

Product Information

- Added size variations that allow to choose the cam length and driver height
- Minimal rear space removal and ease of cam slider disassembly
- Compact design with a narrow mounting width
- Spring option : Gas or Coil Spring



Features

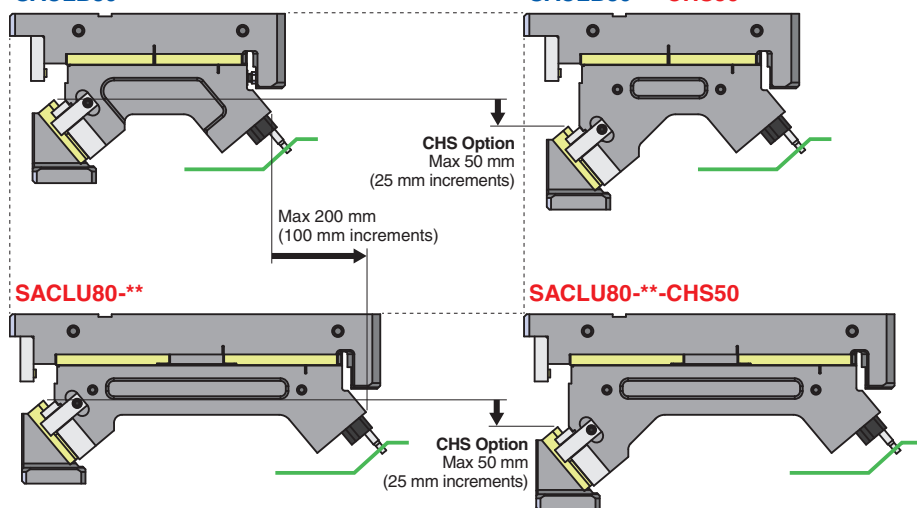
Variety of choices

- Added cam length extension variations that allow to select the cam length depending on the machining position.

SACLB (Standard) , **SACLS** (+100 mm) , **SACLU** (+200 mm)

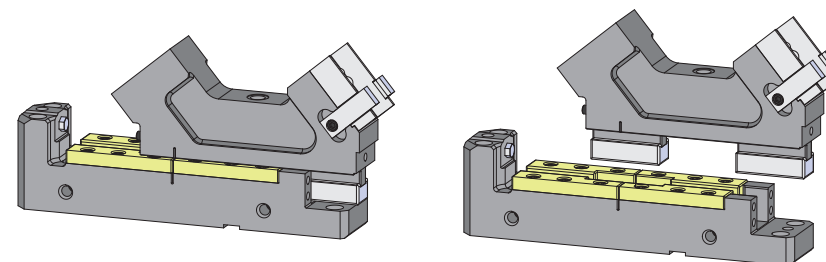
- Added the option to change the height of the cam driver. (**-CHS**)

SACLB80-**-CHS50



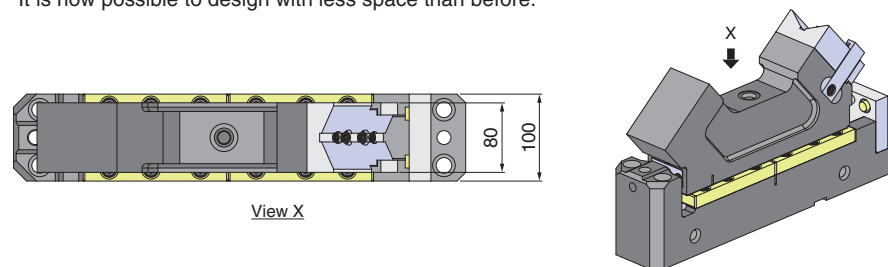
Structure with ease of cam slider disassembly

The Long Body Cam uses an upper plate notch structure, which greatly reduces the space required for removal at the rear.

