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

Moun	t Face			Working For	ce [kN (tonf)]	
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

Mou	int Face			Working For	ce [kN (tonf)]
w	н	Working Angle	Travel	Standard Working Force 1,000,000 strokes	Allowable Working Force 300,000 strokes
			25		
52	65	00	40	14.7 (1.5)	29.4 (3.0)
			60		
		00	40		
		00	60		
		05	45		
		05	70		
65	70	10	45	10.6 (0.0)	39.2 (4.0)
60	70	10	70	19.6 (2.0)	39.2 (4.0)
		15	45		
		15	70		
			45		
		20	70		
			40		
	100	00	60	29.4 (3.0)	58.8 (6.0)
			80		
			45		
		05	70		
100		10	45		
		10	70		70 ((0 0)
	90		45	39.2 (4.0)	78.4 (8.0)
		15	70		
			45		
		20	70		
			40		
		00	60	58.8 (6.0)	88.2 (9.0)
		0.5	45		
		05	70		
150	100	10	45		
150	100	10	70		
			45	64.7 (6.6)	98.0 (10.0)
		15	70		
			45		
		20	70		
	110		40	70.4 (0.0)	1170 (100)
200	110	00	60	78.4 (8.0)	117.6 (12.0)
		0.0	40	00.0 (40.0)	1170 (15 0)
250	100	00	60	98.0 (10.0)	147.0 (15.0)
000	130	00	40	117.0 (10.0)	170 4 (10 0)
300		00	60	117.6 (12.0)	176.4 (18.0)

SKCA

954

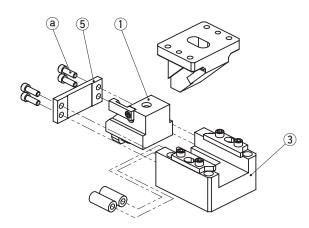
Copyright © Sankyo Oilless Industry, Inc. All Rights Reserved.

Copyright © Sankyo Oilless Industry, Inc. All Rights Reserved.

SKCA [Overview]

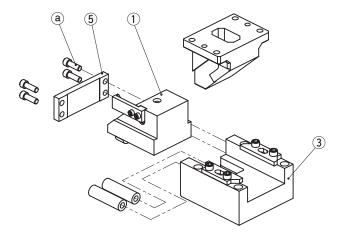
Product Information

SKCA52, 65 Assembly Instructions



SKCA200, 250 Assembly Instructions

SKCA100, 150 Assembly Instructions

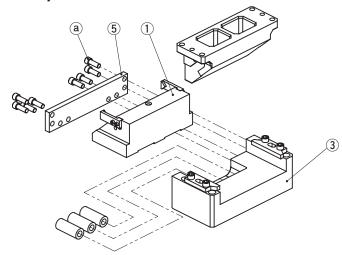


Disassembly

955

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.

SKCA300 Assembly Instructions



Assembly

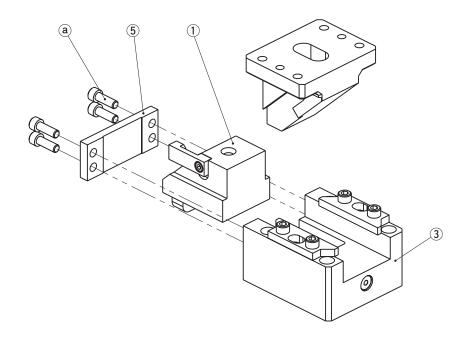
Assembly is the reverse procedure of disassembly.

- 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.
- \cdot Make sure that all bolts are tighten to the recommended torque after assembly and disassembly.

SKCA [Overview]

Product Information

SKCA65, 100, 150 Assembly Instructions (Gas Spring)



Disassembly

Remove Hexagon Socket Head Bolts ([®]), to pull out Stopper Plate ([§]).
 Pull out and remove Cam Slider (¹) from Cam Holder (³) to the rear.

Assembly

Assembly is the reverse procedure of disassembly.

