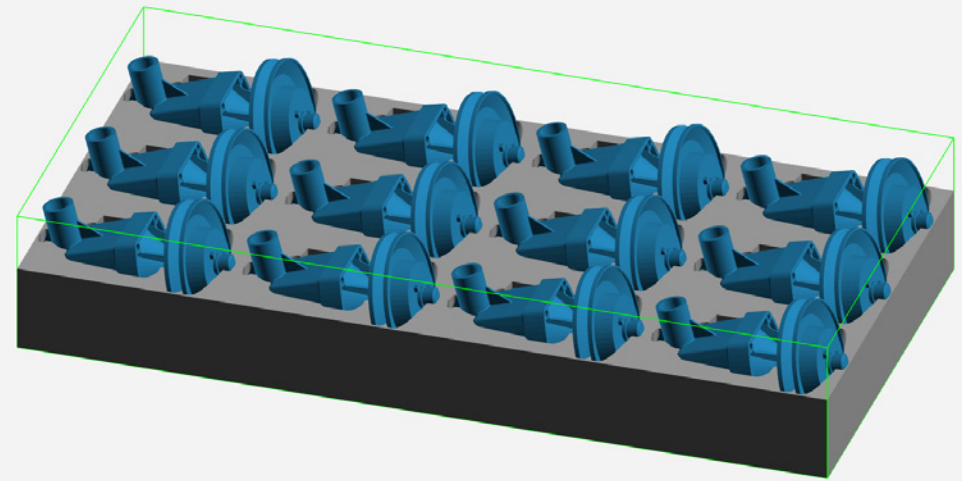




PackAssistant: Software for perfect packing

- More than 400 customers with over 2,000 installations
- Worldwide network of distribution partners
- New: cost planning plus palletizing and truck loading

Leading software for container load planning with identical, complex parts



Perfect packing with PackAssistant Container load planning

PackAssistant optimizes the loading of containers with identical parts. The software accounts not only for a component's length, width, and height, but also for its actual geometry based on 3D CAD data. This enables PackAssistant to calculate space-efficient part arrangements that reliably protect parts from damage. The calculated cost per part makes it easy to select the most economical packaging.

PackAssistant also calculates pallet and truck loading, including company-specific costs for containers, packing materials, and logistics.

Proprietary CAD data remains within the company: the software runs exclusively on user systems and does not connect to any external servers.

PackAssistant supports early, reliable planning of container loads, storage costs, and transportation costs. Manual packing trials can often be eliminated because the CAD data is already suitable as a working basis. This allows packaging to be already considered during product development.

A customizable PDF, Word, or Excel report significantly facilitates the preparation of price quotes and tenders. The software also offers CAD export for further packaging designs.

Using PackAssistant's automation interface, users can efficiently analyze large numbers of parts and integrate the analysis into company-specific packaging workflows.

User friendly

PackAssistant is intuitive and offers a clear presentation of the packaging options. The floating license model allows any number of installations. Only the number of simultaneous users is limited.

Database technology supports collaboration within the team: calculation results can be shared, and earlier calculations can be retrieved quickly and selectively.

Established worldwide

PackAssistant is multilingual and is used worldwide by more than 400 companies at approximately 2,000 workstations. An international network of distribution partners ensures local user support.

Benefits at a glance

- Optimal space utilization with reliable part protection
- Calculation of suitable containers, pallets, and trucks, incl. total costs
- Early planning already during design, without packing tests
- Direct PDF, Word, and Excel reports for efficient quote preparation
- Intuitive operation and clear visualization of packing options
- Component data remains within the company
- Easy sharing of packing solutions within the team through a central database
- Convenient and fast search for previous calculations
- Any number of installations through a floating license
- Established worldwide, multilingual, and with local support

Success stories

PackAssistant enormously simplifies the planning of logistics processes and the packing of industrial components.

AUDI AG

As one of the original development partners for PackAssistant, AUDI AG has been working with the software for many years and particularly benefits from the software's rapid calculations in its cooperation with suppliers. The enormous potential savings that can be realized through optimal packing of parts in large quantities can be seen in the case of a rear light for an automobile:

Supplier's recommendation

36 parts per container



PackAssistant's calculation

45 parts per container



Reduction in transportation costs

57 T€ per year

KTM Power Sports AG

When setting up a production facility for the X-Bow sports car series production, KTM Power Sports AG used PackAssistant to plan container sizes and the optimal packing of 450 parts. Since neither real parts nor prototypes were available during the set-up phase, planning was carried out using CAD data for the parts. Strategic planning for the containers revolved around the future logistics processes, the flow of materials, and the production cycle within the plant.

