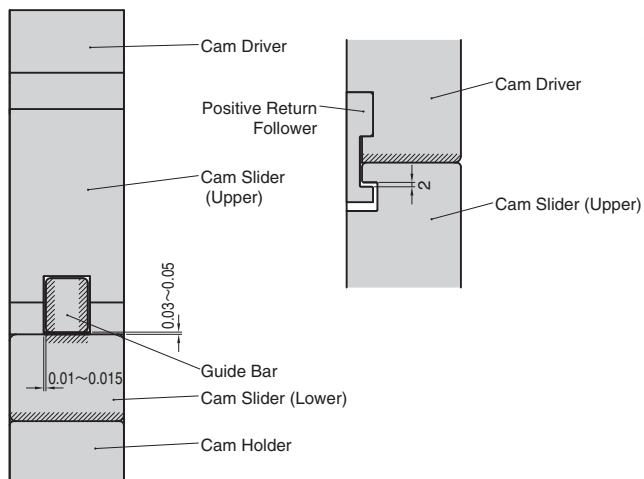


- Mount width are 52 and 90.
- Structure to ease removal of spring
- Available angle is 0° to 20°(52 in width) , 0° to 15°(90 in width) and the travel is 55mm.

Slide Structure and Positive Return Structure



- Sliding system by Guide Bar, Clearance between Cam Slider and Guide Bar is 0.01~0.015 on one side.

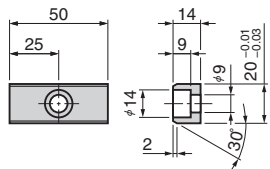
*Oilless System at Hatched Area

Option of CMSD

Key Specification(-K)

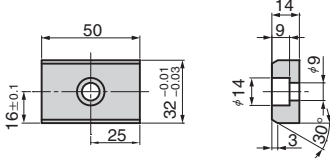
CMSD52

LKU20-50(with 2-M8×15 bolts)

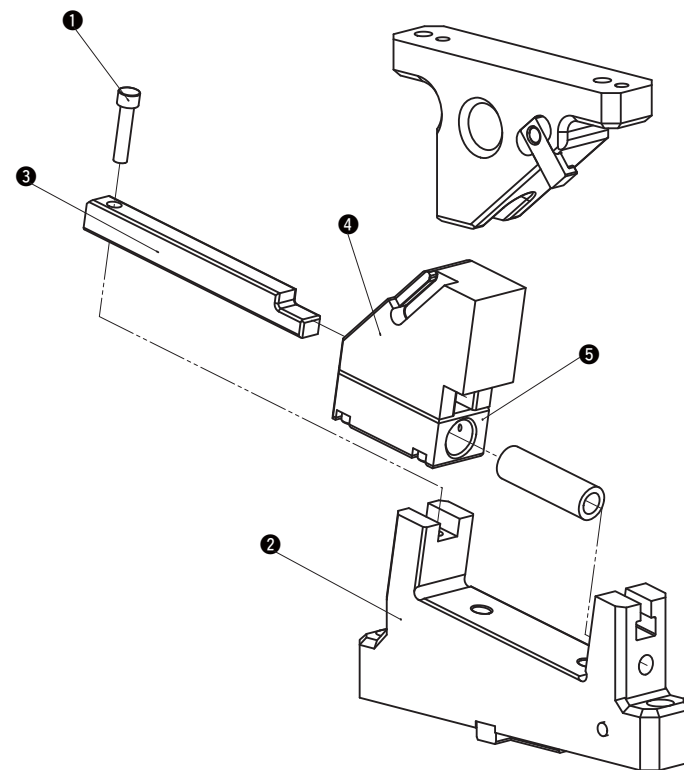


CMSD90

LKU32-50(with 2-M8×15 bolts)



