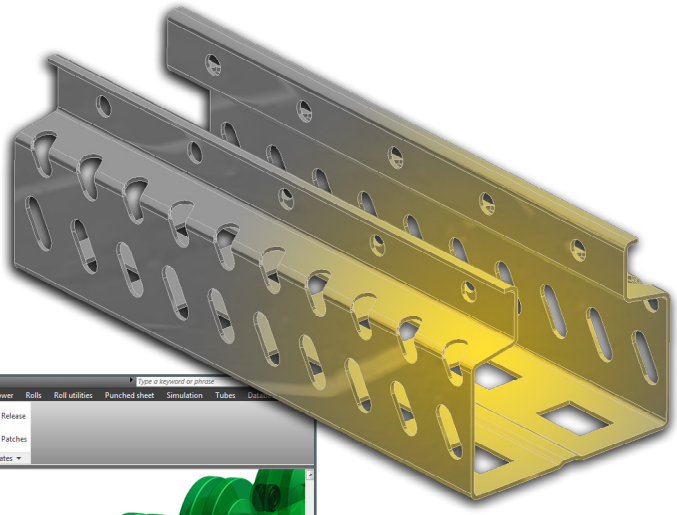
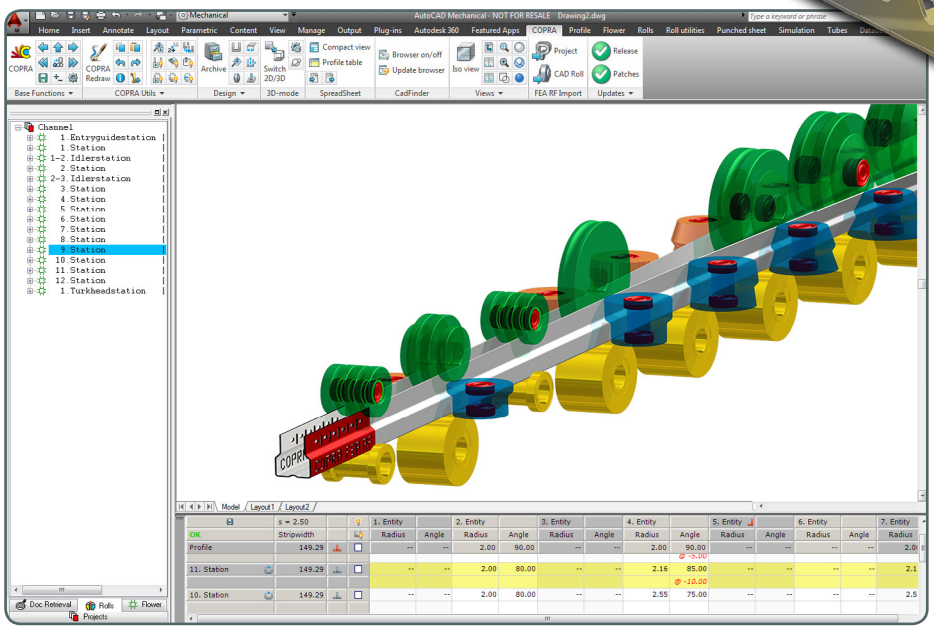
COPRA® RF 2023

Release Notes

COPRA® RF State-of-the-Art Roll Forming Design





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COPRA® RF version 2023

data M Sheet Metal Solutions offers its customers a variety of software and hardware solutions as well as services in the field of roll forming. The programs COPRA® RF and COPRA® FEA RF for design, simulation and analysis are market leaders worldwide and form the basis for our COPRA® Roll Forming workflow.
COPRA® RF includes features specifically tailored to meet the needs and requirements of today's roll form designer.

Enhancements

- **AutoCAD 2023**
  The version AutoCAD 2023 is supported

- **AutoCAD Mechanical 2023**
  The version AutoCAD Mechanical 2023 is supported

- **Inventor 2023**
  The version Inventor 2023 is supported

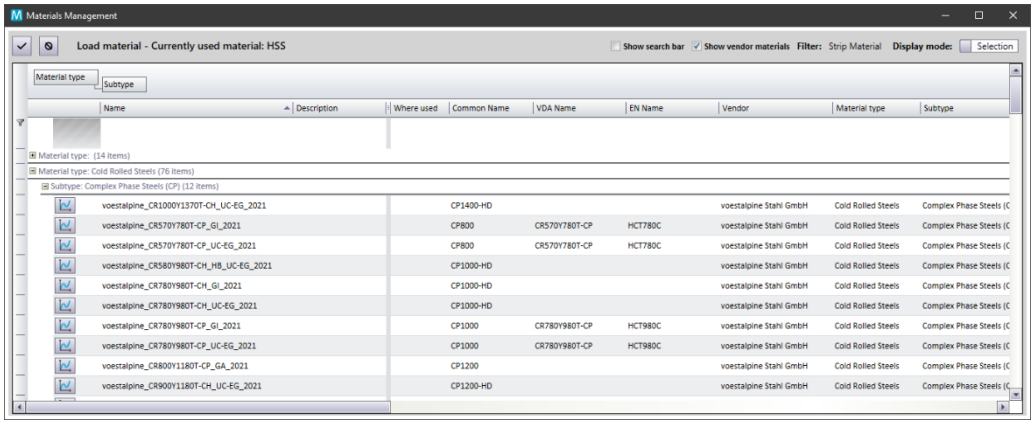
- **Simplified installation**
  The administrator no longer needs to start AutoCAD. AutoCAD profile creation is done entirely by the user when AutoCAD is started for the first time.

