Parameterized cam unit adapter

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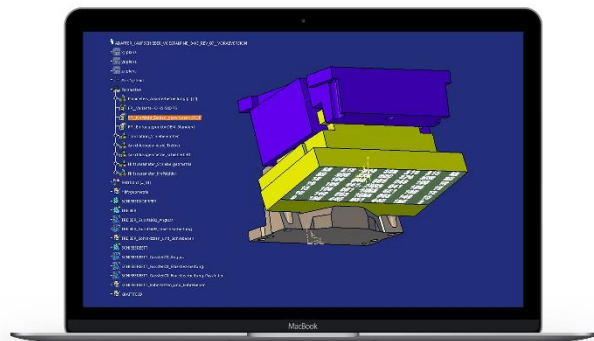
Privacy: Public

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REVISION INFORMATION

» First puplication January 2024 – Rev00
» Rev01 - 18.04.2024: ID numbers O-BS 60 updated
» Rev02 – 28.05.2024: ID27155 and 27175 cam stroke modified

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SHORT DESCRIPTION

» **Parameterized cam unit adapter,** which combines the selection of various **cam types, widths** and **angles in one file:**

   » **O-ES:** 50 / 65 - 85 / 90 - 110 / 125 - 160 / 175 - 220 / 260 - 330 / 400 - 500
   » **O-BS:** 60 / 65 - 85 / 90 - 110 / 125 - 160 / 175 - 220 / 260 - 330 / 400 - 500
   » **O-KS:** 60 / 65 - 85 / 90 - 110 / 125 - 160 / 175 - 220 / 260 - 330 / 400 - 500
   » **KS-OT:** 600 / 700 / 850 / 1000 / 1200

   » **Angle:** 0-75°

   » **Can be interchanged** between the optimized **O-ES*, O-BS** and **O-KS series.**
     *Exception: cam unit width 50 mm

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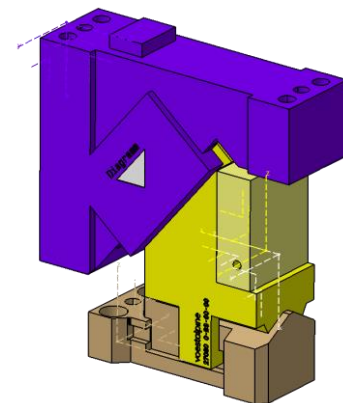
ADVANTAGES

» **Savings in construction time:**
  » One cam adapter for all standard OT cams
  » Simple integration into CATIA tool design (suitable for BMW & VW)
  » No need to replace the adapter in the event of changes (width, angle, cam type)

» **Easier handling:**
  » No external links to customer models required
  » Detailed information on the connection geometry (stop surfaces, threaded & fitting holes, etc.)
  » Features for load time optimization (force fields can be shown & hidden)

» **Use in the method planning process:**
  » Representation of rough models without extensive details (installation space)
  » Reduced geometry

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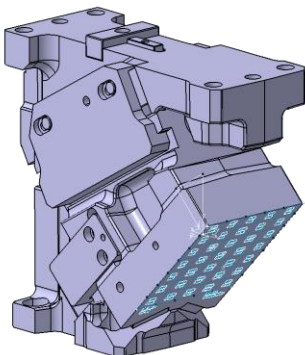
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ADVANTAGES

» **The cam unit adapter includes :**
  » All angles and widths of the O-series and the KS-series from 600-1200 mm
  » Stroke rate-dependent force fields
    » O-KS & KS-OT (1.000.000)
    » O-BS (Level 1: 500.000, Level 2: 750.000)
    » O-ES (300.000)
  » Cam geometry
  » Installation space
  » Mounting space
  » Pre-machining area
  » Open and closed cam unit position

» Cam diagram displayed in 3D body
» Order number / type displayed as a parameter and in the 3D body
» Insert axes (OEM standard, NAAMS, driver, cam slider, cam base)
» Casting, milling & drilling processing (drilling depths variably adjustable)
» Casting & shouldering
» Locking the settings

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PRESENTATION IN COMPARISON

» **Detail customer model:**
  » **1 File → 1 cam unit**
  » **Still** available **on our website:**
    https://www.voestalpine.com/camtec/products/view/cam/27109
  » E.g.:
    KM_27109__ZSB_O-KS_125-45__00

» **Parameterized cam unit adapter:**
  » **1 File → 304 cam unit types**
  » **Now** available **on our website:**
    https://www.voestalpine.com/camtec/Product-Finder
  » VOESTALPINE_PARAMETR-SCHIEBERADAPTER_REV00

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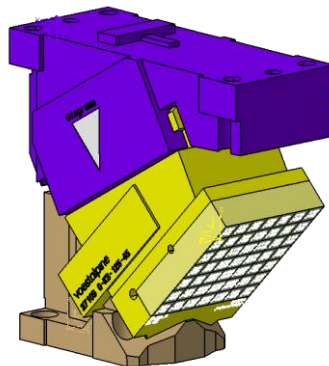
PROCEDURE

1) Download cam unit adapter from productfinder:

» Link: https://www.voestalpine.com/camtec/Product-Finder

2) Insert cam unit adapter into Catia and tool structure:

» Application possible from "Catia® Release 2020" and later
» The cam unit adapter file is suitable for handling all common cam unit integration tools (BMW, VW, …)

Name	Änderungsdatum	Typ
VOESTALPINE_PARAMETR-SCHIEBERADAPTER_REV00.CATPart	04.01.2024 11:14	CATIA Teil