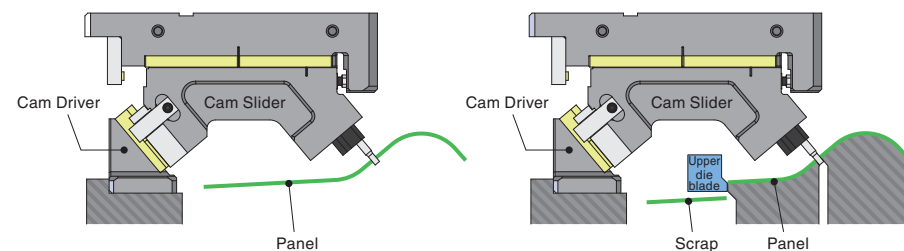


Compact design with a narrow mounting width

The width of the mounting surface is 80 mm. Overall cam width is 100 mm. It is now possible to design with less space than before.



Application Example

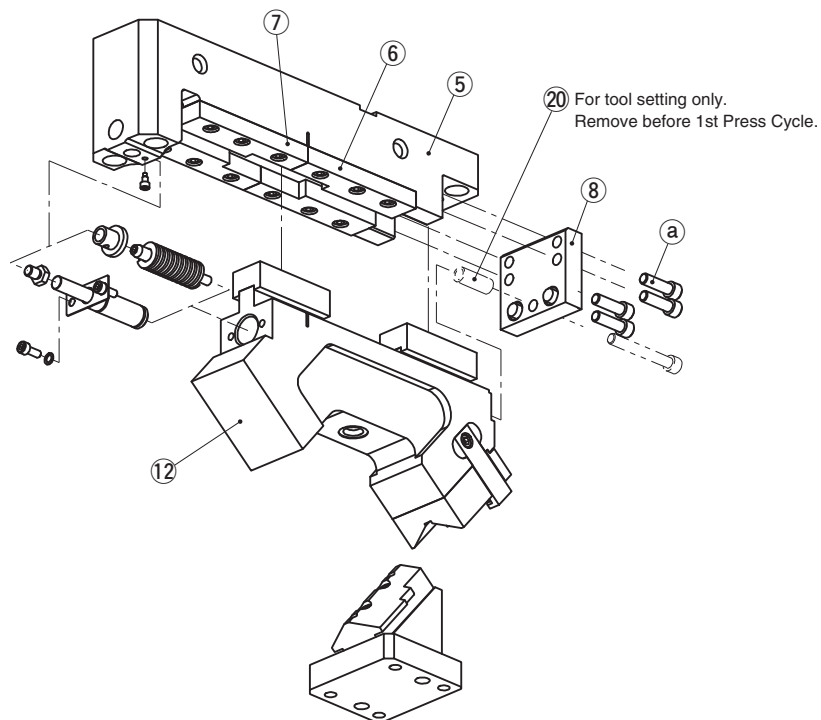


The long reach of Cam Slider and the Cam Driver attached outside of the panel enable the greater processing area to be machined.

An increased layout can be realized with external trimming allowing sufficient space for scrap removal.

Product Information

■SACMB·SACLB·SACLS·SACLU Assembly Instructions



● Disassembly

- 1) Remove Hexagon Socket Head Bolts (a), to pull out Stopper Plate (8).
- 2) Slide Cam Slider (12) back to the corresponding notch placed between (6) and (7).
- 3) Pull up Cam Slider from Cam Holder (5).

● 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.



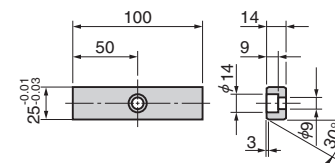
Gas Spring

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.

■ Option

● Key Specification (—K)

LKU25-100 (A M8 Bolt is included.)



■ Thrust Pad Installation

When the unit is used for trimming, it is recommended a thrust pad be included so an extreme lateral load is eliminated from trimming line to the unit.

■ Do not use for restriking

The cam unit would break.

■ Coil Spring life expectancy

Coil Spring life expectancy is approximately 300,000 cycles.

Note that 300,000 cycles is a manufacturer guideline, not a guarantee.

It may break earlier than the life expectancy depending on usage conditions.

