

Autodesk Moldflow

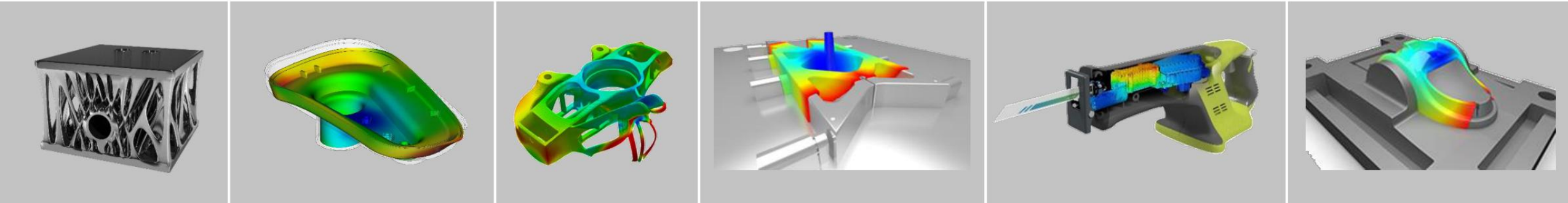
Moldflow Automation Solutions

Moldflow Automation Solutions
by **Code PS** and **MFS**



Specialization
Advanced Materials Analysis
Value Added Services
Authorized Training Center
Authorized Certification Center

Tim Dassen & Benjamin Wittmann
CODE Product Solutions & MF SOFTWARE Sales & Service Group GmbH



Tel: +49 176 32903986
Mail: benjamin.wittmann@moldflow.eu
Web: www.moldflow.eu

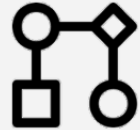
Introduction | PEG & MFS



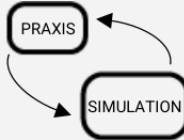
Simulation Consulting



INJECTION
MOLDING
SIMULATION



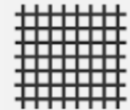
DEVELOPMENT
SUPPORT



REVERSE
ENGINEERING



STRUCTURAL
MECHANICS



INTEGRATIVE
SIMULATION



MATERIAL
MODELLING



Software Reseller



SOFTWARE
SALES



MF ACADEMY



SUPPORT



CERTIFICATION



API SERVICE



MATERIAL DATA
SERVICE

- 35 years experience
- 22.000 projects



- 16 years Moldflow sales
- 400 customers



Introduction | CODE / MFS Partnership

- cooperation start: November 2024
- partnership in application development & sales for Moldflow Automation

Moldflow Automation Solutions
by **Code PS** und **MFS**



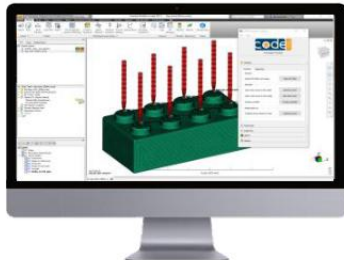
Moldflow Automation Solutions | CODE / MFS



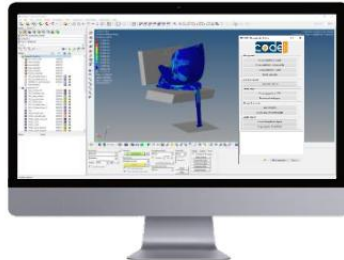
toolbox solutions by CODE



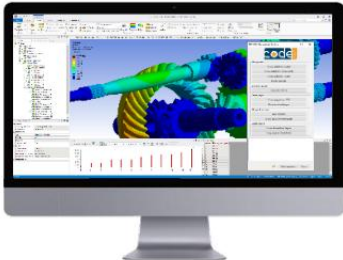
the **Moldflow** Toolbox



the **HyperWorks** Toolbox



the **ANSYS** Toolbox



Moldflow Toolbox by CODE PS



automate tasks
improve quality
increase consistency

the **Moldflow**
Toolbox

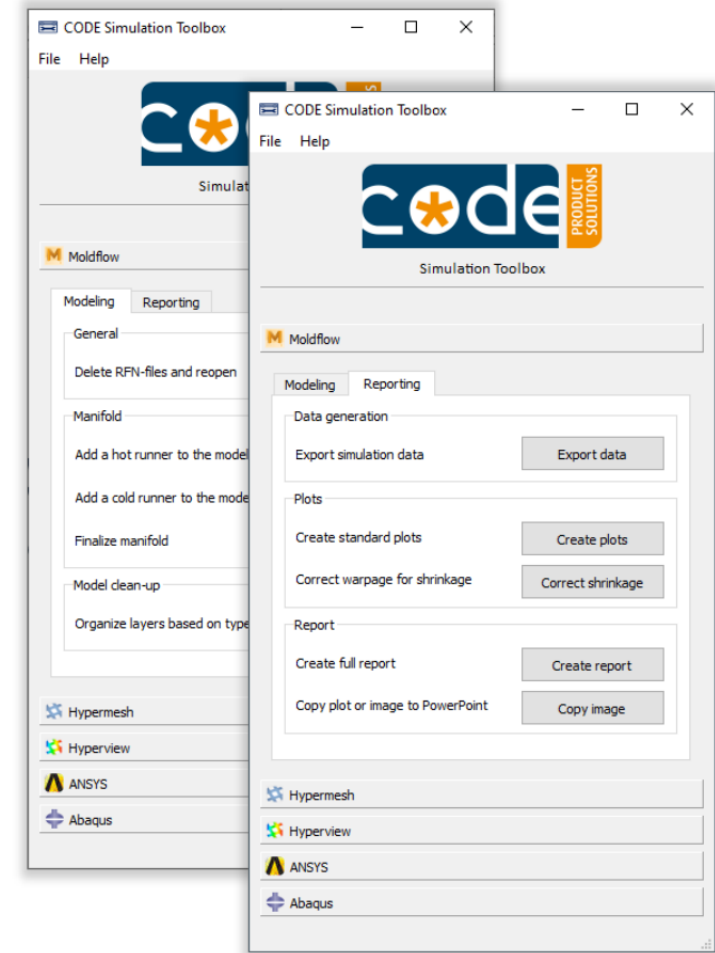
- saves up to 50% modeling and 80% reporting time
- reduces workload from 5 to 4 days per week on av

Moldflow Toolbox by CODE PS



- hot runner nozzle modelling
- cold runner modelling
- manifold definition
- valve gate manager
- gate connectivity
- layer organization
- sync legends
- report generator
- copy to report
- path tool

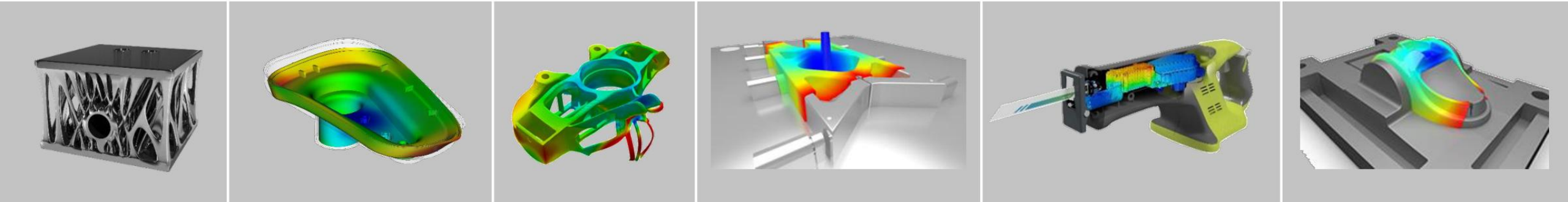
the **Moldflow**
Toolbox



Moldflow Automation Solutions by Code PS und MFS



Tim Dassen & Thomas Wittmann
MF SOFTWARE Sales & Service Group GmbH



Tel: +49 170 324 2921
Mail: wittmann@moldflow.eu
Web: www.moldflow.eu



Gate & Go | Product information

- simplified Moldflow simulation environment for designers
- no pre-processing necessary
- available in two versions



Gate & Go (1) – Base version

Fully configured product, online and web-based, available since the end of 2024

Currently in use at PEGASOS as a public consulting tool

[PEGASOS Speed Simulation Service](#)

Direct interface to Autodesk Moldflow Insight, the industry standard for injection molding simulation (without loss of quality)

Target group:

- Design engineers, product designers, technical sales

Requirements:

- Basic knowledge of injection molding, basic knowledge of interpreting simulation results