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PROCEDURE

3) Open parameters in the structure tree:
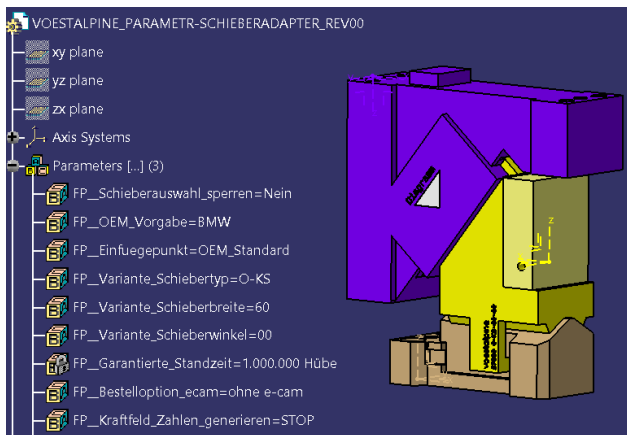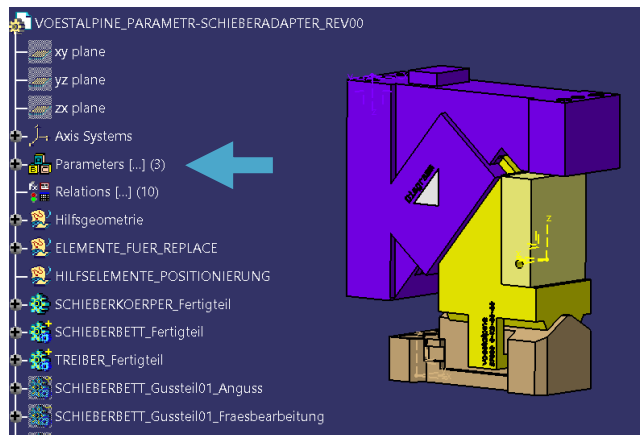
PROCEDURE

4) Selection of the desired orientation and renaming of the used bodies / publication „FP__OEM_Vorgabe" (BMW, VW/AUDI):
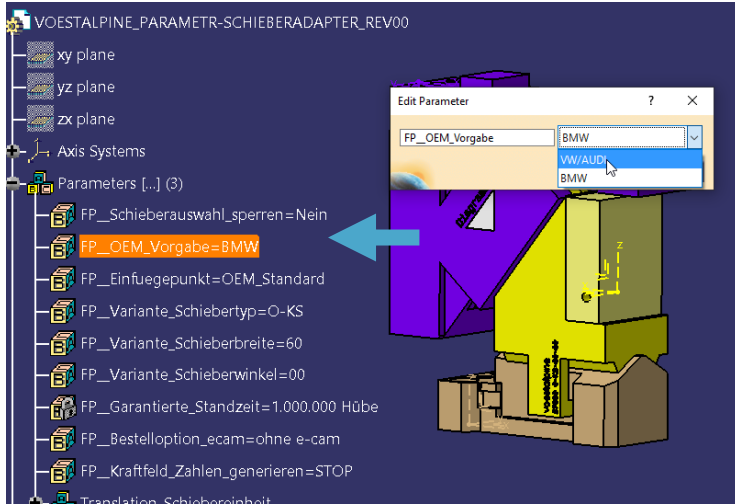
» the English translation appears via mouseover effect:
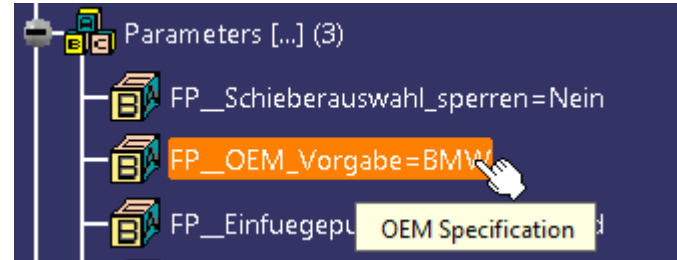
PROCEDURE

5) Selection of the desired inserting point „FP__Einfügepunkt" (OEM_Standard, Naams_Standard, Voest_Standard):
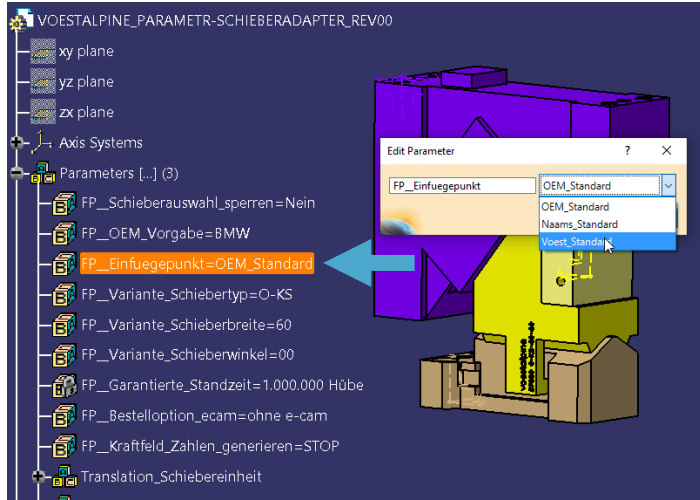
PROCEDURE

6) Selection of the desired cam unit type „FP__Variante_Schiebertyp":
(KS-OT, O-KS, O-BS, O-ES)
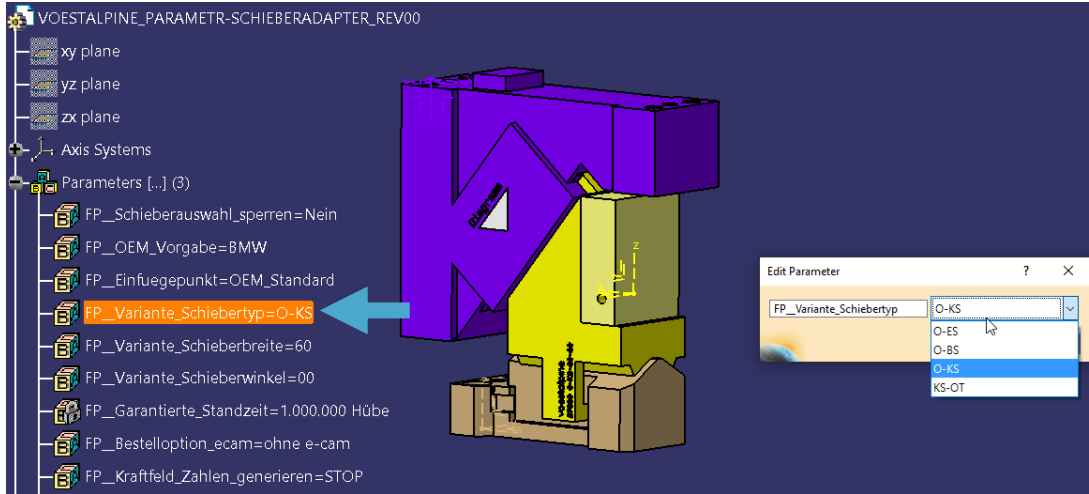
PROCEDURE

