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# CAM UNIT – SWFCD AERIAL CAM UNIT

## ■ 구성부품표

No.	명칭	개수	재질, 비고
①	캠홀더	1	FC250
②	캠슬라이드	1	FC250 오일레스가공
③	캠드라이버	1	SF700
④	슬라이드 키퍼	2	S45C 오일레스가공
⑤	강제 리턴 플레이트	1	S45C
⑥	스프링	1	SWOSC-V AL27-100
⑦	스토퍼	2	우레탄 Ø8x10
⑧	육각렌치볼트	5	SCM435 M8x15
⑨	스토퍼 플레이트	1	SS400
⑩	육각렌치볼트	2	SCM 435 별표참조
⑪	스프링 스톱퍼	1	SS400
⑫	육각렌치볼트	2	SCM435 M8x25
⑬	스페이서	1	SS400
⑭	육각렌치볼트	1	SCM 435 M6x12

\* ⑪ 이후는가공각 50, 60용 부품.

θ	스트로크 S	A	B	C	D	E	F	중량 (kg)
00	19.2	105.00	150.00	-	43.00	21	7	5.0
05	21.2	111.10	153.10	-	45.21	26		4.9
10	23.3	116.55	153.55	-	47.83	31		4.8
15	25.4	121.32	153.32	-	50.82	36		
20	27.6	126.38	153.38	-	55.10	40		
30	32.5	136.28	153.28	-	63.31	49		
40	38.5	145.14	149.14	21	71.93	58	4.9	
50	46.6	152.92	143.92	34	79.43	68	12	5.0
60	60.0	159.69	150.69	34	90.28	74		5.1

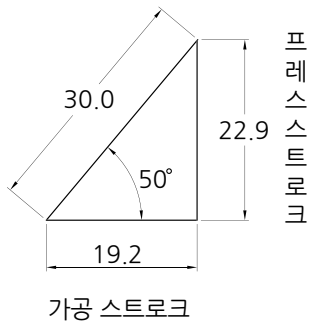
가공력 kN(tonf)	스프링 힘 N(kgf)		전고	전장 max	Catalog No.	(W)	θ
	min	max					
14.7 (1.5)	147.1 (15.0)	882.6 (90.0)	125	175	SWFCD	52	00
							05
							10
							15
							20
							30
							40
				184			50
60							

규격표기 방법    Catalog No.    (W) - θ  
SWFCD    52 - 15

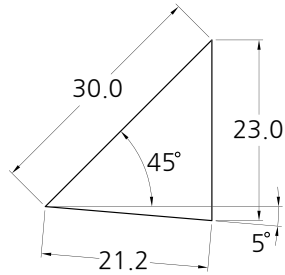
\* kgf=0.101972N



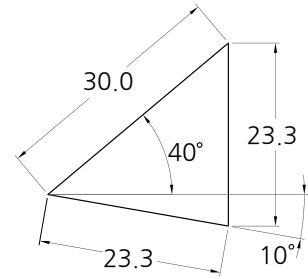
00°



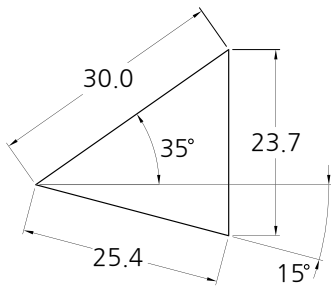
05°



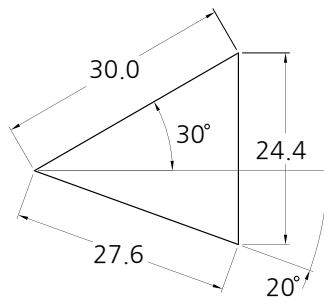
10°



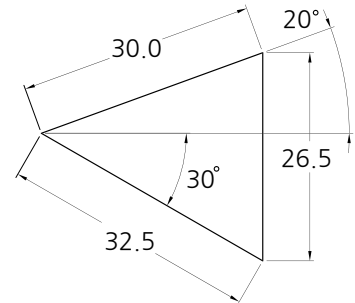
15°



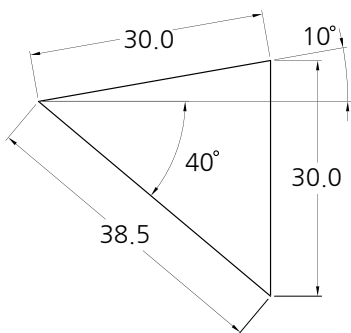
20°



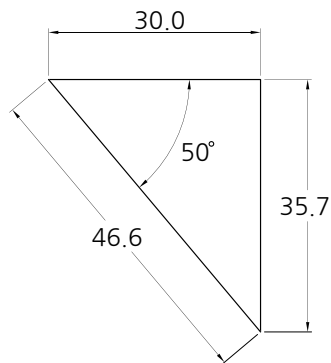
30°



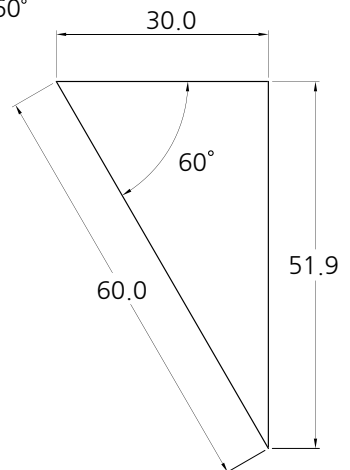
40°



50°



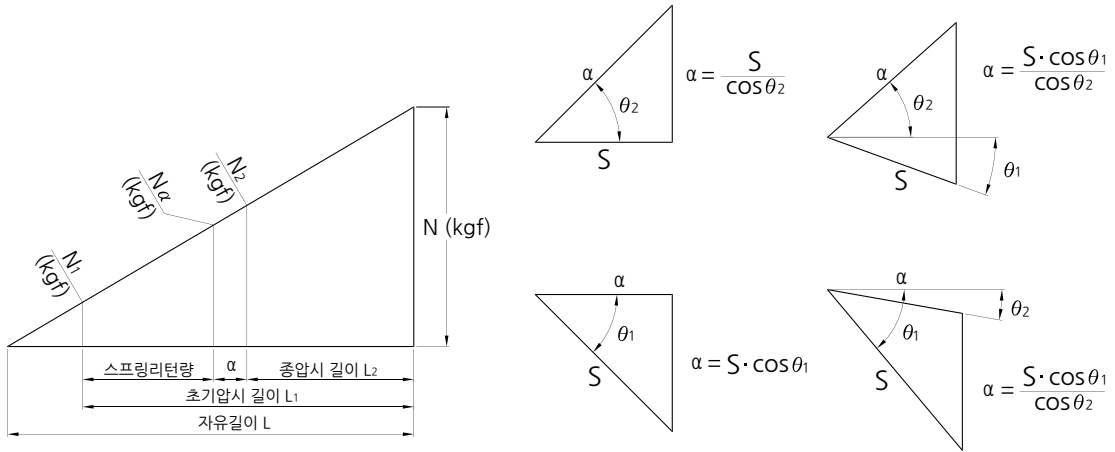
60°





# CAM UNIT – SWFCD AERIAL CAM UNIT

## ■ SWFCD52 스프링도면 (편치 리턴량 5mm 일때의 하중 Nα)



Catalog No.	W	θ	스트로크 S	사용스프링		
				규격	스프링 정수	개수
SWFCD	52	00	19.2	AL27-100	2.50	1
		05	21.2			
		10	23.3			
		15	25.4			
		20	27.6			
		30	32.5			
		40	38.5			
		50	46.6			
		60	60.0			

\* 스프링 정수 kgf/mm

Catalog No.	W	θ	스트로크 S	L1	N1(kgf)	α	Nα (kgf)	L2	N2(kgf)
SWFCD	52	00	19.2	94	147.1 (15.0)	7.8	691.4 (70.5)	64	882.6 (90.0)
		05	21.2			7.0	711.0 (72.5)		
		10	23.3			6.4	725.7 (74.0)		
		15	25.4			5.9	737.5 (75.2)		
		20	27.6			5.4	750.2 (76.5)		
		30	32.5			4.6	769.8 (78.5)		
		40	38.5			3.9	786.5 (80.2)		
		50	46.6			3.2	804.1 (82.0)		
		60	60.0			2.5	820.8 (83.7)		

\* kgf=0.101972N





# CAM UNIT – SWFSA AERIAL CAM UNIT

## ■ 구성부품표

No.	명칭	개수	재질, 비고
①	캠홀더	1	S45C
②	캠슬라이드	1	FC250
③	슬라이드 플레이트	1	FCS 오일레스가공
④	캠드라이버	1	SS400
⑤	가이드바	1	동합금 오일레스가공
⑥	스프링	1	SWOSC-V AM22-L
⑦	강제 리턴 플레이트	2	S45C
⑧	슬라이드 가이드	1	동합금 오일레스가공
⑨	육각렌치볼트	2	SCM435 M10x35
⑩	육각렌치볼트	2	SCM435 M6x10
⑪	육각렌치볼트	1	SCM435 M6x10
⑫	육각렌치볼트	4	SCM435 M10x25
⑬	육각렌치볼트	2	SCM435 M8x20
⑭	육각렌치 낮은머리볼트	2	SCM435 M8x18
⑮	암나사 노크핀	2	SCM435 Ø8x30
⑯	스프링 워셔	3	S50CM M8용

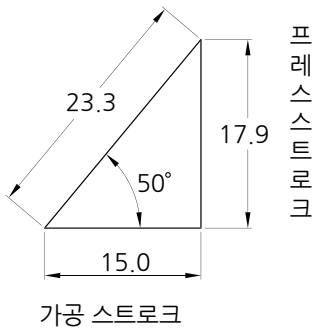
θ	스트로크 S	A	B	D	E	F	h	중량 (kg)
00	15.0	115.00	195.00	67.50	46.50	23	15	9.7
05	15.6	123.04	198.04	68.29	52.80			9.2
10	15.6	130.99	195.99	69.77	59.02			9.2
15	17.0	133.77	198.77	71.95	64.91			8.8
20	18.4	141.34	196.34	74.79	70.46			8.3
30	17.4	150.58	190.58	85.39	77.36			8.2
40	20.6	160.79	183.29	95.35	85.43			8.3
50	23.3	169.07	174.07	99.37	99.42	8.4		
60	31.5	187.61	162.61	118.08	98.15	20	10	8.8

가공력 kN(tonf)	스프링 힘 N(kgf)		전고	전장 max	Catalog No.	(W)	θ
	min	max					
14.7 (1.5)	106.9(10.9)	790.4(80.6)	180	225	SWFSA	50	00
		761.0(77.6)					220
	99.0(10.1)	758.1(77.3)		210			10
							15
							20
	80.4(8.2)	760.0(77.5)		235			30
	73.5(7.5)	759.0(77.4)					40
80.4(8.2)	760.0(77.5)	50					
			60				

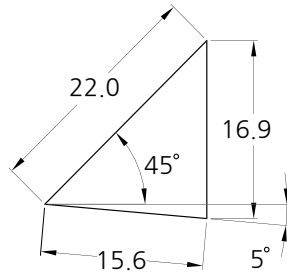
\* kgf=0.101972N



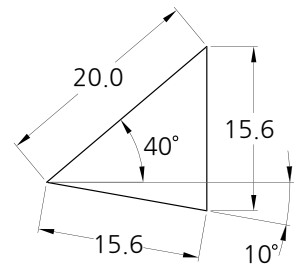
00°



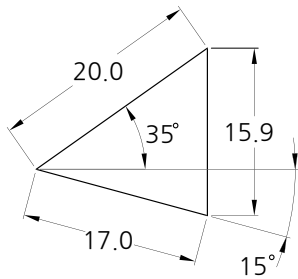
05°



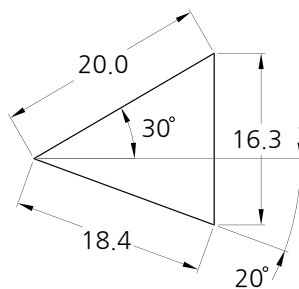
10°



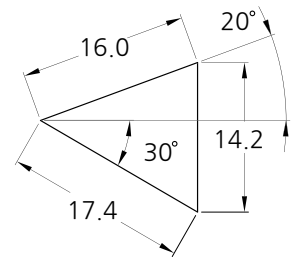
15°



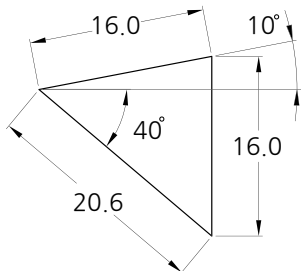
20°



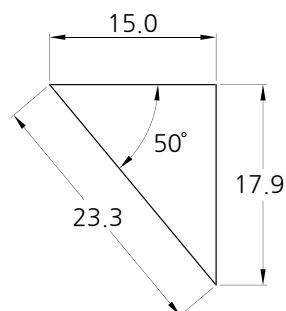
30°



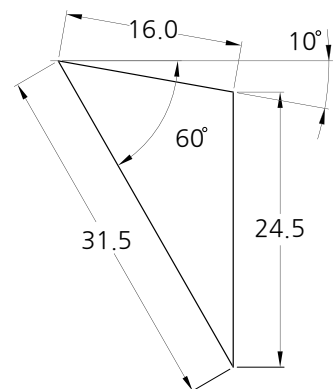
40°



50°



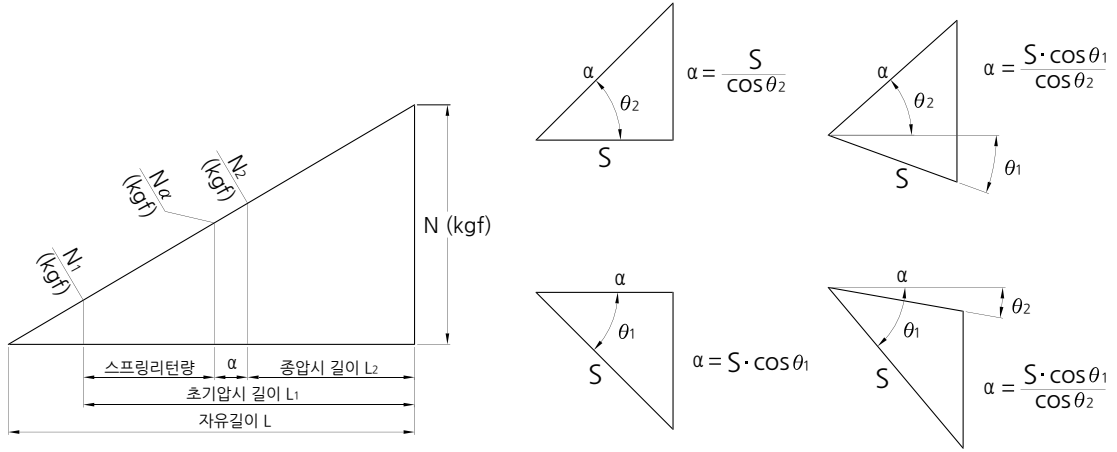
60°







■ SWFSA50 스프링도면 (편치 리턴량 5mm 일때의 하중 Na)



Catalog No.	W	θ	스트로크 S	사용스프링		
				규격	스프링 정수	개수
SWFSA	50	00	15.0	AM22-100	3.03	1
		05	15.6			
		10	15.6			
		15	17.0	AM22-90	3.36	
		20	18.4			
		30	17.4	AM22-70	4.33	
		40	20.6			
		50	23.3			
		60	31.5	AM22-70	4.33	

\* 스프링 정수 kgf/mm

Catalog No.	W	θ	스트로크 S	L1	N1(kgf)	α	Na (kgf)	L2	N2(kgf)
SWFSA	50	00	15.0	96.4	106.9(10.9)	7.8	559.0(57.0)	73.4	790.4(80.6)
		05	15.6			7.0	553.1(56.4)	74.4	761.0(77.6)
		10	15.6			6.4	547.2(55.8)	67	758.1(77.3)
		15	17.0	5.9	563.9(57.5)				
		20	18.4	5.4	580.6(59.2)	52.1	760.0(77.5)		
		30	17.4	4.6	564.9(57.6)				
		40	20.6	3.9	594.3(60.6)				
		50	23.3	63.4	73.5(7.5)	3.2	612.9(62.5)	48.4	759.0(77.4)
		60	31.5	68.1	80.4(8.2)	2.5	654.1(66.7)	52.1	760.0(77.5)

\* kgf=0.101972N





# CAM UNIT – SWFSA AERIAL CAM UNIT

## ■ 구성부품표

No.	명칭	개수	재질, 비고
①	캠홀더	1	FCD450
②	캠슬라이드	1	FC250 오일레스가공
③	슬라이드 블록	1	FC250 오일레스가공
④	캠드라이버	1	SS400
⑤	슬라이드 플레이트	2	동합금
⑥	스프링	1	SWOSC-V SWS31-L
⑦	강제 리턴 플레이트	2	S45C
⑧	슬라이드 가이드	1	동합금 오일레스가공
⑨	스토퍼 플레이트	1	SS400
⑩	스프링 블록	1	SS400
⑪	스토퍼	1	우레탄
⑫	육각렌치볼트	4	SCM435 M8x16
⑬	육각렌치볼트	1	SCM435 M6x10
⑭	육각렌치볼트	2	SCM435 M10x20
⑮	육각렌치볼트	2	SCM435 M10x30
⑯	육각렌치볼트	2	SCM435 M8x20
⑰	육각렌치볼트	1	SCM435 M8x20
⑱	육각렌치 낮은머리볼트	2	SCM435 M8x18
⑲	스프링 워셔	1	S50CM M6용
⑳	워셔	2	S45C M8용
㉑	스프링 플러그	2	SAE1065 NH10 (부속품)

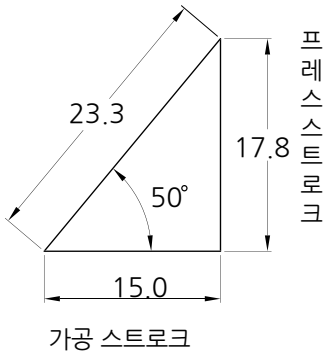
θ	스트로크 S	A	B	D	E	F	G	H	h	J	중량 (kg)	
00	15.0	100.00	170.00	60.00	58.0	25	30	26.5	15	30	10.7	
05	15.6	105.36	170.36	67.22	57.1						10.4	
10	15.6	112.57	175.07	69.88	61.1						10.2	
15	17.0	119.10	174.10	72.92	65.3			22		15	22	9.9
20	18.4	127.41	172.41	76.28	70.2							9.9
30	19.5	136.78	171.78	83.71	78.0							9.6
40	23.1	143.07	163.07	91.63	84.5	15	22	10	9.5			
50	24.9	151.22	156.22	104.50	91.1				9.9			
60	32.0	161.29	146.29	116.78	103.1				11.1			

