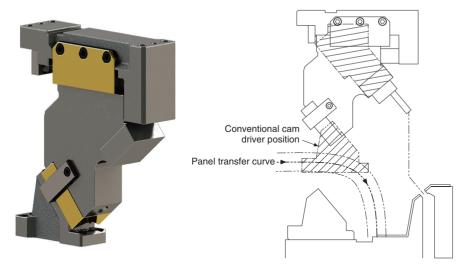
# Cam unit that can avoid interference with panel LONG LEG CAM-angle 50~80-

**AERIAL CAM UNIT** 

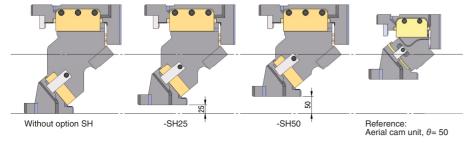






### ■ Features

- The lowered cam driver position provides no interference with the panel.
- Option SH, which is to change shut height, provides optimal designing of the die.



- Space saving
- Rigid and durable cam unit confirmed by CAE analysis and in-house endurance test

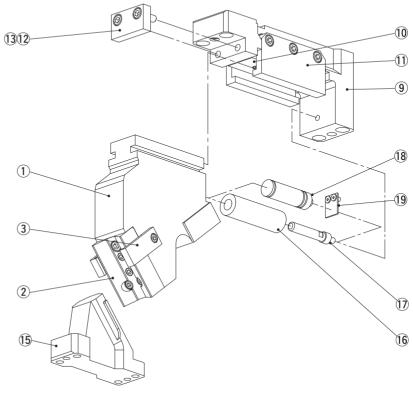
### **■** Endurance test



### ■ CAE analysis



### ■ Structure and Assembly • Disassembly



### Disassembly method

- 1) Loosen hexagonal socket head bolts and remove #12 Stopper Plate.
- 2) Pull out and remove #1 Cam Slider from #9 Cam Holder to the rear.
- \* Note that #18 Gas Spring is not fixed to #1 Cam Slider.

### Assembly method

- 1) Assemble parts in the reverse order of disassembly.
- · Make sure that there is no foreign matter on the sliding area and apply grease on sliding surface.
- · Since clearances of #1 Cam Slider and #9 Cam Holder are controlled, make sure that serial numbers engraved on the Cam Slider and the Cam Holder are identical.
- · After assembly, make sure that all bolts are correctly tightened.

### **■** Table of Components

		Qty						
No.	Description	Coil spring	Gas Spring					
1	Cam Slider	-	1					
2	Cam Bottom Slide Plate	-	1					
3	Positive Return Follower	2	2					
9	Cam Holder	-	1					
10	Wear Plate	1						
11	Slide Keeper	2						
12	Stopper Plate	1						
13	Urethane Stopper	3						
15	Cam Driver		1					
16	Coil Spring	1						
17	Spring Guide Pin	1						
18	Gas Spring		1					
19	Spring Plate		1					
A Bolte for assembly are not indicated								

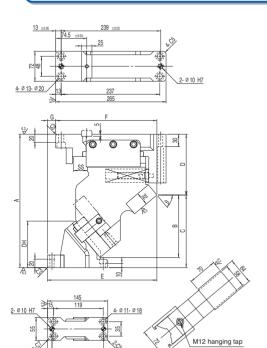
Bolts for assembly are not indicated.

# Cam unit that can avoid interference with panel LONG LEG CAM-angle 50~80-

**AERIAL CAM UNIT** 







# ■ Cam Diagram

						1		-		
				,				,		[mm]
Angle θ	Stroke SS	Option SH	Α	В	С	D	Е	F	G	DH
		_	320	149.7	174					
50	33	-SH25	295	124.7	149	146	263	243	20	111.4
		-SH50	270	99.7	124					
		_	330	158.7	184					
55	27	-SH25	305	133.7	159	146	270	240	30	114.8
		-SH50	280	108.7	134					
		_	335	161.5	187					_
60	24	-SH25	310	136.5	162	148	272	238	34	119.1
		-SH50	285	111.5	137					
		_	335	161.2	186					
65	21	-SH25	310	136.2	161	149	274	235	39	121.6
		-SH50	285	111.2	136					
		_	335	159.8	185					
70	18	-SH25	310	134.8	160	150	285	232	53	124.6
		-SH50	285	109.8	135					
		_	330	154.2	180					
75	14	-SH25	305	129.2	155	150	291	229	62	127.0
		-SH50	280	104.2	130					
			330	153.2	179					
80	11	-SH25	305	128.2	154	151	300	226	74	133.0
		-SH50	280	103.2	129					