7) Selection of the cam unit width „FP__Variante_Schieberbreite":
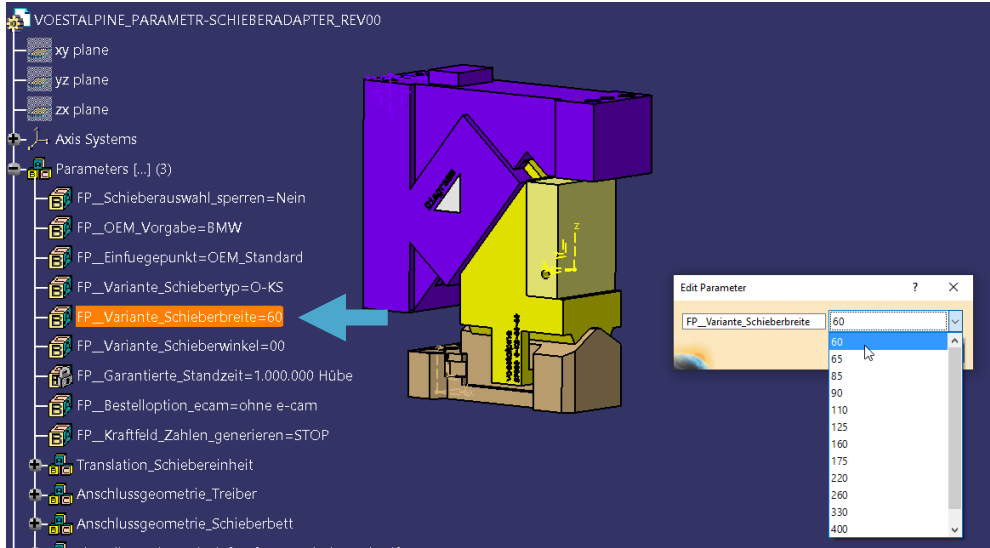
» Depending on the cam unit type, the corresponding widths are suggested.

» **O-ES:** 50-500 mm
» **O-BS:** 60-500 mm
» **O-KS:** 60-500 mm
» **KS-OT:** 600-1200 mm

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PROCEDURE

8) Selection of the desired cam unit angle „FP__Variante_Schieberwinkel":
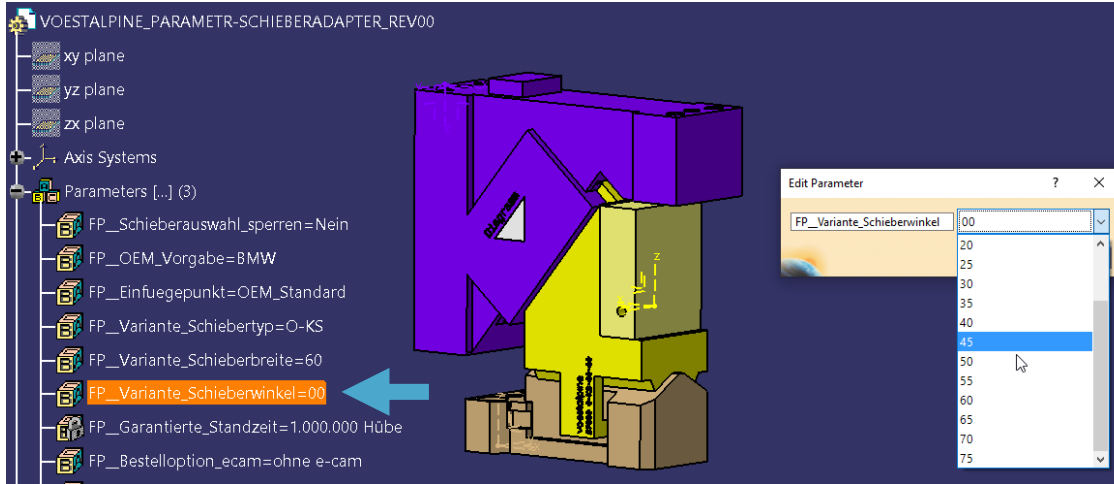
» **Angle :** 0-75° (5°- steps)

PROCEDURE

9) The selection of the cam unit type indicates the guaranteed service life:
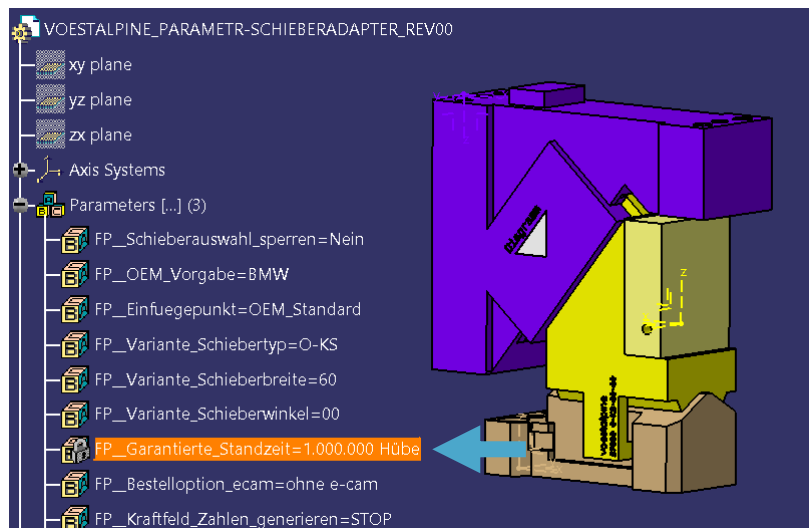
» **O-KS & KS-OT:**
  » 1.000.000