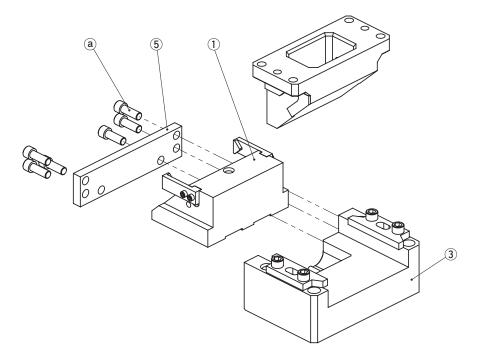
- Ensure that all parts are clean, particularly the sliding components to which a small amount of lubricant is applied and is then placed in position.
- Take care that the respective tolerances are observed when assembling Cam Slider and Cam Holder, which also should be identified by the same serial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

Copyright © Sankyo Oilless Industry, Inc. All Rights Reserved.

Gas Spring

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

Remove Hexagon Socket Head Bolts (^(a)), to pull out Stopper Plate (⁽⁵⁾).
 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.

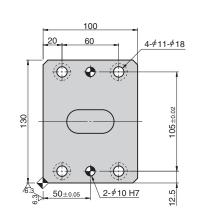
🚹 Gas Spring

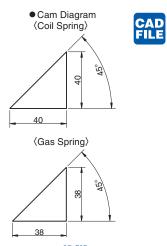
Please contact your local sales representative if you prefer to use a gas spring not specified in our catalog. For use and maintenance of gas spring, please contact the manufacturer directly.

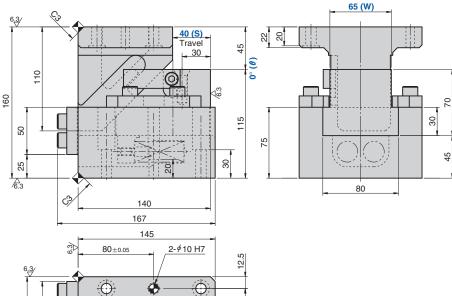
SKCA

Die Mounted Cam Unit









	Working Force [kN (tonf)]		Force	Total				Troval	Spring Type		
Standard Working Force	Allowable Working Force		kgf)	Weight	Catalog No.	w	θ	S	PS		
1,000,000 strokes	300,000 strokes	Initial Load	Final Load	kg							
19.6	39.2	125.4 (12.8)	752.6 (76.8)	15.5	SKCA	SKCA	SKCA	C.F.		40	No Code (Coil Spring) NISO
(2.0)	(4.0)	_	677 (69.1)	15.5		65	00	40 (38)	GK NGK GD NGD GS NGS		

Gas Spring travel is 38mm.

No Code: Coil Spring GK: Gas Spring (KALLER) GD: Gas Spring (DADCO) GS: Gas Spring (SDT) NGK/NGD/NGS: Without Gas Spring NISO: Without Coil Spring Parts for spring assembly are included.

	Catalog No.	W]-[θ]-[S]-	PS]-[Option
	SKCA	65	_	00	_	40	_	GK		
Order	SKCA	65	_	00	_	40	_	NGK		
	SKCA	65	—	00	-	40	—	GK	-	NF
5	Option Code			Speci	ificat	ion				

Nitrogen gas not charged.

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

Spring Specification

NF

Option

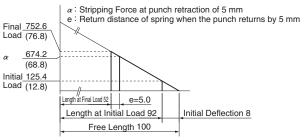
No.	PS	Spring Model	Qty	Remark				
	No Code	TF22-100	2	Coil Spring 7.84 N/mm (0.80 kgf/mm)				
8	GK	R19-38.1-Blue	1	Gas Spring (KALLER)				
0	GD	C.090.038.BK.100	1	Gas Spring (DADCO)				
	GS	SFL.50.38	1	Gas Spring (SDT)				

Gas filling pressure: 10 MPa

Life expectancy of Coil Spring is approximately 300,000 strokes.

