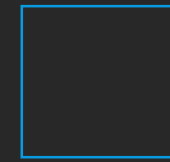


Turning COMSOL® Simulations into Specialized Engineering Tools



Daniel Ericsson
CEO & Founder, Deflexional, Sweden
daniel.ericsson@deflexional.com

Background

- 20+ years as COMSOL[®] employee
- Started Deflexional 2021
 - Certified Consultant, specialized in COMSOL[®] App development
 - 25+ years with COMSOL Multiphysics[®]



Building a Business Around COMSOL[®] Apps

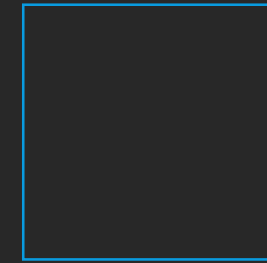
- Is it possible to build a business around COMSOL[®] Apps?
- Can a single COMSOL[®] App scale to thousands of users?
- Will COMSOL[®] Apps transform how companies use simulation and modeling?



Contents

- Introduction
- Industrial COMSOL[®] Apps
- Summary

Introduction



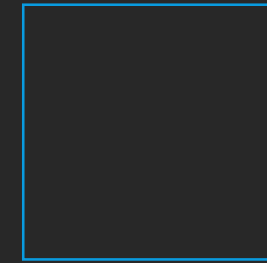
What is a COMSOL[®] App?

- A specialized engineering tool built on simulation technology
- Designed to solve specific engineering challenges
- Enables non-simulation experts to perform advanced analyses
- Reduces the barrier to using advanced simulation software

How Do You Create a COMSOL[®] App?

1. Build the simulation model in [Model Builder](#)
2. Create the app using [Application Builder](#)
 - Specialized user interface
 - Extended functionality with code
3. Deploy the app using:
 - [COMSOL Compiler™](#)
 - [COMSOL Server™](#)

Industrial COMSOL[®] Apps



HETT²²

A software to simulate early-age temperature and strength development in concrete

www.comsol.com/paper/hett22-a-comsol-app-to-accurately-simulate-plan-and-monitor-concrete-castings-122611

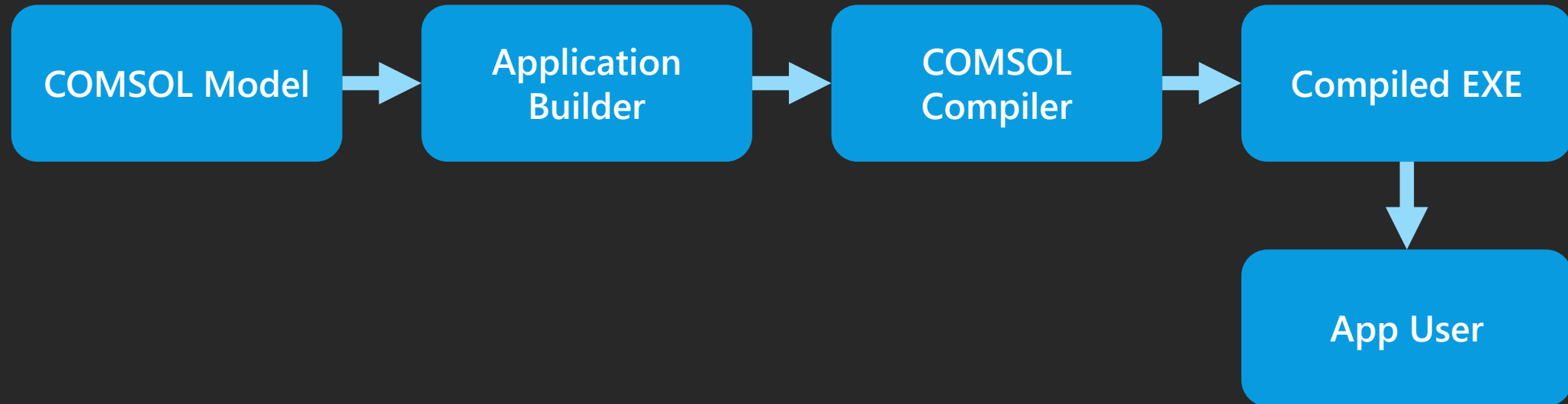
Industrial Deployment Example

- Needed to replace an existing FEM tool
- The new tool should be free and offered as a service to Heidelberg Materials customers
- Estimated number of users: > 1,000

Requirements

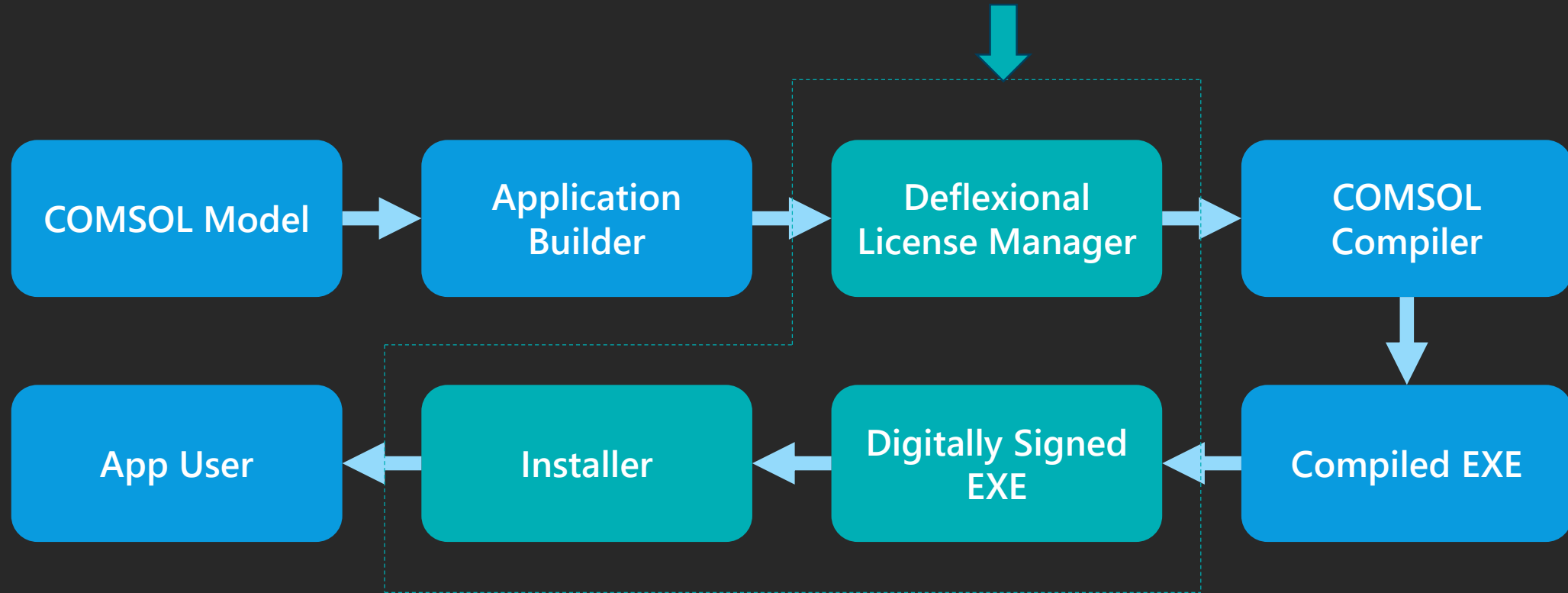
- Easy-to-use software for contractors
- Solve a multiphysics problem
- Easy installation
- User needs to accept Terms of Use
- Parts of the software requires a license key
- Sensitive material properties needs to be encrypted
- Material library (standard library and user library)
- Automatic check-for-updates

Normal Workflow

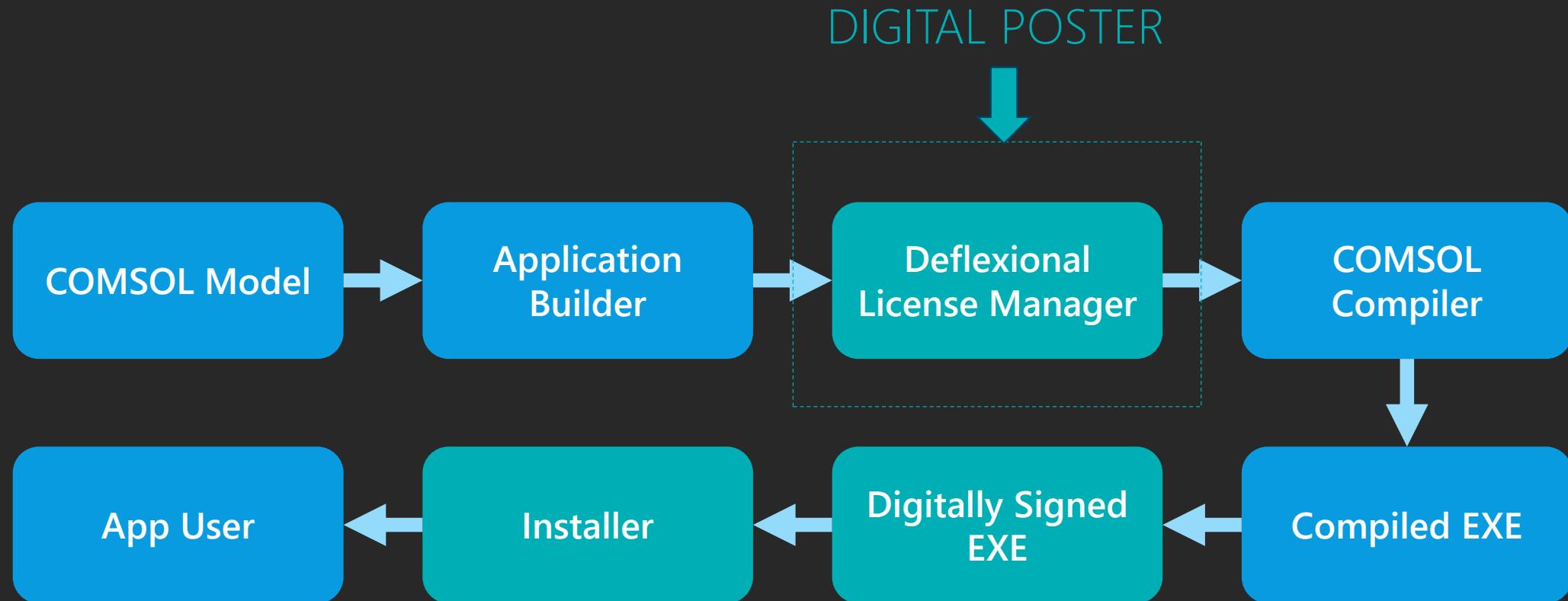


Extended Workflow

COMING COMSOL BLOG POST



Extended Workflow



Download the Installer

Prognosverktyg HETT22 | Heidelberg Materials

https://www.cement.heidelbergmaterials.se/sv/fa-tilgang-till-hett22

Prognosverktyg HETT22

HETT22 är ett prognosverktyg för simulering av betongens temperatur- och hållfasthetsutveckling i en konstruktion. Detta är av stor betydelse vid planering av betonggjutningar. (HETT22 ersatte HETT11 2022)

För att få tillgång till HETT22 behöver du ange namn och e-post här för att få löpande nyheter om programmet.

Om du inte önskar få dessa nyheter kan du tacka nej till det i det första utskicket du får. Välkommen!

Vi blir glada om du också anger din yrkestitel.

