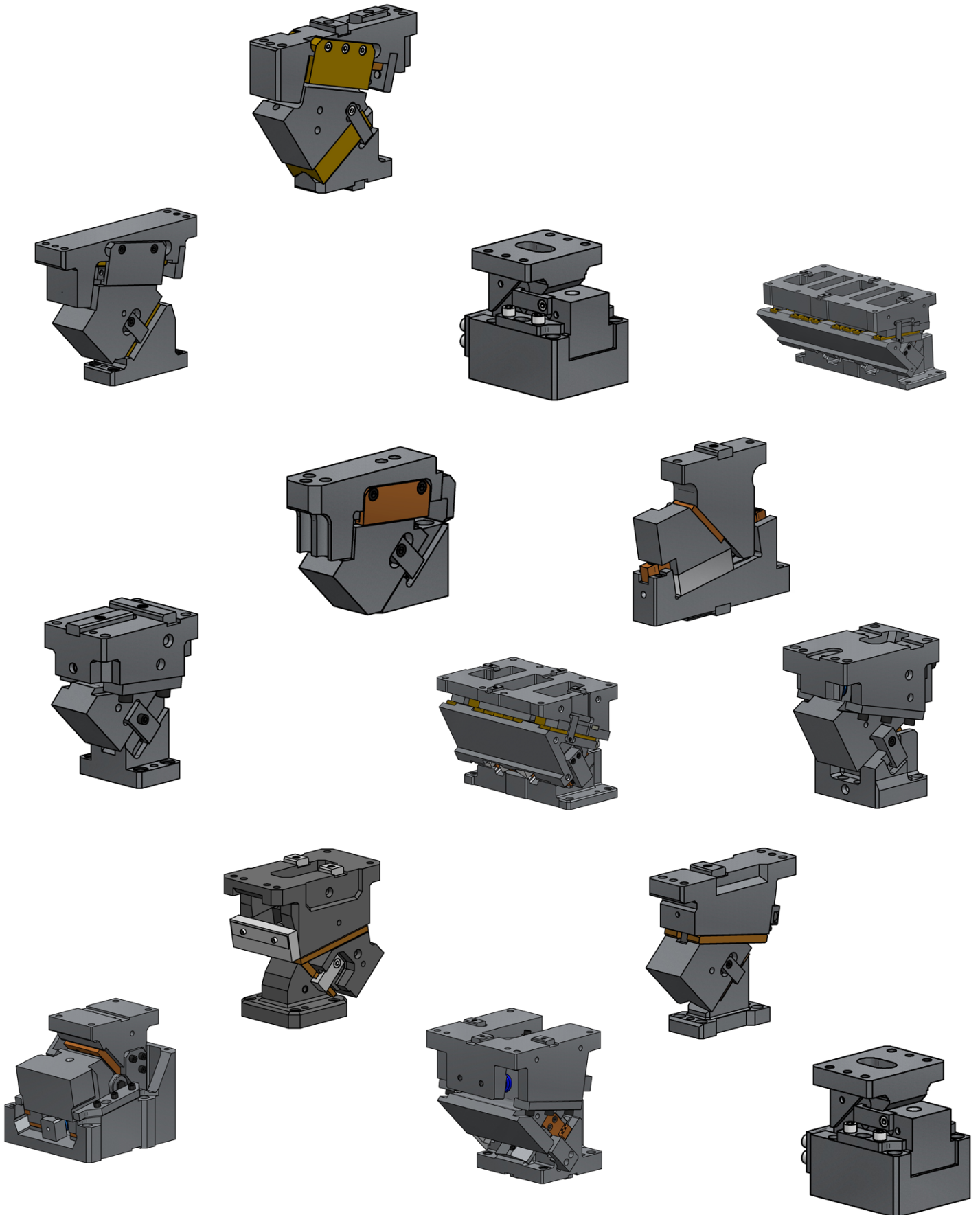




# CAM UNITS

Summary

## SUMMARY



Summary

# CAM UNITS



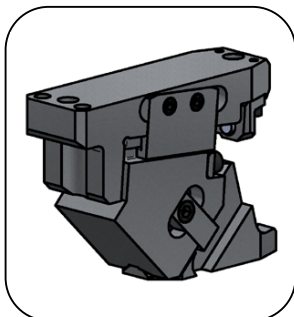
# CAM UNITS

Summary

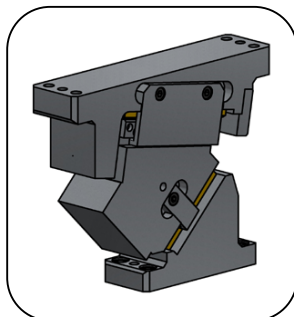


## 01 - ATFA

P. 1 - 74



ATFA 0052



ATFA 0065

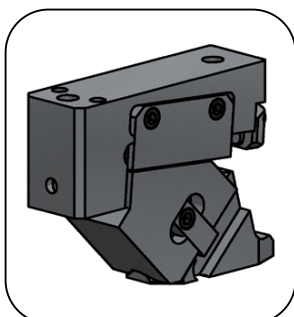
MOUNT WIDTH (mm)	WORKING FORCE kN - (tons)	
	(1 Million Strokes)	(300.000 Strokes)
52	14.7 (1.5)	29.4 (3.0)
65	68.7 (7.0)	137.3 (14.0)

### DESCRIPTION

- Aerial cam.
- (ATFA 52) Angles from 0° to 80° with increments of 5°.
- (ATFA 65) Angles from 0° to 75° with increments of 5°.
- "V" shaped sliding for auto-centered.
- Compact design.

## 02 - ASDR

P. 75 - 100



ASDR 0052

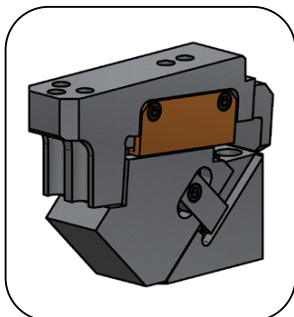
MOUNT WIDTH (mm)	WORKING FORCE kN - (tons)	
	(1 Million Strokes)	(300.000 Strokes)
52	14.7 (1.5)	29.4 (3.0)

### DESCRIPTION

- Aerial cam.
- Angles from 0° to 50° with increments of 5°.
- "V" shaped sliding for auto-centered.
- Compact design.
- Longer stroke than ATFA 52.

**03 - ACDS**

P. 101 - 130



**ACDS 0052**

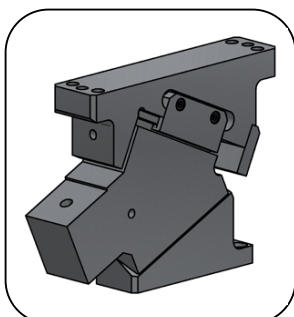
**DESCRIPTION**

- Aerial cam.
- Angles from 0° to 60° with increments of 5°.
- “V” shaped sliding for auto-centered.
- High return force for extraction.
- Extensible mount length.

MOUNT WIDTH (mm)	WORKING FORCE kN - (tons)	
	(1 Million Strokes)	(300.000 Strokes)
52	29.4 (3.0)	58.8 (6.0)

**04 - ANCG**

P. 131 - 146



**ANCG 0065**

**DESCRIPTION**

- Aerial cam.
- Angles from 0° to 25° with increments of 5°.
- “V” shaped sliding for auto-centered.
- Extensible mount length.

MOUNT WIDTH (mm)	WORKING FORCE kN - (tons)	
	(1 Million Strokes)	(300.000 Strokes)
65	14.7 (1.5)	29.4 (3.0)

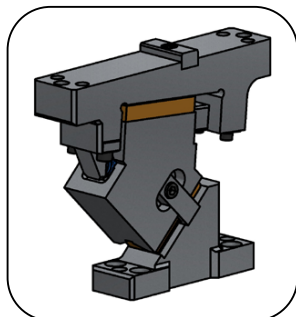
# CAM UNITS

Summary

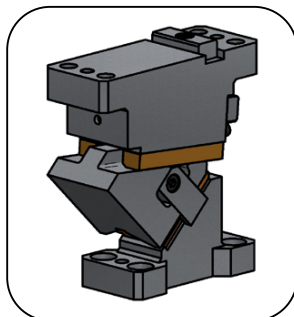


## 05 - ASCB

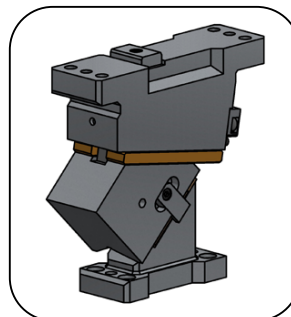
P. 147 - 282



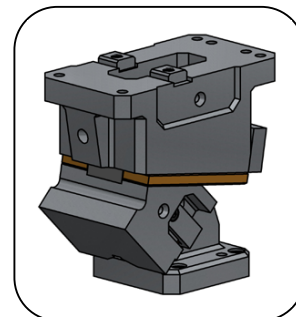
ASCB 0050



ASCB 0065



ASCB 0080



ASCB 0150

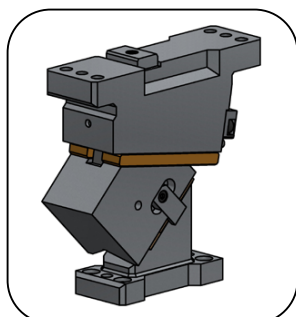
MOUNT WIDTH (mm)	WORKING FORCE kN - (tons)	
	(1 Million Strokes)	(300.000 Strokes)
50	19.6 (2.0)	39.2 (4.0)
65	19.6 (2.0)	39.2 (4.0)
80	39.2 (4.0)	78.4 (8.0)
150	88.2 (9.0)	132 (13.5)

### DESCRIPTION

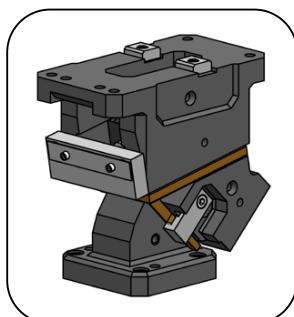
- Aerial cam.
- Angles from 0° to 70° with increments of 5°.
- "V" shaped sliding for auto-centered.
- Same width for cam and mount.
- Extensible mount length.
- Slider easy desassembly from the rear.

## 06 - ASFK

P. 215 - 282



ASFK 0080



ASFK 0150

MOUNT WIDTH (mm)	WORKING FORCE kN - (tons)	
	(1 Million Strokes)	(300.000 Strokes)
80	54.9 (5.6)	109.8 (11.2)
150	123.5 (12.6)	185.2 (18.9)

### DESCRIPTION

- Aerial cam.
- Angles from 0° to 70° with increments of 5°.
- "V" shaped sliding for auto-centered.
- Same width for cam and mount.
- Higher return force than ASCB.
- Slider front prolongable.
- Slider easy desassembly from the rear.

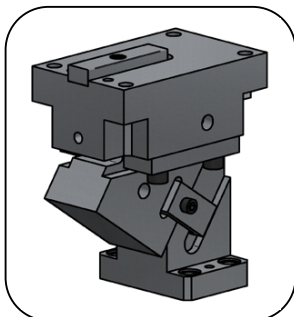


# CAM UNITS

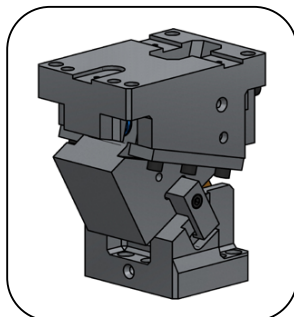
Summary

## 07 - AUKE

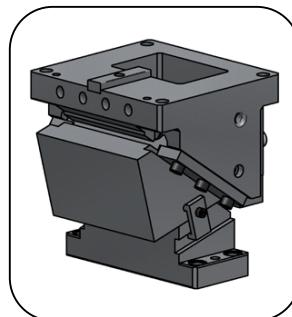
P. 283 - 380



AUKE 0065



AUKE 0100



AUKE 0200

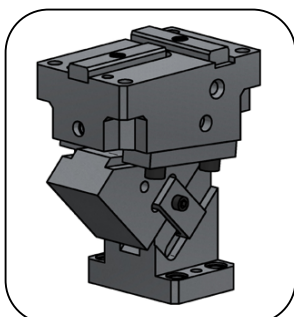
MOUNT WIDTH (mm)	WORKING FORCE kN - (tons)	
	(1 Million Strokes)	(300.000 Strokes)
65	19.6 - 29.4 (2.0 - 3.0)	39.2 - 58.8 (4.0 - 6.0)
100	44.1 - 49.0 (4.5 - 5.0)	88.2 - 98.0 (9.0 - 10.0)
200	98.1 - 117.7 (10.0 - 12.0)	196.2 - 235.4 (20.0 - 24.0)

### DESCRIPTION

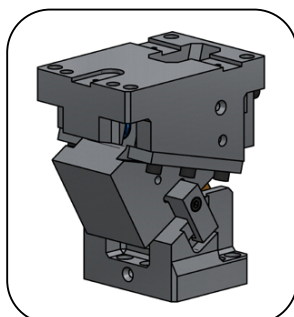
- Aerial cam.
- Angles from 0° to 70° with increments of 5°.
- Rigid flat guides system.
- Slider easy desassembly from the rear.

