
V	Boss cutoff
<b>I Accessory</b>	
I	Rod eye
Y	Rod clevis (pin and split washer pin attached)
B2	Clevis bracket (pin and snap ring attached)

Electric actuator	Pneumatic cylinders	Assistive device	Pneumatic valves	FRL/Accessory Components Electronic Component	Vacuum components	Main line components	Fluid control valves	Main line components	Anti-bacterial/bacteria-removing filter	Vacuum components	Fluid control valves

# CMK2-\*C-FP1 Series

## How to order (Variation: \*C)

● Without switch

CMK2 - 00 - 20 - C - 100 - V FP1 Y

● With switch

CMK2 - 00 - 20 - C - 100 - T0H - R - V FP1 Y

Model No. A Mounting  
\*1

Rubber-air  
Cushioned

B Bore size

C Port thread

D Stroke  
\*1

E Switch model No.  
\* indicates the  
length.

F Switch quantity  
\*7

G Option  
\*3

H Accessory  
\*4

## ⚠ Precautions for model No. selection

- \*1: One side foot (LS) has the max. stroke length of 50mm.
- \*2: Refer to Pneumatic Cylinders I (CB-029SA) for the min. stroke length with switch.
- \*3: The instantaneous max. temperature is the temperature when sparks and cutting chips, etc., instantaneously contact the bellows.
- \*4: "I" and "Y" cannot be selected together.
- \*5: Refer to Pneumatic Cylinders I (CB-029SA) for made-to-order specifications of rod end form.
- \*6: Refer to Pneumatic Cylinders I (CB-029SA) for combinations of variations and options.
- \*7: Up to three built-in switches are possible. If four or more switches are required, switch mounting brackets for the extra switches must be prepared separately.
- \*8: For 20 or 25 bore size, the rod material is stainless steel as standard and the rod nut is zinc chromate. If a stainless steel rod nut is necessary, select the "M" option code.

## [Example of model No.]

**CMK2-00-20C-100-T0H-R-VFP1Y**

Model: Small bore size cylinder/rubber-air cushioned Food-grade grease specifications

- A Mounting : Basic
- B Bore size :  $\phi 20$  mm
- C Port thread : Rc thread
- D Stroke length : 100mm
- E Switch model No. : Proximity switch T0H switch, lead wire 1 m
- F Switch quantity : 1 on rod side
- G Option : Boss cutoff
- H Accessory : Rod clevis

Code	Description
<b>A Mounting</b>	
00	Basic
LB	Axial foot (Both sides)
LS	Axial foot (One side)
FA	Rod side flange
FB	Head side flange
CA	Eye bracket
CC	Eye bracket integrated
CC1	Eye bracket, bush pressfit
CB	Clevis Bracket (pin and split washer pin included)
TA	Rod side trunnion
TB	Head side trunnion

<b>B Bore size (mm)</b>	
20	$\phi 20$
25	$\phi 25$
32	$\phi 32$
40	$\phi 40$

<b>C Port thread</b>	
Blank	Rc thread
N	NPT thread (made to order)
G	G thread (made-to-order product)

<b>D Stroke length (mm)</b>	
Refer to the stroke length table on page 29.	

E Switch model No.						
Lead wire	Lead wire	Contact	Voltage		Display	Lead wire
Straight	L-shaped		AC	DC		
T0H*	T0V*	Reed	●	●	1-color display	2-wire
T5H*	T5V*		●	●	Without indicator lamp	
T8H*	T8V*		●	●	1-color display	
T1H*	T1V*	Proximity	●			2-wire
T2H*	T2V*			●		
T3H*	T3V*			●	1-color display (made to order)	3-wire
T3PH*	T3PV*			●		
T2WH*	T2WV*			●	2-color display	2-wire
T2YH*	T2YV*			●		
T3WH*	T3WV*			●		
T3YH*	T3YV*			●		3-wire
T2JH*	T2JV*			●		

