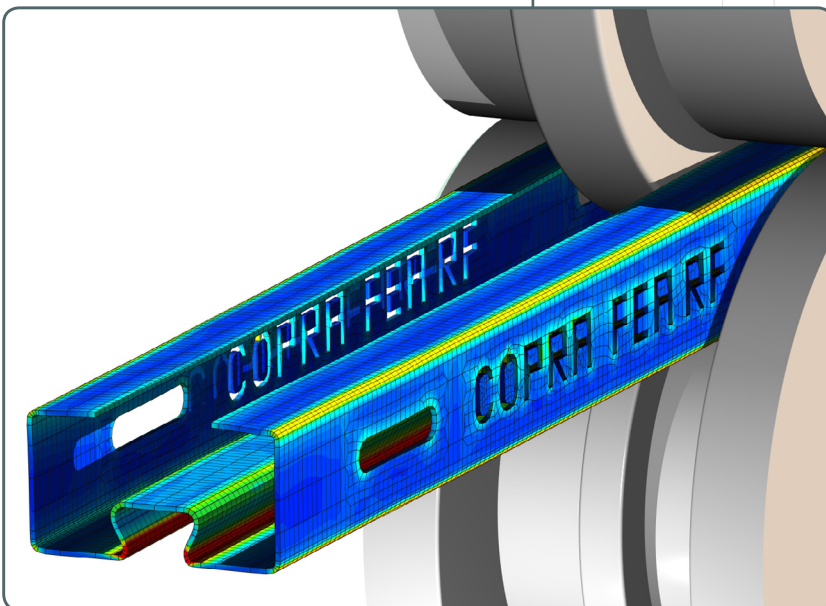
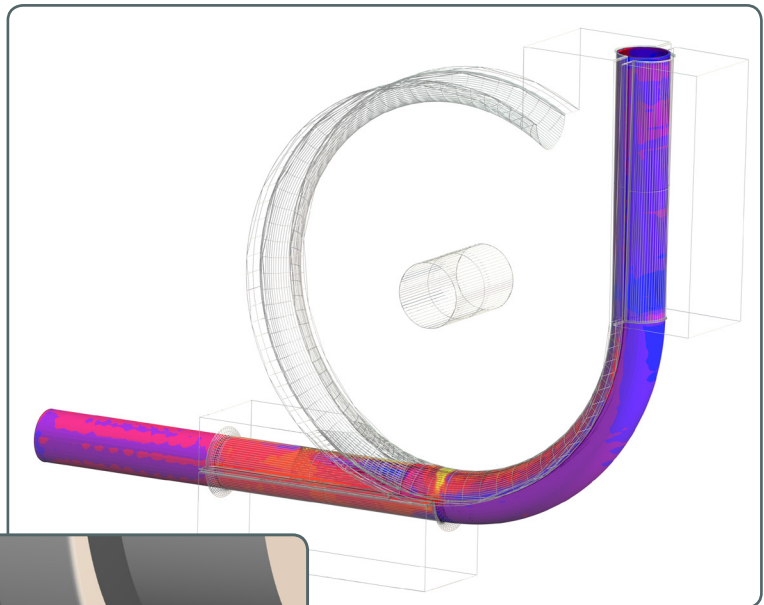


COPRA® FEA RF 2019.1



Release Notes

COPRA®
Finite Element
Analysis
for Roll Forming



COPRA® FEA RF

What's new in version 2019.1

With over 20 years of FEA simulation experience in research and industry our specialists have contributed to the COPRA® FEA RF continuous improvement. The target of the new 2019.1 version is to:

- Increase number of functionalities available for simulations with friction
- Improve the usability of the automatic report feature
- Enhance overall performance of the software in regard to its speed

NEW

Deformable Shafts Available for Simulations with Friction:

The possibility to represent deformable shafts, already available for non-driven simulation, is now available also for simulations with friction.

NEW

Synchronize View with sheet movement in friction

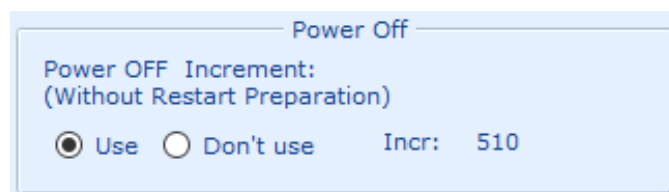
One can now synchronize the view with the sheet movement in simulations with friction - the sheet remains in the graphics area while post-processing and navigating through the stations.

This setting can be (de)activate in the program settings menu.

NEW

Power Off Restart of Simulations with Friction:

The power off restart functionality, already available for non-driven simulation, is now available also for simulations with friction. This prevents the user from having to re-run a simulation in case of a sudden computer power loss.