With PackAssistant it was possible to shorten the times for planning and implementing new containers by more than 50 percent: compared with the industry standard of nine to twelve months, using PackAssistant KTM needed just four months. PackAssistant enabled a comparison of different packing types and container models. The KTM planners created a concept for each part and an overall plan for using both standard and specialized containers.

Testimonials and references

(Selection)

»This software makes many things easier since we no longer need samples but can immediately carry out packing tests using the existing CAD datasets.«

Thorsten Henschel – AUDI AG

»If you look at the whole logistics chain, the container is just the beginning. Storage space can be saved, and fewer delivery cycles are needed to satisfy customer needs.«

Marco Rosensprung – GEDIA GmbH

»Only with a technology such as that offered by PackAssistant were we able to complete an optimal container planning for all 450 parts and define standardized containers.«

Franco Lanzoni – KTM Power Sports AG

References

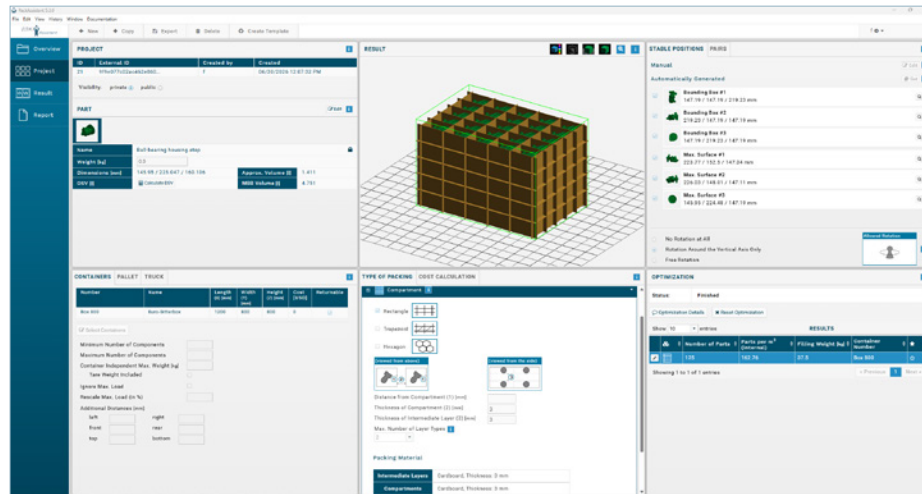
- AUDI AG
- BMW Group
- Continental AG
- Gedia Gebrüder Dingerkus GmbH
- KTM Power Sports AG
- Playmobil
- Renault Group
- Schleich GmbH



KTM Power Sports AG

PackAssistant – user interface

Easy and intuitive to use



- Help boxes (pop-ups) are available for all functions throughout the system.
- The user can adjust the interface settings to show measurements in mm/inch and g/kg/pound.
- Efficient and easy-to-use 3D view for displaying parts and packing results.
- PackAssistant supports multiple languages.

Types of packaging

One software – many options

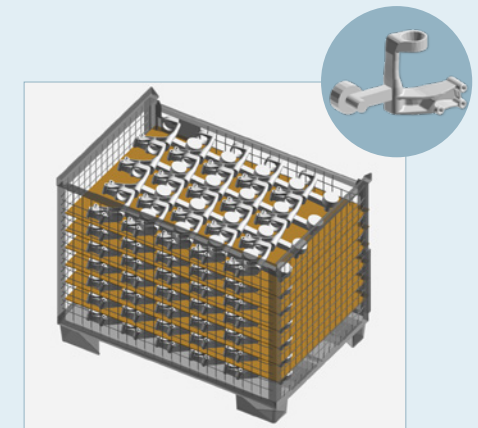
PackAssistant supports a wide range of packaging types, described in the sections below. It also offers advanced functions for customer-specific solutions, including:

- Possibility to select the minimum distance between parts, the container base, walls, and compartments.
- Adherence to the maximum load of the container.

- To facilitate the container's stability, it is possible to define stable positions for the parts.
- Calculation of the minimum volume bounding box of a single part.
- Automatic choice of an appropriate container from a list.
- Based on the 3D data, an approximated center of gravity of the part is displayed in the 3D view.

Loading with planar intermediate layers

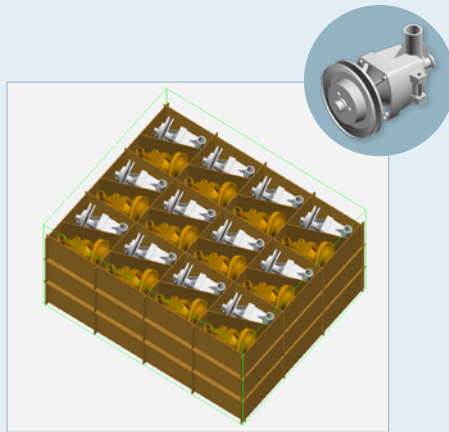
PackAssistant arranges the parts in layers with planar intermediate layers. The parts can be arranged in two ways: with or without overlap in the direction in which the parts will be taken out of the container. The software ensures that in either case, the arrangement of the parts is as regular as possible to allow easy loading and unloading. The exact selection of the minimum distance between the parts enables a realistic and case-specific solution.