<b>* Lead wire length</b>	
Blank	1m (standard)
3	3m (option)
5	5m (option)

<b>F Switch quantity</b>	
R	1 on rod side
H	1 on head side
D	2
T	3

<b>G Option</b>	
	: Max. ambient temp. ; Instantaneous max. temp.
J	Bellows : 100°C : 200°C
L	Bellows : 250°C : 400°C
M	Piston rod material (stainless steel) *8
V	Boss cutoff

<b>H Accessory</b>	
I	Rod eye
Y	Rod Clevis (pin and split washer pin included)
B2	Clevis bracket (pin and snap ring attached)

### How to order(Variation: P, R)

Without switch

CMK2 - P - 00 - 32 - 100 - 25 - M FP1 I

With switch

CMK2 - P - 00 - 32 - 100 - 25 - T0H - D - M FP1 I

A Variation

B Mounting  
\*1

C Bore size

D Port thread

E Stroke

F Adjustable stroke range

G Switch model No.

H Switch quantity

\*7

I Option  
\*3

J Accessory \*5

Code	Description
<b>A Variation</b>	
P	Double acting/adjustable stroke (push)
R	Double acting/adjustable stroke (pull)
<b>B Mounting</b>	
00	Basic
LB	Axial foot (Both sides)
LS	Axial foot (One side)
FA	Rod side flange
FB	Head side flange
TA	Rod side trunnion
TB	Head side trunnion
<b>C Bore size (mm)</b>	
20	ø20 *8
25	ø25 *8
32	ø32
40	ø40
<b>D Port thread</b>	
Blank	Rc thread
NN	NPT thread (made to order)
GN	G thread (made-to-order product)
<b>E Stroke length (mm)</b>	
Refer to the stroke length table on page 29.	
<b>F Adjustable stroke range (mm)</b>	
25	25
50	50
<b>G Switch model No.</b>	
Refer to the switch model No. on page 34.	
<b>H Switch quantity</b>	
R	1 on rod side
H	1 on head side
D	2
T	3
<b>I Option</b>	
	Max. ambient temp. ; Instantaneous max. temp.
J	Bellows 100°C 200°C
L	Bellows 250°C 400°C
M	Piston rod material (stainless steel) *8
<b>J Accessory</b>	
I	Rod eye
Y	Rod clevis(Pin and split washer pin included)
B2	Clevis bracket (pin and snap ring attached)

### ⚠ Precautions for model No. selection

- \*1: One side foot (LS) has the max. stroke length of 50mm.
- \*2: Refer to Pneumatic Cylinders I (CB-029SA) for the min. stroke length with switch.
- \*3: The instantaneous max. temperature is the temperature when sparks and cutting chips, etc., instantaneously contact the bellows.
- \*4: "I" and "Y" are not available.
- \*5: Refer to Pneumatic Cylinders I (CB-029SA) for made-to-order specifications of rod end form.
- \*6: Refer to Pneumatic Cylinders I (CB-029SA) for combinations of variations and options.
- \*7: Up to three built-in switches can be used. If four or more switches are required, switch mounting brackets for the extra switches must be prepared separately.
- \*8: For 20 or 25 bore size, the rod material is stainless steel as standard and the rod nut is zinc chromate. If a stainless steel rod nut is necessary, select the "M" option code.

### [Model No. example]

#### CMK2-P-00-32-100-25-T0H-D-MFP1I

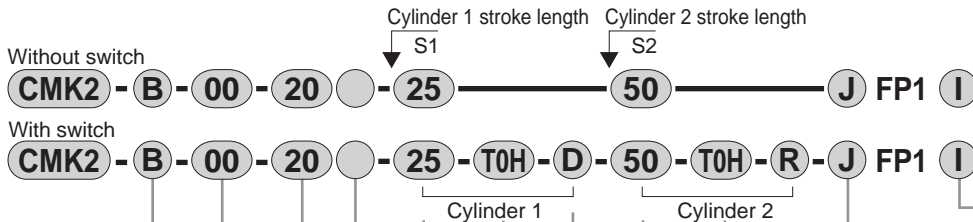
Model: Small bore cylinder Food-grade grease specifications