Förnamn

Efternamn

E-post *

Mikael Westerholm
Projektledare/Specialist betong
0708-29 20 03
mikael.westerholm@heidelbergmaterials.com

Ladda ner
Licensvillkor HETT22
PDF, 136.82 KB

www.cement.heidelbergmaterials.se/sv/hett22

Prognosverktyg HETT22 | Heidelberg Materials

https://www.sement.heidelbergmaterials.no/no/last-ned-nye-hett22

Få tilgang til nye HETT22

HETT²² er et program for simulering av temperatur- og fasthetsutvikling til betong i en konstruksjon. Dette er av stor betydning ved planlegging av støping av betong. HETT²² erstattet HETT97 høsten 2022, med en rekke forbedringer samt utvidet funksjonalitet.

For å få tilgang til HETT²² må du skrive inn navn og e-post her, da vil du også motta nyheter om HETT²². Hvis du ikke ønsker å motta disse nyhetene, kan du avmelde deg i den første utsendelsen du mottar. Velkommen!

Navn

E-post*

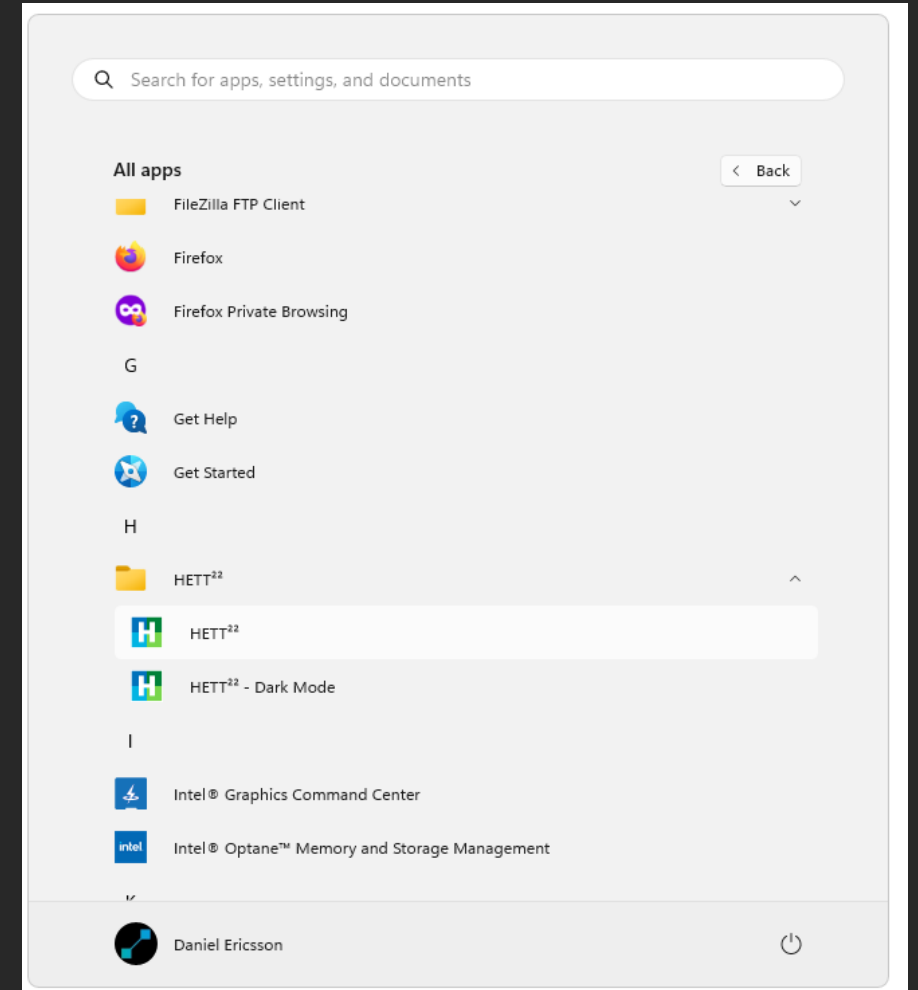
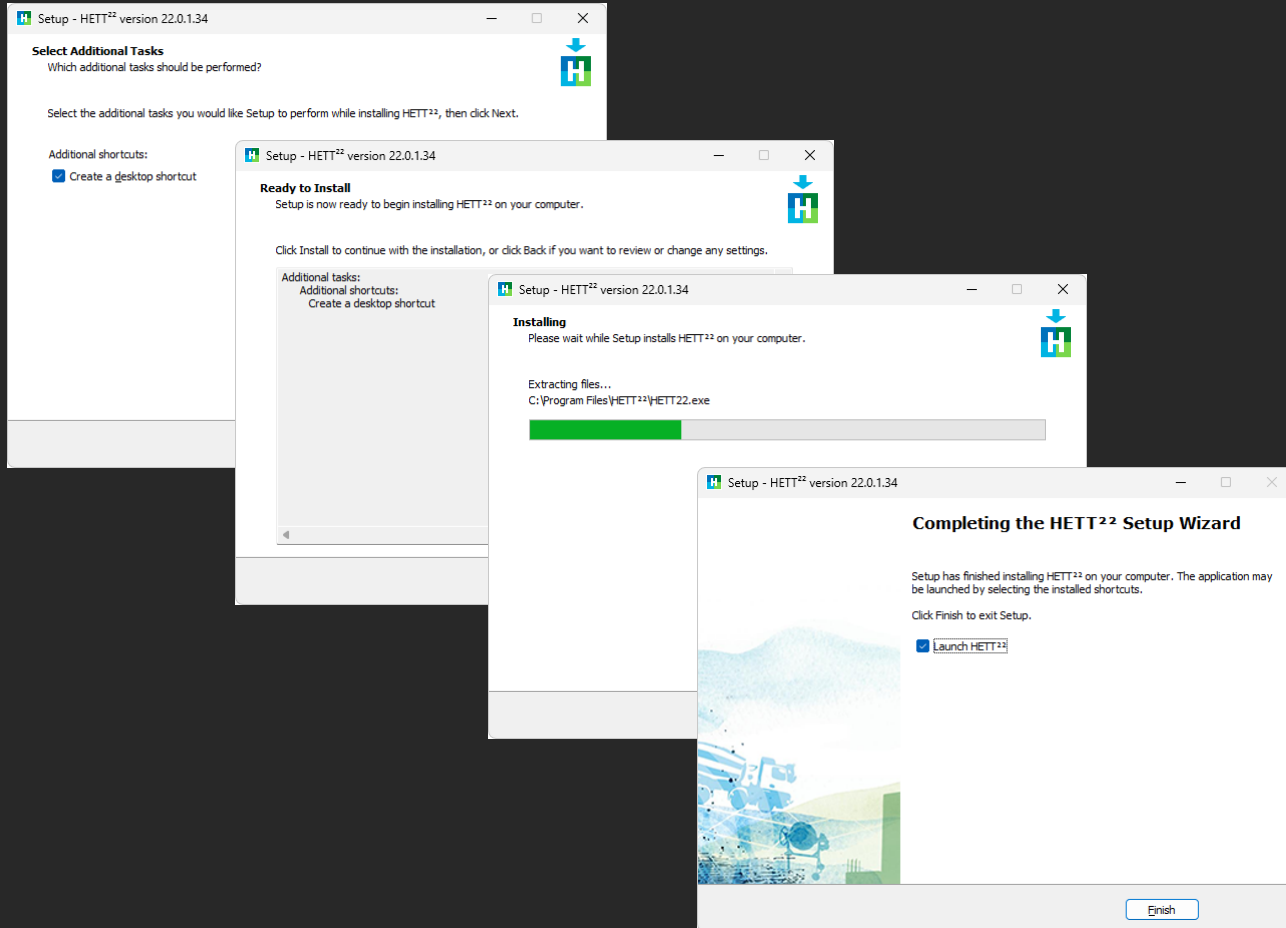
Dr. Tom Fredvik
Teknisk sjef
+47 901 71 926
tom.fredvik@heidelbergmaterials.com

Hva er HETT²²?
Med økt bruk av lavkarbonbetong de siste årene blir det stadig viktigere å ha pålitelige simuleringstøytøy for å kunne forutsi ulike betongtypers egenskapsutvikling. Dette gjelder både for massive konstruksjoner der maksimum temperaturvikling kan være kritisk, og ikke minst for slankere konstruksjoner vinterstid når det kan være utfordrende å bruke betong med lav andel klinker.

Downloads
Veiledning for installasjon av HETT22
PDF, 1,76 MB

www.sement.heidelbergmaterials.no/no/tilgangHETT22

Run the Installer



Splash Screen



If COMSOL Runtime™ is not already installed, it will be automatically downloaded

HETT²²

File Home

New Open Save Compute Geometry Mesh Graph Colormap Time Development Compare Measurements Input/Output Table Report Parameters Locations Reset Windows Preferences

Project Simulation Graphics Data Documentation Library Settings

New Project

Wall

- Wall with Equal Sides
- Wall with Different Sides
- Wall against Other Material
- Sandwich Wall
- Wall on Other Material
- Wall on Other Material, Edge Section

Floor

- Floor on Conventional Formwork
- Floor on Permanent Formwork
- Floor Filigree Slab Floor
- Hollow Core Slab

Slab

- Slab on Ground
- Slab on Ground, Edge Section

Column

- Column, Circular
- Column, Rectangular

Imported Measurements

- Measured Data

Project: New, Open, Save
Simulation: Compute
Graphics: Geometry, Mesh, Graph, Colormap, Time Development
Data: Input/Output, Table
Documentation: Report
Library: Parameters, Locations
Settings: Reset Windows, Preferences

Menu

- Construction
- Concrete
- Time
- Weather Condition
- Measures
 - Weather Protection
 - Insulation
 - Cover
 - Pipe
 - Heating Cable
- Measurements
 - Temperature
- Point Probes
- Results

Settings

Concrete Dimensions

Wall thickness, w: 0.2 m
Wall height, h: 2.4 m

Other Material

Floor width, w2: 2 m
Floor thickness, h2: 0.2 m
Source: Standard library
Material: Old concrete

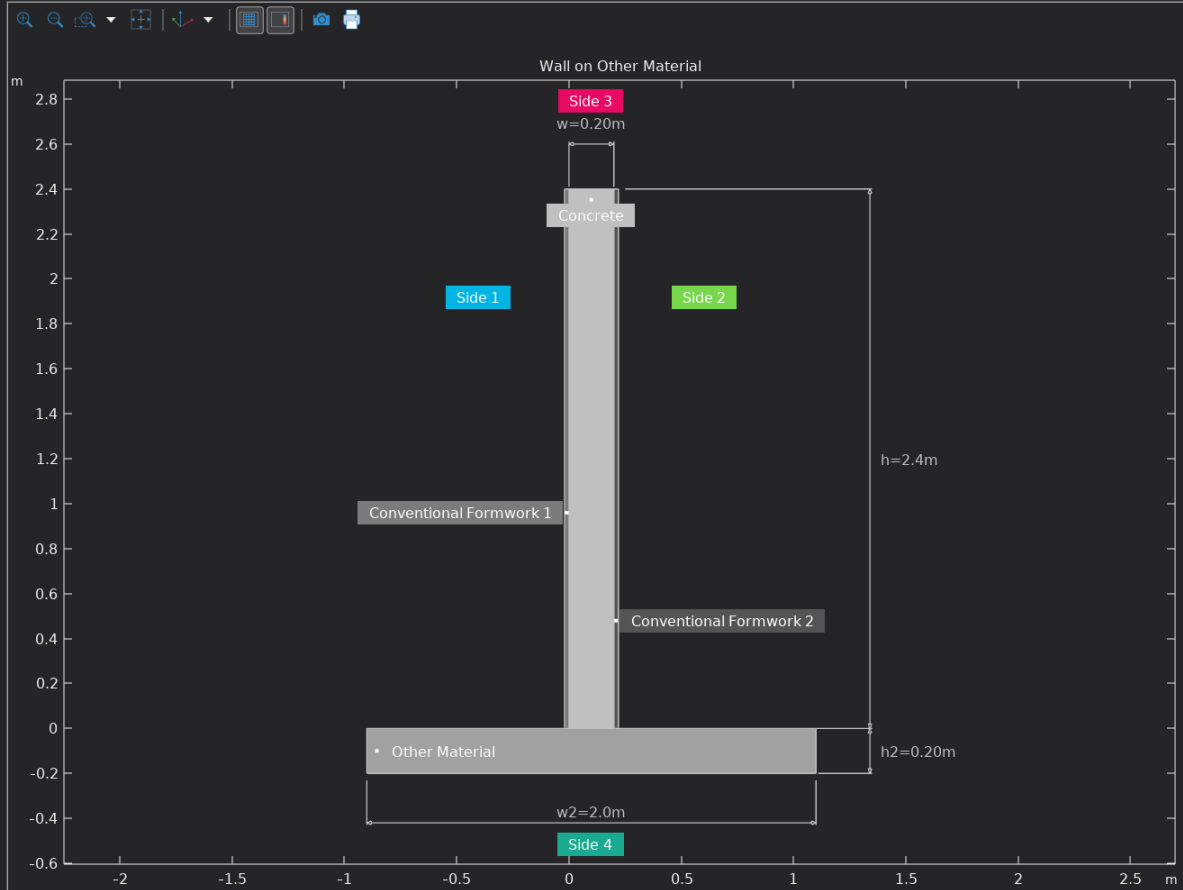
Conventional Formwork 1

Source: Standard library
Material: Steel 3 mm, uninsulated
Form removal at: Strength
Strength: 15 MPa
 Use the same properties for Conventional Formwork 2

Conventional Formwork 2

Source: Standard library
Material: Steel 3 mm, uninsulated
Form removal at: Strength
Strength: 15 MPa

Geometry



Status

No solution is available yet.

