NEW

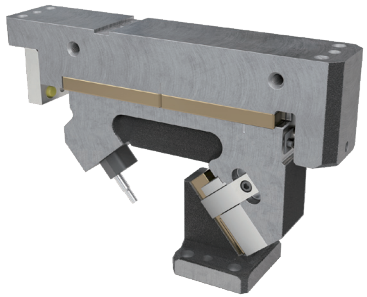
PULL CAM SAPLC [Overview]

Panel Avoidance Cam

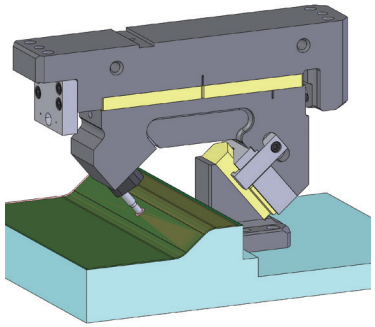
For Pierce

Product Information

- Compact design for back angle piercing
- Minimal rear space removal and ease of cam slider disassembly
- Spring option : Gas or Coil Spring



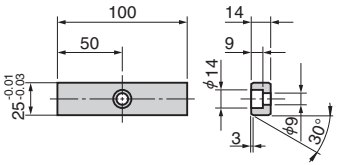
■Application Example



For panels that are difficult to process with normal aerial cam units because the application requires to pierce a hole on a back or reverse angle.
e.g. body side panels
back door panels

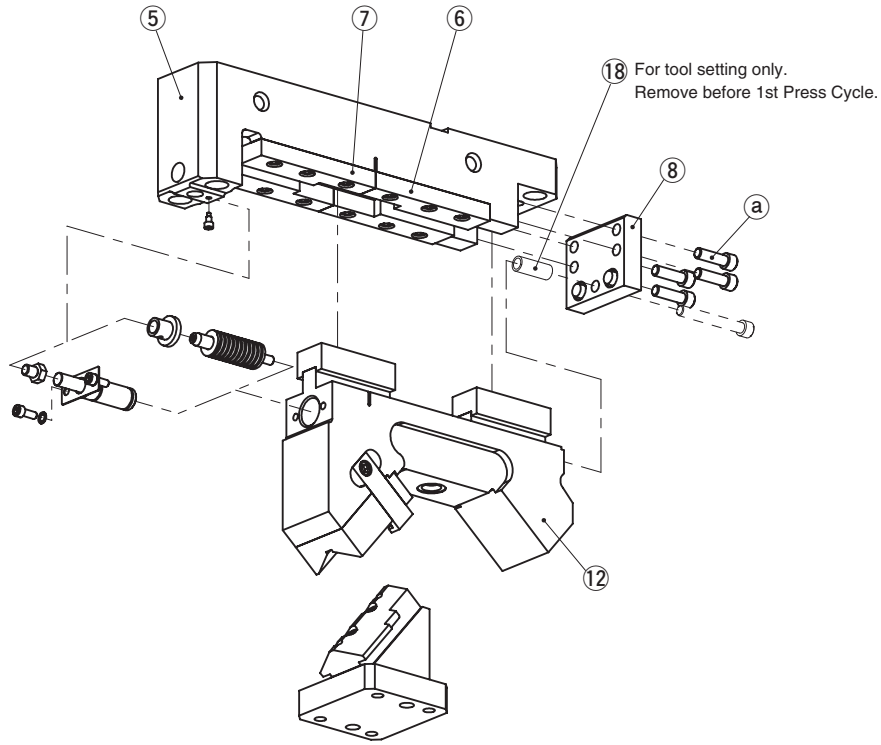
■Option

● **Key Specification (−K)**
LKU25-100 (A M8 Bolt is included.)



This product is not for sale in China.

■SAPLC Assembly Instructions



● Disassembly
1) Remove Hexagon Socket Head Bolts (ⓐ), 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.

