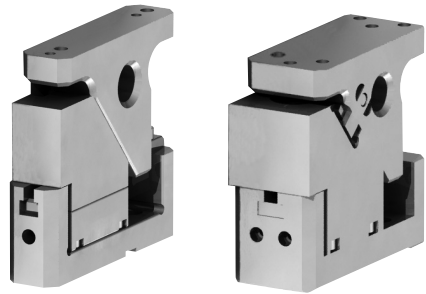


Die Mounted Cam Unit CMSD

FOR PIERCING



- Mounting Widths 52mm and 90mm
- Ease of assembly with exposed cam slider
- Working angles:
 - 0° to 20° for mounting surface width 52mm
 - 0° to 15° for mounting surface width 90mm
- Travel 55mm

■ CMSD Specifications

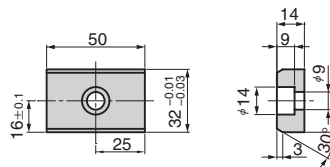
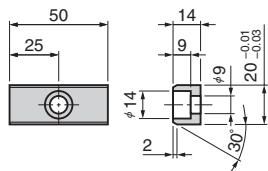
Mounting Surface		Working Angle	Travel	Working Force kN(tonf)		Spring Force N(kgf)
W	H			1,000,000 strokes	300,000 strokes	
52	75	00	55	19.6 (2.0)	39.2 (4.0)	606.7 (62.1)
		05				
		10				
		15				
90	82	00	55	38.2 (3.9)	76.4 (7.8)	1213.4 (124.2)
		05				
		10				
		15				

■ Option

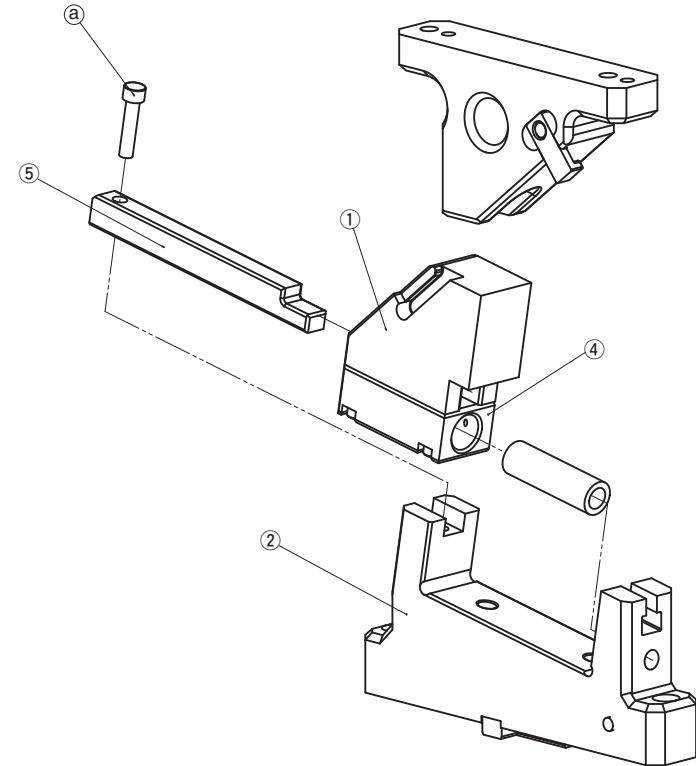
● Key Specification(-K)

CMSD52
LKU20-50(With 2 pcs of M8 x15 bolt)

CMSD90
LKU32-50(With 2 pcs of M8 x15 bolt)



■ CMSD Assembly / Dis-assembly



● Disassembling CMSD

- 1) Remove Hexagon Socket Head Bolt (a), pull out Guide Bar (5) from Cam Holder (2) to the rear for 30mm, and then remove Guide Bar and Cam Slider.
- 2) Pull up Guide Bar to remove from Cam Slider.(5①④).