## 08 - ABKL

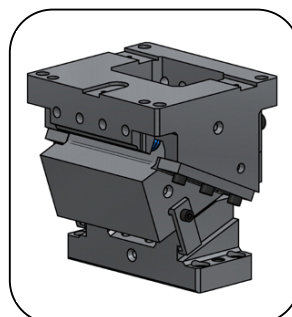
P. 381 - 478



ABKL 0065



ABKL 0100



ABKL 0200

MOUNT WIDTH (mm)	WORKING FORCE kN - (tons)	
	(1 Million Strokes)	(300.000 Strokes)
65	19.6 (2.0)	39.2 (4.0)
100	44.1 (4.5)	88.2 (9.0)
200	93.1 (9.5)	186.2 (19.0)

### DESCRIPTION

- Aerial cam.
- Angles from 0° to 70° with increments of 5°.
- "V" shaped sliding for auto-centered.
- Slider easy desassembly from the rear.

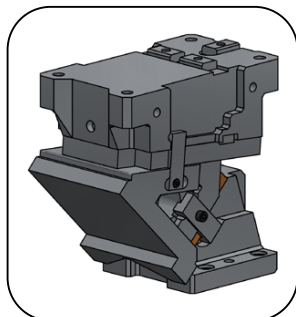
# CAM UNITS

Summary

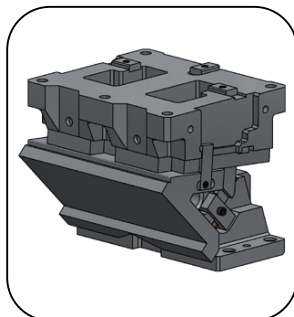


## 09 - AWBC

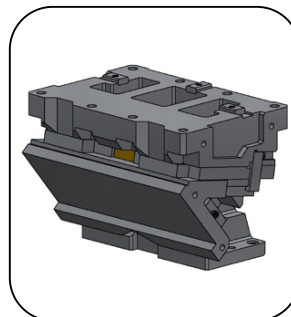
P. 479 - 620



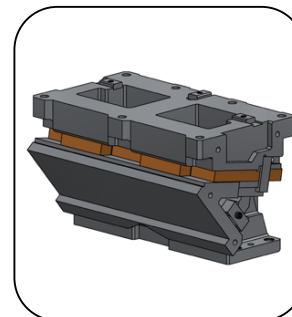
AWBC 0200 / 0300



AWBC 0400



AWBC 0500



AWBC 0600

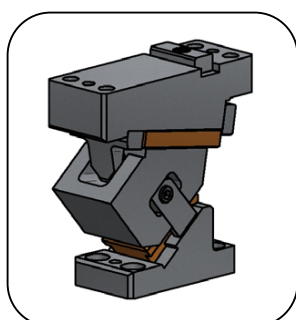
MOUNT WIDTH (mm)	WORKING FORCE kN - (tons)	
	(1 Million Strokes)	(300.000 Strokes)
200	117.6 (12.0)	235.2 (24.0)
300	196.0 (20.0)	392.0 (40.0)
400	245.0 (25.0)	490.0 (50.0)
500	313.6 (32.0)	627.2 (64.0)
600	392.0 (40.0)	784.0 (80.0)

### DESCRIPTION

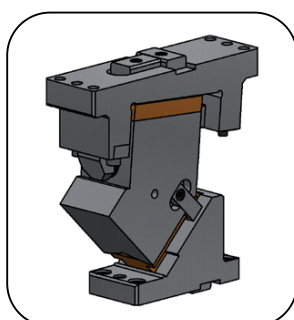
- Aerial cam.
- Angles from 0° to 60° with increments of 5°.
- "V" shaped sliding for auto-centered.
- Slider easy desassembly from the rear.

## 10 - ASGN

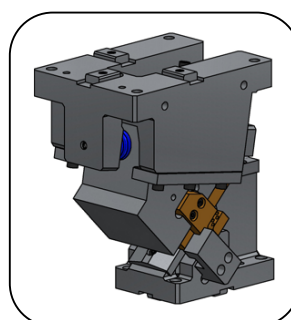
P. 621 - 798



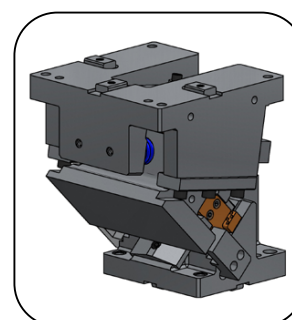
ASGN 0050 / 0065



ASGN 0080



ASGN 0150



ASGN 0200 / 0300

MOUNT WIDTH (mm)	WORKING FORCE kN - (tons)	
	(1 Million Strokes)	(300.000 Strokes)
50	29.4 (3.0)	58.6 (6.0)
65	29.4 (3.0)	58.6 (6.0)
80	49 (5.0)	98.0 (10.0)
150	147.0 (15.0)	294.0 (30.0)
200	147 (15.0)	294.0 (30.0)
300	294.0 (30.0)	588.0 (60.0)

### DESCRIPTION

- Aerial cam.
- Angles from 0° to 65° with increments of 5°. (0° to 75° for ASGN 50) (0° to 60° for ASGN 65)
- Rigid flat guides system.
- "V" shaped sliding for auto-centered.
- Slider easy desassembly from the rear. (Except ASGN 0050 y 0065)

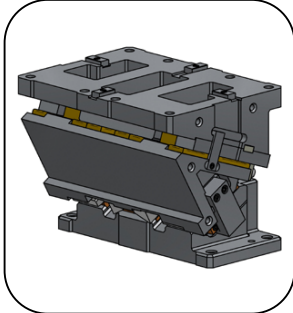


# CAM UNITS

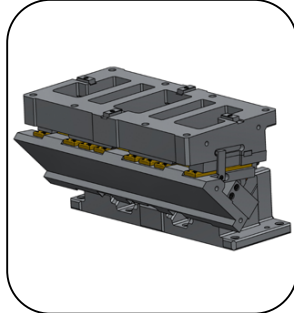
Summary

## 11 - ASLT

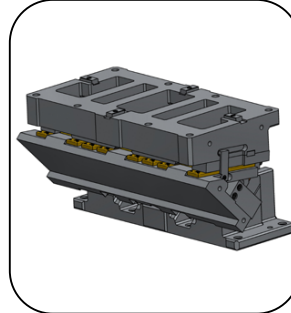
P. 799 - 884



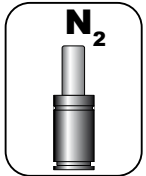
ASLT 0500 / 0600



ASLT 0700 / 0800



ASLT 0900 / 1000



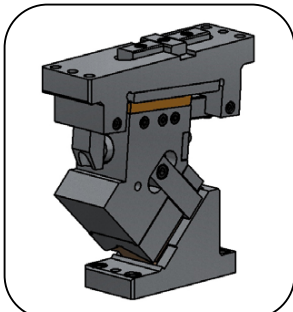
MOUNT WIDTH (mm)	WORKING FORCE kN - (tons)
500 600	137.3 (14.0)
700 800	470.4 (48.0)
900 1000	627.2 (64.0)

### DESCRIPTION

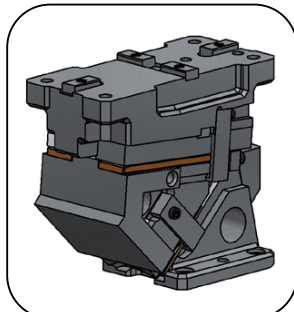
- Aerial cam.
- Angles from 0° to 60° with increments of 5°.
- "V" shaped sliding for auto-centered.
- Slider easy desassembly from the rear.
- Gas spring equipped unit.

## 12 - ANRP

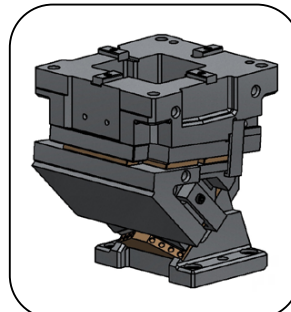
P. 885 - 1026



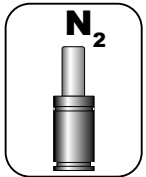
ANRP 0070 / 0080



ANRP 0165 / 0200



ANRP 0300 / 0400



MOUNT WIDTH (mm)	WORKING FORCE kN - (tons)
70	98.1 (10.0)
80	166.7 (17.0)
165	294.2 (30.0)
200	353.0 (36.0)
300	451.1 (46.0)
400	

### DESCRIPTION

- Aerial cam.
- Angles from 0° to 60° with increments of 5°.
- Rigid flat guides system.
- "V" shaped sliding for auto-centered.
- Optional gas spring
- According to NAAMS.



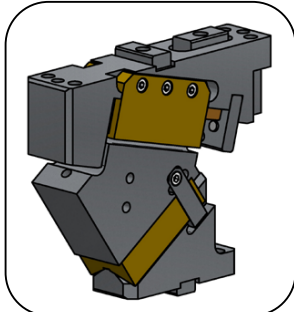
# CAM UNITS

Summary

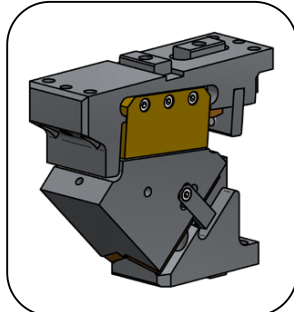


## 13 - ASVX

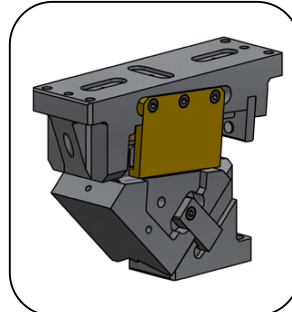
P. 1027 - 1336



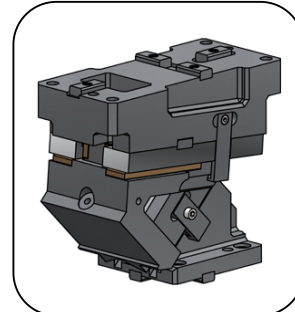
ASVX 0060



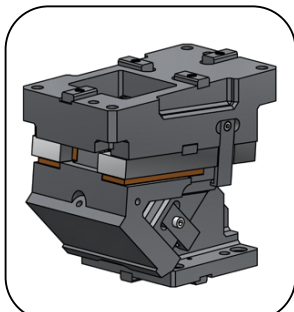
ASVX 0085



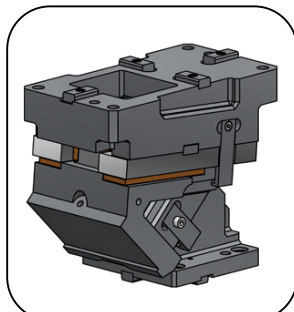
ASVX 0110



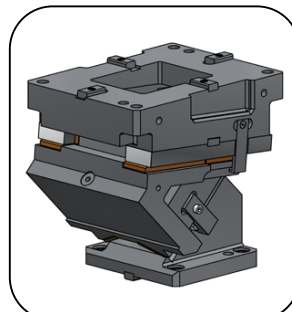
ASVX 0165



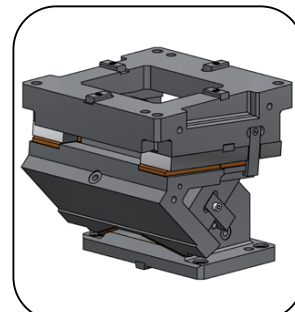
ASVX 0200



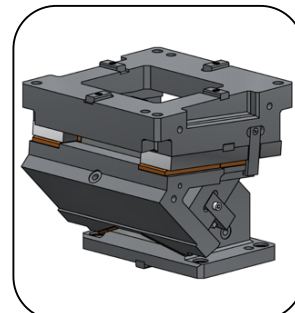
ASVX 0250



ASVX 0300

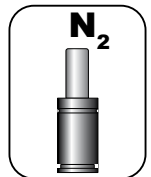


ASVX 0350



ASVX 0400

MOUNT WIDTH (mm)	WORKING FORCE kN - (tons)
60	75.0 (7.6)
85	100.0 (10.2)
110	150.0 (15.3)
165	171.0 (17.4)
200	218.0 (22.2)
300	364.0 (37.1)
350	405.0 (41.1)
400	450.0 (45.9)



### DESCRIPTION

- Aerial cam.
- Angles from 0° to 75° with increments of 5°.
- Rigid flat guides system.
- "V" shaped sliding for auto-centered.
- Gas spring equipped unit.
- According to VDI-BAK.