HETT²²

File Home

New Open Save Compute Geometry Mesh Graph Colormap Time Development Compare Measurements Input/Output Table Report Parameters Locations Reset Windows Preferences

Project Simulation Graphics Data Documentation Library Settings

Menu

- Construction
- Concrete
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 - Results

Settings

Concrete

Source: Standard library

Concrete quality: C16/20

Cement type: Anläggningscement FA

Manual settings

Binder content: 275 kg/m³

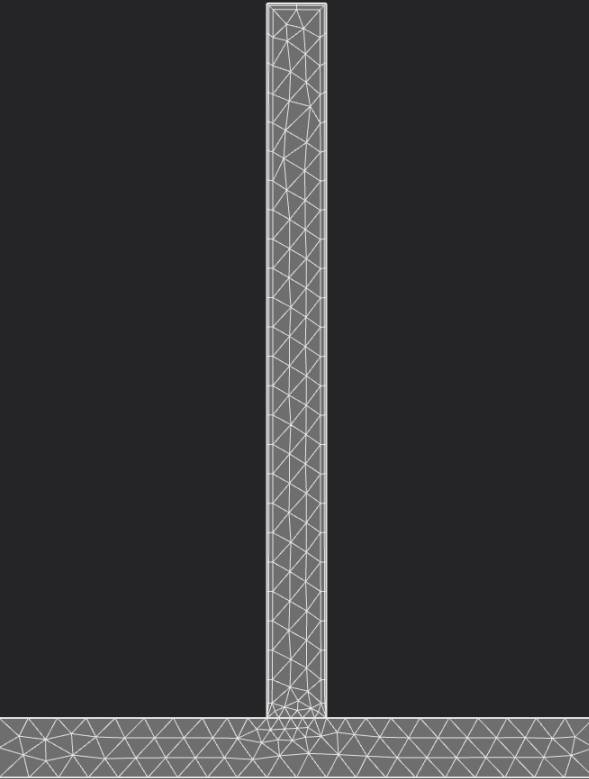
28-days strength: 20 MPa

Retardation: 0 h

Concrete Temperature

Casting temperature: 15 °C

Geometry Mesh



Status

No solution is available yet.

File Home

New Open Save Compute Geometry Mesh Graph Colormap Time Development Compare Measurements Input/Output Table Report Parameters Locations Reset Windows Preferences

Project Simulation Graphics Data Documentation Library Settings

- Menu
- Construction
 - Concrete
 - Time
 - Weather Condition
 - Measures
 - Weather Protection
 - Insulation
 - Cover
 - Pipe
 - Heating Cable
 - Measurements
 - Temperature
 - Point Probes
 - Results

Settings

Simulation

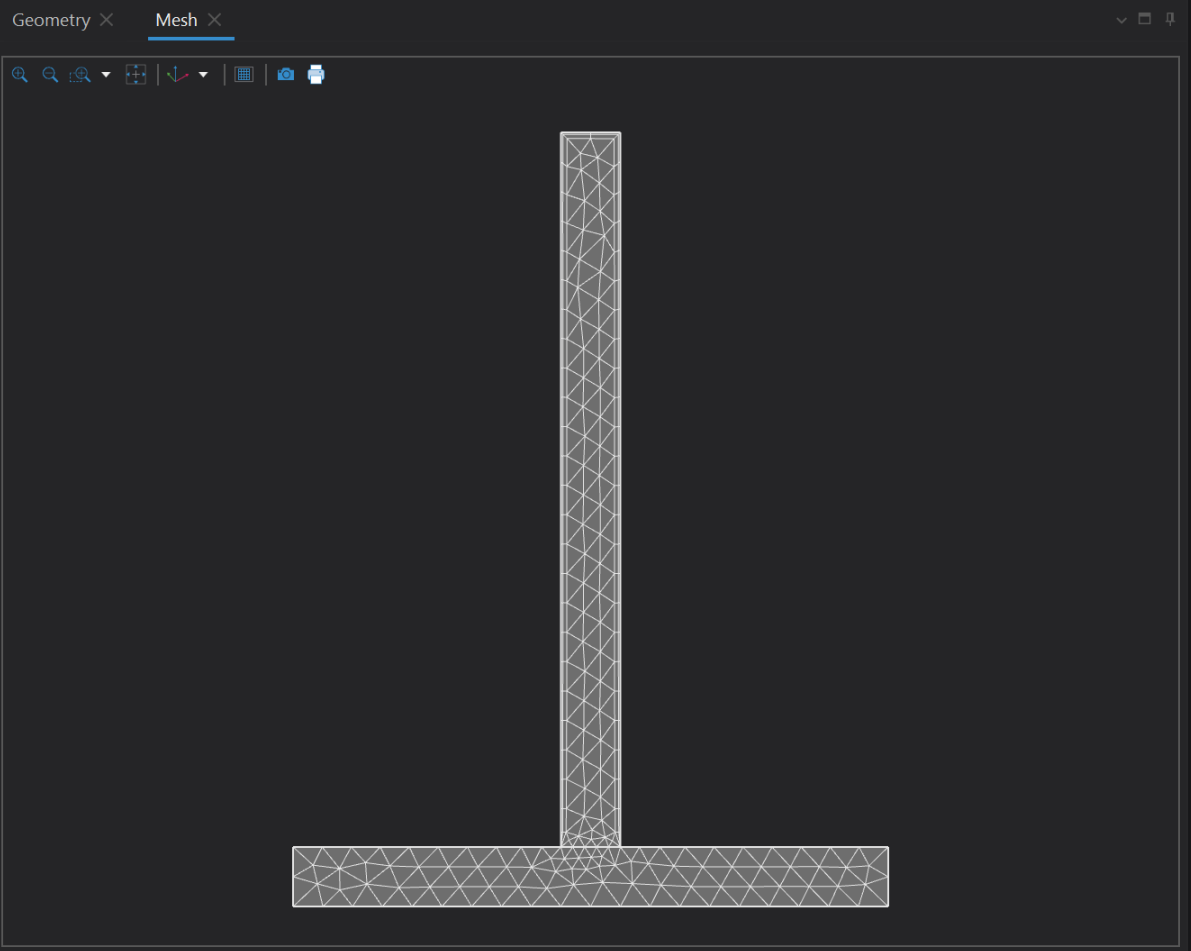
Simulation time: 10 d

Start Time

Year: 2026
Month: May
Day: 28
Hour: 14
Minute: 30

Get the current time

Advanced Time Settings



Status

No solution is available yet.

HOTEL GALANT LEDNICE - Google

https://www.google.com/maps/place/HOTEL+GALANT+LEDNICE/@48.8071219,16.7880771,14.75z/data=!4m9!3m8!1s0x4712d4a18a89ec75:0x3e87c9776eda05...

HOTEL GALANT LEDNICE

1 063 kr
May 24 - 25

HOTEL GALANT LEDNICE
3.9 ★★★★★ (433) • Hotel

Overview Prices Reviews About

Directions Save Nearby Share

Check availability

Compare prices Free cancellation only

Check in / Check out

Sun, May 24 Mon, May 25 2

Sponsored :
Featured options

	HOTEL GALANT LEDNICE	1 063 kr >
	Official site	
	Free breakfast	
	1 double bed	1 063 kr >

Nearby hotels Restaurants Things to do Bars Coffee Pharma

Ornitologická pozorovatelna
Pastvisko u Lednice
Minaret
Jeskyně Peklo
Lednicko-valtický areál
Hubertova šopa (Ovčárna)
Sochy z pisku
Včelařský dvůr
Penzion
Vinařství HRANIČNÍ ZÁMEČEK
Ubytování Elements Lednice
Mikulovská
Nejdecká

48.80307, 16.80145

- Share this location
- Directions from here
- Directions to here
- What's here?
- Search nearby
- Print
- Add a missing place
- Add your business
- Report a data problem
- Measure distance

Layers

Imagery ©2026, Map data ©2026 Google Sweden Terms Privacy Send Product Feedback 200 m

HETT²²

File Home

New Open Save Compute Geometry Mesh Graph Colormap Time Development Compare Measurements Input/Output Table Report Parameters Locations Reset Windows Preferences

Project Simulation Graphics Data Documentation Library Settings

Menu

- Construction
- Concrete
- Time
- Weather Condition
- Measures
 - Weather Protection
 - Insulation
 - Cover
 - Pipe
 - Heating Cable
- Measurements
 - Temperature
 - Point Probes
 - Results

Settings

Location

Source: User-defined

Latitude, Longitude: 48.803071564146485,16.801448296547395

Show Weather Show on Map Save Location

Weather Condition - Side 1

Weather data: Forecast

- Use the same properties for Side 2
- Use the same properties for Side 3
- Use the same properties for Side 4

Forecast Settings

Forecast service: YR

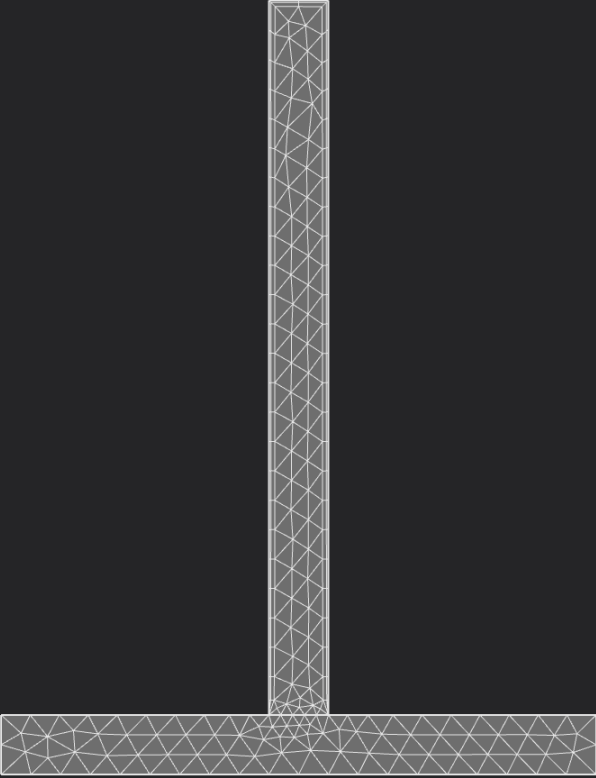
Data before forecast: Historical data

Data after forecast: Historical data

Other Material

Initial temperature: 15 °C

Geometry Mesh



Geometry Mesh

Search Zoom In Zoom Out Rotate Pan View Grid Camera Print

Status

No solution is available yet.

