



Name	Angular Pins		Angular Pins with Tapped Hole		Angular Pins with Screw	
Model	25AGP / 25AGS		25AGU / 25AGUS / 25AGHX / 25AGHXS		25AGM / 25AGMS / 25AGX / 25AGXS	
Page	49		50		51	



Name	Angular Pins Retainers		Stopper Plate for Angular Pins	Angular Cam	Locking Blocks	
Model	25AGRSS / 25AGRWS		25APP	25ANC	25LBCKS / 25LBKSZ / 25LBKSM	
Page	52		52	53	53	



Name	Locking Blocks Inlay Type		Locking Blocks Side Setting Type		Compact Locking Blocks with Angular Holes	
Model	25LBMS / 25LBMD		25LBSS / 25LBSST		25ABPX / 25ABPZS / 25ABPZT	
Page	54		55		56	



Name	Locking Blocks with Angular Holes		Locking Blocks with Angular Holes (PL Setting)	
Model	25ALBMS		25ALBPS	
Page	57		58	

ตารางการเลือกแองกูล่าพิน | Angular Pins Selecting Chart

พิน - Pins	Types	Model	Page
	Plain Type 	25AGP	P.49
	Stepped Type 	25AGS	
	Tapped + Wrench Slot 	25AGU	P.50
	Tapped + Wrench Slot Stepped Type 	25AGUS	
	Tapped + Hex Socket 	25AGHX	
	Tapped + Hex Socket Stepped Type 	25AGHXS	
	Male Thread + Wrench Slot 	25AGM	P.51
	Male Thread + Wrench Slot Stepped Type 	25AGMS	
	Cap Bolt 	25AGX	

ใช้ร่วมกันได้
Suitable

Types	Model	Page
รีเทนเนอร์ - Retainers	Single Bolt 	25AGRSS
	Double Bolt 	25AGRWS
Types	Model	Page
แคม - Cam	Angular Cam Designate Angle 	25ANC

Angular Pins

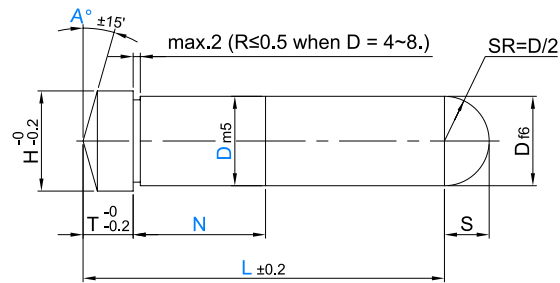
บล็อกกึ่งบล็อค - Locking Blocks	Types	SKS3			SKD61	Page
		Plain	Oil Free	Oil Groove	Plain	
	Positioning Type 	25LBCKSK	25LBCKSZ	25LBCKSM	-	P.53
	Inlay Type 	25LBMS	-	-	25LBMD	P.54
	Side Setting Type 	25LBSS 25LBST	-	-	-	P.55
	Compact Angular Holes Type 	25ABPX 25ABPZS 25ABPZT	-	-	-	P.56
	Angular Holes Type 	25ALBMS	-	-	-	P.57
Angular Holes Type (PL Setting) 		25ALBPS	-	-	-	P.58

แองกูล่าพิน

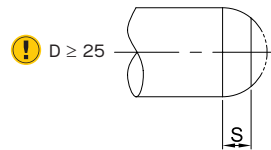
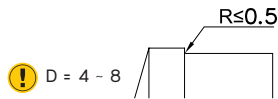
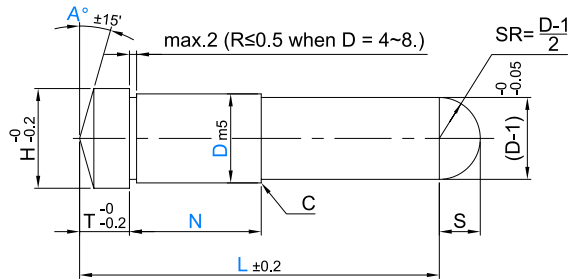
Angular Pins - แองกูล่าพิน