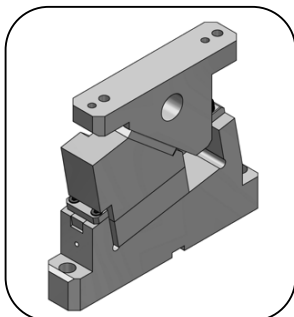


# CAM UNITS

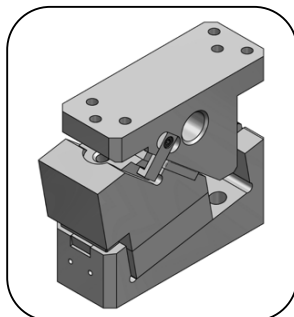
Summary

## 14 - LSDH

P. 1337 - 1360



LSDH 0052



LSDH 0090

MOUNT WIDTH (mm)	WORKING FORCE kN - (tons)	
	(1 Million Strokes)	(300.000 Strokes)
52	19.6 (2.0)	39.2 (4.0)
90	38.2 (3.9)	76.4 (7.8)

### DESCRIPTION

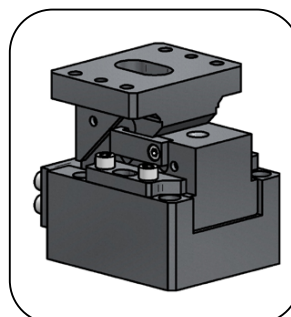
- Die mounted cam.
- Angles from 0° to 20° with increments of 5°. (0° to 15° for LSDH 90)
- Extensible mount length (only for LSDH 90).

## 15 - LKCM

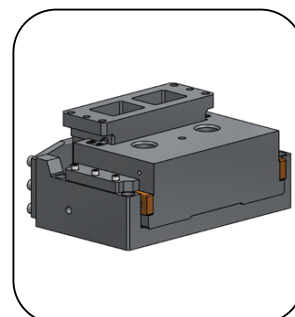
P. 1361 - 1416



MOUNT WIDTH (mm)	WORKING FORCE kN - (tons)	
	(1 Million Strokes)	(300.000 Strokes)
52	14.7 (1.5)	29.4 (3.0)
65	19.6 (2.0)	39.2 (4.0)
100	29.4 (3.0)	58.8 (6.0)
150	58.8 (6.0)	88.2 (9.0)
200	78.4 (8.0)	117.6 (12.0)
250	98.0 (10.0)	147.0 (15.0)
300	117.6 (12.0)	176.4 (18.0)
400	137.2 (14.0)	205.8 (21.0)
500	137.2 (14.0)	205.8 (21.0)
600	137.2 (14.0)	205.8 (21.0)



LKCM 0052  
LKCM 0065  
LKCM 0100  
LKCM 0150  
LKCM 0200  
LKCM 0250  
LKCM 0300



LKCM 0400  
LKCM 0500  
LKCM 0600

### DESCRIPTION

- Die mounted cam.
- 0° Horizontal cam.

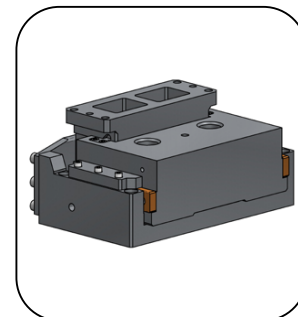
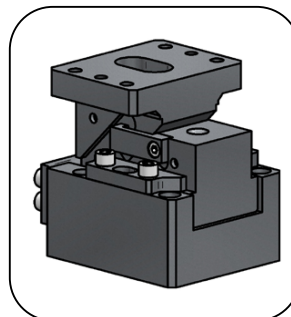
# CAM UNITS

Summary



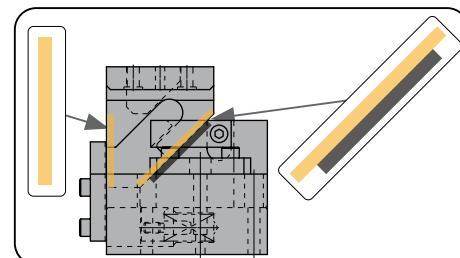
## 16 - LKBM

P. 1361 - 1411



LKBM 0052  
LKBM 0065  
LKBM 0100  
LKBM 0150  
LKBM 0200  
LKBM 0250  
LKBM 0300

LKBM 0400



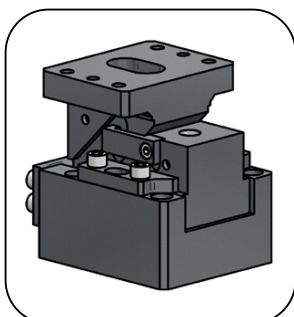
MOUNT WIDTH (mm)	WORKING FORCE kN - (tons)	
	(1 Million Strokes)	(300.000 Strokes)
52	14.7 (1.5)	29.4 (3.0)
65	19.6 (2.0)	39.2 (4.0)
100	29.4 (3.0)	58.8 (6.0)
150	58.8 (6.0)	88.2 (9.0)
200	78.4 (8.0)	117.6 (12.0)
250	98.0 (10.0)	147.0 (15.0)
300	117.6 (12.0)	176.4 (18.0)
400	137.2 (14.0)	205.8 (21.0)

### DESCRIPTION

- Die mounted cam.
- 0° Horizontal cam.
- Sliding plates in driver.

## 17 - LKCV

P. 1417 - 1448



LKCV 0065  
LKCV 0100  
LKCV 0150

MOUNT WIDTH (mm)	WORKING FORCE kN - (tons)	
	(1 Million Strokes)	(300.000 Strokes)
65	19.6 (2.0)	39.2 (4.0)
100	39.2 (4.0)	78.4 (8.0)
150	64.7 (6.6)	98.0 (10.0)

### DESCRIPTION

- Die mounted cam.
- Angles from 5° to 20° with increments of 5°.
- 45mm Stroke.

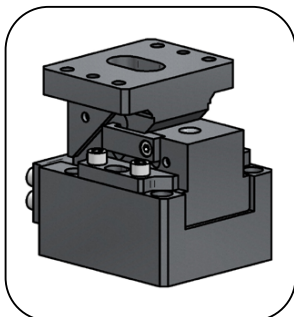


# CAM UNITS

Summary

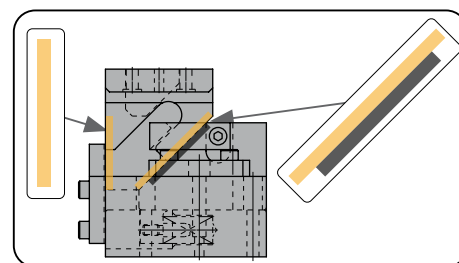
## 18 - LKBV

P. 1417 - 1448



LKBV 0065  
LKBV 0100  
LKBV 0150

MOUNT WIDTH (mm)	WORKING FORCE kN - (tons)	
	(1 Million Strokes)	(300.000 Strokes)
65	19.6 (2.0)	39.2 (4.0)
100	39.2 (4.0)	78.4 (8.0)
150	64.7 (6.6)	98.0 (10.0)

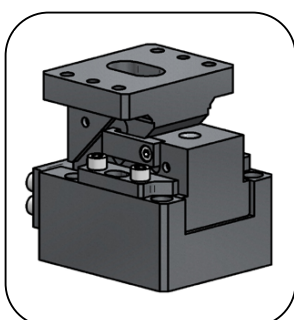


### DESCRIPTION

- Die mounted cam.
- Angles from 5° to 20° with increments of 5°.
- 45mm Stroke.
- Sliding plates in driver.

## 19 - LKCZ

P. 1449 - 1480



LKCZ 0065  
LKCZ 0100  
LKCZ 0150

MOUNT WIDTH (mm)	WORKING FORCE kN - (tons)	
	(1 Million Strokes)	(300.000 Strokes)
65	19.6 (2.0)	39.2 (4.0)
100	39.2 (4.0)	78.4 (8.0)
150	64.7 (6.6)	98.0 (10.0)

### DESCRIPTION

- Die mounted cam.
- Angles from 5° to 20° with increments of 5°.
- 70mm Stroke.

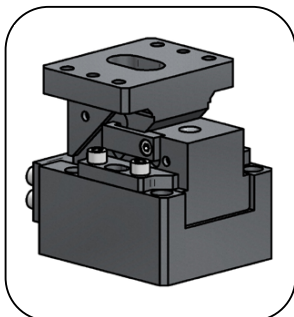
# CAM UNITS

Summary



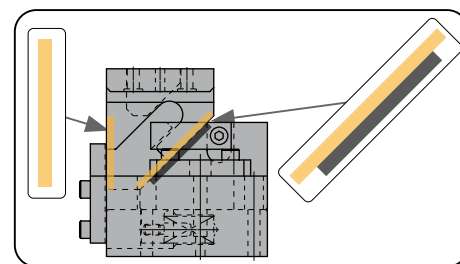
## 20 - LKBZ

P. 1449 - 1480



LKBZ 0065  
LKBZ 0100  
LKBZ 0150

MOUNT WIDTH (mm)	WORKING FORCE kN - (tons)	
	(1 Million Strokes)	(300.000 Strokes)
65	19.6 (2.0)	39.2 (4.0)
100	39.2 (4.0)	78.4 (8.0)
150	64.7 (6.6)	98.0 (10.0)

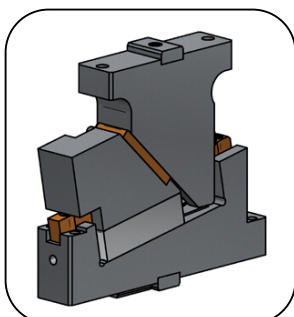


### DESCRIPTION

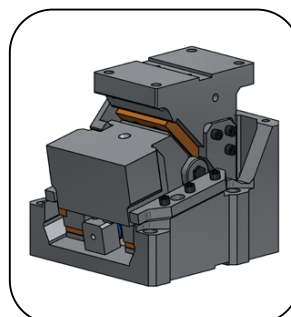
- Die mounted cam.
- Angles from 5° to 20° with increments of 5°.
- 70mm Stroke.
- Sliding plates in driver.

## 21 - LSPJ

P. 1481 - 1564



LSPJ 0050  
LSPJ 0080  
LSPJ 0150



LSPJ 0200  
LSPJ 0300

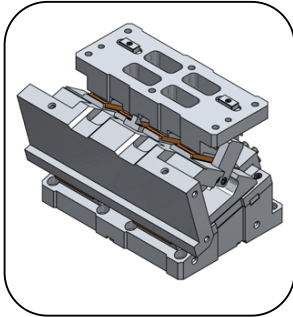
MOUNT WIDTH (mm)	WORKING FORCE kN - (tons)
50	14.7.0 (1.5)
80	35.3 (3.6)
150	117.6 (12.0)
200	147.0 (15.0)
300	294.0 (30.0)

### DESCRIPTION

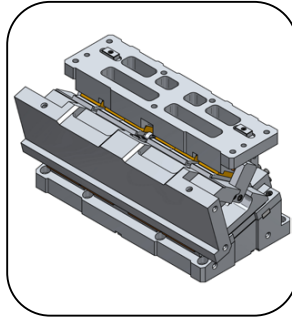
- Die mounted cam.
- Angles from 0° to 30° with increments of 5°.
- Rigid guides system.

**19 - LSLD**

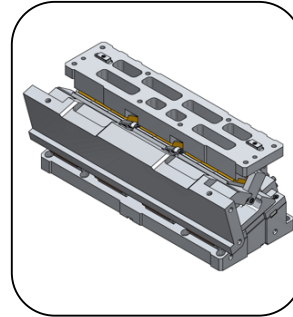
**P. 1565 - 1602**



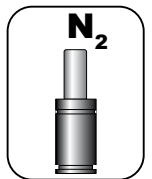
**LSLD 0500  
LSLD 0600**



**LSLD 0700  
LSLD 0800**



**LSLD 0900  
LSLD 1000**



MOUNT WIDTH (mm)	WORKING FORCE kN - (tons)
500 600	313.6 (32.0)
700 800	470.4 (48.0)
900 1000	627.2 (64.0)

**DESCRIPTION**

- Die mounted cam.
- Angles from 0° to 20° with increments of 5°.
- Rigid guides system.
- Gas spring equipped unit.