가공력 kN(tonf)	스프링 힘 N(kgf)		전고	전장 max	Catalog No.	(W)	θ
	min	max					
14.7 (1.5)	213.8(21.8)	784.5(80.0)	175	190	SWFSA	65	00
	250.1(25.5)			185			05
	224.6(22.9)			182.5			10
		175		15			
		172.4		20			
		171.8		30			
	196.1(20.0)	783.5(79.9)		170			40
	260.9(26.6)			185			50

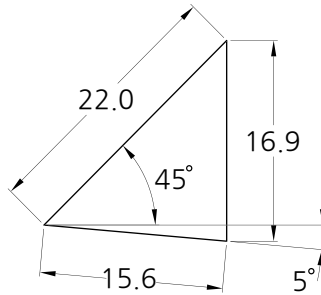
\* kgf=0.101972N



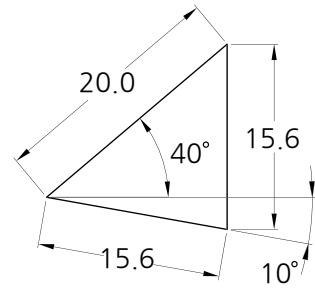
00°



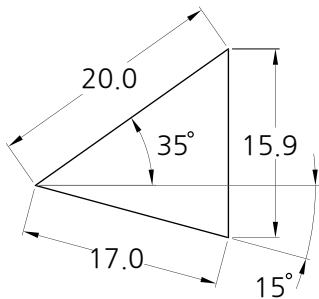
05°



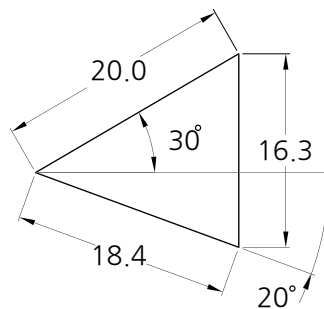
10°



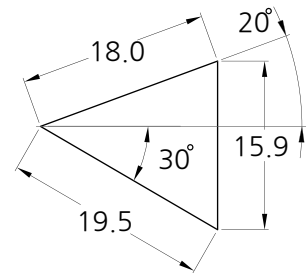
15°



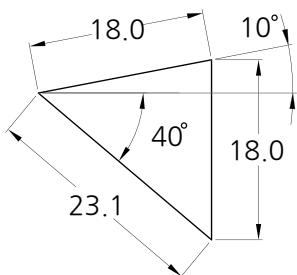
20°



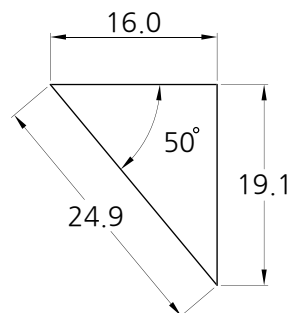
30°



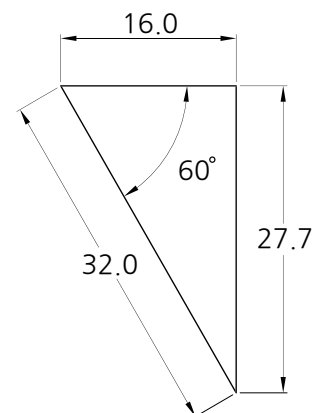
40°



50°

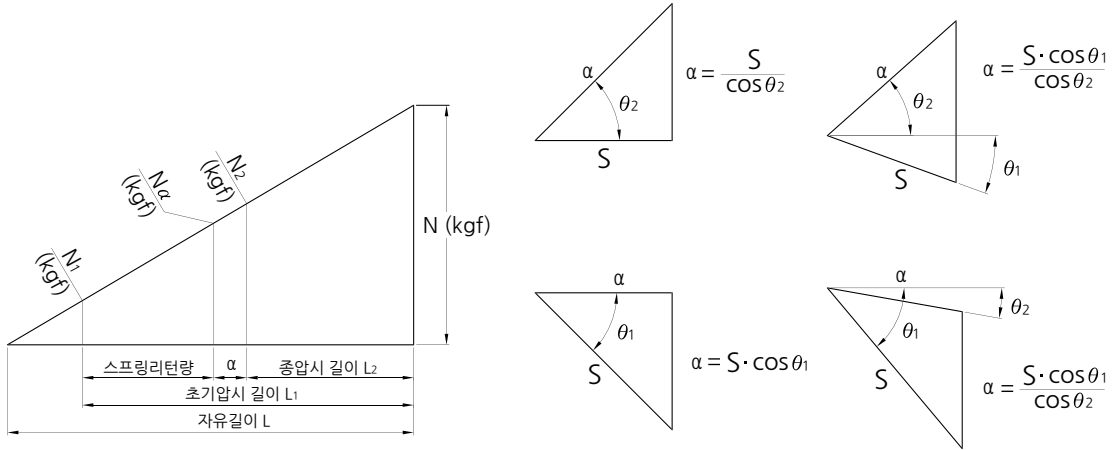


60°





■ SWFSA65 스프링도면 (편치 리턴량 5mm 일때의 하중 Na)



Catalog No.	W	θ	스트로크 S	사용스프링		
				규격	스프링 정수	개수
SWFSA	65	00	15.0	SWS31-80	2.50	1
		05	15.6			
		10	15.6	SWS31-70	2.86	
		15	17.0			
		20	18.4	SWS31-60	3.33	
		30	19.5			
		40	23.1			
		50	24.9			
60	32.0					

\* 스프링 정수 kgf/mm

Catalog No.	W	θ	스트로크 S	L1	N1(kgf)	α	Na (kgf)	L2	N2(kgf)
SWFSA	65	00	15.0	71.3	213.8(21.8)	7.8	593.3(60.5)	48	784.5(80.0)
		05	15.6	69.8	250.1(25.5)	7.0	612.9(62.5)		
		10	15.6	62.0	224.6(22.9)	6.4	606.0(61.8)	42	785.5(80.1)
		15	17.0			5.9	619.8(63.2)		
		20	18.4	54.0	196.1(20.0)	5.4	634.5(64.7)	36	783.5(79.9)
		30	19.5			4.6	633.5(64.6)		
		40	23.1	52.0	260.9(26.6)	3.9	656.1(66.9)	36	783.5(79.9)
		50	24.9			3.2	678.6(69.2)		
60	32.0			2.5	702.2(71.6)				

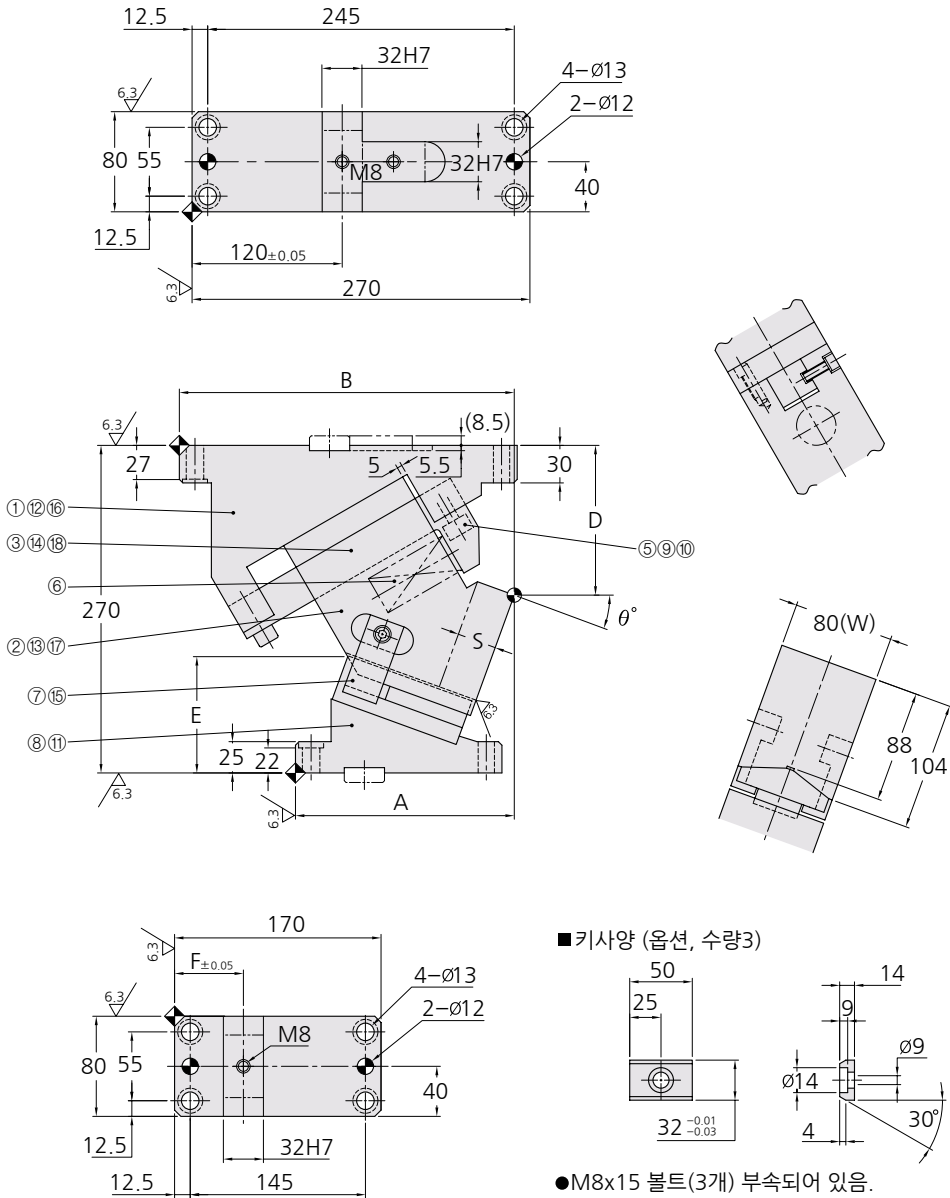
\* kgf=0.101972N



# CAM UNIT – SWFSA AERIAL CAM UNIT

## SWFSA 80

\* 본 도면은 SWFSA80-20입니다.



캠도면, 스프링 도면은 P.196~197 참조.  
부품표는 P.195 참조.

옵션코드	사양	규격표기 방법	Catalog No.	(W)	-	θ	-	옵션코드
K	전용키 있음. (본체에는 세팅되지 않음)		SWFSA	80	-	30	-	K



# CAM UNIT – SWFSA AERIAL CAM UNIT

## ■ 구성부품표

No.	명칭	개수	재질, 비고
①	캠 홀더	1	FC250
②	캠슬라이드	1	FC250
③	슬라이드 플레이트	1	FSC 오일레스가공
④	캠드라이버	1	FC250
⑤	가이드바	1	S45C 오일레스가공
⑥	스프링	1	SWOSC-V AF35-L
⑦	강제 리턴 플레이트	2	S45C
⑧	슬라이드 가이드	1	동합금 오일레스가공
⑨	육각렌치볼트	2	SCM435 M12x50
⑩	육각렌치볼트	2	SCM435 M12x40
⑪	육각렌치볼트	2	SCM435 M8x20
⑫	육각렌치볼트	1	SCM435 M8x20
⑬	육각렌치볼트	4	SCM435 M10x25
⑭	육각렌치볼트	2	SCM435 M10x25
⑮	스프링 워셔	2	S50CM M8용
⑯	스프링 워셔	1	S50CM M8용
⑰	암나사 노크핀	2	SUJ2 Ø8x30

θ	스트로크 S	A	B	D	E	F	중량 (kg)
00	30.2	142.00	277.00	110.00	68.9	65	34
05	30.5	153.32	278.32	115.67	73.3		
10	31.1	164.54	274.54	117.32	82.4		
15	33.9	172.58	277.58	119.95	91.0	55	32
20	32.3	178.34	273.34	123.52	99.2		
25	35.0	188.75	268.75	128.03	106.7		
30	34.7	196.73	261.73	133.42	113.7	60	30
35	37.7	203.20	258.20	139.66	119.9		
40	39.9	210.09	254.09	146.70	125.5		
45	43.7	215.34	245.34	154.49	130.2	50	29
50	46.7	220.87	225.87	162.97	134.2		
55	53.8	229.64	229.64	172.07	137.4		
60	61.1	228.58	208.58	181.73	139.7	60	30
65	70.9	233.67	203.67	191.87	141.1		

가공력 kN(tonf)	스프링 힘 N(kgf)		전고	전장 max	Catalog No.	(W)	θ	
	min	max						
39.2 (4.0)	165.7(16.9)	764.9(78.0)	270	305	SWFSA	80	00	
	216.7(22.1)			295			05	
	255.0(26.0)			280			10	
				277.58			15	
	273.34			20				
	231.4(23.6)	769.8(78.5)		270			270	25
	277.5(28.3)							30
	292.2(29.8)							35
	307.9(31.4)							40
								45
	292.2(29.8)							50
								55
	290							60
	300	65						

\* kgf=0.101972N



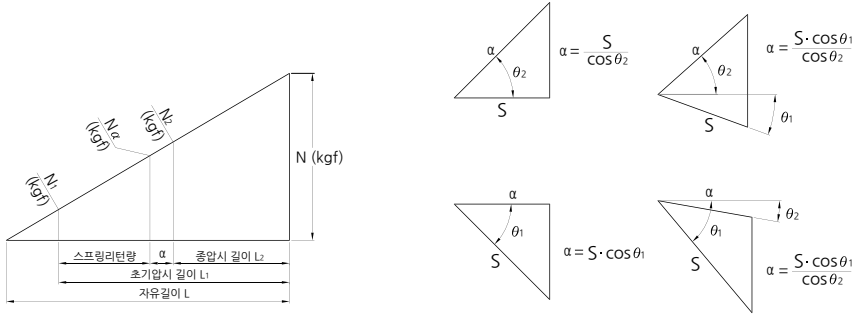
<p>00°</p> <p>프레스스트로크 가공스트로크</p>	<p>05°</p>	<p>10°</p>
<p>15°</p>	<p>20°</p>	<p>25°</p>
<p>30°</p>	<p>35°</p>	<p>40°</p>
<p>45°</p>	<p>50°</p>	<p>55°</p>
<p>60°</p>	<p>65°</p>	





# CAM UNIT – SWFSA AERIAL CAM UNIT

## ■ SWFSA80 스프링도면 (편치 리턴량 5mm 일때의 하중 Na)



Catalog No.	W	θ	스트로크 S	사용스프링		
				규격	스프링 정수	개수
SWFSA	80	00	30.2	AF35-150	1.30	1
		05	30.5			
		10	31.1			
		15	33.9			
		20	32.3			
		25	35.0	AF35-125	1.57	
		30	34.7			
		35	37.7			
		40	39.9			
		45	43.7			
		50	46.7			
		55	53.8			
		60	61.1			
		65	70.9			

\* 스프링 정수 kgf/mm

Catalog No.	W	θ	스트로크 S	L1	N1(kgf)	α	Na (kgf)	L2	N2(kgf)
SWFSA	80	00	30.2	137	165.7(16.9)	7.8	665.9(67.9)	90	764.9(78.0)
		05	30.5	133	216.7(22.1)	7.0	675.7(68.9)		
		10	31.1	130	255.0(26.0)	6.4	683.5(69.7)		
		15	33.9			5.7	692.3(70.6)		
		20	32.3	110	231.4(23.6)	5.4	686.5(70.0)		
		25	35.0			5.0	692.3(70.6)		
		30	34.7	107	277.5(28.3)	4.6	699.2(71.3)		
		35	37.7			4.2	705.1(71.9)		
		40	39.9	106	292.2(29.8)	3.9	710.0(72.4)		
		45	43.7			3.5	715.9(73.0)		
		50	46.7	105	307.9(31.4)	3.2	720.8(73.5)		
		55	53.8	106	292.2(29.8)	2.9	724.7(73.9)		
		60	61.1			2.5	731.6(74.6)		
		65	70.9			2.2	735.5(75.0)		

\* kgf=0.101972N





■ 구성부품표(①~⑤)

No.	명칭	개수	재질, 비고
①	캠홀더	1	FC250
②	캠슬라이드	1	FC250 오일레스가공
③	업퍼 플레이트	2	FC250 오일레스가공
④	캠드라이버	1	FC250 오일레스가공
⑤	스토퍼 플레이트	1	SS400

■ 구성부품표(⑥~⑭)

No.	명칭	재질	마운트폭					
			마운트폭 65	개수	마운트폭 100	개수	마운트폭 200	개수
⑥	스프링	SWOSC-V	AL30-L	1	AM30-L	2	AL30-L	4
⑦	강제 리턴 플레이트	S45C	-	2	-	2	-	2
⑧	스프링 가이드 핀	SCM435	Ø14x50	1	Ø14x50	2	Ø14x50	4
⑨	육각렌치볼트	SCM435	M12x35	4	M16x45	4	M16x45	8
⑩	육각렌치볼트	SCM435	M12x30	4	M12x35	6	M12x35	6
⑪	육각렌치볼트	SCM435	M8x25	2	M8x25	2	M8x25	2
⑫	육각렌치볼트	SCM435	M8x20	2	M8x25	2	M10x25	2
⑬	스프링 워셔	S50CM	M8용	2	M8용	2	M10용	2
⑭	스토퍼	우레탄	-	-	Ø22x23	2	Ø22x23	4

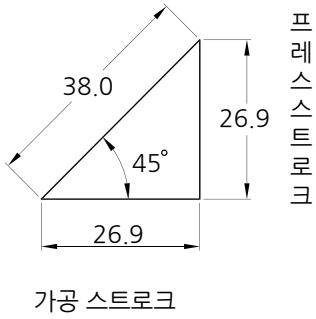
θ	스트로크 S	A	B	D	E	F	G	K	중량 (kg)
00	26.9	110.94	185.94	56.57	73.43	80	55	38.2	20
10	31.6	126.80	196.80	67.58	83.54		40		21
20	33.7	138.10	198.10	74.31	100.82		10		20
30	33.5	143.64	193.64	89.52	111.03		15		19
40	42.9	148.72	188.72	99.62	120.00				17
50	54.4	160.00	190.00	110.00	130.00	90	10	37.9	20
60	50.0	170.00		115.00		100		29.5	18
70	58.5	190.00		130.00		110		20.2	20

