# **SKCA** [Overview]

# **Product Information**

- Mount face widths 52, 65, 100, 150, 200, 250, and 300 mm.
- •Working angles from 0° to 20° in 5° increments for 65, 100, and 150 mm.
- Mount face widths of 52, 200, 250, and 300 mm are available with an angle of 0°.
- •Gas Spring is available in 65, 100, 150, and 200 mm width and 0°.
- ●The Box-type holder provides high rigidity.



# **■**Gas Spring Specifications

Mount face				Working For		
w	Н	Working Angle	Travel	Standard Working Force 1,000,000 strokes	Allowable Working Force 300,000 strokes	Spring Force N (kgf)
65	70	00	38	19.6 (2.0)	39.2 (4.0)	667 (69.1)
100	100	00	40	29.4 (3.0)	58.8 (6.0)	1111 (113.4)
150	100	00	40	58.8 (6.0)	88.2 (9.0)	2051 (209.3)
200	110	00	40	78.4 (8.0)	117.6 (12.0)	2733 (278.9)

# **■**Coil Spring Specifications

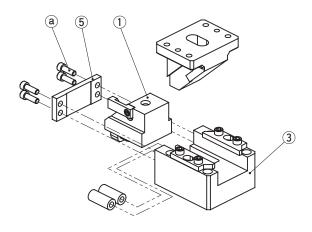
W         H         Working Angle         Travel Conting Force (1,000,000 strokes)         Standard Conting Force (1,000,000 strokes)         Allowable Working Force (1,000,000 strokes)         Allowa	Mount face				Working Force [kN (tonf)]		
52     65     00     40     14.7 ( 1.5)     29.4 ( 3.0)       00     40       00     40       05     70       10     45     19.6 ( 2.0)     39.2 ( 4.0)       15     70       20     45       70     40       20     45       70     40       100     00     60     29.4 ( 3.0)     58.8 ( 6.0)       80     45       70     45     39.2 ( 4.0)     78.4 ( 8.0)       15     70     45       20     45     39.2 ( 4.0)     78.4 ( 8.0)       15     70     45       20     45     64.7 ( 6.6)     98.0 (10.0)       150     10     10     70     64.7 ( 6.6)     98.0 (10.0)       20     45     70     45     64.7 ( 6.6)     98.0 (10.0)       20     110     00     40     78.4 ( 8.0)     117.6 (12.0)       250     130     00     40     117.6 (12.0)     176.4 (18.0)	w	н	Working Angle	Travel			
65 70 10 45 70 19.6 ( 2.0) 39.2 ( 4.0)  65 70 10 70 70 19.6 ( 2.0) 39.2 ( 4.0)  15 70 45 70 45 70 40 29.4 ( 3.0) 58.8 ( 6.0)  100 00 60 29.4 ( 3.0) 58.8 ( 6.0)  100 10 70 39.2 ( 4.0) 78.4 ( 8.0)  100 10 70 39.2 ( 4.0) 78.4 ( 8.0)  15 70 45 70 70 70 70 70 70 70 70 70 70 70 70 70				25			
00	52	65	00	40	14.7 ( 1.5)	29.4 ( 3.0)	
00 60 45 45 70 10 45 45 19.6 ( 2.0) 39.2 ( 4.0)    15 45 70 20 45 70    100 00 60 29.4 ( 3.0) 58.8 ( 6.0)    100 10 45 70    100 10 45 70    100 10 45 70    15 70    100 10 45 70    15 70    15 70    15 70    15 70    15 70    15 70    15 70    15 70    15 70    15 70    15 70    15 70    15 70    15 70    15 70    20 45    20 70    15 45    20 70    15 45    20 70    15 45    20 70    20 45    20 70    20 45    20 70    20 45    20 70    20 45    20 70    20 110 00 40 78.4 ( 8.0) 117.6 (12.0)    250 130 00 40 117.6 (12.0) 176.4 (18.0)				60			