● Re-assembly

Reassembly is the reverse procedure of disassembly.

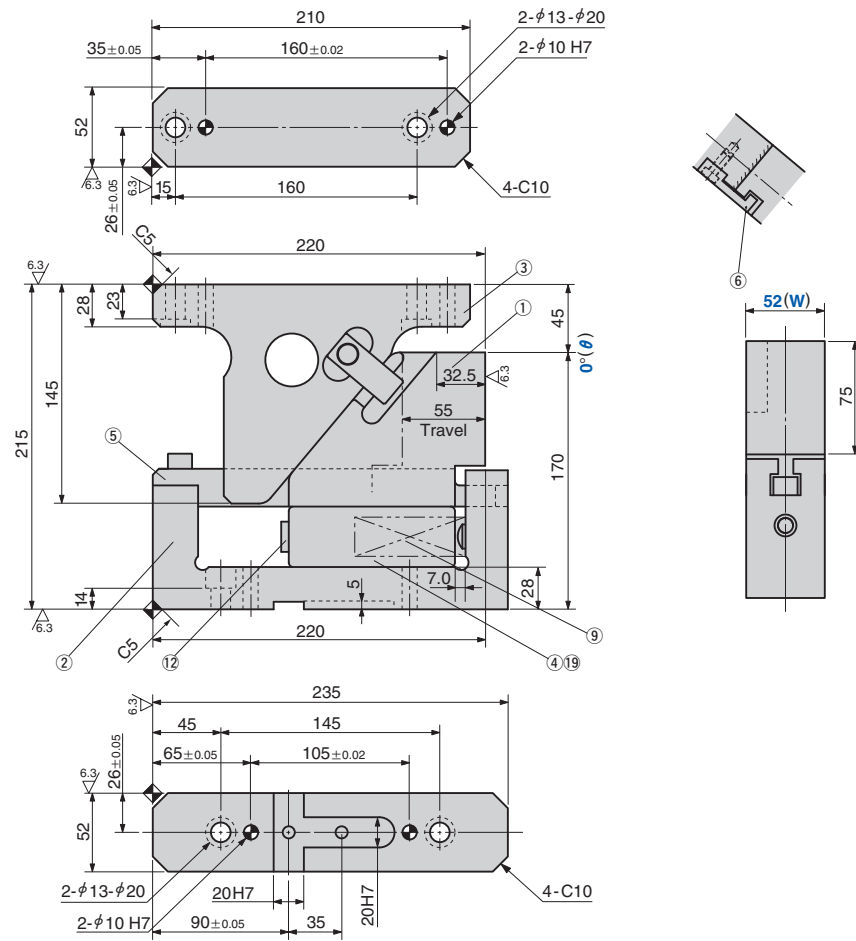
- NOTE
- Ensure that all parts are clean, particularly the sliding components, to which a small amount of grease is applied and is then placed on position.
 - Take care the respective tolerances are observed when assembling the slider and holder, which also should be identified by the same serial number.
 - Ensure that all bolts are tightened to the recommended torque.

Die Mounted Cam Unit

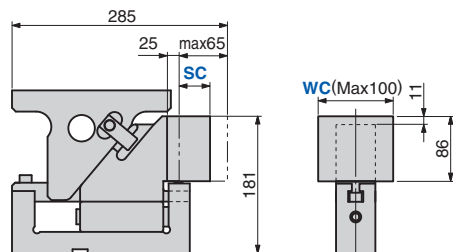
FOR PIERCE

CAD FILE

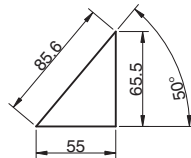
CMSD52 - 00 - 55



SC and WC Option



Cam Diagram



Working Force kN(tonf)		Spring Force N(kgf)		Total Weight kg	Catalog No.	W	θ	Travel S
Standard 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)	14.2	CMSD	52	00	55



Order

Catalog No.	W	θ	S
CMSD	52	00	55

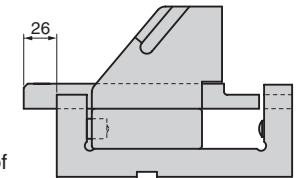


Option

Option Code	Specification
K	Key attached.
SC	The mount surface is extended forward in the range of 0 to 65 mm (at increments of 1 mm).
WC	The mounting surface width (W) is changed within the range 53 mm - 100mm (1 mm increments).