Gate & Go (2) – Customized

Expandability of the base version with additional functions, as a modular system for implementing product- and user-specific constraints:

- Material data
- Meshing criteria
- Result exports (type & quantity)
- Target ranges for quality indicators
- Target ranges for cost indicators
- Visualization of progress

Support and guidance for users with no experience with plastics

Tracking of economic and qualitative targets

Consolidation and provision of internal company know-how

Collection of simulation data for AI & ML purposes (CAD data, injection points, material data, process settings, simulation results)

Gate & Go (1) Example: PEGASOS

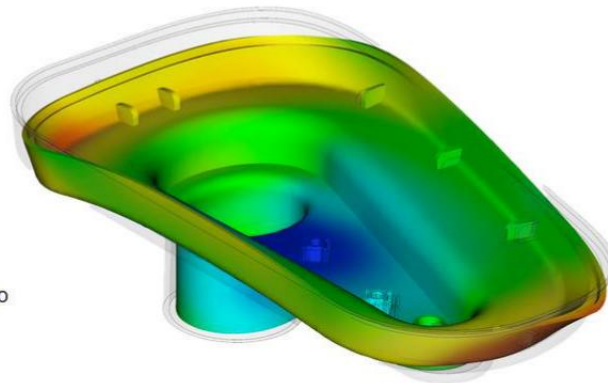
Gate & Go (1) | Example: PEGASOS

- online platform for fast and easy injection molding simulations
- public PEG-simulation tool ([PEGASOS Speed Simulation Service](#))



Error-free injection molded parts thanks to speed simulation.

Check your parts before production. Gain important insights into error potentials, manufacturability and accelerate your development.



[Start Simulation](#) ↗

[Request consultation](#)

 <p>SPEED</p> <p>After 24 hours you will receive your simulation results, when preprocessing was successful.</p>	 <p>VALUE</p> <p>No more cost-intensive errors in your injection molded parts. Simulations starting at €200.</p>
 <p>SAFETY</p> <p>This is especially important to us: we are TISAX-certified and guarantee your data security.</p>	 <p>EXPERTISE</p> <p>Our PEG Simulation Experts support you throughout the process and are available for consultation when needed.</p>



MFS

Software | Service | Solutions




PEG

Plastic | Simulation | Experience


Gate & Go (1) | PEGASOS Workflow

Data upload | Analysis sequence and injection locations | Part and insert material | Process Settings | Selected Add-ons | Summary and Order

Project title:


Upload CAD-Data Part
Drag & drop your file here, or click in this field.

[General notes about CAD data quality](#)


Upload CAD-Data Insert
Drag & drop your file here, or click in this field. (Multiple files are possible)

Support file formats: IPT, CATPART, PRT, X_T, SLDPRT, SAT, STP, STEP, PRT oder PRT.1 (No assemblies)
Maximum file size: 1 GB

Support file formats: IPT, CATPART, PRT, X_T, SLDPRT, SAT, STP, STEP, PRT oder PRT.1 (No assemblies)
Maximum file size: 1 GB

3.65 MB • step

12.37 KB • step

Manual mesh repair
What is included in manual mesh repair? ⓘ

€200

- project title
- CAD-upload part
- optional: CAD-upload part inserts
- optional: manual mesh repair

Gate & Go (1) | PEGASOS Workflow

Data upload | **Analysis sequence and injection locations** | Part and insert material | Process Settings | Selected Add-ons | Summary and Order

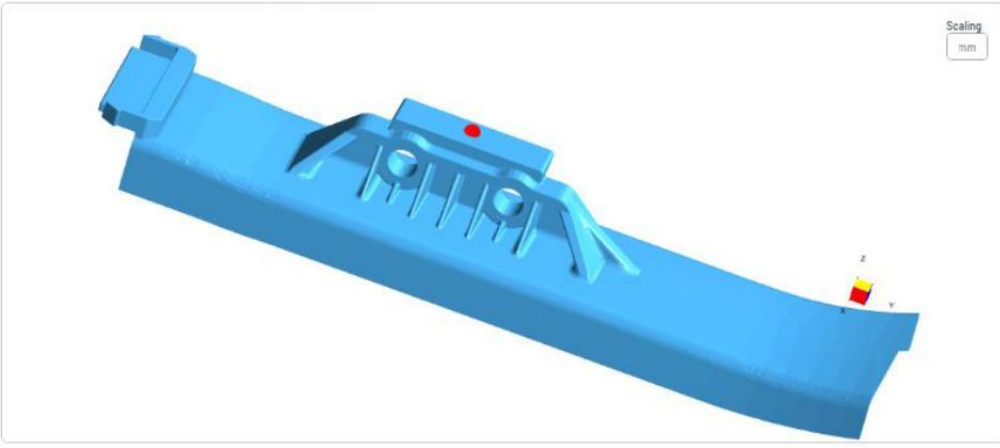
Analysis sequence

What do the individual analysis include?

Filling	€200	Filling, holding pressure, warpage	€350
---------	------	------------------------------------	------

Select coordinates

How to select injection points for coordinates in the 3D model?



Scaling mm

Injection points

How do I find the coordinates of the injection locations?

X-Coordinate:	Y-Coordinate:	Z-Coordinate:
-8,47	106,32	33,61

Remove injection location

Add another injection location

- simulation sequence: Fill, Pack, Warp
- injection location selection

Gate & Go (1) | PEGASOS Workflow

Data upload | Analysis sequence and injection locations | **Part and insert material** | Process Settings | Selected Add-ons | Summary and Order

Part material
More information about the materials ⓘ
Stanyl TW441 NAT | Part: Gleitschiene.step

Insert material
Aluminium A1 | Plastic | **Metal** | Material: Gleitschiene Buchsen Alu.step

BACK | TO THE NEXT STEP

- part material selection
- part-insert material selection
- access to Moldflow material database (>13.000 materials)

Gate & Go (1) | PEGASOS Workflow

Data upload | Analysis sequence and injection locations | Part and insert material | **Process Settings** | Selected Add-ons | Summary and Order

Process control

Automatic | Manual default

Unselected options are set to 'Automatic'

Melt temperature [°C]: (recommendation: 305-325°C)

Mold temperature [°C]: (recommendation: 80-150°C)

Switch over [Vol. %]:

Filing parameters:

Injection time [s]:

Flow rate [cm³/s]:

Holding pressure profile (filling pressure over time):

	Duration [s]	Height [MPa]	
1	<input type="text" value="0.1"/>	<input type="text" value="30"/>	
2	<input type="text" value="12"/>	<input type="text" value="30"/>	<input type="button" value="- Remove packing pressure stage"/>
3	<input type="text" value="5"/>	<input type="text" value="0"/>	<input type="button" value="- Remove packing pressure stage"/>

BACK | TO THE NEXT STEP

- process parameter definition
- manual or automatic

Gate & Go (1) | PEGASOS Workflow

Data upload Analysis sequence and injection locations Part and insert material Process Settings **Selected Add-ons** Summary and Order

Add-ons:

More Information ⓘ More Information ⓘ More Information ⓘ

MFR file (requires Moldflow Communicator, without additional costs) inclusive

Quality check inclusive

Powerpoint report 100€

More Information ⓘ More Information ⓘ

Warpexport 50€

Shrinkage compensation 50€

Shrinkage compensation

isotrop [%]

automatic isotrop

2

Report Language

English

BACK TO THE NEXT STEP

- selection of special options
- PowerPoint report, warp export & shrinkage compensation

Gate & Go (1) | PEGASOS Workflow

Data upload Analysis sequence and injection locations Part and insert material Process Settings Selected Add-ons **Summary and Order**

Order Summary

The chosen analysis sequence contains the following results in the MFR-File

Filing results:

- Fill time
- Fill time (isochrones)
- Pressure at speed/pressure switching point
- Temperature at the flow front
- Pressure at injection location: XY representation
- Clamp force: XY representation
- Time to reach the ejection temperature
- Percentage of the frozen layer
- Weld lines
- Fiber orientation (if available)
- Air traps
- Shear rate, maximum
- Wall thickness distribution (Surface distance)
- Temperature

Packing pressure and deflection results

- Sink marks estimate
- Average volumetric shrinkage
- Melting core
- Deformation, all effects: Deflection
- Deflection, all effects:X Component
- Deflection, all effects:Y Component
- Deflection, all effects:Z Component

Shrinkage compensation results:

- Deformation, all effects: Deflection (with Shrinkage compensation)
- Deflection, all effects:X Component (with Shrinkage compensation)
- Deflection, all effects:Y Component (with Shrinkage compensation)
- Deflection, all effects:Z Component (with Shrinkage compensation)