# CAM UNITS

Summary



## APPLIED FORCE CALCULATION FOR HORIZONTAL CAMS

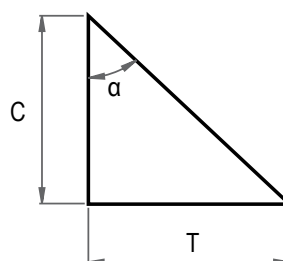
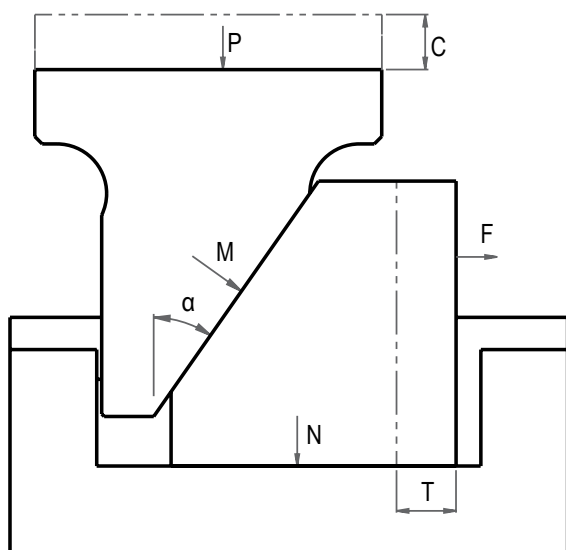
$$P = F \times \tan \alpha$$

$$M = F \times \frac{1}{\cos \alpha} \quad C = \frac{T}{\tan \alpha}$$

$$N = F \times \tan \alpha$$

- $\alpha$  : Driver inclination angle.
- F : Force Required for Working.
- P : Press compression force.
- M : Load applied to Cam Driver surface.
- N : Load applied to Cam Slider surface.
- T : Working stroke.
- C : Press stroke.

F = Working force + Spring Return Force + Pad Force



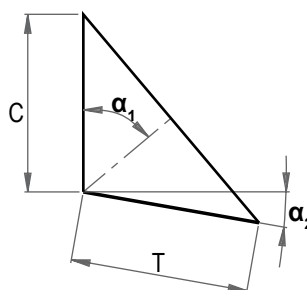
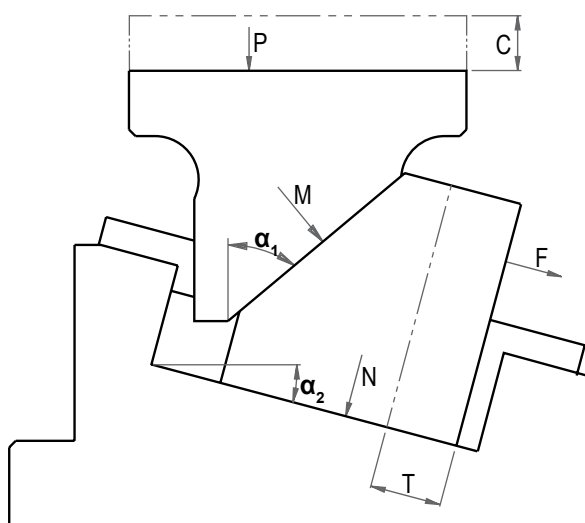
## APPLIED FORCE CALCULATION FOR DIE MOUNTED CAMS

$$P = F \times \frac{\sin \alpha_1}{\cos (\alpha_1 - \alpha_2)} \quad N = F \times \tan (\alpha_1 + \alpha_2)$$

$$M = F \times \frac{1}{\cos (\alpha_1 - \alpha_2)} \quad C = T \times \frac{\cos (\alpha_1 - \alpha_2)}{\sin \alpha_1}$$

- $\alpha_1$  : Driver inclination angle.
- $\alpha_2$  : Slider useful inclination angle.
- F : Force Required for Working.
- P : Press compression force.
- M : Load applied to Cam Driver surface.
- N : Load applied to Cam Slider surface.
- T : Working stroke.
- C : Press stroke.

F = Working force + Spring Return Force + Pad Force



**APPLIED FORCE CALCULATION FOR AERIAL CAMS**

$$P = F \times \frac{\cos \alpha_1}{\sin (\alpha_1 + \alpha_2)}$$

$$N = F \times \frac{1}{\tan (\alpha_1 + \alpha_2)}$$

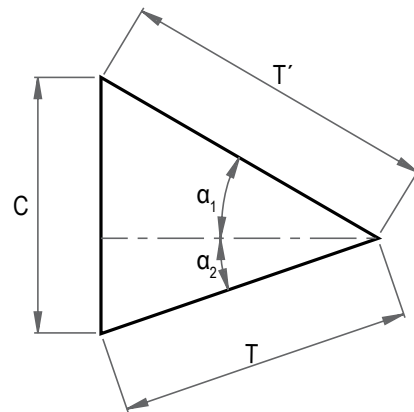
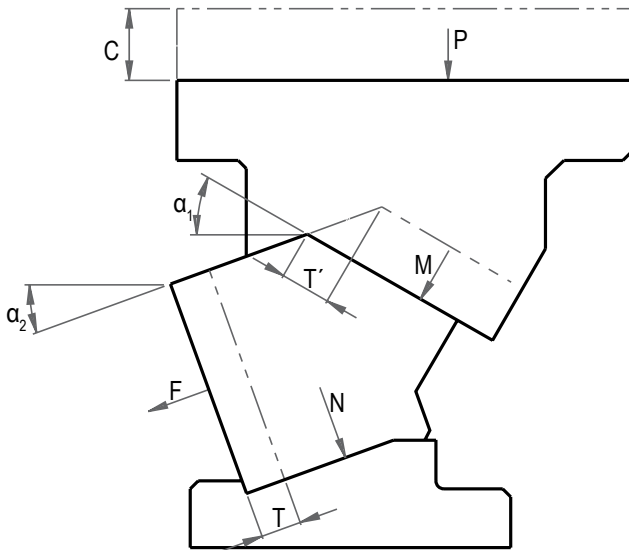
$$T' = T \times \frac{\cos \alpha_2}{\cos \alpha_1}$$

$$M = F \times \frac{1}{\sin (\alpha_1 + \alpha_2)}$$

$$C = T \times \frac{\sin (\alpha_1 + \alpha_2)}{\cos \alpha_1}$$

- $\alpha_1$  : Driver inclination angle.
- $\alpha_2$  : Slider useful inclination angle.
- F : Force Required for Working.
- P : Press compression force.
- M : Load applied to Cam Driver surface.
- N : Load applied to Cam Slider surface.
- T : Working stroke.
- T' : Spring stroke.
- C : Press stroke.

**F = Working force + Spring Return Force + Pad Force**





# CAM UNITS

Summary



## AVAILABLE OPTIONS

Nº	MODEL	MOUNT WIDTH	MOUNT		KEY				PIN					GAS SPRING	
			LM	WM	K	KT	KF	KU	P8	P10	P12	P13	P16	G	
1	ATFA	52	✓												
		65													
2	ASDR	52	✓	✓											
3	ACDS	52	✓	✓							✓				
4	ANCG	65	✓								✓				
5	ASCB	50	✓	✓	✓						✓				
		65	✓		✓										
		80	✓	✓	✓									✓	
		150			✓	✓								✓	
6	ASFK	80	✓	✓	✓									✓	
		150			✓	✓								✓	
7	AUKE	65			✓						✓	✓	✓		
		100			✓						✓	✓			
		200			✓						✓	✓	✓		
8	ABKL	65			✓										
		100			✓			✓							
		200			✓			✓							
9	AWBC	200			✓			✓						✓	✓
		300			✓			✓						✓	✓
		400			✓			✓						✓	✓
		500			✓			✓						✓	✓
		600			✓			✓						✓	✓
10	ASGN	50			✓				✓				✓		
		65			✓										
		80			✓				✓			✓			
		150			✓				✓				✓		
		200			✓				✓				✓		
		300			✓				✓						
11	ASLT	500-600													
		700-800													
		900-1000													
12	ANRP	70													✓
		80													✓
		165												✓	✓
		200												✓	✓
		300-400												✓	✓
13	ASVX	60			✓										
		85			✓										
		110			✓										
		165			✓										
		200			✓										
		250			✓										
		300			✓										
		350			✓										
400			✓												



# CAM UNITS

Summary

## AVAILABLE OPTIONS

Nº	MODEL	MOUNT WIDTH	MOUNT		KEY				PIN					GAS SPRING
			LM	WM	K	KT	KF	KU	P8	P10	P12	P13	P16	G
14	LSDH	52	✓	✓	✓									
		90		✓	✓									
15 16	LKCM LKBM	52							✓					
		65								✓				
		100									✓	✓		
		150											✓	
		200												✓
		250												✓
		300												✓
400-500-600				✓									✓	
17 18	LKCV LKBV	65								✓				
		100									✓	✓		
		150												✓
19 20	LKCZ LKBZ	65								✓				
		100									✓	✓		
		150												✓
21	LSPJ	50			✓				✓					
		80			✓							✓		
		150			✓				✓				✓	
		200			✓				✓					✓
		300			✓				✓					
22	LSLD	500-600												
		700-800												
		900-1000												

## Summary

# CAM UNITS

## GENERAL DIMENSIONS BY GROUP

Nº	MODEL	MOUNT WIDTH (mm)	MOUNT WEIGHT (mm)	ANGLE (°)	STROKE (mm)	WORKING FORCE N - (kgf)
1	ATFA	52	60 - 70	0-80	19.3 - 60.0	980.0 - 981.2 ( 99.9 - 100.1 )
		65	90	0-75	22.5 - 69.5	5257.8 - 5988.5 ( 536.1 - 610.7 )
2	ASDR	52	60	0-50	30.2 - 60.7	901.6 ( 91.9 )
3	ACDS	52	75	0-60	30.2 - 73.1	3110.8 ( 317.2 )
4	ANCG	65	80	0-25	30.2 - 35.0	2115.0 ( 215.7 )
5	ASCB	50	65 - 75	0-70	30.2 - 58.3	981.0 - 982.8 ( 100.0 - 100.1 )
		65	65	0-70	15.0 - 51.1	1186.2 - 1220.1 ( 121.0 - 124.5 )
		80	86	0-70	32.1 - 98.5	1461.2 - 1623.6 ( 149.1 - 165.7 )
		150	85	0-70	32.1 - 98.5	4607.5 ( 470.2 )
6	ASFK	80	86	0-70	32.1 - 98.5	3250.0 ( 331.4 )
		150	85	0-70	32.1 - 98.5	9569.4 ( 975.8 )
7	AUKE	65	80 - 110	0-70	26.9 - 58.5	890.7 - 1140.5 ( 90.8 - 116.3 )
		100	100 - 140	0-70	28.3 - 60.0	2741.5 - 3070.2 ( 279.6 - 313.3 )
		200	100 - 140	0-70	28.3 - 60.0	5483.0 - 6140.4 ( 559.1 - 321.1 )
8	ABKL	65	80 - 110	0-70	26.9 - 58.5	890.7 - 1140.5 ( 90.8 - 116.3 )
		100	100 - 140	0-70	28.3 - 70.9	2740.0 - 3074.4 ( 279.5 - 313.3 )
		200	100 - 140	0-70	28.3 - 70.9	5117.0 - 5639.4 ( 521.8 - 575.1 )
9	AWBC	200	180	0-60	38.6 - 120.0	4903.2 ( 499.7 )
		300	180	0-60	38.6 - 120.0	9806.4 ( 999.4 )
		400	180	0-60	38.6 - 120.0	9806.4 ( 999.4 )
		500	180	0-60	38.6 - 120.0	14709.6 ( 1499.0 )
		600	180	0-60	38.6 - 120.0	19612.8 ( 1998.7 )
10	ASGN	50	55 - 65	0-75	15.0 - 52.2	999.4 - 1167.4 ( 101.9 - 118.8 )
		65	56	0-60	15.0 - 32.0	809.6 - 834.9 ( 82.6 - 85.1 )
		80	90	0-65	30.2 - 70.9	1842.4 - 1914.0 ( 187.6 - 194.9 )
		150	120	0-65	28.6 - 116.5	7022.4 ( 715.9 )
		200	120	0-65	28.6 - 116.5	7022.4 ( 715.9 )
		300	160	0-65	28.6 - 116.5	14044.8 ( 1431.8 )
11	ASLT	500	180	0-60	38.6 - 120.0	18682.0 ( 1906.3 )
		600	180	0-60	38.6 - 120.0	18682.0 ( 1906.3 )
		700	180	0-60	38.6 - 120.0	28023.0 ( 2859.5 )
		800	180	0-60	38.6 - 120.0	28023.0 ( 2859.5 )
		900	180	0-60	38.6 - 120.0	37364.0 ( 3812.7 )
		1000	180	0-60	38.6 - 120.0	37364.0 ( 3812.7 )
12	ANRP	70	75	0-60	19.3 - 50.0	578.2 - 676.2 ( 59.0 - 69.0 )
		80	75	0-60	32.1 - 80.0	993.6 - 1223.6 ( 101.3 - 124.8 )
		165	120 - 125	0-60	32.1 - 100.0	2694.0 ( 274.7 )
		200	120	0-60	32.1 - 100.0	4494.0 ( 458.3 )
		300	160	0-60	38.6 - 102.0	8015.4 - 9198.0 ( 817.9 - 937.9 )
		400	160	0-60	38.6 - 102.0	8015.4 - 9198.0 ( 817.9 - 937.9 )



