

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.

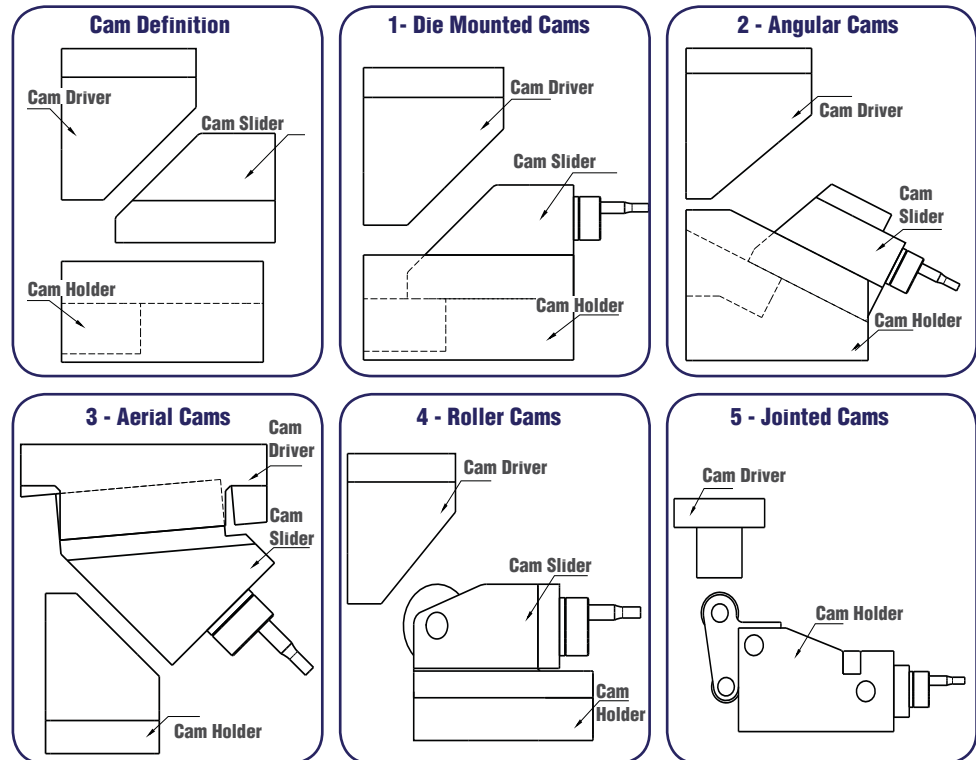
Cam Units: They can be connected to different angles - they can be worked at wide force and stroke ranges. **Giving 10% stroke tolerance is recommended.**

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 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 Units Group and Types:



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).

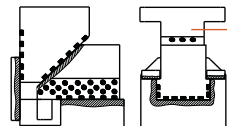
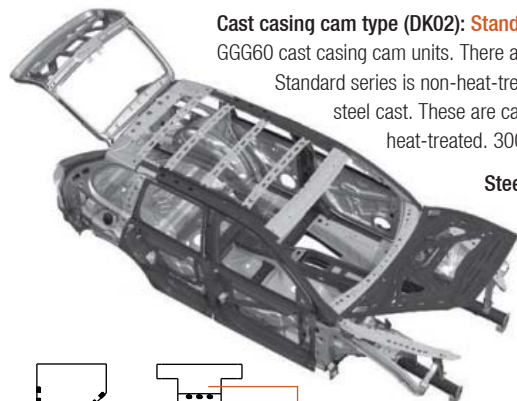
GGG60 cast casing cam units. There are 2 models: Heat-treated and non-heat-treated cams.

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.

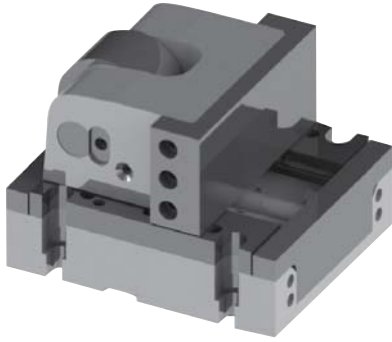
Steel casing cam type (DK01) : Order as per request.

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.