For detailed specification of the key, refer to page 1041.

Space for removing



Order

CMSD52 - 00 - 55 - SC5 - WC100
CMSD52 - 00 - 55 - SC25

Refer to page 389 for detailed specifications of tapped holes and dowel pin holes (prepared hole, finish hole) for retainer.

Table of Components

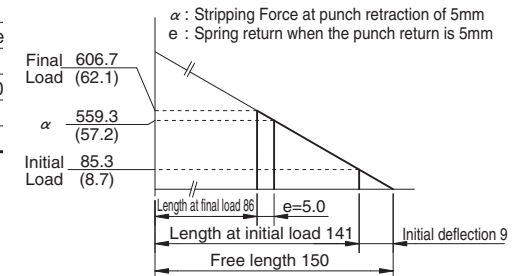
No.	Description	Qty	Material and Remark
①	Cam Slider	1	FC250
②	Cam Holder	1	FC250
③	Cam Driver	1	FC250 with Graphite
④	Cam Lower Slider	1	FC250 with Graphite
⑤	Guide Bar	1	SCM440 with Graphite
⑥	Cam Positive Return	1	S45C(1045)
⑨	Coil Spring	1	SWOSC-V SWS26-150
⑫	Stopper	1	Urethane PCU20
⑰	Spring Plug	2	SAE1065 NH8

Bolts for assembly are not indicated.

Spring Diagram

(Stripping Force at punch retraction of 5mm)

- Spring used SWS26-150 (1 piece)
- Spring constant 9.48N/mm(0.97kgf/mm)
- Guideline of spring durability 500,000 strokes