# CAM UNITS

Summary

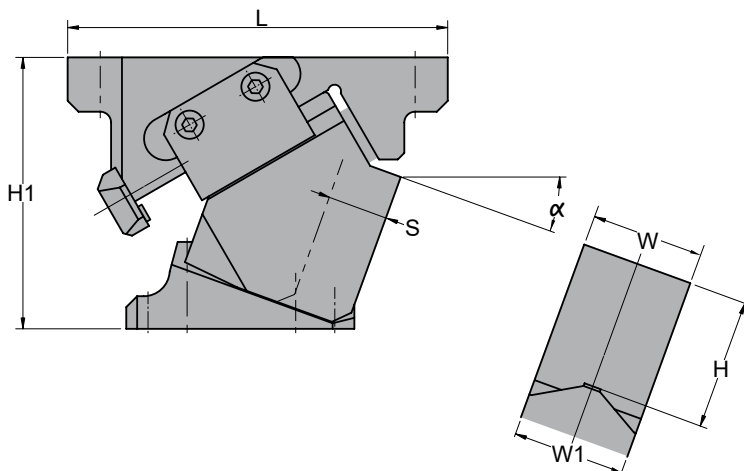
## GENERAL DIMENSIONS BY GROUP

Nº	MODEL	MOUNT WIDTH (mm)	MOUNT WEIGHT (mm)	ANGLE (°)	STROKE (mm)	WORKING FORCE N - (kgf)
13	ASVX	60	100	0 - 75	19.3 - 77.3	2580.9 - 2583.7 ( 263.3 - 263.6 )
		85	110	0 - 75	19.3 - 77.3	5170.4 - 5205.5 ( 527.5 - 531.1 )
		110	140 - 145	0 - 75	32.1 - 108.2	5193.0 - 5501.2 ( 529.9 - 561.3 )
		165	115	0 - 75	32.1 - 77.8	8734.9 - 10766.2 ( 891.3 - 1098.5 )
		200	115	0 - 75	32.1 - 77.8	10766.2 ( 1098.5 )
		250	155	0 - 75	32.1 - 77.8	18578.2 - 21532.4 ( 1895.2 - 2195.6 )
		300	155	0 - 75	38.6 - 120.0	27599.7 - 31587.3 ( 2816.1 - 3222.9 )
		350	155	0 - 75	38.6 - 96.6	23356.0 - 27263.8 ( 2381.6 - 2780.1 )
	400	155	0 - 75	38.6 - 120	27599.7 - 31587.3 ( 2816.1 - 3222.9 )	
14	LSDH	52	75	0 - 20	55.0	606.7 ( 62.1 )
		90	82	0 - 15	55.0	1213.4 ( 124.2 )
15 16	LKCM LKBM	52	65	0	25.0 - 60.0	595.3 - 614.7 ( 60.7 - 62.8 )
		65	70	0	40.0 - 60.0	752.6 - 763.6 ( 76.8 - 77.4 )
		100	100	0	40.0 - 80.0	1130.9 - 1302.7 ( 115.2 - 132.5 )
		150	100	0	40.0 - 60.0	1841.3 - 1867.3 ( 188.2 - 189.8 )
		200	110	0	40.0 - 60.0	2761.9 - 2801.0 ( 282.2 - 284.7 )
		250	130	0	40.0 - 60.0	3610.1 - 3659.4 ( 368.6 - 372.3 )
		300	130	0	40.0 - 60.0	3610.1 - 3659.4 ( 368.6 - 372.3 )
		400	150	0	60.0	9332.2 ( 952.3 )
		500	150	0	60.0	9332.2 ( 952.3 )
		600	150	0	60.0	9332.2 ( 952.3 )
17 18	LKCV LKBV	65	70	5 - 20	45.0	741.0 ( 75.5 )
		100	90	5 - 20	45.0	1111.6 ( 113.3 )
		150	100	5 - 20	45.0	1810.1 ( 184.1 )
19 20	LKCZ LKBZ	65	70	5 - 20	70.0	974.4 ( 99.2 )
		100	90	5 - 20	70.0	1137.4 ( 116.6 )
		150	100	5 - 20	70.0	1841.3 ( 188.2 )
21	LSPJ	50	68	0 - 30	60.0	591.5 ( 60.2 )
		80	88	0 - 30	60.0	1339.6 ( 136.0 )
		150	120	0 - 30	60.0	3746.8 ( 381.5 )
		200	120	0 - 30	60.0	3746.8 ( 381.5 )
		300	120	0 - 30	60.0	7493.6 ( 763.0 )
22	LSLD	500	180	0 - 20	60.0	19600.0 ( 763.0 )
		600	180	0 - 20	60.0	19600.0 ( 763.0 )
		700	180	0 - 20	60.0	19600.0 ( 763.0 )
		800	180	0 - 20	60.0	19600.0 ( 763.0 )
		900	180	0 - 20	60.0	39200.0 ( 3997.3 )
		1000	180	0 - 20	60.0	39200.0 ( 3997.3 )

# CAM UNITS



Summary



Approximate dimensions and values, check specific catalog sheet measures of each cam.

MODEL	MOUNT WIDTH W (mm)	MOUNT HEIGHT H (mm)	WORKING ANGLE $\alpha$ (mm)	MOUNT STROKE S (mm)	WORKING F. kN - (tons)		DIMENSIONS (mm)			SPRING FINAL F. N - (kgf)	
					(1 Million Strokes)	(300.000 Strokes)	WIDTH W1 (mm)	HEIGHT H1 (mm)	LENGTH Lmax.(mm)		
ATFA	52	60	00	19.3	14.7 (1.5)	29.4 (3.0)	52	125	175	980.0 (99.9)	
			05	21.3							
			10	23.3							
			15	25.4							
			20	27.6							
			25	30.0							
			30	32.6							
			35	35.4							
			40	38.6							
			45	42.3							
			50	46.7							
			55	52.3							
			60	60.0							
			65	47.3							
	70	52	60	70	58.5	14.7 (1.5)	29.4 (3.0)	52	125	179	981.0 (100.0)
				75	46.3						
				80	57.5						
				215							
				184							
				185							
65	90	00	22.5	68.7 (7.0)	137.3 (14.0)	65	230	275	5988.5 (610.7)		
		05	22.6								
		10	27.2								
		15	27.8								
		20	32.3								
		25	33.4								
		30	38.0								
		35	40.2								
		40	45.0								
		45	48.7								
		50	54.5								
		55	61.0								
		60	70.0								
		65	68.5								
		70	67.2								
		75	69.5								
ASDR	52	60	00	30.2	14.7 (1.5)	29.4 (3.0)	52	135	185	901.6 (91.9)	
			05	31.9							
			10	35.0							



# CAM UNITS

Summary

MODEL	MOUNT WIDTH W (mm)	MOUNT HEIGHT H (mm)	WORKING ANGLE $\alpha$ (mm)	MOUNT STROKE S (mm)	WORKING F. kN - (tons)		DIMENSIONS (mm)			SPRING FINAL F. N - (kgf)		
					(1 Million Strokes)	(300.000 Strokes)	WIDTH W1 (mm)	HEIGHT H1 (mm)	LENGTH Lmax.(mm)			
<b>ASDR</b>	52	60	15	38.2	14.7 (1.5)	29.4 (3.0)	52	135	185	901.6 (91.9)		
			20	41.5								
			25	45.0								
			30	48.8								
			35	53.1								
			40	57.9								
			45	54.9								
			50	60.7					192			
<b>ACDS</b>	52	75	00	30.2	29.4 (3.0)	58.8 (6.0)	52	160	196.5	3110.8 (317.2)		
			05	33.4					199.4			
			10	36.6					206.5			
			15	39.9					210.5			
			20	43.3					212.1			
			25	47.0					213.7			
			30	51.0					215.4			
			35	55.4					216.0			
			40	60.4					212.3			
			45	66.2					213.6			
			50	73.1					205.0			
			55	64.5					215.0			
			60	54.0					200.0			
<b>ANCG</b>	65	80	00	30.2	----	14.7 (1.5)	65	240	335.0	2115.0 (215.7)		
			05	31.9					338.7			
			10	35.0					341.7			
			15	31.4					339.1			
			20	32.3					335.7			
			25	35.0					331.6			
<b>ASCB</b>	50	75	00	30.2	19.6 (2.0)	39.2 (4.0)	50	200	257	981.0 (100.0)		
			05	30.5					250			
			10	30.3					240		981.0 (100.0)	
			15	30.5								
			20	30.4								
			25	30.0								
			30	32.6								
			35	35.4								
			40	38.6								
			45	42.3								
			50	46.7								
			55	52.1								255
	60	59.1										
	65	65	75	65	58.3	19.6 (2.0)	39.2 (4.0)	65	180	272		1220.1 (124.5)
				70	57.6					278	981.2(100.1)	
				00	15.0					190	1186.2 (121.0)	
				05	15.1					185		
				10	15.2							
15				15.5								
20	16.5											
25	17.1											

## CAM UNITS



## Summary

MODEL	MOUNT WIDTH W (mm)	MOUNT HEIGHT H (mm)	WORKING ANGLE $\alpha$ (mm)	MOUNT STROKE S (mm)	WORKING F. kN - (tons)		DIMENSIONS (mm)			SPRING FINAL F. N - (kgf)	
					(1 Million Strokes)	(300.000 Strokes)	WIDTH W1 (mm)	HEIGHT H1 (mm)	LENGTH Lmax.(mm)		
<b>ASCB</b>	65	65	30	18.5	19.6 (2.0)	39.2 (4.0)	65	180	177.8	1220.1 (124.5)	
			35	19.6					173.3		
			40	21.5					170.8		
			45	23.3					170		
			50	26.5				190	175		
			55	29.7					180		
			60	35.0					190		
			65	41.4				210	195		
			70	51.1					202		
	80	86	00	32.1	39.2 (4.0)	78.4 (8.0)	80	270	270		1623.6 (165.7)
			05	38.4					273.0		
			10	38.9					280.0		
			15	39.7					286.0		
			20	46.1					285.9		
			25	47.8					289.8		
			30	54.3					282.6		
			35	57.4					284.3		
			40	64.3					274.8		
			45	69.6					274.2		
			50	77.8					270	270	
			55	87.2						270	
			60	98.5					275	275	1461.2(149.1)
			65	81.6						280	1623.2(165.6)
	70	86.4									
	150	85	00	32.1	88.2 (9.0)	132.3 (13.5)	150	270	280	4607.5 (470.2)	
			05	32.3					288.3		
			10	38.9					285.6		
			15	39.7					291.8		
			20	46.1					287		
			25	47.8					291.1		
			30	54.3					284		
			35	57.4					285.7		
			40	64.3					280		280
45			69.6	280							
50			77.8	280							
55			87.2	280							
60			98.5	285					285		
65			93.2						285		
70	86.4										
<b>ASFK</b>	80	86	00	32.1	54.9 (5.6)	109.8 (11.2)	80	270	270	3250.0 (331.4)	
			05	38.4					273.0		
			10	38.9					280.0		
			15	39.7					286.0		
			20	46.1					285.9		
			25	47.8					289.8		
			30	54.3					282.6		
			35	57.4					284.3		
			40	64.3					274.8		



# CAM UNITS

Summary

MODEL	MOUNT WIDTH W (mm)	MOUNT HEIGHT H (mm)	WORKING ANGLE $\alpha$ (mm)	MOUNT STROKE S (mm)	WORKING F. kN - (tons)		DIMENSIONS (mm)			SPRING FINAL F. N - (kgf)
					(1 Million Strokes)	(300.000 Strokes)	WIDTH W1 (mm)	HEIGHT H1 (mm)	LENGTH Lmax.(mm)	
ASFK	80	86	45	69.6	54.9 (5.6)	109.8 (11.2)	80	270	274.2	3250.0 (331.4)
			50	77.8					270	
			55	87.2						
			60	98.5						
			65	81.6						
			70	86.4						
	150	85	00	32.1	123.5 (12.6)	185.2 (18.9)	150	270	280	9569.4 (975.8)
			05	32.3					288.3	
			10	38.9					285.6	
			15	39.7					291.8	
			20	46.1					287	
			25	47.8					291.1	
			30	54.3					284	
			35	57.4					285.7	
			40	64.3					280	
			45	69.6						
			50	77.8						
			55	87.2						
			60	98.5					285	
			65	93.2						
70	86.4	285								
AUKE	65	80	00	26.9	19.6 (2.0)	39.2 (4.0)	115	210	210	1069.2(109.0)
		90	05	27.0					217.1	
		80	10	31.6					220.8	
		90	15	32.2					227.8	
		80	20	33.8					222.1	
		90	25	35.0					228.8	
		80	30	33.5					217.7	
		90	35	35.4					223.8	
		80	40	42.9					212.8	
		90	45	46.5					218.2	
	100	85	50	54.5	23.5 (2.4)	47.0 (4.8)	115	210	214	1140.5 (116.3)
			55	43.6					214	
			60	50.0						
			65	47.3						
	110	85	65	47.3	29.4 (3.0)	58.8 (6.0)	115	210	214	1039.2 (106.0)
			70	58.5					890.7 (90.8)	
	100	85	100	00	28.3	44.1 (4.5)	88.2 (9.0)	160	280	2819.7(287.5)
			140	05	28.4					273
			100	10	33.3					
			140	15	33.9					287.4
100			20	30.9	274					
140			25	32.0	287.3					
120			30	33.5	273					
140			35	35.4	285.4					
120			40	39.0	273					
140			85	45	42.3					49.0 (5.0)
	50	46.7								
	55	52.3		272						