FOIL FREE™

Model: 25AGP



Model: 25AGS
Stepped Type



ORDER
EXAMPLE

Model D - L - N - A
25AGP25-200-30-15



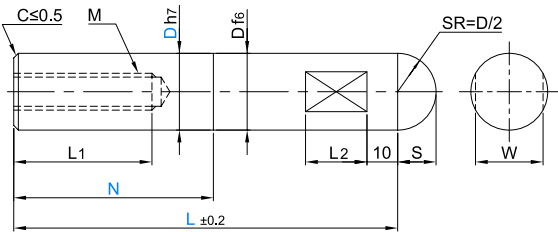
D4 - 8 : SKD11 (60 ~ 63HRC)
D10 ~ 50 : SUJ2 (58HRC- Induction Hardened)

Model	D m5		L	N	A 1° increment	D f6	T	H	S	
			0.1mm increments						25AGP	25AGS
25AGP 25AGS	4	+0.009 +0.004	15 - 90	2 ≤ N N ≤ L-T-1 or N = 0	0 - 30	-0.010 -0.018	5	7	2	1.5
	5		15 - 100					8	2.5	2
	6		15 - 110					9	3	2.5
	8	+0.012 +0.006	15 - 130			-0.013 -0.022	10	11	4	3.5
	10		20 - 200					13	5	4.5
	12	+0.015 +0.007	20 - 250			-0.016 -0.027	13	15	6	5.5
	13		20 - 250					16	6.5	6
	15		20 - 250					18	7.5	7
	16	+0.017 +0.008	20 - 250			-0.020 -0.033	15	19	8	7.5
	20		40 - 350					23	10	10
	25		40 - 400					28		
	30		60 - 500					35		
	32		70 - 500					37		
	35	+0.020 +0.009	100 - 500			-0.025 -0.041	40			
40	100 - 500		45							
50	200 - 500		20		55					

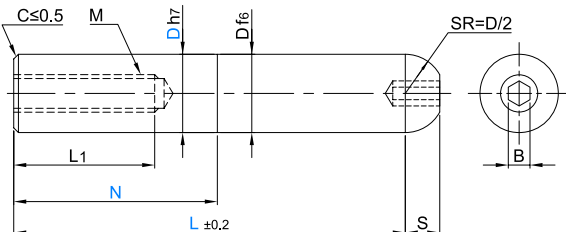
Angular Pins with Tapped Hole - แองกูล่าพิน มีรูต๊ापเกลียว

FOIL FREE™

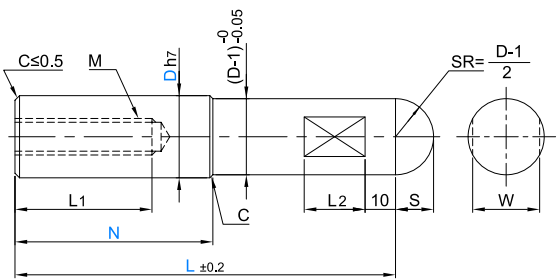
Model: 25AGU
Tapped + Wrench Slot



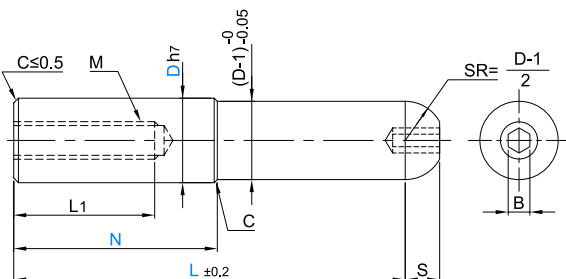
Model: 25AGHX
Tapped + Hex Socket



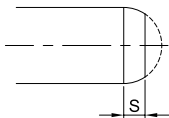
Model: 25AGUS
Tapped + Wrench Slot
Stepped Type



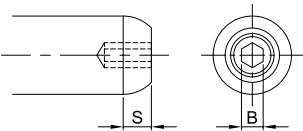
Model: 25AGHXS
Tapped + Hex Socket
Stepped Type