CMSD Structure and Assembly / Disassembly



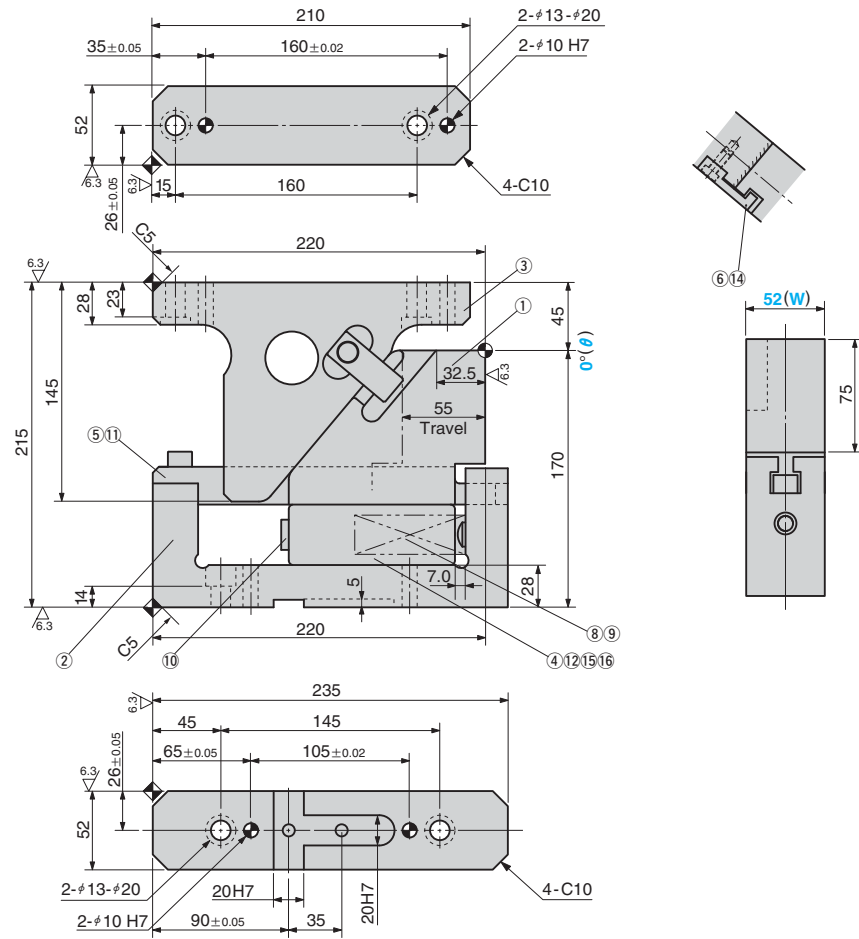
Disassembly method of CMSD

- 1) Remove hexagon socket head bolt (1) and pull guide bar (3) from cam holder (2) 30 mm to the rear. Remove the guide bar and cam slide(3 4 5).
- 2) Pull and remove the guide bar from the cam slider.

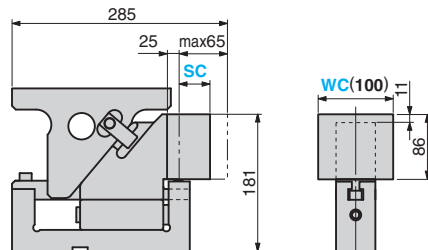
Assembly method of CMSD

- 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 guide bar/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

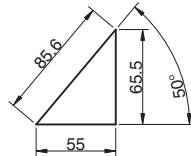
CMSD52 - 00 - 55



SC and WC Option



Cam Diagram



Working Force kN(tonf)		Spring Force N(kgf)		Total Weight kg	Catalog No.	(W)	(θ)	Travel S
Standard (one million strokes)	Allowable (300,000 strokes)	Initial Load	Final Load					
19.6 (2.0)	39.2 (4.0)	85.3 (8.7)	606.7 (62.1)	14.2	CMSD	52	00	55



Order

Catalog No.	(W)	-	(θ)	-	S
CMSD	52	-	00	-	55

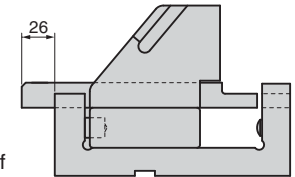


Option

Option Code	Specification
K	Dedicated key is attached. (It is not assembled to the main unit.)
SC	The mount surface is extended forward in the range of 5 to 65 mm (at increments of 5 mm).
WC	The mount width is changed to 100.

For detailed specification of the key, refer to page 1555.

Space for removing



Order

CMSD52 - 00 - 55 - SC5 - WC
CMSD52 - 00 - 55 - SC25

Refer to page 552 for detailed specifications of tapped holes and dowel pin holes (prepared hole, finish hole) for retainer.