Working force [kN (tonf)] 1,000,000 strokes	Catalog No.	Cam width W	Angle <i>θ</i>	Spring type PS
28.4 (2.9)	SACTFR	64	50 ~ 80 (5-degree increments)	No code (Coil spring) GK NGK GD NGD

No code: Coil spring GK: Gas spring (KALLER)

NGK/NGD: without gas spring Parts for spring assembly are included.

GD: Gas spring (DADCO)

	Option
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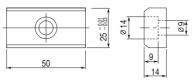
SH Option Code	Specification
SH25	Make shut height 25mm shorter by cutting cam slider.
SH50	Make shut height 50mm shorter by cutting cam slider.
Option Code	Specification
NF	Nitrogen gas not charged.
V	Key attached.



Catalog No.	W -	<b>0</b> -	Option SH - PS - Option
SACTFR	64 —	50 —	SH50
SACTER	64 —	80 —	SH50 - GK - NF - K

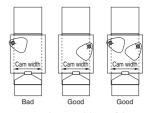
1 35°, 40° and 45° are also available. Please contact your sales representative.

### ■ Key specifications



(A M8 bolt is included.)

## ■ Installation range of piercing punch



Make sure to mount a tool not to stick out of the cam unit and to keep tooling center of gravity within cam slider width 58mm.

### ■ 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.

### ■ Gas Spring

For use and maintenance of gas spring, please contact the manufacturer directly.

### ■ 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.)

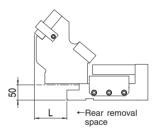
It may break earlier than the life expectancy depending on usage conditions.

### ■ Weight

Angle θ	Option SH	Cam slider weight kg	Total weight kg	Tool installation weight kg
	_	12.0	23.3	
50	-SH25	10.9	22.2	3.0
	-SH50	9.7	21.0	
	_	12.3	23.8	
55	-SH25	11.2	22.7	3.0
	-SH50	10.1	21.6	
	_	12.4	23.8	
60	-SH25	11.4	22.8	3.0
	-SH50	10.4	21.8	
	_	12.3	23.8	
65	-SH25	11.3	22.8	3.0
	-SH50	10.3	21.8	
	_	12.2	23.8	
70	-SH25	11.2	22.8	3.0
	-SH50	10.2	21.8	
	_	12.2	23.8	
75	-SH25	11.2	22.8	3.0
	-SH50	10.2	21.8	
	_	12.4	24.2	
80	-SH25	11.5	23.3	3.0
	-SH50	10.5	22.3	

## ■ Rear removal space

Angle θ	L (mm)	
50	105.8	
55	112.8	
60	110.3	
65	110.7	
70	119.6	
75	122.7	
80	128.7	



### ■ Spring force & Return force

### ●Coil spring specification

Amada		Spring	Return force			
Angle	Initial load				Final load	
· ·	N	kgf	N	kgf	N	kgf
50	260.8	26.6	2950.3	301.1	3871.1	395.0
55	401.4	41.0	2809.8	286.7	4011.0	409.3
60	394.4	40.2	2760.8	281.7	4354.7	444.4
65	388.9	39.7	2722.0	277.8	4841.3	494.0
70	381.9	39.0	2673.3	272.8	5497.9	561.0
75	447.3	45.6	2534.7	258.6	6234.5	636.2
80	442.8	45.2	2390.9	244.0	7383.3	753.4

### ●Gas spring specification

	Al.a	Spring	force	Return force		
4	Angle	Final	load			
		N	kgf	N	kgf	
Ξ	50	2886.9	294.6	3786.8	386.4	
	55	2715.2	277.1	3872.7	395.2	
	60	2950.4	301.1	4655.0	475.0	
	65	2820.8	287.8	5017.7	512.0	
	70	2691.2	274.6	5535.0	564.8	
	75	2856.0	291.4	7030.0	717.3	
	80	2758.3	281.5	8526.2	870.0	