- A Variation : Double acting/adjustable stroke (push)
- B Mounting : Basic
- C Bore size : ø32 mm
- D Port thread : Rc thread
- E Stroke length : 100mm
- F Adjustable stroke range : 25 mm
- G Switch model No. : Reed T0H switch, lead wire 1m
- H Switch quantity : 2
- I Option : Piston rod material stainless steel
- J Accessory : Rod eye

Electric actuator	Pneumatic cylinders	Assistive device	Pneumatic valves	FRL/Auxiliary Components Electronic Component	Vacuum components	Main line components	Fluid control valves	Main line components	Anti-bacterial/bacteria-removing filter	Vacuum components	Fluid control valves

# CMK2-FP1 Series

## How to order(Variation: B)



Code	Description
<b>A Variation</b>	
<b>B</b>	Double acting/back to back
<b>B Mounting</b>	
<b>00</b>	Basic
<b>LB</b>	Axial foot (Both sides)
<b>FA</b>	Rod side flange
<b>C Bore size (mm)</b>	
<b>20</b>	ø20 *7
<b>25</b>	ø25 *7
<b>32</b>	ø32
<b>40</b>	ø40
<b>D Port thread</b>	
<b>Blank</b>	Rc thread
<b>NN</b>	NPT thread (made to order)
<b>GN</b>	G thread (made-to-order product)
<b>E Stroke length (mm)</b>	
Refer to the stroke length table on page 29.	

Lead wire		Lead wire	Lead wire	Lead wire	Lead wire	Lead wire
Straight		L-shaped	Reed	AC	DC	Display
<b>T0H*</b>	<b>T0V*</b>		●	●	●	1-color display
<b>T5H*</b>	<b>T5V*</b>		●	●	●	Without indicator lamp
<b>T8H*</b>	<b>T8V*</b>		●	●	●	1-color display
<b>T1H*</b>	<b>T1V*</b>		●	●	●	1-color display
<b>T2H*</b>	<b>T2V*</b>		●	●	●	1-color display
<b>T3H*</b>	<b>T3V*</b>		●	●	●	1-color display
<b>T3PH*</b>	<b>T3PV*</b>		●	●	●	1-color display(Made to order)
<b>T2WH*</b>	<b>T2WV*</b>		●	●	●	2-color display
<b>T2YH*</b>	<b>T2YV*</b>		●	●	●	2-color display
<b>T3WH*</b>	<b>T3WV*</b>		●	●	●	2-color display
<b>T3YH*</b>	<b>T3YV*</b>		●	●	●	2-color display
<b>T2JH*</b>	<b>T2JV*</b>		●	●	●	1-color display off-delay

* Lead wire length	
<b>Blank</b>	1 m (standard)
<b>3</b>	3 m (option)
<b>5</b>	5 m (option)

G Switch quantity	
<b>R</b>	1 on rod side
<b>H</b>	1 on head side
<b>D</b>	2
<b>T</b>	3

H Option	
	Max. ambient temp. Instantaneous max. temp
<b>J</b>	Bellows 100°C 200°C
<b>L</b>	Bellows 250°C 400°C
<b>M</b>	Piston rod material (stainless steel) *7

I Accessory	
<b>I</b>	Rod eye
<b>Y</b>	Rod Clevis (pin and split washer pin included)
<b>B2</b>	Clevis bracket (pin and snap ring attached)

## ⚠ Precautions for model No. selection

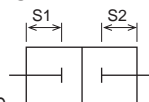
- \*1: Refer to Pneumatic Cylinders I (CB-029SA) for the min. stroke length with switch.
- \*2: What is the instantaneous max. temperature?, The temperature when sparks and cutting chips, etc., instantaneously contact the bellows.
- \*3: Made to order rod end form Refer to Pneumatic Cylinders I (CB-029SA) for added specifications.
- \*4: Refer to Pneumatic Cylinders I (CB-029SA) for combinations of variations and options.
- \*5: In the back to back type, as port adjustment is performed with a spacer, the X and M dimensions has 0 to 1.5mm tolerance.
- \*6: Up to three built-in switches can be used. If four or more switches are required, switch mounting brackets for the extra switches must be prepared separately.
- \*7: For 20 or 25 bore size, the rod material is stainless steel as standard and the rod nut is zinc chromate. If a stainless steel rod nut is necessary, select the "M" option code.