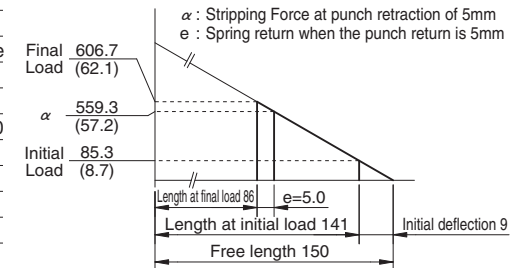
Table of Components

No.	Description	Qty	Material and Remark
1	Cam Slider	1	FC250
2	Cam Holder	1	FC250
3	Cam Driver	1	FC250 with Graphite
4	Cam Lower Slider	1	FC250 with Graphite
5	Guide Bar	1	SCM440 with Graphite
6	Cam Positive Return	1	S45C(1045)
8	Spring Guide Pin	1	S45C(1045)
9	Coil Spring	1	SWOSC-V SWS26-150
12	Stopper	1	Urethane PCU20
13	Hexagon Socket Head Bolt	1	SCM435 M10×50
14	Hexagon Socket Head Bolt	4	SCM435 M8×50
16	Hexagon Socket Brazier Head Bolt	1	SCM435 LCS8×18
18	Dowel Pin with Female Thread	2	SUJ2 #8×40
19	Spring Plug	2	SAE1065 NH8

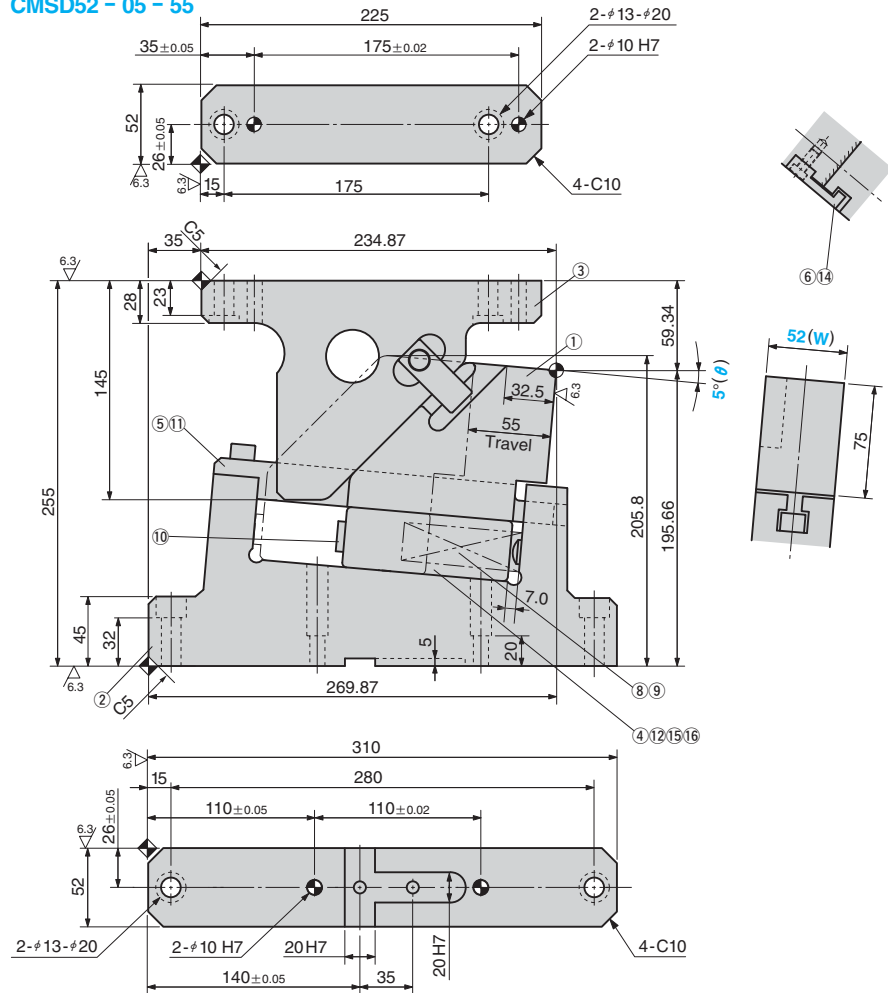
Spring Diagram

(Stripping Force at punch retraction of 5mm)