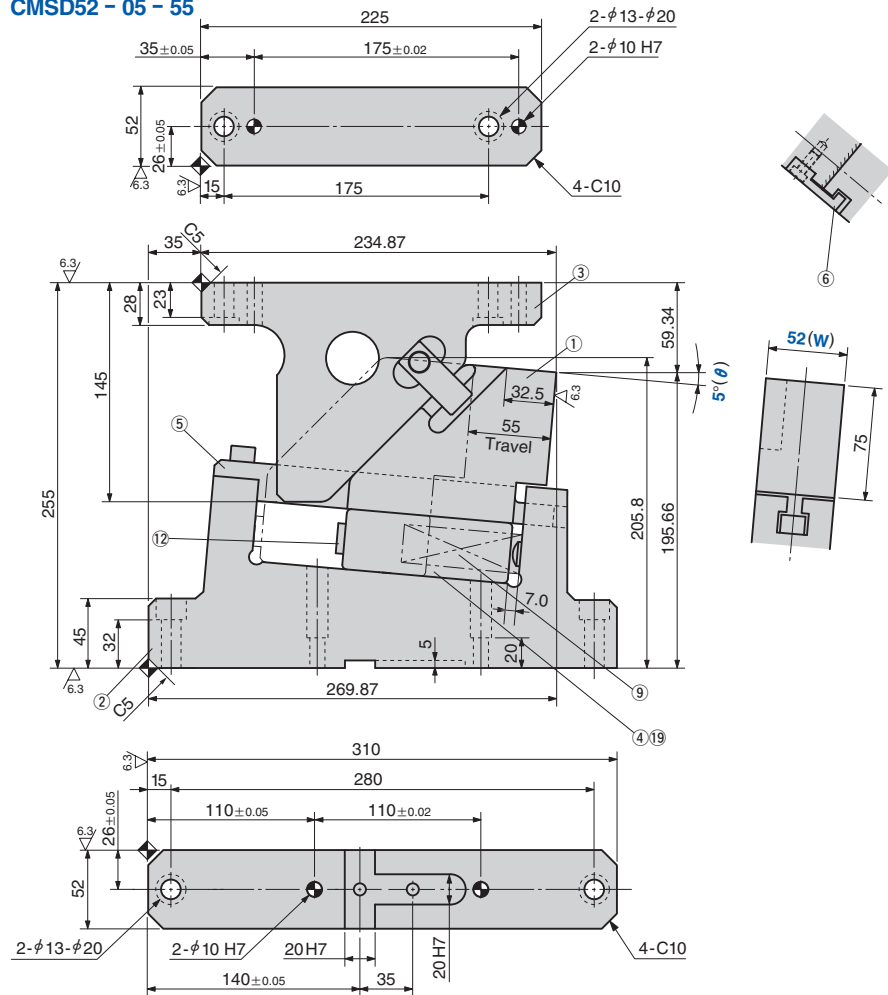


Die Mounted Cam Unit

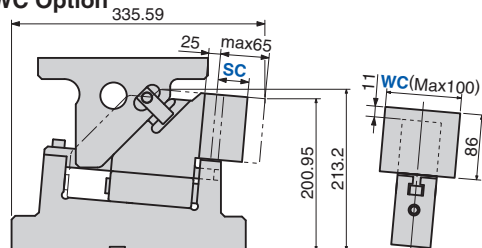
FOR PIERCE



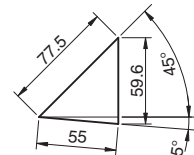
CMSD52 - 05 - 55



SC and WC Option



Cam Diagram



Working Force kN(tonf)		Spring Force N(kgf)		Total Weight kg	Catalog No.	W	θ	Travel S
Standard 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)	18.5	CMSD	52	05	55



Order

Catalog No.	W	θ	S
CMSD	52	05	55

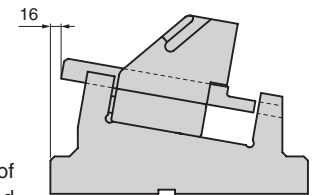


Option

Option Code	Specification
K	Key attached.
SC	The mount surface is extended forward in the range of 0 to 65 mm (at increments of 1 mm).
WC	The mounting surface width (W) is changed within the range 53 mm - 100mm (1 mm increments).

For detailed specification of the key, refer to page 1041.

Space for removing



Order

CMSD52 - 05 - 55 - SC5 - WC100
CMSD52 - 05 - 55 - SC25



Refer to page 389 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)
⑨	Coil Spring	1	SWOSC-V SWS26-150
⑫	Stopper	1	Urethane PCU20
⑰	Spring Plug	2	SAE1065 NH8

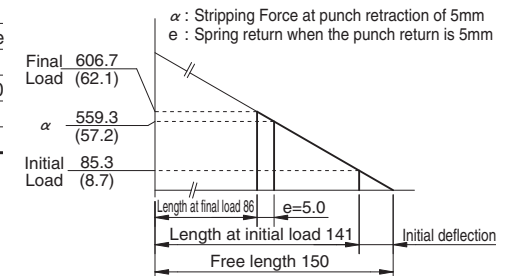


Bolts for assembly are not indicated.