Your Order

Filling, holding pressure, warpage	350€
MFR file (requires Moldflow Communicator, withoutFree additional costs)	
Quality check	Free
Powerpoint report	+ 100€
Warpexport	+ 50€
Shrinkage compensation	+ 50€
Total amount:	550€

[BACK](#) [ORDER NOW](#)

- overview simulation results
- summary and order

Gate & Go (1) | PEGASOS Workflow

Overview Page

+ NEW PROJECT

Search Status: All Date: Old first Reset

[147] Gleitschiene 2025-10-03 13:52:04 Simulation finished

Gleitschiene
2025-10-03 13:52:04
Project Number: 147

MFR Data download STEP Data download PPT Data download

Analysis sequence: Filling, holding pressure, warpage

Process Settings: Melt Temp. 315 [°C], Mold Surface Temp. 115 [°C], Fill Time 1.2 [s], Switch-Over 98 [%]

Packing pressure: 1. Duration 0.1 [s], Height 30 [MPa]; 2. Duration 12 [s], Height 30 [MPa]; 3. Duration 5 [s], Height [MPa]

Injection locations: 1. X -7,17, Y 107,18, Z 33,62

Part: CAD File: Gleitschiene.step; Material Name: Stanyl T8441 NAT (Envalior (former DSM materials))

Inserts: CAD File: Gleitschiene Buchsen Alu.step; Material Name: Aluminium A1 ()

Add-Ons: Quality Check, MFR File (requires Moldflow Communicator, without additional costs), Powerpoint report, Warpexport, Shrinkage compensation, Mesh repair

- project overview
- result download
- viewer files (.mfr), PowerPoints, warp export (.step)
- most important key figures

Gate & Go (1) | PEGASOS Workflow

Expert Consultation

Your direct line to the expert

[How to book an expert consultation and manage your bookings?](#)

Some questions are best answered in person. Arrange a 30-minute consultation with one of our mould flow experts - directly after your order or as required. You will receive in-depth support with data preparation, interpretation of results and material selection.

User name
T. User

E-mail address
bernd.martens@pe-group.de

Project number / topic (*)

Describe your request

SELECT APPOINTMENT DATE



Book an expert consultation

In a 30-minute video call, our Moldflow experts will support you with all challenges relating to your injection moulding simulation. Only €100 - you will only be charged if the call takes place.

- Direct contact with experts**
30-minute video call with an experienced mouldflow professional.
- Optimise CAD data**
Support in preparing your 3D geometries - for error-free analyses and realistic results.
- Understanding simulation correctly**
Help with analysing and interpreting the simulation.
- Material selection & design advice**
Recommendations for material selection and component optimisation.

- booking option for expert consultation
- support for interpretation of simulation results
- assistance and solution finding

Gate & Go (1) | PEGASOS Workflow

The screenshot displays the PEGASOS Spy software interface. The main window is titled "PEGASOS Spy - Version" and "Revision". It features a control bar with options for "Silent-Modus (keine Benachrichtigungen)", "Auto-Refresh" (checked), and "Intervall (Min): 1". An "Aktualisieren" button is also present.

The main content area is divided into two sections. On the left, a table lists projects with columns for "Bild", "Project", "Gewählte Optionen", and "Projekt Status". Each project row includes a small image, project details (Name, Id, Datum, Firma, Besteller, Inserts), a list of selected options with their costs, and a status indicator (green circle for "Projekt abgeschlossen" and "Abgerechnet").

Bild	Project	Gewählte Optionen	Projekt Status
	Name: [redacted] Id: [redacted] Datum: [redacted] Firma: [redacted] Besteller: [redacted] Inserts: 0	Füllung, Nachdruck, Verzug 350 € Manuelle Netzreparatur 0 € MFR 0 € Powerpoint 100 € Warp export 0 € Shrink Comp. 0 € Expertengespräch 0 € Total 450 €	Projekt abgeschlossen Abgerechnet
	Name: [redacted] Id: [redacted] Datum: [redacted] Firma: [redacted] Besteller: [redacted] Inserts: 0	Füllung, Nachdruck, Verzug 350 € Manuelle Netzreparatur 0 € MFR 0 € Powerpoint 100 € Warp export 0 € Shrink Comp. 0 € Expertengespräch 0 € Total 450 €	Projekt abgeschlossen Abgerechnet
	Name: [redacted] Id: [redacted] Datum: [redacted] Firma: [redacted] Besteller: [redacted] Inserts: 0	Füllung 200 € Manuelle Netzreparatur 0 € MFR 0 € Powerpoint 100 € Warp export 0 € Shrink Comp. 0 € Expertengespräch 0 € Total 300 €	Projekt abgeschlossen Abgerechnet
	Name: [redacted] Id: [redacted] Datum: [redacted] Firma: [redacted] Besteller: [redacted] Inserts: 0	Füllung 200 € Manuelle Netzreparatur 0 € MFR 0 € Powerpoint 100 € Warp export 0 € Shrink Comp. 0 € Expertengespräch 0 €	Projekt abgeschlossen Abgerechnet

On the right, the "Projekt Details" panel shows fields for Name, Id, Datum, Firma, and Besteller. Below this, the "Abrechnung" section includes checkboxes for "Testprojekt" and "Abgerechnet" (checked), along with a date field. The "Material" section has fields for "Handelsname" and "Hersteller". The "Analysessequenz" section shows a dropdown menu with "Füllung, Nachdruck, Verzug" selected. The "Prozess (automatisch)" section contains two buttons: "MFR öffnen" and "Bericht öffnen".

At the bottom of the window, a status bar indicates "Projekte in der Liste: 38", "Nächste Aktualisierung in: 00:55", and "Daten wurden aktualisiert."

- expert backend
- project monitoring

Gate & Go (2) Excerpt from the modular system

Gate & Go (2) | Excerpt from the modular system

Implementation of product- and user-specific constraints:

- Material data
- Meshing criteria
- Result exports (type & quantity)
- Target ranges for quality indicators
- Target ranges for cost indicators
- Visualization of progress

Gate & Go (2) | Excerpt from the modular system

View expert department

	Minimum:	Maximum:	Export:
<input checked="" type="checkbox"/> Mesh evaluation	50.000	80.000	<input checked="" type="checkbox"/>
<input checked="" type="checkbox"/> Fill time	0.3 s	0.6 s	<input checked="" type="checkbox"/>
<input checked="" type="checkbox"/> Fill pressure	0 bar	500 bar	<input checked="" type="checkbox"/>
<input checked="" type="checkbox"/> Temperature at flow front (difference)	0 °C	15 °C	<input checked="" type="checkbox"/>
<input checked="" type="checkbox"/> Shear velocity	0 1/s	100.000 1/s	<input checked="" type="checkbox"/>
<input checked="" type="checkbox"/> Average volumetric shrinkage	2.0 %	8.0 %	<input checked="" type="checkbox"/>
<input checked="" type="checkbox"/> Needed packing time	1.0 s	5.0 s	<input checked="" type="checkbox"/>
<input checked="" type="checkbox"/> Freeze time	6.0 s	10.0 s	<input checked="" type="checkbox"/>
<input checked="" type="checkbox"/> Wall thickness distribution	1.0 mm	3.0 mm	<input checked="" type="checkbox"/>
<input checked="" type="checkbox"/> Further ...			<input checked="" type="checkbox"/>

Save

- definition of qualitative and economic target corridors
- definition of export options

Export options

Result images export:

- to PowerPoint
- as Excel
- as Moldflow Communicator file (.mfr)
- as HTML

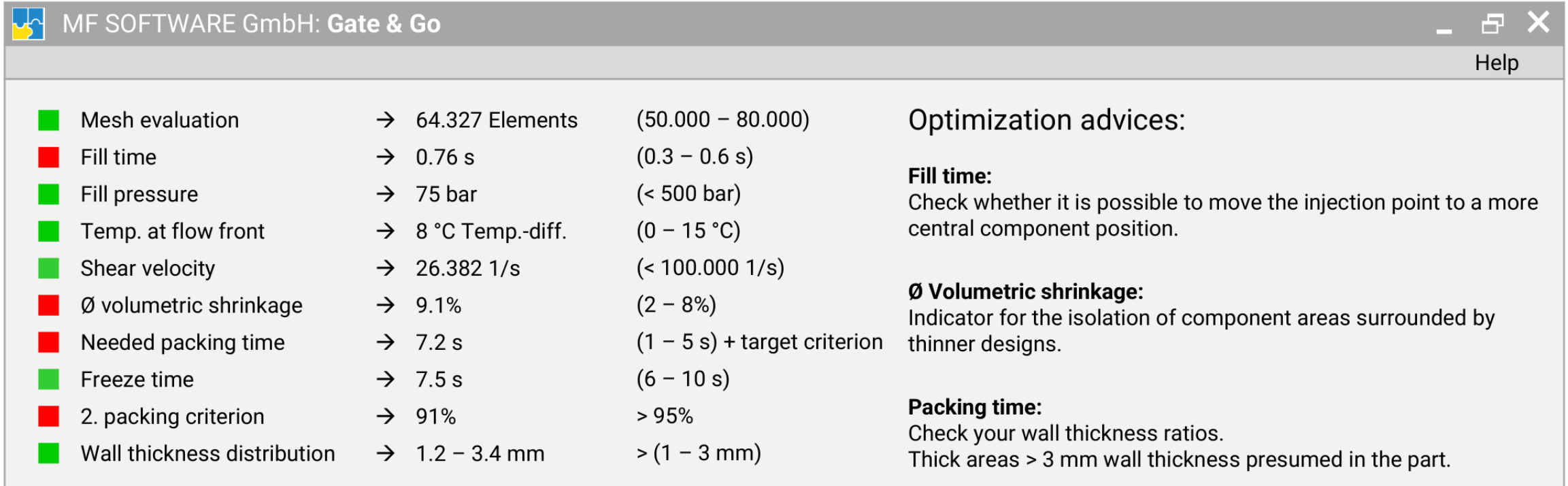
Output directory name:

results Get

Save

Gate & Go (2) | Excerpt from the modular system

User view



The screenshot shows a software window titled "MF SOFTWARE GmbH: Gate & Go" with a "Help" button in the top right corner. The main content area is divided into two columns. The left column lists simulation parameters with traffic light symbols (green, red, or yellow) indicating their status. The right column provides optimization advice for specific parameters.

Parameter	Value	Target/Range	Optimization Advice
Mesh evaluation	→ 64.327 Elements	(50.000 – 80.000)	Optimization advices:
Fill time	→ 0.76 s	(0.3 – 0.6 s)	
Fill pressure	→ 75 bar	(< 500 bar)	Fill time: Check whether it is possible to move the injection point to a more central component position.
Temp. at flow front	→ 8 °C Temp.-diff.	(0 – 15 °C)	∅ Volumetric shrinkage: Indicator for the isolation of component areas surrounded by thinner designs.
Shear velocity	→ 26.382 1/s	(< 100.000 1/s)	
∅ volumetric shrinkage	→ 9.1%	(2 – 8%)	Packing time: Check your wall thickness ratios. Thick areas > 3 mm wall thickness presumed in the part.
Needed packing time	→ 7.2 s	(1 – 5 s) + target criterion	
Freeze time	→ 7.5 s	(6 – 10 s)	
2. packing criterion	→ 91%	> 95%	
Wall thickness distribution	→ 1.2 – 3.4 mm	> (1 – 3 mm)	

- Visualization of remaining issues and progress using traffic light symbols
- Provision of optimization advice

Gate & Go (2) | Excerpt from the modular system

MFS - Gate and Go
🇬🇧
✖

Analysis

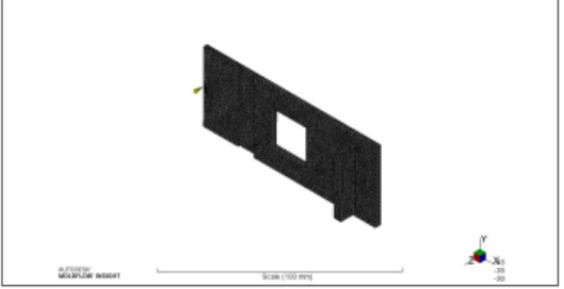
Project overview

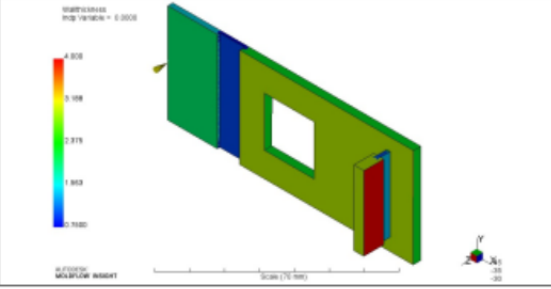
View Result

Expert

New
X
001-Montageplatte_M
X
+

	Resultname	Value	Specification	Recommendations
●	Nr of DualDomain Elements	12.672 Elem.	1.000 - 20.000 Elem.	ok
●	Wallthickness	0,75 - 4,00 mm	0,50 - 4,00 mm	ok
●	Fill time	1,26 s	0,50 - 1,50 s	ok
●	Pressure at V/P switchover	26,0 MPa	5,0 - 25,0 MPa	<p>1. Long flow path due to too decentralized gating? If yes: Check whether you can position the gating point more in the component center! If no: Check 2.</p> <p>2. Is the filling balanced (are there several open flow path ends)? Check on the basis of the pressure result whether there is uneven filling, i.e. whether some component ends are already filled (without blue areas) and some are not (blue areas). If no: Move the gating point slightly in the direction of the blue areas to equalize the flow paths (pressure losses) If yes: Check 3.</p> <p>3. The base wall thickness may be too low. Increase the base wall thickness!</p>
●	Temperature at flow front	1,66 °C 2,02 °C	<= 5,0 °C <= 20,0 °C	ok





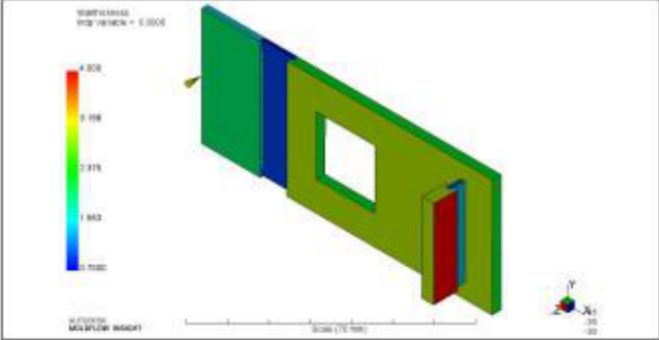
Material: Standardmaterial_Nr1

CAD - Datei: M:\Xtras\X9_Datentransfer\Michael\Platte_kurz_V6_0.step

Rev: rev 001

Number not ok: 6

Gate & Go (2) | Excerpt from the modular system

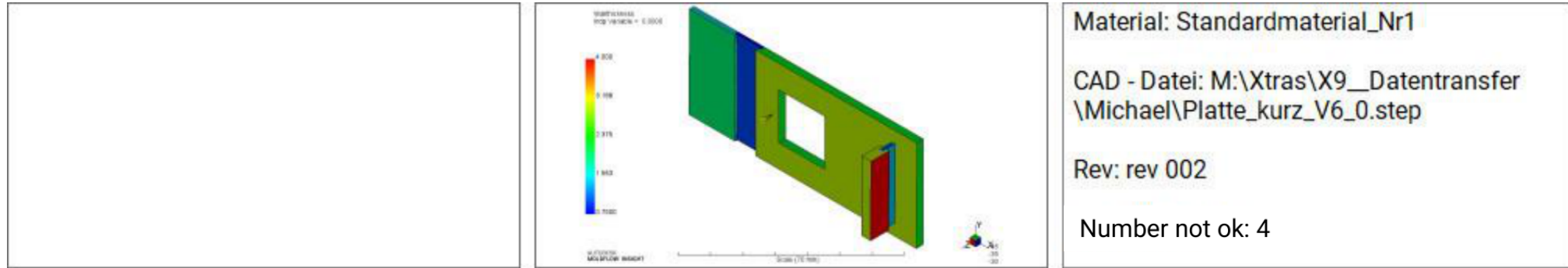


Material: Standardmaterial_Nr1
CAD - Datei: M:\Xtras\X9_Datentransfer
\Michael\Platte_kurz_V6_0.step
Rev: rev 001
Number not ok: 6

Revision	Specification		Rev
	min	max	1
Pressure at V/P switchover	5	25	26
Cycle time	12	20	23.35
Plastic Core	<=	5	56.41@3.45s
Average VS	1	8	8.8
Needed packing time	6	12	16.5
Frozen Volume	>	95	44.1