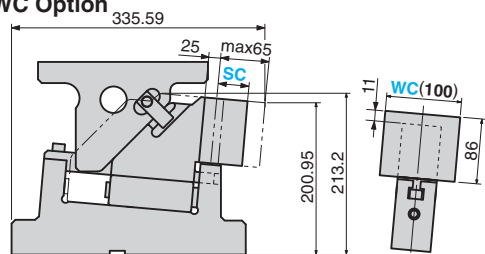
- Spring used SWS26-150 (1 piece)
- Spring constant 9.48N/mm(0.97kgf/mm)



CMSD52 - 05 - 55



■ SC and WC Option



■ Cam Diagram

Working Force kN(tonf)		Spring Force N(kgf)		Total Weight kg	Catalog No.	(W)	(θ)	Travel S
Standard (one million strokes)	Allowable (300,000 strokes)	Initial Load	Final Load					
19.6 (2.0)	39.2 (4.0)	85.3 (8.7)	606.7 (62.1)	18.5	CMSD	52	05	55



Order

Catalog No.	(W)	-	(θ)	-	S
CMSD	52	-	05	-	55

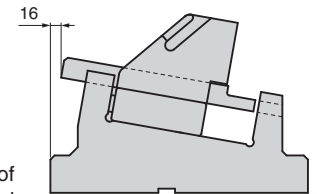


Option

Option Code	Specification
K	Dedicated key is attached. (It is not assembled to the main unit.)
SC	The mount surface is extended forward in the range of 5 to 65 mm (at increments of 5 mm).
WC	The mount width is changed to 100.

For detailed specification of the key, refer to page 1555.

■ Space for removing



Order

CMSD52 - 05 - 55 - SC5 - WC
CMSD52 - 05 - 55 - SC25

Refer to page 552 for detailed specifications of tapped holes and dowel pin holes (prepared hole, finish hole) for retainer.

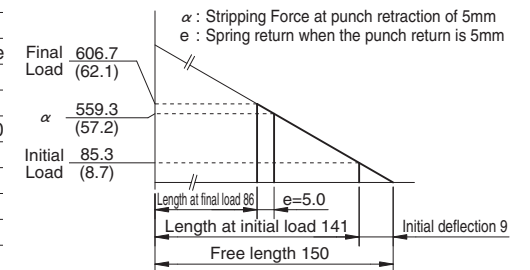
■ Table of Components

No.	Description	Qty	Material and Remark
①	Cam Slider	1	FC250
②	Cam Holder	1	FC250
③	Cam Driver	1	FC250 with Graphite
④	Cam Lower Slider	1	FC250 with Graphite
⑤	Guide Bar	1	SCM440 with Graphite
⑥	Cam Positive Return	1	S45C(1045)
⑧	Spring Guide Pin	1	S45C(1045)
⑨	Coil Spring	1	SWOSC-V SWS26-150
⑫	Stopper	1	Urethane PCU20
⑬	Hexagon Socket Head Bolt	1	SCM435 M10×50
⑭	Hexagon Socket Head Bolt	4	SCM435 M8×50
⑯	Hexagon Socket Brazier Head Bolt	1	SCM435 LCS8×18
⑱	Dowel Pin with Female Thread	2	SUJ2 #8×40
⑲	Spring Plug	2	SAE1065 NH8