! 25AGU & 25AGUS
D ≥ 25



! 25AGHX & 25AGHXS
D ≥ 20



! D ≤ 16



! D ≥ 20



ORDER
EXAMPLE

Model D - L - N
25AGU25-200-40

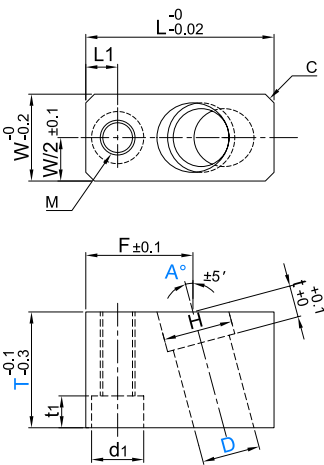
M SUJ2
58HRC- (Induction Hardened)

Model	D	h7	f6	L	N	M	L1	S				Wrench		Hex
				0.1mm increments				25AGU	25AGUS	25AGHX	25AGHXS	L2	W	B
25AGU 25AGHX 25AGUS 25AGHXS	10	-0.000 -0.015	-0.013 -0.022	30 - 200	L > N ≥ 0	6	15	5	4.5	3.5	3	8	7	5
	13	-0.000 -0.018	-0.016 -0.027	35 - 250		8	20	6.5	6	5	4	10	10	
	16			45 - 250		10	25	8	7.5	7	6		13	
	20	-0.000 -0.021	-0.020 -0.033	50 - 350		12	30	10	10	6	6	12	17	6
	25			50 - 400									22	
	30			60 - 400						10	10	18	27	8
	32	-0.000 -0.025	-0.025 -0.041	60 - 400		16	40							
	35			60 - 450									32	
	40			60 - 450		20		15	15	15	18		36	

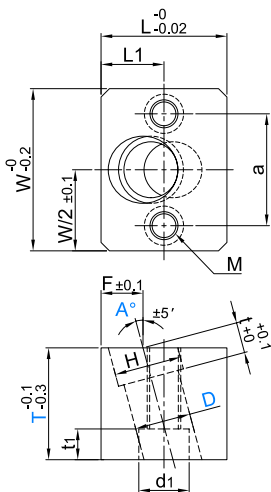
Angular Pins Retainers - รีเทนเนอร์ สำหรับแองกูล่าพิน



Model: 25AGRSS
Single Bolt Type



Model: 25AGRWS
Double Bolt Type



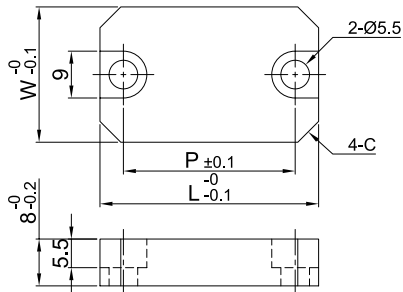
ORDER EXAMPLE Model D - T - A 25AGRSS20-40-15 S45C

Model	D H7		T							A 1° increments	W	L	H	t	F	d1	t1	M	Bolt	L1	a	c	
25AGRSS	8	+0.015	20	25						10 - 20	16	35	12	5	19	11	7	8	M6	7	-	3	
	10	+0.000		25	30						18	40	14	10	21								
	13	+0.018			30	35					22	50	17		27								
	16	+0.000				35	40				25	55	20	13	29	14	9	10	M8	9		5	
	20	+0.021 +0.000					40	45			30	65	24		35								18
25AGRWS	8	+0.015	20	25						10 - 20	38	24	12	5	8	11	7	8	M6		14	24	5
	10	+0.000		25	30						40	28	14	10	10						16	26	
	13	+0.018			30	35					44	34	17		12						18	30	
	16	+0.000				35	40				48	40	20	13	21						34		
	20						40	45			58	45	24	13	15	14	9	10	M8	25	40	8	
	25	+0.021 +0.000						45	50		65	55	29		18						30		46
	30										55	60	75	65	36						15	22	18

Stopper Plate for Angular Pins - สต็อปเพลอร์เพลท สำหรับแองกูล่าพิน



Model: 25APP



ORDER EXAMPLE Model No. 25APP10 S45C

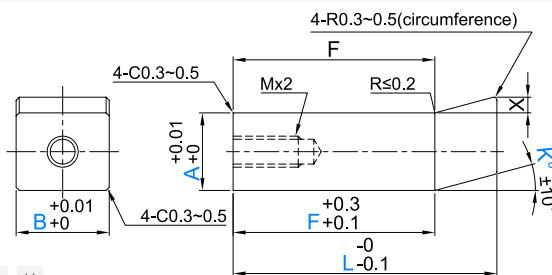
Model	No.	For Model + D		W	L	P	C
25APP	6	25AGP 25AGS	4 / 5 / 6	13	28	19	2
	10		8 / 10	16	32	23	3
	16		12 / 13 / 15 / 16	22	38	29	5
	20		20	26	42	33	6