- 6 criteria not ok
- Pressure is too high → gate too decentralized
- Improvement: more centralized connection

Gate & Go (2) | Excerpt from the modular system



Revision	Specification		Rev	
	min	max	1	2
Pressure at V/P switchover	5	25	26	20.3
Cycle time	12	20	23.35	23.2
Plastic Core	<=	5	56.41@3.45s	13.94@3.1s
Average VS	1	8	8.8	6.2
Needed packing time	6	12	16.5	17.2
Frozen Volume	>	95	44.1	91.4



- 4 criteria not ok
- Cycle time is too long → thick area in the guide rail
- Improvement: Core out guide rail

Gate & Go (2) | Excerpt from the modular system

Material: Standardmaterial_Nr1

CAD - Datei: M:\Xtras\X9_Datentransfer
\Michael\Platte_kurz_V7_1.step

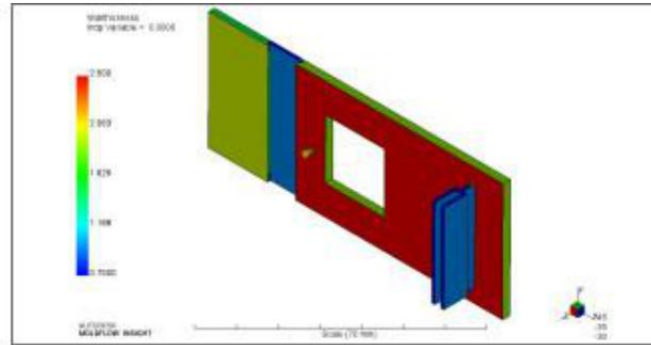
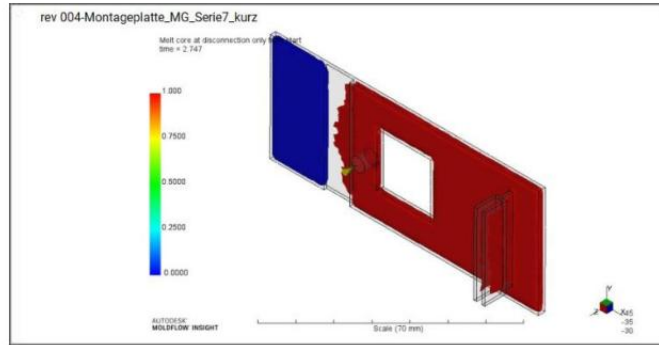
Rev: rev 003

Number not ok: 2

Revision	Specification		Rev		
	min	max	1	2	3
Pressure at V/P switchover	5	25	26	20.3	20
Cycle time	12	20	23.35	23.2	19.15
Plastic Core	<=	5	56.41@3.45s	13.94@3.1s	13.46@3.05s
Average VS	1	8	8.8	6.2	6.3
Needed packing time	6	12	16.5	17.2	15.6
Frozen Volume	>	95	44.1	91.4	98.7

- 2 criteria not ok
- Needed packing pressure time is too long → base wall thickness is too high
- Improvement: Reduce base wall thickness

Gate & Go (2) | Excerpt from the modular system



Material: Standardmaterial_Nr1

CAD - Datei: M:\Xtras\X9_Datentransfer
\Michael\Platte_kurz_V7_2.step

Rev: rev 004

Number not ok: 1

Revision	Specification		Rev			
	min	max	1	2	3	4
Pressure at V/P switchover	5	25	26	20.3	20	21.9
Cycle time	12	20	23.35	23.2	19.15	14.66
Plastic Core	<=	5	56.41@3.45s	13.94@3.1s	13.46@3.05s	13.39@2.75s
Average VS	1	8	8.8	6.2	6.3	6.2
Needed packing time	6	12	16.5	17.2	15.6	11.1
Frozen Volume	>	95	44.1	91.4	98.7	97.6



- 1 criterion not ok
- Plastic core: area of molten material without packing pressure supply is too big
→ The thin area separates the holding pressure supply from the thicker area behind it
- Improvement: Thicken the thin area

Gate & Go (2) | Excerpt from the modular system

Material: Standardmaterial_Nr1

CAD - Datei: M:\Xtras\X9_Datentransfer
\Michael\Platte_kurz_V7_3.step

Rev: rev 005

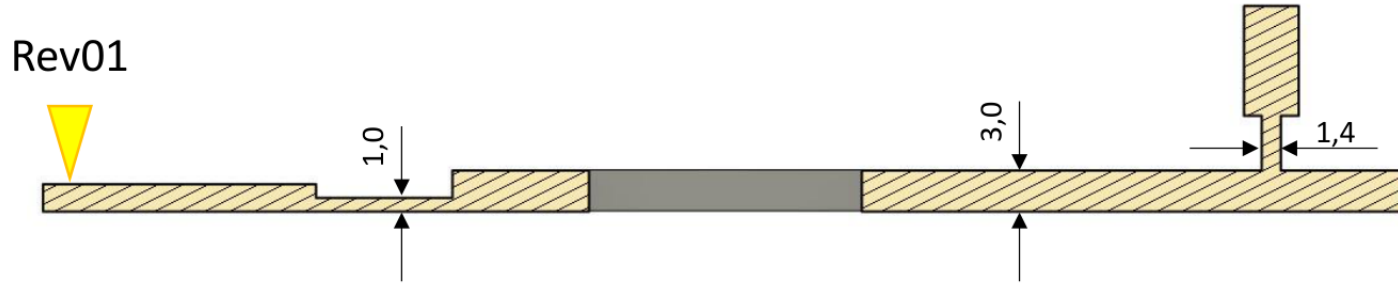
Number not ok: 0

Revision	Specification		Rev				
	min	max	1	2	3	4	5
Pressure at V/P switchover	5	25	26	20.3	20	21.9	19.4
Cycle time	12	20	23.35	23.2	19.15	14.66	15.16
Plastic Core	<=	5	56.41@3.45s	13.94@3.1s	13.46@3.05s	13.39@2.75s	1.18@11.11
Average VS	1	8	8.8	6.2	6.3	6.2	5
Needed packing time	6	12	16.5	17.2	15.6	11.1	11.4
Frozen Volume	>	95	44.1	91.4	98.7	97.6	98.8

- All criteria ok
- No conspicuous results → Target design achieved

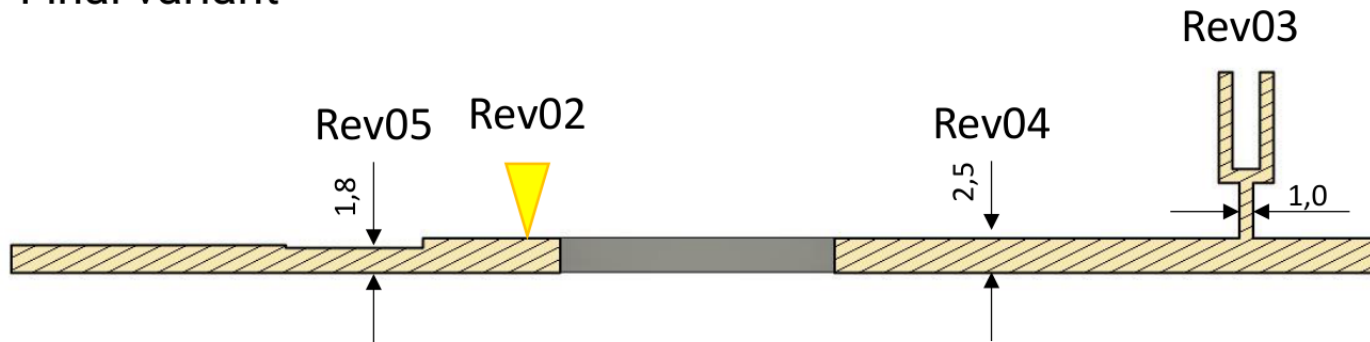
Gate & Go (2) | Excerpt from the modular system

Initial variant



- Rev01: Initial variant
- Rev02: Gate moved
- Rev03: Guide rail cored out
- Rev04: Reduced base wall thickness
- Rev05: Thickened thin section