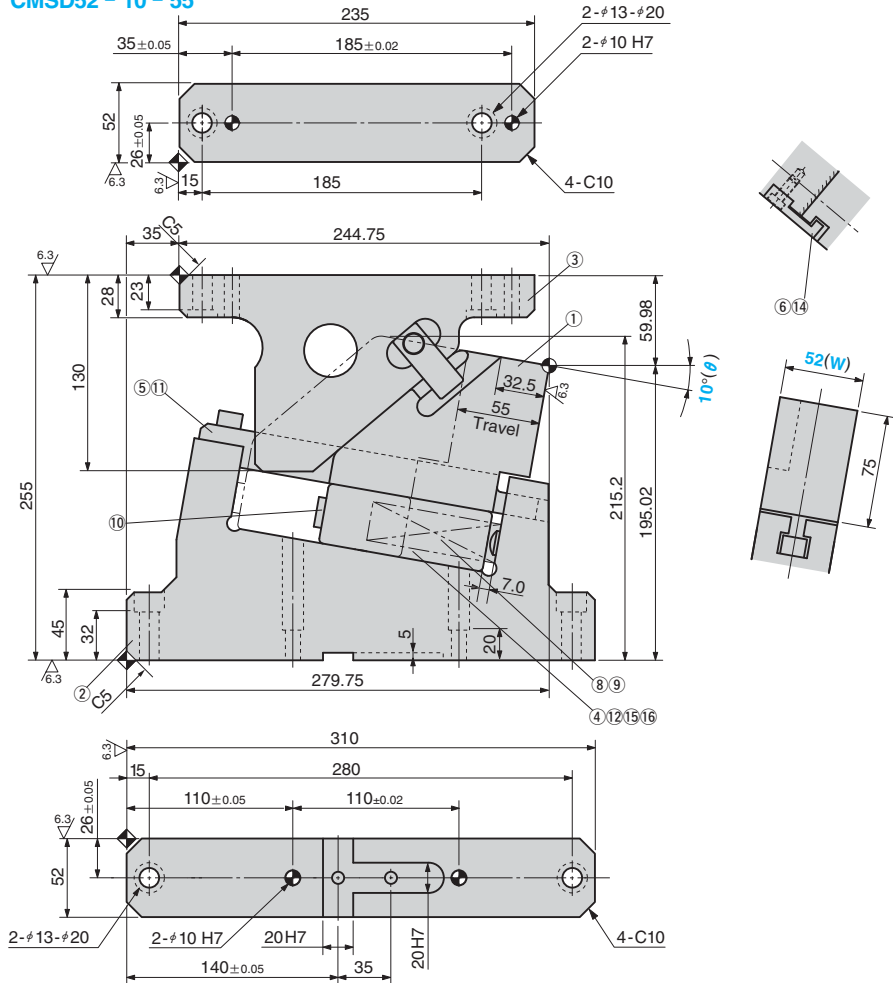
■ Spring Diagram

(Stripping Force at punch retraction of 5mm)

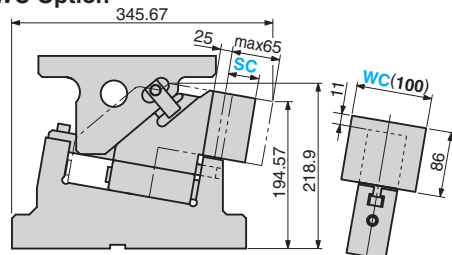
- Spring used SWS26-150 (1 piece)
- Spring constant 9.48N/mm(0.97kgf/mm)



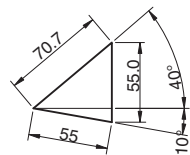
CMSD52 - 10 - 55



SC and WC Option



Cam Diagram



Working Force kN(tonf)		Spring Force N(kgf)		Total Weight kg	Catalog No.	(W)	(θ)	Travel S
Standard Working Force (one million strokes)	Allowable Working Force (300,000 strokes)	Initial Load	Final Load					
19.6 (2.0)	39.2 (4.0)	85.3 (8.7)	606.7 (62.1)	19.4	CMSD	52	10	55



Order

Catalog No.	(W)	—	(θ)	—	S
CMSD	52	—	10	—	55

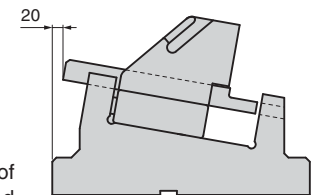


Option

Option Code	Specification
K	Dedicated key is attached. (It is not assembled to the main unit.)
SC	The mount surface is extended forward in the range of 5 to 65 mm (at increments of 5 mm).
WC	The mount width is changed to 100.

For detailed specification of the key, refer to page 1555.

Space for removing



Order

CMSD52 - 10 - 55 - SC5 - WC
CMSD52 - 10 - 55 - SC25



Refer to page 552 for detailed specifications of tapped holes and dowel pin holes (prepared hole, finish hole) for retainer.

