



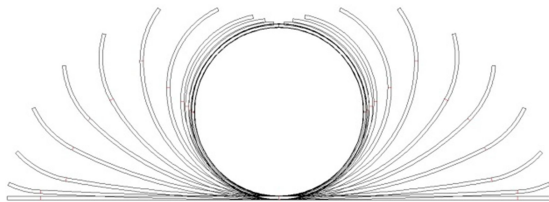
Training videos enable the designer to learn **PROFIL** more quickly and easily.

What's New? – Rel. 5.7

Training Videos for Roll Forming Design

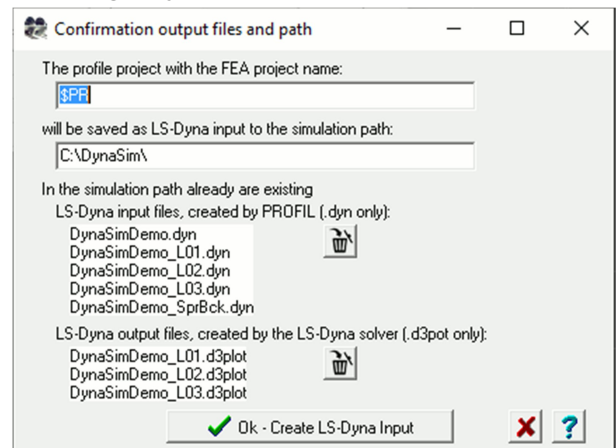
High familiarization effort is necessary if roll forming software should be used for designing roll tools. In order to succeed more quickly and easily, training videos are available to learn **PROFIL** handling. The training lessons show how to define simple and complicated profiles and how to design the flower pattern and the roll tools by deriving the contours from the passes. For this purpose the parameters of the roll forming machine must be determined, this is demonstrated in another video. Now follows the important step to verify by using the finite element analysis, if the designed roll tools actually are able to produce the desired profile cross section within the required allowances. This is shown in a specific video. The result of the design has to be passed to a CAD/CAM system or a CNC lathe; this illustrates another video. Round welded tubes and shaped calibrated tubes (these are welded tubes with any cross-section) are a specific matter covered in a separate video.

Automatic Tube Forming



This function creates the flower pattern for a given round tube automatically. The flower consists of the round tube (welding pass) given by the user with any diameter and sheet thickness, a preselected count of fin passes, and the break-down passes. The count is preset in the machine data window. If the round tube should be formed to a shaped tube (i.e. a tube with any cross-section), the calibration passes can be created automatically by using the function **Shaped Tubes Calibration**.

Checking Project Name and Simulation Path



A new window is good for checking the proper FEA project name and simulation path. This prevents overwriting earlier simulation results by mistake. If needed, both settings can be modified. For safety, the bottom part of the window shows the existing files in the simulation path, separated by the creating system **PROFIL** and **LS-Dyna Solver**. For reason of clarity only .dyn files (PROFIL) and .d3plot files (LS-Dyna Solver) respectively are shown.

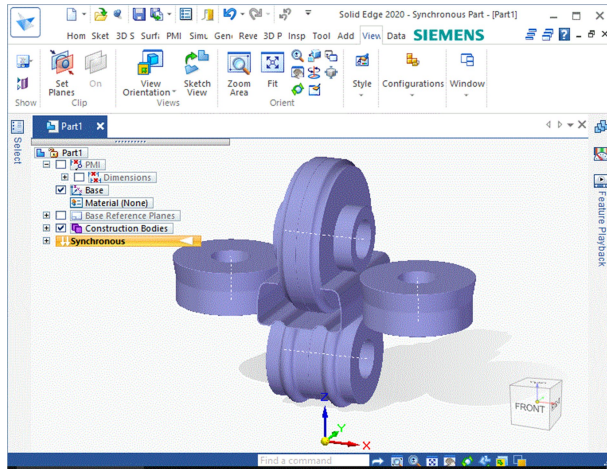
By using the buttons **Delete** the path can be emptied before a new simulation is started in this path. The files can be deleted separately dependent on the creating system PROFIL or LS-Dyna Solver. Not only the shown files are deleted but all.