แองกูล่าพิน

Angular Cam - แองกูล่าแคม



Model: 25ANC



FOIL FREE™

$X = (L-F)\tan K^\circ$
 $X < 20$

ORDER
EXAMPLE

Model A - B - L - F - K
25ANC10-20-50-30-20



SKD11
60 - 63HRC

Model	A	B						0.1mm increments		K 1° increments	M
								L	F		
25ANC	10	10	15	20	25	30		20 - 80	15 ≤ F ≤ L-10	10 - 25	M6x1.00
	15	10	15	20	25	30		20 - 150			M8x1.25
	20		15	20	25	30		20 - 150			
	25			20	25	30		20 - 150			

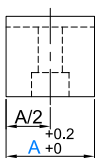
Locking Blocks - ล็อกกิ้งบล็อก

FOIL FREE™

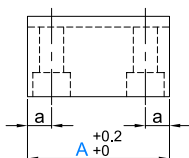
Model: 25LBCSK



A = 15 ~ 23

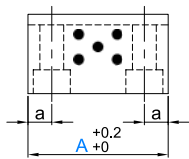
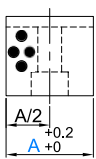


A = 28 ~ 78



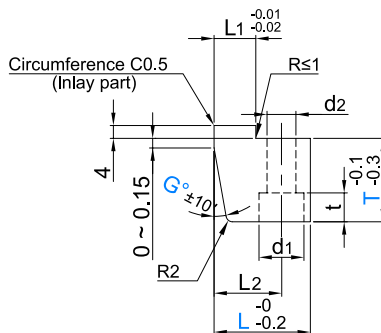
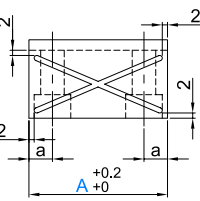
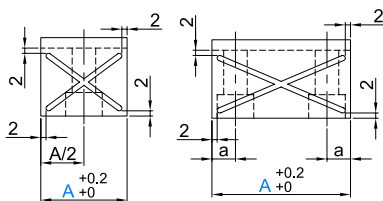
Model: 25LBCSZ

with Oil Free™
Solid Lubricant



Model: 25LBCSM

with Oil Groove



ORDER
EXAMPLE

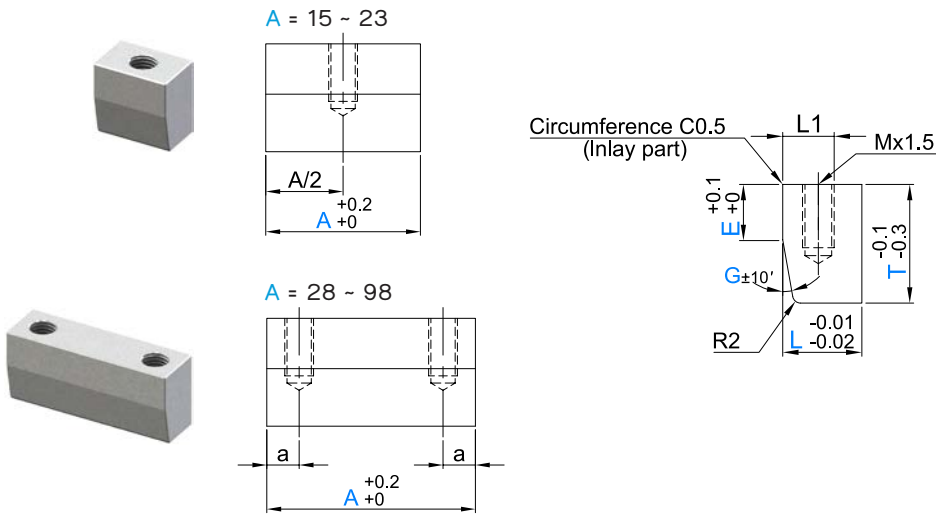
Model L - T - A - G
25LBCSZ25-20-38-15



SKS3
53 - 56HRC

Model	L	T	A											G°				a	L1	L2	d1	d2	t
25LBCSK	20	10	13	15	18	23	28	33	38	48				17	20	22	6	6	13	9.5	5.5	6	
		15	13	15	18	23	28	33	38	48	58			15	17	20							22
		20												15	17								
25LBCSM	25	10				23	28	33	38	48	58			17	20	22	7	10	17	11	6.5	7	
15					18	23	28	33	38	48	58	68	78	15	17	20							22
25LBCSZ	30	10															8	13	21	14	9	9	
15								33	38	48	58	68	78	15	17	20							22
20																							