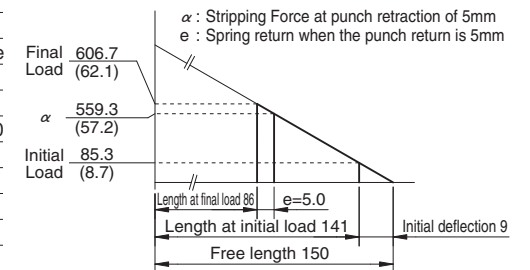
Table of Components

No.	Description	Qty	Material and Remark
①	Cam Slider	1	FC250
②	Cam Holder	1	FC250
③	Cam Driver	1	FC250 with Graphite
④	Cam Lower Slider	1	FC250 with Graphite
⑤	Guide Bar	1	SCM440 with Graphite
⑥	Cam Positive Return	1	S45C(1045)
⑧	Spring Guide Pin	1	S45C(1045)
⑨	Coil Spring	1	SWOSC-V SWS26-150
⑫	Stopper	1	Urethane PCU20
⑬	Hexagon Socket Head Bolt	1	SCM435 M10×50
⑭	Hexagon Socket Head Bolt	4	SCM435 M8×50
⑯	Hexagon Socket Brazier Head Bolt	1	SCM435 LCS8×18
⑱	Dowel Pin with Female Thread	2	SUJ2 φ8×40
⑲	Spring Plug	2	SAE1065 NH8

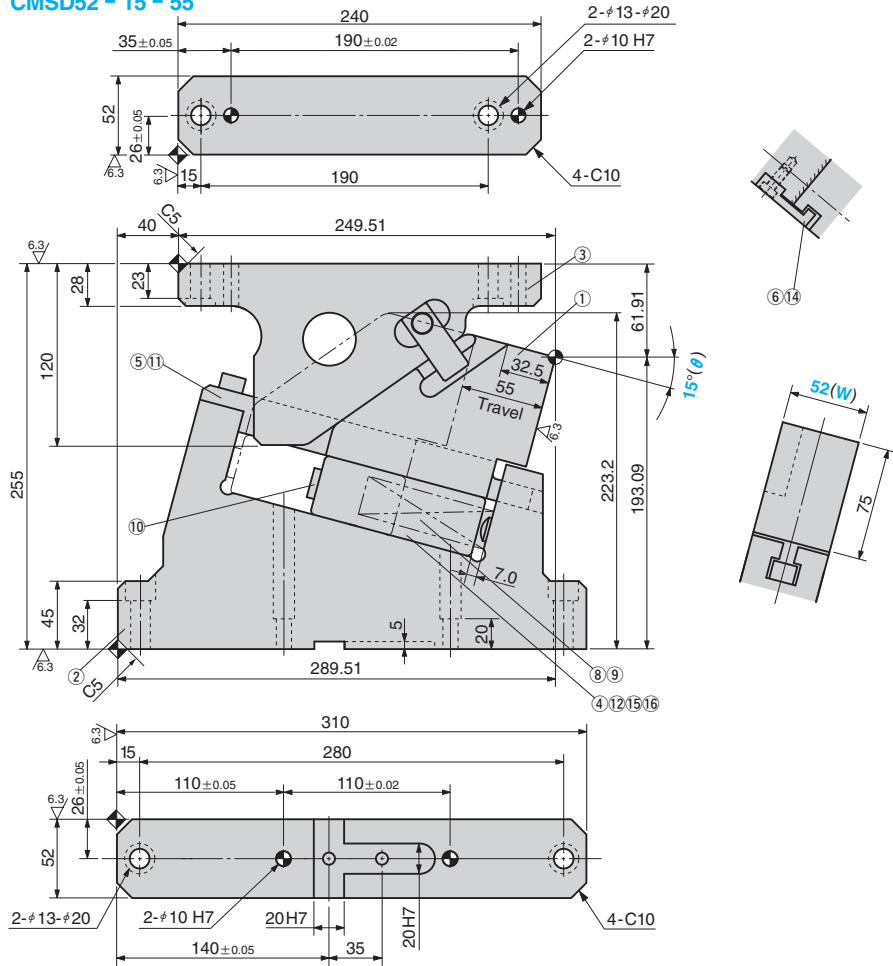
Spring Diagram

(Stripping Force at punch retraction of 5mm)

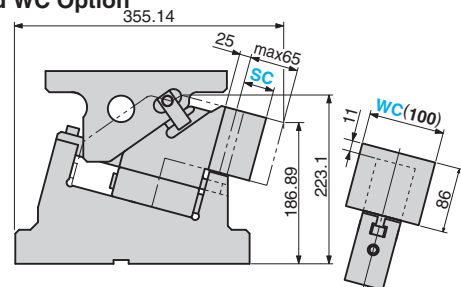
- Spring used SWS26-150 (1 piece)
- Spring constant 9.48N/mm(0.97kgf/mm)