## [Model No. example]

**CMK2-B-00-20-25-T0H-D-50-T0H-R-JFP1I**

Model: Small bore cylinder Food-grade grease specifications

- A** Variation : Double acting/back to back
- B** Mounting : Basic
- C** Bore size : ø20 mm
- D** Port thread : Rc thread
- E** Stroke(S1) : 25mm
- F** SwitchNo.(S1) : Reed T0H switch 1st stage stroke length 25 mm (S1)  
Lead wire 1 m + 2nd stage stroke length 50mm S2
- G** SwitchQuantity(S1) : 2 pcs. included Total stroke length 75 mm S1 + S2
- E** Stroke(S2) : 50 mm
- F** Switch model No.(S2): Reed T0H switch, Lead wire 1 m
- G** Switch quantity(S2) : 1 on rod side
- H** Option : Bellows, Max. ambient temp 100°C, Instantaneous max. temp 200°C
- I** Accessory : Rod eye



Switch model No.

● Variation: blank, S, SR, C, D, M, Z

Switch model No.						
Lead wire Straight	Lead wire L-shaped	Contact	Voltage		Display	Lead Line
			AC	DC		
T0H*	T0V*	Reed	●	●	1-color display	2-wire
T5H*	T5V*		●	●	Without indicator lamp	
T8H*	T8V*		●	●	1-color display	
T1H*	T1V*	Proximity	●		1-color display	2-wire
T2H*	T2V*			●		3-wire
T3H*	T3V*			●		
T3PH*	T3PV*			●	1-color display (made to order)	3-wire
T2WH*	T2WV*			●	2-color display	2-wire
T2YH*	T2YV*			●		3-wire
T3WH*	T3WV*			●		
T3YH*	T3YV*			●		2-wire
T2JH*	T2JV*			●		

* Lead wire length	
Blank	1m (standard)
3	3m (option)
5	5m (option)

● Variation: G2, G3

Switch model No.						
Lead wire Straight	Lead wire L-shaped	Contact	Voltage		Display	Lead Line
			AC	DC		
T2YLH*	T2YLV*	Proximity		●	2-color display	2-wire
T3YLH*	T3YLV*			●		3-wire
* Lead wire length						
Blank	1m (standard)					
3	3m (option)					
5	5m (option)					

How to order mounting brackets

● Variation: blank, S, SR, C, D, M, Z, \*C, P, R, B

Bore size (mm)	ø20	ø25	ø32	ø40
Mounting bracket				
Basic (00) *4	M1-00-20	M1-00-30	M1-00-30	M1-00-30
Axial foot (LB/LS)	M1-LB-20	M1-LB-30	M1-LB-30	M1-LB-30
Flange (FA/FB)	M1-FA-20	M1-FA-30	M1-FA-30	M1-FA-30
Trunnion (TA/TB)	M1-TA-20	M1-TA-30	M1-TA-30	M1-TA-40
Eye bracket (CA)	M1-CA-20-FP1	M1-CA-30-FP1	M1-CA-30-FP1	M1-CA-30-FP1
Clevis bracket (CB)	M1-CB-20-FP1	M1-CB-30-FP1	M1-CB-30-FP1	M1-CB-30-FP1