Repeat Last Operation



This function makes it easier to repeat an operation several times successively.

SolidEdge: 3D ActiveX Output



Users of the CAD system **SolidEdge** now are enabled to create 3D models via the comfortable **ActiveX** interface. Either a roll forming stand with or without a profile section or all stands of the whole machine can be transferred. ActiveX does not use a transfer file but works via the operating system Windows directly. Alternatively the transfer is also possible via **STEP** file.

Machine Training Slides Available

General data of the selected roll forming stand

Machine: Bumper Machine
Stand: Balls
F = Forming Stand C = Calibration St.

| Stand | Shell | Bottom | Top | Left | Right |
|-------|---------|---------|---------|---------|---------|
| F01 | 45,000 | 45,000 | 45,000 | 45,000 | 45,000 |
| F02 | 100,000 | 170,000 | 200,000 | 200,000 | 200,000 |
| F03 | 200,000 | 200,000 | 200,000 | 200,000 | 200,000 |
| F04 | 150,000 | 150,000 | 150,000 | 150,000 | 150,000 |

Calibration factor (%)
Says how much % the strip width of the profile should be smaller than the one in the previous stand

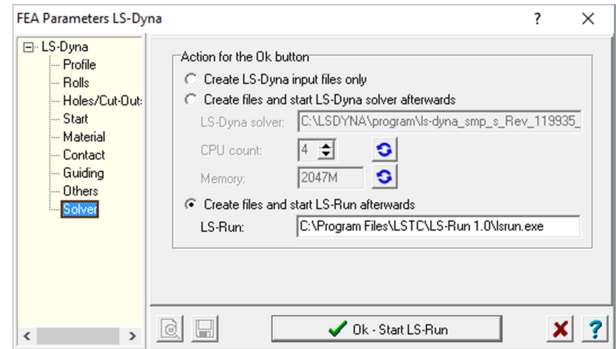
Deformation degree (%) (Calibration stands only)
For the automatic shaped tube calibration this factor says how the total deformation (100%) of all calibration stands should be partitioned.
Example for 3 stands: 100% = 45%+45%+10%

Stand name
Is shown in the machine explorer and in the profile explorer (if desired)

Distance between stands (horizontal)
Is the distance to the center of the previous stand (in sheet running direction).
E.g. D2 is the distance between L03 and L02

If help is needed during machine setup the designer can open the **PROFIL Training Slides** from the software directly. So he remembers the training and is enabled to better understand the meaning of the input parameters. This works context-dependent, i.e. the slides are shown that fit to the just opened window thematically. If this info is not sufficient, a further key-press opens the appropriate manual page.

Direct Start of the FEA Solver and LS-Run



This makes the FEA simulation of the designed roll tools easier: If the **FEA solver** is installed on the local computer, the files are created and the solver is started from **PROFIL** directly by key-press. If it is installed locally or on a remote network server, **LS-Run** can be started directly to handle the solver and the simulation projects clearly.

Further New Features

FEA Finite Element Analysis:

- Change to MPP and mpiexec for parallel jobs.
- Enter key now works like TAB key. This avoids unintended closing of the window.
- New button for saving (export) the material data.
- Pass name and roll number are shown in the meshing preview window.
- A traffic light remembers if the plausibility check is not yet proceeded.
- Bugfix: The **Lankford** parameters now are saved correctly.

Profile Design:

- The sheet thickness limit is increased from 10mm to 20mm.

Roll Design:

- Bugfix: The contour tracking does not change the profile side anymore.

CAD Interface:

- STEP output is always metric, also in an imperial project.

NC Output:

- Optionally G02/G03 commands with radius R instead of I/K parameters for the distance to the arc center point.

More info: www.ubeco.com