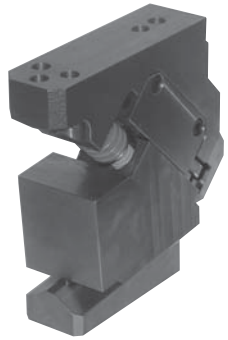
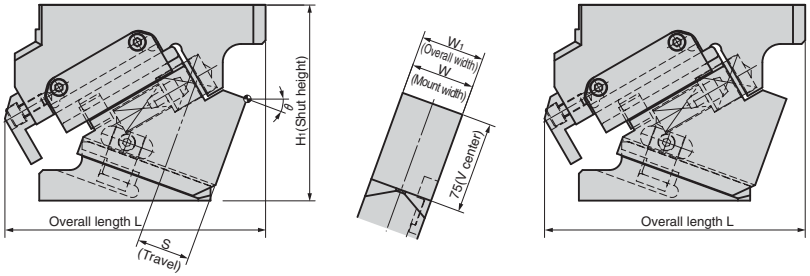
Aerial Cam Unit General Description of SACD

WORKING FORCE 3-TON TYPE



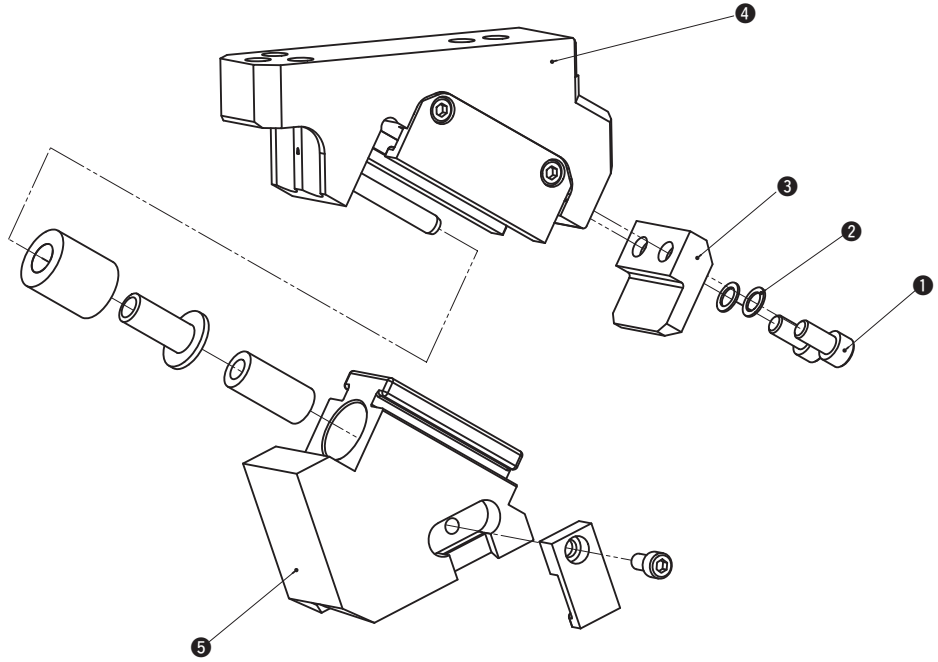
- The standard working force (one million strokes) achieved 29.4 kN - 3.0 ton with the mount width of 52 mm.
  The allowable working force (300,000 strokes) is 58.8 kN - 6.0 ton.
- The spring force is 3110 N- 317 kgf, which is more than three times that of similar model SUCD.
  It is effective for piercing a high tensile or a thick material.
- Automatic alignment mechanism of the V-shaped guide.
- Available angle is 0°to 60°at increments of 5°

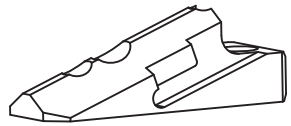
■ SACD Specification



Mount Surface		Woring Angle θ	Travel S	Working Force kN(tonf)		Unit Size			Spring Force N(kgf)	
W	H			Standard Working Force (one million strokes)	Allowable Working Force (300,000 strokes)	W_1	H_1	L	Initial Load	Final Load
		00	30.2					196.9		
		05	33.4					200.8		
		10	36.6					207.7		
		15	39.9					211.6		
		20	43.3					213.1		
		25	47.0					214.5		
52	75	30	51.0	29.4 (3.0)	58.8 (6.0)	52	160	216.0	31.6 (3.2)	3110.8 (317.2)
		35	55.4					216.5		
		40	60.4					212.6		
		45	66.2					213.7		
		50	73.1					205.0		
		55	64.5					215.0		
		60	54.0					200.0		

■SACD Structure and Assembly / Disassembly





- Disassembly method of SACD52
  1) Remove hexagon socket head bolt (❶) and washer (❷), and remove stopper plate (❸).
  2) Pull and remove cam slider (❺) from cam holder (❹) to the rear.

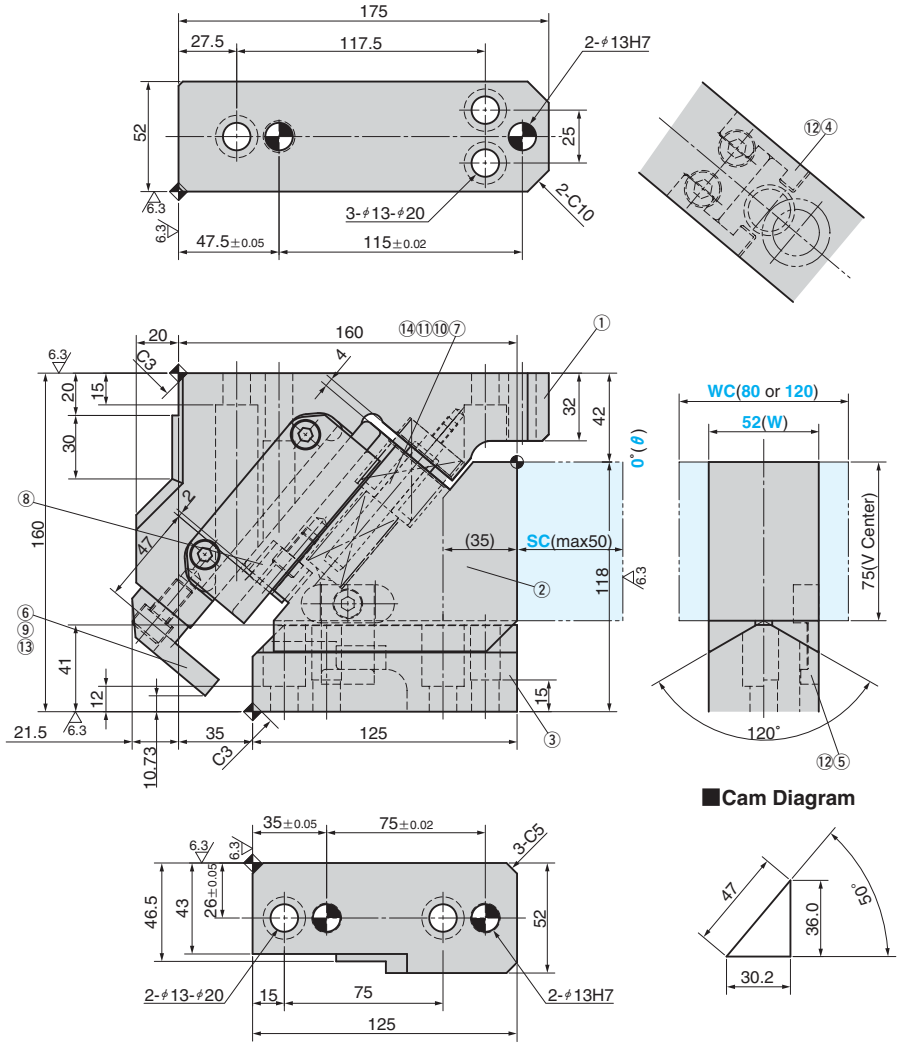
- Assembly method of SACD52
  1)Assemble components in the reverse order of disassembly.
  - Make sure that there is no foreign matter on the sliding area and assemble components.
  - The clearance between the cam slider and the cam holder is controlled. Match the stamped serial number on the holder and slider before assembly.
  - When cam is disassembled and then reassembled,please do not forget to assemble all bolts provided.

Aerial Cam Unit

WORKING FORCE 3-TON TYPE

CAD FILE

SACD 52 – 00



■Cam Diagram

Travel S	Working Force kN(tonf)		Spring Force N(kgf)		Total Weight kg	Catalog No.	(W)	(θ)
	Standard Working Force (one million strokes)	Allowable Working Force (300,000 strokes)	Initial Load	Final Load				
30.2	29.4 (3.0)	58.8 (6.0)	31.6 (3.2)	3110.8 (317.2)	8.8	SACD	52	00

Order

Catalog No.	(W)	–	(θ)
SACD	52	–	00

Option

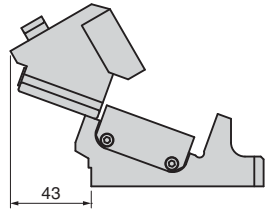
Option Code	Specification
SC	The mount surface is extended in the range from 1 to 50 mm (in the increments of 1 mm).
WC	The mount width is changed to 80 (WC80) or 120 (WC120).
N12	Dowel Pin holes of cam holder and cam driver are changed to φ12

Determine the pierce center position in the range of the cam width.

Order SACD52 – 00 – SC40 – N12
SACD52 – 00 – WC120

Refer to page 551 for detailed specifications of tapped holes and dowel pin holes (prepared hole,finished hole) for retainer.