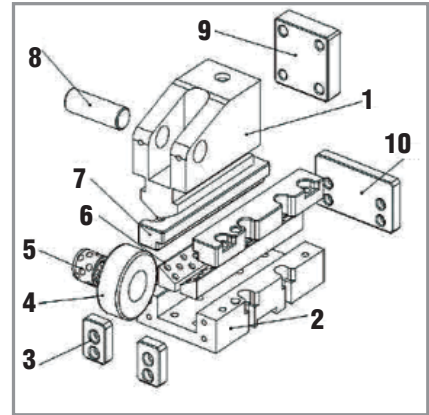
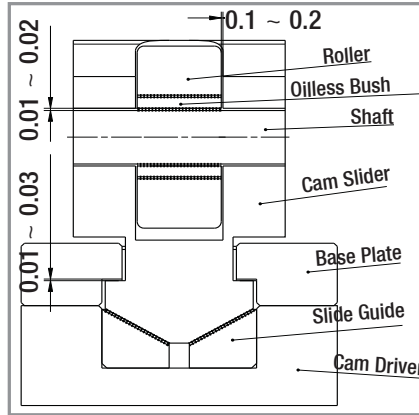


In Steel Casing Cam Unit: Heat treatment is applied in shaded areas (HRC 45-55).



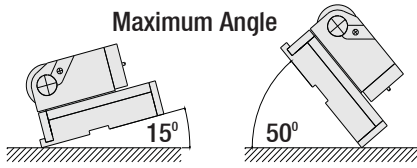
Roller Cam Unit

Code: **RK**

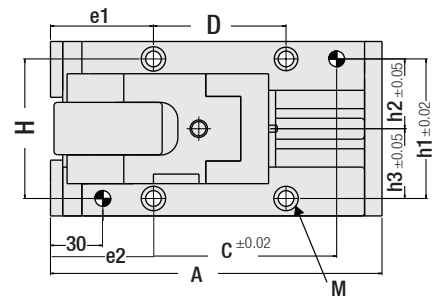
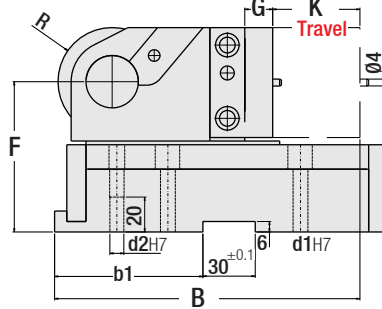
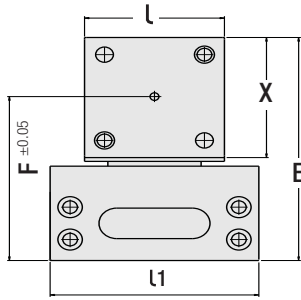


| Part No. | Description | Material |
|----------|---------------|----------|
| 1 | Cam Slider | CK45 |
| 2 | Cam Driver | CK45 |
| 3 | Stopper Plate | CK45 |
| 4 | Roller | 1.7131 |
| 5 | Oilless Bush | SAE 430B |

| Part No. | Description | Material |
|----------|--------------|----------|
| 6 | Slide Guide | SAE 430B |
| 7 | Base Plate | SAE 430B |
| 8 | Shaft | 1.7131 |
| 9 | Punch Plate | CK45 |
| 10 | Spring Plate | CK45 |



N - Newton = (0.102)Kg.
daN -10 Newton = (1.020)Kg.