NEW

PULL CAM

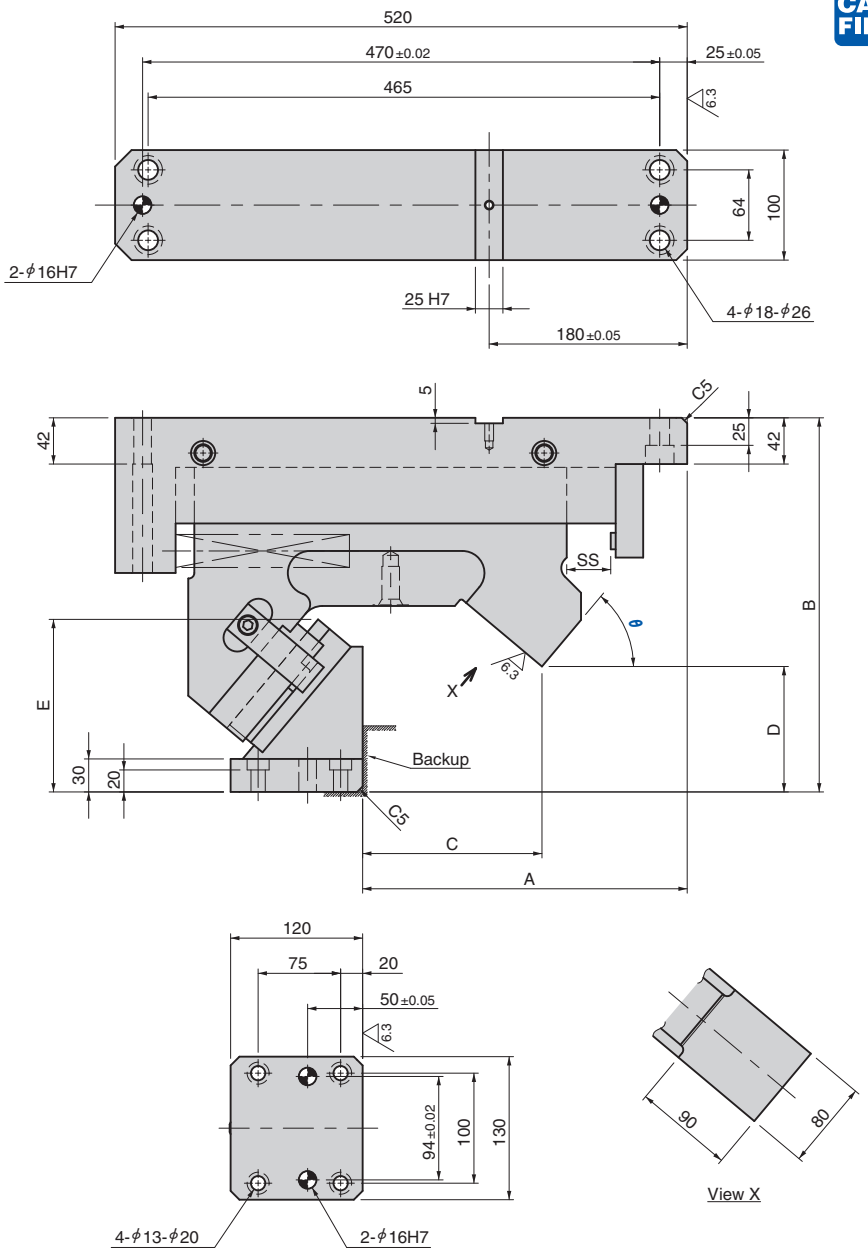
Panel Avoidance Cam

Aerial Cam Unit

For Pierce

SAPLC80

CAD FILE



Working Force [kN (tonf)] 1,000,000 strokes	Catalog No.	W	θ	Spring Type PS
39.2 (4.0)	SAPLC	80	50～80 (5° increments)	No Code (Coil Spring) GK NGK GD NGD

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

Order

Catalog No.	W	–	θ	–	PS	–	Option
SAPLC	80	–	50				
SAPLC	80	–	50	–	GK	–	NF – K

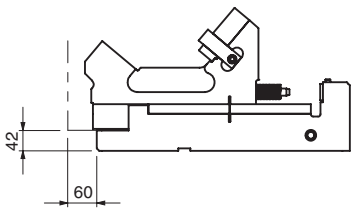
Option

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

Refer to page 377 for the machining details of tapped holes and dowel holes for retainer mounting.
Refer to page 595 for key specification.

