

Cam Units Short Definitions

Cam Units: In dies, by turning vertical motion of press to horizontal motion within the die, drilling - cutting - form processes are provided in dies. These cam units are standard compact design components, and grouped as die mounted / angular or aerial cam types. As well as standard cam models are suitable to many general usages, also special models are produced as per request. Also, upper casing holes can be finished (with reamer / H7). Also, plate lock systems or gas spring options may be selected.

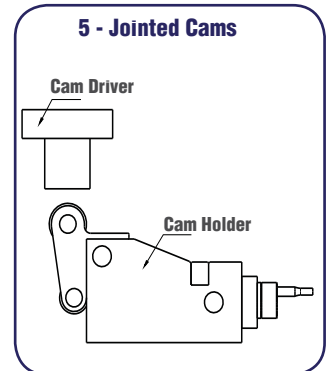
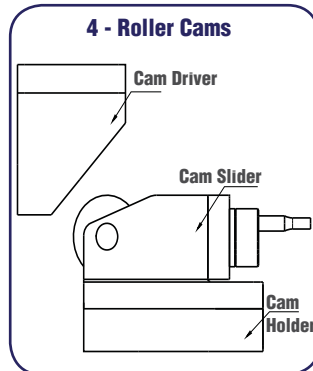
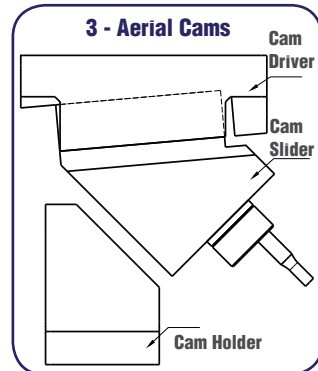
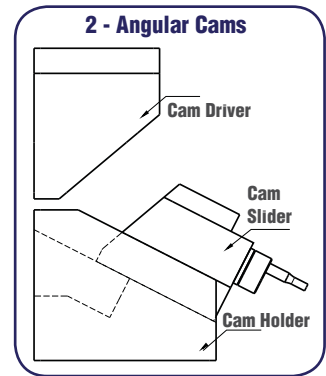
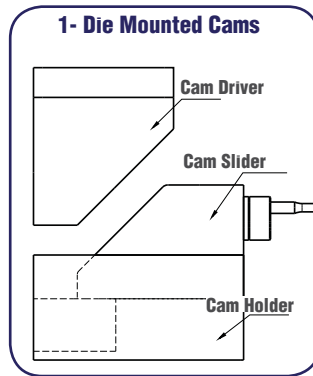
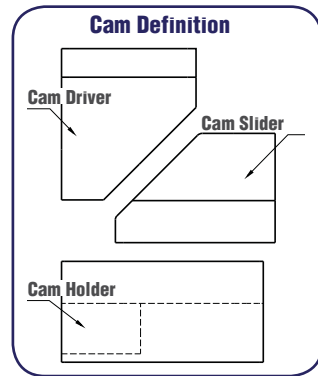
Cam Units: They can be connected to different angles - they can be worked at wide force and stroke ranges. **Giving 10% stroke tolerance is recommended.**

Safety and Working Conditions: Lateral loads should be avoided. Cam unit should not be exposed to dirt and burrs (friction surfaces may get damaged).

- * To maintain repeated operation of cam unit, it should be secured to the die robustly.
- * Steel or die gas spring used at cam units are ensured to bring cam to same starting point at every turn at returns.
- * In case of any adhesion, side guide arms are with safety system to provide bringing cam to starting point.
- * When cam units are mounted with replaceable self-lubricating wear plates, they should be lubricated with thin oil regularly.
- * In case of replacement of worn plates, you should be sure that all and centering elements are in their right position.
- * If necessary, technical setting should be remade and fixed.
- * For technical service, you can contact with our company.

Cam Units Group and Types:

Cam Unit Code	Nominal Size
DK Die Mounted Cam Units	52
	65
	100
	150 ~ 300
	400 ~ 600
DAK Angular Cam Units	65
	100
	150
AKSD	52
AKSCD	52
AKHTF	65
AKUC Aerial Cam Units	50
	65
	80
	150
AKSUK	65
	100
	200
AKBK	65 ~ 200
AKUG Aerial Cam Units	50
	65
	80 ~ 200
	300
AKUSL	500 ~ 1000
AKUNR	70
	80
	165 ~ 400
AKCD	52
	90
AKKP	50
	80
	200 ~ 300
AKKSL	500 ~ 1000
AKUSV	60 ~ 110
	165 ~ 400
RK	01 ~ 03
MK	01 ~ 02



Cam products selection: You can select cam products from our catalogue according to the feature of sheet metal used in your dies in production and load calculations or you can use our technical support service for this matter. The main purpose in die production is to minimize die production process in terms of time and cost and to simplify the die. This simplification can only be ensured by using standard products as far as possible. In some cases, cam units may be customized according to the operation conditions they will be used. In such cases, if you contact us about product selection or design, we can offer solutions for you.