● Variation: G2, G3

Bore size (mm)	ø20	ø25	ø32	ø40
Mounting bracket				
Basic (00) *4	M1-00-20	M1-00-30	M1-00-30	M1-00-30 (Head side)
Axial foot (LB/LS)	M1-LB-20	M1-LB-30	M1-LB-30	M1-LB-30 CMK2-G2-40-LS (LB rod side)
Flange (FA/FB)	M1-FA-20	M1-FA-30	M1-FA-30	CMK2-G2-40-FA(FA) M1-FA-30(FB)
Trunnion (TA/TB)	M1-TA-20	M1-TA-30	M1-TA-30	CMK2-G2-40-TA(TA) M1-TA-40(TB)
Eye bracket (CA)	M1-CA-20-FP1	M1-CA-30-FP1	M1-CA-30-FP1	M1-CA-30-FP1
Clevis bracket (CB)	M1-CB-20-FP1	M1-CB-30-FP1	M1-CB-30-FP1	M1-CB-30-FP1

\*1 : The rod cover nut, LS bracket (LB rod side), FA bracket, and TA bracket for variation "G2" "G3" with a bore size of ø40 are different from the standard.

\*2 : Regarding mounting brackets, mounting nuts and toothed washers are included with the axial foot type and flange type. The trunnion type includes mounting nuts.

\*3 : The axial foot bracket kit in the table above has one foot bracket. If both sides (rod side and head side) are required, the respective brackets need to be arranged.

\*4 : Mounting nut, toothed washer only. Although 00 set is attached with the basic product (1), use this when needed. (Contact CKD for rod side piping with a bore size of ø40 of variation "G2""G3".)

\*5 : For variation "D" "P" "R" "B", mounting brackets not set on the product are not available.

For dimensions, refer to the CMK2 Series in "Pneumatic Cylinders I (CB-029SA)".

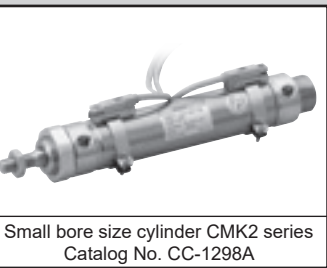


Tight cylinder double acting, appearance all stainless steel, water resistant type

# CMK2-JG2/JG3-FP1 Series

● Bore size: ø20/ø25/ø32/ø40

JISCode



Small bore size cylinder CMK2 series  
Catalog No. CC-1298A

## Specifications

Item	CMK2-JG2/JG3			
Bore size mm	ø20	ø25	ø32	ø40
Actuation	Double acting/water resistant			
Working fluid	Compressed air			
Max. working pressure MPa	1.0			
Min. working pressure MPa	0.15			
Proof pressure MPa	1.6			
Ambient temperature °C	-10 to 60 (no freezing)			
Port size	Rc 1/8			
Stroke tolerance mm	$\begin{smallmatrix} +2.0 \\ 0 \end{smallmatrix}$ (0 to 200) $\begin{smallmatrix} +2.4 \\ 0 \end{smallmatrix}$ (More than 200)			
Working piston speed mm/s	50 to 500			
Cushion	Rubber cushion			
Lubrication	Not required			
permissionVolume absorbed energy J	0.166	0.308	0.424	0.639

## Stroke

Bore size (mm)	Standard stroke (mm)	Max.Stroke length (mm)	Min. stroke (mm)	Min. stroke length with switch (mm)
ø20, ø25, ø32, ø40	25, 50, 75, 100, 150, 200, 250, 300	750	5	25

\*1: The custom stroke length is available in 1 mm increments.  
 \*2: One side foot (LS) has the max. stroke length of 50 mm.

### Switch specifications

Type/model No.	Proximity switch specifications	
Item	T2YLH/T2YLV	T3YLH/T3YLV
Applications	Dedicated for programmable controller	Programmable controller, relay
Output method	-	NPN output
Power supply voltage	-	10 to 28 VDC
Load voltage/current	10 to 30 VDC, 5 to 20 mA *1	30 VDC or less, 50 mA or less
Display lamp	Red/green LED (Lit when ON)	
Leakage current	1 mA or less	10 µA or less
Shock resistance	980 m / S <sup>2</sup>	
Weight	g 1 m: 33, 3 m: 87, 5 m: 142	

\*1: The above max. load current is 20 mA at 25°C.