θ	SS	A	B	C	D	E
50		295	340	163	114.0	156.8
55	40	287		159	120.5	160.8
60		279	345	155	132.0	163.8
65	34	270		150	140.0	167.8
70	28	260		145	152.5	168.8
75	21	250	350	139	160.0	170.8
80	14	240		133	168.0	169.9

■Rear Removal Space



■Spring Force

● Coil Spring

θ	SS	Initial Load N	Initial Load kgf	Final Load N	Final Load kgf	Spring Model
50						
55	40	440.7	45.0	2644.3	269.8	TH30-200
60						
65	34	503.7	51.4			TH30-175
70	28	587.7	60.0	2644.6	269.9	TH30-150
75	21	330.6	33.7			TH30-100
80	14	587.6	60.0	2644.4	269.8	TH30-75

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

● Gas Spring

Final Load N	Final Load kgf	Spring Model GK	Spring Model GD
2558.9	261.1	X320-50	U.0325.050
2396.9	244.6		
2462.5	251.3	X320-38	U.0325.038
2588.1	264.1	X320-25	U.0325.025
2427.9	247.7	X320-19	U.0325.019

Gas filling pressure: 10 MPa

Refer to page 600 for Table of Components.

NEW

PULL CAM [Table of Components]

Panel Avoidance Cam

For Pierce

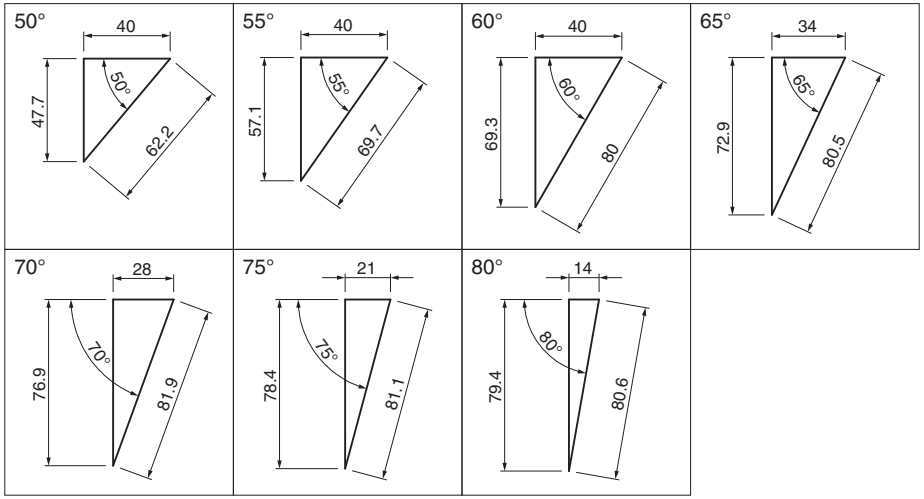
Aerial Cam Unit