가공력 kN(tonf)	스프링 힘 N(kgf)		전고	전장 max	Catalog No.	(W)	θ			
	min	max								
19.6 (2.0)	165.7(16.9)	1067.9(108.9)	210	207.9	SWFK	65	00			
	237.3(24.2)	1139.5 (116.2)		218.8			10			
	308.9(31.5)			220.1			20			
23.5 (2.4)	427.6(43.6)			215.6			30			
	356.0(36.3)			210.7			40			
29.4 (3.0)	308.9(31.5)	1036.6(105.7) 888.5(90.6)		212						50
	292.2(30.2)									60
			70							

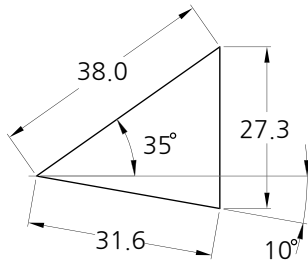
\* kgf=0.101972N



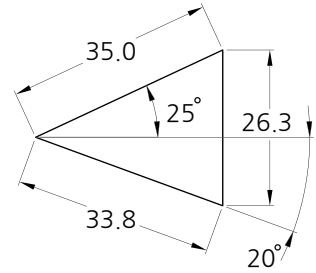
00°



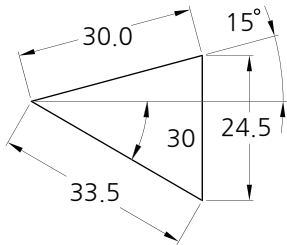
10°



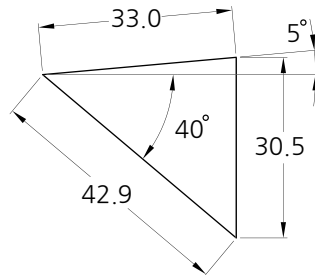
20°



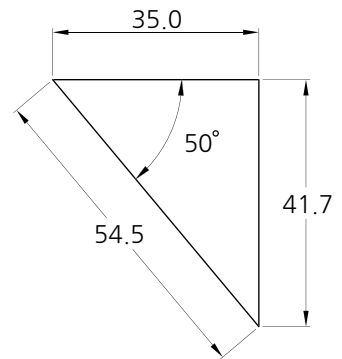
30°



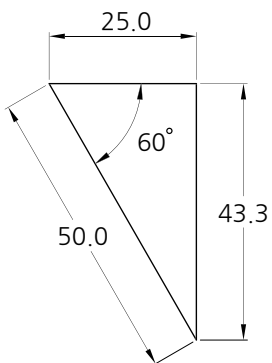
40°



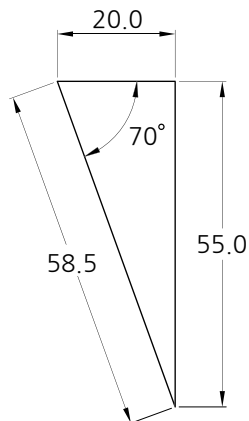
50°



60°



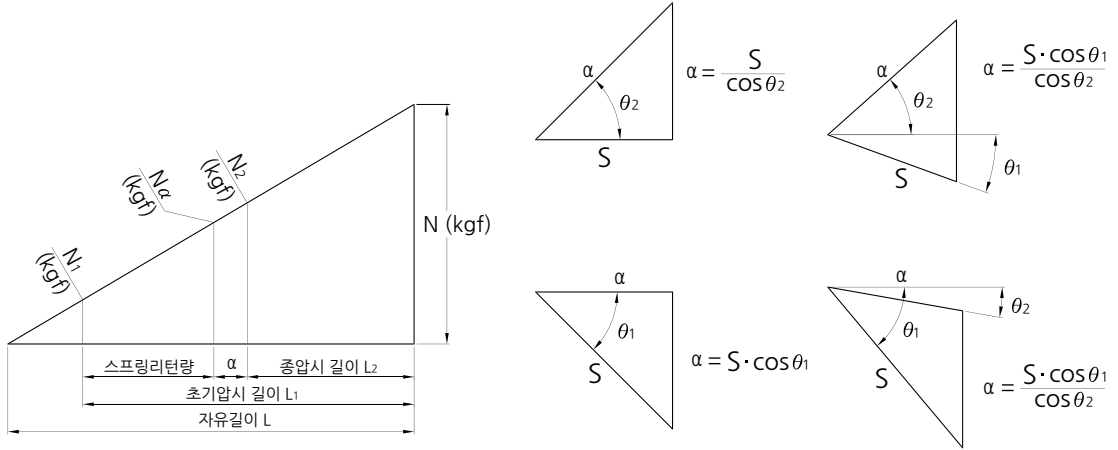
70°





# CAM UNIT – SWFK AERIAL CAM UNIT

## ■ SWFK 65 스프링도면 (편치 리턴량 5mm 일때의 하중 Na)



Catalog No.	W	θ	스트로크 S	사용스프링		
				규격	스프링 정수	개수
SWFK	65	00	26.9	AL30-125	2.42	1
		10	31.6			
		20	33.7			
		30	33.5			
		40	42.9			
		50	54.4			
		60	50.0	AL30-100	3.01	
		70	58.5			

\* 스프링 정수 kgf/mm

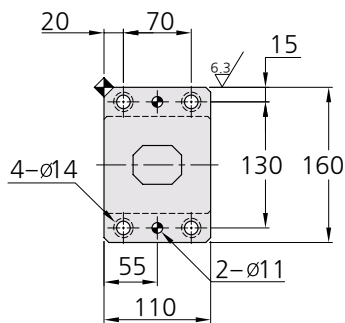
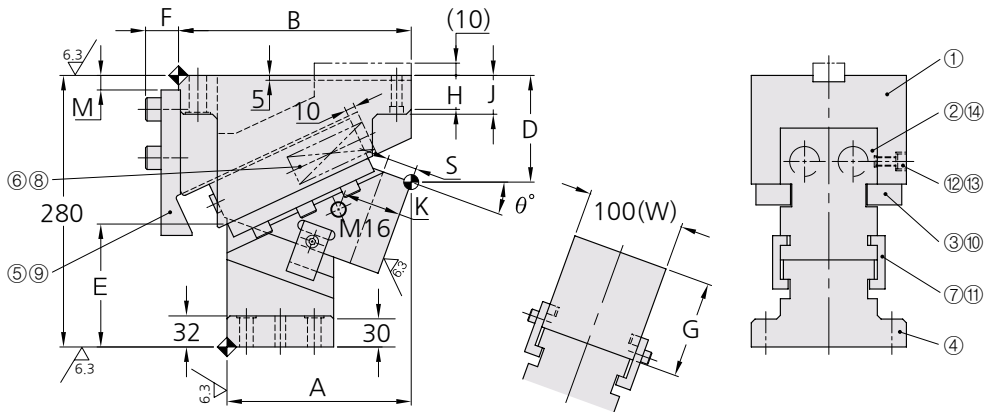
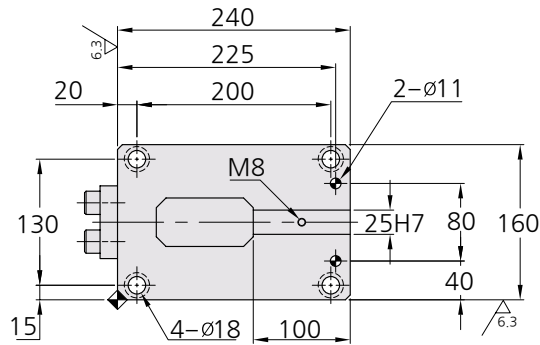
Catalog No.	W	θ	스트로크 S	L1	N1(kgf)	α	Nα (kgf)	L2	N2(kgf)
SWFK	65	00	26.9	118	165.7(16.9)	7.1	899.3(91.7)	80	1067.9(108.9)
		10	31.6	115	237.3(24.2)	6.0	997.3(101.7)	77	1139.5(116.2)
		20	33.7	112	308.9(31.5)	5.2	1016.0(103.6)		
		30	33.5	107	427.6(43.6)	4.5	1032.6(105.3)		
		40	42.9	110	356.0(36.3)	3.8	1049.3(107.0)		
		50	54.4	112	308.9(31.5)	3.2	1064.0(108.5)		
		60	50.0	90	296.2(30.2)	2.5	962.0(98.1)		
		70	58.5	90		1.7	838.5(85.5)	70	888.5(90.6)

\* kgf=0.101972N

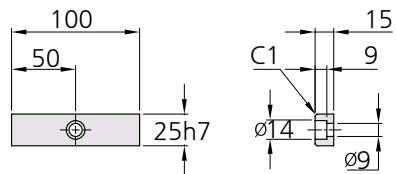


SWFK 100

\* 본 도면은 SWFK100-20입니다.



■키사양(옵션, 수량1)



● M8X20 볼트(1개) 부착되어 있음.

캠도면, 스프링 도면은 P.204~205 참조.  
부품표는 P.199 참조.



# CAM UNIT – SWFK AERIAL CAM UNIT

θ	스트로크 S	A	B	D	E	F	G	H	J	K	M	중량 (kg)
00	28.3	180.0	240.0	85.0	95	33	100	38	40	38.2	55	49
10	33.3			90.0	120.2						35	
20	30.9	190.0		110.0	130	34					15	45
30	33.5	210.0		115.0	150	33	120	10	43			
40	39.0			120.0	160				40			
50	46.7	230.0		120.0	170	32	140	60	80	37.9	10	41.5
60	60.0	240.0		145.0	180					29.5		42
70	58.5									20.2		

가공력 kN(tonf)	스프링 힘 N(kgf)		전고	전장 max	Catalog No.	(W)	θ
	min	max					
44.1 (4.5)	314.8(32.1)	2833.1(288.9)	280	273	SWFK	100	00
	147.1(15.0)	3089.1(315.0)		274			10
	176.5(18.0)	2824.3(288.0)		273			20
272				30			
				40			
49.0 (5.0)	551.1(56.2)	2853.7(291.0)					50
							60
				70			

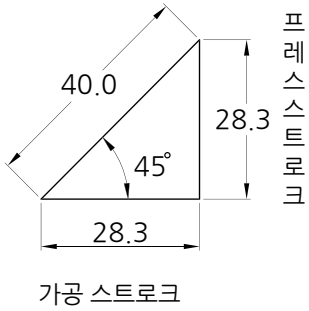
\* kgf=0.101972N

옵션코드	사양
K	전용키 있음. (본체에는 세팅되지 않음)

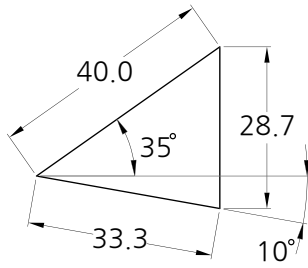
규격표기 방법    Catalog No.    (W)    -    θ    -    옵션코드  
                                  SWFK            100    -    60    -    K



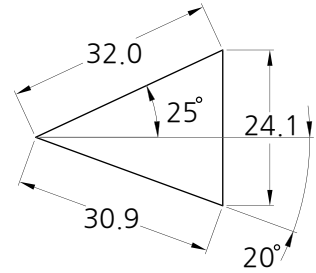
00°



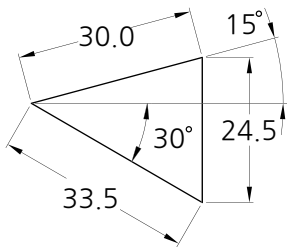
10°



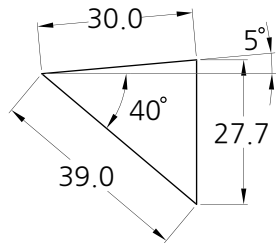
20°



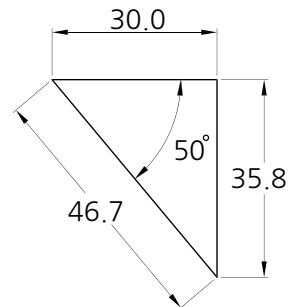
30°



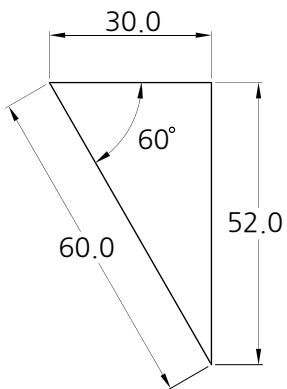
40°



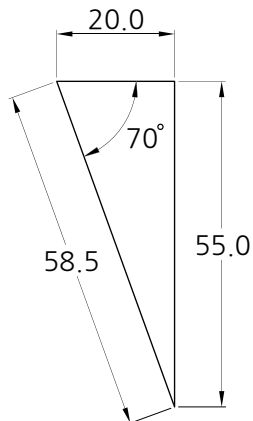
50°



60°



70°

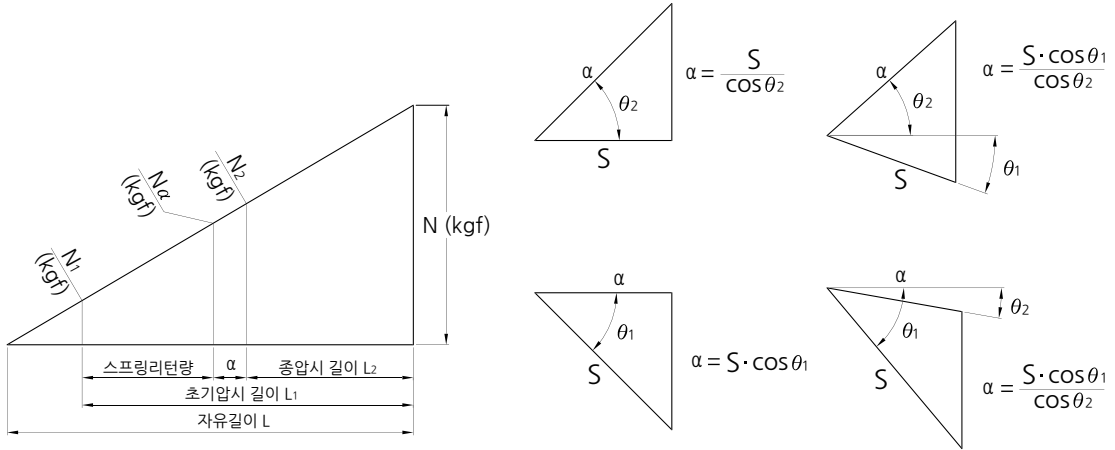






# CAM UNIT – SWFK AERIAL CAM UNIT

■SWFK 100 스프링도면 (편치 리턴량 5mm 일때의 하중 Na)



Catalog No.	W	θ	스트로크 S	사용스프링		
				규격	스프링 정수	개수
SWFK	100	00	28.3	AM30-175	3.21	2
		10	33.3	AM30-150	3.75	
		20	30.9	AM30-125	4.50	
		30	33.5			
		40	39.0			
		50	46.7			
		60	60.0	AM30-100	5.62	
		70	58.5			

\* 스프링 정수 kgf/mm

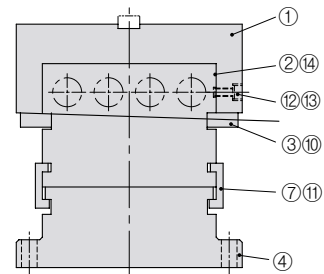
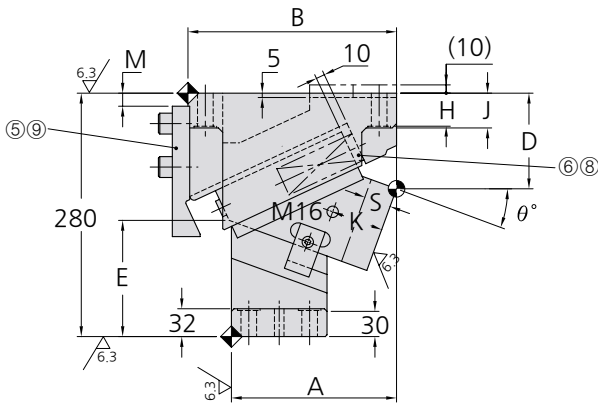
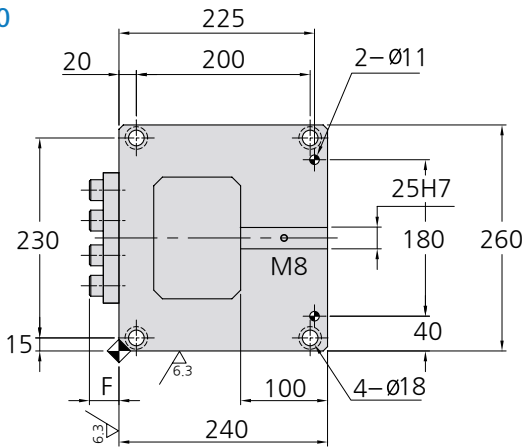
Catalog No.	W	θ	스트로크 S	L1	N1(kgf)	α	Na (kgf)	L2	N2(kgf)
SWFK	100	00	28.3	170	314.8(32.1)	7.1	2385.9(243.3)	130	2833.1(288.9)
		10	33.3	148	147.1(15.0)	6.0	2647.8(270.0)	108	3089.1(315.0)
		20	30.9	123	176.5(18.0)	5.2	2541.9(259.2)	91	3000.8(306.0)
		30	33.5			4.5	2427.1(247.5)	93	2824.3(288.0)
		40	39.0			3.8	2488.9(253.8)		
		50	46.7			3.2	2541.9(259.2)		
		60	60.0	95	551.1(56.2)	2.5	2603.7(265.5)	74	2853.7(291.0)
		70	58.5			1.7	2666.4(271.9)		

\* kgf=0.101972N

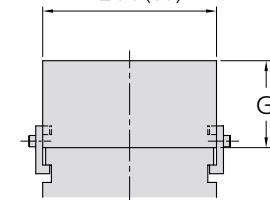


SWFK 200

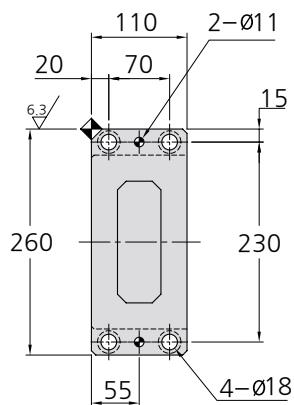
\* 본 도면은 SWFK200-20입니다.