The current is lower than 20 mA if the operating ambient temperature around the switch is higher than 25°C. (5 to 10 mA at 60°C)

### Cylinder weight

(Unit: kg)

Item/mounting	Stroke length (S) = Product weight for 0 mm					Switch weight (per 1 pc)	Switch rail + Band weight	S= per 10mm Additional weight per
Bore size (mm)	Basic (00)	Axial foot (LB)	Axial foot (LS)	furanZigata (FA, FB)	Eye bracket (CC )			
ø20	0.31	0.57	0.44	0.46	0.37	Refer to the weight in the switch specifications.	0.005	0.01
ø25	0.32	0.58	0.45	0.47	0.39		0.005	0.01
ø32	0.43	0.69	0.56	0.58	0.55		0.009	0.02
ø40	0.65	0.91	0.78	0.80	0.90		0.009	0.02
<div>(Example) Product weight of CMK2-JG2-FA-32-50-T2YL-D</div> <div>Product weight when S = 0 mm..... 0.56 kg</div> <div>Additional weight when S = 50 mm</div> <div>..... Additional weight when S = 10 mm <math>0.02 \times \frac{\text{Product stroke length (50)}}{10} = 0.10 \text{ kg}</math></div> <div>Weight of 2 switches..... 0.062 kg</div> <div>Weight of switch rail + 2 bands..... 0.018 kg</div> <div>Product weight..... 0.56 kg + 0.1 kg + 0.062 kg + 0.018 kg = 0.74 kg</div>								

### How to order mounting brackets

Bore size (mm)	ø20	ø25	ø32	ø40
Mounting bracket				
Axial foot (LB, LS)	CMK2-JG2-20-LS	CMK2-JG2-20-LS	CMK2-JG2-20-LS	CMK2-JG2-40-LS CMK2-JG2-20-LS (LB head side)
Flange (FA, FB)	CMK2-JG2-20-FA	CMK2-JG2-20-FA	CMK2-JG2-20-FA	CMK2-JG2-20-FA (for FB) CMK2-JG2-40-FA (for FA)

\*1: Regarding mounting brackets, mounting nuts are included with the axial foot type and flange type.

\*2: With the axial foot (LB), two sets of the "CMK2-JG2-\*LS" table above are required.

### Theoretical thrust table

(Unit: N)

Bore size (mm)	Operating direction	Working pressure MPa									
		0.15	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	1.0
ø20	Push	47.1	62.8	94.2	$1.26 \times 10^2$	$1.57 \times 10^2$	$1.88 \times 10^2$	$2.20 \times 10^2$	$2.51 \times 10^2$	$2.83 \times 10^2$	$3.14 \times 10^2$
	Pull	35.3	47.1	70.7	94.2	$1.18 \times 10^2$	$1.41 \times 10^2$	$1.65 \times 10^2$	$1.88 \times 10^2$	$2.12 \times 10^2$	$2.36 \times 10^2$
ø25	Push	73.6	98.2	$1.47 \times 10^2$	$1.96 \times 10^2$	$2.45 \times 10^2$	$2.95 \times 10^2$	$3.44 \times 10^2$	$3.93 \times 10^2$	$4.42 \times 10^2$	$4.91 \times 10^2$
	Pull	56.7	75.6	$1.13 \times 10^2$	$1.51 \times 10^2$	$1.89 \times 10^2$	$2.27 \times 10^2$	$2.64 \times 10^2$	$3.02 \times 10^2$	$3.40 \times 10^2$	$3.78 \times 10^2$
ø32	Push	$1.21 \times 10^2$	$1.61 \times 10^2$	$2.41 \times 10^2$	$3.22 \times 10^2$	$4.02 \times 10^2$	$4.83 \times 10^2$	$5.63 \times 10^2$	$6.43 \times 10^2$	$7.24 \times 10^2$	$8.04 \times 10^2$
	Pull	$1.04 \times 10^2$	$1.38 \times 10^2$	$2.07 \times 10^2$	$2.76 \times 10^2$	$3.46 \times 10^2$	$4.15 \times 10^2$	$4.84 \times 10^2$	$5.53 \times 10^2$	$6.22 \times 10^2$	$6.91 \times 10^2$
ø40	Push	$1.88 \times 10^2$	$2.51 \times 10^2$	$3.77 \times 10^2$	$5.03 \times 10^2$	$6.28 \times 10^2$	$7.54 \times 10^2$	$8.80 \times 10^2$	$1.01 \times 10^3$	$1.13 \times 10^3$	$1.26 \times 10^3$
	Pull	$1.65 \times 10^2$	$2.21 \times 10^2$	$3.31 \times 10^2$	$4.41 \times 10^2$	$5.51 \times 10^2$	$6.62 \times 10^2$	$7.72 \times 10^2$	$8.82 \times 10^2$	$9.92 \times 10^2$	$1.10 \times 10^3$