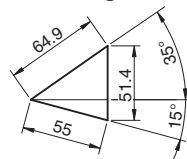
CMSD52 - 15 - 55



SC and WC Option



Cam Diagram



Working Force kN(tonf)		Spring Force N(kgf)		Total Weight kg	Catalog No.	(W)	(θ)	Travel S
Standard (one million strokes)	Allowable (300,000 strokes)	Initial Load	Final Load					
19.6 (2.0)	39.2 (4.0)	85.3 (8.7)	606.7 (62.1)	20.0	CMSD	52	15	55



Order

Catalog No.	(W)	(θ)	S
CMSD	52	15	55

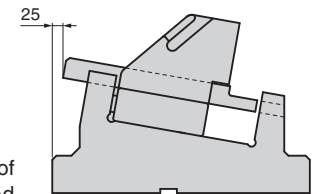


Option

Option Code	Specification
K	Dedicated key is attached. (It is not assembled to the main unit.)
SC	The mount surface is extended forward in the range of 5 to 65 mm (at increments of 5 mm).
WC	The mount width is changed to 100.

For detailed specification of the key, refer to page 1555.

Space for removing



Order

CMSD52 - 15 - 55 - SC5 - WC
CMSD52 - 15 - 55 - SC25

Refer to page 552 for detailed specifications of tapped holes and dowel pin holes (prepared hole, finish hole) for retainer.

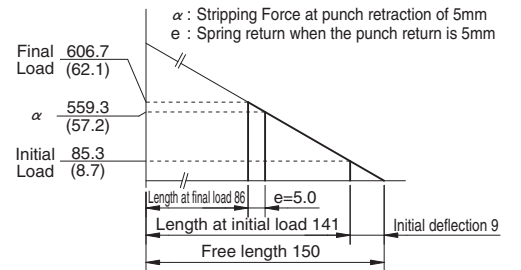
Table of Components

No.	Description	Qty	Material and Remark
①	Cam Slider	1	FC250
②	Cam Holder	1	FC250
③	Cam Driver	1	FC250 with Graphite
④	Cam Lower Slider	1	FC250 with Graphite
⑤	Guide Bar	1	SCM440 with Graphite
⑥	Cam Positive Return	1	S45C(1045)
⑧	Spring Guide Pin	1	S45C(1045)
⑨	Coil Spring	1	SWOSC-V SWS26-150
⑫	Stopper	1	Urethane PCU20
⑬	Hexagon Socket Head Bolt	1	SCM435 M10×50
⑭	Hexagon Socket Head Bolt	4	SCM435 M8×50
⑯	Hexagon Socket Brazier Head Bolt	1	SCM435 LCS8×18
⑱	Dowel Pin with Female Thread	2	SUJ2 #8×40
⑲	Spring Plug	2	SAE1065 NH8

Spring Diagram

(Stripping Force at punch retraction of 5mm)

- Spring used SWS26-150 (1 piece)
- Spring constant 9.48N/mm(0.97kgf/mm)