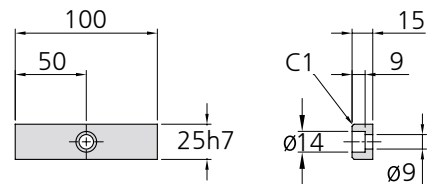
200(W)



사용면



■ 키사양(옵선, 수량1)



● M8X20 볼트(1개) 부속되어 있음.

캠도면, 스프링 도면은 P.208~209 참조.  
부품표는 P.199 참조.



# CAM UNIT – SWFK AERIAL CAM UNIT

θ	스트로크 S	A	B	D	E	F	G	H	J	K	M	중량 (kg)
00	28.3	180.0	240.0	90.0	90	33	100	38	40	38.2	60	88
10	33.3				120.2						35	74
20	30.9	130		15	76							
30	33.5	150		78								
40	39.0	210.0		115.0	160	70						
50	46.7	230.0		120.0	170	72						
60	60.0	240.0		145.0	180	32	140	60	80	37.9	10	75
70	58.5		20.2	71								

가공력 kN(tonf)	스프링 힘 N(kgf)		전고	전장 max	Catalog No.	(W)	θ
	min	max					
98.1 (10.0)	627.6(64.0)	5658.4(577.0)	280	273	SWFK	200	00
	294.2(30.0)	6178.2(630.0)					10
	353.0(36.0)	5648.6(576.0)					20
30							
40							
50							
117.7 (12.0)	1102.3(112.4)	5511.3(562.0)		272			60
			70				

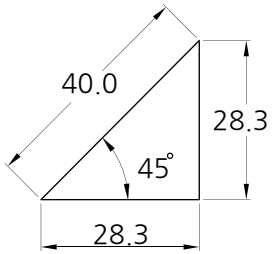
\* kgf=0.101972N

옵션코드	사양
K	전용키 있음. (본체에는 세팅되지 않음)

규격표기 방법    Catalog No.    (W)    -    θ    -    옵션코드  
SWFK    200    -    00    -    K



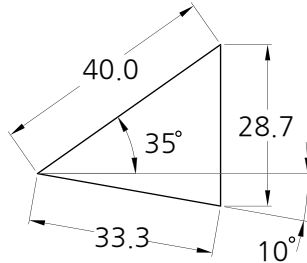
00°



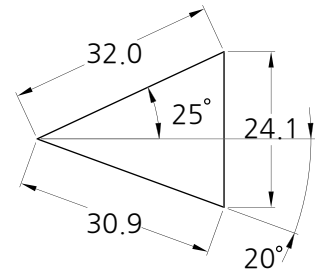
프레스스트로크

가공 스트로크

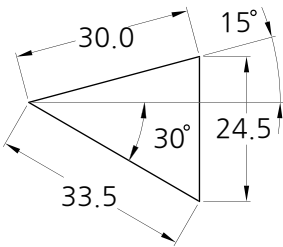
10°



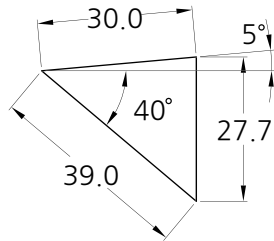
20°



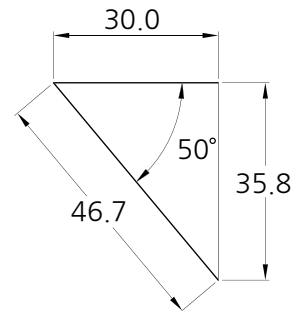
30°



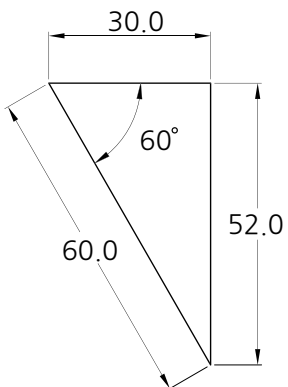
40°



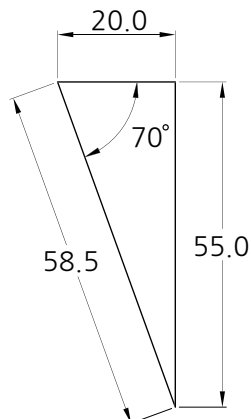
50°



60°

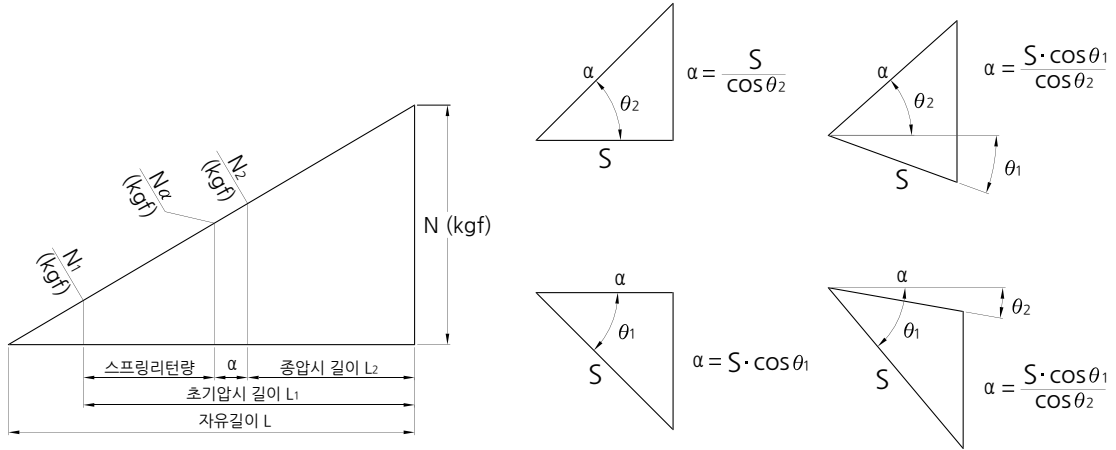


70°





■ SWFK 200 스프링도면 (펀치 리턴량 5mm 일때의 하중 Na)



Catalog No.	W	θ	스트로크 S	사용스프링		
				규격	스프링 정수	개수
SWFK	200	00	28.3	AM30-175	3.21	4
		10	33.3	AM30-150	3.75	
		20	30.9	AM30-125	4.50	
		30	33.5			
		40	39.0			
		50	46.7			
		60	60.0	AM30-100	5.62	
		70	58.5			

\* 스프링 정수 kgf/mm

Catalog No.	W	θ	스트로크 S	L1	N1(kgf)	α	Na (kgf)	L2	N2(kgf)
SWFK	200	00	28.3	170	627.6(64.0)	7.1	4764.1(485.8)	130	5658.4(577.0)
		10	33.3	148	294.2(30.0)	6.0	5295.6(540.0)	108	6178.2(630.0)
		20	30.9	123	353.0(36.0)	5.2	5083.7(518.4)	91	6001.6(612.0)
		30	33.5			4.5	4854.3(495.0)	93	5648.6(576.0)
		40	39.0			3.8	4977.8(507.4)		
		50	46.7			3.2	5083.7(518.4)		
		60	60.0	2.5	5207.3(531.0)	75	5511.3(562.0)		
		70	58.5	95	1102.3(112.4)			1.7	5136.7(523.8)

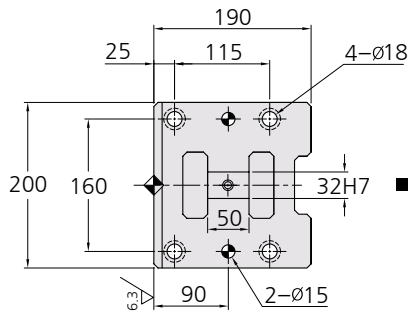
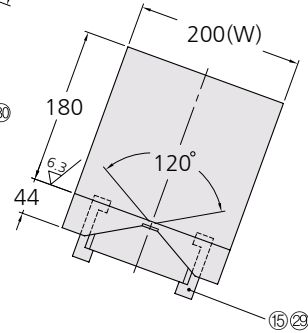
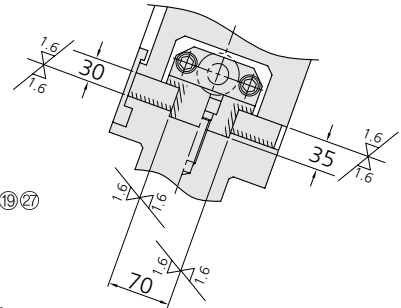
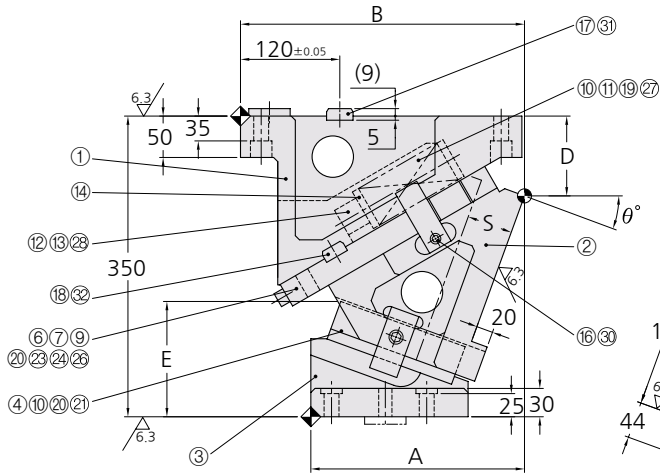
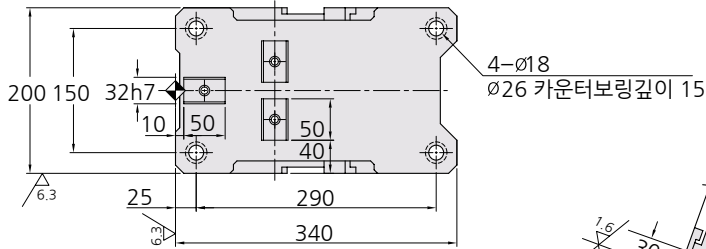
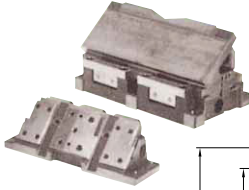
\* kgf=0.101972N



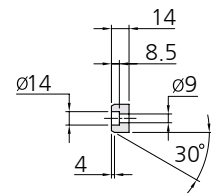
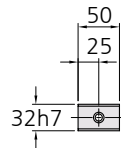
# CAM UNIT – SWFB AERIAL CAM UNIT

## SWFB 200

\* 본 도면은 SWFB200-20입니다.



■ 키사양(옵션, 드라이버측 수량1)



● M8x20 볼트(1개) 부착되어 있음.

캠도면, 스프링 도면은 P.214~215 참조.  
부품표는 P.211 참조.



# CAM UNIT – SWFB AERIAL CAM UNIT

## ■ 구성부품표(①~⑳)

No.	명칭	개수	재질, 비고
①	캠홀더	1	FC250
②	캠슬라이드	1	FC250
③	캠드라이버	1	FC250
④	슬라이드 가이드	1	SS400
⑤	슬라이드 플레이트	n	SS400
⑥	베이스 플레이트	n	S45C 오일레스가공
⑦	베이스 플레이트	2	S45C 오일레스가공
⑧	베이스 플레이트	n	S45C 오일레스가공
⑨	스토퍼 플레이트	n	SS400
⑩	스프링	n	SWOSC-V AL50-175
⑪	스프링 가이드 홀더	n	동합금 (SP2) 오일레스가공
⑫	스프링 가이드 플레이트	n	SS400
⑬	스프링 가이드 핀	n	S45C
⑭	스페이서	n	S45C
⑮	강제 리턴 플레이트	2	S45C
⑯	안전 플레이트	2	SS400
⑰	키 A	n	SS400
⑱	키 B	n	SS400
⑲	스토퍼	n	우레탄 Ø22x23
⑳	암나사 노크핀	6	SUJ2 Ø13x40

## ■ 구성부품표(㉑ ~ ㉓)

명칭	재질	NO.	마운트폭										적용
			200	개수	300	개수	400	개수	500	개수	600	개수	
육각렌치볼트 ㉑㉒㉓에서 마운트폭 300은 육각렌치 낮은머리볼트	SCM435	㉑	M12x35	4	M12x35	4	M12x35	4	M12x35	4	M12x35	4	④슬라이드 가이드용
		㉒	-	-	-	-	M10x25	4	M10x25	4	M10x20	4	⑤슬라이드 플레이트용
		㉓	M16x45	2	M16x45	2	M16x45	4	M16x45	4	M16x45	4	⑥베이스 플레이트용
		㉔	M16x45	4	M16x45	4	M16x45	4	M16x45	4	M16x45	4	⑦베이스 플레이트용
		㉕	-	-	-	-	M16x45	3	M16x45	4	M16x45	3	⑧베이스 플레이트용
		㉖	M12x40	2	M16x50	2	M12x40	4	M12x40	6	M16x50	4	⑨스토퍼 플레이트용
		㉗	M20x50	2	M20x50	4	M20x50	4	M20x50	6	M20x50	8	⑩스프링 가이드 홀더용
		㉘	M12x40	2	M16x50	2	M12x40	4	M12x40	6	M16x50	4	⑫스프링 가이드 플레이트용
		㉙	M10x25	2	M10x25	2	M10x25	2	M10x25	2	M10x25	2	⑬강제 리턴 플레이트용
		㉚	M8x20	2	M8x18	2	M8x20	2	M8x20	2	M8x20	2	⑭안전 플레이트용
		㉛	M8x20	4	M8x18	4	M8x20	4	M8x20	4	M8x20	4	⑰키 A용
㉜	M8x20	2	M8x18	2	M8x20	3	M8x20	4	M8x20	3	⑰키 A용		

## ■ 부품수

마운트폭	부품 NO.												
	⑤	⑥	⑧	⑨	⑩	⑪	⑫	⑬	⑭	⑰	⑱	⑲	
200	-	1	-	1	1	1	1	1	1	3	2	1	
300	-	1	-	1	2	1	1	2	2	3	2	3	
400	2	2	1	2	2	2	2	2	2	3	3	2	
500	2	2	2	3	3	3	3	3	3	3	4	3	
600	2	2	1	2	4	2	2	4	4	3	3	6	



# CAM UNIT – SWFB AERIAL CAM UNIT

θ	스트로크 S	A	B	D	E	중량 (kg)
00	38.6	175.00	313.00	58.00	104.0	89.1
05	42.6	195.64	320.64	64.34	112.6	88.5
10	46.7	216.08	331.08	72.47	120.7	88.3
15	50.9	236.17	336.17	82.37	128.2	87.8
20	55.3	255.76	340.76	94.00	135.1	87.0
30	65.1	292.83	347.83	112.25	156.4	
40	77.1	326.17	351.17	136.66	174.1	89.0
50	93.3	354.77	348.77	161.49	192.5	87.6
60	120.0	377.75	332.75	195.83	201.3	91.9

가공력 kN(tonf)	스프링 힘 N(kgf)		전고	전장 max	Catalog No.	(W)	θ				
	min	max									
117.7 (12.0)	235.4 (24.0)	3059.7 (312.0)	350	340	SWFB	200	00				
				340.8			05				
							347.8	10			
								351.2	15		
									354.8	20	
										385	30
											40
											50
60											

\* kgf=0.101972N

옵션코드	사양
K	전용키 있음. (본체에는 세팅되지 않음)

규격표기  
방법

Catalog No.	(W)	-	θ	-	옵션코드
SWFB	200	-	30	-	K

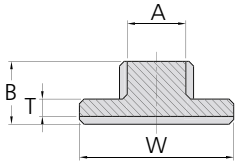




■ 드라이버 백업 유효 부길이

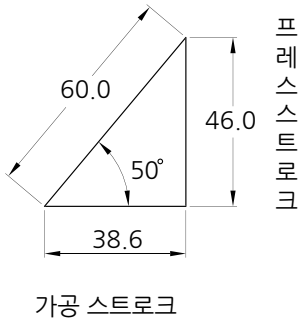
W	$\theta$	A	B	T
200	00	85	55	20
	05		65	
	10		74	
	15		84	
	20		90	