65 70 10 45 70 19.6 ( 2.0) 39.2 ( 4.0)    15 45 70    15 70    15 70    20 70    445    20 70    40    20 70    45    70    100 00 60 29.4 ( 3.0) 58.8 ( 6.0)    80    100 70    39.2 ( 4.0) 78.4 ( 8.0)    100 10 70    39.2 ( 4.0) 78.4 ( 8.0)    15 70    20 45    20 70    45    70    15 70    20 45    70    15 45    70    20 45    70    20 45    70    20 45    70    20 45    70    20 45    70    20 45    70    20 45    70    20 45    70    20 45    70    20 45    70    20 45    70    20 45    70    20 45    70    20 45    70    20 45    70    20 46    20 70    20 47    20 70    20 48    20 70    20 46    20 70    20 47    20 48    20 70    20 48    20 70    20 48    20 70    20 41    20 70    20 42    20 70    20 110 00 60 78.4 ( 8.0) 117.6 (12.0)    250 130 00 60 98.0 (10.0) 147.0 (15.0)			00	40			
65 70 10 45 19.6 ( 2.0) 39.2 ( 4.0)  15 45 70 45 70 45 70 70 70 70 70 70 70 70 70 70 70 70 70			00	60			
65 70 10 45 19.6 ( 2.0) 39.2 ( 4.0)  15 45 70 45 70 70 70 70 70 70 70 70 70 70 70 70 70			0E	45			
65 70 10 70 19.6 ( 2.0) 39.2 ( 4.0)    15 45 70    20 45    70    40    100 00 60 29.4 ( 3.0) 58.8 ( 6.0)    80    05 45    70    100 10 45    90 45    20 45    70    100 58.8 ( 6.0) 70    45    70    20 45    20 70    20 45    20 70    20 45    20 70    20 45    20 70    20 45    20 70    20 45    20 70    20 46    20 70    20 47    20 48    20 70    20 40 98.0 (10.0) 147.6 (12.0) 176.4 (18.0) 117.6 (12.0) 147.0 (15.0) 147.0 (15.0) 147.0 (15.0) 147.0 (15.0) 147.0 (15.0) 147.0 (15.0) 147.0 (15.0) 147.6 (12.0) 176.4 (18.0) 1176.4 (18.0) 117.6 (12.0) 176.4 (18.0) 1176.4 (18.			05	70			
15	G.E.	70	10	45	10.6 ( 2.0)	20.2 ( 4.0)	
15	05	70	10	70	19.6 ( 2.0)	39.2 ( 4.0)	
100			45	45			
100			15	70			
100 00 60 29.4 ( 3.0) 58.8 ( 6.0)  100 00 60 29.4 ( 3.0) 58.8 ( 6.0)  100 10 70 39.2 ( 4.0) 78.4 ( 8.0)  15 70 45 70  20 45 70  00 60 58.8 ( 6.0) 88.2 ( 9.0)  150 100 10 70 64.7 ( 6.6) 98.0 (10.0)  15 70 70 70 70 70 70 70 70 70 70 70 70 70			-00	45			
100 00 60 29.4 (3.0) 58.8 (6.0)  80  05 45  70  10 45  70  15 70  20 45  70  00 60  05 88.2 (9.0)  15 70  15 70  15 70  15 70  20 45  70  15 70  20 45  70  20 45  70  20 45  70  20 45  70  20 45  70  20 45  70  20 45  70  20 45  70  20 45  70  20 45  70  20 45  70  20 45  70  20 45  70  20 45  70  20 45  70  20 45  20 70  20 45  20 70  20 45  20 70  20 45  20 70  20 45  20 70  20 45  20 70  20 41  20 40 78.4 (8.0) 117.6 (12.0)  250 00 60 98.0 (10.0) 147.0 (15.0)			20	70			
100  10  45  70  10  10  45  70  45  70  45  70  20  45  70  46  78.4 ( 8.0)  117.6 (12.0)  250  130  00  40  117.6 (12.0)  176.4 (18.0)				40			
100  10  10  10  10  10  10  10  10  10		100	00	60	29.4 ( 3.0)	58.8 ( 6.0)	
100  10  10  10  10  10  10  10  10  10				80			
100  10  10  10  10  10  10  15  70  45  70  45  70  20  45  70  40  58.8 ( 6.0)  88.2 ( 9.0)  150  100  10  10  10  10  10  10  15  70  46.7 ( 6.6)  98.0 (10.0)  200  110  00  40  78.4 ( 8.0)  117.6 (12.0)  130  00  117.6 (12.0)  176.4 (18.0)			0-	45			