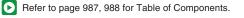
Spring Diagram





Rear Removal Space

968



100

Clearance 1

ťΘ

12 30

20

967

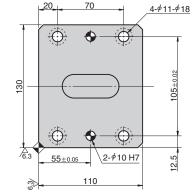
Q

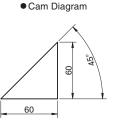
 105 ± 0.0

4*-∲*11*-∮*18

Die Mounted Cam Unit

SKCA65-00-60



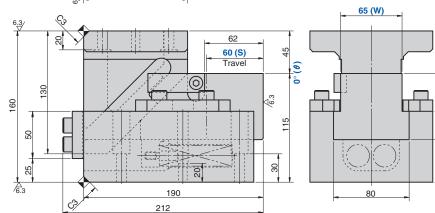


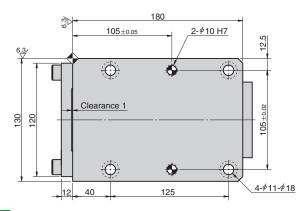
CAD FILE

0

5

8





Refer to page 987 for Table of Components.

969

Standard	ce [kN (tonf)] Allowable	opinigroitee		Total Weight	Catalog No.	w	θ	Travel S
Working Force 1,000,000 strokes	Working Force 300,000 strokes	Initial Load	Final Load	kg				U
19.6	39.2	136.0	763.6	21.0	SKCA	65	00	60
(2.0)	(4.0)	(13.8)	(77.4)	21.0	SKCA	05	00	00



Option D

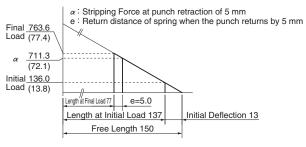
Refer to page 377 for the machining details of tapped holes and dowel holes for retainer mounting.

Spring Diagram

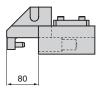
Spring Model TF22-150 (2 pieces)

• Spring constant 5.23 N/mm (0.53 kgf/mm)

· Life expectancy of Coil Spring is approximately 300,000 strokes.

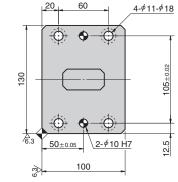


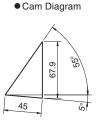
Rear Removal Space



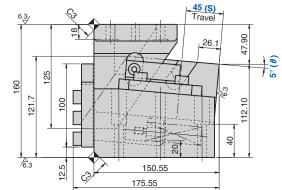
Die Mounted Cam Unit

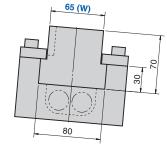
SKCA65-05-45

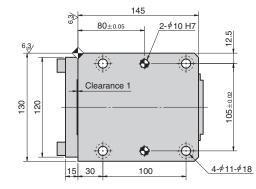




CAD FILE







Standard	ce [kN (tonf)] Allowable	Spring Force N (kgf)		Total Weight	Catalog No.	w	θ	Travel
Working Force 1,000,000 strokes	Working Force 300,000 strokes	Initial Load	Final Load	kg				Ŭ
19.6	39.2	175.8	741.0	19.0	SKCA	65	05	45
(2.0)	(4.0)	(17.9)	(75.5)	19.0	SKCA	05	05	40



Option F

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

Spring Diagram

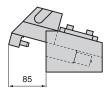
Spring Model TF22-125 (2 pieces)

Spring constant 6.28 N/mm (0.64 kgf/mm)

· Life expectancy of Coil Spring is approximately 300,000 strokes.

Final 741.0 Load (75.5) $\alpha = \frac{678.2}{(69.1)}$ Initial 175.8 Load (17.9) $\alpha = \frac{678.2}{(69.1)}$ Initial 175.8 Load (17.9) $\alpha = \frac{175.8}{(17.9)}$ $\alpha = \frac{175.8}{(17.9)}$

Rear Removal Space

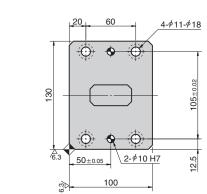


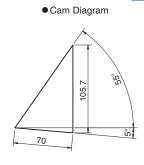
972

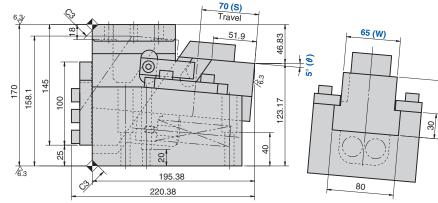
Refer to page 987 for Table of Components.

