

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					
White	27.9 (2.8)	37.2 (3.8)	Short	VACWS	58	00~80	ISO ISOL

ISO, ISOL: Coil Spring



Order

Catalog No.	W	—	θ	—	PS	—	Option
VACWS	58	—	10	—	ISO		
VACWS	58	—	10	—	ISOL	—	SC60
VACWS	58	—	10	—	ISO	—	WC64
VACWS	58	—	10	—	ISOL	—	SC45 — WC64



Option

Option Code	Specification
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.

Spring Force & Return Force

● Coil Spring

ISO

θ	Spring Force				Return Force	
	Initial Load		Final Load			
	N	kgf	N	kgf	N	kgf
00	230	23.4	2067	211	2756	281
05	402	41.0	2067	211	2753	281
10	517	52.7	2067	211	2750	281
15	198	20.2	1844	188	2452	250
20	263	26.9	1844	188	2449	250
25	329	33.6	1844	188	2446	250
30	329	33.6	1844	188	2442	249
35	329	33.6	1844	188	2438	249
40	329	33.6	1844	188	2435	248
45	329	33.6	1844	188	2431	248
50	329	33.6	1844	188	2427	248
55	402	41.0	1895	193	2713	277
60	329	33.6	1844	188	2917	298
65	309	31.5	1851	189	3302	337
70	275	28.1	1833	187	3780	386
75	345	35.2	1839	188	4537	463
80	466	47.6	1798	183	5570	568

● Coil Spring

ISOL

θ	Spring Force				Return Force	
	Initial Load		Final Load			
	N	kgf	N	kgf	N	kgf
00	137	14.0	1235	126	1657	169
05	240	24.5	1235	126	1655	169
10	309	31.5	1235	126	1652	169
15	118	12.0	1100	112	1471	150
20	157	16.0	1100	112	1468	150
25	197	20.1	1100	112	1464	149
30	197	20.1	1100	112	1461	149
35	197	20.1	1100	112	1457	149
40	197	20.1	1100	112	1453	148
45	197	20.1	1100	112	1450	148
50	197	20.1	1100	112	1446	148
55	240	24.5	1132	116	1618	165
60	197	20.1	1100	112	1737	177
65	184	18.8	1106	113	1969	201
70	164	16.7	1094	112	2251	230
75	206	21.0	1098	112	2701	276
80	278	28.4	1073	110	3315	338

Cam Travel

θ	Travel mm
00	20.6
05	20.6
10	21.0
15	21.2
20	22.1
25	23.0
30	25.0
35	27.1
40	29.6
45	32.4
50	35.8
55	45.3
60	46.0
65	47.3
70	49.7
75	50.2
80	57.6

Aerial Cam Unit

Weight*1

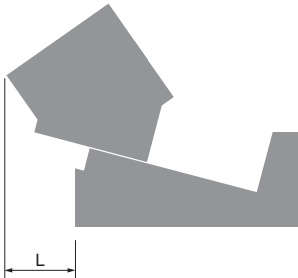
θ	Total Weight kg	Cam Slider Weight kg	Tool Weight*2 kg
00	8.7	3.2	3.3
05	8.6	3.2	3.3
10	8.5	3.2	3.3
15	8.3	3.2	3.4
20	8.2	3.2	3.5
25	8.2	3.2	3.6
30	8.1	3.2	3.8
35	8.0	3.2	4.0
40	7.8	3.2	4.2
45	7.9	3.2	4.6
50	7.9	3.2	5.4
55	8.7	3.6	6.2
60	9.1	4.1	5.7
65	9.5	4.4	5.4
70	9.7	4.7	5.1
75	10.1	5.0	4.8
80	10.6	5.3	4.5

*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

θ	L mm
00	24.8
05	30.9
10	35.6
15	41.7
20	49.1
25	58.4
30	66.3
35	74.6
40	83.3
45	89.3
50	96.7
55	91.6
60	97.6
65	103.3
70	106.5
75	113.6
80	120.3

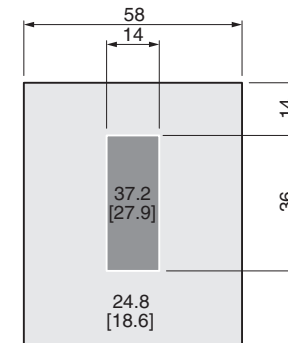


Working Force Distribution Diagram

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.