90			05	70			
90	100		10	45			
15				70	00.0 ( 4.0)	70.4 ( 0.0)	
20		90		45	39.2 ( 4.0)	78.4 ( 8.0)	
20 70 70 88.2 ( 9.0)   00 60 58.8 ( 6.0) 88.2 ( 9.0)   05 70   150 100 10 45   15 70   20 45   20 70   200 110 00 60 78.4 ( 8.0) 117.6 (12.0)   250 00 60 98.0 (10.0) 147.0 (15.0)   300 00 117.6 (12.0) 176.4 (18.0)			15	70			
70 40 58.8 ( 6.0) 88.2 ( 9.0)  05 45 70 45 70 45 45 70 45 45 70 45 45 70 20 45 70 20 45 70 20 45 70 20 40 70 40 70 40 98.0 (10.0)  117.6 (12.0)  130 300 00 40 117.6 (12.0) 117.6 (12.0) 117.6 (12.0)				45			
00 60 58.8 ( 6.0) 88.2 ( 9.0)  05 70  150 100 10 45  70 45  45 70  20 45  20 70  200 110 00 60 78.4 ( 8.0) 117.6 (12.0)  250 00 60 98.0 (10.0) 147.0 (15.0)  300 00 117.6 (12.0) 176.4 (18.0)			20	70			
150 100 10 45 70 45 64.7 ( 6.6) 98.0 (10.0) 15 70 45 70 20 45 70 20 45 70 20 110 00 60 78.4 ( 8.0) 117.6 (12.0) 250 00 60 98.0 (10.0) 147.0 (15.0) 300 40 117.6 (12.0) 176.4 (18.0)				40	50.0 ( 0.0)	00.0 ( 0.0)	
150 100 10 45 70 45 64.7 ( 6.6) 98.0 (10.0) 15 70 64.7 ( 6.6) 98.0 (10.0) 20 45 70 20 45 70 20 40 70 250 40 98.0 (10.0) 117.6 (12.0) 60 98.0 (10.0) 147.0 (15.0) 300 40 117.6 (12.0) 176.4 (18.0)			00	60	58.8 ( 6.0)	88.2 ( 9.0)	
150 100 10 45 64.7 ( 6.6) 98.0 (10.0)  15 70 45 70  20 45 70  20 45 70  20 40 78.4 ( 8.0) 117.6 (12.0)  250 00 60 98.0 (10.0) 147.0 (15.0)  300 00 117.6 (12.0) 176.4 (18.0)			0.5	45			
150 100 10 70 64.7 ( 6.6) 98.0 (10.0)  15 70 45 70  20 45 70  200 110 00 40 78.4 ( 8.0) 117.6 (12.0)  250 00 40 98.0 (10.0) 147.0 (15.0)  300 40 117.6 (12.0) 176.4 (18.0)			05	70			
200 110 00 40 78.4 ( 8.0) 117.6 (12.0) 250 00 40 98.0 (10.0) 147.0 (15.0) 300 00 40 117.6 (12.0) 176.4 (18.0)	450	400	40	45			
200 110 00 40 78.4 ( 8.0) 117.6 (12.0) 250 00 40 98.0 (10.0) 147.0 (15.0) 300 40 117.6 (12.0) 176.4 (18.0)	150	100	10	70	047(00)	00.0 (40.0)	
20			45	45	64.7 ( 6.6)	98.0 (10.0)	
20 70 110 00 40 78.4 ( 8.0) 117.6 (12.0) 250 00 40 98.0 (10.0) 147.0 (15.0) 300 40 117.6 (12.0) 176.4 (18.0)			15	70			
200 110 00 40 78.4 ( 8.0) 117.6 (12.0)  250 00 40 98.0 (10.0) 147.0 (15.0)  300 40 117.6 (12.0) 176.4 (18.0)				45			
200 110 00 60 78.4 ( 8.0) 117.6 (12.0)  250 00 40 98.0 (10.0) 147.0 (15.0)  300 40 117.6 (12.0) 176.4 (18.0)			20	70			
250 00 40 98.0 (10.0) 147.0 (15.0)  300 40 117.6 (12.0) 176.4 (18.0)	000	440	00	40	70.4 ( 0.6)	1170 (100)	
250 00 60 98.0 (10.0) 147.0 (15.0) 300 40 117.6 (12.0) 176.4 (18.0)	200	110	00	60	78.4 ( 8.0)	117.6 (12.0)	
300 00 40 117.6 (12.0) 176.4 (18.0)	070		0.0	40	00.0 (10.0)	4470 (15.0)	
300 00 40 117.6 (12.0) 176.4 (18.0)	250	400	00	60	98.0 (10.0)	147.0 (15.0)	
300 00 60 117.6 (12.0) 176.4 (18.0)	000	130	00	40	447.0 (40.0)	470.4 (40.0)	
	300		00	60	117.6 (12.0)	1/6.4 (18.0)	