■Space for removing



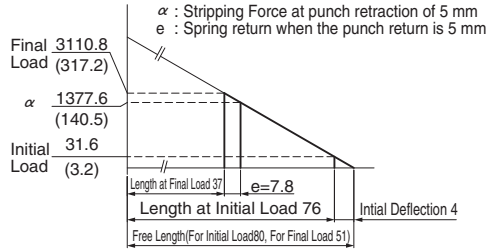
■Table of Components

No.	Description	Qty	Material and Remark
①	Cam Holder	1	FCD550
②	Cam Slider	1	FCD550 with Graphite
③	Cam Driver	1	SF700
④	Slide Keeper	2	S45C with Graphite
⑤	Positive Return Follower	1	Bronze(SP2)
⑥	Stopper Plate	1	SS400(1020)
⑦	Spring Guide Pin	1	S45C(1045)
⑧	Stopper	1	Urethane
⑨	Spring Washer	2	M10
⑩	Coil Spring	1	TF20-80
⑪	Coil Spring	1	TJH32-51
⑫	Hexagon Socket Head Bolt	5	SCM435 M8×16
⑬	Hexagon Socket Head Bolt	2	SCM435 M10×20
⑭	Spring Guide Bush	1	Bronze(SP2)

■Spring Diagram

(Stripping Force at punch retraction of 5 mm)

- Spring Used
  - For Initial Load: TF20-80(1 piece) 7.89N/mm(0.80kgf/mm)
  - For Final Load: TJH32-51(1 piece) 222.2N/mm(22.66kgf/mm)

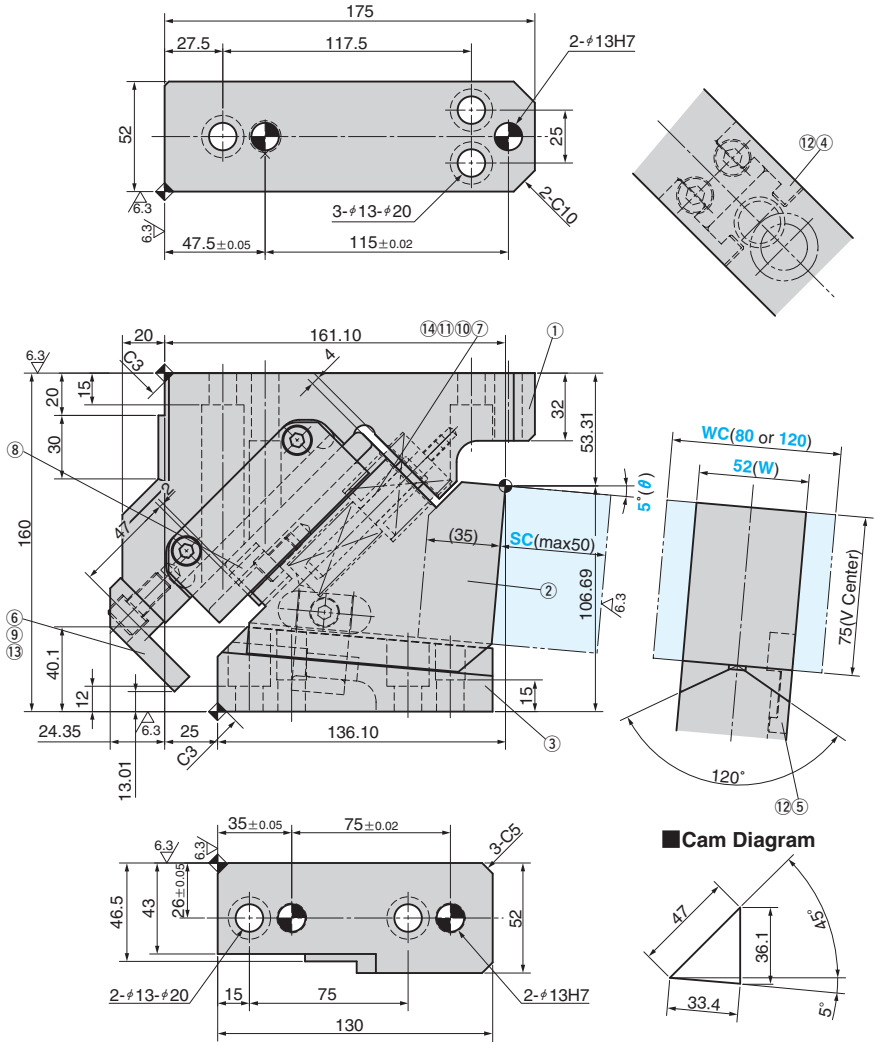


Aerial Cam Unit

WORKING FORCE 3-TON TYPE

CAD FILE

SACD 52 – 05



■Cam Diagram

Travel S	Working Force kN(tonf)		Spring Force N(kgf)		Total Weight kg	Catalog No.	(W)	(θ)
	Standard Working Force (one million strokes)	Allowable Working Force (300,000 strokes)	Initial Load	Final Load				
33.4	29.4 (3.0)	58.8 (6.0)	31.6 (3.2)	3110.8 (317.2)	8.6	SACD	52	05

Order

Catalog No.	(W)	–	(θ)
SACD	52	–	05

Option

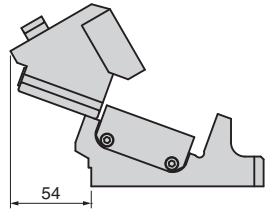
Option Code	Specification
SC	The mount surface is extended in the range from 1 to 50 mm (in the increments of 1 mm).
WC	The mount width is changed to 80 (WC80) or 120 (WC120).
N12	Dowel Pin holes of cam holder and cam driver are changed to φ12

Determine the pierce center position in the range of the cam width.

Order SACD52 – 05 – SC40 – N12
SACD52 – 05 – WC120

Refer to page 551 for detailed specifications of tapped holes and dowel pin holes (prepared hole,finished hole) for retainer.

■Space for removing



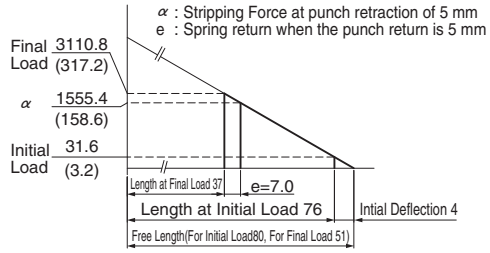
■Table of Components

No.	Description	Qty	Material and Remark
①	Cam Holder	1	FCD550
②	Cam Slider	1	FCD550 with Graphite
③	Cam Driver	1	SF700
④	Slide Keeper	2	S45C with Graphite
⑤	Positive Return Follower	1	Bronze(SP2)
⑥	Stopper Plate	1	SS400(1020)
⑦	Spring Guide Pin	1	S45C(1045)
⑧	Stopper	1	Urethane
⑨	Spring Washer	2	M10
⑩	Coil Spring	1	TF20-80
⑪	Coil Spring	1	TJH32-51
⑫	Hexagon Socket Head Bolt	5	SCM435 M8×16
⑬	Hexagon Socket Head Bolt	2	SCM435 M10×20
⑭	Spring Guide Bush	1	Bronze(SP2)

■Spring Diagram

(Stripping Force at punch retraction of 5 mm)

- Spring Used
  - For Initial Load: TF20-80(1 piece) 7.89N/mm(0.80kgf/mm)
  - For Final Load: TJH32-51(1 piece) 222.2N/mm(22.66kgf/mm)

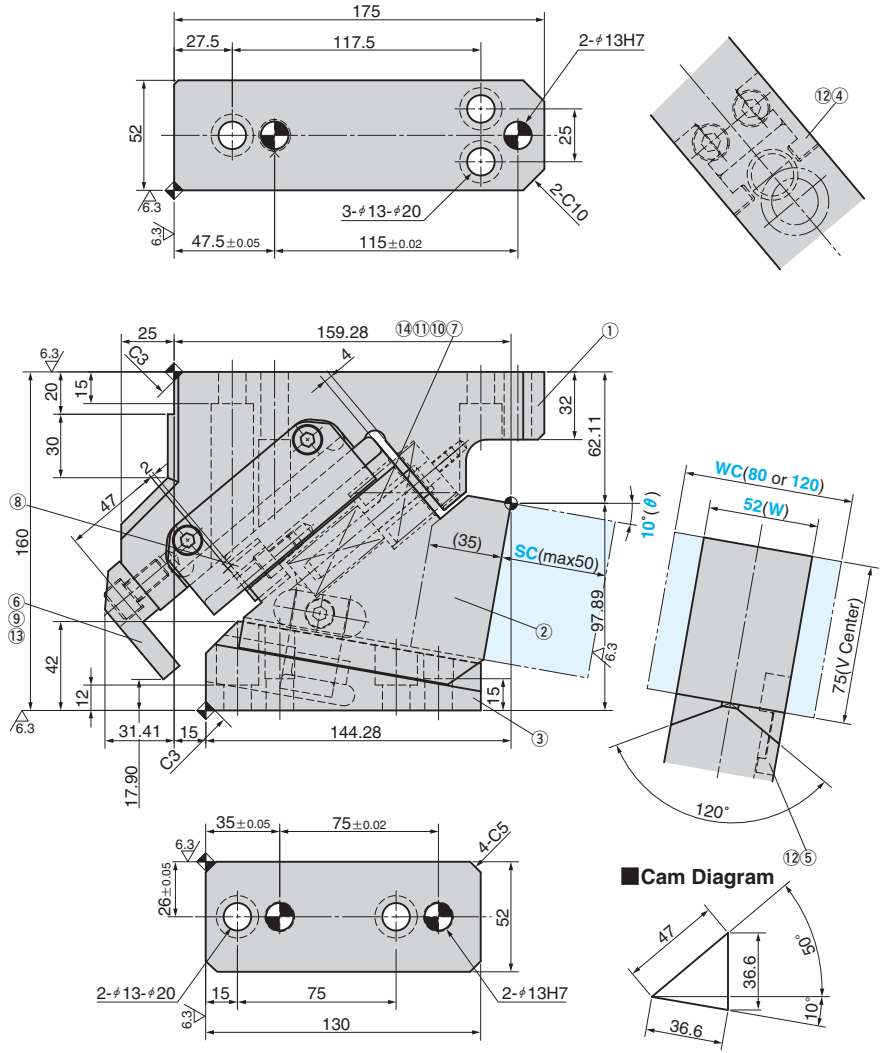


Aerial Cam Unit

WORKING FORCE 3-TON TYPE

CAD FILE

SACD 52 – 10



Travel S	Working Force kN(tonf)		Spring Force N(kgf)		Total Weight kg	Catalog No.	(W)	(θ)
	Standard Working Force (one million strokes)	Allowable Working Force (300,000 strokes)	Initial Load	Final Load				
36.6	29.4 (3.0)	58.8 (6.0)	31.6 (3.2)	3110.8 (317.2)	8.7	SACD	52	10

Order

Catalog No.	(W)	–	(θ)
SACD	52	–	10

Option

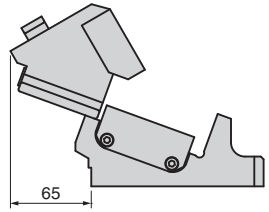
Option Code	Specification
SC	The mount surface is extended in the range from 1 to 50 mm (in the increments of 1 mm).
WC	The mount width is changed to 80 (WC80) or 120 (WC120).
N12	Dowel Pin holes of cam holder and cam driver are changed to φ12

Determine the pierce center position in the range of the cam width.