# CAM UNITS



Summary

MODEL	MOUNT WIDTH W (mm)	MOUNT HEIGHT H (mm)	WORKING ANGLE $\alpha$ (mm)	MOUNT STROKE S (mm)	WORKING F. kN - (tons)		DIMENSIONS (mm)			SPRING FINAL F. N - (kgf)		
					(1 Million Strokes)	(300.000 Strokes)	WIDTH W1 (mm)	HEIGHT H1 (mm)	LENGTH Lmax.(mm)			
<b>AUKE</b>	100	140	60	60.0	49.0 (5.0)	98.0 (10.0)	160	280	272	2807.0(286.2)		
			65	47.3						2741.5 (279.6)		
			70	58.5								
	200	100	00	28.3	98.1 (10.0)	196.2 (20.0)	260	280	273	5639.4(575.1)		
		130	05	28.4						6140.4 (621.1)		
		100	10	33.3								
		130	15	33.9					287.4			
		100	20	30.9					274	5965.0 (608.3)		
		130	25	32.0					287.3			
		120	30	33.5					273			
		140	35	35.4					285.4	5614.1 (572.5)		
		120	40	39.0					273			
		140	45	42.3					117.7 (12.0)		235.4 (24.0)	272
			50	46.7								
			55	52.3								
			60	60.0								
			65	47.3								
		70	58.5	5483.0 (559.1)								
<b>ABKL</b>	65	80	00	26.9	19.6 (2.0)	39.2 (4.0)	115	210	209.5	1069.2(109.0)		
		90	05	27.0					217.1			
		80	10	31.6					220.8			
		90	15	32.2					227.8			
		80	20	33.8					222.1			
		90	25	35.0					228.8			
		80	30	33.5					217.7			
		90	35	35.4					223.8			
		80	40	42.9					212.8			
		90	45	46.5					218.2			
			50	54.5								
		100	55	43.6					214		1039.2 (106.0)	
	60		50.0									
	110	65	47.3	214	890.7 (90.8)							
		70	58.5									
	100	100	00	28.3	44.1 (4.5)	88.2 (9.0)	160	280	273	2817.0(287.1)		
		120	05	28.4					3074.4 (313.3)			
		100	10	33.3								
		120	15	33.9					287.4			
		100	20	30.9					274	2978.4 (304.0)		
		120	25	32.0					287.3			
			30	33.5					273			
			35	35.4					285.4	2803.2 (286.1)		
		40	39.0	273								
45		42.3	280.5									
140		50	46.7	272								
		55	52.3									
	60	60.0										
150	65	70.9	272	2740.0 (279.5)								
140	70	58.5										



# CAM UNITS

Summary

MODEL	MOUNT WIDTH W (mm)	MOUNT HEIGHT H (mm)	WORKING ANGLE $\alpha$ (mm)	MOUNT STROKE S (mm)	WORKING F. kN - (tons)		DIMENSIONS (mm)			SPRING FINAL F. N - (kgf)	
					(1 Million Strokes)	(300.000 Strokes)	WIDTH W1 (mm)	HEIGHT H1 (mm)	LENGTH Lmax.(mm)		
<b>ABKL</b>	200	100	00	28.3	93.1 (9.5)	186.2 (19.0)	260	280	273	5634.0(574.9)	
		120	05	28.4						5639.4 (575.1)	
		100	10	33.3							
		120	15	33.9						287.4	
		100	20	30.9						274	5117.0 (521.8)
		120	25	32.0						287.4	
		140	30	33.5						273	
		140	35	35.4						285.4	5614.1 (572.5)
		120	40	39.0						273	
		140	45	42.3						280.5	
			50	46.7						272	
			55	52.3							
			60	60.0							
			65	70.9							
		70	58.5	5483.0 (559.1)							
<b>AWBC</b>	200	180	00	38.6	117.6 (12.0)	235.2 (24.0)	200	350	340	4903.2 (499.7)	
			05	42.6							
			10	46.7							
			15	50.9							
			20	55.3							340.8
			25	60.0							344.7
			30	65.1							347.9
			35	70.8							355.1
			40	77.1							351.2
			45	84.5							356.2
			50	93.3							354.8
			55	104.6							367.1
	60	120.0	385								
	300	180	00	38.6	196.0 (20.0)	392.0 (40.0)	300	350	340	9806.4 (999.4)	
			05	42.6							
			10	46.7							
			15	50.9							
			20	55.3							340.8
			25	60.0							344.7
			30	65.1							347.9
			35	70.8							355.1
			40	77.1							351.2
			45	84.5							356.2
			50	93.3							354.8
			55	104.6							367.1
	60	120.0	385								
	400	180	00	38.6	245.0 (25.0)	490.0 (50.0)	400	350	340	9806.4 (999.4)	
			05	42.6							
			10	46.7							
			15	50.9							
			20	55.3							340.8
			25	60.0							344.7
	30	65.1	347.9								

# CAM UNITS



## Summary

MODEL	MOUNT WIDTH W (mm)	MOUNT HEIGHT H (mm)	WORKING ANGLE $\alpha$ (mm)	MOUNT STROKE S (mm)	WORKING F. kN - (tons)		DIMENSIONS (mm)			SPRING FINAL F. N - (kgf)	
					(1 Million Strokes)	(300.000 Strokes)	WIDTH W1 (mm)	HEIGHT H1 (mm)	LENGTH Lmax.(mm)		
<b>AWBC</b>	400	180	35	70.8	245.0 (25.0)	490.0 (50.0)	400	350	355.1	9806.4 (999.4)	
			40	77.1					351.2		
			45	84.5					356.2		
			50	93.3					354.8		
			55	104.6					367.1		
			60	120.0					385		
	500	180	00	38.6	313.6 (32.0)	627.2 (64.0)	500	350	340	14709.6 (1499.0)	
			05	42.6							
			10	46.7							
			15	50.9							
			20	55.3							
			25	60.0							
			30	65.1							
			35	70.8							
			40	77.1							
			45	84.5							
			50	93.3							
			55	104.6							
			60	120.0							
			600	180					00		38.6
	05	42.6									
	10	46.7									
	15	50.9									
	20	55.3									
	25	60.0									
	30	65.1									
	35	70.8									
	40	77.1									
	45	84.5									
	50	93.3									
	55	104.6									
	60	120.0									
	<b>ASGN</b>	50	65	00	15.0	29.4 (3.0)	58.8 (6.0)	50	180	225	1097.6(111.7)
				05	15.6					220	1167.4 (118.8)
				10						210	
				15	17.0						
20				18.4							
25				18.0							
30				17.4							
35				18.9							
40			20.6	1104.6 (112.6)							
45			22.5								
50			23.3								
55			26.1		225						
60			31.5		235						
65			36.6		245						
70			39.5		250					999.4 (101.9)	
75			52.2		260						



# CAM UNITS

Summary

MODEL	MOUNT WIDTH W (mm)	MOUNT HEIGHT H (mm)	WORKING ANGLE $\alpha$ (mm)	MOUNT STROKE S (mm)	WORKING F. kN - (tons)		DIMENSIONS (mm)			SPRING FINAL F. N - (kgf)
					(1 Million Strokes)	(300.000 Strokes)	WIDTH W1 (mm)	HEIGHT H1 (mm)	LENGTH Lmax.(mm)	
ASGN	65	56	00	15.0	29.4 (3.0)	58.8 (6.0)	65	175	190	834.9 (85.1)
			05	15.6					185	
			10						182.5	828.8 (84.3)
			15	17.0					175	
			20	18.4					172.4	
			30	19.5					809.6 (82.6)	171.8
			40	23.1						170
			50	24.9						185
			60	32.0						
			80	90					00	30.2
	05	30.5			295	1872.0 (190.8)				
	10	31.1			280					
	15	33.9			277.6					
	20	32.3			273.4	1914.0 (194.9)				
	25	35.0								
	30	34.7			270					
	35	37.7								
	40	39.9								
	45	43.7								
	50	46.7			270					
	55	53.8								
	60	61.1			290					
	65	70.9			300					
	150	120	00	28.6	147.0 (15.0)	294.0 (30.0)	240	355	325	7022.4 (715.9)
			05	32.2						
			10	35.9						
			15	39.6						
			20	43.5						
			25	47.7						
			30	52.3						
			35	57.3						
			40	63.0						
			45	69.6						
			50	77.4						
			55	87.1						
			60	99.6						
65			116.5							
200	120	00	28.6	147.0 (15.0)	294.0 (30.0)	270	355	325	7022.4 (715.9)	
		05	32.2							
		10	35.9							
		15	39.6							
		20	43.5							
		25	47.7							
		30	52.3							
		35	57.3							
		40	63.0							
		45	69.6							
		50	77.4							

# CAM UNITS



Summary

MODEL	MOUNT WIDTH W (mm)	MOUNT HEIGHT H (mm)	WORKING ANGLE $\alpha$ (mm)	MOUNT STROKE S (mm)	WORKING F. kN - (tons)		DIMENSIONS (mm)			SPRING FINAL F. N - (kgf)
					(1 Million Strokes)	(300.000 Strokes)	WIDTH W1 (mm)	HEIGHT H1 (mm)	LENGTH Lmax.(mm)	
ASGN	200	120	55	87.1	147.0 (15.0)	294.0 (30.0)	270	355	415	7022.4 (715.9)
			60	99.6					430	
			65	116.5					445	
	300	160	00	28.6	294.0 (30.0)	588.0 (60.0)	340	355	325	14044.8 (1431.8)
			05	32.2					326.4	
			10	35.9						
			15	39.6						
			20	43.5						
			25	47.7						
			30	52.3						
			35	57.3						
			40	63.0						
			45	69.6						
			50	77.4						
			55	87.1						
			60	99.6						
			65	116.5						

MODEL	MOUNT WIDTH W (mm)	MOUNT HEIGHT H (mm)	WORKING ANGLE $\alpha$ (mm)	MOUNT STROKE S (mm)	WORKING F. kN - (tons)	DIMENSIONS (mm)			SPRING FINAL F. N - (kgf)
						WIDTH W1 (mm)	HEIGHT H1 (mm)	LENGTH Lmax.(mm)	
ASLT	500	180	00	38.6	313.6 (32.0)	500	385	370	18682.0 (1906.3)
			05	42.6					
			10	46.7					
			15	50.9					
			20	55.3					
			25	60.0					
			30	65.1					
			35	70.8					
			40	77.1					
			45	84.5					
			50	93.3					
			55	104.6					
			60	120.0					
	600	180	00	38.6	313.6 (32.0)	600	385	370	18682.0 (1906.3)
			05	42.6					
			10	46.7					
			15	50.9					
			20	55.3					
			25	60.0					
			30	65.1					
			35	70.8					
			40	77.1					
			45	84.5					
50	93.3								
55	104.6								
60	120.0								
700	180	00	38.6	470.4 (48.0)	700	385	370	28023.0 (2859.5)	
		05	42.6						



# CAM UNITS

Summary

MODEL	MOUNT WIDTH W (mm)	MOUNT HEIGHT H (mm)	WORKING ANGLE $\alpha$ (mm)	MOUNT STROKE S (mm)	WORKING F. kN - (tons)	DIMENSIONS (mm)			SPRING FINAL F. N - (kgf)
						WIDTH W1 (mm)	HEIGHT H1 (mm)	LENGTH Lmax.(mm)	
<b>ASLT</b>	700	180	10	46.7	470.4 (48.0)	700	385	370	28023.0 (2859.5)
			15	50.9					
			20	55.3					
			25	60.0					
			30	65.1					
			35	70.8					
			40	77.1					
			45	84.5					
			50	93.3					
			55	104.6					
			60	120.0					
	800	180	00	38.6	470.4 (48.0)	800	385	370	28023.0 (2859.5)
			05	42.6					
			10	46.7					
			15	50.9					
			20	55.3					
			25	60.0					
			30	65.1					
			35	70.8					
			40	77.1					
			45	84.5					
			50	93.3					
	55	104.6							
	60	120.0							
	900	180	00	38.6	627.2 (64.0)	900	385	370	37364.0 (3812.7)
			05	42.6					
			10	46.7					
			15	50.9					
			20	55.3					
			25	60.0					
			30	65.1					
			35	70.8					
			40	77.1					
			45	84.5					
			50	93.3					
	55	104.6							
	60	120.0							
	1000	180	00	38.6	627.2 (64.0)	1000	385	370	37364.0 (3812.7)
			05	42.6					
			10	46.7					
			15	50.9					
			20	55.3					
			25	60.0					
			30	65.1					
35			70.8						
40			77.1						
45			84.5						
50			93.3						
55	104.6								
60	120.0								