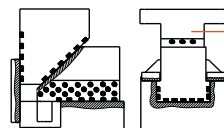
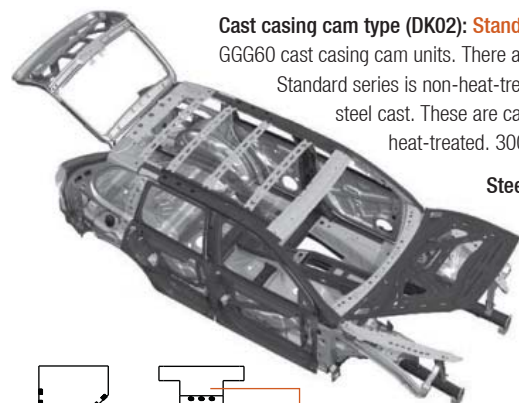
Cast casing cam type (DK02): Standard (delivery from stock).

GGG60 cast casing cam units. There are 2 models: Heat-treated and non-heat-treated cams.

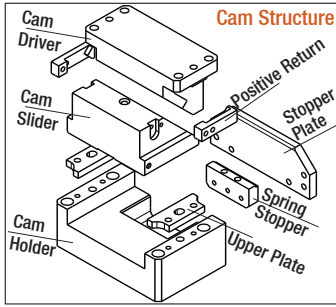
Standard series is non-heat-treated. **Heat-treated cams:** Are produced from hardenable steel cast. These are cams of which friction surfaces (cam holder - slider) are heat-treated. 300 - 500 grade is suitable for sheet metals press.

Steel casing cam type (DK01) : Order as per request.

Cams with mono block steel casing, of which friction surfaces (lower casing and driver) are applied heat treatment. It has a feature to be used in die 400 - 650 grade and over. They work efficiently in performance 1.5 - 2 times better than load values specified in catalogue in proportion to the normal cast type cams and they give better results in high quantity productions (150.00 - 200.00 pieces / year). If periodic maintenance, cleaning and lubrication is done, cams can press 1.000.000 pieces and over.

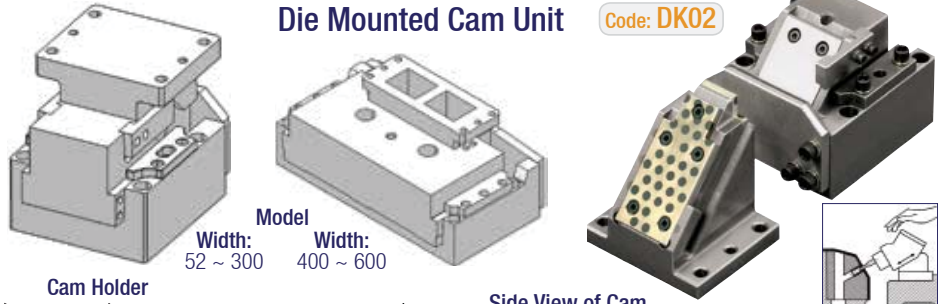


In Steel Casing Cam Unit: Heat treatment is applied in shaded areas (HRC 45-55).

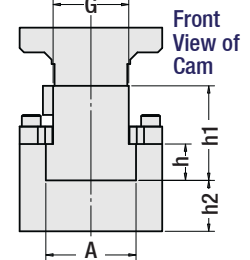
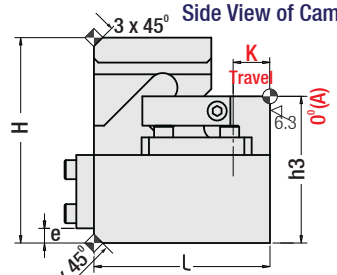
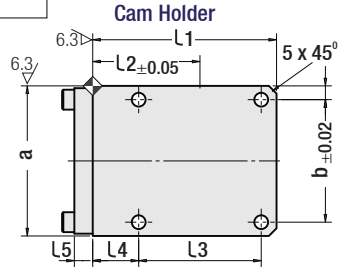
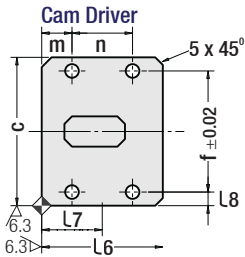