W	$\theta$	A	B	T
200	30	85	115	20
	40		140	
	50		150	
	60		150	

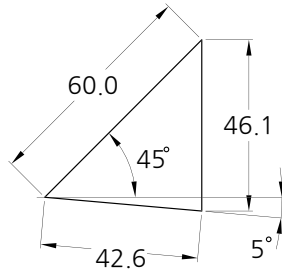




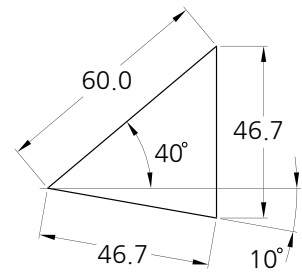
00°



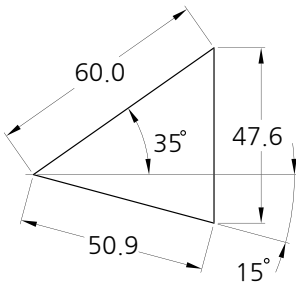
05°



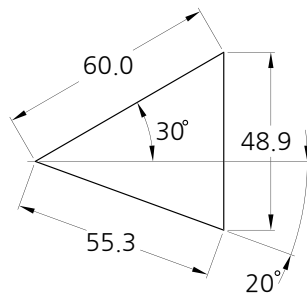
10°



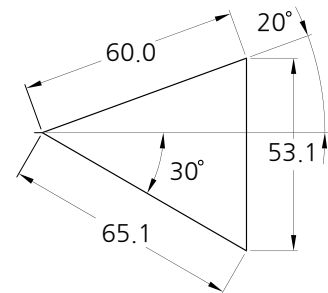
15°



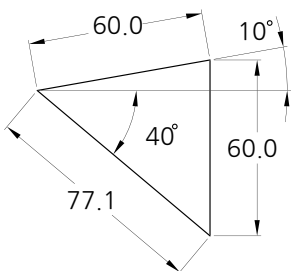
20°



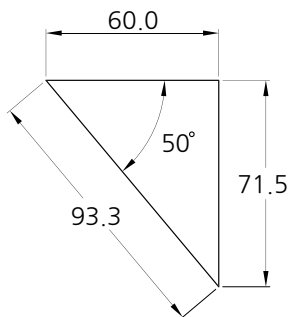
30°



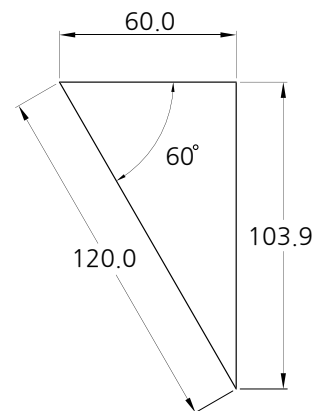
40°



50°



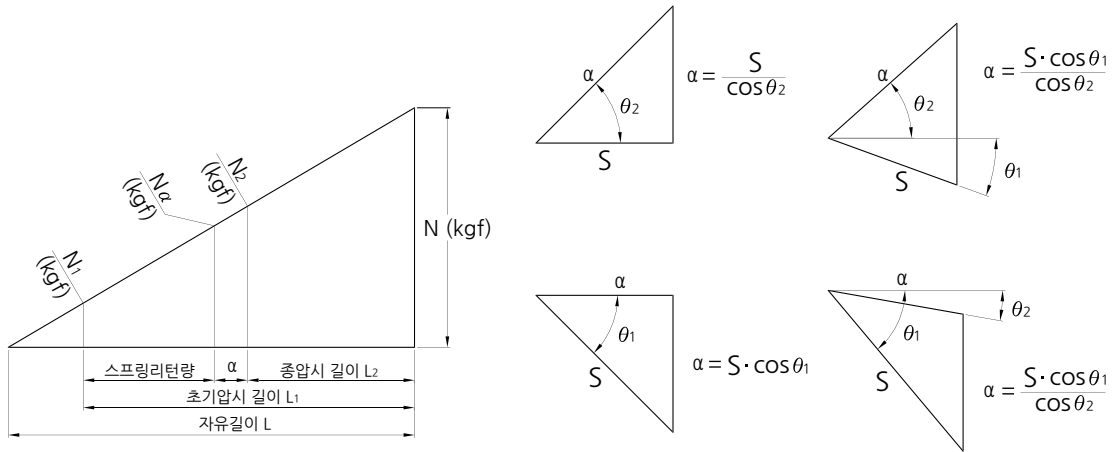
60°





# CAM UNIT – SWFB AERIAL CAM UNIT

## ■ SWFB 200 스프링도면 (펀치 리턴량5mm 일때의 하중 Na)



Catalog No.	W	θ	스트로크 S	사용스프링		
				규격	스프링 정수	개수
SWFB	200	00	38.6	AL50-175	4.80	1
		05	42.6			
		10	46.7			
		15	50.9			
		20	55.3			
		30	65.1			
		40	77.1			
		50	93.3			
		60	120.0			

\* 스프링 정수 kgf/mm

Catalog No.	W	θ	스트로크 S	L1	N1(kgf)	α	Na (kgf)	L2	N2(kgf)
SWFB	200	00	38.6	170	235.4(24.0)	7.8	2692.9(274.6)	110	3059.7(312.0)
		05	42.6			7.0	2730.2(278.4)		
		10	46.7			6.4	2758.6(281.3)		
		15	50.9			5.9	2782.1(283.7)		
		20	55.3			5.4	2805.7(286.1)		
		30	65.1			4.6	2842.9(289.9)		
		40	77.1			3.9	2876.3(293.3)		
		50	93.3			3.2	2908.6(296.6)		
		60	120.0			2.5	2942.0(300.0)		

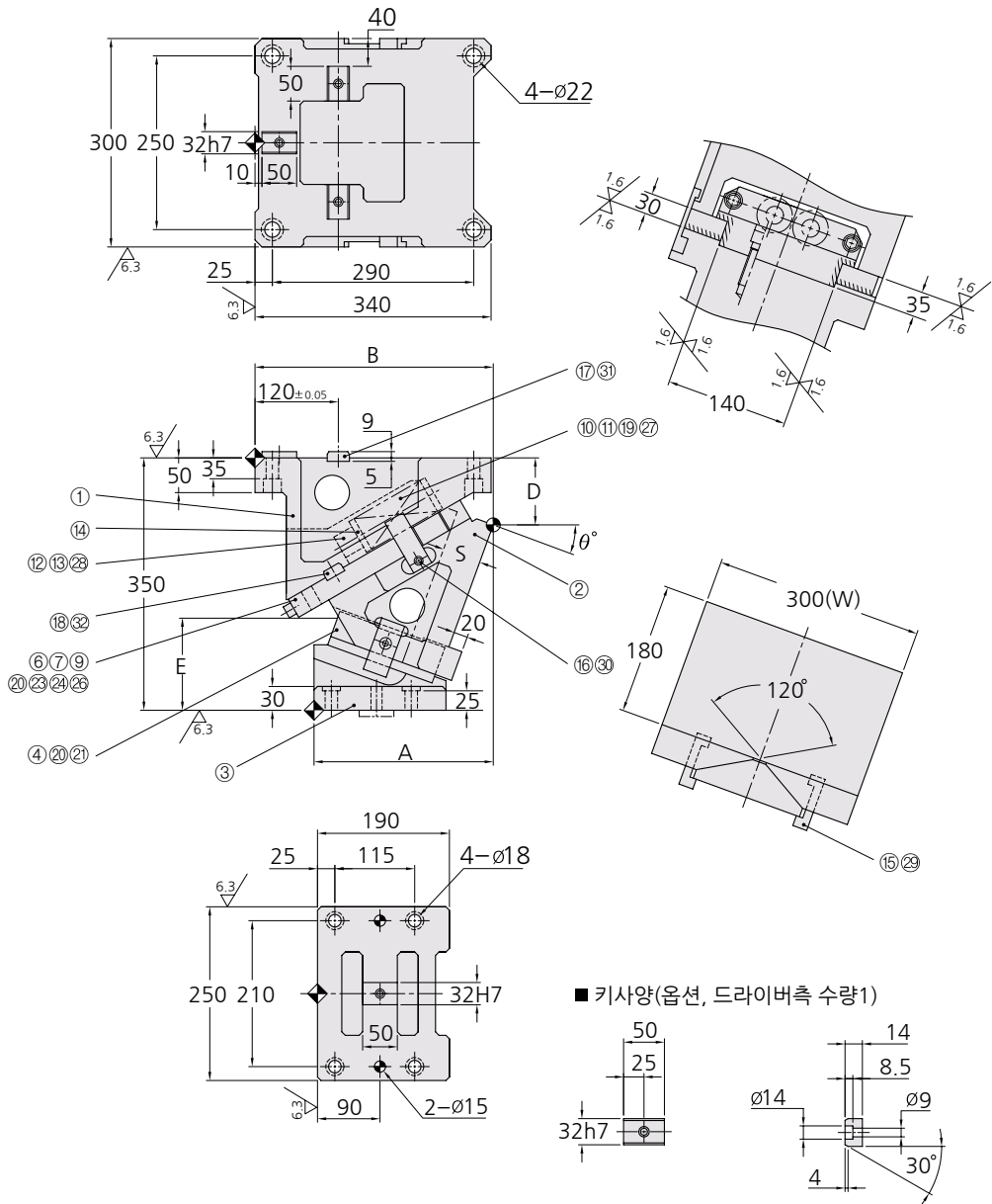
\* kgf=0.101972N



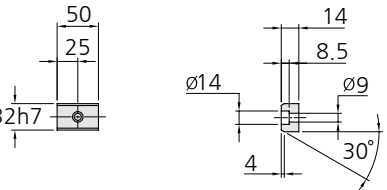
# CAM UNIT – SWFB AERIAL CAM UNIT

## SWFB 300

\* 본 도면은 SWFB300-20입니다.



■ 키사양(옵션, 드라이버측 수량1)



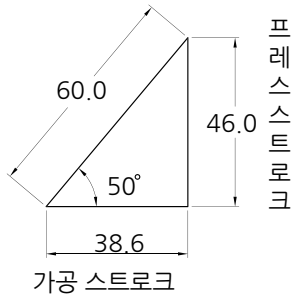
● M8x20 볼트(1개) 부속되어 있음.

캠도면, 스프링 도면은 P.216~219 참조.  
부품표는 P.211 참조.

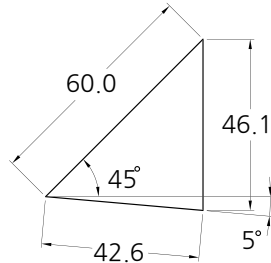




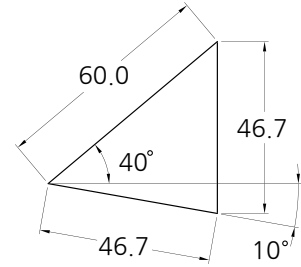
00°



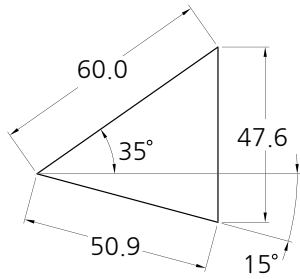
05°



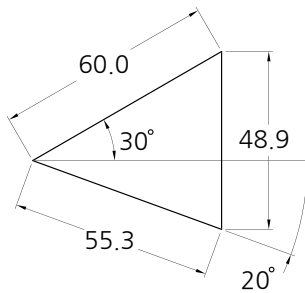
10°



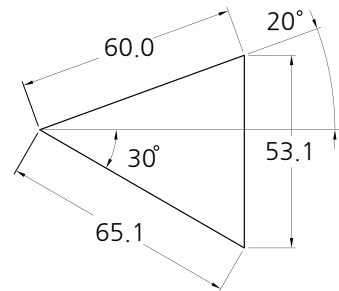
15°



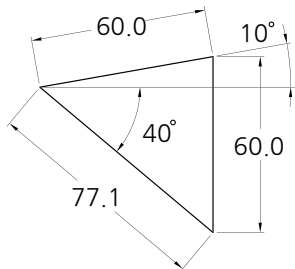
20°



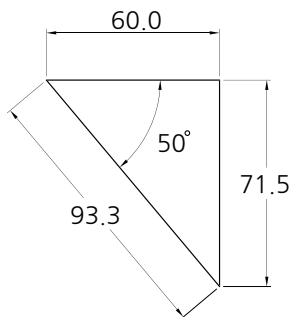
30°



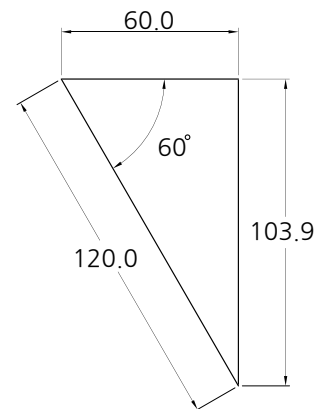
40°



50°



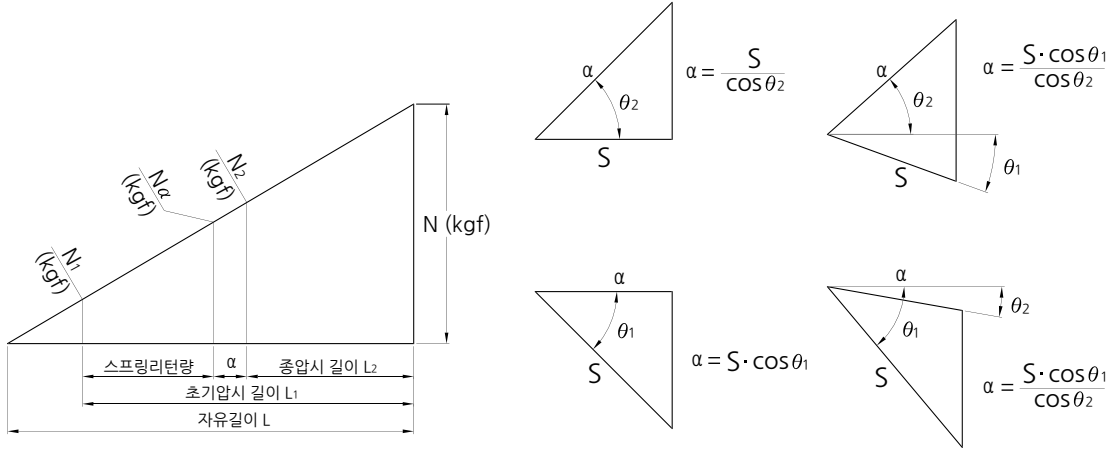
60°





# CAM UNIT – SWFB AERIAL CAM UNIT

## ■ SWFB 300 스프링도면 (편치 리턴량 5mm 일때의 하중 Na)



Catalog No.	W	θ	스트로크 S	사용스프링		
				규격	스프링 정수	개수
SWFB	300	00	38.6	AL50-175	4.80	2
		05	42.6			
		10	46.7			
		15	50.9			
		20	55.3			
		30	65.1			
		40	77.1			
		50	93.3			
		60	120.0			

\* 스프링 정수 kgf/mm

Catalog No.	W	θ	스트로크 S	L1	N1(kgf)	α	Na (kgf)	L2	N2(kgf)
SWFB	300	00	38.6	170	470.7(48.0)	7.8	5384.8(549.1)	110	6119.3(624.0)
		05	42.6			7.0	5460.3(556.8)		
		10	46.7			6.4	5517.2(562.6)		
		15	50.9			5.9	5564.3(567.4)		
		20	55.3			5.4	5611.3(572.2)		
		30	65.1			4.6	5685.9(579.8)		
		40	77.1			3.9	5752.6(586.6)		
		50	93.3			3.2	5818.3(593.3)		
		60	120.0			2.5	5884.0(600.0)		

\* kgf=0.101972N







# CAM UNIT – SWFB AERIAL CAM UNIT

θ	스트로크 S	A	B	D	E	중량 (kg)
00	38.6	175.00	313.00	58.00	104.0	180.5
05	42.6	195.64	320.64	64.34	112.6	179.0
10	46.7	216.08	331.08	72.47	120.7	177.0
15	50.9	236.17	336.17	82.37	128.2	176.2
20	55.3	255.76	340.76	94.00	135.1	175.5
30	65.1	292.83	347.83	112.25	156.4	184.8
40	77.1	326.17	351.17	136.66	174.1	183.0
50	93.3	354.77	348.77	161.49	192.5	181.9
60	120.0	377.75	332.75	195.83	201.3	189.2

가공력 kN(tonf)	스프링 힘 N(kgf)		전고	전장 max	Catalog No.	(W)	θ
	min	max					
245.2 (25.0)	470.7 (48.0)	6119.3 (624.0)	350	380	SWFB	400	00
							05
							10
							15
							20
							30
							40
							50
60							

\* kgf=0.101972N

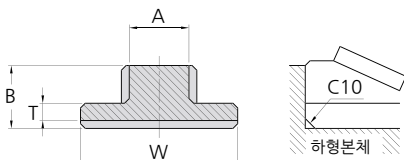
옵션코드	사양
K	전용키 있음. (본체에는 세팅되지 않음)

규격표기 방법    Catalog No.    (W)    -    θ    -    옵션코드  
    SWFB            400    -    60    -    K

## ■ 드라이버 백업 유효부 길이

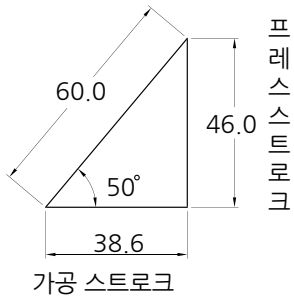
W	θ	A	B	T
400	00	240	55	20
	05		65	
	10		73	
	15		82	
	20		90	

