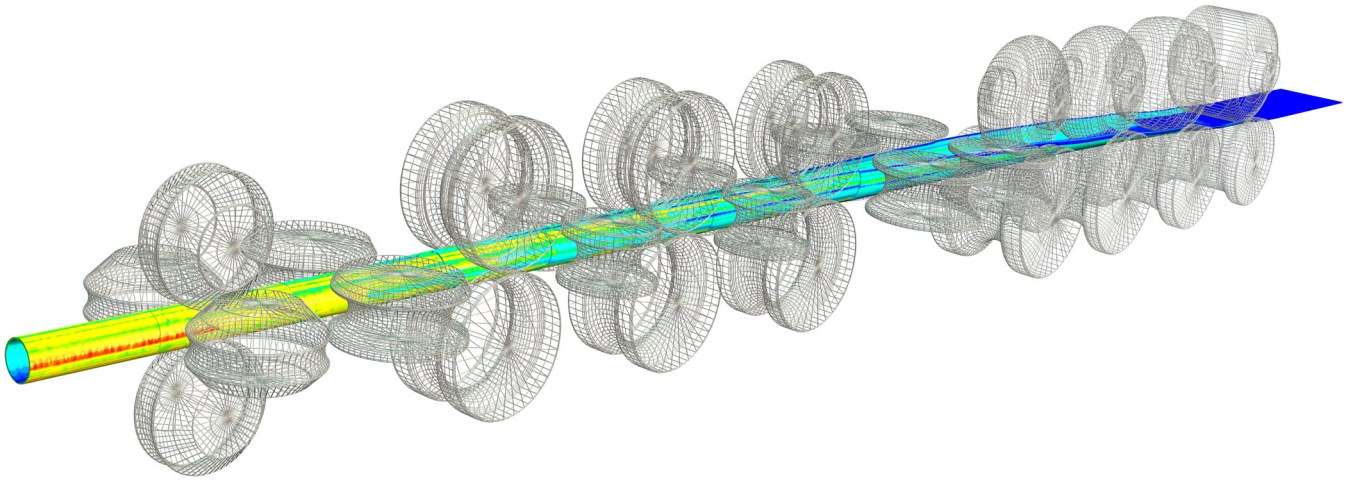
COPRA® FEA RF 2025.2

Release Notes

COPRA®
Finite Element
Analysis
for Roll Forming



data M
Sheet Metal
Solutions

COPRA® FEA RF

What´s new in version 2025.2

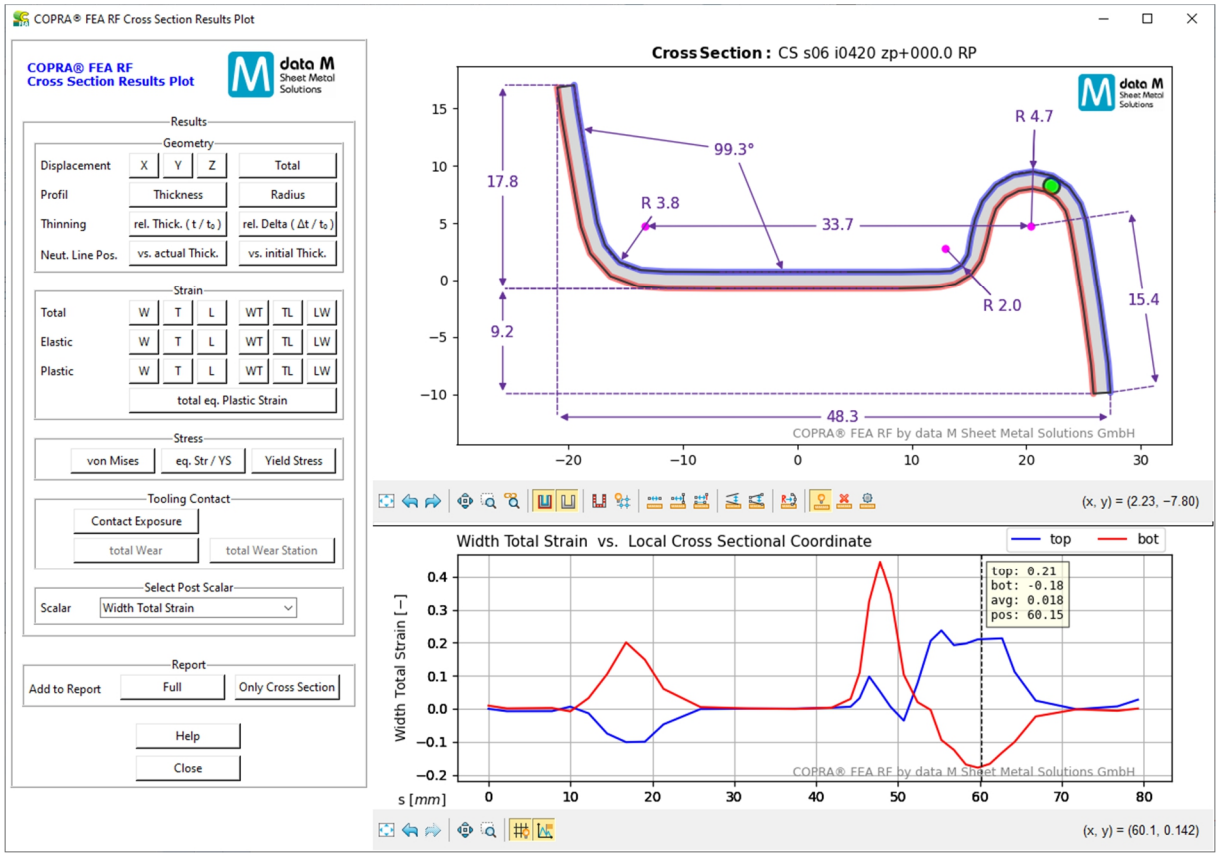
With over 25 years of FEA simulation expertise in research and industry, data M´s specialists have been contributing to the continuous improvement of COPRA® FEA RF, our finite element analysis software tailored for roll forming processes. The 2025.2 release introduces innovative features, enhanced functionalities, and improved simulation efficiency, offering users an unparalleled experience.