Locking Blocks Inlay Type - ล็อกกิ้งบล็อก แบบอินเลย์



ORDER EXAMPLE	Model	L	T	A	E	G
	25LBMS20-30-48-20-15					

Model: 25LBMS Model: 25LBMD
SKS3 SKD61
53 - 56HRC 50 - 55HRC

Model	L	T	A												E 1mm increments	G° 1° increments	a	L1	M
25LBMS 25LBMD	15	20	15	18	23	28	33	38	48						10 - 13	5 - 33	7	7	6
		25												10 - 15	5 - 33				
		30									10 - 20	5 - 33							
		35				28	33	38	48	58				10 - 25	5 - 28				
		40												10 - 30	5 - 22				
	20	30					33	38	48	58					10 - 20	5 - 33	8	9	8
		35												10 - 25	5 - 33				
		40												10 - 30	5 - 30				
		50					33	38	48	58	68	78		12 - 40	5 - 24				
		60												12 - 50	5 - 22				
	25	30													12 - 20	5 - 33	10	12	10
		35						38	48	58	68	78			12 - 25	5 - 33			
		40													12 - 30	5 - 33			
		50													12 - 40	5 - 30			
		60							48	58	68	78			12 - 50	5 - 24			
	30	40													12 - 30	5 - 33	12	14	12
		50										78	88	98	12 - 40	5 - 33			
		60													12 - 50	5 - 30			

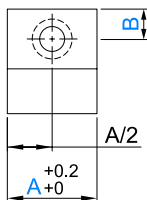
แองกูล่าพิน

Locking Blocks Side Setting Type - ล็อกกิ้งบล็อก แบบเซ็ทด้านข้าง

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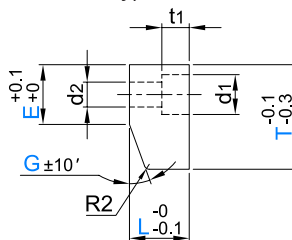


A = 28



เลือกรุ่นตามประเภทรูยึด
Choose model from hole types

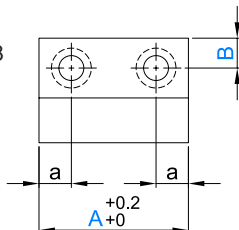
Model: 25LBSS
รูนรูโบลต์
Bolt Hole Type



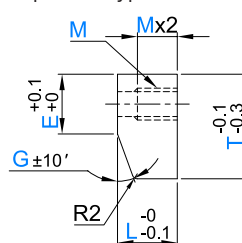
M	d1	d2	t1
M8	14	9	9
M10	17	11.5	11
M12	19	12.5	13