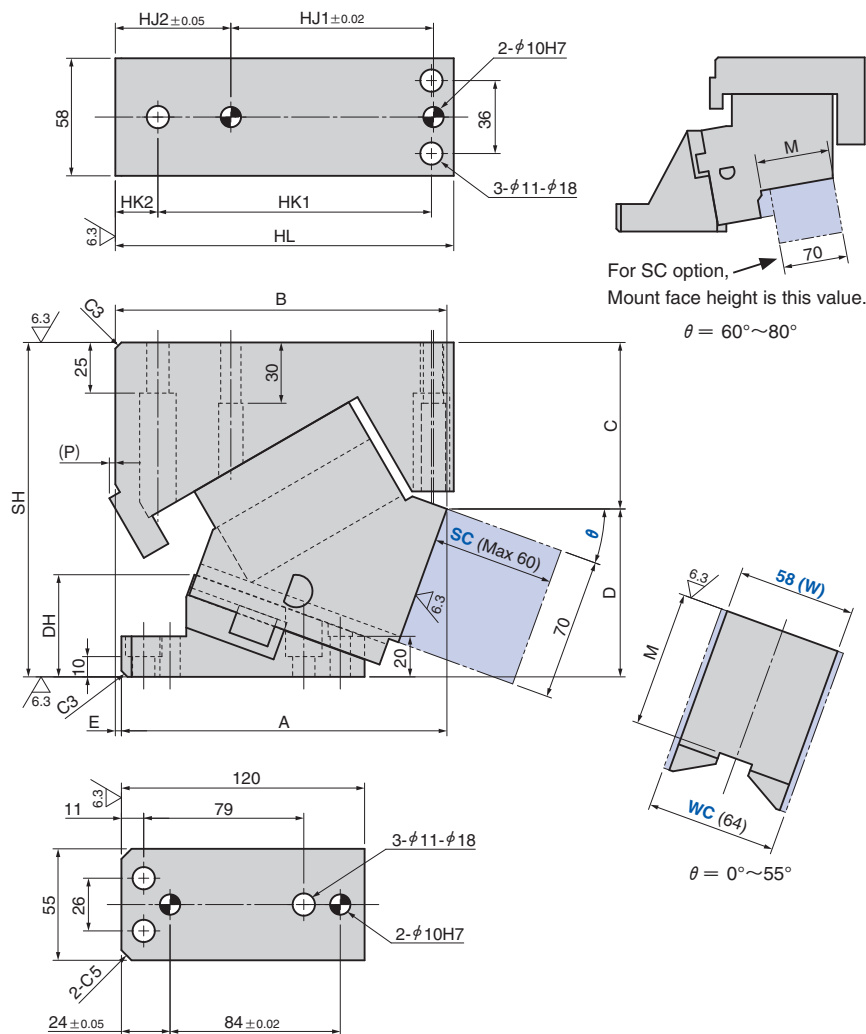
: Working force (kN) allowed for up to 300,000 strokes

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



Aerial Cam Unit

VACWS58



θ	A	B	C	D	E	SH	HL	HK1	HK2	HJ1	HJ2	DH	M	P
00	135.00	162.00	64.00	101.00	27		164	140	13	107	47	27.9		1.5
05	141.75	163.75	68.74	96.26	22		168	140	17	107	51	32.7		2.1
10	148.26	165.26	73.36	91.64	17		169	140	18	107	52	38.3		2.0
15	154.54	163.54	77.84	87.16	9		166	135	20	100	56	44.0		3.7
20	160.62	163.62	82.16	82.84	3		167	135	21	100	57	50.4		2.9
25	165.51	161.51	86.31	78.69	-4	165	167	130	26	95	62	57.2	67	3.1
30	170.21	159.21	90.26	74.74	-11		167	130	26	95	62	64.4		3.0
35	173.76	154.76	94.00	71.00	-19		165	130	24	95	60	71.9		3.8
40	178.16	148.16	98.53	66.47	-30		157	125	21	85	62	78.6		5.6
45	182.44	142.44	103.82	61.18	-40		157	125	21	85	62	84.4		5.3
50	185.61	133.61	109.87	55.13	-52		153	125	17	80	63	89.3		7.0
55	194.29	145.29	117.22	62.78	-49	180	163	125	27	80	73	90.0	82	
60	204.74	142.74	119.87	65.13	-62	185	163	125	27	80	73	95.0	85	
65	211.09	137.09	123.64	66.36	-74		163	125	27	80	73	98.0	83	6.0
70	218.70	133.70	125.70	64.30	-85	190	163	125	27	80	73	100.0	78	
75	229.42	132.42	128.92	61.08	-97		163	125	27	80	73	103.0	80	
80	236.42	128.42	131.63	58.37	-108		163	125	27	80	73	110.0	80	

Cam Diagram