- **New roll attribute 'Number like spacer ring'**
  This allows simple rolls to be automatically assigned roll numbers according to the 'diameter x width' scheme without treating them like spacer rings in downstream processes (e.g. single roll dimensioning).

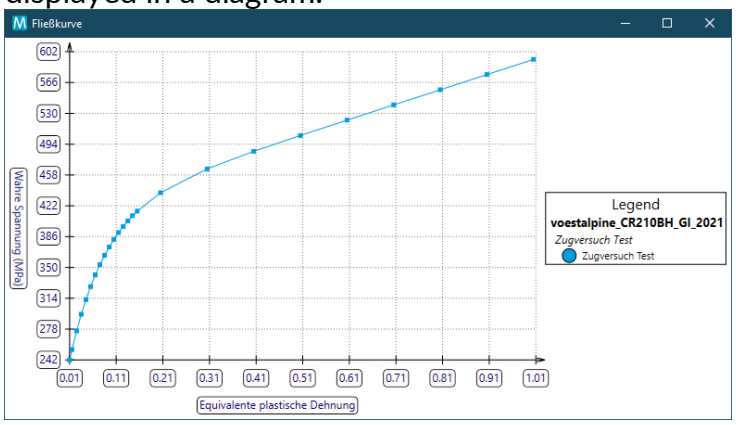
- **Extended material properties**
  The company voestalpine Stahl GmbH provides the material properties for 90 steel strips. These contain all relevant parameters and flow curves for use in COPRA® FEA RF.

  The material properties are fully integrated into the COPRA® workflow and are thus automatically available for the subsequent simulation calculations in COPRA® FEA RF.

In the material dialog, the additional manufacturer material data can be displayed for selection.



Additionally the flow curve from the stored material data of a material can be displayed in a diagram.



In edit mode additional material can be imported. Use a XML file to import tensile test data to materials.
An example for this is the file "data_M_demo_material.xml", which is located in the directory <COPRA® installation directory>\material.

- Example " data_M_demo_material.xml"

```
<MaterialList>
  <!--
  Start of the first material
  -->
  <ApMaterial xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" xmlns:xsd="http://www.w3.org/2001/XMLSchema">
    <!--
    The material's name
    -->
    <Name>data_M_demo_material</Name>
    <!--
    The material's yield strength
    -->
    <YieldStrength>205.0</YieldStrength>
    <!--
    The material's ultimate tensile strength
    -->
    <UltimateTensileStrength>305.0</UltimateTensileStrength>
    <!--
    The material's A80 elongation
    -->
    <ElongationBreakA80>20.0</ElongationBreakA80>
    <!--
    The material's specific gravity
    -->
    <SpecificGravity>7850.0</SpecificGravity>
    <!--
    The material's hardness
    -->
    <Hardness>0</Hardness>
    <!--
    The material's poisson ratio
    -->
    <PoissonRatio>0.3</PoissonRatio>
    <!--
    The material's young's modulus
    -->
    <YoungsModule>210000</YoungsModule>
    <!--
    The material's flow stress
    -->
    <FlowStress>0</FlowStress>
```

In edit mode selected material in the table can also be exported into a material file (.xml).

Other improvements

- Setting for number of visible decimal places for distance ring numbering introduced
- Setting introduced that allows fixed roll attributes or a fixed roll number to be retained for copies of rolls
- Parameters last used when creating parametric rolls are saved in order to have them available again the next time they are used
- Improved readability of installation side-dependent roll attributes (e.g. retaining rings left/right)
- Continuous roll numbering accelerated throughout the plant
- Fixed problems when inserting passes
- Fixed problems with incorrect installation side-dependent roll attributes for rolls with symmetrical outer contour
- Some rolls were not mirrored in 'Mirror database'
- Incorrect referencing of info parts after inserting passes
- Incorrect transfer of project data from archive files fixed
- Incorrect numbering with continuous roll numbering fixed
- Faulty full section display of rolls on accessory axes fixed
- Incorrect transfer of sheet thickness from old archive file fixed

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