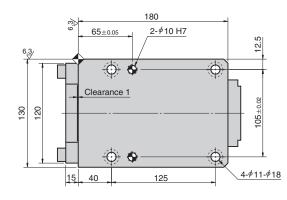
Die Mounted Cam Unit

SKCA65-05-70









CAD

2

Standard	ce [kN (tonf)] Allowable	opinigi oroco 10ta		Total Weight	Catalog No.	w	θ	Travel S
Working Force 1,000,000 strokes	Working Force 300,000 strokes	Initial Load	Final Load	kg				Ū
19.6	39.2	190.4	974.4	22.2	SKCA	65	05	70
(2.0)	(4.0)	(19.4)	(99.2)		ONOA	00	00	10

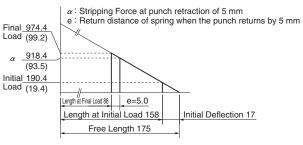


Option

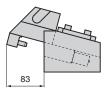
Refer to page 377 for the machining details of tapped holes and dowel holes for retainer mounting.

Spring Diagram

- Spring Model TF25-175 (2 pieces)
- Spring constant 5.60 N/mm (0.57 kgf/mm)
- · Life expectancy of Coil Spring is approximately 300,000 strokes.



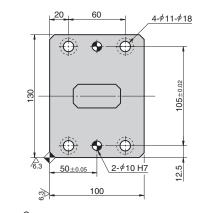
Rear Removal Space



974

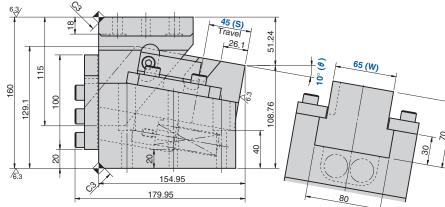
Die Mounted Cam Unit

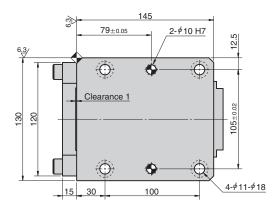
SKCA65-10-45

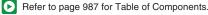




CAD FILE







Standard	ce [kN (tonf)] Allowable	Spring Force Total N (kgf) Weight Catalog N		Catalog No.	w	θ	Travel	
Working Force 1,000,000 strokes	Working Force 300,000 strokes	Initial Load	Final Load	kg				Ŭ
19.6	39.2	175.8	741.0	19.6	SKCA	65	10	45
(2.0)	(4.0)	(17.9)	(75.5)	19.0	SKCA	05	10	40

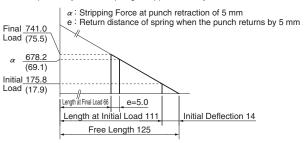


Option Re

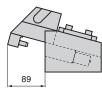
Refer to page 377 for the machining details of tapped holes and dowel holes for retainer mounting.

Spring Diagram

- Spring Model TF22-125 (2 pieces)
- Spring constant 6.28 N/mm (0.64 kgf/mm)
- · Life expectancy of Coil Spring is approximately 300,000 strokes.

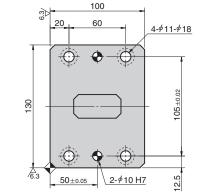


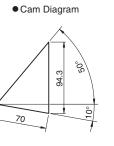




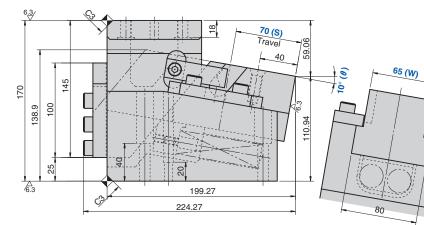
Die Mounted Cam Unit

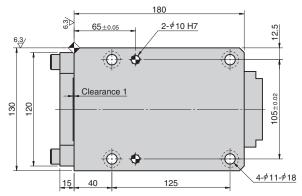
SKCA65-10-70





CAD FILE





Standard	Norking Force [kN (tonf)] Standard Allowable Working Force Working Force		Force Total gf) Weight Catalog No.		Catalog No.	w	θ	Travel
1,000,000 strokes		Initial Load	Final Load	kg				U
19.6	39.2	190.4	974.4	20.5	SKCA	65	10	70
(2.0)	(4.0)	(19.4)	(99.2)	20.5	SKCA	05	10	10



Option R

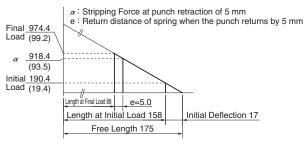
Refer to page 377 for the machining details of tapped holes and dowel holes for retainer mounting.

