

## Custom cams for special applications

## General Information for custom cams from voestalpine

General

With more than 680 standard cams in 3 different series voestalpine provides a huge variety of cams for your tool applications. Our product range covers most of the requirements ranging from die design, tool making to metal stamping.

In cases where we cannot fulfill your requirements with our standard cams we can offer you tailor made solutions according to your personal specification. While building custom cams we attempt to predominately use our standard components as to maintain commercial attractiveness as well as spare part availability.

Your options with our custom cams are nearly limitless:

- Customizable cam face dimensions (symmetric and asymmetric)
- Customizable cam angles, even beyond our standard product range
- Customizable stroke
- Customizable cam sizes and dimensions
- Enhanced retraction force
- Custom casting of the cam face (i.e. for cam pads)
- Special mounting plate for aerial cams
- Clearance for automation (crossbar, gripper)
- Part clearance (for protruded deep-drawing edge)
- Optimization of cam components for additional space in the die

Your custom cam inquiry will quickly be handled by our highly competent design department. You will receive within the shortest possible time a statement, if your custom cam can be realized. Followed by the feasibility evaluation you will receive an official quotation including your own identification number for your custom cam. After receipt of your purchase order a 3D-CAD-model of your custom cam will be provided as in form of a CatiaV5 file (other formats like stp etc. are available upon request).

By using a voestalpine custom cam you save the time and money of a home-made solution and you can rely on an approved purchase-cam production process. As a matter of course voestalpine provides cam face machining according to your specific requirements on your custom cam as well.

Below are some samples for customized cams:

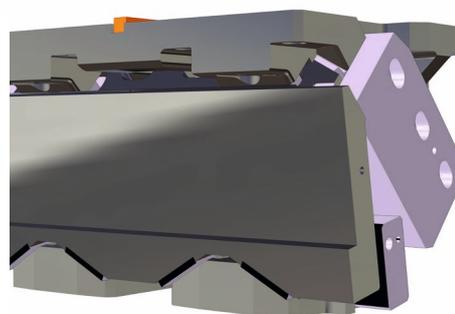
### Aerial cams with increased width of cam face

Customer requirements:

- Cam width 750 mm
- Cam angle 10°

voestalpines' customized solution:

- Custom cam based on KS-OT standard
- Increased width on the cam face



Examples

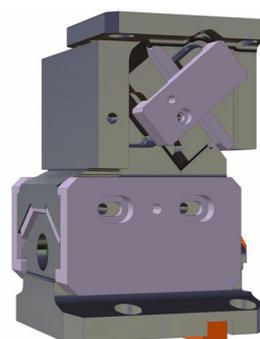
### Die mount cam with shortened stroke

Customer requirements:

- Cam width 180 mm
- Cam angle 0°
- Stroke 25 mm
- Decreased cam size to allow crossbar-automation

voestalpines' customized solution:

- Custom cam based on HS-UT standard
- Shortened stroke through use of more compact components



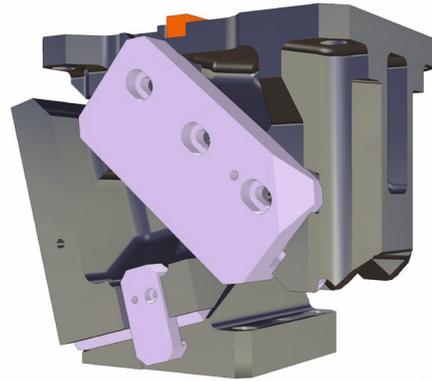
## Aerial cam with increased stroke and larger cam face

Customer requirements:

- Cam width 260 mm
- Cam angle 15°
- Increased stroke
- Extended cam face
- Customized cam base to increase available space in the die

voestalpines' customized solution:

- Custom cam based on KS-OT standard
- Increased stroke
- Customized cam face
- Cam base adjusted for gripper automation