# CMK2-JG2/JG3-FP1 Series

## How to order

Without switch

**CMK2** - **JG2** - **00** - **20** - **50** ————— **FP1**

With switch

**CMK2** - **JG2** - **00** - **20** - **50** - **T2YLH** - **R** - **V** **FP1** **Y**

**H** Accessory \*4

**A** Variation

**B** Mounting  
\*1

**C** Bore size

**D** Stroke

**E** Switch model No.  
\* indicates the lead wire length.

**F** Switch quantity  
\*3

**G** Option

## ⚠ Precautions for model No. selection

\*1: One side foot (LS) has the max. stroke length of 50mm.

\*2: Refer to page 35 for the min. stroke length with switch.

\*3: Up to three built-in switches can be used. If four or more switches are required, switch mounting brackets for the extra switches must be prepared separately.

\*4: "I" and "Y" cannot be selected together.

[Model No. example]

**CMK2-JG2-00-32-50-T2YLH-D-VFP1Y**

Model: Small bore cylinder Food-grade grease specifications

- A** Variation : Exterior 100% stainless steel + water resistant scraper + packing NBR
- B** Mounting : Basic
- C** Bore size :  $\varnothing 32$
- D** Stroke length : 50mm
- E** Switch model No. : Proximity switch T2YLH, lead wire 1 m
- F** Switch quantity : 2 pcs. included
- G** Option : Boss cutoff
- H** Accessory : Rod clevis

Code	Description				
A Variation					
JG2	Exterior 100% stainless steel + water resistant scraper + packing NBR				
JG3	Exterior 100% stainless steel + water resistant scraper + packing FKM				
B Mounting					
00	Basic				
LB	Axial foot (Both sides)				
LS	Axial foot (One side)				
FA	Rod side flange				
FB	Head side flange				
CC	Eye bracket integrated				
C Bore size (mm)					
20	ø20				
25	ø25				
32	ø32				
40	ø40				
D Stroke length (mm)					
Bore size	Stroke length *2	Custom stroke length			
ø20	5 to 750	In 1 mm increments			
ø25	5 to 750				
ø32	5 to 750				
ø40	5 to 750				
E Switch model No.					
Lead wire Straight	Lead wire L-shaped	Contact	Voltage	Indicator	Lead wire
T2YLH*	T2YLV*	Proximity	DC	2-color display	2-wire
T3YLH*	T3YLV*				3-wire
F Switch quantity					
R	1 on rod side				
H	1 on head side				
D	2				
T	3				
G Option					
Blank	Standard				
V	Boss cutoff				
H Accessory					
I	Rod eye				
Y	Rod clevis (pin and snap ring attached)				

For dimensions, refer to the CMK2 Series in "Pneumatic Cylinders I (CB-029SA)".