HETT²²

File Home

New Open Save Compute Geometry Mesh Graph Colormap Time Development Compare Measurements Input/Output Table Report Parameters Locations Reset Windows Preferences

Project Simulation Graphics Data Documentation Library Settings

Menu

- Construction
- Concrete
- Time
- Weather Condition
- Measures
 - Weather Protection
 - Insulation
 - Cover
 - Pipe
 - Heating Cable
- Measurements
 - Temperature
 - Point Probes
 - Results

Settings

Form Removal - Side 1

Form removal at:	Strength = 15 MPa
Time of form removal:	214 h

Form Removal - Side 2

Form removal at:	Strength = 15 MPa
Time of form removal:	214 h

Results During the Simulation

Temperature, max:	25.4 °C
Temperature, min:	13.8 °C
Temperature difference, max:	5.32 °C
Final strength, average:	15.5 MPa

Notifications and Warnings

✓ The results give no warnings.

Status

The simulation is finalized.

Geometry × Mesh × Graph: Temperat... × Graph: Strength × Colormap: Temperat... × Colormap: Streng... ×

Time=240 h Temperature (°C)

Time

Colormap

Dynamic Min: 13 °C Max: 26 °C Value in clicked point Temperature: 0 °C

HETT²²

File Home

New Open Save Compute Geometry Mesh Graph Colormap Time Development Compare Measurements Input/Output Table Report Parameters Locations Reset Windows Preferences

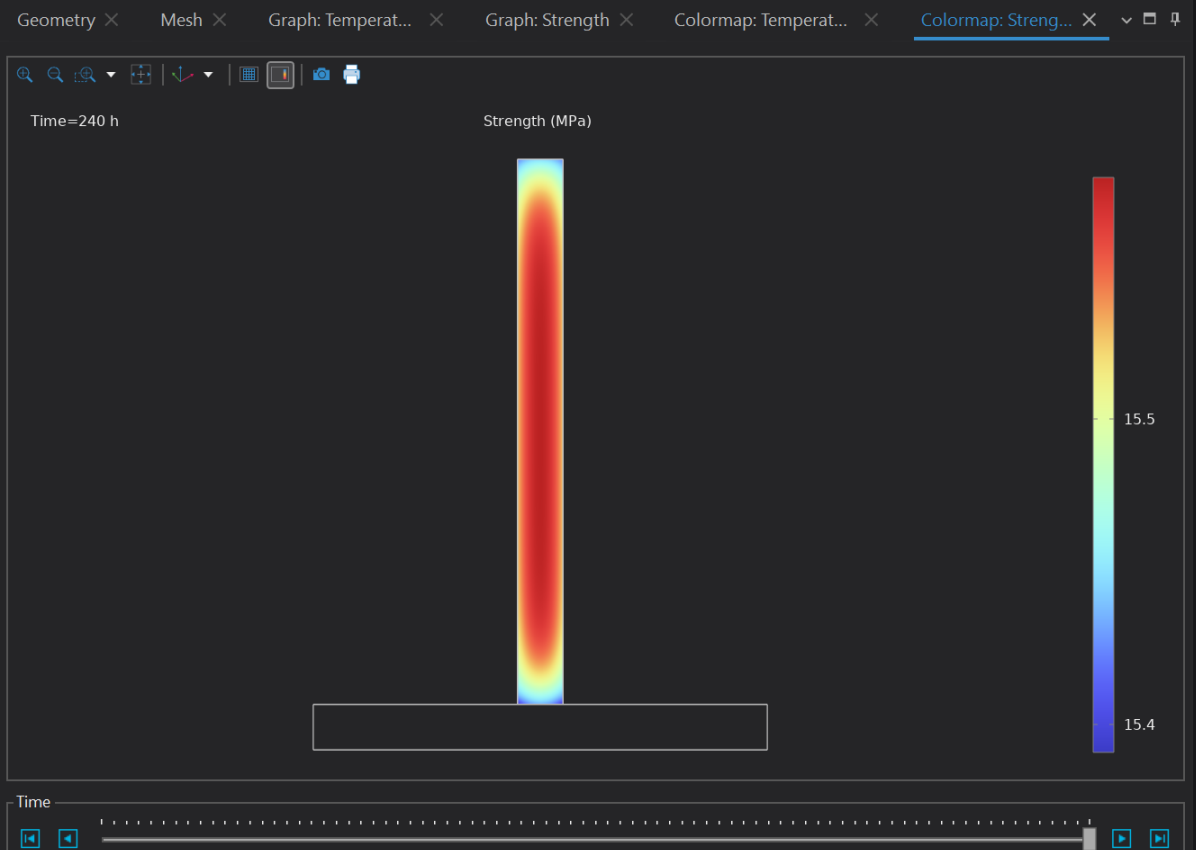
Project Simulation Graphics Data Documentation Library Settings

Menu

- Construction
- Concrete
- Time
- Weather Condition
- Measures
 - Weather Protection
 - Insulation
 - Cover
 - Pipe
 - Heating Cable
- Measurements
 - Temperature
 - Point Probes
 - Results

Settings

- Form Removal - Side 1**
 - Form removal at: Strength = 15 MPa
 - Time of form removal: 214 h
- Form Removal - Side 2**
 - Form removal at: Strength = 15 MPa
 - Time of form removal: 214 h
- Results During the Simulation**
 - Temperature, max: 25.4 °C
 - Temperature, min: 13.8 °C
 - Temperature difference, max: 5.32 °C
 - Final strength, average: 15.5 MPa
- Notifications and Warnings**
 - ✓ The results give no warnings.



Status

✓ The simulation is finalized.

HETT²²

File Home

New Open Save Compute Geometry Mesh Graph Colormap Time Development Compare Measurements Input/Output Table Report Parameters Locations Reset Windows Preferences

Project Simulation Graphics Data Documentation Library Settings

Menu

- Construction
- Concrete
- Time
- Weather Condition
- Measures
 - Weather Protection
 - Insulation
 - Cover
 - Pipe
 - Heating Cable
- Measurements
 - Temperature
- Point Probes
- Results

Settings

Form Removal - Side 1

Form removal at: Strength = 15 MPa
Time of form removal: 214 h

Form Removal - Side 2

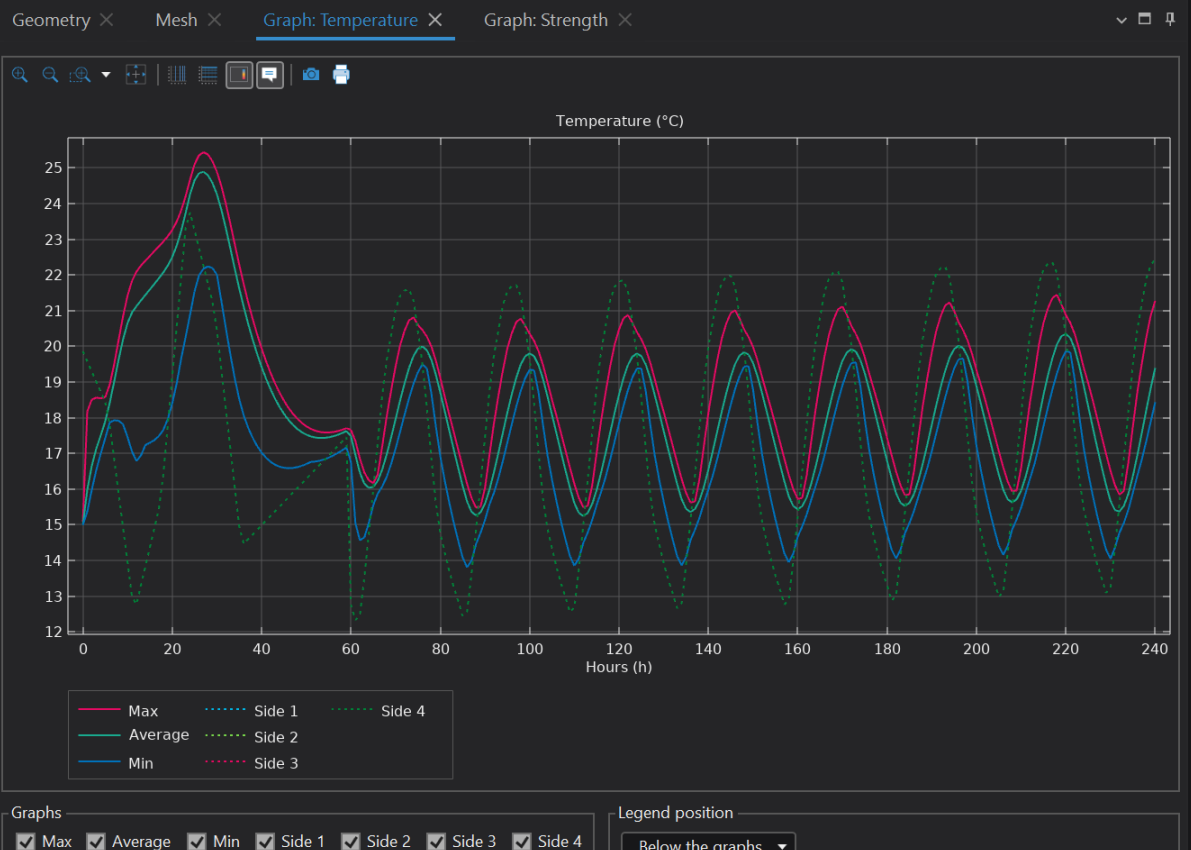
Form removal at: Strength = 15 MPa
Time of form removal: 214 h

Results During the Simulation

Temperature, max: 25.4 °C
Temperature, min: 13.8 °C
Temperature difference, max: 5.32 °C
Final strength, average: 15.5 MPa

Notifications and Warnings

✓ The results give no warnings.



Status

✓ The simulation is finalized.