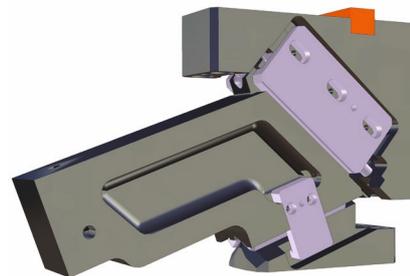
## Aerial cam with extended cam face (long reach cam)

Customer requirements:

- Cam width 60 mm
- Cam angle 20°
- Extended cam face

voestalpines' customized solution:

- Custom cam based on KS-OT standard
- Extended cam face (long reach) casted on cam slider



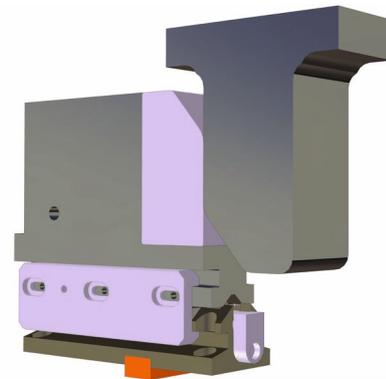
## Compact filler cam

Customer requirements:

- Cam width 60 mm
- Cam angle 0°
- Filler cam

voestalpines' customized solution:

- Custom cam based on HS-UT standard
- Adjusted cam slider with cam stroke plate
- Customized driver



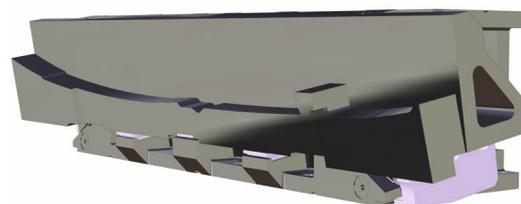
## Die mount cam with increased cam face width and casted trim steel preparation

Customer requirements:

- Cam width 2000 mm
- Cam angle 10°
- Casting preparation for trim steel and puncher on the cam slider
- Decreased height of cam base

voestalpines' customized solution:

- Custom cam based on HS-UT standard
- Cam slider with extended width on both sides
- Custom casting of cam slider including preparation for trim steel and puncher
- Height of cam base decreased to a minimum



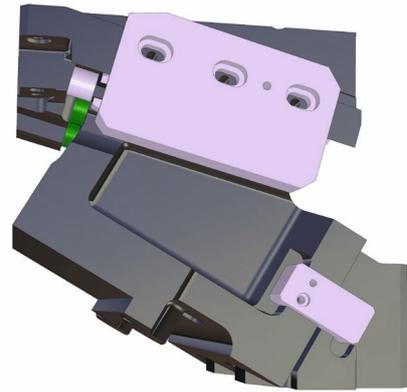
## Aerial cam with offset driver to allow crossbar- automation

Customer requirements:

- Cam width 600 mm
- Cam angle 60°
- Additional space through offset of driver for crossbar-automation

voestalpines' customized solution:

- Custom cam based on KS-OT standard
- Driver set back and outer center
- Extended cam slider to reach the driver



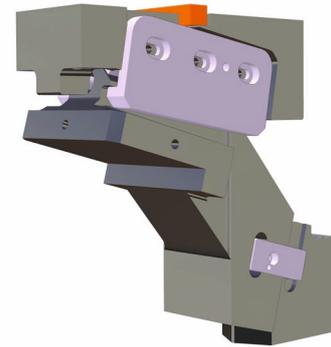
## Aerial cam with offset driver to allow part clearance and metal flow

Customer requirements:

- Cam width 160 mm
- Cam angle 75°
- Panel clearance through offset of driver

voestalpines' customized solution:

- Custom cam based on KS-OT standard
- Offset driver
- Adjusted cam slider with increased cam face width



## Aerial cam with offset driver to allow part clearance and metal flow

Customer requirements:

- Cam width 85 mm
- Cam angle 30°
- Panel clearance through offset of driver

voestalpines' customized solution:

- Custom cam based on KS-OT standard
- Offset driver according to adapted die-design
- Adjusted cam slider including long reach cam face
- Extended cam base for precise guidance



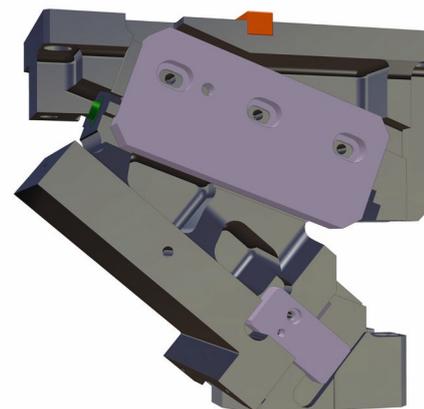
## Aerial cam with larger cam face

Customer requirements:

- Cam width 220 mm
- Cam angle 50°
- Cam reach and cam face width extended

voestalpines' customized solution:

- Custom cam based on KS-OT standard
- Cam face customized according to customer request
- Offset driver



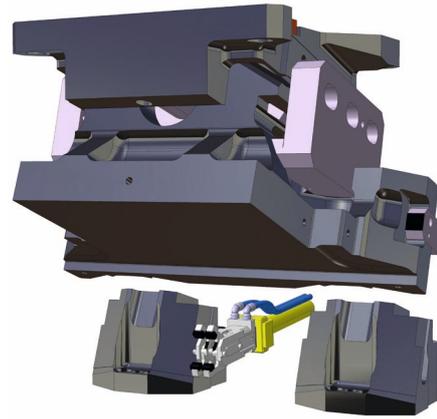
## Aerial cam with additional space (clearance) for gripper automation

Customer requirements:

- Cam width min. 330 mm
- Cam angle 70°
- Offset driver for automation of closing stroke
- Shortened stroke for decreased height

voestalpines' customized solution:

- Custom cam based on KS-OT standard
- Equipping with double standard driver
- Adjustment of cam face dimensions according to customer specification



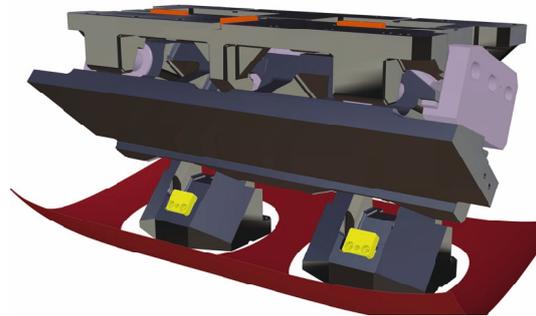
## Aerial cam with offset driver to allow part clearance and metal flow

Customer requirements:

- Cam width 1100 mm
- Cam angle 50°
- Offset driver to increase part clearance
- Adjusted positive return for extended part clearance
- Enlarged cam face

voestalpines' customized solution:

- Custom cam based on KS-OT standard
- Driver offset to the center of the cam
- New customized positive return according to customer request
- Larger cam face



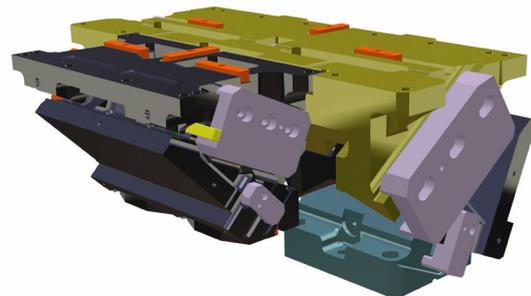
## Aerial cam adjusted to get along with minimal designed space in the die

Customer requirements:

- Cam width 400 mm and 1000 mm
- Cam angle 45° and 25°
- 400 mm wide cam with minimal cam length
- Both cams adjusted to fit in minimal design space

voestalpines' customized solution:

- 2 Custom cams based on KS-OT standard
- New concept of a KS-OT-400 with reduced cam length
- Adjustment of the KS-OT-1000 in order to interleave both cams



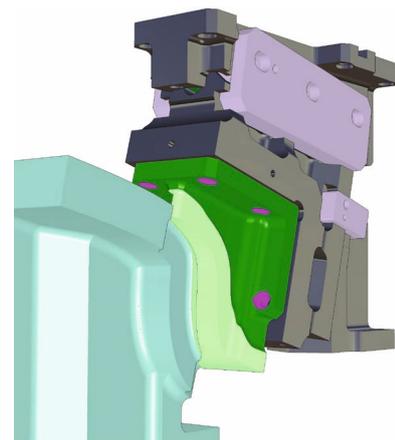
## Aerial cam with L-shaped cam face to offload cam pressure

Customer requirements:

- Cam width 150 mm
- Cam angle 75°
- Adjusted cam face for trimming operation over the deep-drawing edge

voestalpines' customized solution:

- Custom cam based on KS-OT standard
- Cam slider with L-shaped face
- Modified cam driver for optimized force transmission
- Extended cam base for precise guidance
- Offset driver



## Process for ordering custom cams

Inquiry

1. Address your custom cam inquiry to your local voestalpine-contact, our Sales team in Linz/Austria ([sales.nem@voestalpine.com](mailto:sales.nem@voestalpine.com)) or directly to our Die Design department ([engineering.nem@voestalpine.com](mailto:engineering.nem@voestalpine.com)). Provide your technical requirements as accurate as possible. A sketch of your customized design is very helpful and even more helpful would be, if you could provide 3D-CAD data formatted to CATIA V5, ogr, 3d-xml or step including a description of your problem. In case there would be any questions concerning your custom cam, our die design team will contact you immediately to sort them out.
2. Our die designers will do a feasibility study of your inquiry and depending on the complexity of your request we will come back within one to two working days and let you know if we can realize your custom cam. Parallel our Sales team will evaluate the costs and provide an indication quote within a week after your inquiry. This quotation will include your personal cam identification number as well.
3. After the receipt of our quote you can make sure that our custom cam fulfills your technical and commercial requirements and that you are going to use it. After receiving your purchase commitment our die designers will prepare a custom cam concept and provide you the relevant 3D-CAD data. You will receive the custom cam data formatted to CATIA V5 (R18). Upon request we can provide different data formats as well. The usual delivery time for a custom cam is 8 weeks ex works after the receipt of a formal purchase order.

Kindly indicate the exact name and identification number of your cam in any purchase order.

Purchase  
Order

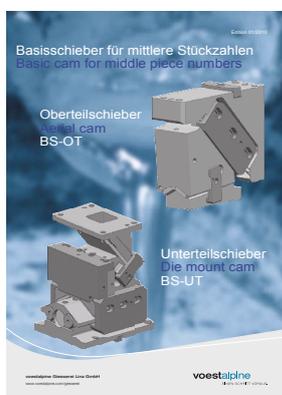
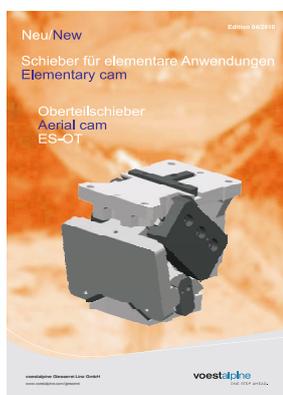
For example:

You have received a custom cam (440 mm wide and working angle of 45°) with the identification number 23926 and you need one item of this custom cam.

Your purchase order should clearly mention:

Ordering quantity: 1 item 23926 KS-OT-440-45°

Please consider also our regular catalogues for Elementary,- Basic and Premium cams.



The above brochures and catalogues are available through your local voestalpine-Sales manager or can be downloaded directly from the internet – [www.voestalpine-nem.at](http://www.voestalpine-nem.at) under chapter “Catalogue > Downloads”.

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