Spring Diagram

(Stripping Force at punch retraction of 5mm)

- Spring used SWS26-150 (1 piece)
- Spring constant 9.48N/mm(0.97kgf/mm)
- Guideline of spring durability 500,000 strokes

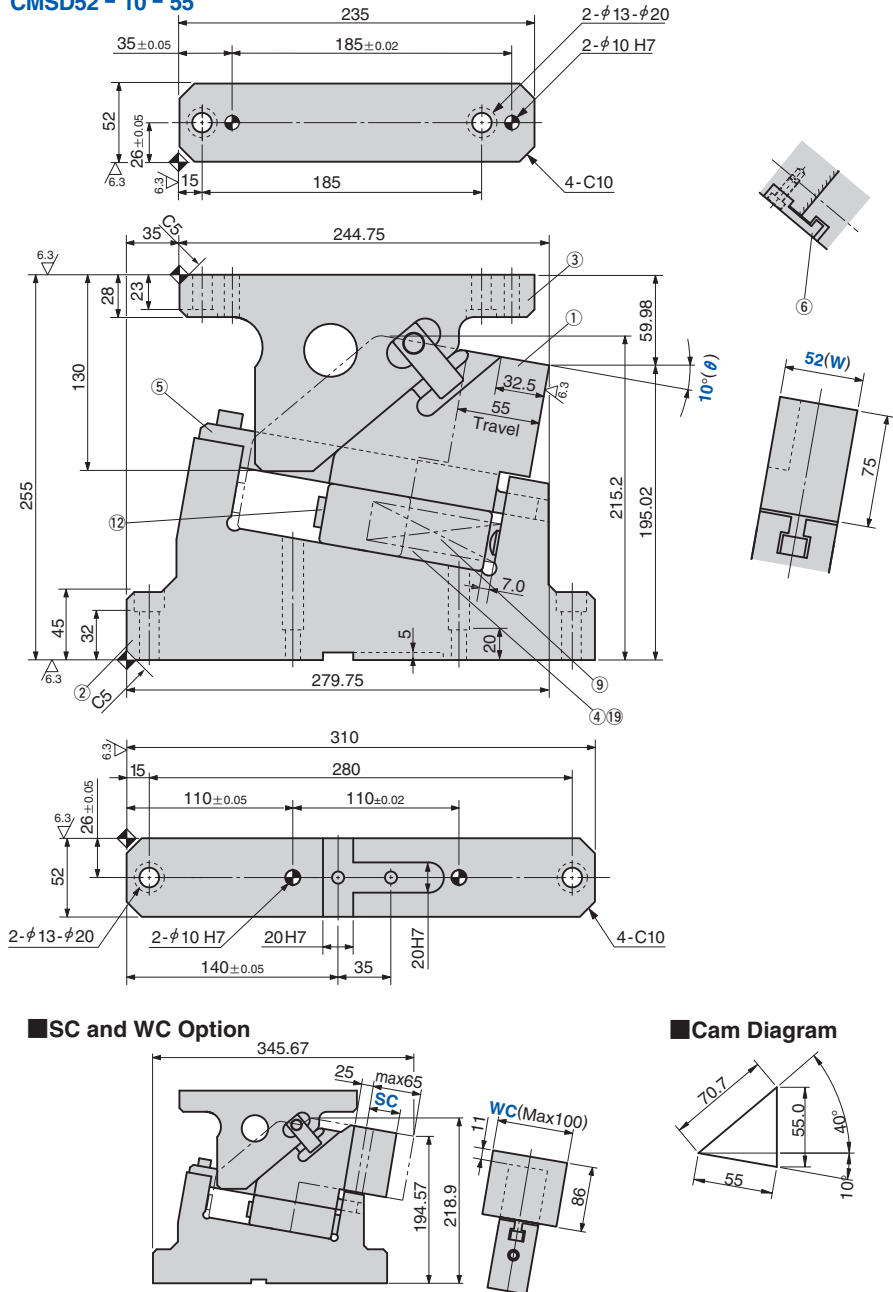


Die Mounted Cam Unit

FOR PIERCE

CAD FILE

CMSD52 - 10 - 55



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

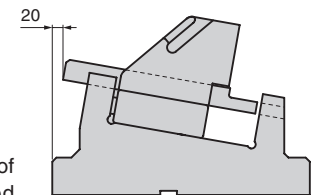


Option

Option Code	Specification
K	Key attached.
SC	The mount surface is extended forward in the range of 0 to 65 mm (at increments of 1 mm).
WC	The mounting surface width (W) is changed within the range 53 mm - 100mm (1 mm increments).