HETT²²

File Home

New Open Save Compute Geometry Mesh Graph Colormap Time Development Compare Measurements Input/Output Table Report Parameters Locations Reset Windows Preferences

Project Simulation Graphics Data Documentation Library Settings

Menu

- Construction
- Concrete
- Time
- Weather Condition
- Measures
 - Weather Protection
 - Insulation
 - Cover
 - Pipe
 - Heating Cable
- Measurements
 - Temperature
- Point Probes
- Results

Settings

Form Removal - Side 1

Form removal at: Strength = 15 MPa
Time of form removal: 214 h

Form Removal - Side 2

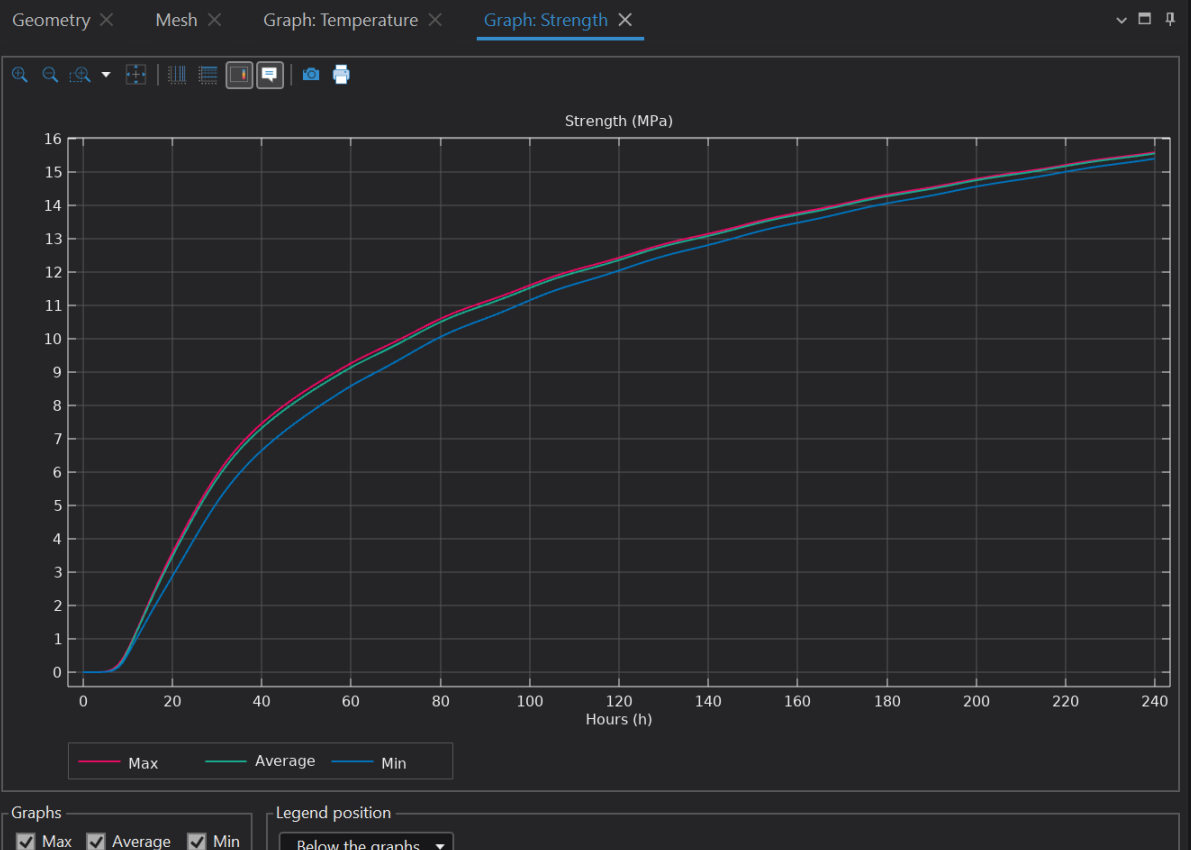
Form removal at: Strength = 15 MPa
Time of form removal: 214 h

Results During the Simulation

Temperature, max: 25.4 °C
Temperature, min: 13.8 °C
Temperature difference, max: 5.32 °C
Final strength, average: 15.5 MPa

Notifications and Warnings

✓ The results give no warnings.



Status

The simulation is finalized.

HETT²²

File Home

New Open Save Compute Geometry Mesh Graph Colormap Time Development Compare Measurements Input/Output Table Report Parameters Locations Reset Windows Preferences

Project Simulation Graphics Data Documentation Library Settings

Menu

- Construction
- Concrete
- Time
- Weather Condition
- Measures
 - Weather Protection
 - Insulation
 - Cover
 - Pipe
 - Heating Cable
- Measurements
 - Temperature
- Point Probes
- Results

Settings

Form Removal - Side 1

Form removal at: Strength = 15 MPa
Time of form removal: 17.0 h

Form Removal - Side 2

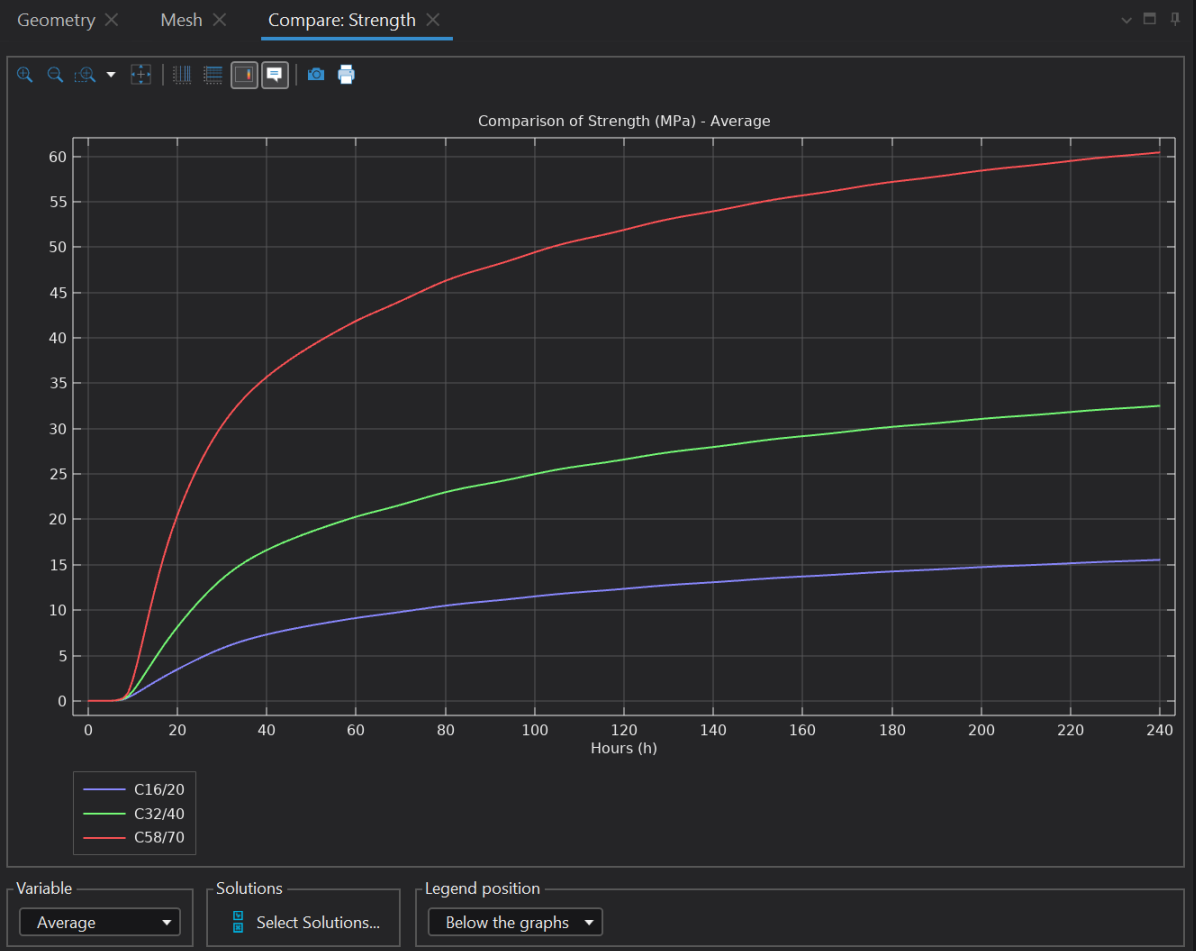
Form removal at: Strength = 15 MPa
Time of form removal: 17.0 h

Results During the Simulation

Temperature, max: 31.0 °C
Temperature, min: 13.6 °C
Temperature difference, max: 11.3 °C
Final strength, average: 60.5 MPa

Notifications and Warnings

✓ The results give no warnings.



Status

The simulation is finalized.

HETT²²

File Home

New Open Save Compute

Project Simulation

Menu

- Construction
- Concrete
- Time
- Weather Condition
- Measures
 - Weather Protection
 - Insulation
 - Cover
 - Pipe
 - Heating Cable
- Measurements
 - Temperature
 - Point Probes
 - Results

Settings

Form re Time of Form re Time of Form re Tempera Tempera Tempera Final str

Noti

Input/Output

Solutions

- C16/20
- C32/40
- Solution 3
- C58/70

Sections

Results
 Construction
 Concrete
 Time
 Weather Condition
 Weather Protection

Insulation
 Cover
 Pipe
 Heating Cable
 Measurements
 Point Probes

Compare graphs

Update at selection of solutions: No update

Reload settings

Settings for: C16/20 Reload

Name	C16/20	C32/40	C58/70
Case	Wall on Other...	Wall on Other Material	Wall on Other Mate...
Results, temperature, max [°C]	25.4	26.5	31.0
Results, temperature, min [°C]	13.8	13.5	13.6
Results, temperature difference, max [°C]	5.32	7.25	11.3
Results, final strength, average [MPa]	15.5	32.5	60.5
Results, all requirements fulfilled	OK	OK	OK
Results, risk for early freezing	OK	OK	OK
Results, risk for high temperature	OK	OK	OK
Results, risk for no form removal due to low strength	--	--	--
Results, risk for low strength (<5MPa) at form removal	--	--	--
Results, time of form removal [h], side 1	214	35.0	17.0
Results, strength at form removal [MPa], side 1	--	--	--
Results, time of form removal [h], side 2	214	35.0	17.0
Results, strength at form removal [MPa], side 2	--	--	--
Construction, concrete dimension wall thickness, w [m]	0.2	0.2	0.2
Construction, concrete dimensions, wall height, h [m]	2.4	2.4	2.4
Construction, other material, floor width, w2 [m]	2	2	2
Construction, other material, floor thickness, h2 [m]	0.2	0.2	0.2
Construction, other material, source	Standard library	Standard library	Standard library
Construction, other material, material	Old concrete	Old concrete	Old concrete

Close

Status

The simulation is finalized.

Variable: Average

Solutions: Select Solutions...

Legend position: Below the graphs

HETT²²

File Home

New Open Save Compute

Geometry Mesh Graph Colormap Time Development Compare Measurements

Input/Output Table Report Parameters Locations

Reset Windows Preferences

Project Simulation Graphics Data Documentation Library Settings

Menu

- Construction
- Concrete
- Time
- Weather Condition
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 - Insulation
 - Cover
 - Pipe
 - Heating Cable
- Measurements
 - Temperature
- Point Probes
- Results

Settings

Form Removal - Side 1

Form removal at: Strength = 15 MPa

Time of form removal: 182 h

Form Removal - Side 2

Form removal at: Strength = 15 MPa

Time of form removal: 182 h

Results During the Simulation

Temperature, max: 27.6 °C

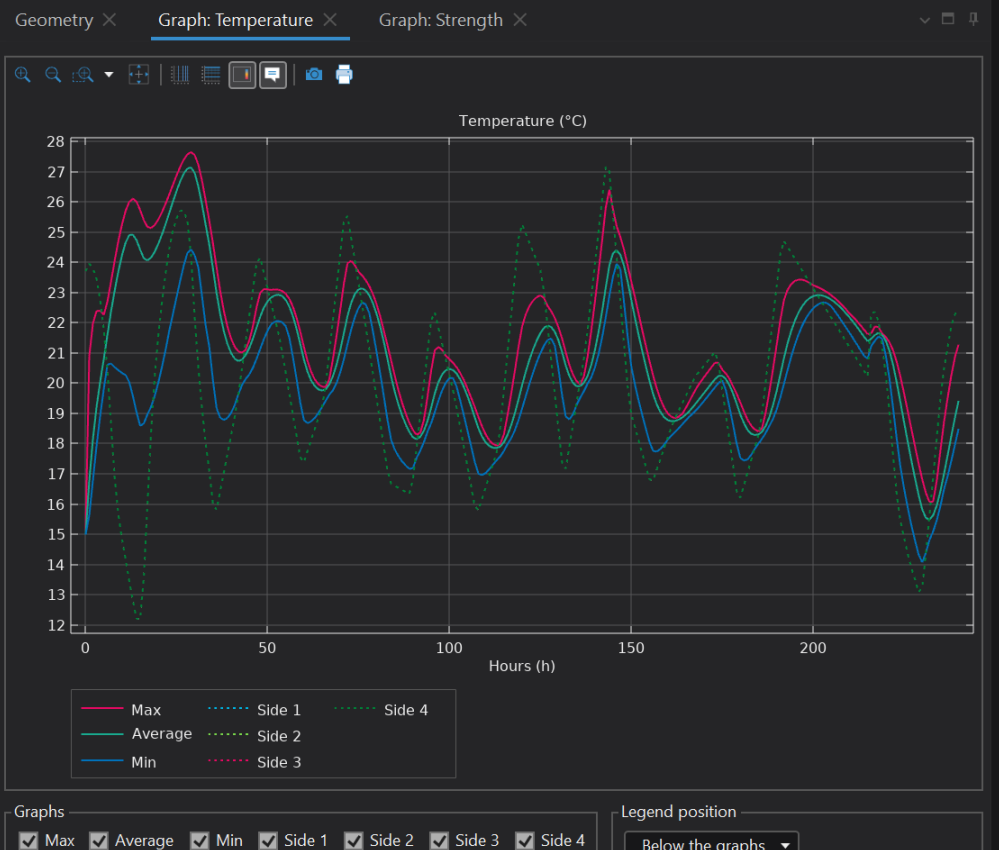
Temperature, min: 14.1 °C

Temperature difference, max: 7.14 °C

Final strength, average: 16.2 MPa

Notifications and Warnings

✓ The results give no warnings.