| Order Codes Model / Dimension | Punch Force Max. | Return Spring Force daN | | K Travel | Dimension / mm | | | | | | | | | | | | | | | | | | | |
|----------------------------------|------------------------|-------------------------------|------|-------------|----------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|----|------|-----|------|------|------|----|---------|------|----|
| | | Min. | Max. | | L | X | F | E | L1 | A | B | C | D | H | G | b1 | h1 | h2 | h3 | e1 | e2 | M | d1 | R |
| RK01 3000 50 | 3000 | 300 | 440 | 50 | 63 | 63 | 86 | 117 | 94 | 190 | 198 | 56 | 88 | 79 | 20 | 75 | 79 | 39.5 | 39.5 | 51 | 67 | 4 x M8 | Ø 8 | 31 |
| RK01 3000 80 | daN | 350 | 580 | 80 | | | | | | 220 | 228 | 86 | 118 | | | | | | | | | | | |
| RK01 5000 50 | 5000 daN | 300 | 440 | 50 | | | | | | 190 | 198 | 56 | 88 | | | | | | | | | | | |
| RK01 5000 80 | | 350 | 580 | 80 | 90 | 74 | 103 | 140 | 120 | 220 | 228 | 86 | 118 | 105 | 20 | 75 | 105 | 52.5 | 52.5 | 51 | 67 | 4 x M8 | Ø 8 | 36 |
| RK01 5000 100 | | 100 | | | | | | | | 260 | 268 | 126 | 158 | | 30 | | | | | | | | | |
| RK01 15000 50 | 15000 daN | 570 | 1070 | 50 | | | | | | 190 | 198 | 56 | 88 | | | | | | | | | | | |
| RK01 15000 80 | | 500 | 870 | 80 | 135 | 90 | 120 | 165 | 170 | 220 | 228 | 86 | 118 | 155 | 20 | 75 | 155 | 77.5 | 77.5 | 51 | 67 | 4 x M8 | Ø 8 | 45 |
| RK01 15000 100 | | 100 | 500 | 870 | 100 | | | | | 260 | 268 | 126 | 158 | | 30 | | | | | | | | | |
| RK02 3000 50 | 3000 daN | 300 | 440 | 50 | | | | | | 200 | 208 | 56 | 116 | | | | | | | | | | | |
| RK02 3000 80 | | 350 | 580 | 80 | 68 | 63 | 117 | 86 | 100 | 230 | 238 | 86 | 146 | 82 | - | 90.5 | 82 | 41 | 41 | 48 | 76 | 4 x M8 | Ø 8 | 31 |
| RK02 3000 100 | | 100 | | | | | | | | 260 | 258 | 106 | 166 | | | | | | | | | | | |
| RK02 5000 50 | 5000 daN | 300 | 440 | 50 | | | | | | 200 | 208 | 59 | 116 | | | | | | | | | | | |
| RK02 5000 80 | | 350 | 580 | 80 | 88 | 74 | 140 | 103 | 120 | 230 | 238 | 89 | 146 | 102 | - | 90.5 | 102 | 51 | 51 | 48 | 73 | 4 x M8 | Ø 8 | 36 |
| RK02 5000 100 | | 100 | | | | | | | | 260 | 258 | 109 | 166 | | | | | | | | | | | |
| RK02 15000 50 | 15000 daN | 570 | 1070 | 50 | | | | | | 220 | 216 | 47 | 123 | | | | | | | | | | | |
| RK02 15000 80 | | 500 | 870 | 80 | 132 | 92 | 165 | 120 | 170 | 250 | 246 | 77 | 153 | 150 | - | 96.5 | 150 | 75 | 75 | 50 | 88 | 4 x M10 | Ø 10 | 45 |
| RK02 15000 100 | | 100 | 500 | 870 | 100 | | | | | 270 | 266 | 97 | 173 | | | | | | | | | | | |
| RK02 20000 50 | 20000 daN | 750 | 1490 | 50 | | | | | | 250 | 258 | 67 | 143 | | | | | | | | | | | |
| RK02 20000 80 | | 100 | | | 196 | 110 | 150 | 205 | 240 | 280 | 288 | 97 | 173 | 222 | - | 102 | 222 | 111 | 111 | 52 | 90 | 4 x M12 | Ø 12 | 55 |
| RK02 20000 100 | | 100 | | | | | | | | 300 | 308 | 117 | 193 | | | | | | | | | | | |
| RK03 2000 22 | 2000 daN | 200 | 460 | 22 | 50 | 50 | 63 | 85 | 75 | 115 | 103 | 30 | 50 | 63 | 15 | 65 | 63 | 31.5 | 31.5 | 32.5 | 43 | 4 x M6 | Ø 6 | 23 |
| RK03 2000 35 | | 35 | | | | | | | | 136 | 137 | 51 | 71 | | | | | | | | | | | |
| RK03 3000 50 | 3000 daN | 300 | 450 | 50 | | | | | | 190 | 167 | 134 | 76 | | | | | | | | | | | |
| RK03 3000 80 | | 350 | 580 | 80 | 63 | 63 | 86 | 117 | 100 | 220 | 227 | 164 | 106 | 80 | 16 | 85 | 80 | 40 | 40 | 59 | - | 4 x M8 | Ø 8 | 31 |
| RK03 3000 100 | | 100 | | | | | | | | 260 | 287 | 204 | 146 | | | | | | | | | | | |
| RK03 5000 50 | 5000 daN | 300 | 440 | 50 | 90 | 74 | 103 | 140 | 130 | 190 | 167 | 134 | 76 | 110 | 16 | 85 | 110 | 55 | 55 | 59 | - | 4 x M8 | Ø 8 | 36 |
| RK03 5000 80 | | 350 | 580 | 80 | | | | | | 220 | 227 | 164 | 106 | | | | | | | | | | | |