NEW

Professional Version

Advanced Possibilities to Analyze Cross-Sectional Results:

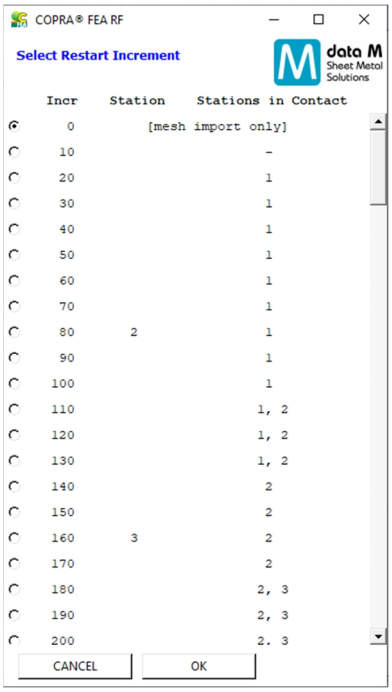
Gain deeper insights into your simulation results with our new advanced cross-sectional analysis tools. Users can now explore any cross section in detail, overlaying geometric views with correlated post-processing results for precise evaluation. Measure and display distances and angles interactively within the cross section, highlight specific areas to analyze their corresponding result values, and seamlessly switch between different post-processing variables for comprehensive assessments. Whether verifying dimensional accuracy or analyzing stress and strain distributions, this tool empowers users with precise and efficient cross-sectional evaluations.



NEW

Restart Simulations with Confidence: Increment Selection Dialog:

Restarting simulations has never been easier. With the new “Select Restart Increment” dialog, users no longer need to memorize or manually identify restart increments. A pop-up list now displays all available increments for restarting a simulation, ensuring quick and error-free selection. Additionally, users can view which stations are in contact with the mesh at each increment, avoiding unintended restart points and guaranteeing a smooth continuation of their simulations.



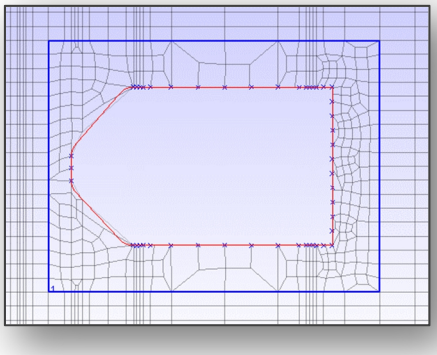
IMPROVED

Professional Version

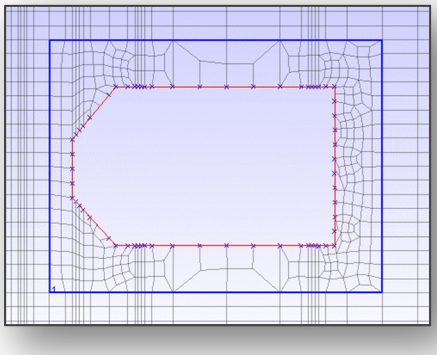
Improved Hole Meshing through Automatic Geometry Simplification:

Meshing complex holes can be challenging and often leads to quality issues. COPRA® FEA RF 2025.2 introduces automatic hole geometry simplification, improving mesh generation for holes with intricate shapes. This enhancement ensures better mesh quality, increases simulation robustness, and saves users valuable preparation time.

Before Simplification



After Simplification



The example above demonstrates how simplifying the hole geometry leads to improved mesh quality. This improvement is particularly noticeable in the bending zone on the right side of the hole, which could not be meshed correctly before the simplification.

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IMPROVED

Reduced Storage Requirements for Solid-Shell Simulations:

Efficiently manage your data storage without compromising result accuracy. In COPRA® FEA RF 2025.2, simulations using solid-shell elements now produce smaller output files thanks to optimized result storage. This improvement reduces disk space requirements, accelerates data transfer, and enhances long-term project data management.