» **O-BS:**
  » Level 1: 500.000
  » Level 2: 750.000

» **O-ES:**
  » 300.000

PROCEDURE

10) Selection of the order option inclusive sensors „FP__Bestelloption_ecam":
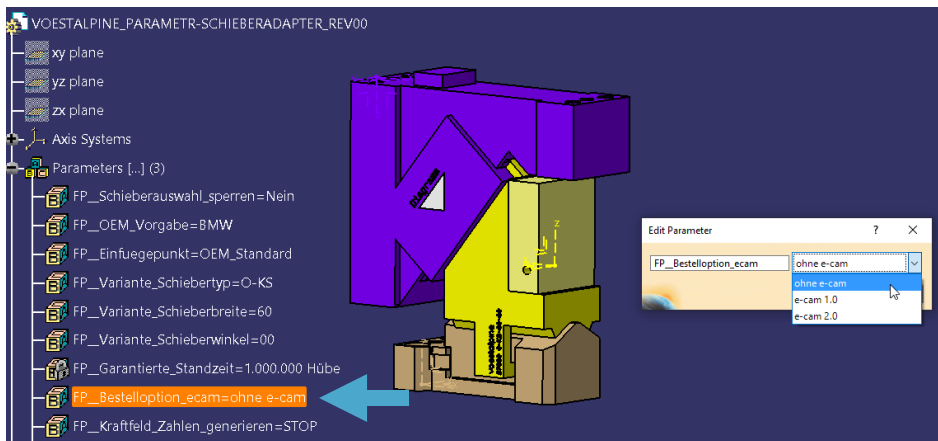
» **without e-cam:** standard

» **e-cam 1.0:** Position control*

» **e-cam 2.0:** Load monitoring**

» **Further information:**
https://www.voestalpine.com/camtec/Schieber/e-cam

* e-cam 1.0 roll out ongoing – delivery time may deviate from standard
**e-cam 2.0 (load monitoring) is under development with selected customers and if you are interested, you can obtain more detailed information by clicking on the link provided or by contacting the engineering department (engineering.camtec@voestalpine.com).

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PROCEDURE

11) Generating the force fields on the working surface „FP__Kraftfeld_ Zahlen_generieren":
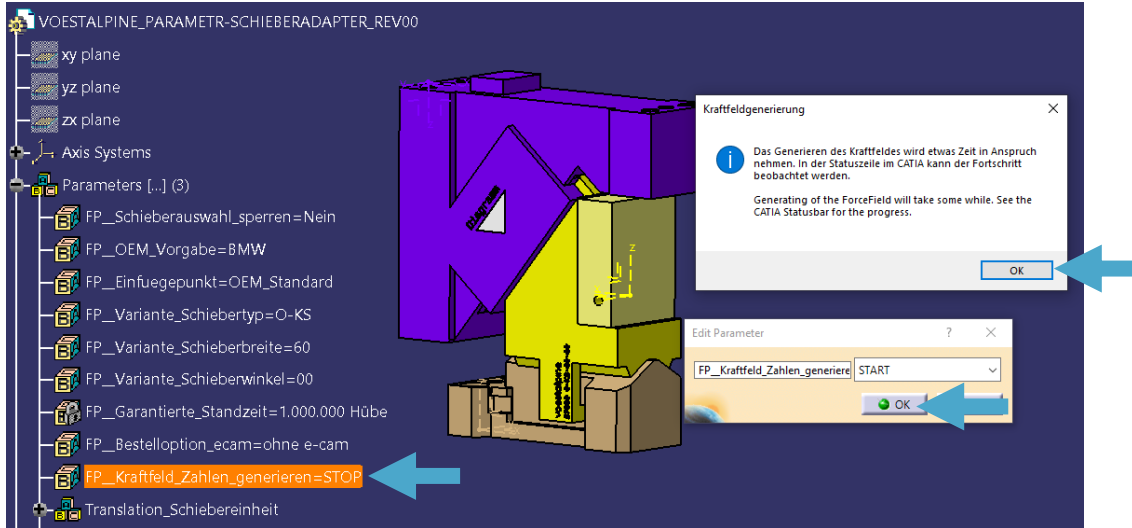
PROCEDURE

11.1) Visualization of the generated force fields:
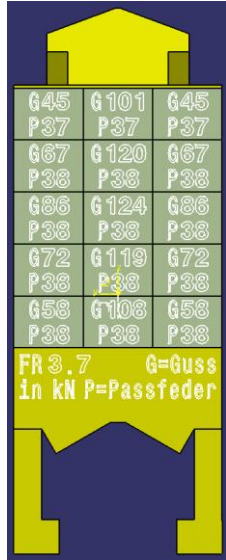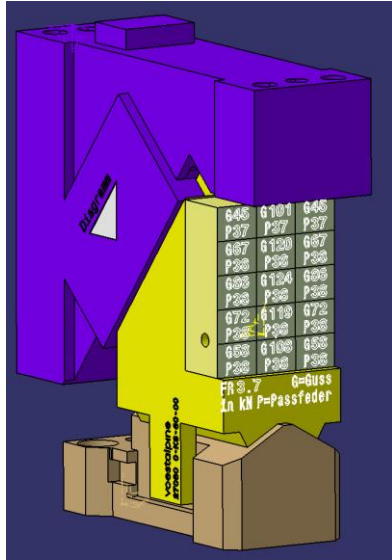
» **G:** Specification for the forces due to shouldering on the **casting shoulder** in kN

» **P:** Specification for the forces due to shearing on the **fitting key** in kN