SKCA

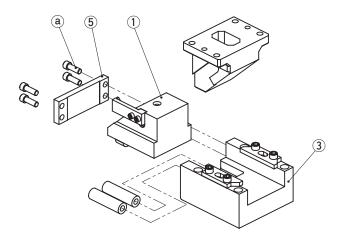
# **SKCA** [Overview]

# **Product Information**

## ■SKCA52, 65 Assembly Instructions



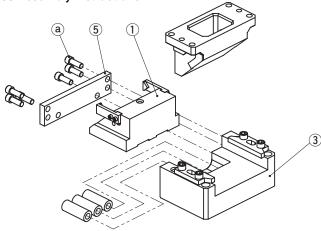
# ■SKCA100, 150 Assembly Instructions



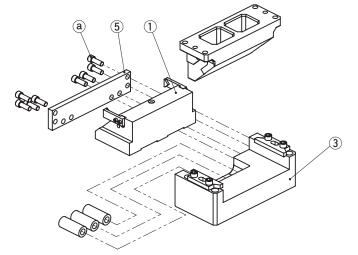
#### Disassembly

- 1) Remove Hexagon Socket Head Bolts (a), to pull out Stopper Plate (5).
- 2) Pull out and remove Cam Slider (1) from Cam Holder (3) to the rear.

## ■SKCA200, 250 Assembly Instructions



# ■SKCA300 Assembly Instructions



#### Assembly

Assembly is the reverse procedure of disassembly.

- Ensure that all parts are clean, particularly the sliding components to which a small amount of lubricant is applied and is then placed in position.
- Take care that the respective tolerances are observed when assembling Cam Slider and Cam Holder, which also should be identified by the same serial number.
- · Make sure that all bolts are tighten to the recommended torque after assembly and disassembly.

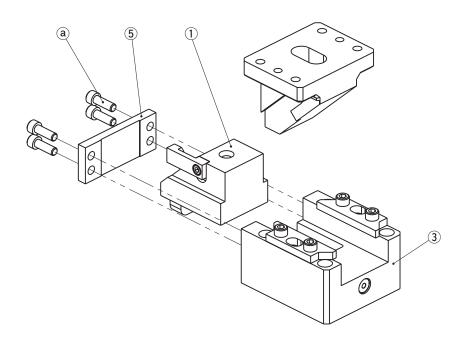


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# **SKCA** [Overview]

## **Product Information**

#### SKCA65, 100, 150 Assembly Instructions (Gas Spring)



#### Disassembly

- 1) Remove Hexagon Socket Head Bolts (a), to pull out Stopper Plate (5).
- 2) Pull out and remove Cam Slider (1) from Cam Holder (3) to the rear.

#### Assembly

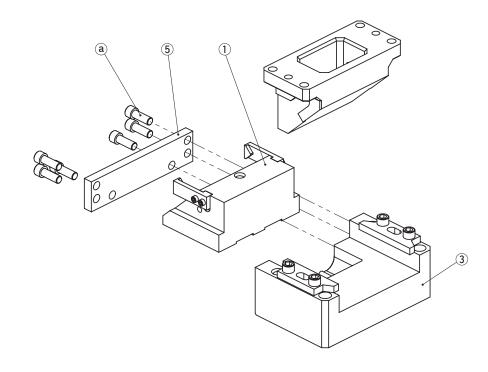
Assembly is the reverse procedure of disassembly.