## CAM UNITS



## Summary

MODEL	MOUNT WIDTH W (mm)	MOUNT HEIGHT H (mm)	WORKING ANGLE $\alpha$ (mm)	MOUNT STROKE S (mm)	WORKING F. kN - (tons)	DIMENSIONS (mm)			SPRING FINAL F. N - (kgf)	
						WIDTH W1 (mm)	HEIGHT H1 (mm)	LENGTH Lmax.(mm)		
ANRP	70	75	00	19.3	98.1 (10.0)	70	225	252	676.2 (69.0)	
			05	21.3				242		
			10	23.3				240		
			15	25.4						
			20	27.6						
			25	30.0						
			30	32.6						
			35	35.4						
			40	38.6						
			45	42.3						242
			50	46.7						261
			55	43.6						263
			60	50.0				275		
			80	75				00		32.1
	05	35.5			295					
	10	38.9			280					
	15	42.4			280.5					
	20	46.1			276.2					
	25	50.0			271.5					
	30	54.3			270					
	35	59.0								
	40	64.3								
	45	70.4								
	50	77.8								
	55	78.5								
	60	80.0								
	165	120				00	32.1	294.2 (30.0)	165	300
			05	35.5						
			10	38.9						
			15	42.4						
			20	46.1						
			25	50.0						
			30	54.3						
			35	59.0						
			40	64.3	350					
			45	70.4	365					
		50	77.8	355						
		125	55	87.2	372					
			60	100.0	385					
			200	120	00	32.1	353.0 (36.0)			
05	35.5									
10	38.9									
15	42.4									
20	46.1									
25	50.0									
30	54.3									
35	59.0									
40	64.3	350								



# CAM UNITS

Summary

MODEL	MOUNT WIDTH W (mm)	MOUNT HEIGHT H (mm)	WORKING ANGLE $\alpha$ (mm)	MOUNT STROKE S (mm)	WORKING F. kN - (tons)	DIMENSIONS (mm)			SPRING FINAL F. N - (kgf)						
						WIDTH W1 (mm)	HEIGHT H1 (mm)	LENGTH Lmax.(mm)							
ANRP	200	120	45	70.4	353.0 (36.0)	200	300	365	4494.0 (458.3)						
			50	77.8				355							
			55	87.2				372							
			60	100.0				385							
	300 ---- 400	160	00	38.6	451.1 (46.0)	300 ---- 400	375	328	9198.0 (937.9)						
			05	42.6				320							
			10	46.7				324.2							
			15	50.9				325.9							
			20	55.3				327.1							
			25	60.0				334.8							
			30	65.1				327.9							
			35	70.8				334.6							
			40	77.1				330.5							
			45	84.5				347.9							
			50	79.3				355							
			55	88.9				405		8015.4 (817.9)					
			60	102.0											
			ASVX	60				100		00	19.3	75.0 (7.6)	60	225	277
									05	21.3					
									10	23.3					
15	25.4														
20	27.6														
25	30.0														
30	32.6														
35	35.4														
40	38.6														
45	42.3														
50	46.7														
55	52.3														
60	60.0														
65	71.0	282													
70	58.5	292		2583.7 (263.6)											
75	77.3	302													
85	110	00		19.3	100.0 (10.2)	85	225	277	5170.4 (527.5)						
		05		21.3											
		10		23.3											
		15		25.4				278							
		20		27.6											
		25		30.0											
		30		32.6											
		35		35.4											
		40		38.6											
		45		42.3											
		50	46.7												
		55	52.3												
60	60.0														
65	71.0	282													
70	58.5	292	5205.5 (531.1)												
75	77.3	302													



# CAM UNITS



Summary

MODEL	MOUNT WIDTH W (mm)	MOUNT HEIGHT H (mm)	WORKING ANGLE $\alpha$ (mm)	MOUNT STROKE S (mm)	WORKING F. kN - (tons)	DIMENSIONS (mm)			SPRING FINAL F. N - (kgf)				
						WIDTH W1 (mm)	HEIGHT H1 (mm)	LENGTH Lmax.(mm)					
<b>ASVX</b>	110	145	00	32.1	150.0 (15.3)	110	275	330	5479.9 (559.1)				
			05	35.5									
			10	38.9									
			15	42.4									
			20	46.1									
			25	50.0									
			30	54.3									
			35	59.0									
			40	64.3									
		45	70.4										
		140	50	77.8				171.0 (17.4)		165	300	345	10766.2 (1098.5)
			55	87.2									
			60	100.0									
			65	94.6									
			70	81.9									
			75	108.2									
			355	5501.2(561.3)									
			365	5193.0 (529.9)									
	375												
	165	115	00	32.1	218.0 (22.2)	200	300	360	10766.2 (1098.5)				
			05	35.5									
			10	38.9									
			15	42.4									
			20	46.1									
			25	50.0									
			30	54.3									
			35	59.0									
			40	64.3									
		45	70.4										
		115	50	77.8				218.0 (22.2)		200	300	367	10766.2 (1098.5)
			55	61.0									
			60	40.0									
			65	47.3									
			70	58.5									
			75	58.0									
			367	9293.6 (948.3)									
375													
385													
395	8734.9(891.3)												
200	115	00	32.1	218.0 (22.2)	200	300	360	10766.2 (1098.5)					
		05	35.5										
		10	38.9										
		15	42.4										
		20	46.1										
		25	50.0										
		30	54.3										
		35	59.0										
		40	64.3										
	45	70.4											
	115	50	77.8				218.0 (22.2)		200	300	367	10766.2 (1098.5)	
		55	52.3										
		60	60.0										
		65	71.0										
		70	58.5										
		75	77.3										
		367											
		375											
385													
395													



# CAM UNITS

Summary

MODEL	MOUNT WIDTH W (mm)	MOUNT HEIGHT H (mm)	WORKING ANGLE $\alpha$ (mm)	MOUNT STROKE S (mm)	WORKING F. kN - (tons)	DIMENSIONS (mm)			SPRING FINAL F. N - (kgf)
						WIDTH W1 (mm)	HEIGHT H1 (mm)	LENGTH Lmax.(mm)	
<b>ASVX</b>	250	155	00	32.1	284.0 (28.9)	250	300	360	21532.4 (2195.6)
			05	35.5					
			10	38.9					
			15	42.4					
			20	46.1					
			25	50.0					
			30	54.3					
			35	59.0					
			40	64.3					
			45	70.4					
			50	77.8					
			55	52.3					
			60	60.0					
			65	71.0					
			70	58.5					
	75	77.3							
	300	155	00	38.6	364.0 (37.1)	300	375	395	31587.3 (3222.9)
			05	42.6				390	
			10	46.7				394.2	
			15	50.9				395.9	
			20	55.3				397.1	
			25	60.0				404.8	
			30	65.1				408.3	
			35	70.8				404.6	
			40	77.1				400.5	
			45	84.5				400	
			50	93.3				410	
			55	104.6				420	
			60	120.0				438	
			65	94.6				455	
			70	73.1				475	
	75	96.6	475						
	350	155	00	38.6	405.0 (41.3)	350	375	395	27263.8 (2780.1)
			05	42.6				409.7	
			10	46.7				414.6	
			15	50.9				408.6	
			20	55.3				423	
			25	60.0				421.6	
			30	65.1				418.5	
			35	70.8				415.9	
			40	77.1				410.8	
			45	84.5				410	
			50	93.3				420	
			55	87.2				430	
			60	90.0				445	
65			94.6	450					
70			87.7	460					
75	96.6	465							

# CAM UNITS



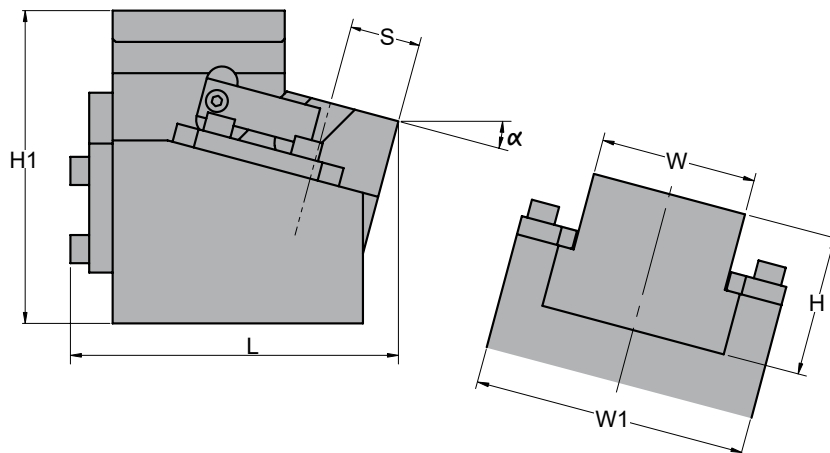
Summary

MODEL	MOUNT WIDTH W (mm)	MOUNT HEIGHT H (mm)	WORKING ANGLE $\alpha$ (mm)	MOUNT STROKE S (mm)	WORKING F. kN - (tons)	DIMENSIONS (mm)			SPRING FINAL F. N - (kgf)
						WIDTH W1 (mm)	HEIGHT H1 (mm)	LENGTH Lmax.(mm)	
<b>ASVX</b>	400	155	00	38.6	450.0 (45.9)	400	375	395	31587.3 (3222.9)
			05	42.6				390	
			10	46.7				394.2	
			15	50.9				395.9	
			20	55.3				397.1	
			25	60.0				404.8	
			30	65.1				408.3	
			35	70.8				404.6	
			40	77.1				400.5	
			45	84.5				400	
			50	93.3				410	
			55	104.6				423	
			60	120.0				440	
			65	94.6				458	
			70	73.1				475	27599.7 (2816.1)
75	96.6	495							



# CAM UNITS

Summary



Approximate dimensions and values, check specific catalog sheet measures of each cam.

MODEL	MOUNT WIDTH W (mm)	MOUNT HEIGHT H (mm)	WORKING ANGLE $\alpha$ (mm)	MOUNT STROKE S (mm)	WORKING F. kN - (tons)		DIMENSIONS (mm)			SPRING FINAL F. N - (kgf)	
					(1 Million Strokes)	(300.000 Strokes)	WIDTH W1 (mm)	HEIGHT H1 (mm)	LENGTH Lmax.(mm)		
LSDH	52	75	00	55	19.6 (2.0)	39.2 (4.0)	52	215	235	606.7 (62.1)	
			05					255	310		
			10								
			15								
	90	82	00	55	38.2 (3.9)	76.4 (7.8)	90	220	236	1213.4 (124.2)	
			05						251.5		
			10						261.8		
			15					225	260.9		
LKCM LKBM	52	65	00	25	14.7 (1.5)	29.4 (3.0)	98	140	140	595.3(60.7)	
				40					155	605.8(61.4)	
				60					200	614.7(62.8)	
	65	70		40	19.6 (2.0)	39.2 (4.0)	130	160	167	752.6(76.8)	
				60					212	763.6(77.4)	
				80					277	1302.7(132.5)	
	100	100		40	29.4 (3.0)	58.8 (6.0)	175	200	218	1130.9(115.2)	
				60					238	1146.1(116.8)	
				80					277	1302.7(132.5)	
	150	100		40	58.8 (6.0)	88.2 (9.0)	260	220	225	1841.3(188.2)	
				60					245	1867.3(189.8)	
	200	110		40	78.4 (8.0)	117.6 (12.0)	310	240	236	2761.9(282.2)	
				60					256	2801.0(284.7)	
	250	130		40	98.0 (10.0)	147.0 (15.0)	360	270	246	3610.1(368.6)	
				60					266	3659.4(372.3)	
	300	130		40	117.6 (12.0)	176.4 (18.0)	410	270	246	3610.1(368.6)	
				60					266	3659.4(372.3)	
	400	150		60	137.2 (14.0)	205.8 (21.0)	525	250	356	9332.2 (952.3)	
	500	150		60					625		361
	600	150		60					725		361
LKCV LKBV	65	70	05	45	19.6 (2.0)	39.2 (4.0)	130	160	175.6	741.0 (75.5)	
			10					170	180		
			15						183.2		
			20						185.2		
	100	90	05	45	39.2 (4.0)	78.4 (8.0)	175	200	199.3	1111.6 (113.3)	
			10						205.2		
			15						209.7		
			20						212.9		

# CAM UNITS



Summary

MODEL	MOUNT WIDTH W (mm)	MOUNT HEIGHT H (mm)	WORKING ANGLE $\alpha$ (mm)	MOUNT STROKE S (mm)	WORKING F. kN - (tons)		DIMENSIONS (mm)			SPRING FINAL F. N - (kgf)
					(1 Million Strokes)	(300.000 Strokes)	WIDTH W1 (mm)	HEIGHT H1 (mm)	LENGTH Lmax.(mm)	
<b>LKCV LKBV</b>	150	100	05	45	64.7 (6.6)	98.0 (10.0)	260	220	229.1	1810.1 (184.1)
			10						235.6	
			15						240.6	
			20						244.1	
<b>LKCZ LKBZ</b>	65	70	05	70	19.6 (2.0)	39.2 (4.0)	130	170	220.4	974.4 (99.2)
			10						224.3	
			15						226.7	
			20						227.5	
	100	90	05		39.2 (4.0)	78.4 (8.0)	175	200	234.1	1137.4 (116.6)
			10						239.6	
			15						243.5	
			20						245.8	
	150	100	05		64.7 (6.6)	98.0 (10.0)	260	220	254	1841.3 (188.2)
			10					260.2		
			15					264.8		
			20					267.6		