W	θ	A	B	T
400	30	200	115	20
	40		140	
	50		150	
	60		150	

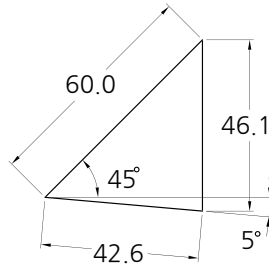




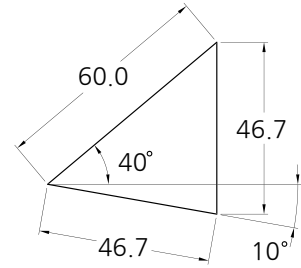
00°



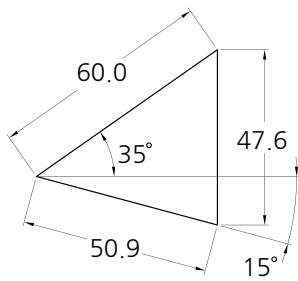
05°



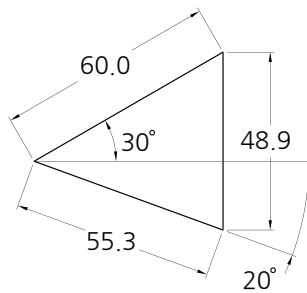
10°



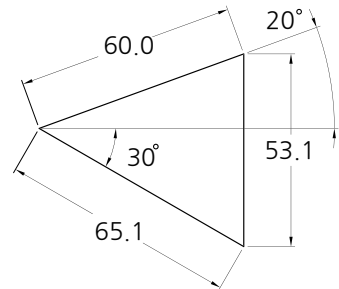
15°



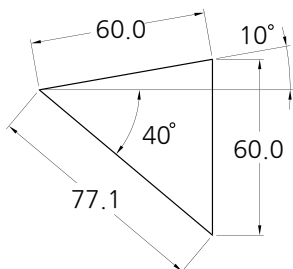
20°



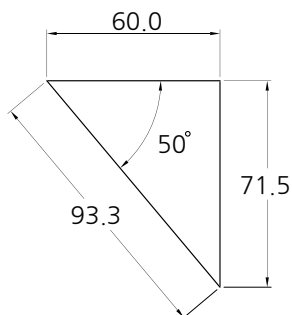
30°



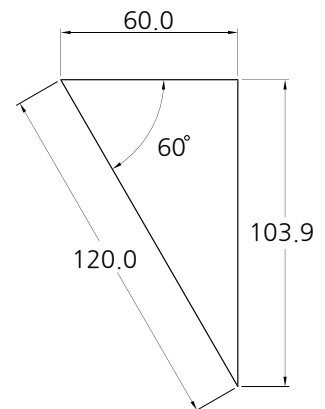
40°



50°



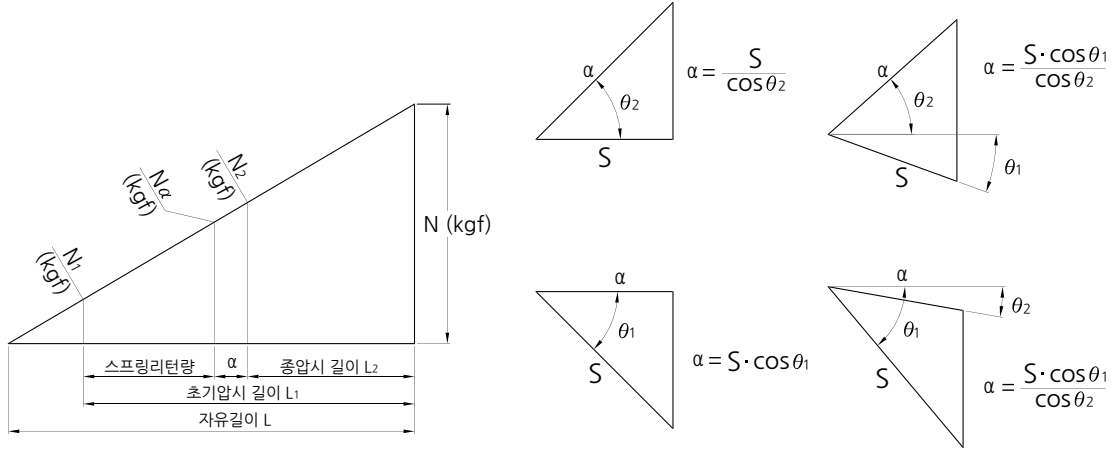
60°





# CAM UNIT – SWFB AERIAL CAM UNIT

## ■ SWFB 400 스프링도면 (편치 리턴량 5mm 일때의 하중 Nα)



Catalog No.	W	θ	스트로크 S	사용스프링		
				규격	스프링 정수	개수
SWFB	400	00	38.6	AL50-175	4.80	2
		05	42.6			
		10	46.7			
		15	50.9			
		20	55.3			
		30	65.1			
		40	77.1			
		50	93.3			
		60	120.0			

\* 스프링 정수 kgf/mm

Catalog No.	W	θ	스트로크 S	L1	N1(kgf)	α	Nα (kgf)	L2	N2(kgf)
SWFB	400	00	38.6	170	470.7(48.0)	7.8	5384.8(549.1)	110	6119.3(624.0)
		05	42.6			7.0	5460.3(556.8)		
		10	46.7			6.4	5517.2(562.6)		
		15	50.9			5.9	5564.3(567.4)		
		20	55.3			5.4	5611.3(572.2)		
		30	65.1			4.6	5685.9(579.8)		
		40	77.1			3.9	5752.6(586.6)		
		50	93.3			3.2	5818.3(593.3)		
		60	120.0			2.5	5884.0(600.0)		

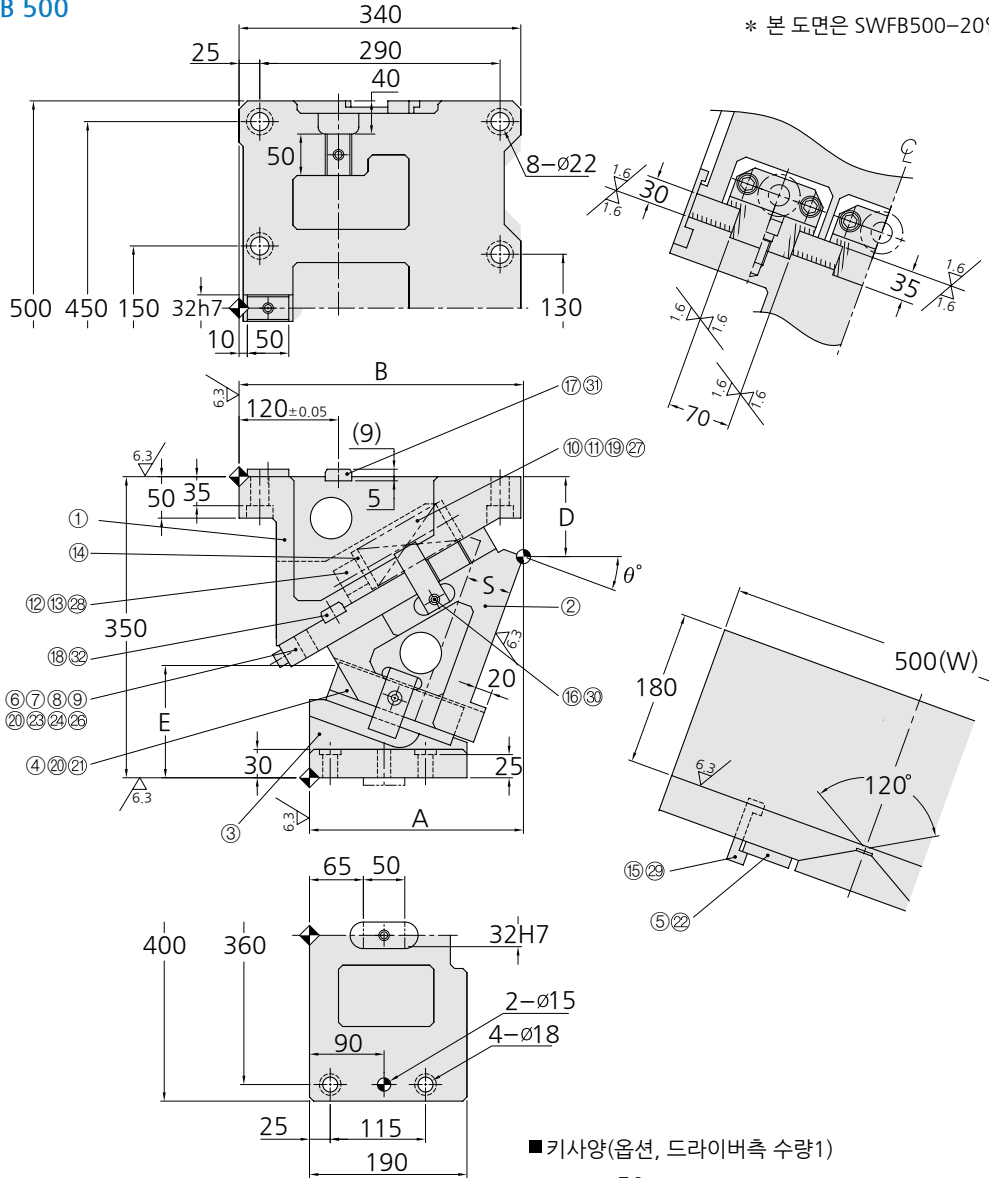
\* kgf=0.101972N



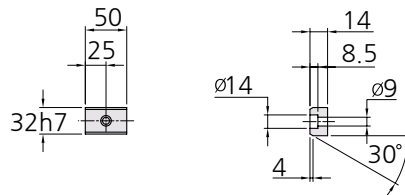
# CAM UNIT – SWFB AERIAL CAM UNIT

## SWFB 500

\* 본 도면은 SWFB500-20입니다.



■ 키사양(옵선, 드라이버측 수량1)



● M8x20 볼트(1개) 부착되어 있음.

캠도면, 스프링 도면은 P.226~227 참조.  
부품표는 P.211 참조.



# CAM UNIT – SWFB AERIAL CAM UNIT

θ	스트로크 S	A	B	D	E	중량 (kg)
00	38.6	175.00	313.00	58.00	104.0	208.4
05	42.6	195.64	320.64	64.34	112.6	206.6
10	46.7	216.08	331.08	72.47	120.7	204.8
15	50.9	236.17	336.17	82.37	128.2	203.3
20	55.3	255.76	340.76	94.00	135.1	202.1
30	65.1	292.83	347.83	112.25	156.4	207.4
40	77.1	326.17	351.17	136.66	174.1	211.2
50	93.3	354.77	348.77	161.49	192.5	210.0
60	120.0	377.75	332.75	195.83	201.3	223.4

가공력 kN(tonf)	스프링 힘 N(kgf)		전고	전장 max	Catalog No.	(W)	θ
	min	max					
313.8 (32.0)	706.1 (72.0)	9179.0 (936.0)	350	340	SWFB	500	00
				340.8			05
				347.8			10
				351.2			15
				354.8			20
				385.0			30
							40
	50						
	60						

\* kgf=0.101972N

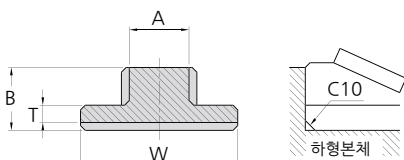
옵션코드	사양
K	전용키 있음. (본체에는 세팅되지 않음)

규격표기 방법    Catalog No.    (W)    -    θ    -    옵션코드  
    SWFB            500    -    60    -    K

## ■ 드라이버 백업 유효부 길이

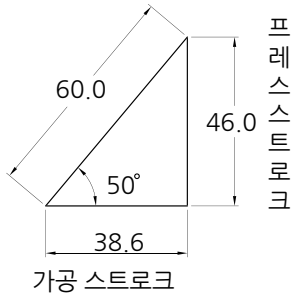
W	θ	A	B	T
500	00	240	55	20
	05		65	
	10		73	
	15		82	
	20		90	

W	θ	A	B	T
500	30	200	115	20
	40		140	
	50		150	
	60		150	

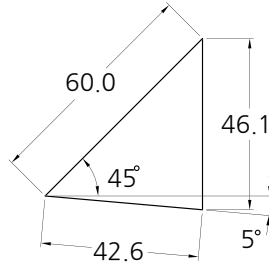




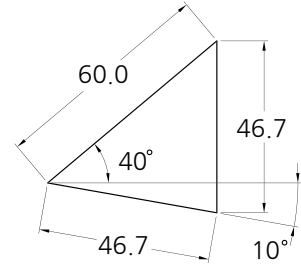
00°



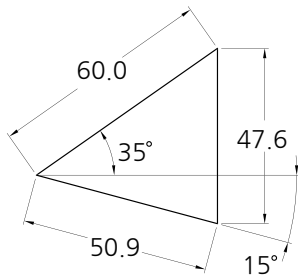
05°



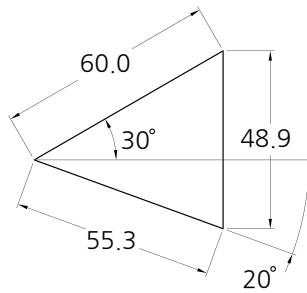
10°



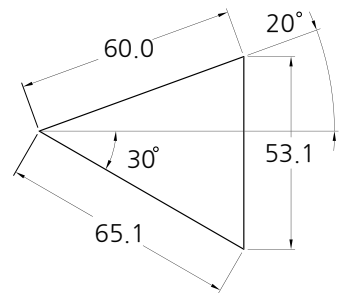
15°



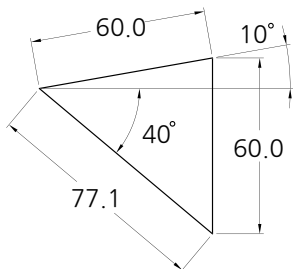
20°



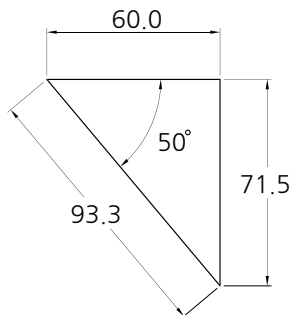
30°



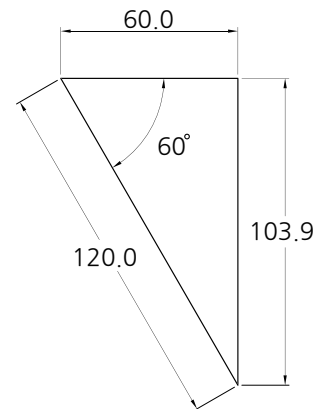
40°



50°



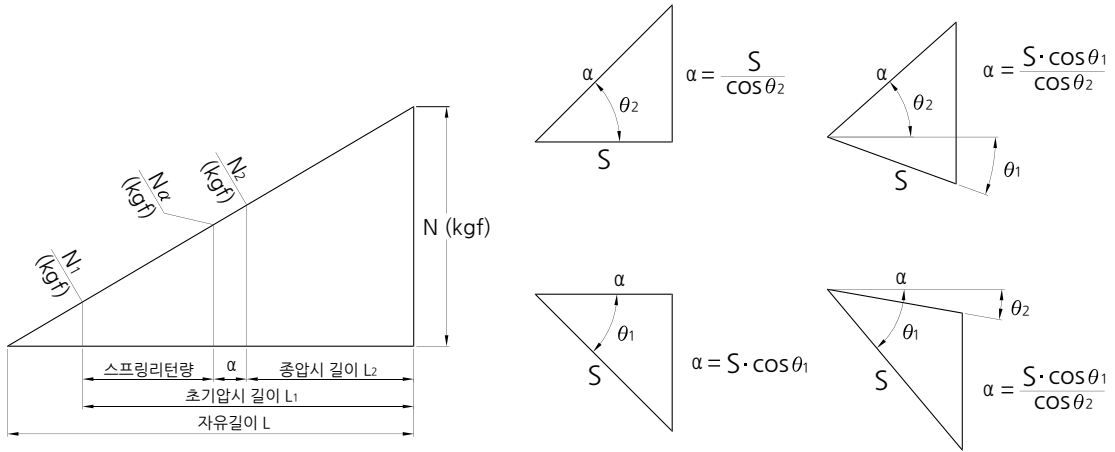
60°





# CAM UNIT – SWFB AERIAL CAM UNIT

## ■ SWFB 500 스프링도면 (편치 리턴량 5mm 일때의 하중 $N\alpha$ )



Catalog No.	W	$\theta$	스트로크 S	사용스프링		
				규격	스프링 정수	개수
SWFB	500	00	38.6	AL50-175	4.80	3
		05	42.6			
		10	46.7			
		15	50.9			
		20	55.3			
		30	65.1			
		40	77.1			
		50	93.3			
		60	120.0			

\* 스프링 정수 kgf/mm

Catalog No.	W	$\theta$	스트로크 S	$L_1$	$N_1$ (kgf)	$\alpha$	$N\alpha$ (kgf)	$L_2$	$N_2$ (kgf)
SWFB	500	00	38.6	170	706.1(72.0)	7.8	8077.7(823.7)	110	9179.0(936.0)
		05	42.6			7.0	8190.5(835.2)		
		10	46.7			6.4	8274.8(843.8)		
		15	50.9			5.9	8345.4(851.0)		
		20	55.3			5.4	8416.0(858.2)		
		30	65.1			4.6	8529.8(869.8)		
		40	77.1			3.9	8627.9(879.8)		
		50	93.3			3.2	8726.9(889.9)		
		60	120.0			2.5	8826.0(900.0)		

\* kgf=0.101972N







θ	스트로크 S	A	B	D	E	중량 (kg)
00	38.6	175.00	313.00	58.00	104.0	260.3
05	42.6	195.64	320.64	64.34	112.6	258.4
10	46.7	216.08	331.08	72.47	120.7	256.3
15	50.9	236.17	336.17	82.37	128.2	255.0
20	55.3	255.76	340.76	94.00	135.1	253.1
30	65.1	292.83	347.83	112.25	156.4	259.0
40	77.1	326.17	351.17	136.66	174.1	268.6
50	93.3	354.77	348.77	161.49	192.5	266.2
60	120.0	377.75	332.75	195.83	201.3	279.5

가공력 kN(tonf)	스프링 힘 N(kgf)		전고	전장 max	Catalog No.	(W)	θ
	min	max					
392.2 (40.0)	941.4 (96.0)	12238.7 (1248.0)	350	340	SWFB	600	00
							05
							10
							15
							20
							30
							40
50							
60							

\* kgf=0.101972N

옵션코드	사양
K	전용키 있음. (본체에는 세팅되지 않음)

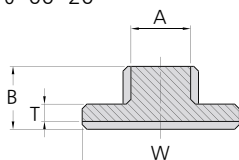
규격표기 방법    Catalog No.    (W)    -    θ    -    옵션코드  
    SWFB            600    -    20    -    K

■ 드라이버 백업 유효부 길이

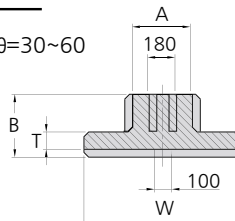
W	θ	A	B	T
550	00	420	55	20
	05		65	
	10		75	
	15		86	
	20		90	