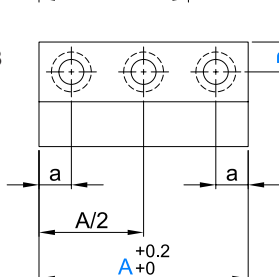
A = 38 ~ 48



Model: 25LBST
รูนรูต๊าป
Tap Hole Type



A = 58 ~ 78



ORDER
EXAMPLE Model L - T - A - E - M - B - G
25LBSS20-40-38-25-8-13-21

SKS3
53 ~ 56HRC

Model	L	T	A	E 1mm increments	M	B 1mm increments		G° 1° increments	a	Bolt Hole
						25LBSS	25LSST			
25LBSS 25LSST	20	28	28	15 - 25	8	(d1/ 2) +2 ≤ B B ≤ E - (d1/2) - 2	(M/2)+2 ≤ B B ≤ E-(M/2)-2	5 - 33	10	1
			38		8				10	2
			48		8 10 12				12	2
		35	28	20 - 25	8				10	1
			38		8				10	2
			48		8 10 12				12	2
		40	38	25 - 30	8				10	2
			48		8 10 12				12	2
			58		8 10				10	3
		50	38	30 - 40	8				10	2
			48		8 10 12				12	2
			58		8 10				10	3
	25	35	38	20 - 25	8				10	2
			48		8 10 12				12	2
			58		8 10				10	3
		40	38	25 - 30	8				10	2
			48		8 10 12				12	2
			58		8 10				10	3
		50	48	30 - 40	8 10 12				12	2
			58		8 10				10	3
			68		8 10 12				12	3
		78	48	35 - 45	8 10 12				15	3
			58		8 10				12	2
			68		8 10 12				10	3
			78		8 10 12				12	3
			78		8 10 12				15	3

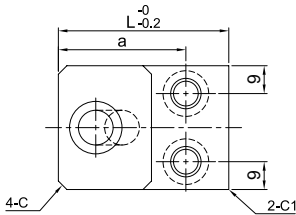
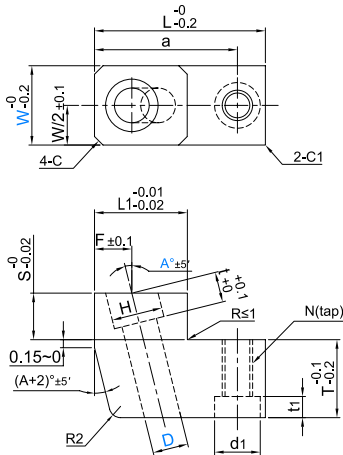
Compact Locking Blocks with Angular Holes - ล็อกกิ้งบล็อก แบบคอมแพ็ค

FOIL FREE™

Model: 25ABPX

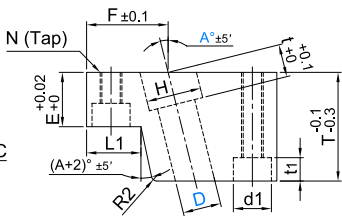
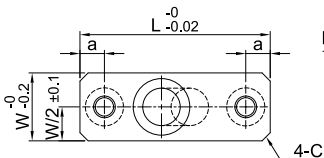
W = 15 ~ 35

W = 40 ~ 70



D	a	
	W 15 - 35	W 40 - 70
6	32	-
8	32	-
10	46	40
13	-	46
16	-	46

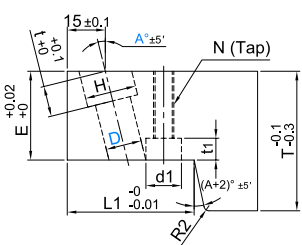
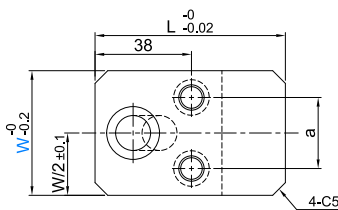
Model: 25ABPZS



W	C
15 / 25	3
25 - 40	5

A	F	
	D = 6 / 8	D = 10
10 / 15	25	35
18 / 20	20	30

Model: 25ABPZT



ORDER
EXAMPLE

Model D - W - A
25ABPX10-30-15

SKS3
53 - 56HRC

Model	D H7		W					A°	H	t	Bolt Hole		Bolt	Tap N	L	T	F	L1	S	C	
							d1				t1										
25ABPX	6	+0.012 +0.000	15	20	25				10 15 18 20	11	5	11	6.5	M6	M8	40	10	10	20	10	3
	8	+0.015 0.000	15	20	25					13											
	10		25	30	35						16	10	14	8.6	M8	M10	55	25	12	30	15
		40	45					50													
	13	+0.018 0.000	45	50	55	60	65	70		19											
	16		45	50	55	60	65	70		21	13										