Spring Diagram

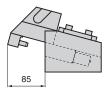
Spring Model TF25-175 (2 pieces)

Spring constant 5.60 N/mm (0.57 kgf/mm)

· Life expectancy of Coil Spring is approximately 300,000 strokes.

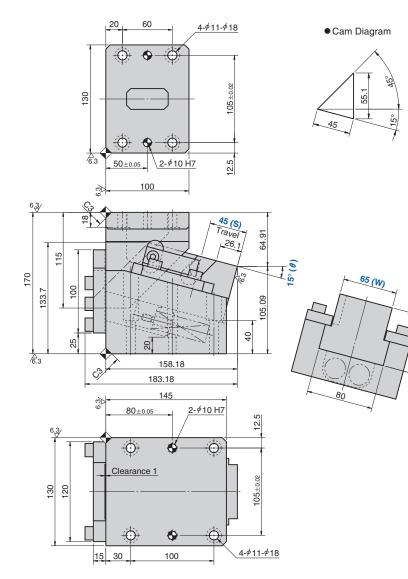


Rear Removal Space



Die Mounted Cam Unit

SKCA65-15-45



Working Ford	ce [kN (tonf)]	Spring	Force
Standard	Allowable	N (I	(gf)
Working Force ,000,000 strokes	Working Force 300,000 strokes	Initial Load	Final
19.6	39.2	175.8	741

(4.0)

	Catalog No.	W]-[θ]-[S]
Order	SKCA	65	-	15	-	45	

(17.9)

Option

(2.0)

CAD FILE

8

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

Total

kg

22.3

Final Load

741.0

(75.5)

Weight Catalog No.

SKCA

Spring Diagram

Spring Model TF22-125 (2 pieces)

Spring constant 6.28 N/mm (0.64 kgf/mm)

· Life expectancy of Coil Spring is approximately 300,000 strokes.

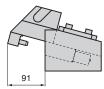
 α : Stripping Force at punch retraction of 5 mm e : Return distance of spring when the punch returns by 5 mm Final 741.0 Load (75.5) α 678.2 (69.1) Initial 175.8 Load (17.9) Length at Final Load 66 e=5.0 Length at Initial Load 111 Initial Deflection 14 Free Length 125

Rear Removal Space

Travel

S

45



W

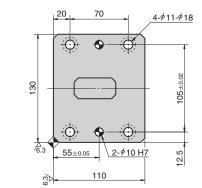
65

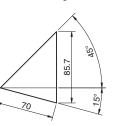
θ

15

Die Mounted Cam Unit

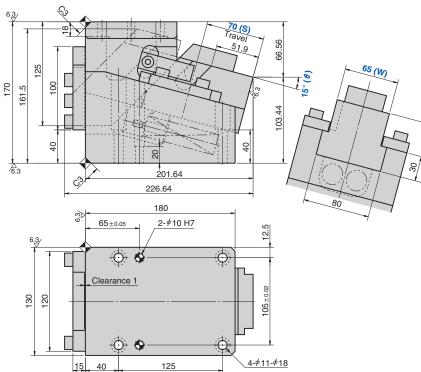
SKCA65-15-70





• Cam Diagram

CAD FILE



Standard	ce [kN (tonf)] Allowable Working Force	Spring Force N (kgf)		Total Weight	Catalog No.	w	θ	Travel	
Working Force 1,000,000 strokes		Initial Load	Final Load	kg				Ŭ	
19.6	39.2	190.4	974.4	22.3	SKCA	65	15	70	
(2.0)	(4.0)	(19.4)	(99.2)	22.5	SKCA	05	15	70	



Option Refe

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

Spring Diagram

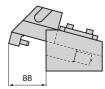
Spring Model TF25-175 (2 pieces)

Spring constant 5.60 N/mm (0.57 kgf/mm)

· Life expectancy of Coil Spring is approximately 300,000 strokes.