Status

The simulation is finalized.

Project Outcome

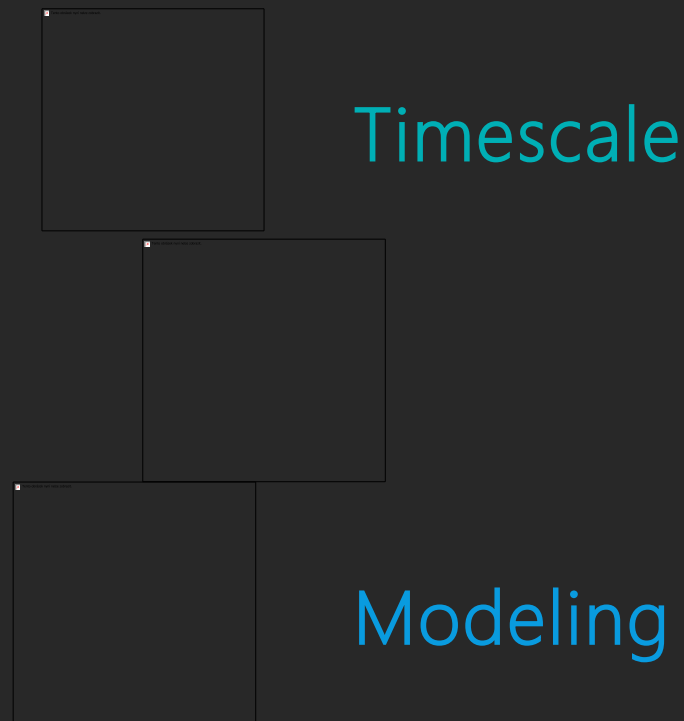
- All initial requirements were fulfilled
- Today, more than 5,000 users of HETT²²
- All major contractors in Sweden and Norway use HETT²²

BI Dry 3.0

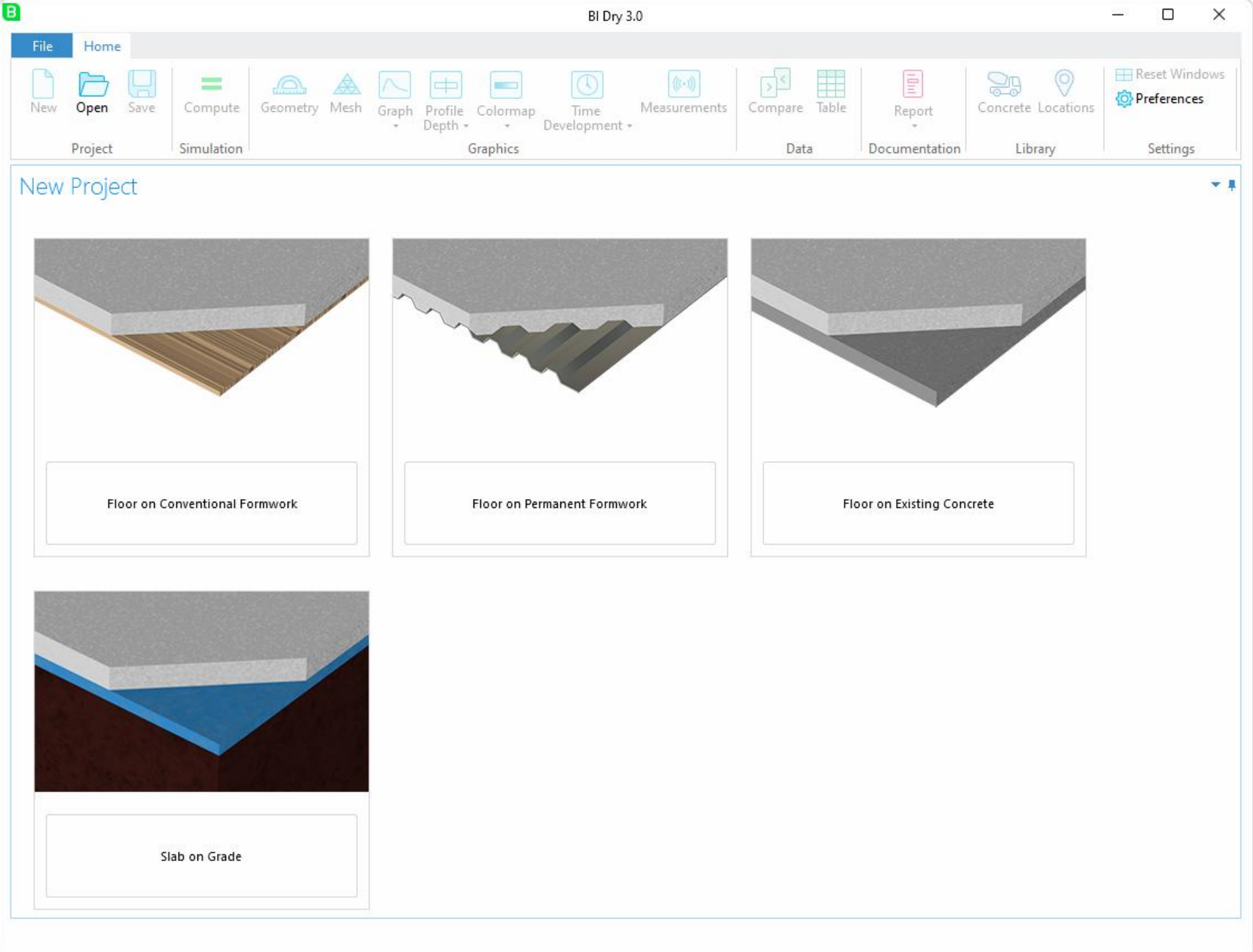
A software for simulating concrete drying

www.comsol.com/paper/bi-dry-30-a-comsol-app-for-simulating-concrete-drying-135332

Differences between HETT²² and BI Dry



- HETT²² simulates strength development - Hours/days
- BI Dry simulates concrete drying - Months/years
- Both tools use heat transfer modeling
- BI Dry additionally models coupled heat and moisture transfer



Select construction scenario to start a new project

File Menu

Ribbon

Menu

Status

The screenshot displays the BI Dry 3.0 software interface. At the top, the title bar reads "BI Dry 3.0". Below it is a ribbon with tabs for "File" and "Home". The ribbon contains various tool icons grouped into categories: Project (New, Open, Save), Simulation (Compute), Graphics (Geometry, Mesh, Graph, Profile Depth, Colormap), Data (Measurements, Compare, Table), Documentation (Report), Library (Concrete, Locations), and Settings (Reset Windows, Preferences). On the left side, there is a vertical menu with categories: Construction, Concrete, Time, Weather Condition, Measures, Cover, Pipe, Heating Cable, Measurements, Temperature/RH, Point Probes, and Results. The main workspace is divided into three panels. The top-left panel is titled "Construction" and contains sub-sections for "Concrete Dimensions" (Thickness: 0.2 m, Width: 1 m) and "Form" (Form material: Wood, Form removal at: 7 days). The top-right panel is titled "Geometry" and shows a 3D visualization of a concrete slab with dimensions 1.5m by 1m by 0.2m. The bottom panel is titled "Status" and displays the message "The calculation is completed".