W	θ	A	B	T
550	30	380	115	20
	40		140	
	50		150	
	60		150	

● θ=00~20

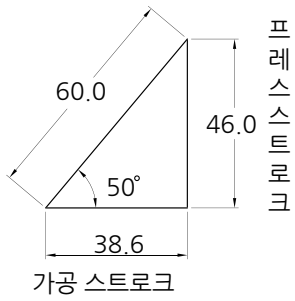


● θ=30~60

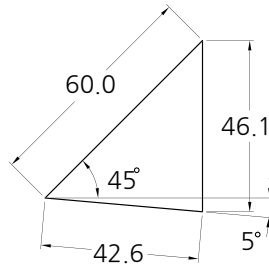




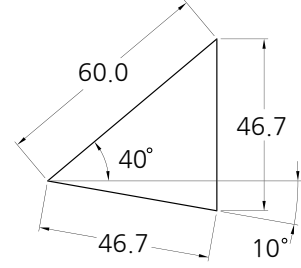
00°



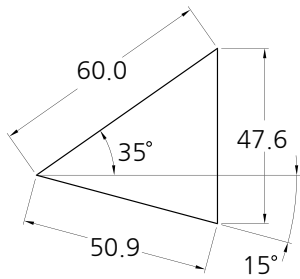
05°



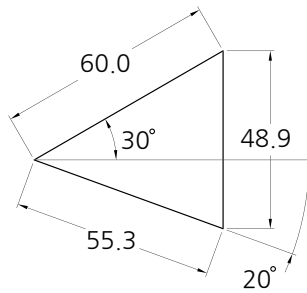
10°



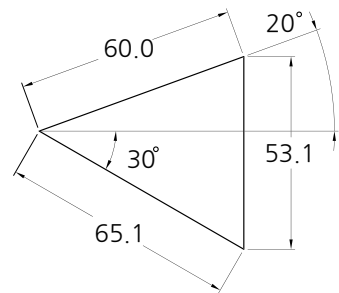
15°



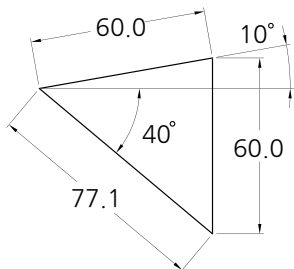
20°



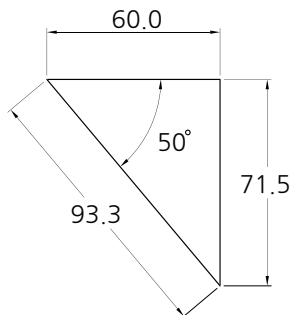
30°



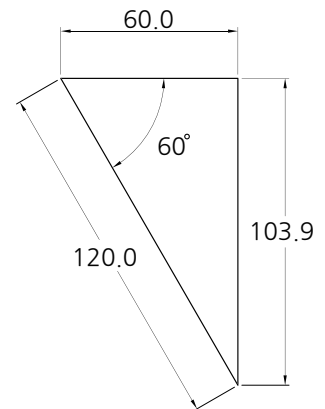
40°



50°



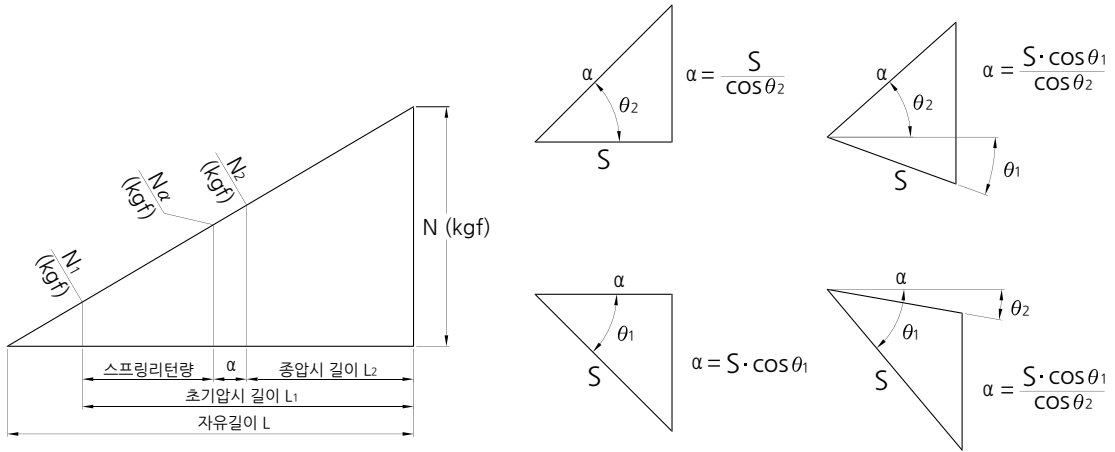
60°





# CAM UNIT – SWFB AERIAL CAM UNIT

## ■ SWFB 600 스프링도면 (편치 리턴량 5mm 일때의 하중 Na)



Catalog No.	W	θ	스트로크 S	사용스프링		
				규격	스프링 정수	개수
SWFB	600	00	38.6	AL50-175	4.80	4
		05	42.6			
		10	46.7			
		15	50.9			
		20	55.3			
		30	65.1			
		40	77.1			
		50	93.3			
		60	120.0			

\* 스프링 정수 kgf/mm

Catalog No.	W	θ	스트로크 S	L1	N1(kgf)	α	Na (kgf)	L2	N2(kgf)
SWFB	600	00	38.6	170	941.4(96.0)	7.8	10769.6(1098.2)	110	12238.7(1248.0)
		05	42.6			7.0	10920.6(1113.6)		
		10	46.7			6.4	11033.4(1125.1)		
		15	50.9			5.9	11127.6(1134.7)		
		20	55.3			5.4	11221.7(1144.3)		
		30	65.1			4.6	11372.7(1159.7)		
		40	77.1			3.9	11504.1(1173.1)		
		50	93.3			3.2	11636.5(1186.6)		
		60	120.0			2.5	11767.9(1200.0)		

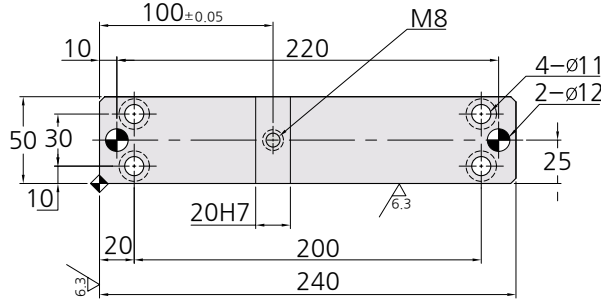
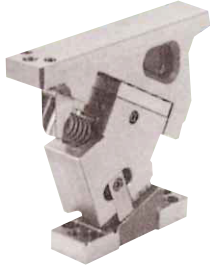
\* kgf=0.101972N



# CAM UNIT – SWFSC AERIAL CAM UNIT

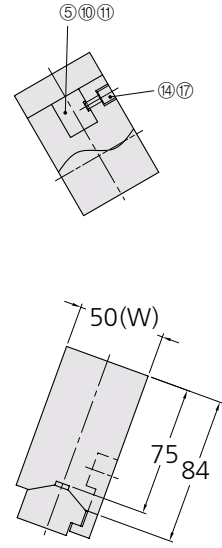
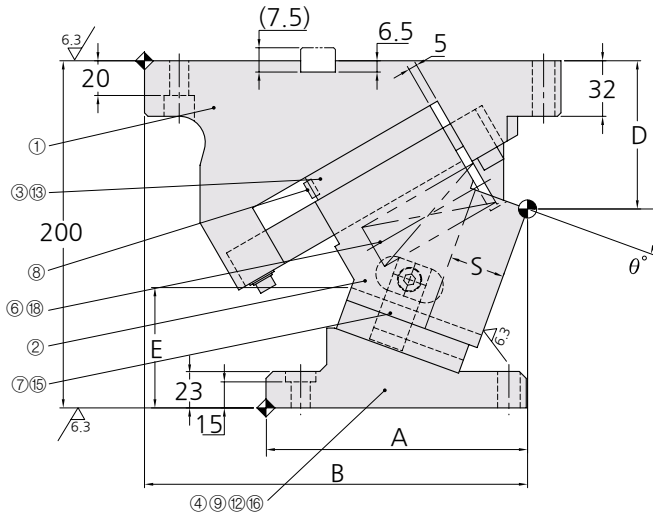
## SWFSC 50

\* 본 도면은 SWFSC50-20입니다.

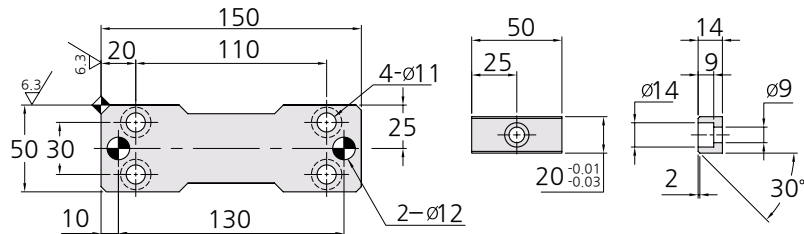


● 스페이스(㉔)

가공각	C1
00	∅26×3
05	-
10	-
15	∅26×18
20	∅26×15
30	-
40	∅26×21
50	-
60	-



● 키사양(옵선, 수량1)



● M8x15 볼트(1개) 부착되어 있음.

캠도면, 스프링 도면은 P.244~245 참조.

옵션코드	사양
K	전용키 있음. (본체에는 세팅되지 않음)

규격표기  
방법

Catalog No.	(W)	-	(θ)	-	옵션코드
SWFSC	50	-	00	-	K



■ 구성부품표

No.	명칭	개수	재질, 비고
①	캠홀더	1	FCD540
②	캠슬라이드	1	FCD540
③	슬라이드 플레이트	1	SS400
④	캠 드라이버	1	FC250
⑤	가이드바	1	동합금 오일레스가공
⑥	스프링	1	SWOSC-V AL25-L
⑦	강제 리턴 플레이트	1	S45C
⑧	스토퍼	2	우레탄 Ø10x5,5
⑨	슬라이드 가이드	1	SS400
⑩	육각렌치볼트	1	SCM435 M10x40
⑪	육각렌치볼트	1	SCM435 M10x45
⑫	육각렌치볼트	2	SCM435 M10x30
⑬	육각렌치볼트	4	SCM435 M8x20
⑭	육각렌치볼트	1	SCM435 M6x10
⑮	육각낮은머리볼트	1	SCM435 M8x18
⑯	암나사 노크핀	1	SUJ2 Ø8x30
⑰	스프링 워셔	1	S50CM M6용
⑱	스페이스	1	SS400

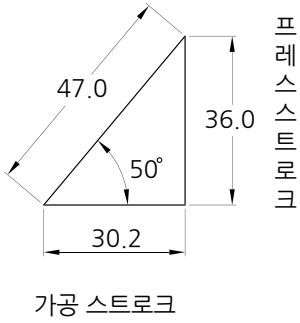
θ	스트로크 S	A	B	D	E	중량 (kg)
00	30.2	118.00	225.00	77.50	46.4	10.0
05	30.5	126.91	226.91	78.33	52.8	9.9
10	30.3	133.72	223.72	79.93	59.0	9.7
15	30.5	139.36	224.36	82.29	64.9	9.4
20	30.4	150.76	220.76	85.39	70.5	9.3
30	32.6	158.58	213.58	94.73	79.4	9.0
40	38.6	176.72	206.72	102.69	90.4	9.0
50	46.7	185.73	195.73	105.94	106.4	8.6
60	59.1	194.27	179.27	125.08	106.2	9.2

가공력 kN(tonf)	스프링 힘 N(kgf)		전고	전장 max	Catalog No.	(W)	θ
	min	max					
14.7 (1.5)	49.0(5.0)	823.8(84.0)	200	257	SWFSC	50	00
	65.7(6.7)	774.7(79.0)		250			05
	131.4(13.4)			240			10
	82.4(8.4)	823.8(84.0)					15
	144.2(14.7)	754.1(76.9)					20
	68.6(7.0)						754.1(76.9)
				40			
				50			
255		60					

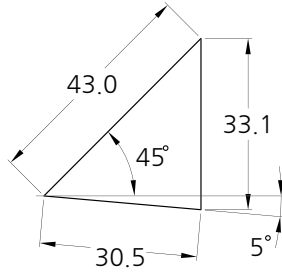
\* kgf=0.101972N



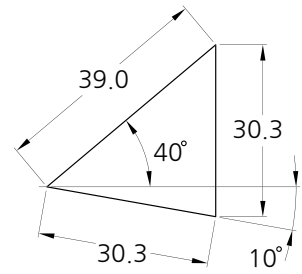
00°



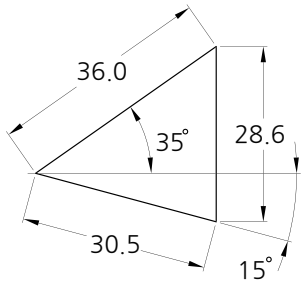
05°



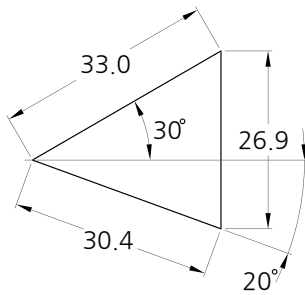
10°



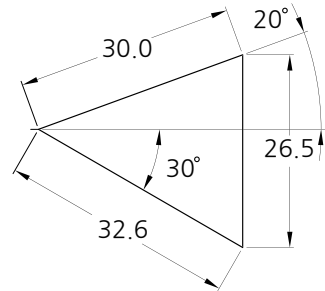
15°



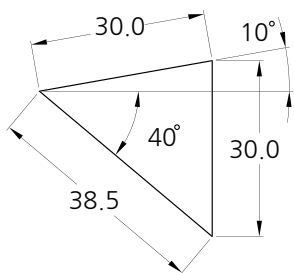
20°



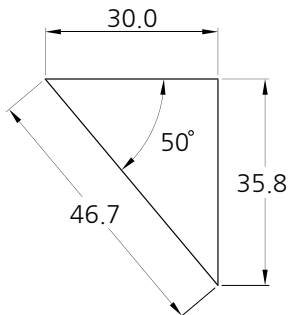
30°



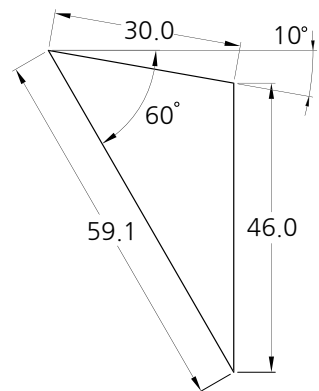
40°



50°



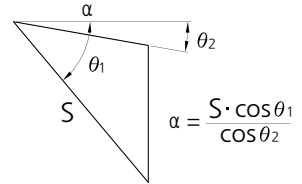
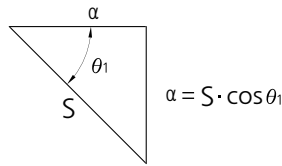
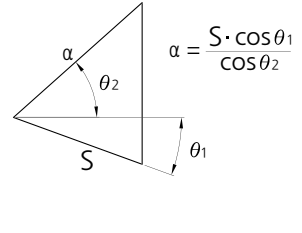
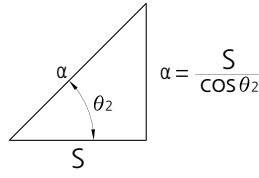
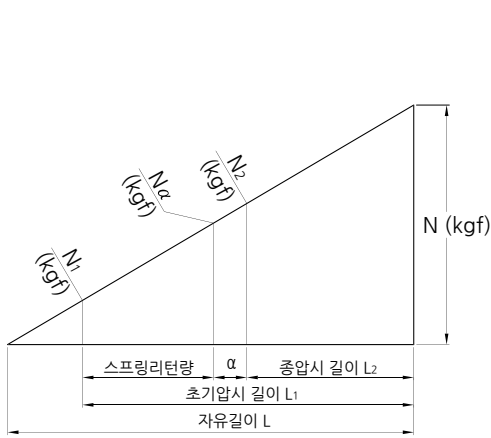
60°





# CAM UNIT – SWFSC AERIAL CAM UNIT

## ■ SWFSC50 스프링도면 (편치 리턴량 5mm 일때의 하중 Na)



Catalog No.	W	θ	스트로크 S	사용스프링		
				규격	스프링 정수	개수
SWFSC	50	00	30.2	AL25-125	1.68	1
		05	30.5			
		10	30.3			
		15	30.5	AL25-100	2.1	
		20	30.4			
		30	32.6	AL25-90	2.33	
		40	38.6			
		50	46.7			
		60	59.1			

\* 스프링 정수 kgf/mm

Catalog No.	W	θ	스트로크	L1	N1(kgf)	α	Na (kgf)	L2	N2(kgf)
			S						
SWFSC	50	00	30.2	122	49.0(5.0)	7.8	695.3(70.9)	75	823.8(84.0)
		05	30.5	121	65.7(6.7)	7.0	659.0(67.2)	78	774.7(79.0)
		10	30.3	117	131.4(13.4)	6.4	668.8(68.2)	78	
		15	30.5	96	82.4(8.4)	5.9	702.2(71.6)	60	823.8(84.0)
		20	30.4	93	144.2(14.7)	5.4	712.9(72.7)	60	
		30	32.6	87	68.6(7.0)	4.6	649.2(66.2)	57	754.1(76.9)
		40	38.6			3.9	664.9(67.8)		
		50	46.7			3.2	680.6(69.4)		
		60	59.1			2.5	697.3(71.1)		

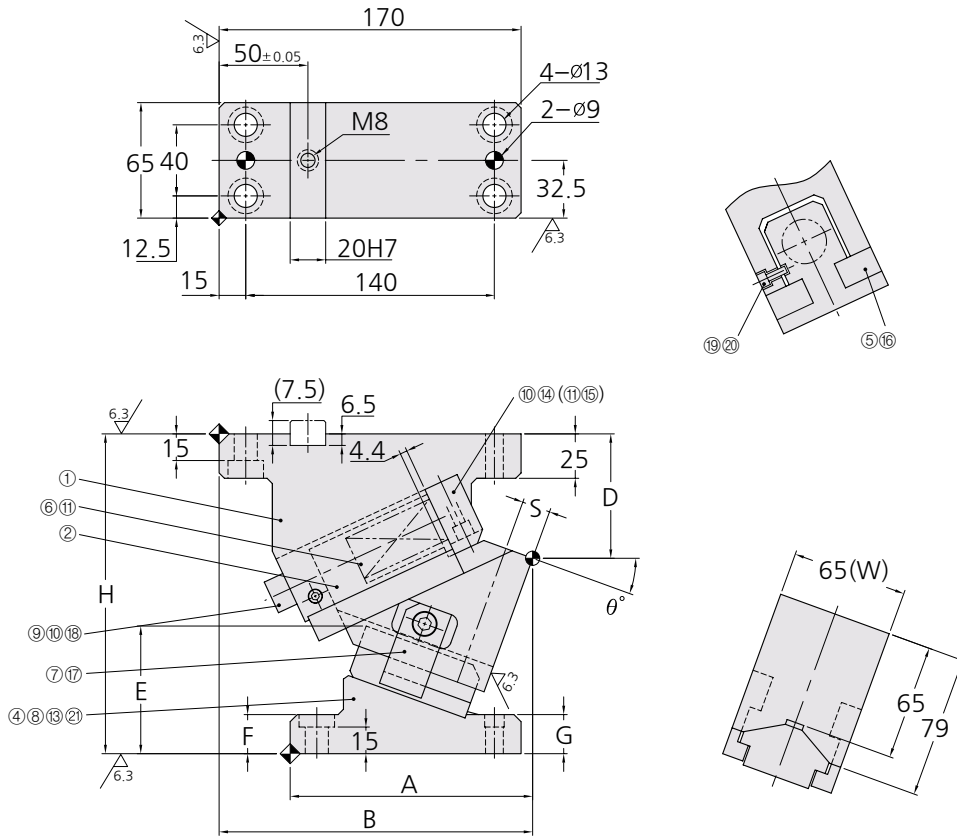
\* kgf=0.101972N



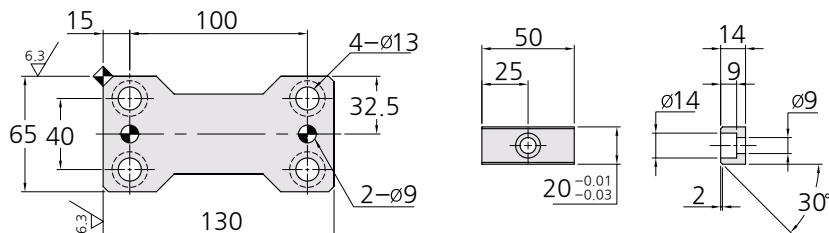
# CAM UNIT – SWFSC AERIAL CAM UNIT

## SWFSC 65

\* 본 도면은 SWFSC65-20입니다.