3D view

Loading with compartments

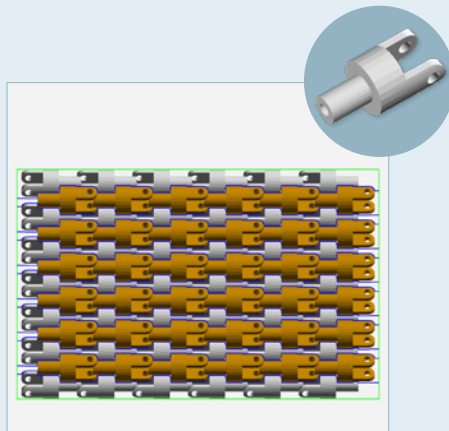
PackAssistant arranges the parts in layers, as before, and additionally in compartments. The software supports standard rectangular, trapezoidal, and hexagonal compartments. For many parts, trapezoidal compartments deliver a considerably higher packing density compared to rectangular ones. The additional effort in design and handling remains minimal.



3D view

Loading with flexible or without intermediate layers

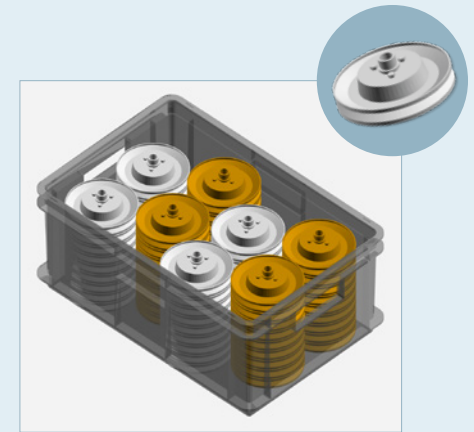
PackAssistant can also handle flexible separators, not only rigid dividers between layers. These intermediate layers are usually foam, plastic film, or fleece. Their material thickness can be specified in millimeters. If the value is set to zero, PackAssistant places the parts directly on top of each other.



View from the side

Loading in stacks

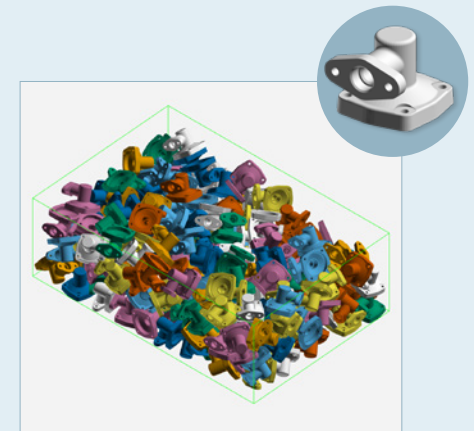
In addition to arranging objects in layers, PackAssistant can also pack them in stacks. This is particularly suitable for thin-walled objects, whereby stacking can be vertical or slanted. The example on the left shows vertical stacking.



3D view

Filling with bulk goods

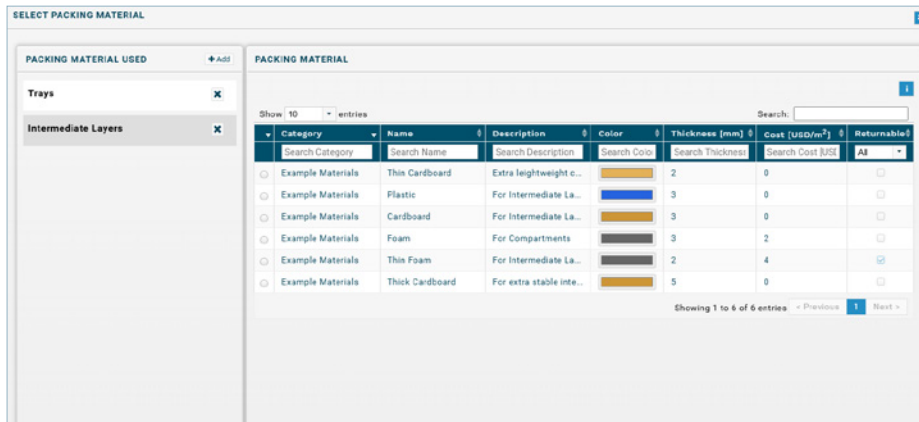
Small parts are often placed into containers without a defined order, for example, by dropping them from a conveyor belt. PackAssistant can estimate how many parts will fit by simulating their physical behavior. The simulation takes into account gravity, speed, and collisions and other relevant properties. Users can also specify any container shape.