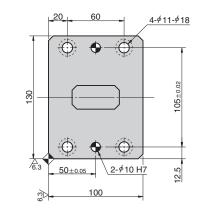
Final $\frac{974.4}{(99.2)}$ α : Stripping Force at punch retraction of 5 mm e : Return distance of spring when the punch returns by 5 mm α : Return distance of spring when the punch re

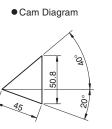
Rear Removal Space

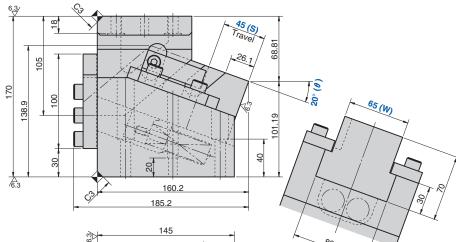


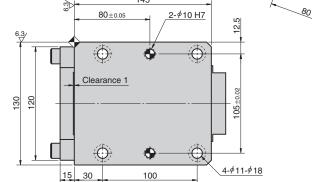
Die Mounted Cam Unit

SKCA65-20-45









CAD
FILE

Working Force [kN (tonf)] Standard Allowable N (k Working Force			Total Weight	Catalog No.	w	θ	Travel S		
1,000,000 strokes		Initial Load	Final Load	kg				Ŭ	
19.6	39.2	175.8	741.0	22.3	SKCA	65	20	45	
(2.0)	(4.0)	(17.9)	(75.5)	22.5	SKCA	05	20	40	



Option

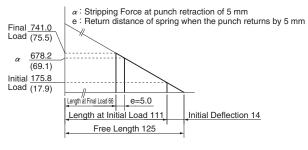
Refer to page 377 for the machining details of tapped holes and dowel holes for retainer mounting.

Spring Diagram

Spring Model TF22-125 (2 pieces)

Spring constant 6.28 N/mm (0.64 kgf/mm)

· Life expectancy of Coil Spring is approximately 300,000 strokes.



Rear Removal Space

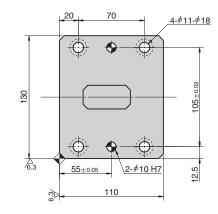


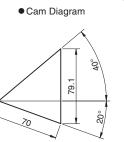
984

Refer to page 987 for Table of Components.

Die Mounted Cam Unit

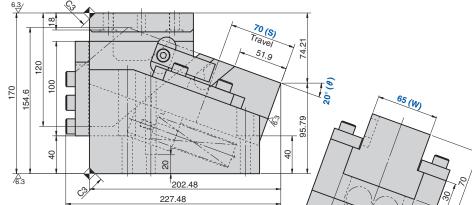
SKCA65-20-70

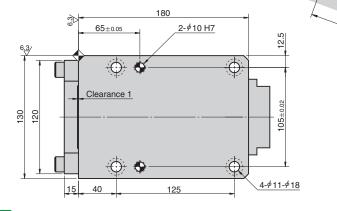




80

CAD FILE





Standard	ce [kN (tonf)] Allowable	opinig i oloo		Total Weight	Catalog No.	w	θ	Travel S	
Working Force 1,000,000 strokes	Working Force 300,000 strokes	Initial Load	Final Load	kg				5	
19.6	39.2	190.4	974.4	21.3	SKCA	65	20	70	
(2.0)	(4.0)	(19.4)	(99.2)	21.3	SKCA	05	20	10	

	Catalog No.	W]-[θ]-	S]
Order	SKCA	65	-	20	-	70	

mounting.

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

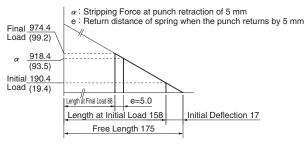
Spring Diagram

Option

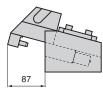
Spring Model TF25-175 (2 pieces)

Spring constant 5.60 N/mm (0.57 kgf/mm)

· Life expectancy of Coil Spring is approximately 300,000 strokes.