NEW

Automatic Report with Dedicated Topics Menu for Simulations with Friction

| Contact Friction Force Topics collapse | | | | | | | | | |
|--|------------------------------|--------------|-----------|---|-----|-----|--------------------------|--|--------------------------|
| <input type="checkbox"/> Contact Friction Force | <input type="checkbox"/> All | Stations (0) | Views (1) | <input checked="" type="checkbox"/> Default | 0.0 | 0.0 | <input type="checkbox"/> | | |
| <input type="checkbox"/> Contact Friction Stress | <input type="checkbox"/> All | Stations (0) | Views (1) | <input checked="" type="checkbox"/> Default | 0.0 | 0.0 | <input type="checkbox"/> | | |
| <input type="checkbox"/> Contact Friction Force Top Axis | <input type="checkbox"/> All | Stations (0) | Views (1) | <input checked="" type="checkbox"/> Default | 0.0 | 0.0 | <input type="checkbox"/> | | |
| <input type="checkbox"/> Contact Friction Force Bottom Axis | <input type="checkbox"/> All | Stations (0) | Views (1) | <input checked="" type="checkbox"/> Default | 0.0 | 0.0 | <input type="checkbox"/> | | |
| <input type="checkbox"/> Contact Friction Force Left Side Axis | <input type="checkbox"/> All | Stations (0) | Views (1) | <input checked="" type="checkbox"/> Default | 0.0 | 0.0 | <input type="checkbox"/> | | |
| <input type="checkbox"/> Contact Friction Force Right Side Axis | <input type="checkbox"/> All | Stations (0) | Views (1) | <input checked="" type="checkbox"/> Default | 0.0 | 0.0 | <input type="checkbox"/> | | |
| <input type="checkbox"/> Contact Friction Force Accessory Axes | <input type="checkbox"/> All | Stations (0) | Views (1) | <input checked="" type="checkbox"/> Default | 0.0 | 0.0 | <input type="checkbox"/> | | |
| <input type="checkbox"/> Contact Friction Force Drawing Dies | <input type="checkbox"/> All | Stations (0) | Views (1) | <input checked="" type="checkbox"/> Default | 0.0 | 0.0 | <input type="checkbox"/> | | |
| <input type="checkbox"/> Torque driven top and bottom axis | <input type="checkbox"/> All | Stations (0) | | | | | | | <input type="checkbox"/> |
| <input type="checkbox"/> Torque Areas | | | | | | | | | <input type="checkbox"/> |
| <input type="checkbox"/> RF Line Speed (friction) | <input type="checkbox"/> All | Stations (0) | | | | | | | <input type="checkbox"/> |
| <input type="checkbox"/> Elongation (Friction) | <input type="checkbox"/> All | Stations (0) | | | | | | | <input type="checkbox"/> |
| <input type="checkbox"/> Rotational Speed Idler Rolls (friction) | <input type="checkbox"/> All | Stations (0) | | | | | | | <input type="checkbox"/> |

NEW

Automatic Report with Contact Normal Force Topics Menu

| Contact Normal Force Topics collapse | | | | | | | | | |
|---|------------------------------|--------------|-----------|---|-----|-----|--------------------------|--|--------------------------|
| <input type="checkbox"/> Contact Status | <input type="checkbox"/> All | Stations (0) | Views (1) | | | | | | <input type="checkbox"/> |
| <input type="checkbox"/> Contact Normal Force | <input type="checkbox"/> All | Stations (0) | Views (1) | <input checked="" type="checkbox"/> Default | 0.0 | 0.0 | <input type="checkbox"/> | | |
| <input type="checkbox"/> Contact Normal Stress | <input type="checkbox"/> All | Stations (0) | Views (1) | <input checked="" type="checkbox"/> Default | 0.0 | 0.0 | <input type="checkbox"/> | | |
| <input type="checkbox"/> Contact Normal Force Top Axis | <input type="checkbox"/> All | Stations (0) | Views (1) | <input checked="" type="checkbox"/> Default | 0.0 | 0.0 | <input type="checkbox"/> | | |
| <input type="checkbox"/> Contact Normal Force Bottom Axis | <input type="checkbox"/> All | Stations (0) | Views (1) | <input checked="" type="checkbox"/> Default | 0.0 | 0.0 | <input type="checkbox"/> | | |
| <input type="checkbox"/> Contact Normal Force Left Side Axis | <input type="checkbox"/> All | Stations (0) | Views (1) | <input checked="" type="checkbox"/> Default | 0.0 | 0.0 | <input type="checkbox"/> | | |
| <input type="checkbox"/> Contact Normal Force Right Side Axis | <input type="checkbox"/> All | Stations (0) | Views (1) | <input checked="" type="checkbox"/> Default | 0.0 | 0.0 | <input type="checkbox"/> | | |
| <input type="checkbox"/> Contact Normal Force Accessory Axes | <input type="checkbox"/> All | Stations (0) | Views (1) | <input checked="" type="checkbox"/> Default | 0.0 | 0.0 | <input type="checkbox"/> | | |
| <input type="checkbox"/> Contact Normal Force Drawing Dies | <input type="checkbox"/> All | Stations (0) | Views (1) | <input checked="" type="checkbox"/> Default | 0.0 | 0.0 | <input type="checkbox"/> | | |

IMPROVED

C2FEA Load Settings Functionality can be used in Simulations of Different Machines:

The user can now load the settings from other simulations regardless of having the same number of stations. This allows a more efficient definition of simulation settings.

NEW

Automatic File Creation with Relevant Information for Optimized Customer Support

For debugging a problem that may occur in the software, relevant information is collected and presented in a text file. This information should later be send together with the support request in order to speed it up by reducing the number of data-collection loops.

IMPROVED

Software Performance Improvement - Speed:**Pre-Processing Speed**

Required time for the preparation of standard restarts as well as manual mesh modifications in an advanced restart was significantly reduced.

Calculation speed

This version makes use of a different solver and a different parallelization technique which may lead to a significant time gain. Furthermore, some numerical settings were further optimized with focus on calculation time.

Post-Processing speed

Improved performance of some of the post processing tools due to a faster collection of the required data.

Additional Developments and Notes

- + *New buttons: zoom extent view and flower fit view*
- + *Report now available in PDF-format*
- + *Quit while creating automatic report*
- + *Tooling and mesh representation taking into account for automatic report*
- + *Automatic export of DXF cross sections*
- + *Marc / Mentat 2019.0 included (also for COPRA® FEA RF WireRolling)*
- + *General usability improvements*



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