Final variant



Gate & Go (2) | Customized



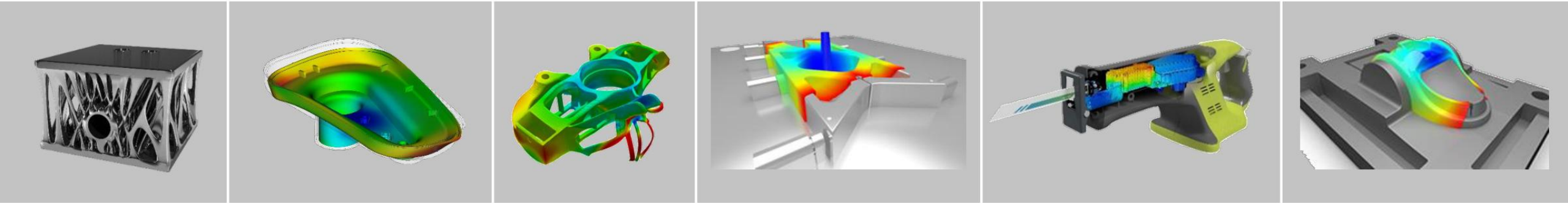
Benefits:

- ensuring quality early in in the design phase
- access to expert software without the need for experts
- securing company-specific knowledge through digitalization
- collecting qualified data for AI or ML applications
- automatic, gradual learning process on the user side with each use of the tool
- strict control and monitoring of quality and manufacturing costs through expert specifications

MF SOFTWARE Sales & Service Group

www.moldflow.eu

Tim Dassen & Benjamin Wittmann
CODE Product Solutions & MF SOFTWARE Sales & Service Group GmbH



Tel: +49 176 32903986
Mail: benjamin.wittmann@moldflow.eu
Web: www.moldflow.eu





Moldflow Summit 2026:

The Moldflow Toolbox

Saving 10 hours per project with automation

Tim Dassen

Co-owner | Senior technical consultant

Code Product Solutions

Facts & figures



since 2007



offices

Schinnen, the Netherlands
Chennai, India



projects

> 1.200 orders
> 100 clients



team

- > mechanical engineers
- > aerospace engineers
- > product development engineers
- > software development engineers

Domain synergy

domain synergy



simulation technology
simulating ahead of reality



industrial design
thinking in enforceable
solutions

```
... of vehicle
elements, contacts):
    id, for node in nodes
    -mult: element_id, element_model.node_id, element...
    |contact: contact_id, contact_element_id, conta...

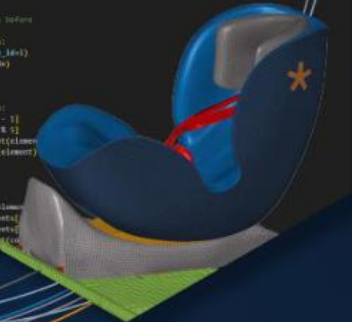
... ["id"]
element_table = tabulate(element_data, headers, tablefmt="grid")
element_table = tabulate(element_data, headers + ["node ID", "tablefmt="grid"]
contact_table = tabulate(contact_data, headers + ["element ID", "tablefmt="grid"]

return {
    "nodes": node_table,
    "elements": element_table,
    "contacts": contact_table,
}

# Create utilities as before
nodes = []
for i in range(1, 4):
    node = Node(node_id=i)
    nodes.append(node)

elements = []
element_id = 1
for i in range(1, 4):
    node1 = nodes[i - 1]
    node2 = nodes[i & 1]
    element = Element(element_id=element_id, nodes=[node1, node2])
    elements.append(element)
    element_id += 1

contacts = []
contact_id = 1
for i in range(1, 4):
    node1 = nodes[i]
    node2 = nodes[i + 1]
    element_id = 1
    element = Element(element_id=element_id, nodes=[node1, node2])
    contacts.append(element)
    element_id += 1
```

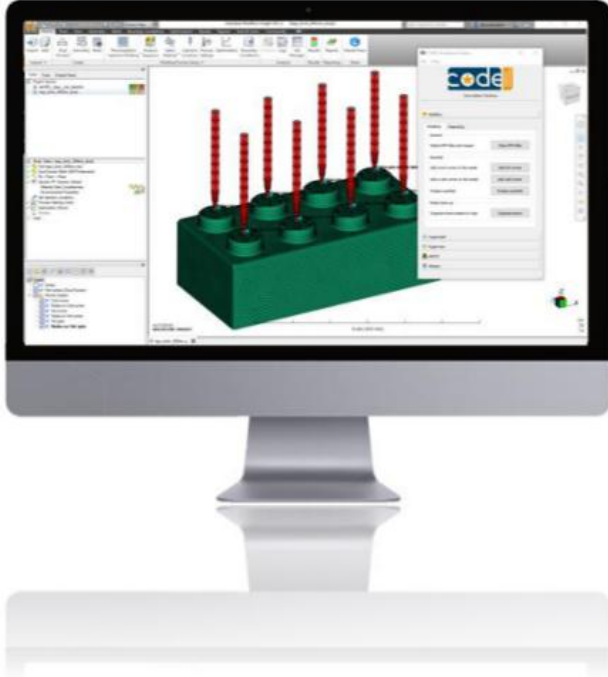


**automated
engineering**
transforming insights
into new values

Our Toolboxes

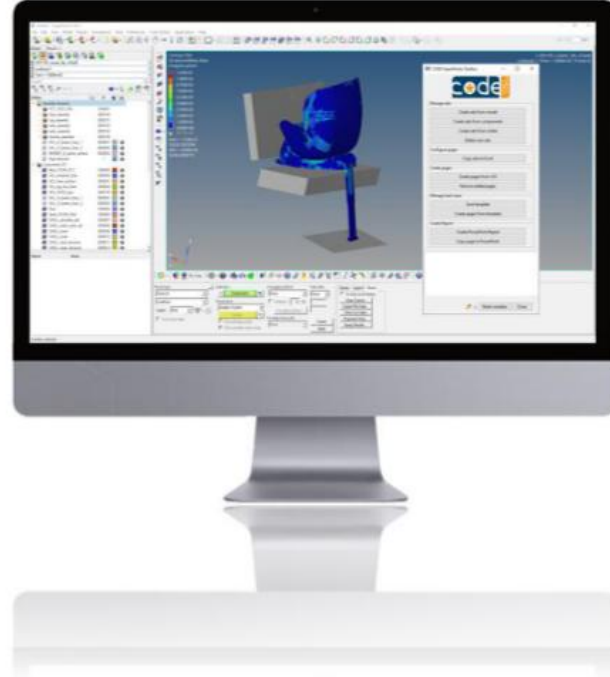
the **Moldflow** Toolbox

- *saves up to 50% modeling and 80% reporting time*
- *reduces workload from 5 to 4 days per week on av.*



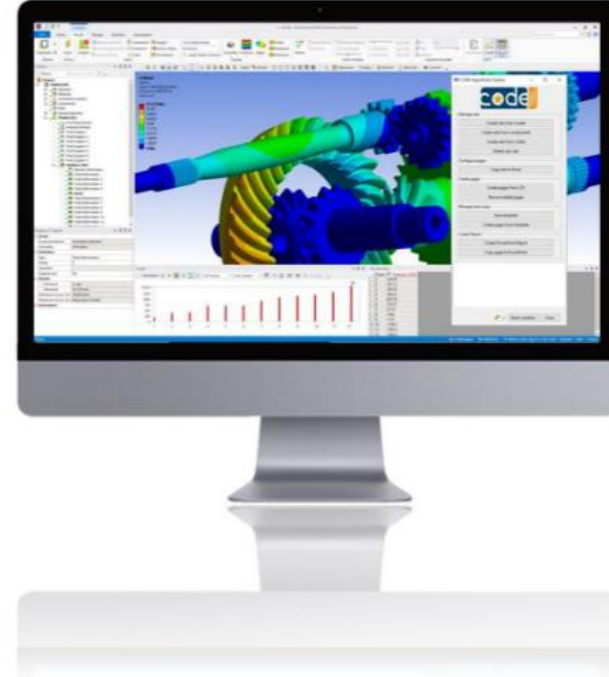
the **HyperWorks** Toolbox

- *saves up to 80% reporting time*
- *full postprocessing & reporting in < 1 hour*