» **FR**: Specification of the **retraction force** in kN

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PROCEDURE

11.2) The O-BS cam unit type enables two gradations:
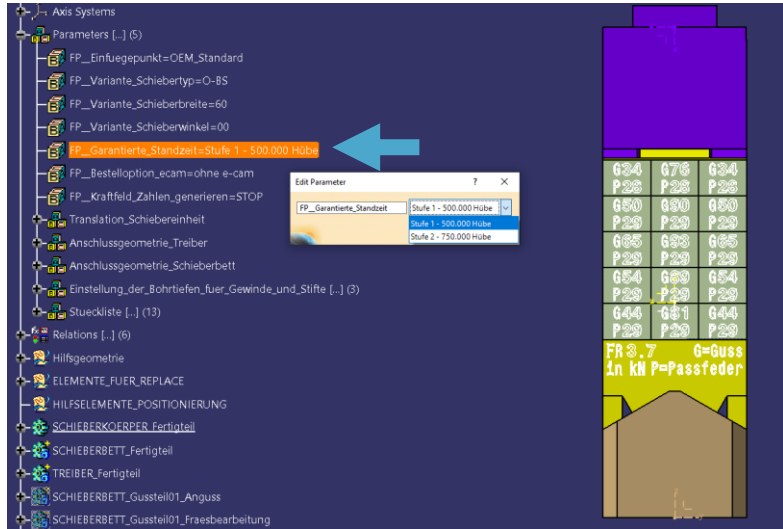
» **O-BS-Level 1:**
  » 500.000 – Strokes
  » Higher working force
  » Less guaranteed strokes

» **O-BS-Level 2:**
  » 750.000 – Strokes
  » Lower working force
  » More guaranteed strokes

PROCEDURE

12) Taking the order number of the cam unit as a parameter:
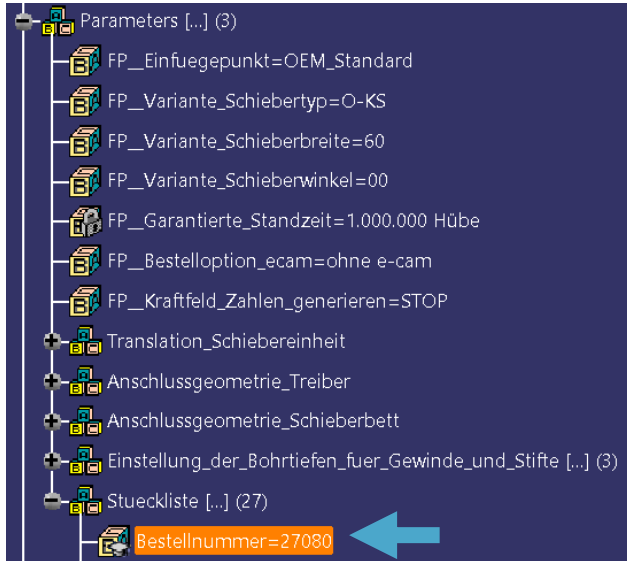
PROCEDURE

12.1) Order number / type of the cam unit and producer shown in the 3D body:
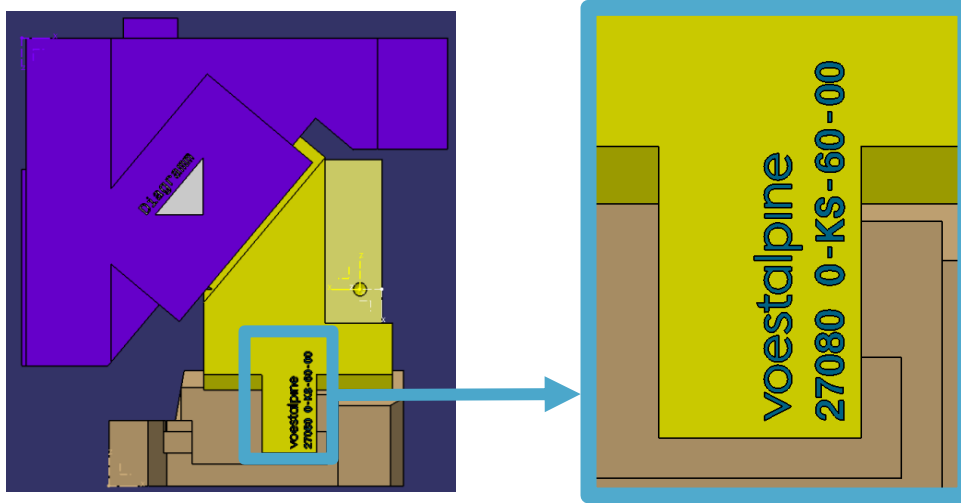
PROCEDURE

13) Visualization of the cam diagram displayed in the 3D body:
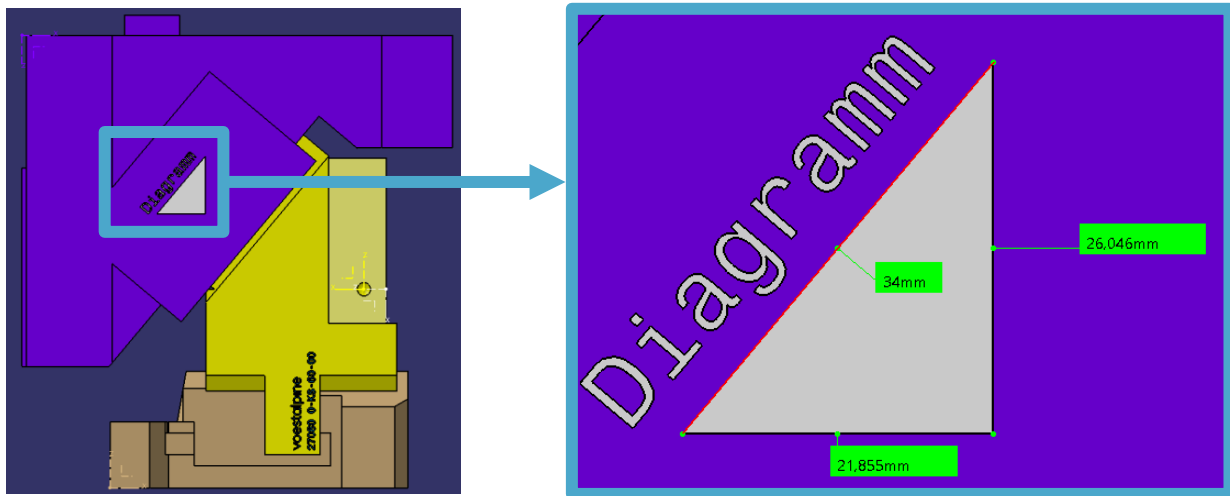
PROCEDURE