Die Mounted Cam Unit

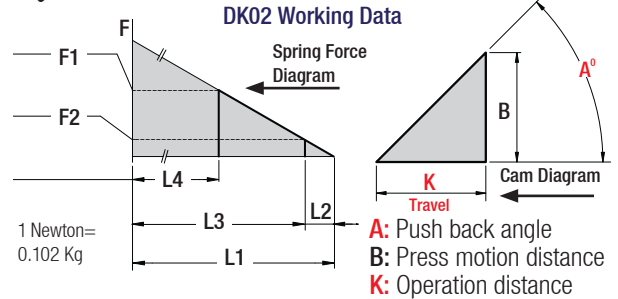
Code: **DK02**



Model
Width: 52 ~ 300
Width: 400 ~ 600



"Order" DK02	Working & Spring Force							Cam Diagram		
	F N/mm	F1 kg.	F2 kg.	L1 mm	L2 mm	L3 mm	L4 mm	A° Angle	B mm	K Travel
52 25	9	60.7	14.7	70	8	62	37	45°	25	25
52 40	6.3	61.4	10.2	100	8	92	52		40	40
52 60	4.2	62.8	11.2	150	13	137	77		60	60
65 40	7.8	76.8	12.8	100	8	92	52	45°	40	40
65 60	5.2	77.4	13.8	150	13	137	77		60	60
100 40	11.8	115	19	100	8	92	52	45°	40	40
100 60	7.8	117	21	150	13	137	77		60	60
100 80	7.1	133	18	200	12	188	108		80	80
150 40	19.2	188	32	100	8	92	52	45°	40	40
150 60	12.7	190	34	150	13	137	77		60	60
200 40	19.2	282	47	100	8	92	52	45°	40	40
200 60	12.7	285	51	150	13	137	77		60	60
250 40	25.1	369	62	100	8	92	52	45°	40	40
250 60	16.7	372	66	150	13	137	77		60	60
300 40	25.1	369	62	100	8	92	52	45°	40	40
300 60	16.7	372	66	150	13	137	77		60	60
400 60								45°	60	60
500 60	37.7	953	31	150	2	148	88		60	60
600 60										



Spring Diagram (Technical Drawing) Detail

- F: Load = N / mm (Final load)
- F1: Final load = (Process pressure spring force)
- F2: Initial load N = Spring initial loading
- L1: Spring free length mm = Open spring length
- L2: Spring initial loading mm = Clamping
- L3: Spring length under first load mm
- L4: Spring length under last load
- Optional (As per request) P: Self-lubricating wear plate model
- F8: Front Holes Ø 8 H7 finish pin hole may be changed
- GY: Gas spring may be used. I: Heat treatment may be applied.

Order Example: DK02.6540

"Order" DK02	Working Force		Cam W. Kg.	Cam Front View (mm)					Cam Side View (mm)				Cam Driver (mm)								Cam Holder (mm)						
	Standard	Allowable		G	A	h	h1	h2	K Travel	L	H	h3	e	c	f	m	n	L6	L7	L8	a	b	L1	L2	L3	L4	L5
52 25	1.5 Ton	3 Ton	8	52	62	25	65	35	25	120	140	100	10	98	80	20	40	80	40	98	80	120	70	80	30	12	
52 40			8						40	135							60	180	135			80	95				
52 60			14						60	180							70	110	55			180	55	140			
65 40	2 Ton	4 Ton	20	65	80	30	70	45	40	140	160	115	25	130	105	20	60	100	50	12.5	130	105	145	80	100	30	40
65 60			21						60	190							70	110	55				180	105	125		
100 40	3 Ton	6 Ton	37	100	120	40	100	50	40	190	200	150	30	165	140	20	80	120	60	12.5	175	140	190	105	130	45	16
100 60			38						60	210							110	75	220				105	130	45		
100 80			44						80	250							120	80	150				10	110	150		
150 40	6 Ton	9 Ton	63	150	180	40	100	70	40	190	220	170	45	230	200	20	80	120	60	15	260	210	190	105	125	45	19
150 60			69						60	210							110	75	220				110	135	45		
200 40	8 Ton	12 Ton	82	200	230	40	110	70	40	200	240	180	40	280	250	20	90	130	65	15	310	260	200	110	135	45	20
200 60			84						60	220							120	75	220				120	145	45		
250 40	10 Ton	15 Ton	106	250	280	50	130	80	40	210	270	210	50	330	300	20	100	140	70	15	360	310	200	105	135	45	20
250 60			127						60	230							125	155	220				125	155	45		
300 40	12 Ton	18 Ton	106	300	330	50	130	80	40	210	270	210	50	380	350	20	100	140	70	15	410	360	200	105	135	45	20
300 60			128						60	230							125	155	220				125	155	45		
400 60	14	21	203	400	435	60	125	125	60	320	250	195	15	360	300	20	100	140	70	15	525	142	300	210	280	70	50
500 60			237	500	535				625	162																	
600 60			279	600	635				725	192																	