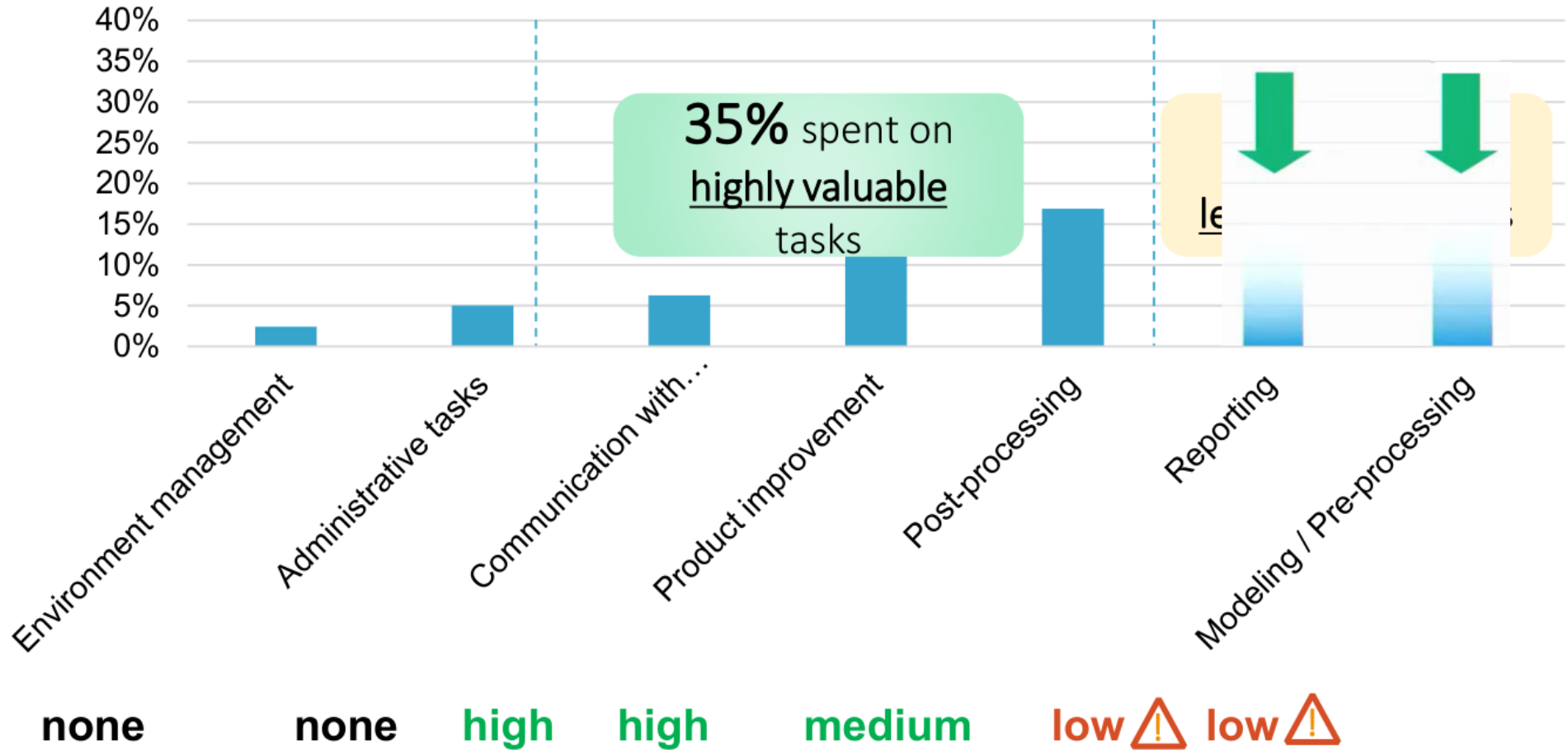
the **ANSYS** Toolbox

- *NEW!*



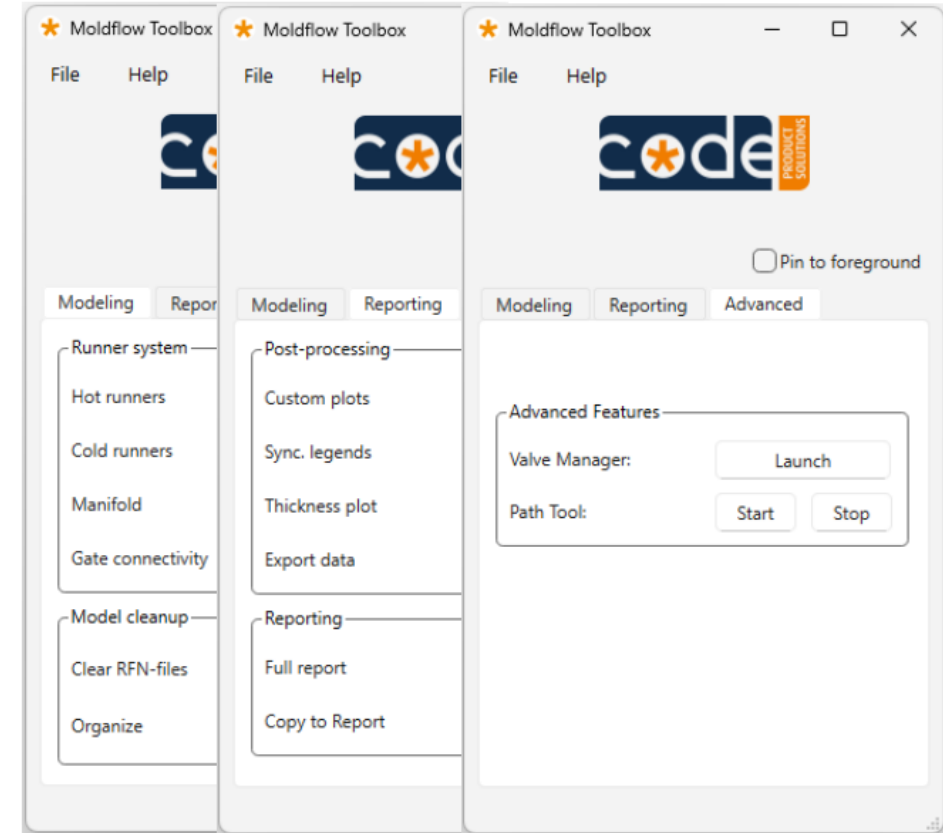
Our mission

remove non-value adding tasks from the workflow

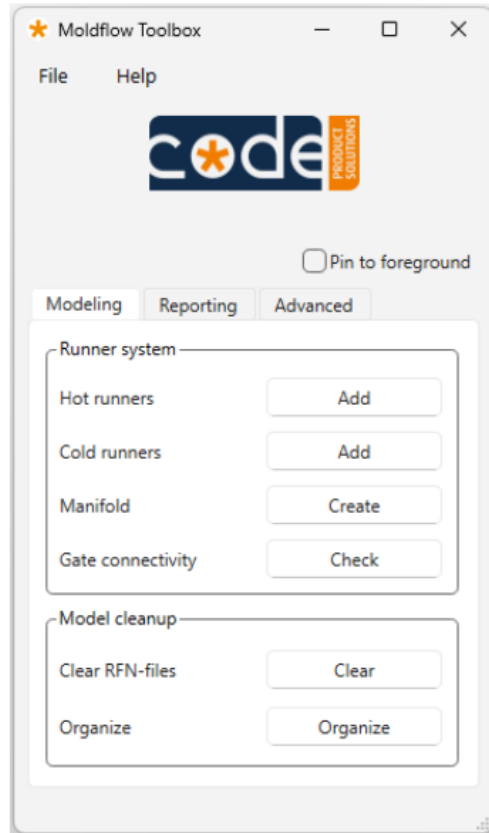


The Moldflow Toolbox

The Toolbox uses the **Moldflow API** to automate tasks in the daily workflow. For complex parts, up to **10 hours** can be saved in each Moldflow project. Features include automation in **modeling, reporting and post processing**.