NEW

Professional Version

Simulation Monitoring - Receive Critical Email Warnings:

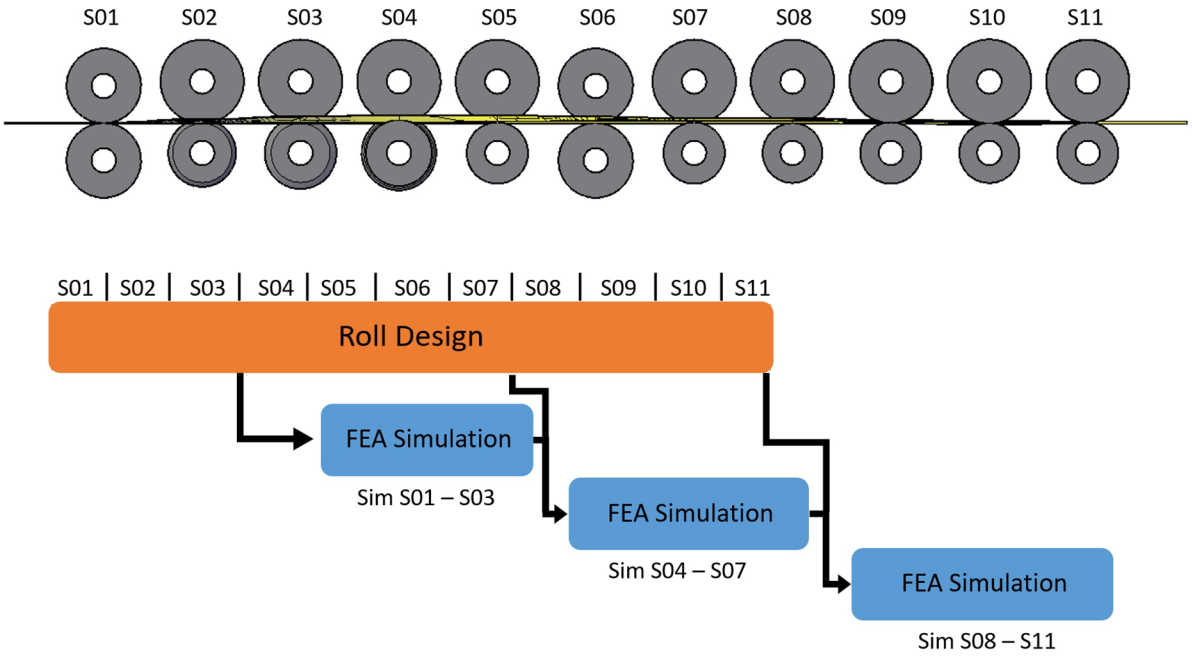
Stay informed wherever you are. With the new simulation monitoring email warnings, professional version users can receive automatic notifications when critical issues arise in their simulations (based on a series of predefined parameters). This feature minimizes wasted time by alerting users if something goes wrong, enabling faster intervention, reducing downtime, and ensuring the efficient progress of projects.

NEW

Professional Version

Define End Station in Friction Simulations:

Simulation end station is now available for friction simulations. During the design-phase the user can start a simulation and define in which station the simulation should end. This allows the user to simulate the already existing designed stations while continuing the roll design. This tool can be used for a more efficient simultaneous roll design and finite element simulation resulting in considerable time savings in the overall process



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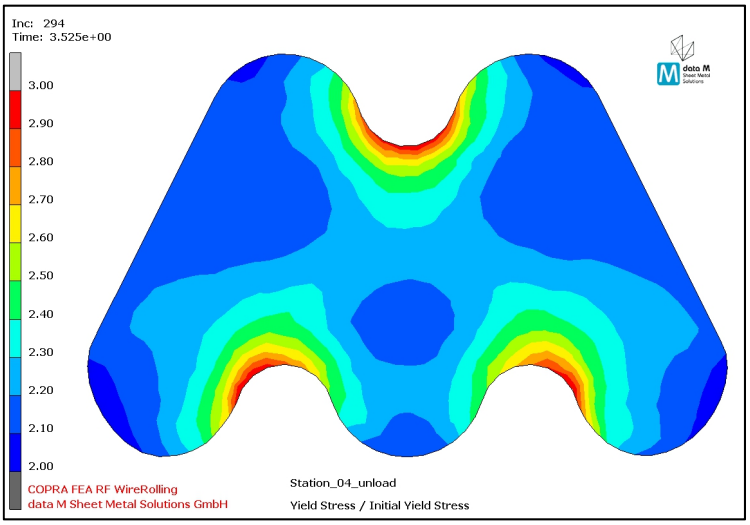
NEW

New Post-Processing Result in COPRA® FEA RF WireRolling:

A new post-processing result is available in the 2025.2 version of COPRA® FEA RF WireRolling. The new result calculates and displays the ration between the current yield stress and initial yield stress along the cross section, giving users deeper insights into work hardening effects during the forming process. By visualizing how material strength evolves, users can better assess material behavior and optimize process parameters for improved product quality and performance.



Additional Developments and Notes

+ ***New Look & Feel for longitudinal strain diagram***

+ ***Marc/Mentat 2024.2 Included (also for COPRA® FEA RF WireRolling)***

+ ***Improved Software Stability and Usability***

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