NEW

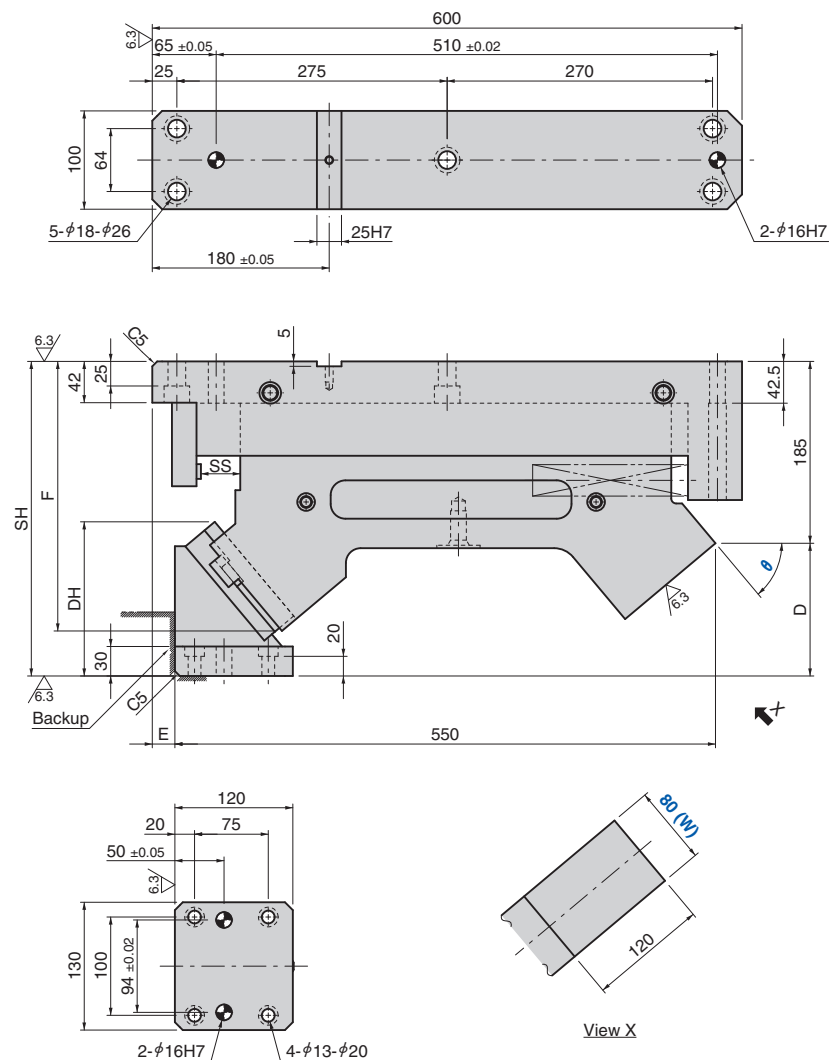
LONG BODY CAM

Panel Avoidance Cam

Aerial Cam Unit

For Pierce

SACLS80

CAD
FILE

Working Force [kN (tonf)] 1,000,000 strokes	Catalog No.	W	θ 5° increments	Spring Type PS
58.8 (6.0)	SACLS	80	50~80	No Code (Coil Spring) GK NGK GD NGD GSS NGSS

No Code: Coil Spring GK: Gas Spring (KALLER) GD: Gas Spring (DADCO) GSS: Gas Spring (Special Springs)
NGK/NGD/NGSS: Without Gas Spring Parts for spring assembly are included.

Catalog No.	W	θ	Option CHS	PS	Option
SACLS	80	50			
SACLS	80	50	CHS25		
SACLS	80	50	CHS50	GK	NF - K

Option Code	Specification
NF	Nitrogen gas not charged.
K	Key attached.

Option Code CHS	Specification
CHS25	The Cam Driver's mounting position will be lowered by 25 mm.
CHS50	The Cam Driver's mounting position will be lowered by 50 mm.

Refer to page 377 for the machining details of tapped holes and dowel holes for retainer mounting.
Refer to page 4 for key specification.