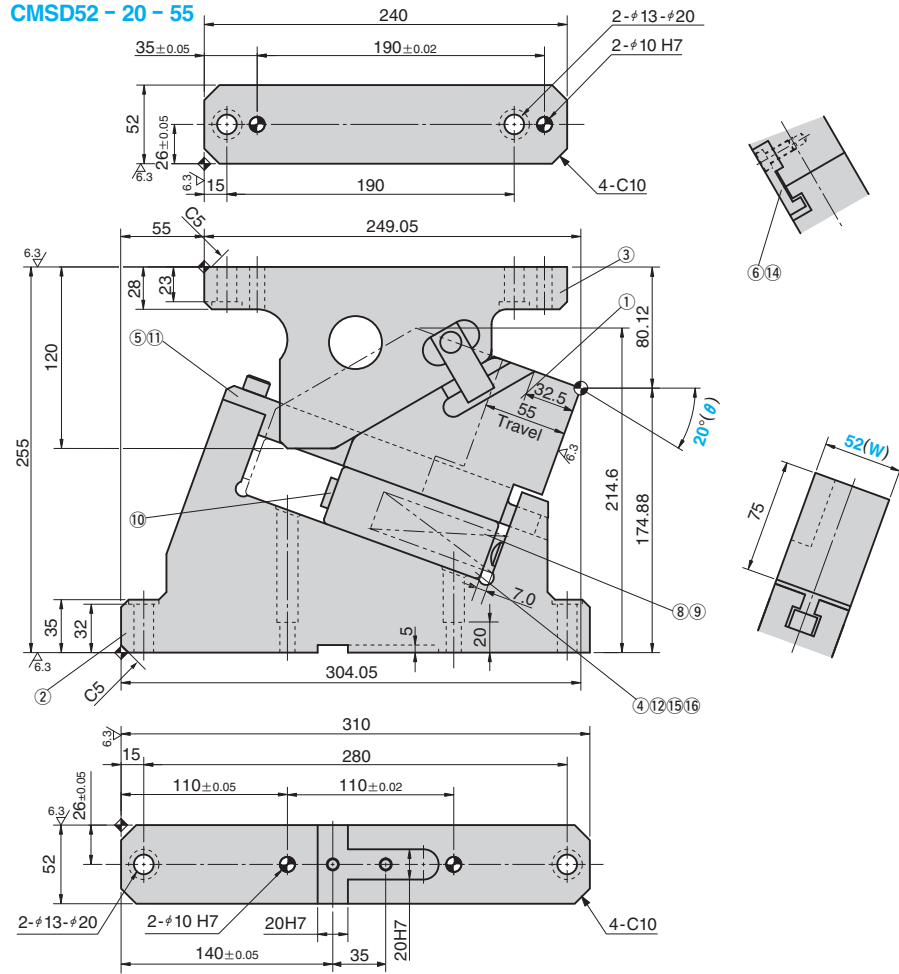


Die Mounted Cam Unit

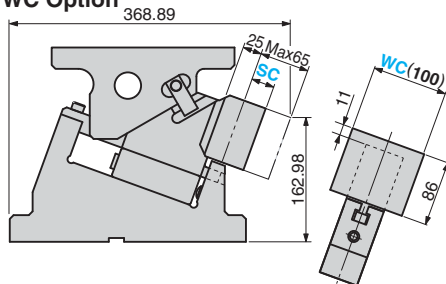
FOR PIERCE

CAD FILE

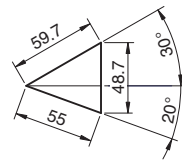
CMSD52 - 20 - 55



■ SC and WC Option



■ Cam Diagram



Working Force kN(tonf)		Spring Force N(kgf)		Total Weight kg	Catalog No.	(W)	(θ)	Travel S
Standard (one million strokes)	Allowable (300,000 strokes)	Initial Load	Final Load					
19.6 (2.0)	39.2 (4.0)	85.3 (8.7)	606.7 (62.1)	19.5	CMSD	52	20	55



Order

Catalog No.	(W)	-	(θ)	-	S
CMSD	52	-	20	-	55



Option

Option Code	Specification
K	Dedicated key is attached. (It is not assembled to the main unit.)
SC	The mount surface is extended forward in the range of 5 to 65 mm (at increments of 5 mm).
WC	The mount width is changed to 100.

For detailed specification of the key, refer to page 1555.

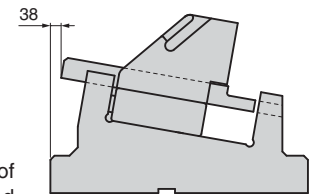


Order

CMSD52 - 20 - 55 - SC5 - WC
CMSD52 - 20 - 55 - SC25

Refer to page 552 for detailed specifications of tapped holes and dowel pin holes (prepared hole, finish hole) for retainer.

■ Space for removing



■ Table of Components

No.	Description	Qty	Material and Remark
①	Cam Slider	1	FC250
②	Cam Holder	1	FC250
③	Cam Driver	1	FC250 with Graphite
④	Cam Lower Slider	1	FC250 with Graphite
⑤	Guide Bar	1	SCM440 with Graphite
⑥	Cam Positive Return	1	S45C(1045)
⑧	Spring Guide Pin	1	S45C(1045)
⑨	Coil Spring	1	SWOSC-V SWS26-150
⑫	Stopper	1	Urethane PCU20
⑬	Hexagon Socket Head Bolt	1	SCM435 M10×50
⑭	Hexagon Socket Head Bolt	4	SCM435 M8×50
⑯	Hexagon Socket Brazier Head Bolt	1	SCM435 LCS8×18
⑱	Dowel Pin with Female Thread	2	SUJ2 #8×40
⑲	Spring Plug	2	SAE1065 NH8

■ Spring Diagram

(Stripping Force at punch retraction of 5mm)

- Spring used SWS26-150 (1 piece)
- Spring constant 9.48N/mm(0.97kgf/mm)