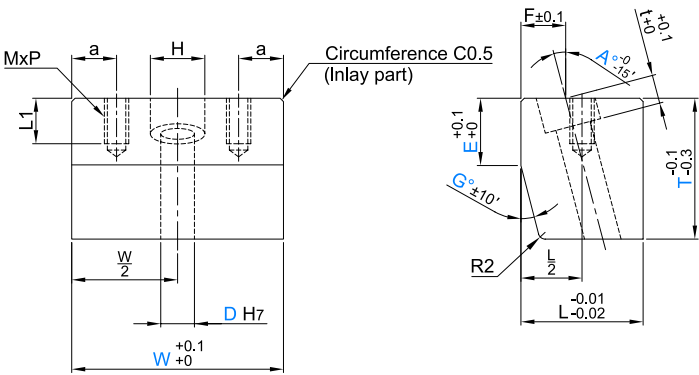
Model	D H7		W				A°	H	t	Bolt Hole		Bolt	Tap N	L	T	L1	E	C
										d1	t1							
25ABPZS	6	+0.012 +0.000	15	20	25		10 15 18 20	11	5	11	6.5	M6	M8	55	30	16	15	7
	8	+0.015 0.000	15	20	25			13										
	10		25	30	35	40		16	10	14	8.6	M8	M10	70	40	20	20	9
25ABPZT	10	+0.015 0.000	45				10 15 18 20	16	10	14	8.6	M8	M10	70	48	48	30	25
			50	55														
	13	+0.018 0.000	55	60	65	70		19						75	55	50	35	28
	16		55	60	65	70		21	13									

แองกูล่าพิน

Locking Blocks with Angular Holes - ล็อกกิ้งบล็อก แบบรูเอียง



Model: 25ALBMS



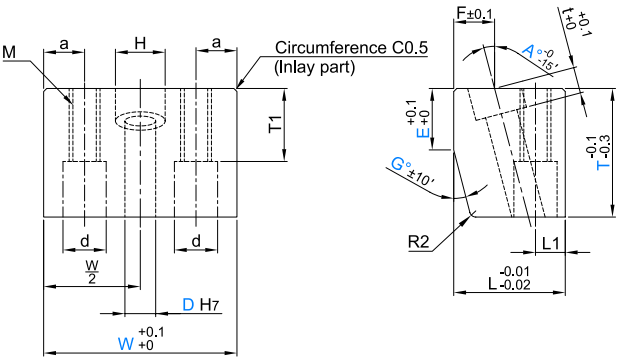
ORDER
EXAMPLE

Model D - T - W - E - A - G
25ALBMS6-25-48-11-15-17

SKS3
53 - 56HRC

Model	D H7		T	W				E 1mm increments	1° increments		H	F	L1	M	t	a	L	
									A°	G°								
25ALBMS	6	+0.012 +0.000	20	38	48	58			10 - 13	10 - 20	G ≥ A+2 and G ≤ A+5	10	6	8	4x0.7	5	5	20
			25						10 - 15									22
			30						10 - 20									25
	8		20	38	48	58			10 - 13			12	8	12	6x1.0	5	6	25
			25						10 - 15									26
			30						10 - 20									30
	10	+0.015 0.000	30	38	48	58	68		10 - 20			14	10	16	8x1.25	10	7	32
			35						10 - 25									35
			40						10 - 30									36
			50						10 - 40									40
	13	+0.018 0.000	35	48	58	68	78		10 - 25			17	12	16	8x1.25	10	8	40
			40						10 - 30									40
			50						10 - 40									45
			60						10 - 50									50

Model: 25ALBPS



ORDER EXAMPLE	Model	D - T - W - E - A - G	 SKS3
	25ALBPS10-30-58-12-15-17		
			53 - 56HRC

Model	D H7		T	W			E 1mm increments	1° increments		H	F	t	T1	d	M	a	L1	L	
								A°	G°										
25ALBPS	10	+0.015 0.000	30	48	58	68		10 - 20	10 - 20	G ≥ A+2 and G ≤ A+5	14	10	10	20	14	10	9	12	32
							10 - 25	35											
			40				10 - 30	36											
			50				10 - 40	40											
	13	+0.018 0.000	35	48	58	68	78	10 - 25			17	12	10	25	14*	10*	9	14	40
							10 - 30	40											
			50				10 - 40	45											
			60				10 - 50	50											
	16		35	58	68	78	10 - 25	20			15	13	25	17*	12*	12	16	40	
			40				10 - 30						45						
			50				10 - 40						50						
			60				10 - 50						55						
	20		40	58	68	78	10 - 30	24			15	13	30	17*	12*	12	16	45	
			50				10 - 40											50	
			60				10 - 50											55	