θ	SS	Option Code CHS	E	SH	D	DH	F
50		—		320	135		274.2
		CHS25	23	345	160	156.8	299.2
		CHS50		370	185		324.2
55	40	—		320	135		275.8
		CHS25	18	345	160	160.8	300.8
		CHS50		370	185		325.8
60		—		320	135		277.5
		CHS25	13	345	160	163.8	302.5
		CHS50		370	185		327.5
65	34	—		320	135		277.2
		CHS25	1	345	160	167.8	302.2
		CHS50		370	185		327.2
70	28	—		320	135		278.9
		CHS25	-10	345	160	168.8	303.9
		CHS50		370	185		328.9
75	21	—		320	135		278.7
		CHS25	-15	345	160	170.8	303.7
		CHS50		370	185		328.7
80	14	—		320	135		280.5
		CHS25	-20	345	160	169.9	305.5
		CHS50		370	185		330.5

Dimension E is positive (+) on the left side and negative (-) on the right side with respect to the backup surface of the cam driver.

Refer to page 16 for Table of Components.

LONG BODY CAM [Table of Components]

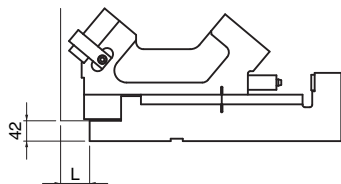
Panel Avoidance Cam

Aerial Cam Unit

For Pierce

SACMB·SACLB·SACLS·SACLU

Rear Removal Space



Catalog No.	L
SACMB	60.0
SACLB	
SACLS	110.0
SACLU	

Spring Force

● Coil Spring

SACMB

θ	SS	Spring Model	Initial Load		Final Load		Return Force	
			N	kgf	N	kgf	N	kgf
50							3441.1	351.1
55	40	TH30-200	440.7	45.0	2644.3	269.8	3744.7	382.1
60							4141.5	422.6
65	34	TH30-175	503.7	51.4	2644.3	269.8	4671.5	476.7
70	28	TH30-150	587.7	60.0	2644.6	269.9	5403.7	551.4
75	21	TH30-100	330.6	33.7	2644.6	269.9	6464.4	659.6
80	14	TH30-75	587.6	60.0	2644.4	269.8	8122.4	828.8

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

SACLB, SACLS, SACLU

θ	SS	Spring Model	Initial Load		Final Load		Return Force	
			N	kgf	N	kgf	N	kgf
50							3407.3	347.7
55	40	TH30-200	440.7	45.0	2644.3	269.8	3708.4	378.4
60							4100.7	418.4
65	34	TH30-175	503.7	51.4	2644.3	269.8	4625.4	472.0
70	28	TH30-150	587.7	60.0	2644.6	269.9	5349.6	545.9
75	21	TH30-100	330.6	33.7	2644.6	269.9	6398.8	652.9
80	14	TH30-75	587.6	60.0	2644.4	269.8	8039.1	820.3

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

● Gas Spring

SACMB

θ	SS	Spring Model	Final Load		Return Force	
			N	kgf	N	kgf
50					3591.7	366.5
55	40	M2-50-Yellow	2759.2	281.5	3908.6	398.8
60					4322.7	441.1
65	34	M2-50-Yellow	2606.9	266.0	4603.8	469.8
70	28	M2-38.1-Yellow	2666.6	272.1	5448.5	556.0
75	21	M2-38.1-Yellow	2454.5	250.5	5993.6	611.6
80	14	M2-25-Yellow	2446.0	249.6	7505.1	765.8

Gas filling pressure: 18 Mpa

SACMB

θ	SS	Spring Model	Final Load		Return Force	
			N	kgf	N	kgf
50					3375.6	344.4
55	40	C.180.050.YW	2595.4	264.8	3673.5	374.8
60					4062.7	414.6
65	34	C.180.050.YW	2481.8	253.2	4379.7	446.9
70	28	C.180.038.YW	2528.4	258.0	5162.3	526.8
75	21	C.180.038.YW	2366.3	241.5	5775.1	589.3
80	14	C.180.025.YW	2361.1	240.9	7240.9	738.9

