

Aerial Cam Unit

Grade	Working Force [kN (tonf)]		Travel	Catalog No.	W	θ 5° increments	Spring Type PS
	1,000,000 strokes	300,000 strokes					
Sky	27.9 (2.8)	37.2 (3.8)	Long	VACSL	58	00~50	GK NGK
Yellow	42.6 (4.3)	56.8 (5.8)		VACYL			ISO
Pink	58.8 (6.0)	78.9 (8.0)		VACPL			ISOL
Black	78.9 (8.0)	98.0 (10.0)		VACBL			GK NGK

ISO, ISOL: Coil Spring GK: Gas Spring (KALLER)
NGK: Without Gas Spring Parts for spring assembly are included.

Order	Catalog No.	W	—	θ	—	PS	—	Option
	VACSL	58	—	10	—	ISOL		
	VACYL	58	—	10	—	NGK	—	SC45 — WC64
	VACPL	58	—	10	—	GK	—	NF — WC64 — K

Option	Option Code	Specification
	NF	Nitrogen gas not charged.
	SC	Mount face length is extended from 1 to 60 mm in increments of 1 mm.
	WC	The width of the mount face is extended to 64 mm.
	S	Lock plate attached.
	K	Key attached.

Refer to page 388 for key specification.

Spring Force & Return Force

● Gas Spring Sky

θ	Spring Force		Return Force	
	Final Load			
	N	kgf	N	kgf
00	2959	302	3933	401
05	2959	302	3930	401
10	2959	302	3927	401
15	2959	302	3924	400
20	2959	302	3921	400
25	2959	302	3917	400
30	2959	302	3914	399
35	2959	302	3910	399
40	2959	302	3907	399
45	2937	300	3874	395
50	2850	291	3755	383

● Gas Spring Yellow, Pink, Black

θ	Spring Force		Return Force	
	Final Load			
	N	kgf	N	kgf
00	5040	514	6680	682
05	5040	514	6677	681
10	5040	514	6674	681
15	5040	514	6671	681
20	5040	514	6668	680
25	5040	514	6664	680
30	5040	514	6661	680
35	5040	514	6657	679
40	5040	514	6653	679
45	4998	510	6594	673
50	4831	493	6369	650

● Coil Spring

ISO Sky, Yellow, Pink

θ	Spring Force				Return Force	
	Initial Load		Final Load			
	N	kgf	N	kgf	N	kgf
00	190	19.4	2086	213	2781	284
05	190	19.4	2086	213	2778	283
10	190	19.4	2086	213	2775	283
15	190	19.4	2086	213	2772	283
20	190	19.4	2086	213	2768	282
25	190	19.4	2086	213	2765	282
30	190	19.4	2086	213	2761	282
35	190	19.4	2086	213	2758	281
40	190	19.4	2086	213	2754	281
45	190	19.4	2044	209	2695	275
50	190	19.4	1875	191	2469	252

● Coil Spring

ISOL Sky, Yellow, Pink

θ	Spring Force				Return Force	
	Initial Load		Final Load			
	N	kgf	N	kgf	N	kgf
00	113	11.6	1247	127	1674	171
05	113	11.6	1247	127	1671	171
10	113	11.6	1247	127	1668	170
15	113	11.6	1247	127	1665	170
20	113	11.6	1247	127	1662	170
25	113	11.6	1247	127	1658	169
30	113	11.6	1247	127	1655	169
35	113	11.6	1247	127	1651	168
40	113	11.6	1247	127	1647	168
45	113	11.6	1222	125	1610	164
50	113	11.6	1121	114	1474	150

Cam Travel

θ	Travel mm
00	28.9
05	31.9
10	35.0
15	38.2
20	41.5
25	45.0
30	48.8
35	53.1
40	57.9
45	62.0
50	62.2

Aerial Cam Unit

Weight*1

θ	Total Weight kg	Cam Slider Weight kg	Tool Weight*2 kg
00	10.1	3.2	3.3
05	10.1	3.2	3.3
10	10.1	3.2	3.3
15	10.0	3.2	3.4
20	9.9	3.2	3.5
25	9.8	3.2	3.6
30	9.7	3.2	3.8
35	9.6	3.2	4.0
40	9.6	3.2	4.2
45	9.5	3.2	4.6
50	9.8	3.2	5.4

*1 This is the weight without SC and WC option. Reduce tool weight when with SC and WC option since the slider gets heavier.

*2 Tool weight is estimated value. Allowable tool weight varies depending on press speed.

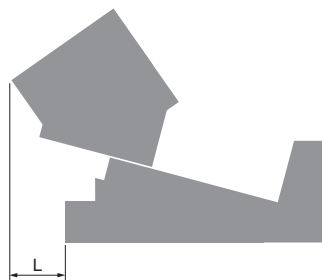
Rear Removal Space

Coil Spring

θ	L mm
00	2.3
05	9.1
10	15.6
15	22.6
20	30.2
25	39.6
30	48.3
35	55.2
40	61.4
45	66.7
50	73.2

Gas Spring

θ	L mm
00	0.0
05	0.0
10	5.2
15	11.5
20	18.5
25	27.3
30	35.6
35	42.2
40	48.1
45	53.3
50	59.7