For detailed specification of the key, refer to page 1041.

Space for removing



Order

CMSD52 - 10 - 55 - SC5 - WC100
CMSD52 - 10 - 55 - SC25



Refer to page 389 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)
⑨	Coil Spring	1	SWOSC-V SWS26-150
⑫	Stopper	1	Urethane PCU20
⑰	Spring Plug	2	SAE1065 NH8

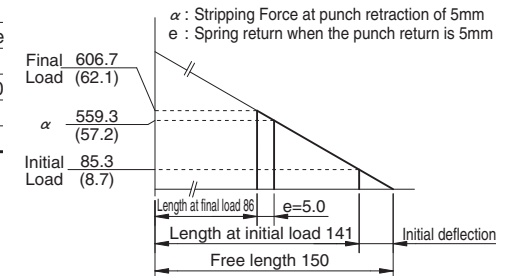


Bolts for assembly are not indicated.

Spring Diagram

(Stripping Force at punch retraction of 5mm)

- Spring used SWS26-150 (1 piece)
- Spring constant 9.48N/mm(0.97kgf/mm)
- Guideline of spring durability 500,000 strokes

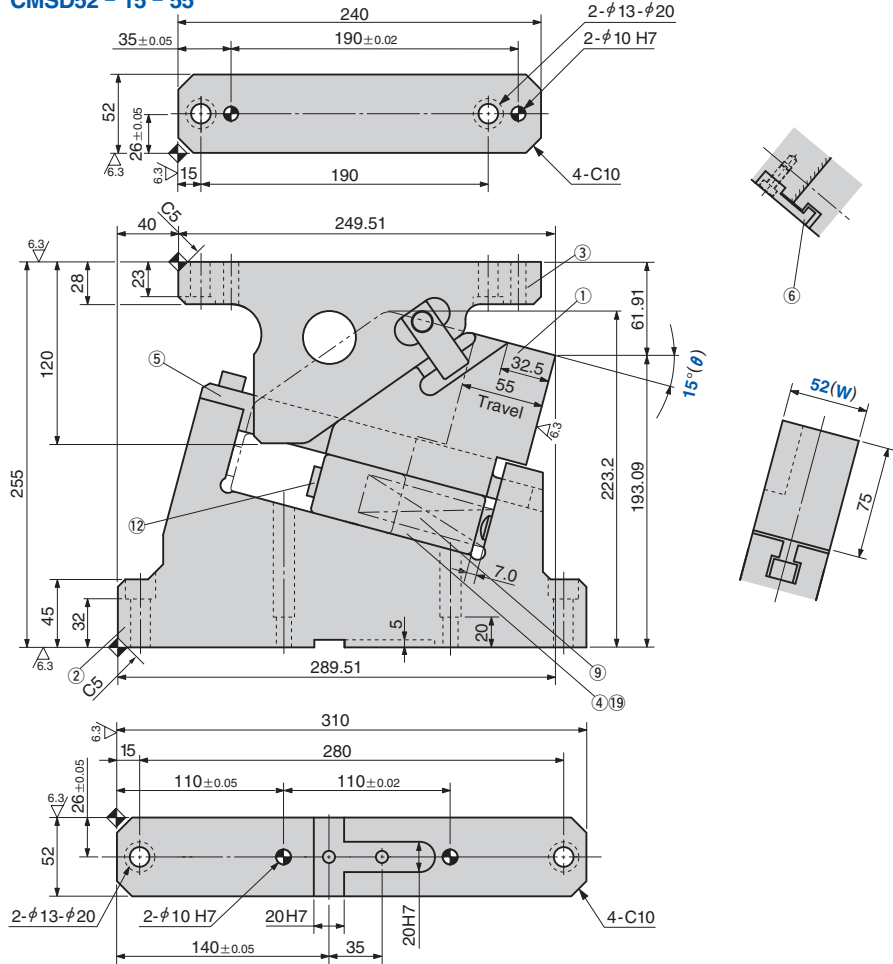


Die Mounted Cam Unit

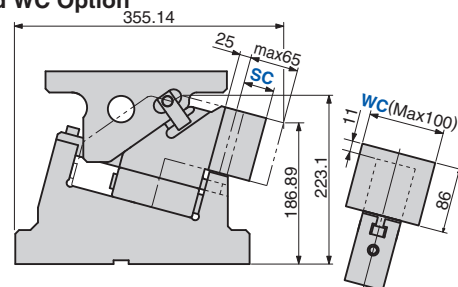
FOR PIERCE



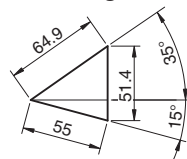
CMSD52 - 15 - 55



SC and WC Option



Cam Diagram



Working Force kN(tonf)		Spring Force N(kgf)		Total Weight kg	Catalog No.	W	θ	Travel S
Standard 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)	20.0	CMSD	52	15	55