Gas filling pressure: 18 Mpa

SACMB

θ	SS	Spring Model	Final Load		Return Force	
			N	kgf	N	kgf
50					3466.7	353.7
55	40	M200-050-B-YW	2664.5	271.9	3772.6	385.0
60					4172.4	425.8
65	34	M200-050-B-YW	2534.9	258.7	4474.9	456.6
70	28	M200-038-B-YW	2574.9	262.7	5258.6	536.6
75	21	M200-038-B-YW	2396.3	244.5	5849.5	596.9
80	14	M200-025-B-YW	2370.7	241.9	7270.7	741.9

Gas filling pressure: 18 Mpa

SACLB, SACLS, SACLU

Spring Model	Final Load		Return Force	
	N	kgf	N	kgf
			3312.2	338.0
X320-50	2573.0	262.5	3604.9	367.8
			3986.2	406.8
X320-50	2407.3	245.6	4200.1	428.6
X320-38	2474.4	252.5	4996.0	509.8
X320-25	2567.9	262.0	6208.2	633.5
X320-19	2386.0	243.5	7234.5	738.2

Gas filling pressure: 10 Mpa

SACLB, SACLS, SACLU

Spring Model	Final Load		Return Force	
	N	kgf	N	kgf
			3293.6	336.1
U.0325.050	2558.9	261.1	3584.7	365.8
			3963.9	404.5
U.0325.050	2396.9	244.6	4181.4	426.7
U.0325.038	2462.5	251.3	4971.5	507.3
U.0325.025	2588.1	264.1	6258.2	638.6
U.0325.019	2427.9	247.7	7365.1	751.5

Gas filling pressure: 10 Mpa

SACLB, SACLS, SACLU

Spring Model	Final Load		Return Force	
	N	kgf	N	kgf
			3470.2	354.1
RV320-050-C	2692.7	274.8	3776.9	385.4
			4176.4	426.2
RV320-050-C	2495.2	256.7	4357.4	444.6
RV320-038-C	2553.5	260.6	5159.8	526.5
RV320-025-C	2651.1	270.5	6414.2	654.5
RV320-019-C	2441.6	249.1	7407.7	755.9

Gas filling pressure: 10 Mpa

LONG BODY CAM [Table of Components]