### ■ 키사양(옵션, 수량1)



● M8x15 볼트(1개) 부착되어 있음.

캠도면, 스프링 도면은 P.248~249 참조.

옵션코드	사양
K	전용키 있음. (본체에는 세팅되지 않음)

규격표기  
방법

Catalog No.	(W)	(θ)	옵션코드
SWFSC	65	50	K





# CAM UNIT – SWFSC AERIAL CAM UNIT

## ■ 구성부품표

No.	명칭	개수	재질, 비고
①	캠홀더	1	FCD450
②	캠슬라이드	1	FC250
③	-	-	-
④	캠드라이버	1	FC250
⑤	슬라이드 플레이트	2	SS400
⑥	스프링	1	SWOSC-V AM25-L
⑦	강제 리턴 플레이트	2	S45C
⑧	슬라이드 가이드	1	동합금(SP2) 오일레스가공
⑨	스토퍼 플레이트	1	SS400
⑩	스토퍼	1	우레탄
⑪	스프링 록	1	SS400
⑫	스프링 가이드핀	1	S45C
⑬	육각렌치볼트	2	SCM435 M10x30
⑭	육각렌치볼트	2	SCM435 M8x40
⑮	육각렌치 낮은머리볼트	2	SCM435 M8x18
⑯	육각렌치 낮은머리볼트	4	SCM435 M8x18
⑰	육각렌치 낮은머리볼트	2	SCM435 M8x18
⑱	육각렌치 낮은머리볼트	2	SCM435 M8x18
⑲	육각렌치볼트	1	SCM435 M6x10
⑳	스프링워셔	1	S50CM M6용
㉑	암나사 노크핀	1	SUJ2 Ø8x30

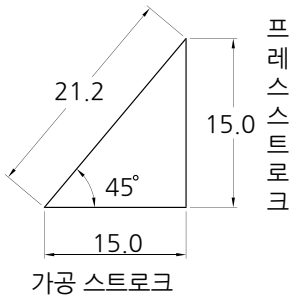
θ	스트로크 S	A	B	D	E	F	G	중량 (kg)
00	15.0	110.00	170.00	53.00	61.0	28	33	11.0
05	15.1	116.41	171.41	60.27	60.5	22	25	10.4
10	15.2	122.16	177.16	63.06	65.0			10.2
15	15.5	127.20	177.20	66.33	69.3		9.9	
20	16.5	136.51	176.51	70.01	73.6		9.7	
30	18.5	147.78	177.78	78.32	82.0		9.9	
40	21.5	160.78	170.78	82.44	97.1		9.5	
50	26.5	170.41	165.41	96.79	112.1		9.9	
60	35.0	176.68	156.68	120.78	129.8		9.6	

가공력 kN(tonf)	스프링 힘 N(kgf)		전고	전장 max	Catalog No.	(W)	θ
	min	max					
14.7 (1.5)	289.3(29.5)	1191.5(121.5)	180	190	SWFSC	65	00
				185			05
	185	10					
	180	15					
	176.5	20					
	177.8	30					
	170.8	40					
	190	175		50			
	210	190		60			

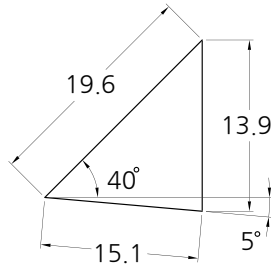
\* kgf=0.101972N



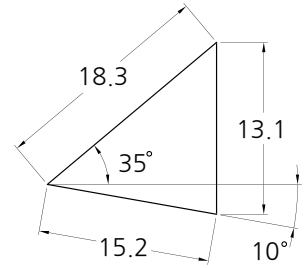
00°



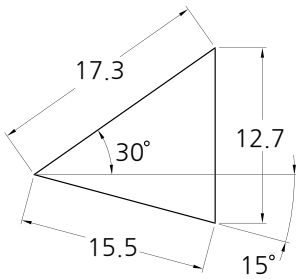
05°



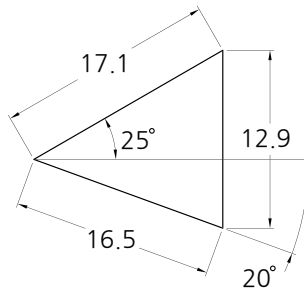
10°



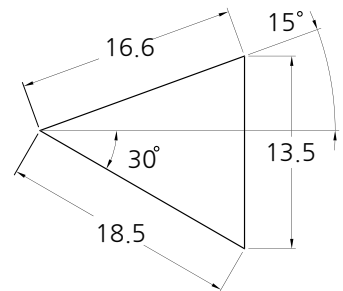
15°



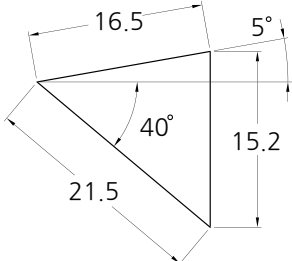
20°



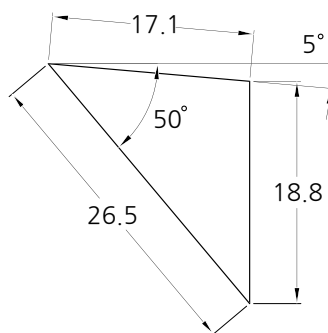
30°



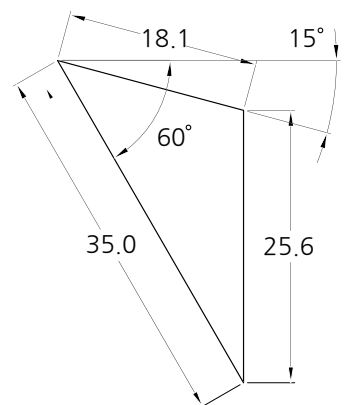
40°



50°



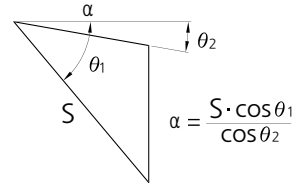
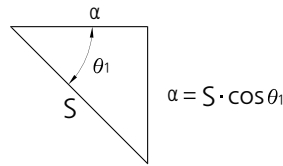
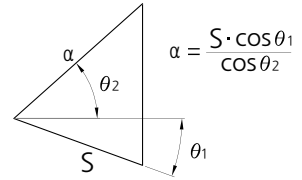
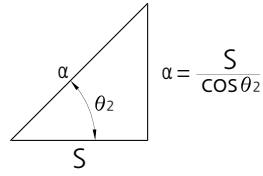
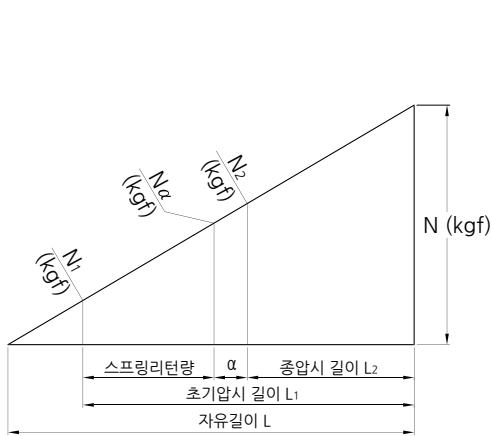
60°





# CAM UNIT – SWFSC AERIAL CAM UNIT

## ■ SWFSC65 스프링도면 (편치 리턴량 5mm 일때의 하중 Nα)



Catalog No.	W	θ	스트로크 S	사용스프링		
				규격	스프링 정수	개수
SWFSC	65	00	15.0	AM25-90	4.34	1
		05	15.1			
		10	15.2			
		15	15.5	AM25-80	4.88	
		20	16.5			
		30	18.5			
		40	21.5			
		50	26.5			
		60	35.0			

\* 스프링 정수 kgf/mm

Catalog No.	W	θ	스트로크 S	L <sub>1</sub>	N <sub>1</sub> (kgf)	α	Nα (kgf)	L <sub>2</sub>	N <sub>2</sub> (kgf)
SWFSC	65	00	15.0	83.2	289.3(29.5)	7.1	889.5(90.7)	62	1191.5(121.5)
		05	15.1			6.5	915.0(93.3)		
		10	15.2			6.0	937.5(95.6)		
		15	15.5	71.7	397.2(40.5)	5.6	957.1(97.6)	54.4	1224.8(124.9)
		20	16.5	71.5	407.0(41.5)	5.2	975.8(99.5)		
		30	18.5	71.0	430.5(43.9)	4.6	1005.2(102.5)		
		40	21.5	70.9	435.4(44.4)	3.8	1043.4(106.4)		
		50	26.5	71.5	407.0(41.5)	3.2	1071.9(109.3)		
		60	35.0	72.5	358.9(36.6)	2.2	1119.9(114.2)		

\* kgf=0.101972N





# CAM UNIT – SWFSC AERIAL CAM UNIT

## ■ 구성부품표

No.	명칭	개수	재질, 비고
①	캠홀더	1	FCD540
②	캠슬라이드	1	FC250
③	슬라이드 블록	1	FC250 오일레스가공
④	캠드라이버	1	FC250
⑤	슬라이드 플레이트	2	SS400
⑥	스프링	1	SWOSC-V AL35-L
⑦	강제 리턴 플레이트	2	S45C
⑧	슬라이드 가이드	1	통합급 오일레스가공
⑨	스토퍼 플레이트	1	SS400
⑩	스프링 블록	1	SS400
⑪	스토퍼	1	우레탄
⑫	육각렌치볼트	6	SCM435 M8x25
⑬	육각렌치볼트	1	SCM435 M8x14
⑭	육각렌치볼트	2	SCM435 M10x35
⑮	육각렌치볼트	2	SCM435 M10x35
⑯	육각렌치볼트	2	SCM435 M10x35
⑰	육각렌치볼트	2	SCM435 M10x30
⑱	육각렌치볼트	2	SCM435 M8x25
⑲	스프링 워셔	1	S50CM M8용
⑳	워셔	2	S45C M10용
㉑	암나사 노크핀	1	SUJ2 Ø8x30
㉒	스프링 가이드핀	1	SCM435 Ø16.5x43

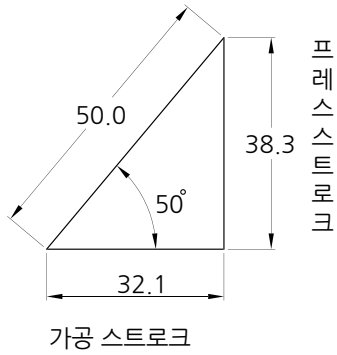
θ	스트로크 S	A	B	D	E	F	중량 (kg)
00	32.1	160.00	260.00	99.00	83.0	40	22.5
05	38.4	172.93	272.93	109.39	83.8	30	23.5
10	38.9	179.92	279.92	120.43	84.6		23.1
20	46.1	195.90	285.90	129.12	100.9		21.0
30	54.3	207.59	282.59	134.36	119.4		21.0
40	64.3	214.80	274.80	140.38	139.3		21.0
50	77.8	227.46	262.46	151.39	154.0		21.0
60	98.5	240.64	240.64	176.59	157.7		22.0

가공력 kN(tonf)	스프링 힘 N(kgf)		전고	전장 max	Catalog No.	(W)	θ
	min	max					
29.4 (3.0)	269.7 (27.5)	1618.1 (165.0)	270	270	SWFSC	80	00
				272.9			05
				279.9			10
				285.9			20
				282.6			30
				274.8			40
				270			50
				270			60

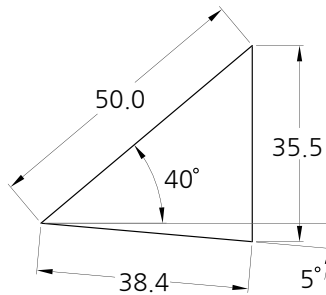
\* kgf=0.101972N



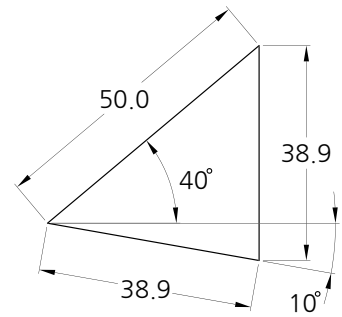
00°



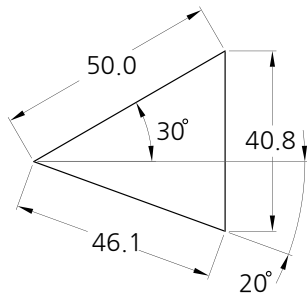
05°



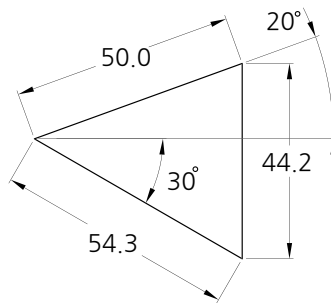
10°



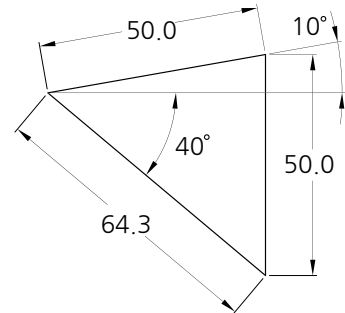
20°



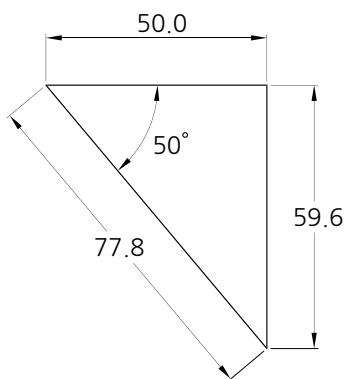
30°



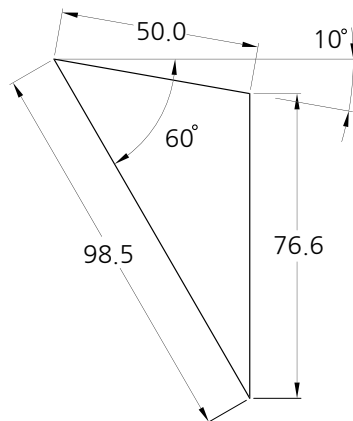
40°



50°



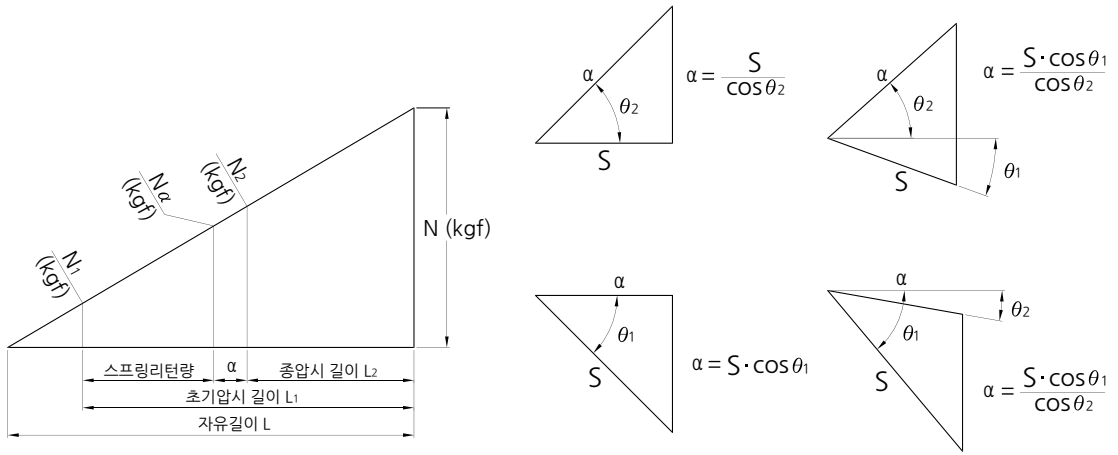
60°





# CAM UNIT – SWFSC AERIAL CAM UNIT

■ SWFSC80 스프링도면 (편치 리턴량 5mm 일때의 하중 Nα)



Catalog No.	W	θ	스트로크 S	사용스프링		
				규격	스프링 정수	개수
SWFSC	80	00	32.1	AL35-150	2.75	1
		05	38.4			
		10	38.9			
		20	46.1			
		30	54.3			
		40	64.3			
		50	77.8			
		60	98.5			

\* 스프링 정수 kgf/mm

Catalog No.	W	θ	스트로크 S	L1	N1(kgf)	α	Nα (kgf)	L2	N2(kgf)
SWFSC	80	00	32.1	140	269.7(27.5)	7.8	1407.2(143.5)	90	1618.1(165.0)
		05	38.4			6.5	1442.6(147.1)		
		10	38.9			6.4	1445.5(147.4)		
		20	46.1			5.4	1472.0(150.1)		
		30	54.3			4.6	1493.5(152.3)		
		40	64.3			3.9	1513.2(154.3)		
		50	77.8			3.2	1531.8(156.2)		
		60	98.5			2.5	1550.4(158.1)		

\* kgf=0.101972N