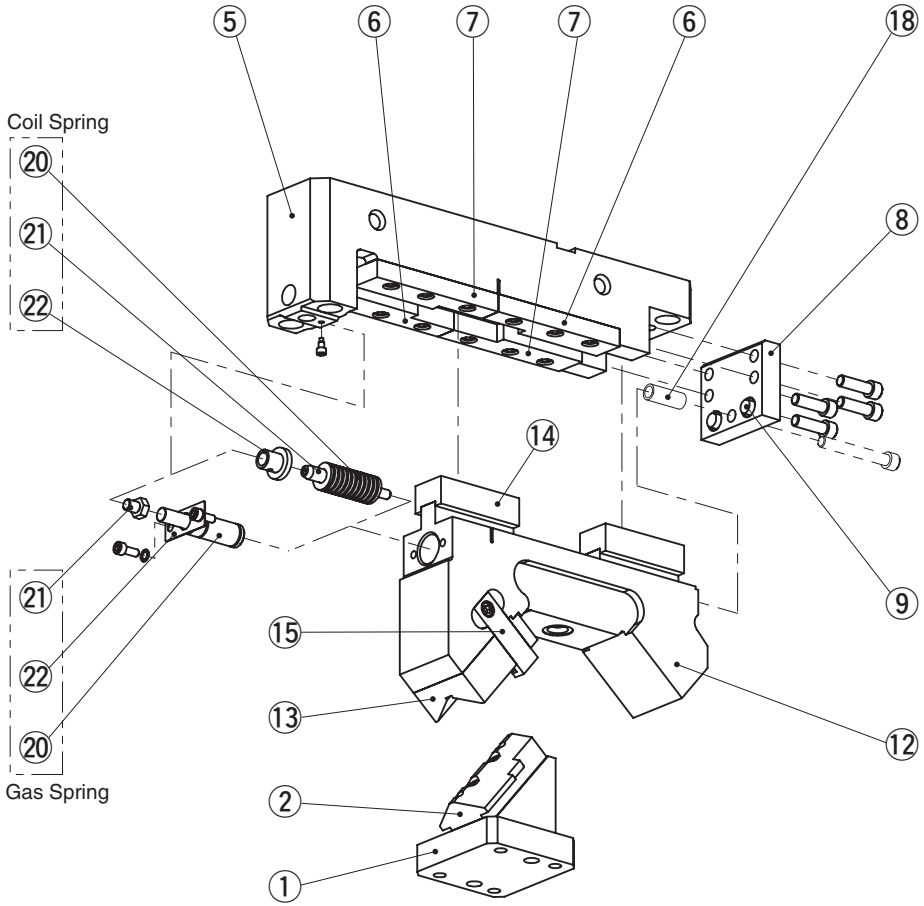
SAPLC80

■Weight

θ	Cam Slider Weight kg	Total Weight kg
50	23.2	59.3
55		59.4
60	23.5	59.9
65	23.6	60.3
70	24.3	61.3
75	24.7	62.0
80	25.2	62.7

■Cam Diagram





No.	Description	Qty
1	Cam Driver	1
2	Cam Bottom Slide Plate	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 Guide Plate	1

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

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

Special Cam Units

SAPLC 80

Cam Units [Overview]

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

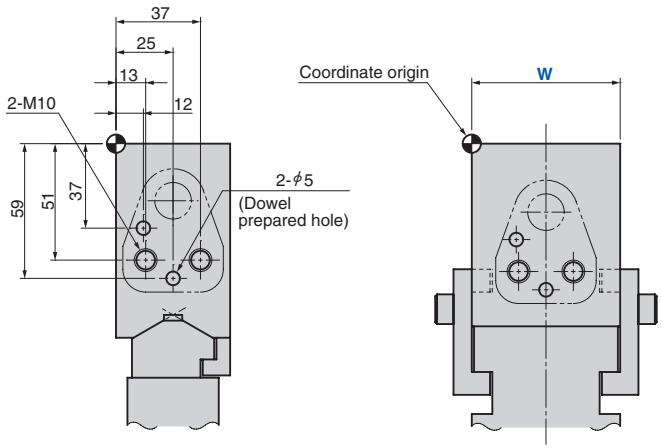
- The origin is positioned at the upper left corner of the mount face. (However, machining uses our machining datum as the reference.)
- Indication symbol

  –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.

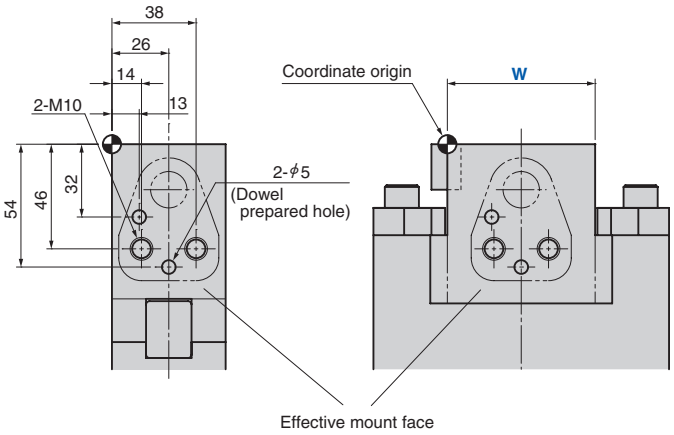
〈Example of Aerial Cam Unit〉



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〉



Order

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.