Order

Catalog No.	W	θ	S
CMSD	52	15	55

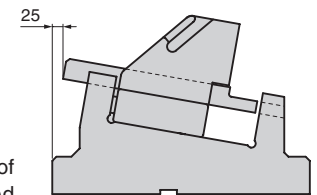


Option

Option Code	Specification
K	Key attached.
SC	The mount surface is extended forward in the range of 0 to 65 mm (at increments of 1 mm).
WC	The mounting surface width (W) is changed within the range 53 mm - 100mm (1 mm increments).

For detailed specification of the key, refer to page 1041.

Space for removing



Order

CMSD52 - 15 - 55 - SC5 - WC100
CMSD52 - 15 - 55 - SC25



Refer to page 389 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)
⑨	Coil Spring	1	SWOSC-V SWS26-150
⑫	Stopper	1	Urethane PCU20
⑰	Spring Plug	2	SAE1065 NH8

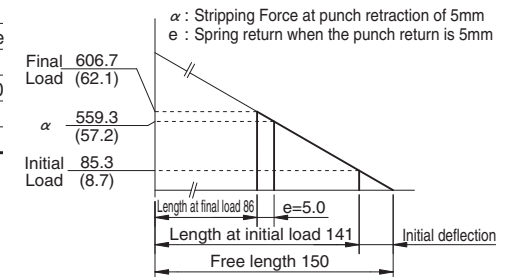


Bolts for assembly are not indicated.

Spring Diagram

(Stripping Force at punch retraction of 5mm)

- Spring used SWS26-150 (1 piece)
- Spring constant 9.48N/mm(0.97kgf/mm)
- Guideline of spring durability 500,000 strokes