- Ensure that all parts are clean, particularly the sliding components to which a small amount of lubricant is applied and is then placed in position.
- Take care that the respective tolerances are observed when assembling Cam Slider and Cam Holder, which also should be identified by the same serial number.
- · Make sure that all bolts are tighten to the recommended torque after assembly and disassembly.

# 

Please contact your local sales representative if you prefer to use a gas spring not specified in our catalog. For use and maintenance of gas spring, please contact the manufacturer directly.

#### ■SKCA200 Assembly Instructions (Gas Spring)



#### Disassembly

- 1) Remove Hexagon Socket Head Bolts (a), to pull out Stopper Plate (5).
- 2) Pull out and remove Cam Slider (1) from Cam Holder (3) to the rear.

#### Assembly

Assembly is the reverse procedure of disassembly.

- Ensure that all parts are clean, particularly the sliding components to which a small amount of lubricant is applied and is then placed in position.
- Take care that the respective tolerances are observed when assembling Cam Slider and Cam Holder, which also should be identified by the same serial number.
- · Make sure that all bolts are tighten to the recommended torque after assembly and disassembly.

### 

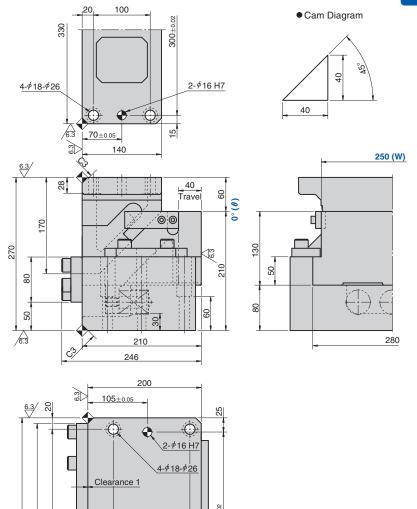
Please contact your local sales representative if you prefer to use a gas spring not specified in our catalog. For use and maintenance of gas spring, please contact the manufacturer directly.

SKCA

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Working Fore	ce [kN (tonf)] Allowable Working Force	Spring Force N (kgf)		Cam Slider Weight	Total Weight	Catalog No.	w	θ	Travel S
1,000,000 strokes		Initial Load	Final Load	kg	kg				
98.0 (10.0)	147.0 (15.0)	601.7 (61.4)	3610.1 (368.6)	33.4	97.0	SKCA	250	00	40

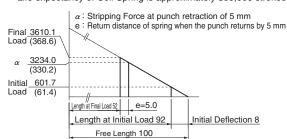




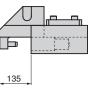
Refer to page 377 for the machining details of tapped holes and dowel holes for retainer

## **■**Spring Diagram

- · Spring Model TF40-100 (3 pieces)
- · Spring constant 25.07 N/mm (2.56 kgf/mm)
- · Life expectancy of Coil Spring is approximately 300,000 strokes.



### ■Rear Removal Space



1041

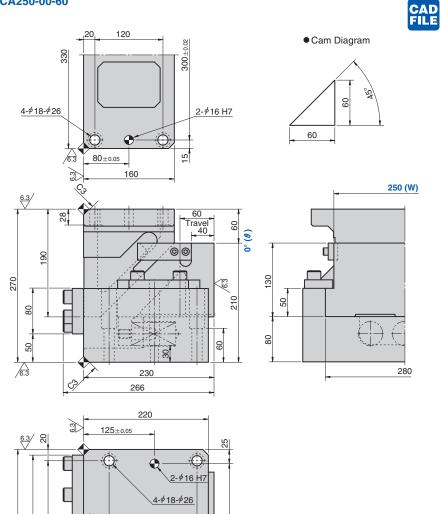
340

20 45

135

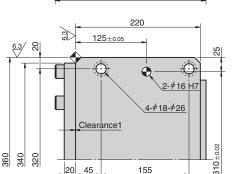
W θ Travel





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17 °CA	
250 (W) 000 000 000 000 000 000 000 000 000 0	



Catalog No.	W	]-	θ	]-[	s
SKCA	250	_	00	_	60

651.7

(66.3)

**Spring Force** 

N (kgf)

Initial Load Final Load

3659.4

(372.3)



Order

Refer to page 377 for the machining details of tapped holes and dowel holes for retainer