Panel Avoidance Cam

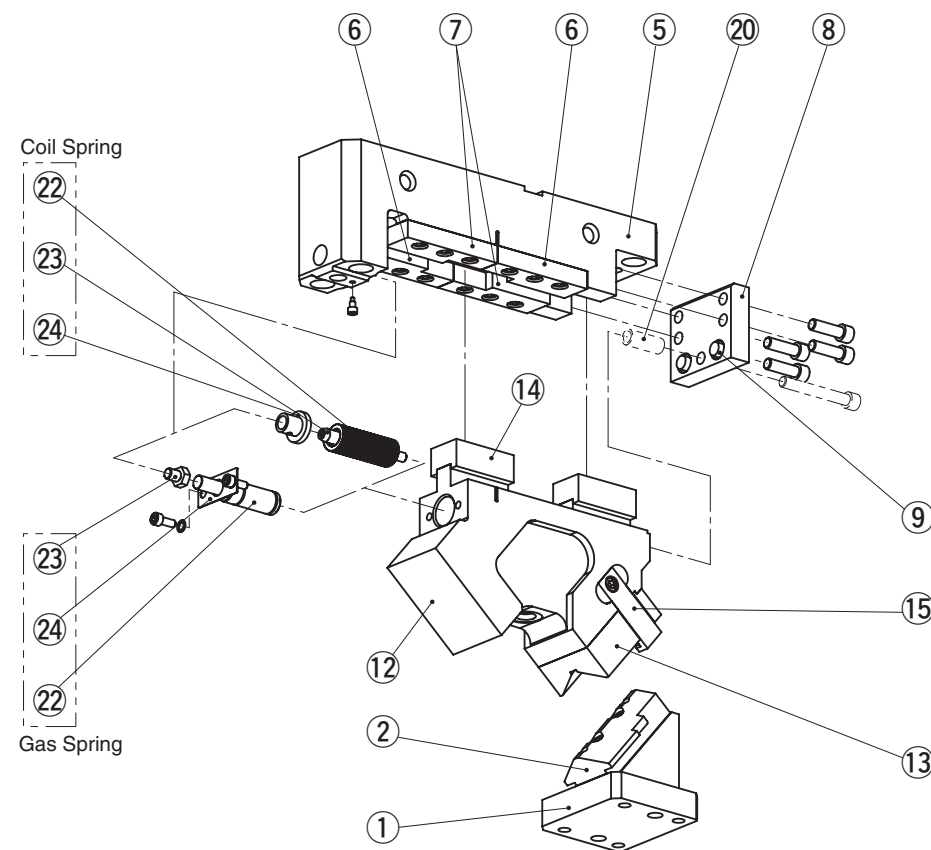
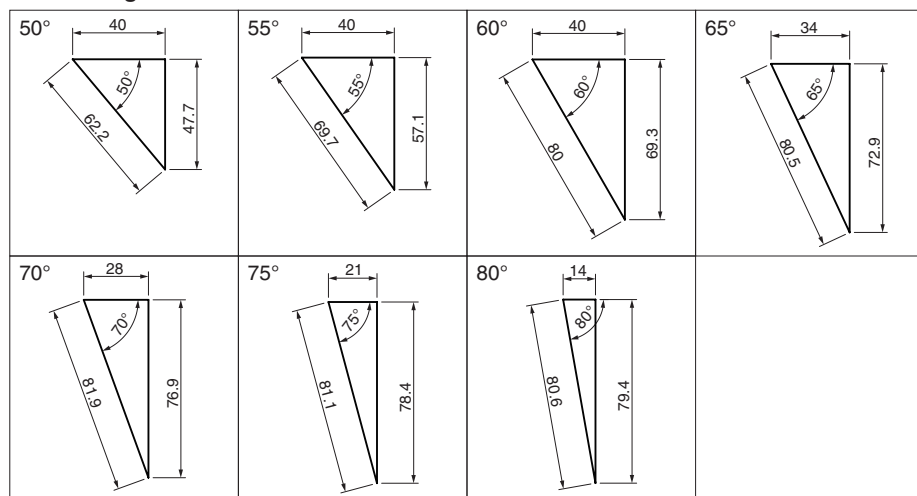
Aerial Cam Unit

For Pierce

Weight

θ	Option Code CHS	Slider Weight (kg)				Total Weight (kg)				Tool installation Weight (kg) Common
		SACMB	SACLB	SACLS	SACLU	SACMB	SACLB	SACLS	SACLU	
50	—	21.5	26.1	33.7	38.8	52.8	62.1	74.4	83.8	8.0
	CHS25	24.0	29.4	35.1	40.8	55.4	65.4	76.4	85.8	
	CHS50	25.7	31.8	38.0	43.1	57.0	67.8	78.7	88.1	
55	—	21.1	25.6	33.1	38.3	52.7	61.8	74.1	83.5	8.0
	CHS25	23.6	28.8	35.0	40.2	55.2	65.0	76.0	85.4	
	CHS50	25.2	31.0	37.2	42.4	56.7	67.2	78.2	87.6	
60	—	20.8	25.3	32.8	38.0	52.6	61.7	74.0	83.4	8.0
	CHS25	23.0	28.5	34.7	39.9	54.8	64.9	75.9	85.3	
	CHS50	24.7	30.7	37.0	42.2	56.5	67.2	78.2	87.6	
65	—	20.6	25.0	32.5	37.7	52.8	61.8	74.0	83.5	8.0
	CHS25	22.6	28.0	34.3	39.5	54.7	64.7	75.8	85.3	
	CHS50	24.1	30.1	36.5	41.7	56.2	66.9	78.0	87.4	
70	—	20.7	25.0	32.4	37.6	53.1	61.9	74.1	83.5	8.0
	CHS25	22.5	27.7	34.4	39.5	54.9	64.6	76.1	85.5	
	CHS50	23.9	29.7	36.6	41.8	56.3	66.7	78.3	87.7	
75	—	20.3	24.8	32.4	37.5	53.0	62.1	74.3	83.8	8.0
	CHS25	22.3	27.7	34.4	39.6	55.1	65.0	76.4	85.8	
	CHS50	23.7	29.9	36.7	41.9	56.5	67.1	78.6	88.1	
80	—	20.1	24.7	32.1	37.3	53.1	62.2	74.3	83.8	8.0
	CHS25	21.9	27.5	34.1	39.3	54.9	64.9	76.3	85.7	
	CHS50	23.2	29.5	36.3	41.5	56.2	67.0	78.5	88.0	