Order SACD52 – 10 – SC40 – N12
SACD52 – 10 – WC120

Refer to page 551 for detailed specifications of tapped holes and dowel pin holes (prepared hole,finished hole) for retainer.

■Space for removing



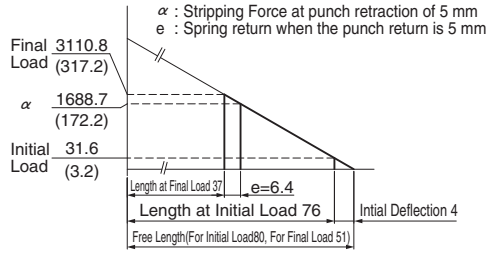
■Table of Components

No.	Description	Qty	Material and Remark
①	Cam Holder	1	FCD550
②	Cam Slider	1	FCD550 with Graphite
③	Cam Driver	1	SF700
④	Slide Keeper	2	S45C with Graphite
⑤	Positive Return Follower	1	Bronze(SP2)
⑥	Stopper Plate	1	SS400(1020)
⑦	Spring Guide Pin	1	S45C(1045)
⑧	Stopper	1	Urethane
⑨	Spring Washer	2	M10
⑩	Coil Spring	1	TF20-80
⑪	Coil Spring	1	TJH32-51
⑫	Hexagon Socket Head Bolt	5	SCM435 M8×16
⑬	Hexagon Socket Head Bolt	2	SCM435 M10×20
⑭	Spring Guide Bush	1	Bronze(SP2)

■Spring Diagram

(Stripping Force at punch retraction of 5 mm)

- Spring Used
  - For Initial Load: TF20-80(1 piece) 7.89N/mm(0.80kgf/mm)
  - For Final Load: TJH32-51(1 piece) 222.2N/mm(22.66kgf/mm)

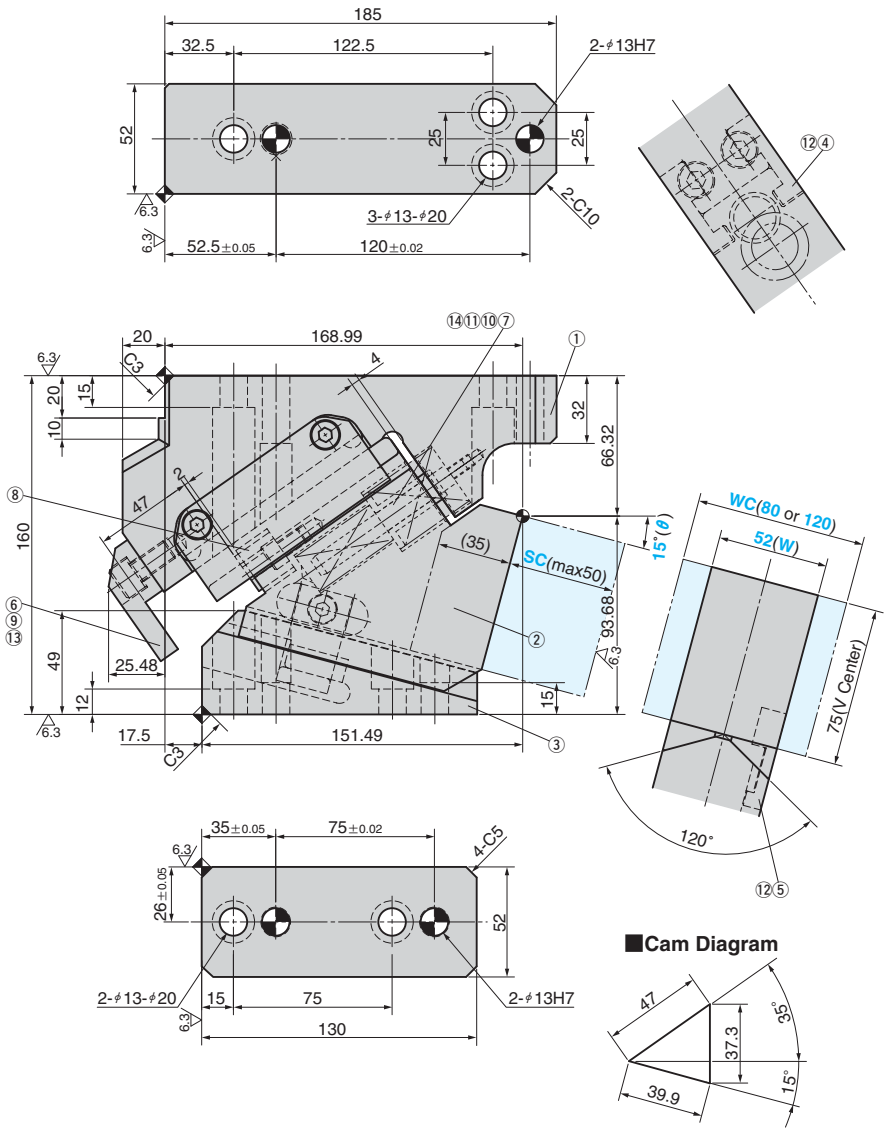


Aerial Cam Unit

WORKING FORCE 3-TON TYPE

CAD FILE

SACD 52 – 15



■Cam Diagram

Travel S	Working Force kN(tonf)		Spring Force N(kgf)		Total Weight kg	Catalog No.	(W)	(θ)
	Standard Working Force (one million strokes)	Allowable Working Force (300,000 strokes)	Initial Load	Final Load				
39.9	29.4 (3.0)	58.8 (6.0)	31.6 (3.2)	3110.8 (317.2)	9.0	SACD	52	15

Order

Catalog No.	(W)	–	(θ)
SACD	52	–	15

Option

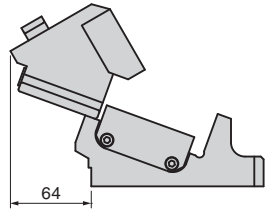
Option Code	Specification
SC	The mount surface is extended in the range from 1 to 50 mm (in the increments of 1 mm).
WC	The mount width is changed to 80 (WC80) or 120 (WC120).
N12	Dowel Pin holes of cam holder and cam driver are changed to φ12

Determine the pierce center position in the range of the cam width.

Order
SACD52 – 15 – SC40 – N12
SACD52 – 15 – WC120

Refer to page 551 for detailed specifications of tapped holes and dowel pin holes (prepared hole,finished hole) for retainer.

■Space for removing



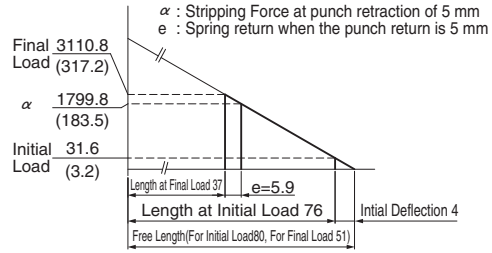
■Table of Components

No.	Description	Qty	Material and Remark
①	Cam Holder	1	FCD550
②	Cam Slider	1	FCD550 with Graphite
③	Cam Driver	1	SF700
④	Slide Keeper	2	S45C with Graphite
⑤	Positive Return Follower	1	Bronze(SP2)
⑥	Stopper Plate	1	SS400(1020)
⑦	Spring Guide Pin	1	S45C(1045)
⑧	Stopper	1	Urethane
⑨	Spring Washer	2	M10
⑩	Coil Spring	1	TF20-80
⑪	Coil Spring	1	TJH32-51
⑫	Hexagon Socket Head Bolt	5	SCM435 M8×16
⑬	Hexagon Socket Head Bolt	2	SCM435 M10×20
⑭	Spring Guide Bush	1	Bronze(SP2)

■Spring Diagram

(Stripping Force at punch retraction of 5 mm)

- Spring Used
  - For Initial Load: TF20-80(1 piece) 7.89N/mm(0.80kgf/mm)
  - For Final Load: TJH32-51(1 piece) 222.2N/mm(22.66kgf/mm)