14) Visualization of the permissible area for machining (lighter coloring):
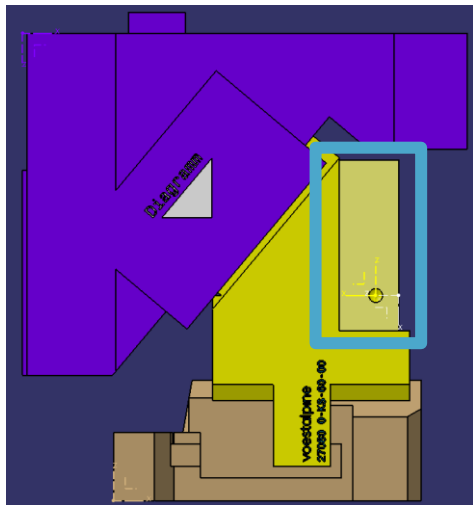
» If a **deeper machining** is necessary, the **feasibility must be checked** on the **detailed customer model**

» https://www.voestalpine.com/camtec/Product-Finder

» engineering.camtec@voestalpine.com

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15) Visualization of the desired casting shoulder options in the cam base and driver:
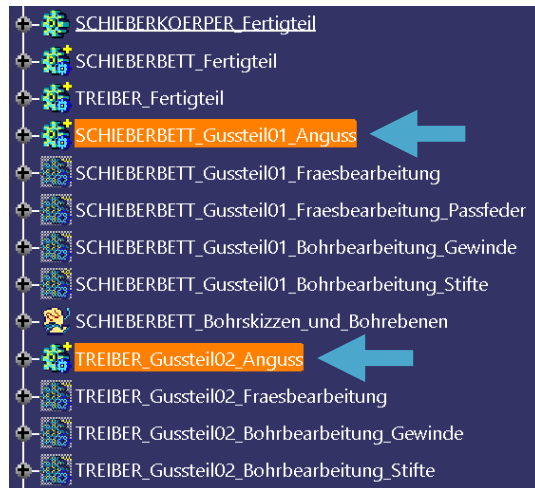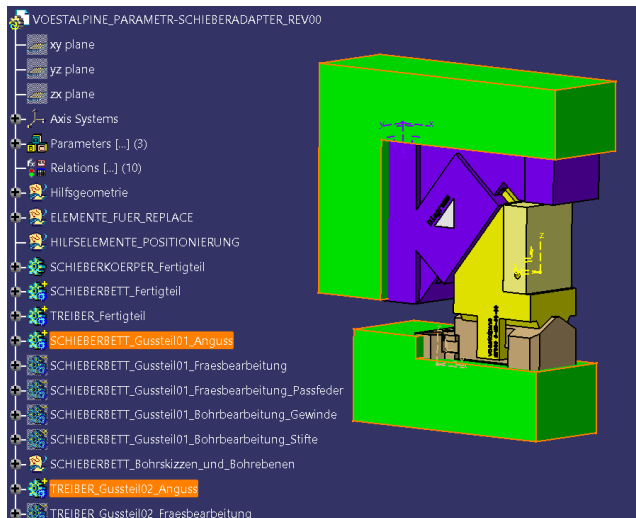
PROCEDURE

16) Visualization of the desired milling process in the cam base and driver - casting shoulder:
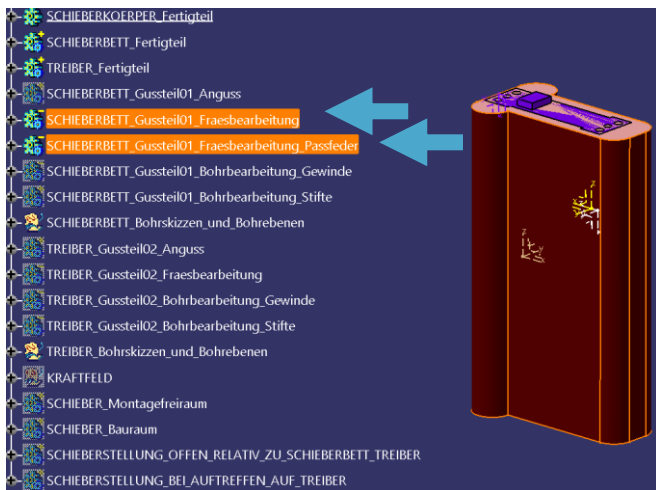
PROCEDURE