Settings

Graphics

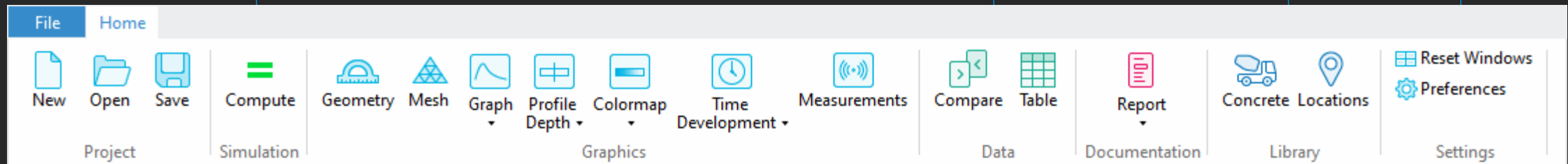
Ribbon

Compute

Results as
numerical data

Standard libraries
and user libraries

Settings

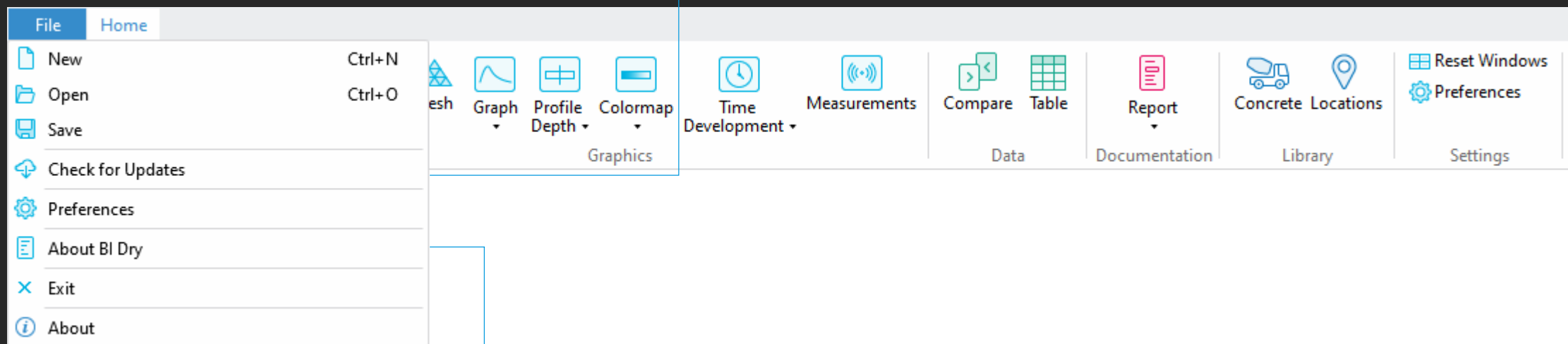


Create a new project,
open, and save

Visualize geometry, mesh,
graphs, 2D plots, and 3D plots

Microsoft® Word® and
Microsoft® PowerPoint® reports

File Menu



Check for new versions

License information

Studsvik

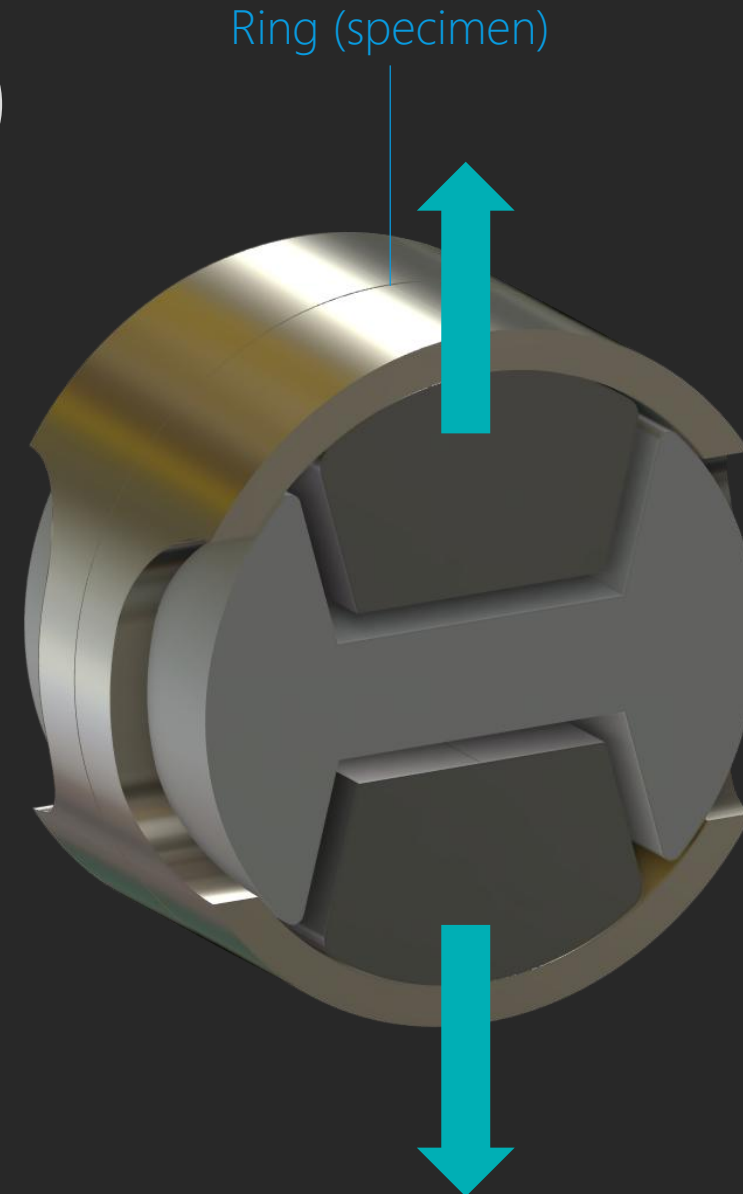
Studsvik RTT Analyzer

An app to evaluate mechanical properties for the nuclear Industry

www.comsol.com/paper/studsvik-rtt-analyzer-a-comsol-app-to-evaluate-mechanical-properties-for-the-nuclear-industry-123041

Ring Tensile Tests (RTT)

- Studsvik uses RTT to evaluate the mechanical properties of cladding
- Force and displacement are measured during testing
- A previous Excel[®]-based method only supported specific dimensions
- A dedicated COMSOL[®] App enabled a more flexible and scalable solution



The COMSOL[®] App

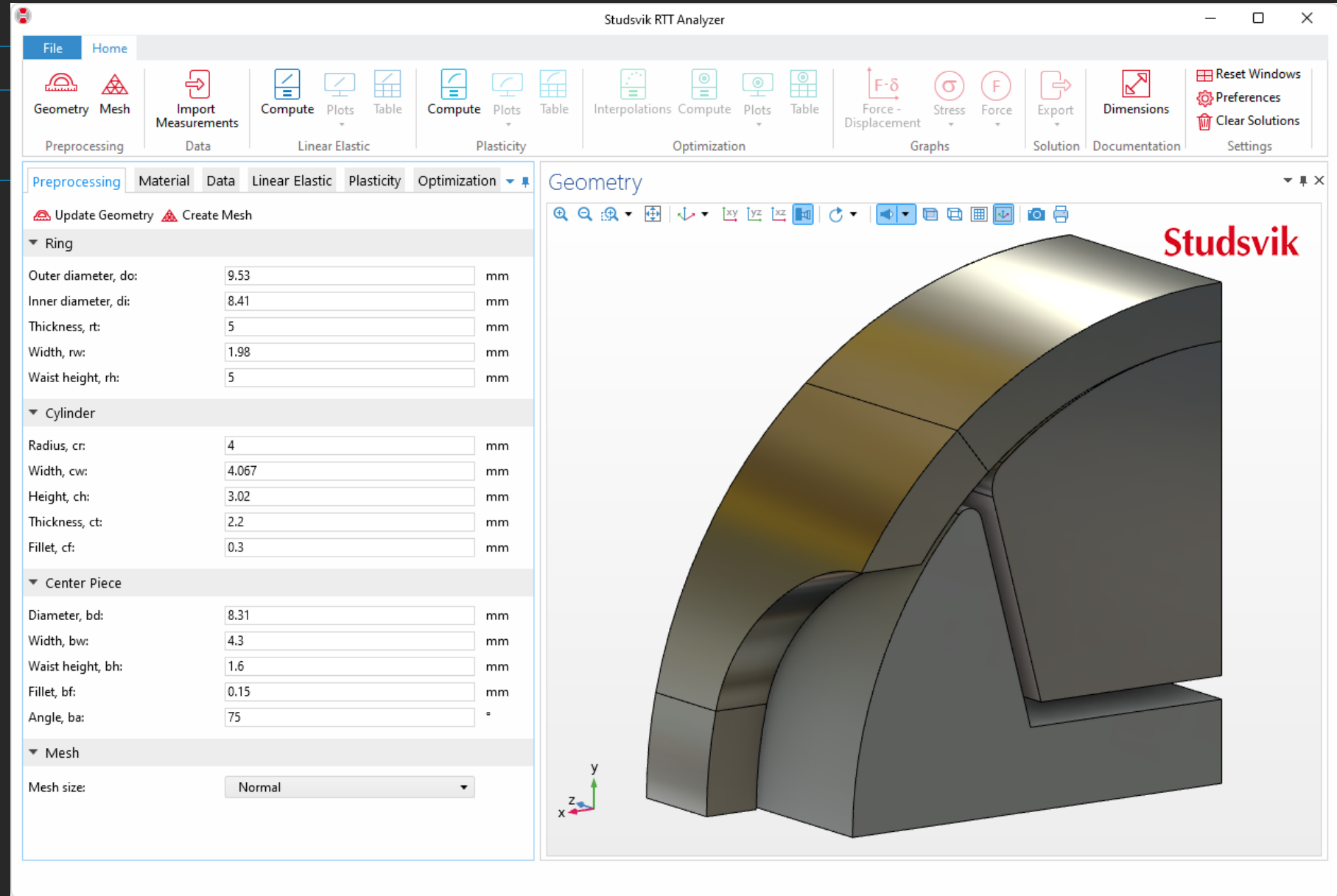


File menu

Ribbon

Tabs

- The different components in the graphical user interface



Settings

Graphics

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- Paste data from Excel[®] or import files

The screenshot displays the Studsvik RTT Analyzer software interface. The main window shows a 3D model of a mechanical part with a mesh overlay. The 'Material' tab is active, showing properties for three components: Ring, Cylinder, and Center Piece. The 'Import Measurements' dialog box is open, displaying a table of data.

Material Properties:

- Ring:** Poisson's ratio: 0.33, Density: 2810, Thermal expansion coefficient: 6e-6
- Cylinder:** Young's modulus: 205, Poisson's ratio: 0.33, Density: 8117, Thermal expansion coefficient: 1.8e-5
- Center Piece:** Young's modulus: 205, Poisson's ratio: 0.33, Density: 8117, Thermal expansion coefficient: 1.8e-5

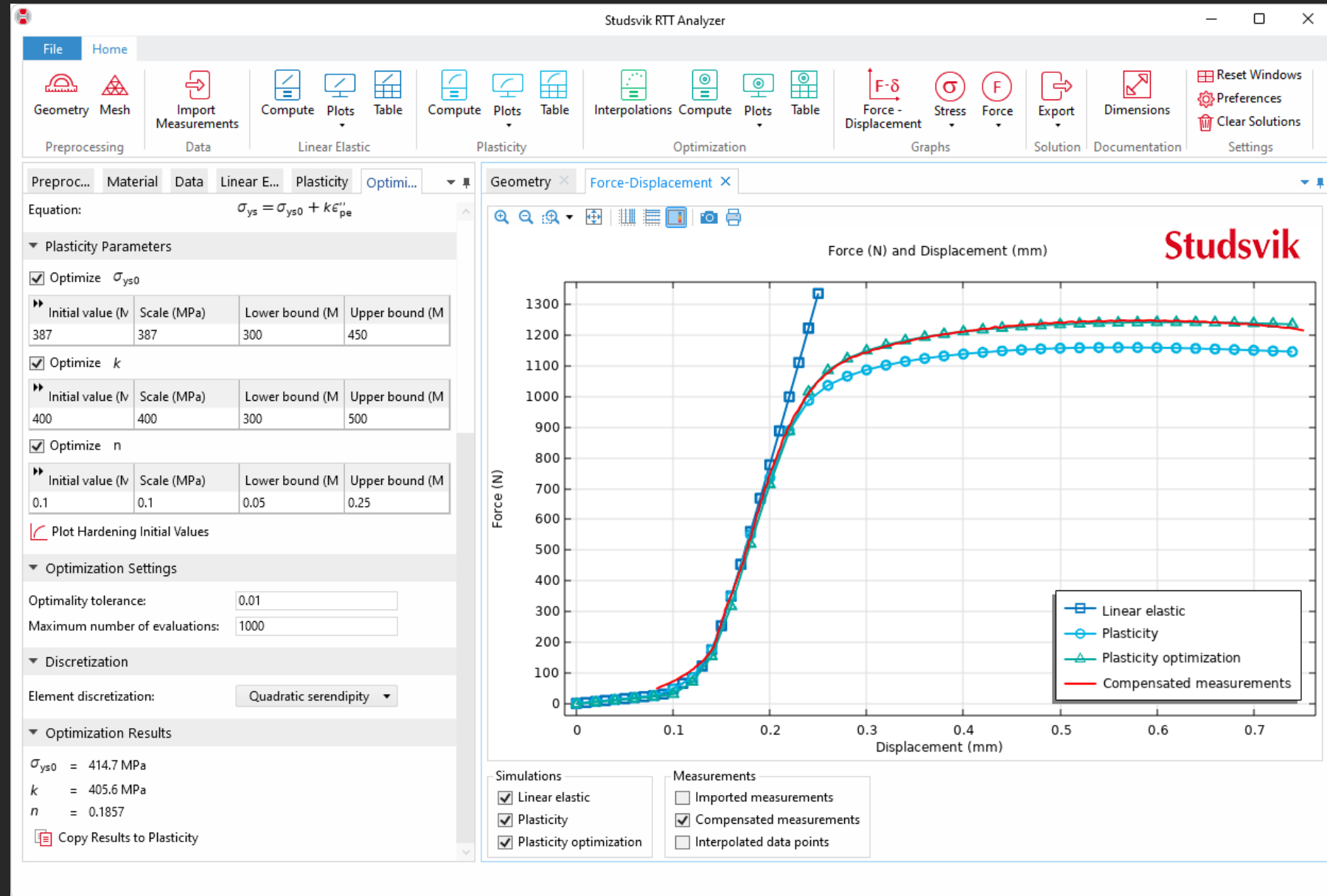
Thermal Properties: Reference temperature: 25, Test temperature: 25