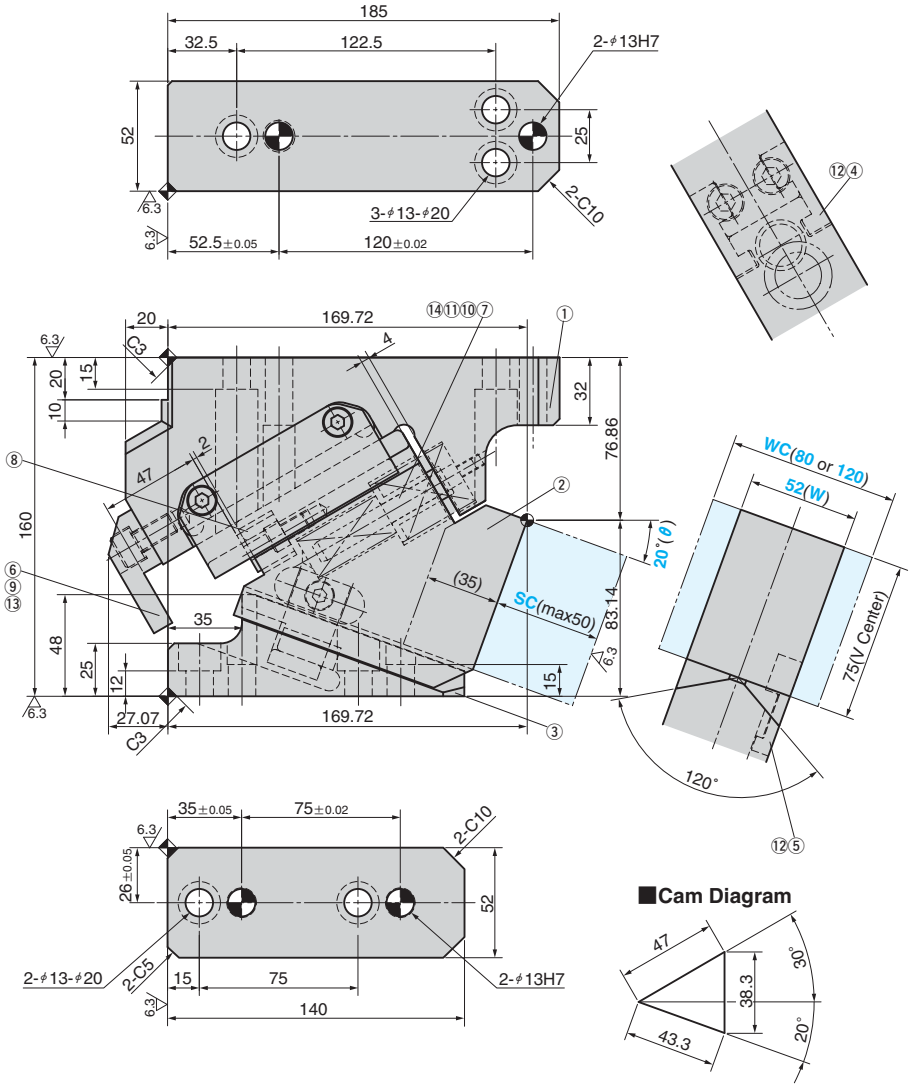


Aerial Cam Unit

WORKING FORCE 3-TON TYPE

CAD FILE

SACD 52 – 20



■Cam Diagram

Travel S	Working Force kN(tonf)		Spring Force N(kgf)		Total Weight kg	Catalog No.	(W)	(θ)
	Standard Working Force (one million strokes)	Allowable Working Force (300,000 strokes)	Initial Load	Final Load				
43.3	29.4 (3.0)	58.8 (6.0)	31.6 (3.2)	3110.8 (317.2)	8.9	SACD	52	20

Order

Catalog No.	(W)	–	(θ)
SACD	52	–	20

Option

Option Code	Specification
SC	The mount surface is extended in the range from 1 to 50 mm (in the increments of 1 mm).
WC	The mount width is changed to 80 (WC80) or 120 (WC120).
N12	Dowel Pin holes of cam holder and cam driver are changed to φ12

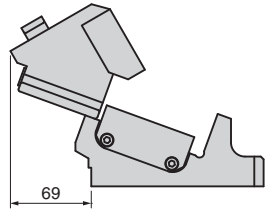
Determine the pierce center position in the range of the cam width.

Order SACD52 – 20 – SC40 – N12
SACD52 – 20 – WC120

Refer to page 551 for detailed specifications of tapped holes and dowel pin holes (prepared hole,finished hole) for retainer.

When the slider interferes with the die due to the protrusion length, you will need to machine the die for clearance.

■Space for removing



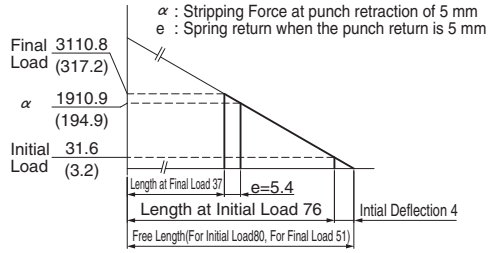
■Table of Components

No.	Description	Qty	Material and Remark
①	Cam Holder	1	FCD550
②	Cam Slider	1	FCD550 with Graphite
③	Cam Driver	1	SF700
④	Slide Keeper	2	S45C with Graphite
⑤	Positive Return Follower	1	Bronze(SP2)
⑥	Stopper Plate	1	SS400(1020)
⑦	Spring Guide Pin	1	S45C(1045)
⑧	Stopper	1	Urethane
⑨	Spring Washer	2	M10
⑩	Coil Spring	1	TF20-80
⑪	Coil Spring	1	TJH32-51
⑫	Hexagon Socket Head Bolt	5	SCM435 M8×16
⑬	Hexagon Socket Head Bolt	2	SCM435 M10×20
⑭	Spring Guide Bush	1	Bronze(SP2)

■Spring Diagram

(Stripping Force at punch retraction of 5 mm)

- Spring Used
  - For Initial Load: TF20-80(1 piece) 7.89N/mm(0.80kgf/mm)
  - For Final Load: TJH32-51(1 piece) 222.2N/mm(22.66kgf/mm)

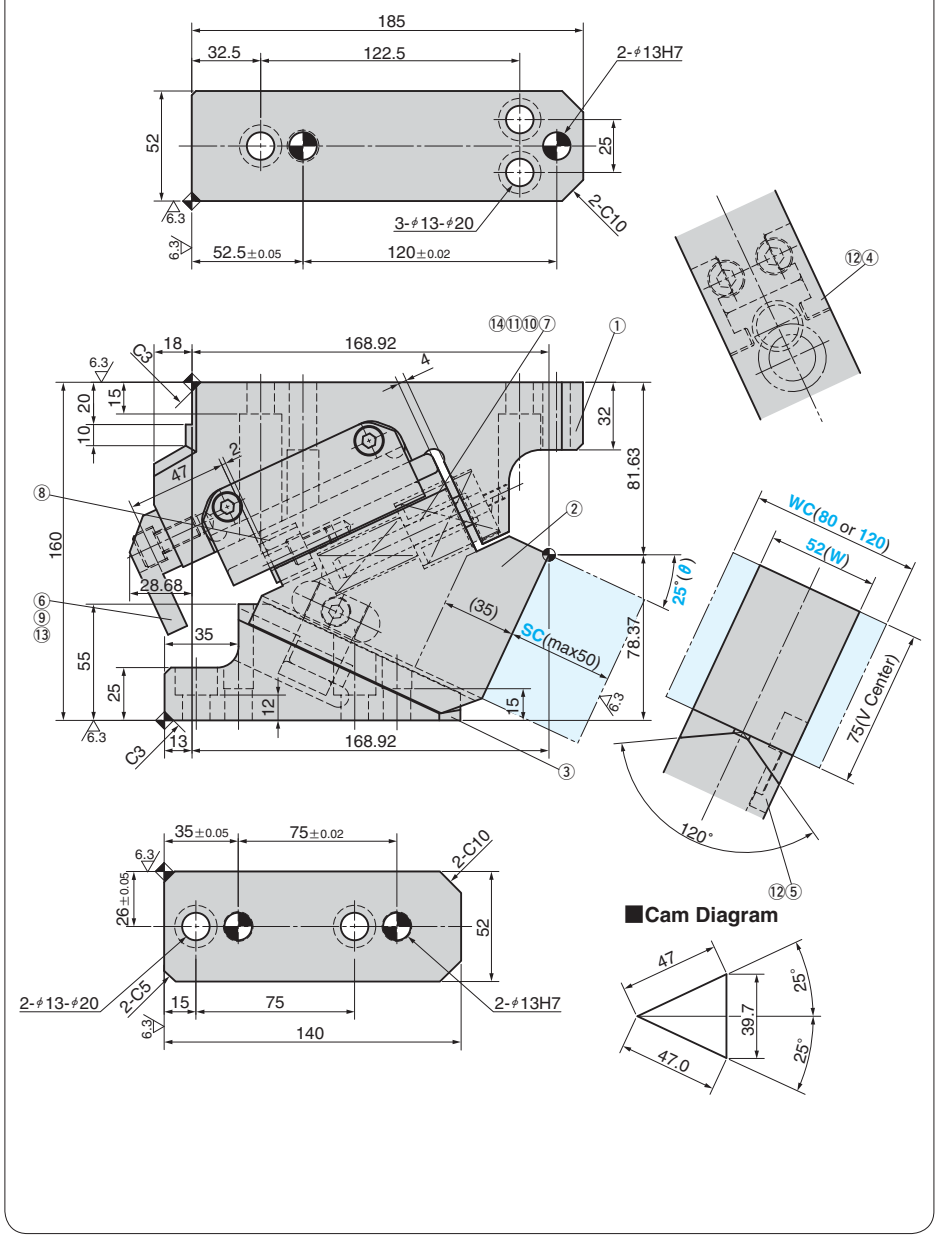


Aerial Cam Unit

WORKING FORCE 3-TON TYPE

CAD FILE

SACD 52 – 25



■Cam Diagram

Travel S	Working Force kN(tonf)		Spring Force N(kgf)		Total Weight kg	Catalog No.	(W)	(θ)
	Standard Working Force (one million strokes)	Allowable Working Force (300,000 strokes)	Initial Load	Final Load				
47.0	29.4 (3.0)	58.8 (6.0)	31.6 (3.2)	3110.8 (317.2)	8.8	SACD	52	25

Order

Catalog No.	(W)	–	(θ)
SACD	52	–	25

Option

Option Code	Specification
SC	The mount surface is extended in the range from 1 to 50 mm (in the increments of 1 mm).
WC	The mount width is changed to 80 (WC80) or 120 (WC120).
N12	Dowel Pin holes of cam holder and cam driver are changed to φ12

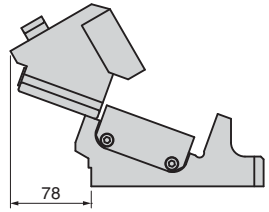
Determine the pierce center position in the range of the cam width.

Order
SACD52 – 25 – SC40 – N12
SACD52 – 25 – WC120

Refer to page 551 for detailed specifications of tapped holes and dowel pin holes (prepared hole,finished hole) for retainer.

When the slider interferes with the die due to the protrusion length, you will need to machine the die for clearance.