Cam Slider

Weight

33.4

Total

Weight

kg

105.3

## **■**Spring Diagram

Working Force [kN (tonf)]

Allowable

Working Force 300,000 strokes

147.0

(15.0)

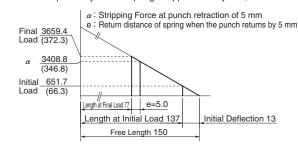
Standard

Working Force 1,000,000 strokes

98.0

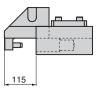
(10.0)

- Spring Model TF40-150 (3 pieces)
- · Spring constant 16.71 N/mm (1.70 kgf/mm)
- · Life expectancy of Coil Spring is approximately 300,000 strokes.



### ■Rear Removal Space

Catalog No.

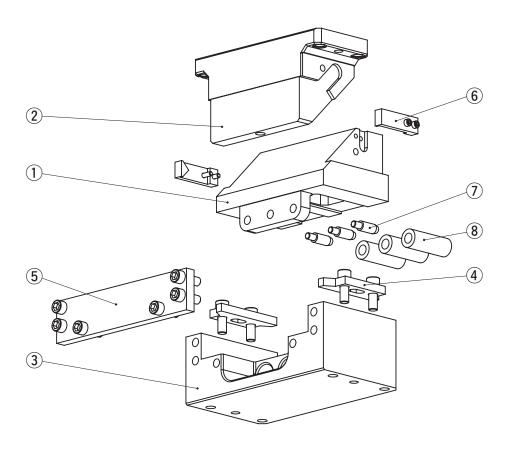


# Standard Cam Units

# **SKCA** [Table of Components]

**Die Mounted Cam Unit** 

SKCA250



No.	Description	Qty	Material and Remark
1	1 Cam Slider		Cast Iron with Graphite
2	Cam Driver	1	Cast Iron with Graphite
3	Cam Holder	1	Cast Iron
4	Upper Plate	2	Copper Powder Sintered
5	Stopper Plate	1	Steel
6	Positive Return Follower	2	Steel
7	Spring Guide Pin	3	<i>∮</i> 21x60
8	Coil Spring	3	TF40-100 40st
8	Coil Spring	3	TF40-150 60st

Bolts, nuts, dowels, and washers for assembly are not indicated.

# **Cam Units [Overview]**

# **Information**

## ■ Tapped Hole and Dowel Hole (Prepared Hole, Finish) Machining for Retainer Mounting

#### Instruction method for machining

Indicate the tapped hole diameter and the dowel hole (or prepared hole) diameter with the XY coordinates.

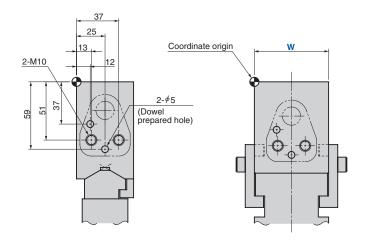
#### To indicate the coordinates

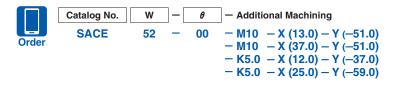
- The origin is positioned at the upper left corner of the mount face. (However, machining uses our machining datum as the reference.)
- · Indication symbol
- -M···Tapped hole, -N···Dowel prepared hole, -K···Dowel finish hole

#### **Machining standard**

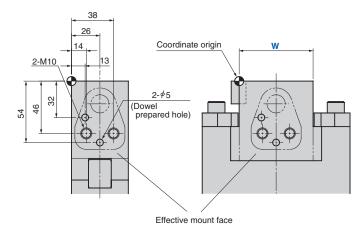
- · Tapped holes and dowel prepared holes are machined to general tolerances.
- The hole depth is 2.5 times the diameter for both tapped holes and dowel holes. The dowel pilot hole is processed for 2 times the diameter.
- $\cdot$  The dowel hole spacing is machined to the tolerance of  $\pm 0.02$ . The hole tolerance is H7.

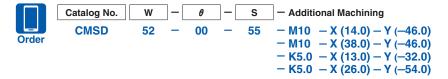
### (Example of Aerial Cam Unit)





#### ⟨Example of Die Mounted Cam Unit⟩





# **■**Other machining

Please give instructions on a separate drawing for drilling or cutting other than tapped holes and dowel holes.