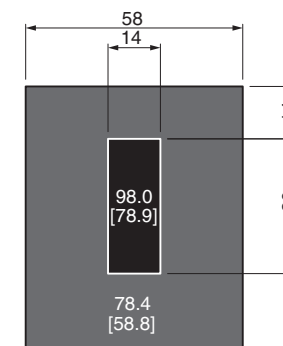
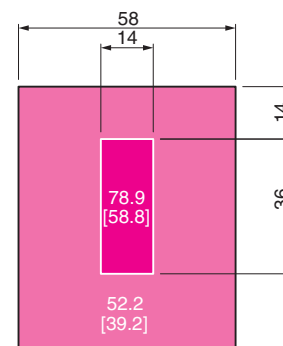
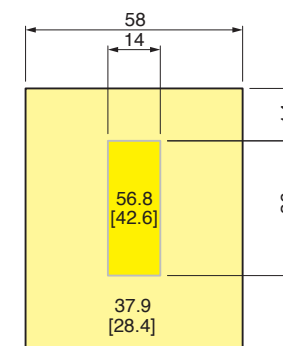
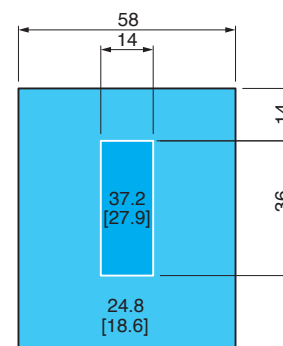


Working Force Distribution Diagram

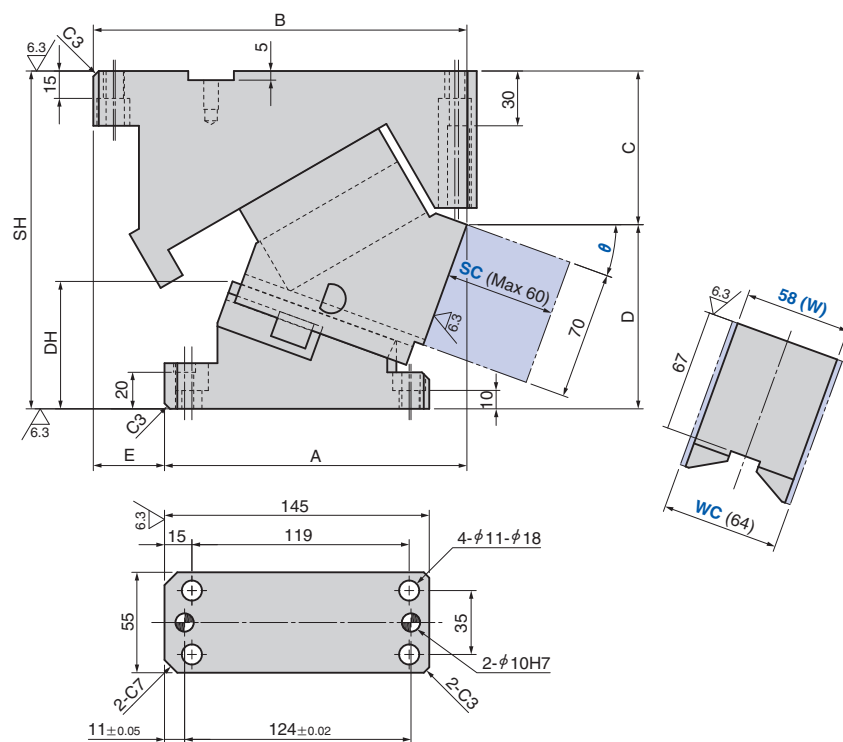
The working forces indicated in the mount face distribution diagram are reached by putting the tooling center of gravity within each area for the following pictures.

: Working force (kN) allowed for up to 300,000 strokes

[]: Working force (kN) allowed for up to 1,000,000 strokes



Technical drawing of a mechanical part, likely a bracket or plate, showing dimensions and tolerances. The part is rectangular with rounded ends and a central slot. Dimensions include overall length 64.5 ± 0.05 , overall width 58 , and a central slot width of 25 . Tolerances are specified for various dimensions, such as 12 ± 0.05 , 64.5 ± 0.05 , and $HJ1 \pm 0.02$. Surface finish symbols are present on the top and bottom surfaces. The part is labeled with $2C5$, $2-\phi 10H7$, $4-\phi 11-\phi 18$, $HK1$, and HL .



θ	A	B	C	D	E	SH	HL	HK1	HJ1	DH
00	138.00	197.00	66.00	119.00	59		195	172	173	45.5
05	145.75	200.75	70.74	114.26	55		200	177	178	51.0
10	152.26	203.26	75.36	109.64	51		205	182	183	56.8
15	159.54	203.54	79.84	105.16	44		205	182	183	63.0
20	165.62	204.62	84.16	100.84	39	185	210	187	188	69.8
25	171.51	203.51	88.31	96.69	32		210	187	188	76.9
30	176.21	201.21	92.26	92.74	25		210	187	188	84.4
35	180.76	198.76	96.00	89.00	18		210	187	188	92.2
40	185.16	195.16	100.53	84.47	10		210	187	188	99.2
45	189.44	189.44	103.82	81.18	0		207	184	185	107.3
50	193.61	177.61	115.87	74.13	-16	190	202	179	180	111.4

0°	5°	10°	15°	20°
25°	30°	35°	40°	45°
50°				