■Space for removing



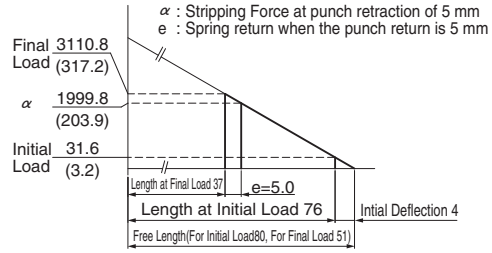
■Table of Components

No.	Description	Qty	Material and Remark
①	Cam Holder	1	FCD550
②	Cam Slider	1	FCD550 with Graphite
③	Cam Driver	1	SF700
④	Slide Keeper	2	S45C with Graphite
⑤	Positive Return Follower	1	Bronze(SP2)
⑥	Stopper Plate	1	SS400(1020)
⑦	Spring Guide Pin	1	S45C(1045)
⑧	Stopper	1	Urethane
⑨	Spring Washer	2	M10
⑩	Coil Spring	1	TF20-80
⑪	Coil Spring	1	TJH32-51
⑫	Hexagon Socket Head Bolt	5	SCM435 M8×16
⑬	Hexagon Socket Head Bolt	2	SCM435 M10×20
⑭	Spring Guide Bush	1	Bronze(SP2)

■Spring Diagram

(Stripping Force at punch retraction of 5 mm)

- Spring Used
  - For Initial Load: TF20-80(1 piece) 7.89N/mm(0.80kgf/mm)
  - For Final Load: TJH32-51(1 piece) 222.2N/mm(22.66kgf/mm)

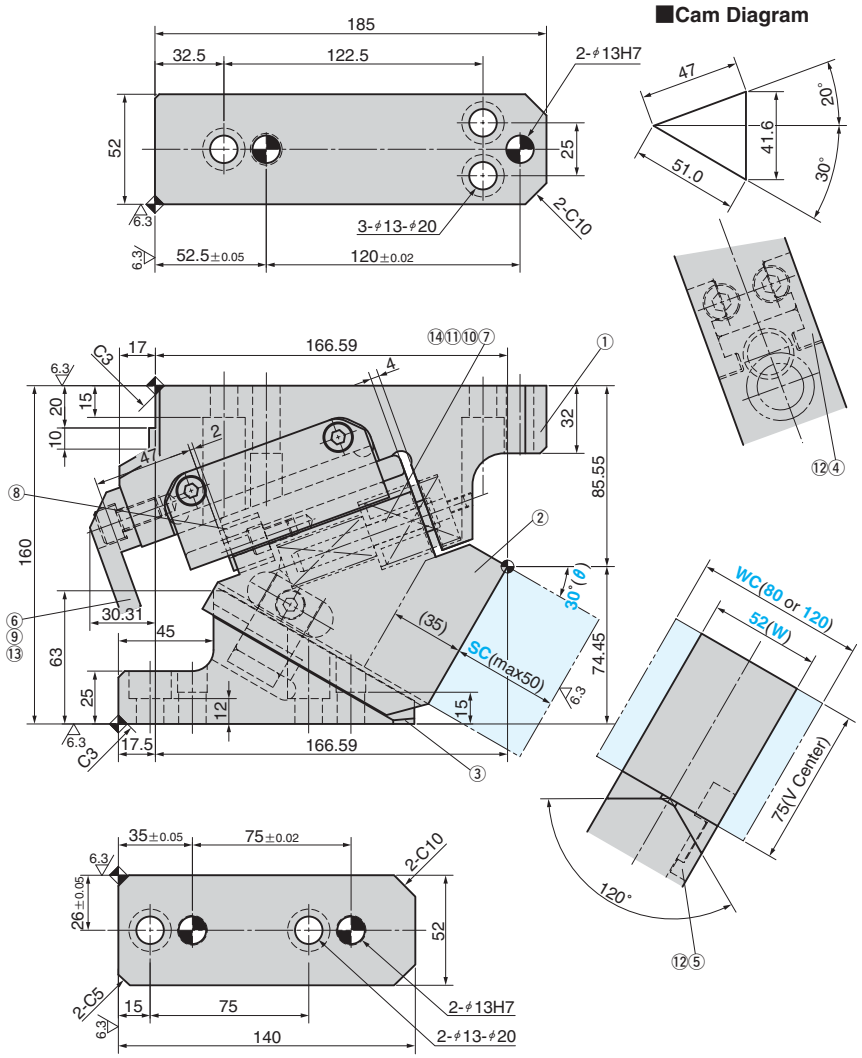


Aerial Cam Unit

WORKING FORCE 3-TON TYPE

CAD FILE

SACD 52 – 30



■Cam Diagram

Travel S	Working Force kN(tonf)		Spring Force N(kgf)		Total Weight kg	Catalog No.	(W)	(θ)
	Standard Working Force (one million strokes)	Allowable Working Force (300,000 strokes)	Initial Load	Final Load				
51.0	29.4 (3.0)	58.8 (6.0)	31.6 (3.2)	3110.8 (317.2)	8.6	SACD	52	30

Order

Catalog No.	(W)	–	(θ)
SACD	52	–	30

Option

Option Code	Specification
SC	The mount surface is extended in the range from 1 to 50 mm (in the increments of 1 mm).
WC	The mount width is changed to 80 (WC80) or 120 (WC120).
N12	Dowel Pin holes of cam holder and cam driver are changed to φ12

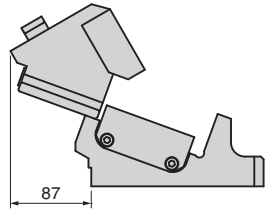
Determine the pierce center position in the range of the cam width.

Order SACD52 – 30 – SC40 – N12
SACD52 – 30 – WC120

Refer to page 551 for detailed specifications of tapped holes and dowel pin holes (prepared hole,finished hole) for retainer.

When the slider interferes with the die due to the protrusion length, you will need to machine the die for clearance.

■Space for removing



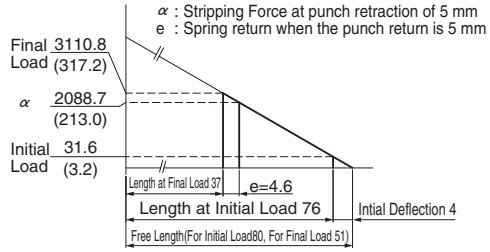
■Table of Components

No.	Description	Qty	Material and Remark
①	Cam Holder	1	FCD550
②	Cam Slider	1	FCD550 with Graphite
③	Cam Driver	1	SF700
④	Slide Keeper	2	S45C with Graphite
⑤	Positive Return Follower	1	Bronze(SP2)
⑥	Stopper Plate	1	SS400(1020)
⑦	Spring Guide Pin	1	S45C(1045)
⑧	Stopper	1	Urethane
⑨	Spring Washer	2	M10
⑩	Coil Spring	1	TF20-80
⑪	Coil Spring	1	TJH32-51
⑫	Hexagon Socket Head Bolt	5	SCM435 M8×16
⑬	Hexagon Socket Head Bolt	2	SCM435 M10×20
⑭	Spring Guide Bush	1	Bronze(SP2)

■ Spring Diagram

(Stripping Force at punch retraction of 5 mm)

- Spring Used
  - For Initial Load: TF20-80(1 piece) 7.89N/mm(0.80kgf/mm)
  - For Final Load: TJH32-51(1 piece) 222.2N/mm(22.66kgf/mm)

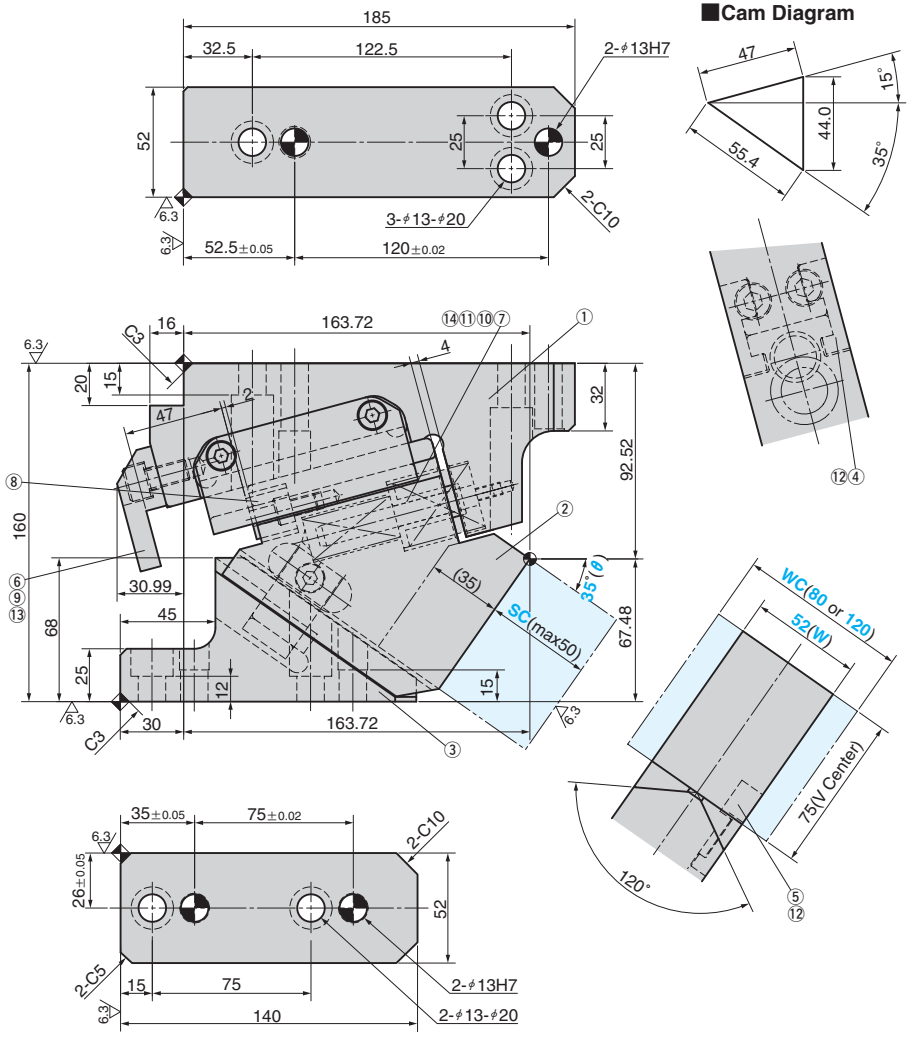


Aerial Cam Unit

WORKING FORCE 3-TON TYPE

CAD FILE

SACD 52 – 35



■Cam Diagram

Travel S	Working Force kN(tonf)		Spring Force N(kgf)		Total Weight kg	Catalog No.	(W)	(θ)
	Standard Working Force (one million strokes)	Allowable Working Force (300,000 strokes)	Initial Load	Final Load				
55.4	29.4 (3.0)	58.8 (6.0)	31.6 (3.2)	3110.8 (317.2)	8.8	SACD	52	35

Order

Catalog No.	(W)	–	(θ)
SACD	52	–	35

Option

Option Code	Specification
SC	The mount surface is extended in the range from 1 to 50 mm (in the increments of 1 mm).
WC	The mount width is changed to 80 (WC80) or 120 (WC120).
N12	Dowel Pin holes of cam holder and cam driver are changed to φ12

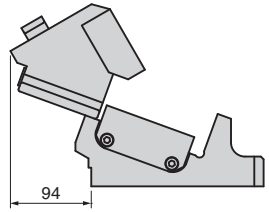
Determine the pierce center position in the range of the cam width.