Rear Removal Space

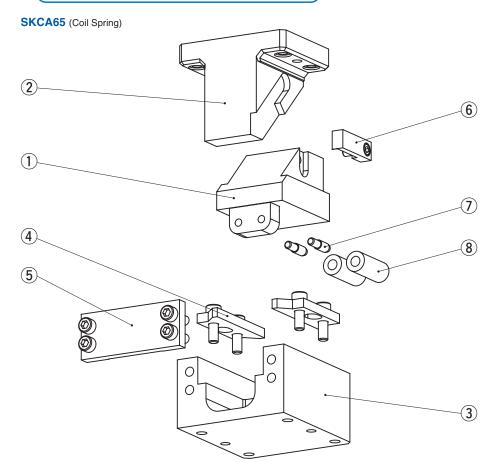


986

Refer to page 987 for Table of Components.

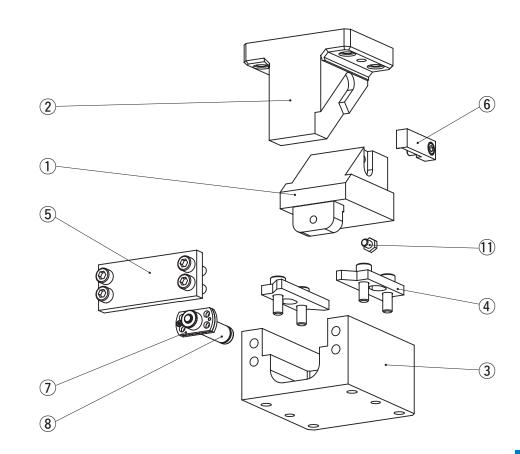
SKCA [Table of Components]

Die Mounted Cam Unit



No.	Description	Qty	Material and Remark
1	Cam Slider	1	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	1	Steel
7	Spring Guide Pin	2	∲10x35 45,60st
7	Spring Guide Pin	2	∲12x40 70st
8	Coil Spring	2	TF22-125 45st
8	Coil Spring	2	TF22-150 60st
8	Coil Spring	2	TF25-175 70st

SKCA65 (Gas Spring)



No.	Description	Qty	Material and Remark
1	Cam Slider	1	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	1	Steel
7	Mounting Plate	1	Gas Spring specification only
8	Spring	—	Refer to the Spring Specification.
11	Stop Pin	1	Gas Spring specification only

Copyright © Sankyo Oilless Industry, Inc. All Rights Reserved.

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

SKCA 65

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

Cam Units [Overview]

Additional Machining

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.

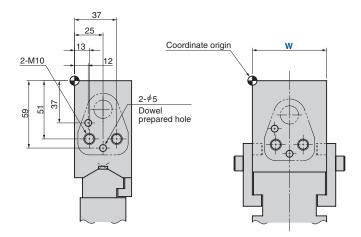
To indicate the coordinates

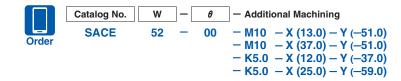
- The origin is positioned at the upper left corner of the mount face. (However, machining uses our machining datum as the reference.)
- · Indication symbol
- -M…Tapped hole, -N…Dowel prepared hole, -K…Dowel finish hole

Machining standard

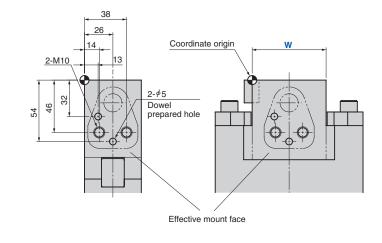
- · Tapped holes and dowel prepared holes are machined to general tolerances.
- The hole depth is 2.5 times the diameter for both tapped holes and dowel holes. The dowel pilot hole is processed for 2 times the diameter.
- \cdot The dowel hole spacing is machined to the tolerance of ± 0.02 .The hole tolerance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

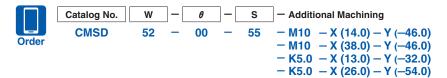
(Example of Aerial Cam Unit)





(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.