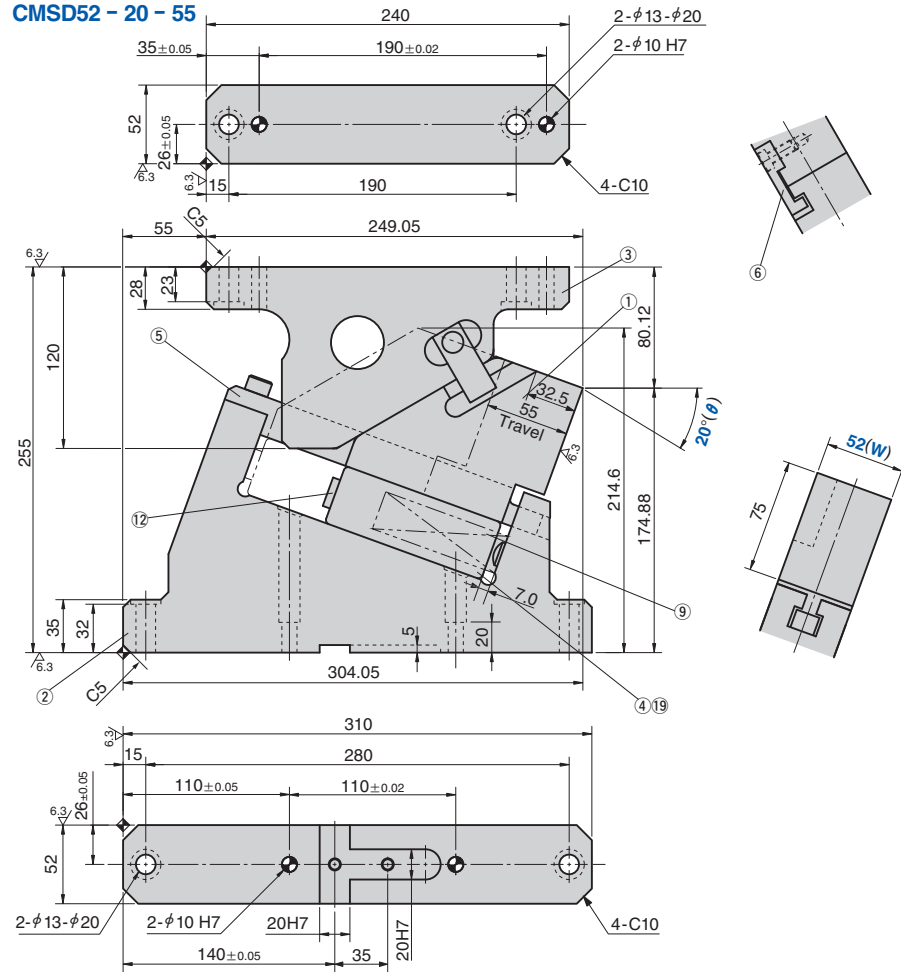
Die Mounted Cam Unit

FOR PIERCE

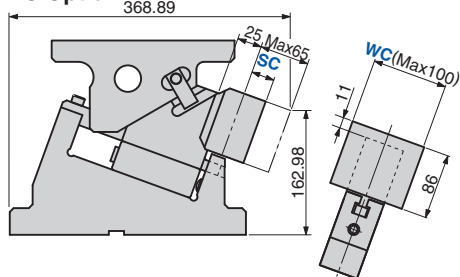
CAD FILE

Cam Unit

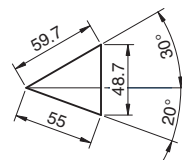
CMSD52 - 20 - 55



SC and WC Option



Cam Diagram



Working Force kN(tonf)		Spring Force N(kgf)		Total Weight kg	Catalog No.	W	θ	Travel S
Standard 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)	19.5	CMSD	52	20	55



Order

Catalog No.	W	θ	S
CMSD	52	20	55

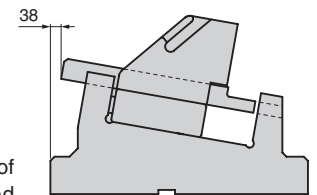


Option

Option Code	Specification
K	Key attached.
SC	The mount surface is extended forward in the range of 0 to 65 mm (at increments of 1 mm).
WC	The mounting surface width (W) is changed within the range 53 mm - 100mm (1 mm increments).

For detailed specification of the key, refer to page 1041.

Space for removing



Order

CMSD52 - 20 - 55 - SC5 - WC100
CMSD52 - 20 - 55 - SC25



Refer to page 389 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)
⑨	Coil Spring	1	SWOSC-V SWS26-150
⑫	Stopper	1	Urethane PCU20
⑰	Spring Plug	2	SAE1065 NH8



Bolts for assembly are not indicated.

Spring Diagram

(Stripping Force at punch retraction of 5mm)

- Spring used SWS26-150 (1 piece)
- Spring constant 9.48N/mm(0.97kgf/mm)
- Guideline of spring durability 500,000 strokes