Order SACD52 – 35 – SC40 – N12
SACD52 – 35 – WC120

Refer to page 551 for detailed specifications of tapped holes and dowel pin holes (prepared hole,finished hole) for retainer.

When the slider interferes with the die due to the protrusion length, you will need to machine the die for clearance.

■Space for removing



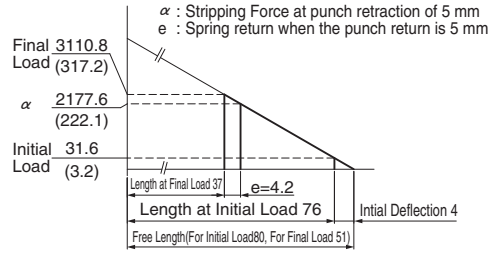
■Table of Components

No.	Description	Qty	Material and Remark
①	Cam Holder	1	FCD550
②	Cam Slider	1	FCD550 with Graphite
③	Cam Driver	1	SF700
④	Slide Keeper	2	S45C with Graphite
⑤	Positive Return Follower	1	Bronze(SP2)
⑥	Stopper Plate	1	SS400(1020)
⑦	Spring Guide Pin	1	S45C(1045)
⑧	Stopper	1	Urethane
⑨	Spring Washer	2	M10
⑩	Coil Spring	1	TF20-80
⑪	Coil Spring	1	TJH32-51
⑫	Hexagon Socket Head Bolt	5	SCM435 M8×16
⑬	Hexagon Socket Head Bolt	2	SCM435 M10×20
⑭	Spring Guide Bush	1	Bronze(SP2)

■Spring Diagram

(Stripping Force at punch retraction of 5 mm)

- Spring Used
  - For Initial Load: TF20-80(1 piece) 7.89N/mm(0.80kgf/mm)
  - For Final Load: TJH32-51(1 piece) 222.2N/mm(22.66kgf/mm)

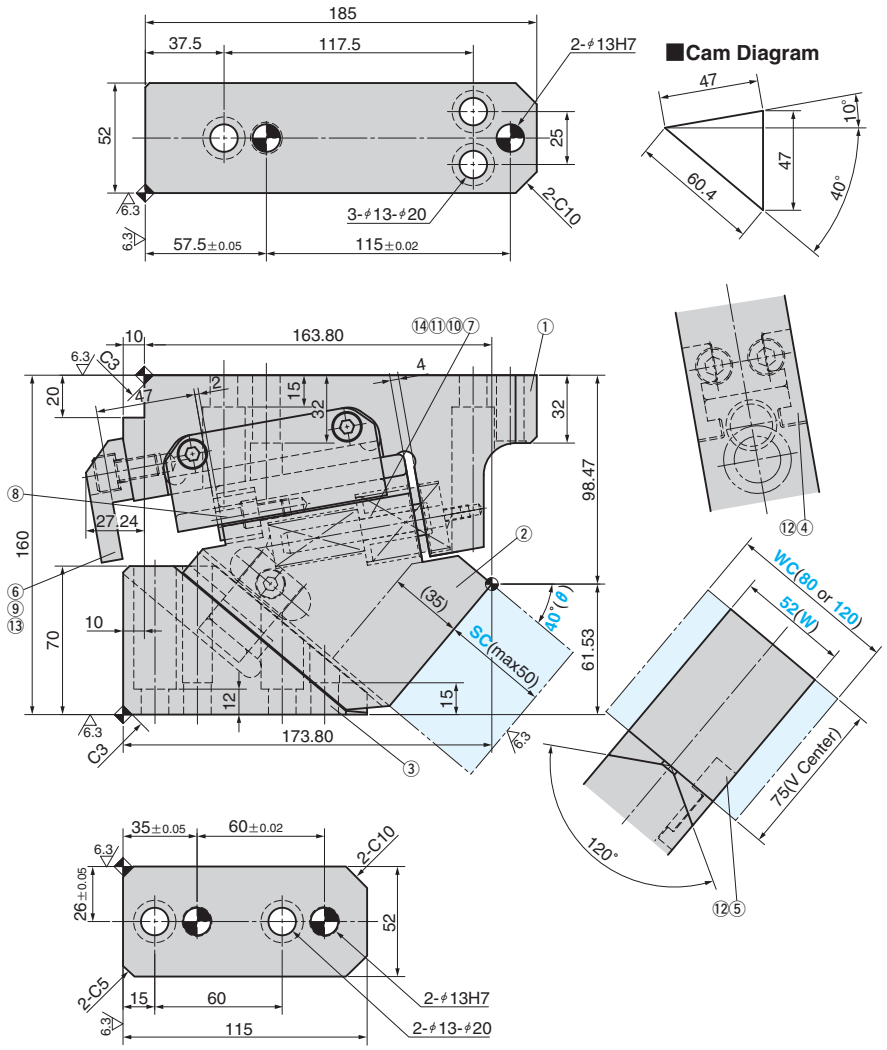


Aerial Cam Unit

WORKING FORCE 3-TON TYPE

CAD FILE

SACD 52 – 40



Travel S	Working Force kN(tonf)		Spring Force N(kgf)		Total Weight kg	Catalog No.	(W)	(θ)
	Standard Working Force (one million strokes)	Allowable Working Force (300,000 strokes)	Initial Load	Final Load				
60.4	29.4 (3.0)	58.8 (6.0)	31.6 (3.2)	3110.8 (317.2)	8.9	SACD	52	40

Order

Catalog No.	(W)	–	(θ)
SACD	52	–	40

Option

Option Code	Specification
SC	The mount surface is extended in the range from 1 to 50 mm (in the increments of 1 mm).
WC	The mount width is changed to 80 (WC80) or 120 (WC120).
N12	Dowel Pin holes of cam holder and cam driver are changed to φ12

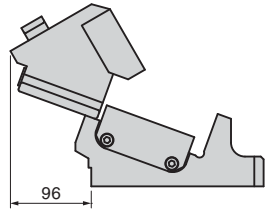
Determine the pierce center position in the range of the cam width.

Order SACD52 – 40 – SC40 – N12
SACD52 – 40 – WC120

Refer to page 551 for detailed specifications of tapped holes and dowel pin holes (prepared hole,finished hole) for retainer.

When the slider interferes with the die due to the protrusion length, you will need to machine the die for clearance.

■Space for removing



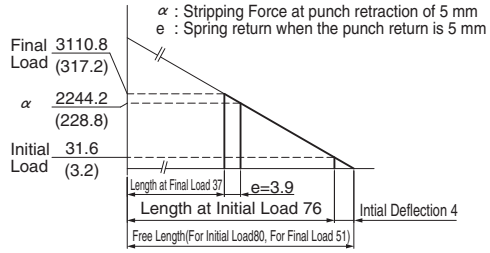
■Table of Components

No.	Description	Qty	Material and Remark
①	Cam Holder	1	FCD550
②	Cam Slider	1	FCD550 with Graphite
③	Cam Driver	1	SF700
④	Slide Keeper	2	S45C with Graphite
⑤	Positive Return Follower	1	Bronze(SP2)
⑥	Stopper Plate	1	SS400(1020)
⑦	Spring Guide Pin	1	S45C(1045)
⑧	Stopper	1	Urethane
⑨	Spring Washer	2	M10
⑩	Coil Spring	1	TF20-80
⑪	Coil Spring	1	TJH32-51
⑫	Hexagon Socket Head Bolt	5	SCM435 M8×16
⑬	Hexagon Socket Head Bolt	2	SCM435 M10×20
⑭	Spring Guide Bush	1	Bronze(SP2)

■Spring Diagram

(Stripping Force at punch retraction of 5 mm)

- Spring Used
  - For Initial Load: TF20-80(1 piece) 7.89N/mm(0.80kgf/mm)
  - For Final Load: TJH32-51(1 piece) 222.2N/mm(22.66kgf/mm)

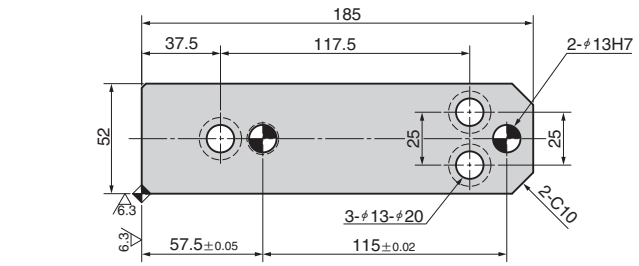


Aerial Cam Unit

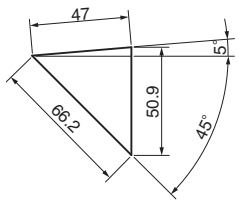
WORKING FORCE 3-TON TYPE

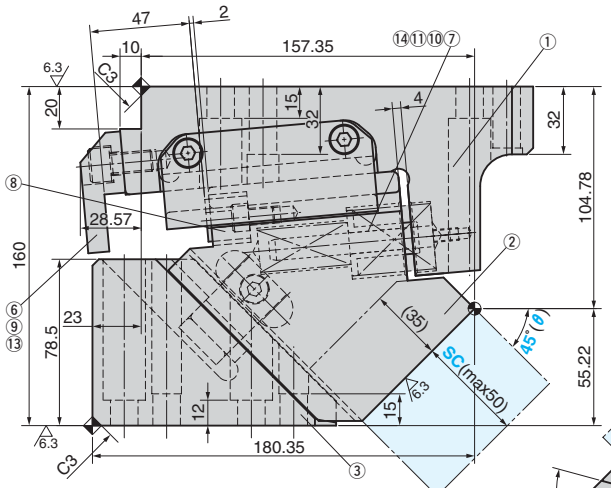
CAD FILE

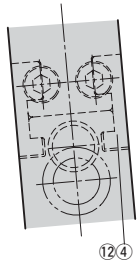
SACD 52 – 45

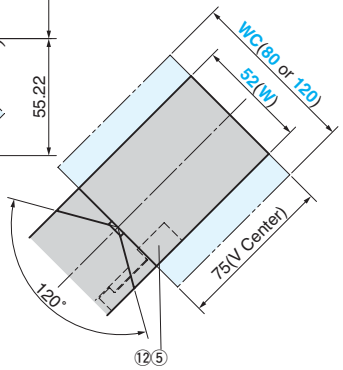


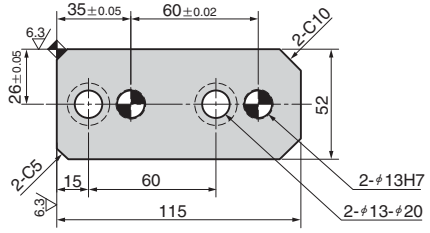
■Cam Diagram











Travel S	Working Force kN(tonf)		Spring Force N(kgf)		Total Weight kg	Catalog No.	(W)	(θ)
	Standard Working Force (one million strokes)	Allowable Working Force (300,000 strokes)	Initial Load	Final Load				
66.2	29.4 (3.0)	58.8 (6.0)	31.6 (3.2)	3110.8 (317.2)	9.1	SACD	52	45