16.1) Visualization of the desired milling process in the cam base - fitting key:
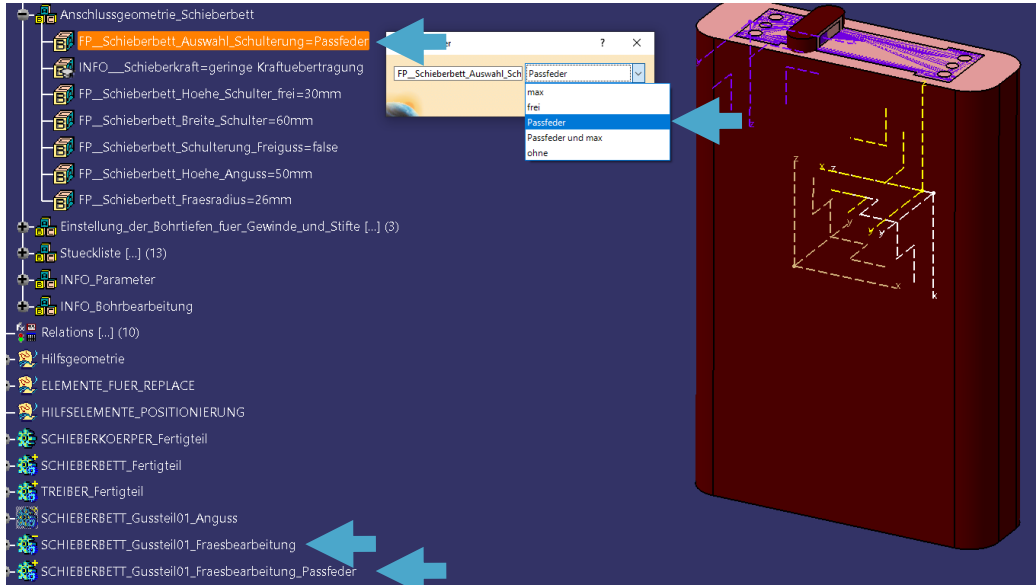
PROCEDURE

16.2) Visualization of the desired milling process in the cam base - fitting key and casting shouldering:
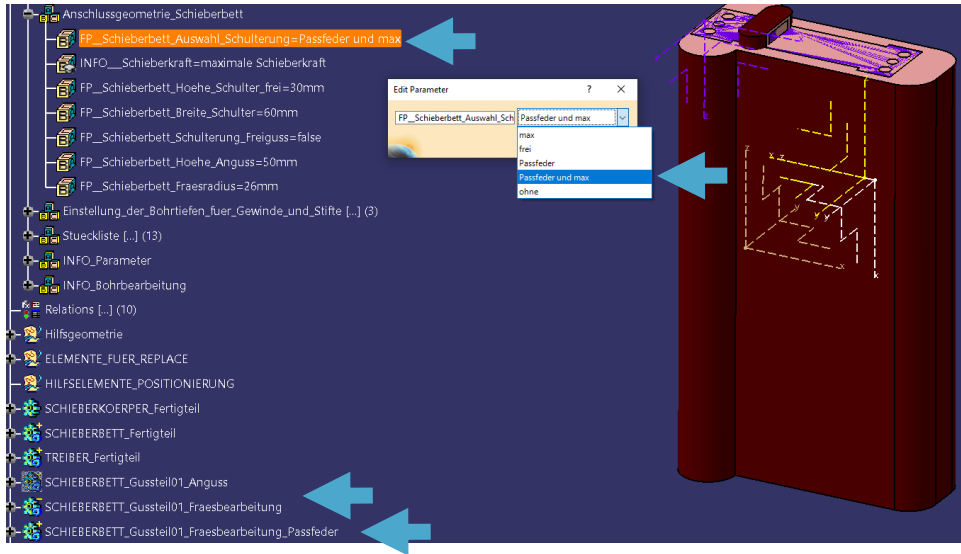
PROCEDURE

17) Visualization of the desired drilling operation in the cam base and driver:
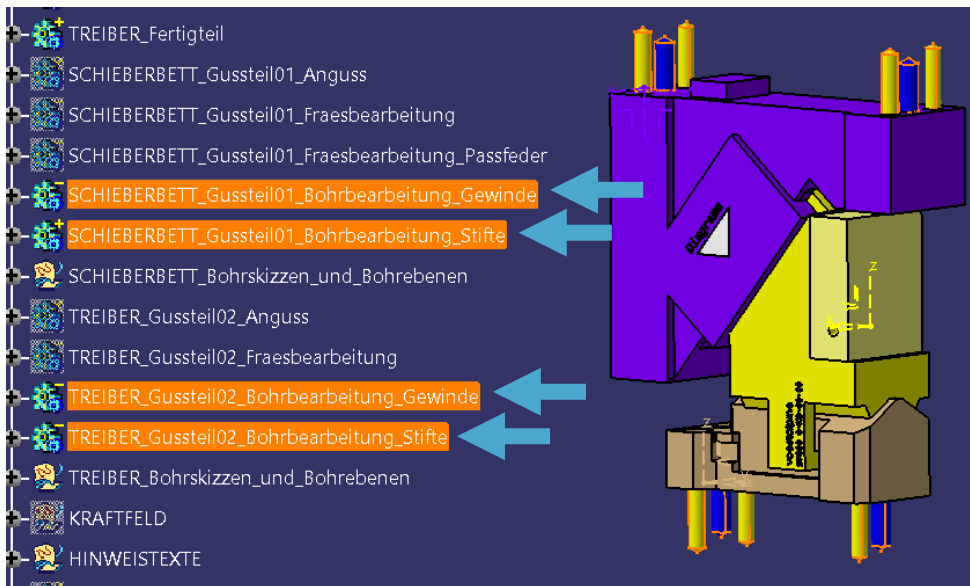
PROCEDURE
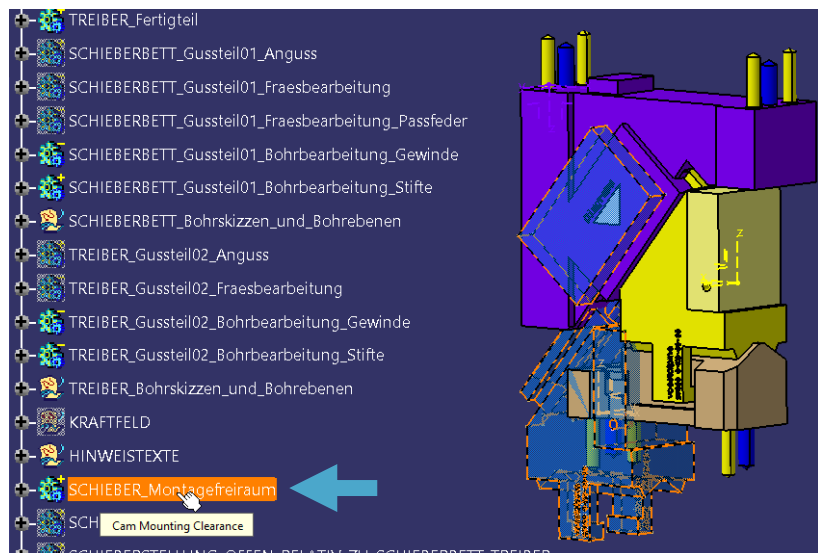
17.1) Selection of the desired drilling depths „FP__Gewinde_Bohrtiefen", „FP__Passstift_Bohrtiefen":