modeling tools



places a new gate to a designated location
time saved: 30 - 45 min



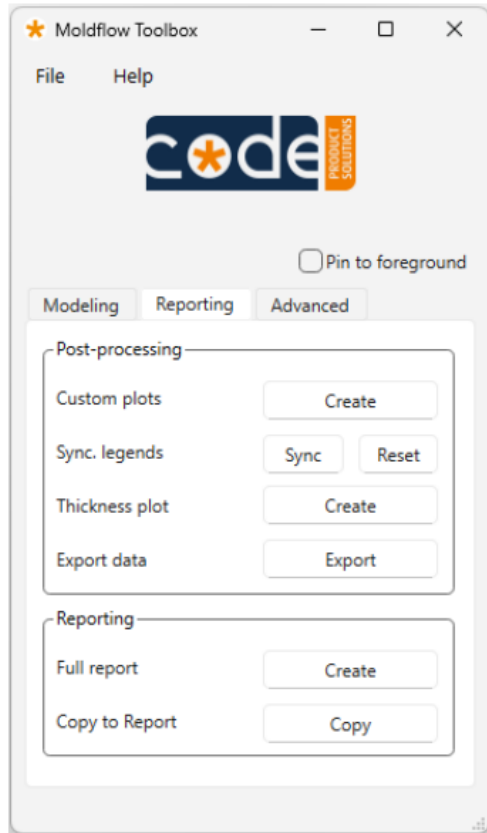
creates a manifold connected to the runners
time saved: 15 - 30 min



organizes layers and folders by element type
time saved: 15 - 30 min



reporting tools



creates and modifies plots (e.g. shrinkage compensation)

time saved: 15 – 30 min

▶ video

creates full report, allows comparing of studies

time saved: 120 – 360 min

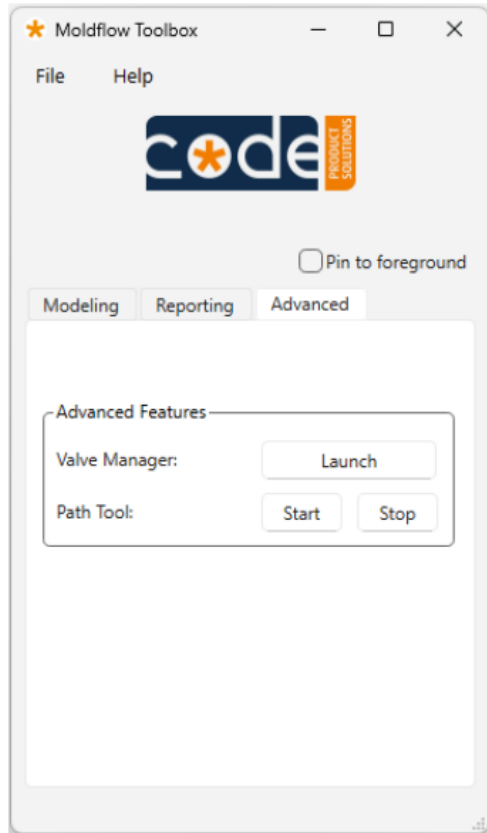
▶ video

copies the current plot to PowerPoint

time saved: 15 – 30 min

▶ video

advanced tools



allows advanced valve gate assignments and control

time saved: 15 – 30 min

enables shortest path between nodes

time saved: 15 – 30 min

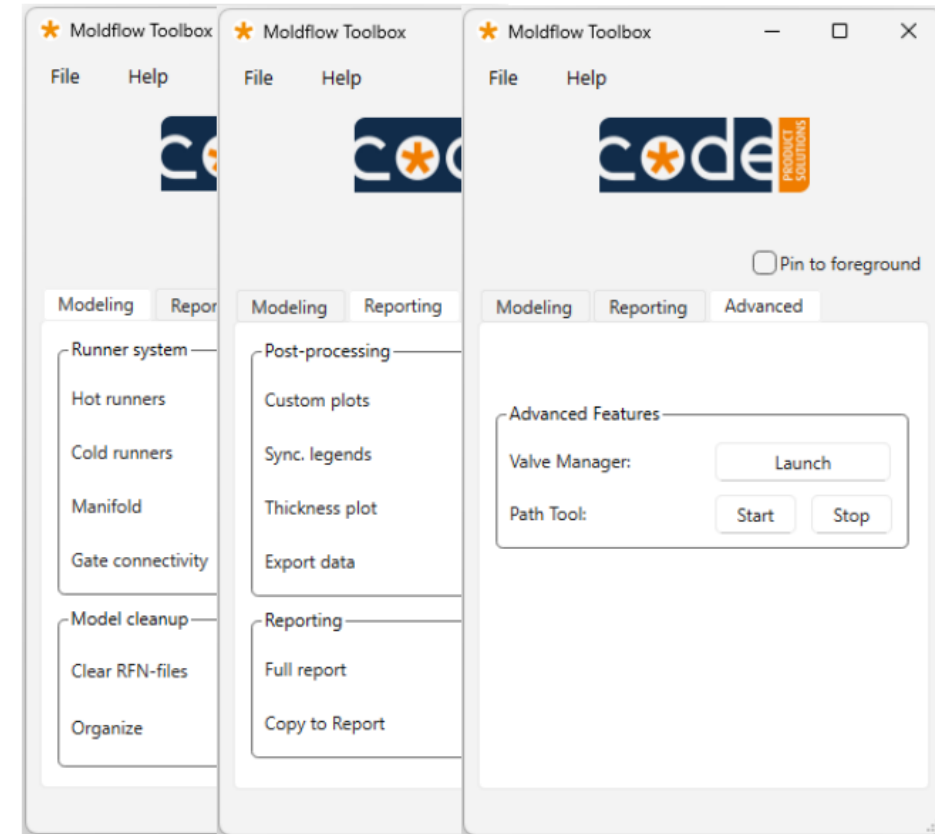


Live demo

The Moldflow Toolbox

time savings

	<u>time saved*</u>
Hot runners	15 – 22 min
Cold runners	15 – 22 min
Manifold	15 – 30 min
Gate connectivity	03 – 05 min
Clear RFN-files	03 – 05 min
Organize	15 – 30 min
Custom plots	15 – 30 min
Full report	120 – 360 min
Copy to report	15 – 30 min
Valve manager	15 – 05 min
Clear RFN-files	03 – 30 min
Path Tool	15 – 30 min
<hr/>	
time savings:	4 – 10 hours / project*



* Depends on part complexity and number of iterations

benefits of automation



time saved



consistency improved
(shared workflow)



cost saved



designs improved
(more iterations)



quality increased
(less mistakes, more checks)



documentation increased

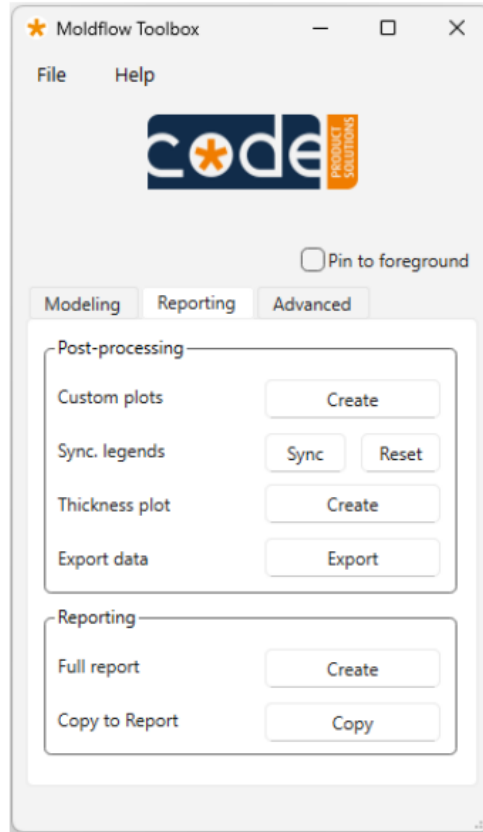


monotony reduced

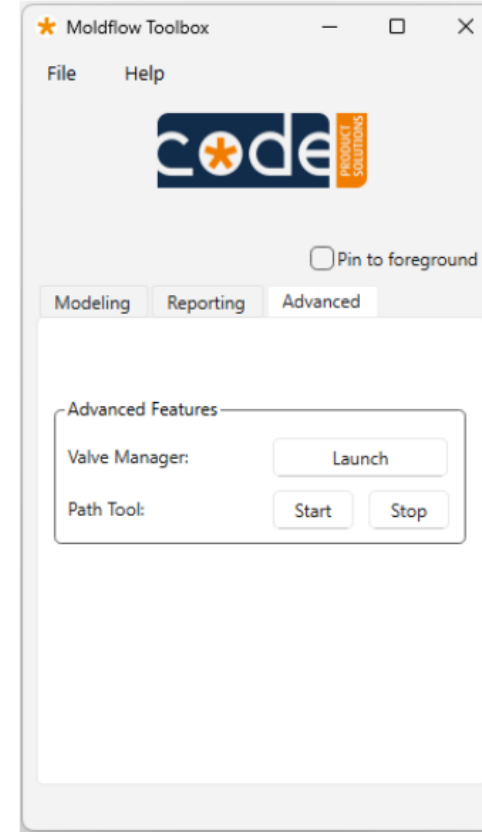


... more time for coffee

OUTLOOK



advanced customization of report layouts



customer survey to define needs for added value functionalities



Tim Dassen

Co-owner | Senior technical consultant

tim.dassen@code-ps.com

“Thank you for
your attention!”