Order

Catalog No.	(W)	–	(θ)
SACD	52	–	45

Option

Option Code	Specification
SC	The mount surface is extended in the range from 1 to 50 mm (in the increments of 1 mm).
WC	The mount width is changed to 80 (WC80) or 120 (WC120).
N12	Dowel Pin holes of cam holder and cam driver are changed to φ12

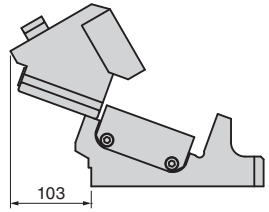
Determine the pierce center position in the range of the cam width.

Order SACD52 – 45 – SC40 – N12
SACD52 – 45 – WC120

Refer to page 551 for detailed specifications of tapped holes and dowel pin holes (prepared hole,finished hole) for retainer.

When the slider interferes with the die due to the protrusion length, you will need to machine the die for clearance.

■Space for removing



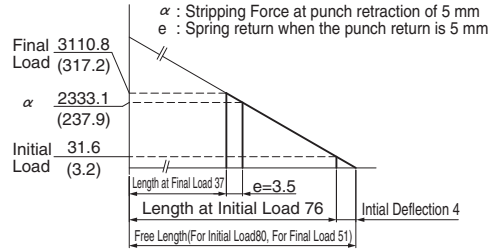
■Table of Components

No.	Description	Qty	Material and Remark
①	Cam Holder	1	FCD550
②	Cam Slider	1	FCD550 with Graphite
③	Cam Driver	1	SF700
④	Slide Keeper	2	S45C with Graphite
⑤	Positive Return Follower	1	Bronze(SP2)
⑥	Stopper Plate	1	SS400(1020)
⑦	Spring Guide Pin	1	S45C(1045)
⑧	Stopper	1	Urethane
⑨	Spring Washer	2	M10
⑩	Coil Spring	1	TF20-80
⑪	Coil Spring	1	TJH32-51
⑫	Hexagon Socket Head Bolt	5	SCM435 M8×16
⑬	Hexagon Socket Head Bolt	2	SCM435 M10×20
⑭	Spring Guide Bush	1	Bronze(SP2)

■Spring Diagram

(Stripping Force at punch retraction of 5 mm)

- Spring Used
  - For Initial Load: TF20-80(1 piece) 7.89N/mm(0.80kgf/mm)
  - For Final Load: TJH32-51(1 piece) 222.2N/mm(22.66kgf/mm)

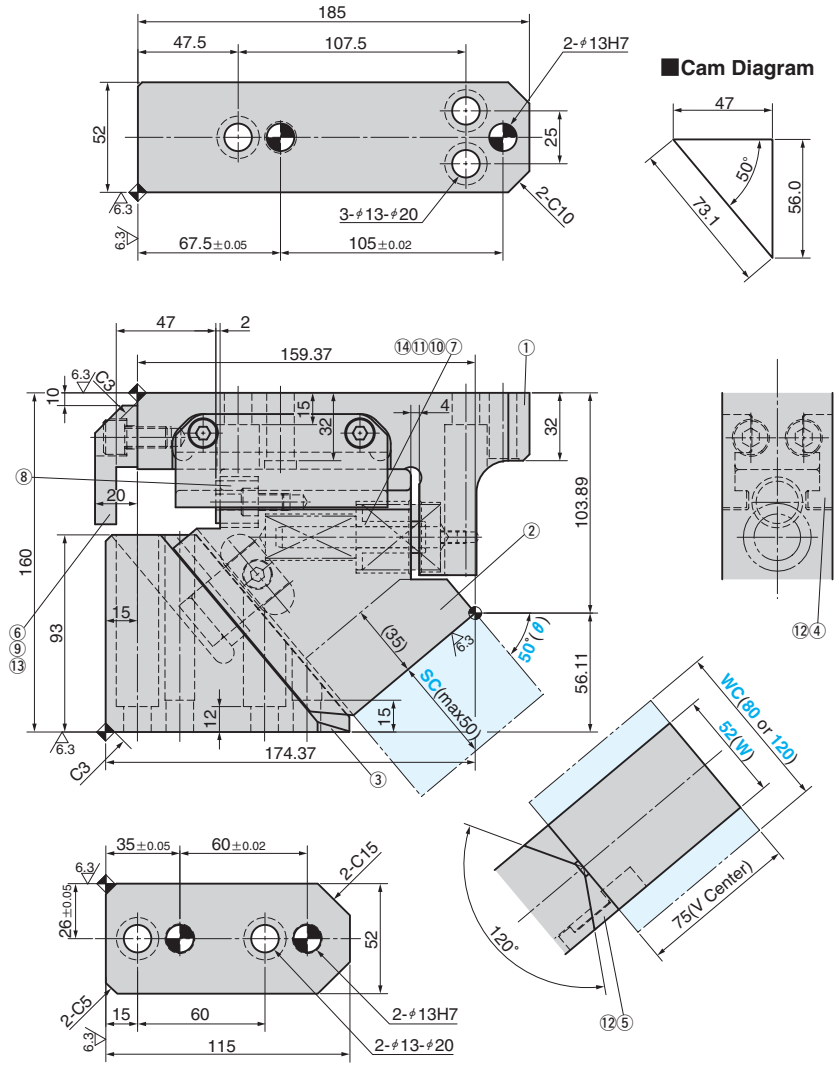


Aerial Cam Unit

WORKING FORCE 3-TON TYPE

CAD FILE

SACD 52 – 50



■Cam Diagram

Travel S	Working Force kN(tonf)		Spring Force N(kgf)		Total Weight kg	Catalog No.	(W)	(θ)
	Standard Working Force (one million strokes)	Allowable Working Force (300,000 strokes)	Initial Load	Final Load				
73.1	29.4 (3.0)	58.8 (6.0)	31.6 (3.2)	3110.8 (317.2)	8.8	SACD	52	50

Order

Catalog No.	(W)	–	(θ)
SACD	52	–	50

Option

Option Code	Specification
SC	The mount surface is extended in the range from 1 to 50 mm (in the increments of 1 mm).
WC	The mount width is changed to 80 (WC80) or 120 (WC120).
N12	Dowel Pin holes of cam holder and cam driver are changed to ϕ12

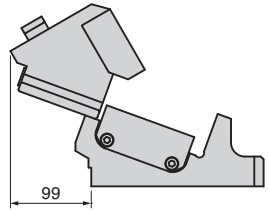
Determine the pierce center position in the range of the cam width.

Order SACD52 – 50 – SC40 – N12
SACD52 – 50 – WC120

Refer to page 551 for detailed specifications of tapped holes and dowel pin holes (prepared hole,finished hole) for retainer.

When the slider interferes with the die due to the protrusion length, you will need to machine the die for clearance.

■Space for removing



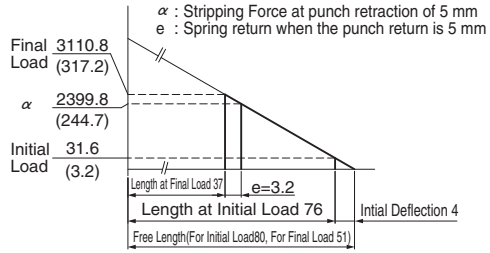
■Table of Components

No.	Description	Qty	Material and Remark
①	Cam Holder	1	FCD550
②	Cam Slider	1	FCD550 with Graphite
③	Cam Driver	1	SF700
④	Slide Keeper	2	S45C with Graphite
⑤	Positive Return Follower	1	Bronze(SP2)
⑥	Stopper Plate	1	SS400(1020)
⑦	Spring Guide Pin	1	S45C(1045)
⑧	Stopper	1	Urethane
⑨	Spring Washer	2	M10
⑩	Coil Spring	1	TF20-80
⑪	Coil Spring	1	TJH32-51
⑫	Hexagon Socket Head Bolt	5	SCM435 M8×16
⑬	Hexagon Socket Head Bolt	2	SCM435 M10×20
⑭	Spring Guide Bush	1	Bronze(SP2)

■Spring Diagram

(Stripping Force at punch retraction of 5 mm)

- Spring Used
  - For Initial Load: TF20-80(1 piece) 7.89N/mm(0.80kgf/mm)
  - For Final Load: TJH32-51(1 piece) 222.2N/mm(22.66kgf/mm)