PROCEDURE

18) Visualization of the mounting space:

PROCEDURE

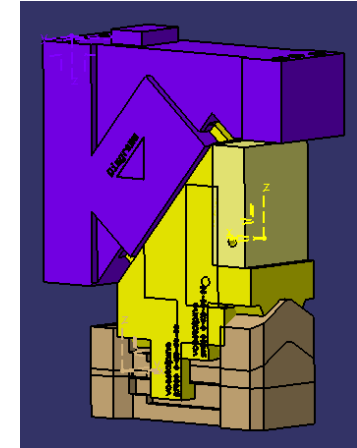## 19) Visualization of the installation space:

PROCEDURE

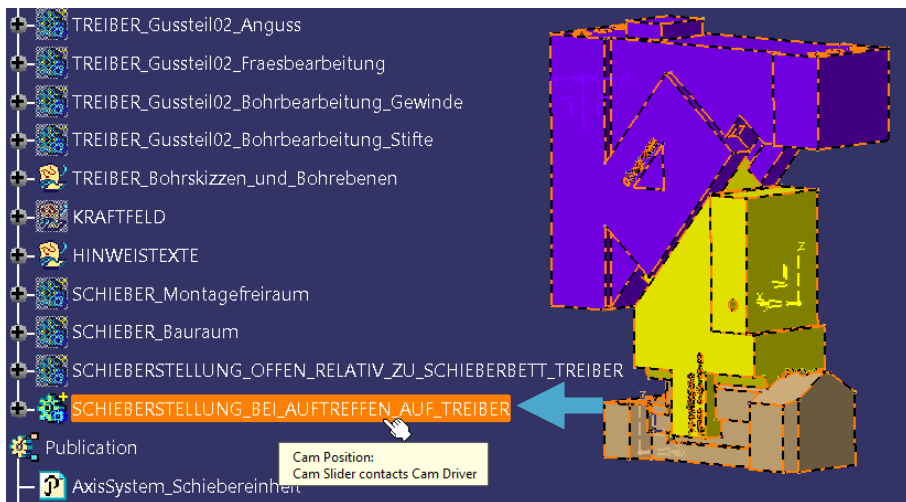**20) Visualization of the open cam unit position relative to the cam base:**
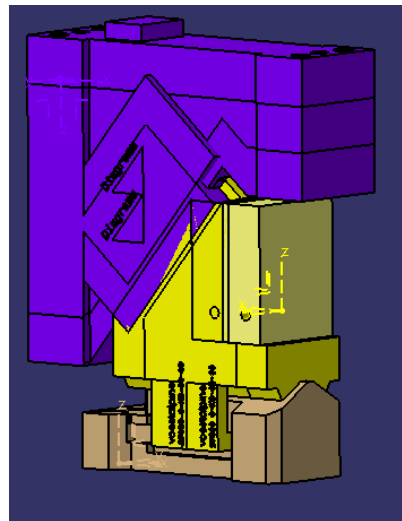

Cam base remains in position

PROCEDURE

21) Visualization of the open slider position relative to the driver:
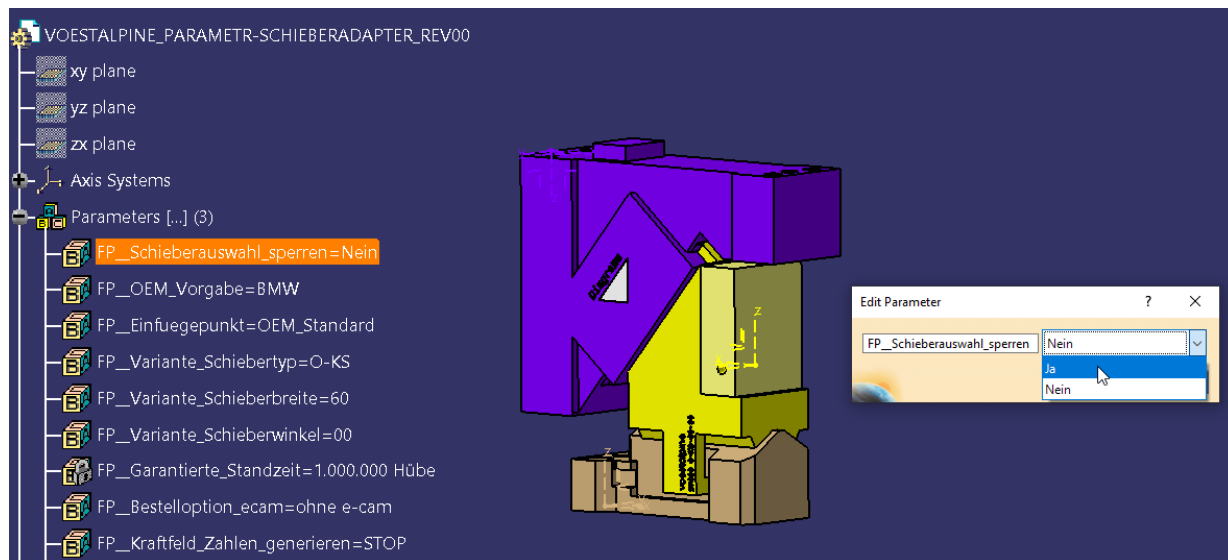

Driver remains in position

PROCEDURE

22) Fixing the settings:

THANK YOU!

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