Friction: Include friction, Friction coefficient: 0.125

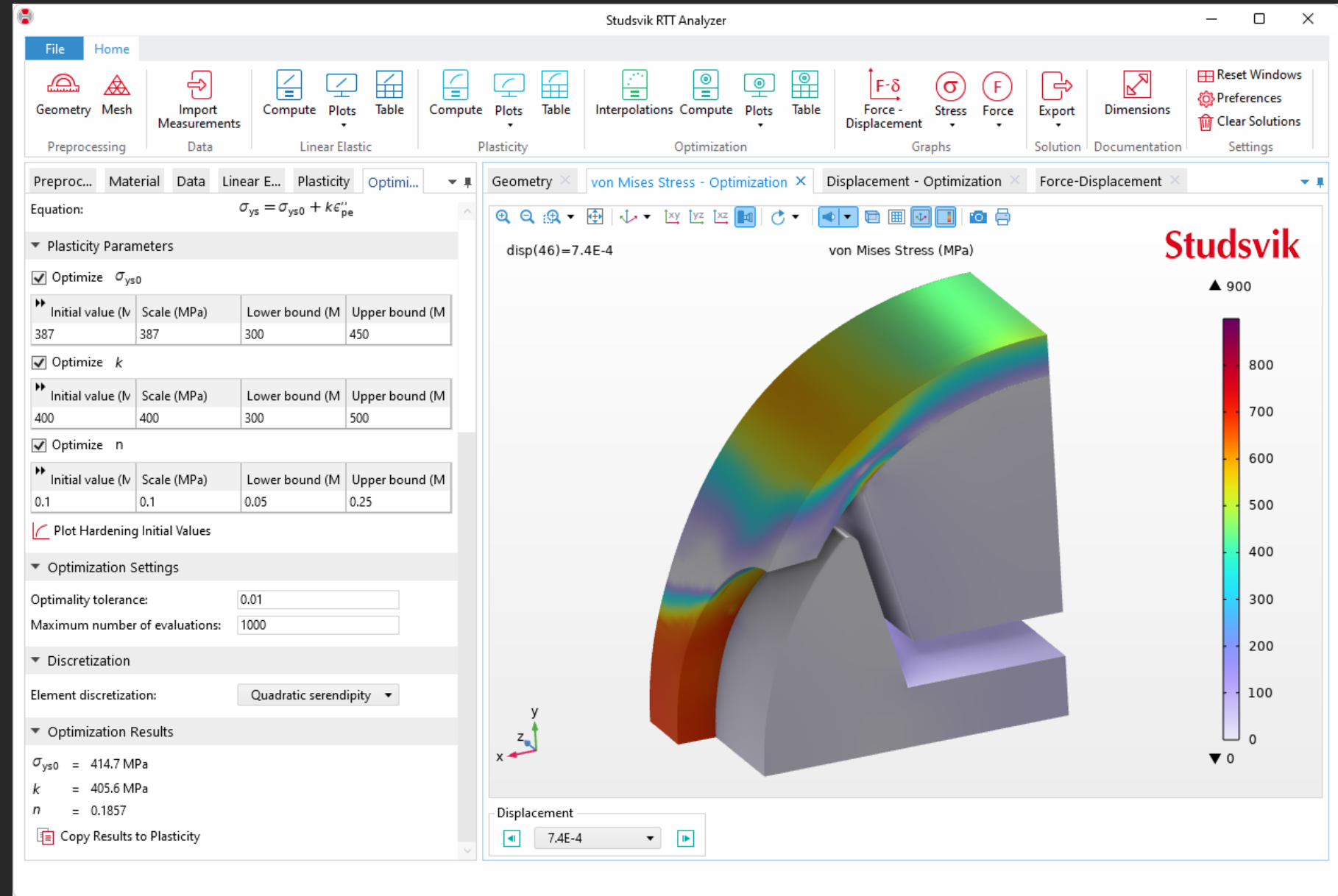
Import Measurements Table:

Displacement (mm)	Force (N)
0.033	171.12
0.036	180.37
0.038	189.47
0.040	200.48
0.043	211.96
0.044	222.13
0.046	234.99
0.049	248.42
0.051	259.55
0.053	271.82
0.056	285.16
0.058	296.13
0.059	306.06
0.062	318.27
0.064	330.09
0.067	341.06
0.069	352.31
0.072	364.87
0.074	375.83
0.076	387.21
0.079	400.79
0.081	412.32
0.083	423.10
0.086	436.53
0.088	449.21
0.091	460.41

- The *Plasticity optimization* curve follows the measurement
- The calculated hardening parameters are presented in the *Optimization Results* section



- The *von Mises Stress* at the last step



PHINIA – Pencil Coil Analyzer

A tool to simulate heat transfer, thermo-mechanical stresses, electric and magnetic fields

PHINIA



- Motivation

- Extensive experience using COMSOL Multiphysics[®]
- Sought to make simulation accessible beyond simulation specialists

- Solution

- Create COMSOL[®] Apps for products where it adds value

- Benefits

- Increased understanding of complex physics
- Faster development of higher-quality products
- Improved simulation models through cross-disciplinary collaboration
- More team members can perform “what-if” analyses

File Home

Design: Geometry Mesh Thermal Thermo-Mechanical Parastic Capacitances Make Breakthrough Electric Field Remaining

Plots: Temperature Stress Displacement Magnetic Flux Electric Field Electric Potential

Graphs: I-V Chamber Voltage Voltage Per Turn Chamber Voltage Difference Probe Voltage Chamber E-Field E-Field Max

Windows: Reset Status Preferences

Settings

- Menu
- Design
 - Material
 - Thermal
 - Thermo-Mechanical
 - Capacitances
 - Circuit
 - Simulation

Settings

Primary Coil

Automatically calculate width and height

Winding diameter: mm

Number of turns:

Width: mm

Height: mm

Offset from bottom: mm

Voltage: V

Secondary Coil

User reverse direction

Winding diameter: mm

Total number of chambers:

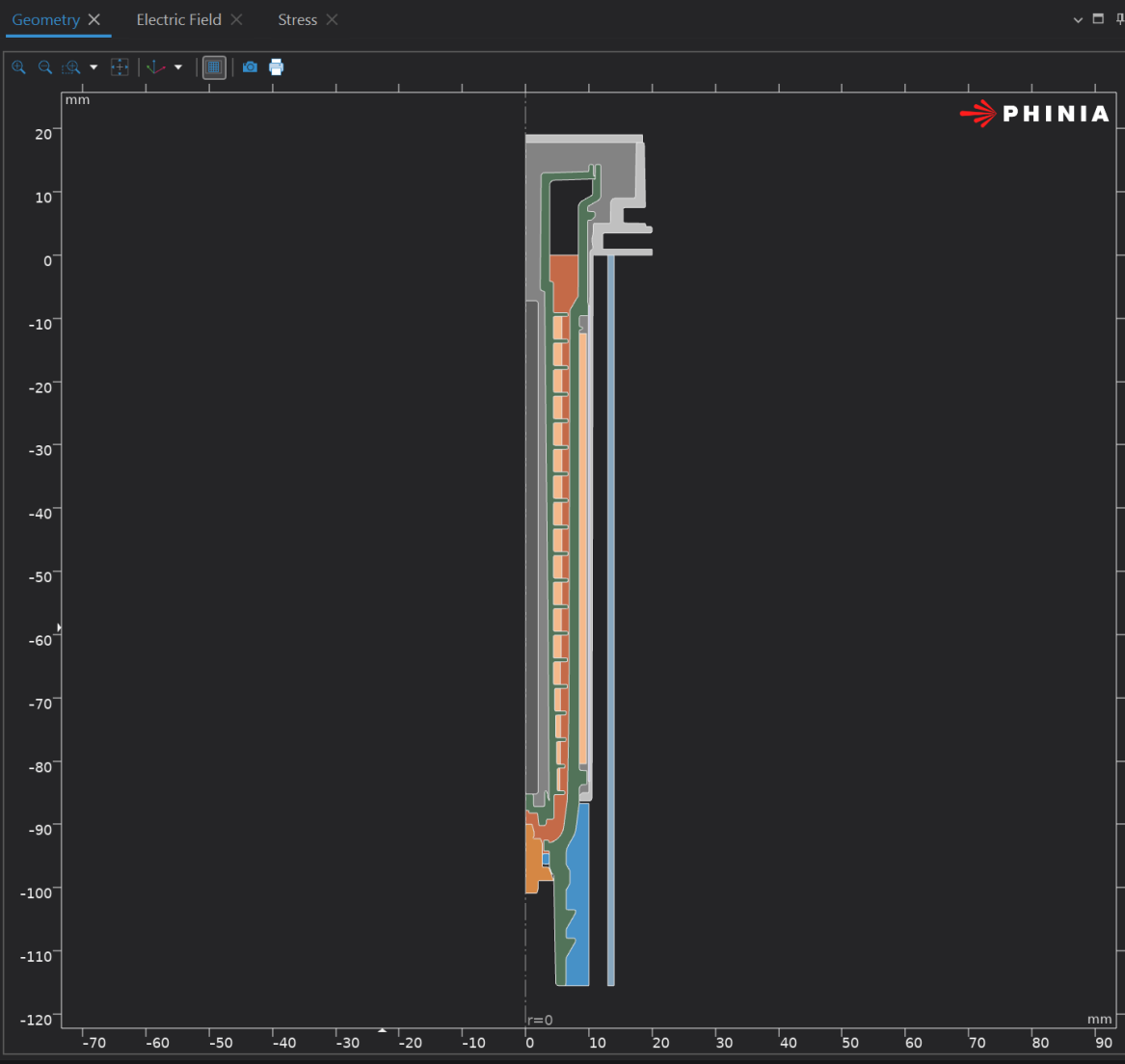
Chamber	Turns
Chamber 1	1200
Chamber 2	1200
Chamber 3	1200
Chamber 4	1200
Chamber 5	1200
Chamber 6	1200
Chamber 7	1200
Chamber 8	1200
Chamber 9	1200
Chamber 10	1200
Chamber 11	1200
Chamber 12	1100
Chamber 13	1072
Chamber 14	955
Chamber 15	797
Chamber 16	674
Chamber 17	515
Chamber 18	341

Total number of turns: 18654

Core

Core radius: mm

Shield



Status

- Geometry: Updated
- Thermal: Solved
- Thermo-Mechanical: Solved
- Parastic: Solved
- Make: Solved
- Breakthrough: Solved
- E-Field, Make: Solved
- E-Field, Breakthrough: Solved

PHINIA Statement

PHINIA Sweden develops advanced electromagnetic devices such as spark ignition coils and electronic control systems. In this demanding development process, it is essential that the entire team understands critical engineering trade-offs.



Jakob Ängeby, PhD
Research & Development Lead

PHINIA Statement

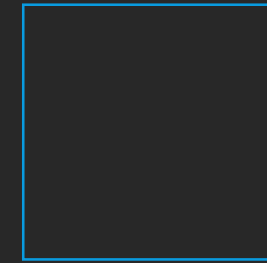
Simulation apps have significantly improved engagement and technical understanding across the team. Everyone can now explore electric and magnetic field propagation, mechanical stresses, and critical design parameters.

Highly recommended for high-performing development teams!



Jakob Ängeby, PhD
Research & Development Lead

Summary



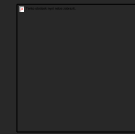
Summary

- Is it possible to build a business around COMSOL[®] Apps?



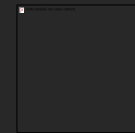
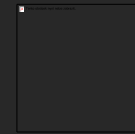
Summary

- Is it possible to build a business around COMSOL[®] Apps?
- Can a single COMSOL[®] App scale to thousands of users?



Summary

- Is it possible to build a business around COMSOL[®] Apps?
- Can a single COMSOL[®] App scale to thousands of users?
- Will COMSOL[®] Apps transform how companies use simulation and modeling?



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Deflexional License Manager

Protection and licensing for compiled COMSOL[®] Apps

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