Cam Diagram



No.	Description	Qty
1	Cam Driver	1
2	Cam Bottom Guide	1
5	Cam Holder	1
6	Cam Upper Plate A	2
7	Cam Upper Plate B	2
8	Stopper Plate	1
9	Stopper	2
12	Cam Slider	1
13	Cam Bottom Slide	1

No.	Description	Qty
14	Cam Lower Slider	2
15	Positive Return	2
20	Collar	1
22	Coil Spring	1
23	Spring Guide Pin	1
24	Spring Guide Washer	1
22	Gas Spring	1
23	Stop Pin	1
24	Spring Stopper	1

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.)

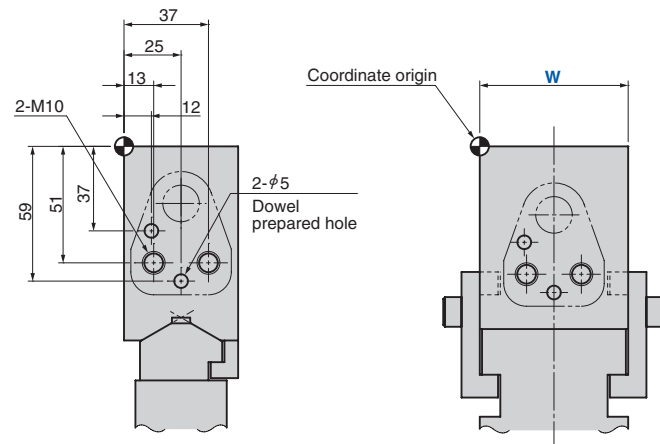
- Indication symbol

—M...Tapped hole, —N...Dowel prepared hole, —K...Dowel finish hole

Machining standard

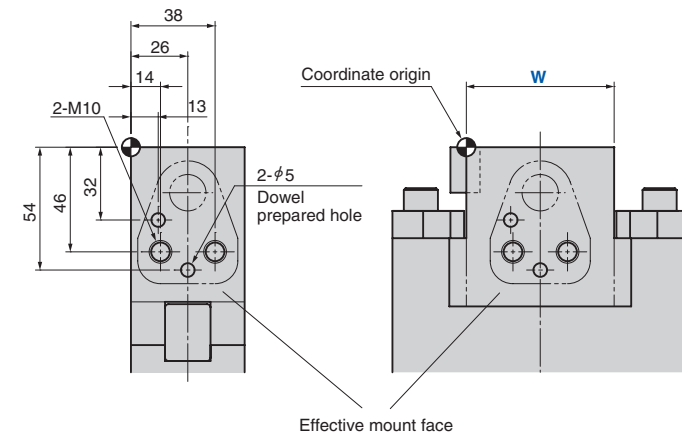
- Tapped holes and dowel prepared holes are machined to general tolerances.
- The hole depth is 2.5 times the diameter for both tapped holes and dowel holes. The dowel pilot hole is processed for 2 times the diameter.
- The dowel hole spacing is machined to the tolerance of ± 0.02 . The hole tolerance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

〈Example of Aerial Cam Unit〉



Order	Catalog No.	W	θ	Additional Machining
	SACE	52	00	— M10 — X (13.0) — Y (−51.0) — M10 — X (37.0) — Y (−51.0) — K5.0 — X (12.0) — Y (−37.0) — K5.0 — X (25.0) — Y (−59.0)

〈Example of Die Mounted Cam Unit〉



Catalog No.	W	θ	S	Additional Machining
CMSD	52	00	55	— M10 — X (14.0) — Y (−46.0) — M10 — X (38.0) — Y (−46.0) — K5.0 — X (13.0) — Y (−32.0) — K5.0 — X (26.0) — Y (−54.0)

■ Other machining

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