MODEL	MOUNT WIDTH W (mm)	MOUNT HEIGHT H (mm)	WORKING ANGLE $\alpha$ (mm)	MOUNT STROKE S (mm)	WORKING F. kN - (tons)	DIMENSIONS (mm)			SPRING FINAL F. N - (kgf)
						WIDTH W1 (mm)	HEIGHT H1 (mm)	LENGTH Lmax.(mm)	
<b>LSPJ</b>	50	68	00	60	14.7 (1.5)	50	240	255	591.5 (60.2)
			05					290	
			10					290	
			15					298	
			20					308.3	
			25					308.1	
			30					312.4	
			80					88	
	05	312.6							
	10	321.6							
	15	329.8							
	20	332.4							
	30	332.4							
	150	120	00	60	117.6 (12.0)	290	300	365	3746.8 (381.5)
			05				378.5		
			10				385.1		
			15				394.6		
			20				397		
			25				397.3		
			30				400.4		
			200				120	00	
	05	378.5							
	10	385.1							
	15	394.6							
	20	397							
	25	397.3							
	30	400.4							



# CAM UNITS

Summary

MODEL	MOUNT WIDTH W (mm)	MOUNT HEIGHT H (mm)	WORKING ANGLE $\alpha$ (mm)	MOUNT STROKE S (mm)	WORKING F. kN - (tons)	DIMENSIONS (mm)			SPRING FINAL F. N - (kgf)	
						WIDTH W1 (mm)	HEIGHT H1 (mm)	LENGTH Lmax.(mm)		
<b>LSPJ</b>	300	120	00	60	294.0 (30.0)	410	335	420	7493.6 (763.0)	
			05					431.9		
			10					442.6		
			15					449.7		
			20					454.2		
			25					461.2		
			30					465.5		
<b>LSLD</b>	500	180	00	60	313.6 (32.0)	500	385	370	19600.0 (1998.6)	
			05					372.5		
			10					385		
			15					400.2		
			20					414		
	600	180	180	00	60	313.6 (32.0)	600	385	370	19600.0 (1998.6)
				05					372.5	
				10					385	
				15					400.2	
				20					414	
	700	180	180	00	60	470.4 (48.0)	700	385	370	19600.0 (1998.6)
				05					372.5	
				10					385	
				15					400.2	
				20					414	
	800	180	180	00	60	470.4 (48.0)	800	385	370	19600.0 (1998.6)
				05					372.5	
				10					385	
				15					400.2	
				20					414	
900	180	180	00	60	627.2 (64.0)	900	385	370	39200.0 (3997.3)	
			05					372.5		
			10					385		
			15					400.2		
			20					414		
1000	180	180	00	60	627.2 (64.0)	1000	385	370	39200.0 (3997.3)	
			05					372.5		
			10					385		
			15					400.2		
			20					414		

# CAM UNITS

Summary



## PUNCHING FORCE CALCULATION

The following formula is used to calculate the required force in the punching process:

$$F = S \times C_R$$

$$S = P \times \text{Esp}$$

Punch Ø - 16 mm  
 Sheet thickness - 2 mm  
 Tensile strength 40 Kg/mm<sup>2</sup>

$$S = (2\pi R) \times \text{Esp}$$

$$S = (2\pi 8) \times 2$$

$$F = (2\pi 8) \times 2 \times 40$$

$$F = 50.26 \times 2 \times 40$$

$$F = 4021.24 \text{ Kg}$$

F : Punching force ( Kg )  
 S : Cutting section ( mm<sup>2</sup> )  
 CR : Tensile strength coefficient ( Kg/mm<sup>2</sup> )  
 P : Cutting perimeter ( mm )  
 Esp : Sheet thickness ( mm )

## HOW TO USE THE GRAPHIC : PUNCHING FORCE CALCULATION

### DESCRIPTION

-Mark a point in the appropriate hole diameter or cutting perimeter punch in the left column of the graphic.

-Mark a point on the value of the sheet thickness that we are going to punch in the right column of the graphic.

-Link the previous two points and required punching force is indicated the central column.

If the piece to be punched has a different material, the result must be multiplied by the factor of the table below.

For example, if the resulting value is 4, and the punched material is aluminum 1100, apply the appropriate multiplier factor.

**Common steel**  
**F = 4 ton**  
**Aluminum 1100**  
**F = 4 x 0.32 = 1.28 ton**  
**Laminated copper**  
**F = 4 x 0.50 = 2 ton**  
**Stainless steel T-304**  
**F = 4 x 1.50 = 6 ton**

MATERIAL	MULTIPLY FACTOR
ALUMINUM 1100	0.32
ALUMINUM 6063 T6	0.50
LAMINATED COPPER	0.50
SEMI-HARD BRASS	0.60
STRUCTURAL STEEL A-52	1.25
STAINLESS STEEL T-304	1.50

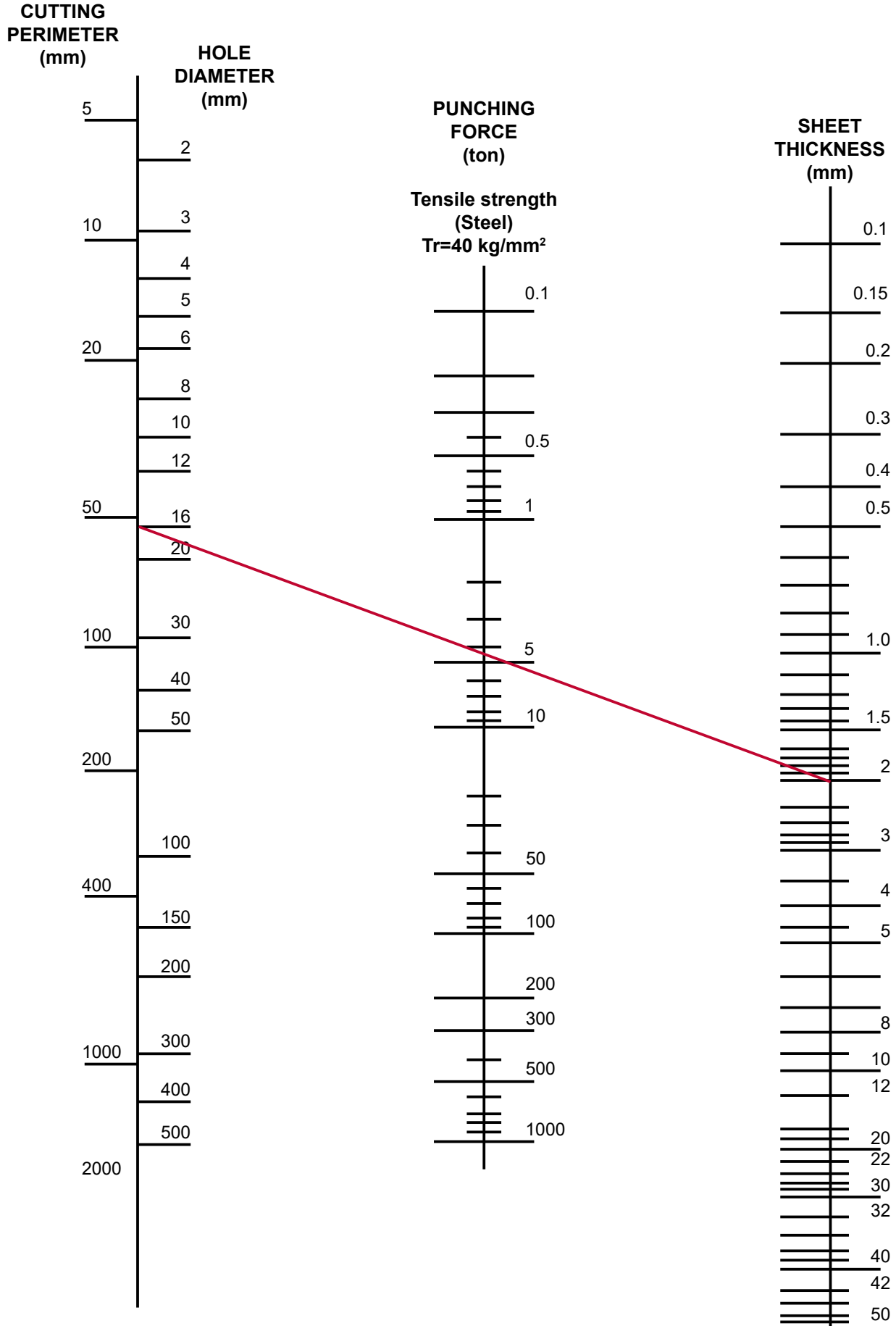


# CAM UNITS

Summary

## PUNCHING FORCE CALCULATION (GRAPHIC)

Steel = 40 Kg/mm<sup>2</sup> Used tensile strength coefficient  
For other materials consult multiplier in attached table.



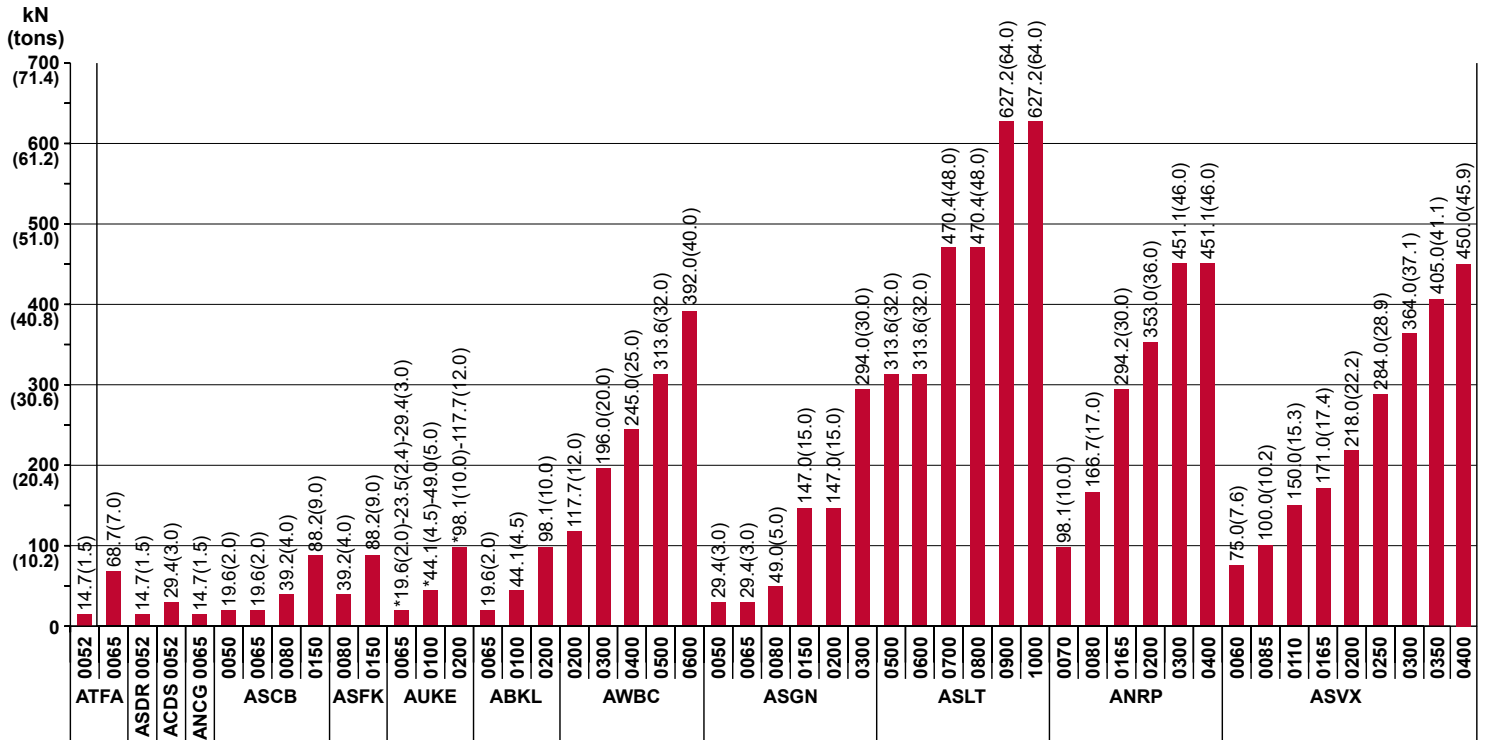


# CAM UNITS

Summary



## AERIAL CAMS WORK FORCES GRAPHIC



\*- Angle depending variable value.

## DIE MOUNTED CAMS WORK FORCES GRAPHIC