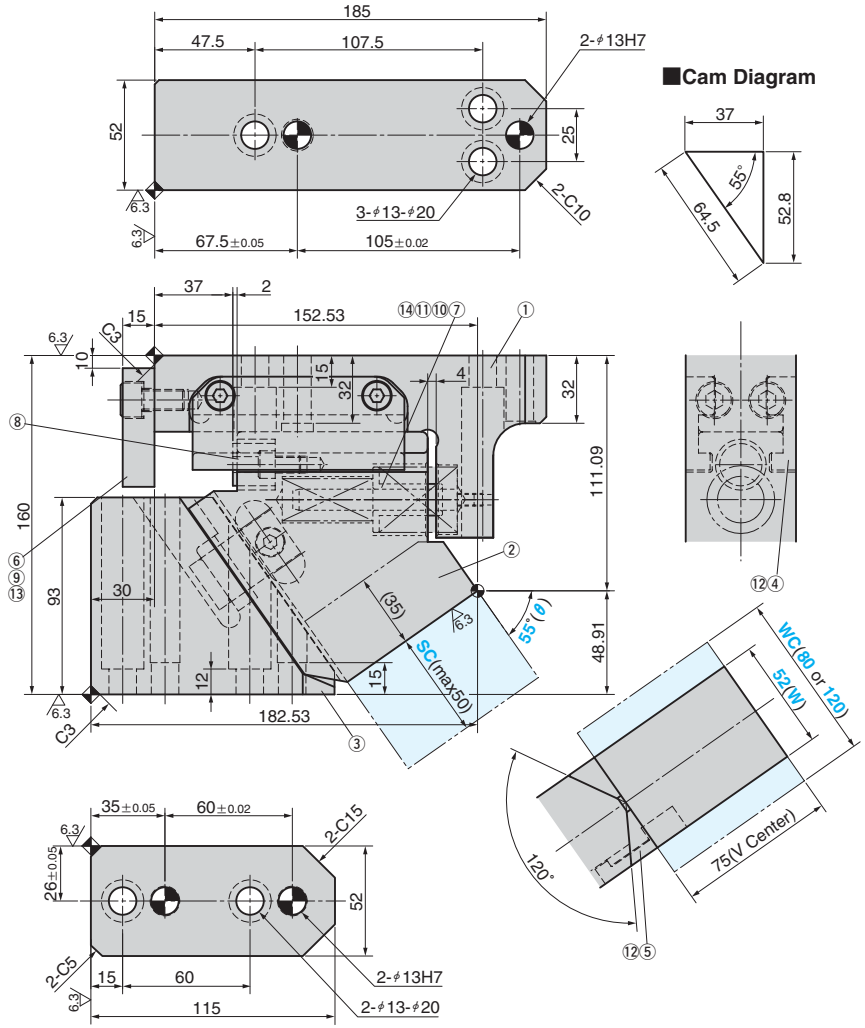


Aerial Cam Unit

WORKING FORCE 3-TON TYPE

CAD FILE

SACD 52 – 55



Travel S	Working Force kN(tonf)		Spring Force N(kgf)		Total Weight kg	Catalog No.	(W)	(θ)
	Standard Working Force (one million strokes)	Allowable Working Force (300,000 strokes)	Initial Load	Final Load				
64.5	29.4 (3.0)	58.8 (6.0)	36.1 (3.7)	3110.8 (317.2)	8.9	SACD	52	55

Order

Catalog No.	(W)	–	(θ)
SACD	52	–	55

Option

Option Code	Specification
SC	The mount surface is extended in the range from 1 to 50 mm (in the increments of 1 mm).
WC	The mount width is changed to 80 (WC80) or 120 (WC120).
N12	Dowel Pin holes of cam holder and cam driver are changed to φ12

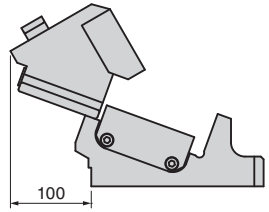
Determine the pierce center position in the range of the cam width.

Order SACD52 – 55 – SC40 – N12
SACD52 – 55 – WC120

Refer to page 551 for detailed specifications of tapped holes and dowel pin holes (prepared hole,finished hole) for retainer.

When the slider interferes with the die due to the protrusion length, you will need to machine the die for clearance.

■Space for removing



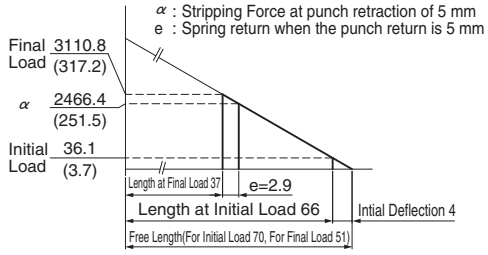
■Table of Components

No.	Description	Qty	Material and Remark
①	Cam Holder	1	FCD550
②	Cam Slider	1	FCD550 with Graphite
③	Cam Driver	1	SF700
④	Slide Keeper	2	S45C with Graphite
⑤	Positive Return Follower	1	Bronze(SP2)
⑥	Stopper Plate	1	SS400(1020)
⑦	Spring Guide Pin	1	S45C(1045)
⑧	Stopper	1	Urethane
⑨	Spring Washer	2	M10
⑩	Coil Spring	1	TF20-70
⑪	Coil Spring	1	TJH32-51
⑫	Hexagon Socket Head Bolt	5	SCM435 M8×16
⑬	Hexagon Socket Head Bolt	2	SCM435 M10×20
⑭	Spring Guide Bush	1	Bronze(SP2)

■Spring Diagram

(Stripping Force at punch retraction of 5 mm)

- Spring Used
  - For Initial Load: TF20-70(1 piece) 9.02N/mm(0.92kgf/mm)
  - For Final Load: TJH32-51(1 piece) 222.2N/mm(22.66kgf/mm)

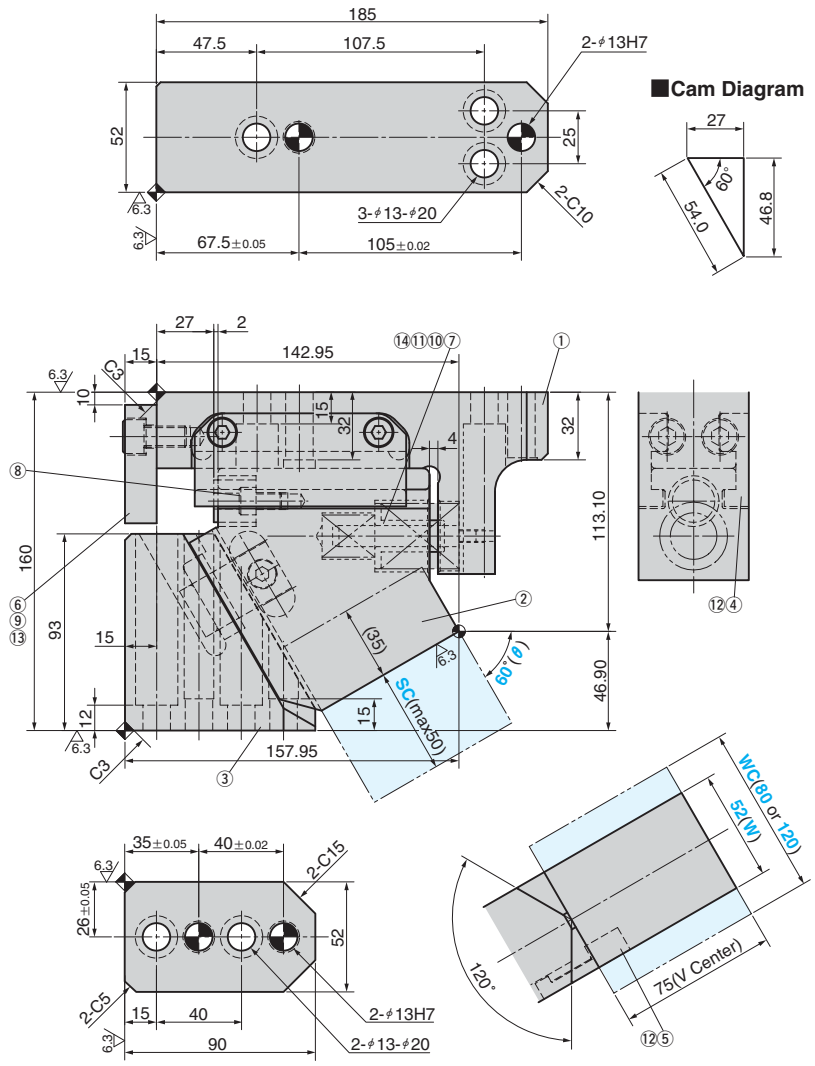


Aerial Cam Unit

WORKING FORCE 3-TON TYPE

CAD FILE

SACD 52 – 60



■Cam Diagram

Travel S	Working Force kN(tonf)		Spring Force N(kgf)		Total Weight kg	Catalog No.	(W)	(θ)
	Standard Working Force (one million strokes)	Allowable Working Force (300,000 strokes)	Initial Load	Final Load				
54.0	29.4 (3.0)	58.8 (6.0)	98.1 (10.0)	3110.8 (317.2)	8.5	SACD	52	60

Order

Catalog No.	(W)	–	(θ)
SACD	52	–	60

Option

Option Code	Specification
SC	The mount surface is extended in the range from 1 to 50 mm (in the increments of 1 mm).
WC	The mount width is changed to 80 (WC80) or 120 (WC120).
N12	Dowel Pin holes of cam holder and cam driver are changed to φ12

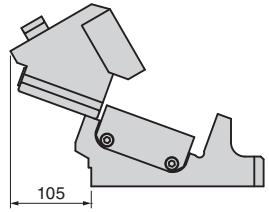
Determine the pierce center position in the range of the cam width.

Order SACD52 – 60 – SC40 – N12
SACD52 – 60 – WC120

Refer to page 551 for detailed specifications of tapped holes and dowel pin holes (prepared hole,finished hole) for retainer.

When the slider interferes with the die due to the protrusion length, you will need to machine the die for clearance.

■Space for removing



■Table of Components

No.	Description	Qty	Material and Remark
①	Cam Holder	1	FCD550
②	Cam Slider	1	FCD550 with Graphite
③	Cam Driver	1	SF700
④	Slide Keeper	2	S45C with Graphite
⑤	Positive Return Follower	1	Bronze(SP2)
⑥	Stopper Plate	1	SS400(1020)
⑦	Spring Guide Pin	1	S45C(1045)
⑧	Stopper	1	Urethane
⑨	Spring Washer	2	M10
⑩	Coil Spring	1	TF20-45
⑪	Coil Spring	1	TJH32-51
⑫	Hexagon Socket Head Bolt	5	SCM435 M8×16
⑬	Hexagon Socket Head Bolt	2	SCM435 M10×20
⑭	Spring Guide Bush	1	Bronze(SP2)

■Spring Diagram

(Stripping Force at punch retraction of 5 mm)

- Spring Used For Initial Load TF20-45(1 piece) 14.02N/mm(1.43kgf/mm)
  For Final Load TJH32-51(1 piece) 222.2N/mm(22.66kgf/mm)