3D view

New: Selection of packing materials

Consideration of materials and costs

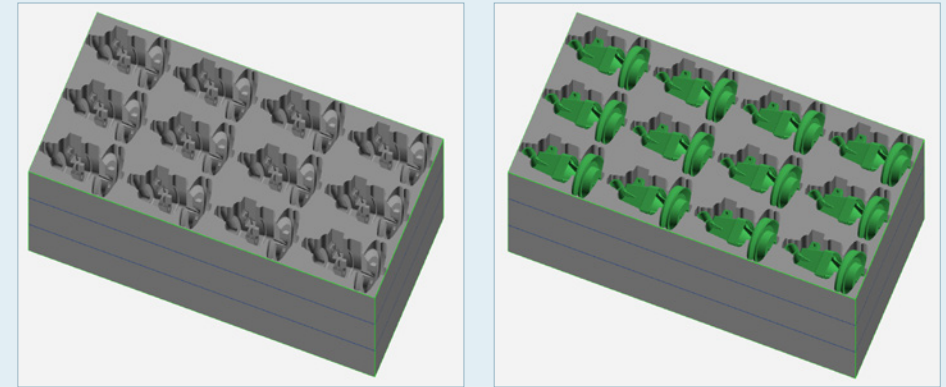


The material database contains packing materials for intermediate layers and compartments.

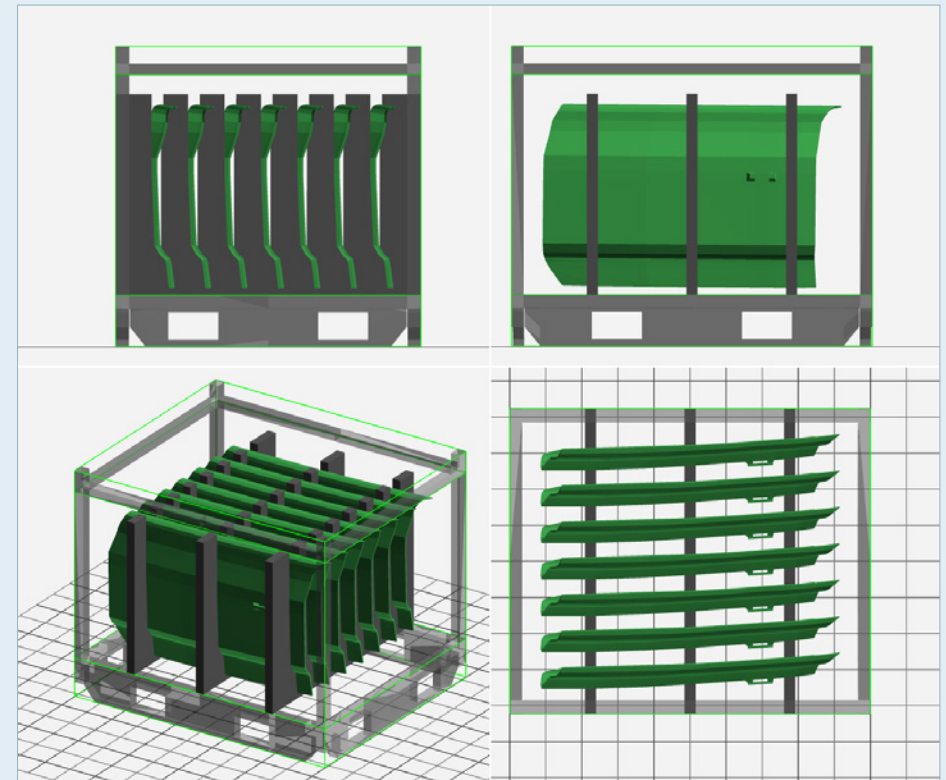
PackAssistant takes packing materials into account for the packing types "Fixed Intermediate Layers" and "Compartment." In addition to manually entering an intermediate layer thickness, users can select specific materials for fixed intermediate layers. For the packing type "Compartment," users can also define the compartment material. For "Fixed Intermediate Layers," PackAssistant can also calculate trays and inserts, to stabilize the parts.

The use of packing materials offers the following benefits:

- Clear visualization of the calculated layout
- Export of compartments, trays and inserts, for further CAD editing, even without parts
- Consideration of the costs of the packing material when selecting a packing option



Trays hold parts in place so that they do not shift or touch each other.



Inserts separate and protect parts in a container from friction and impact.

New: Palletizing and truck loading

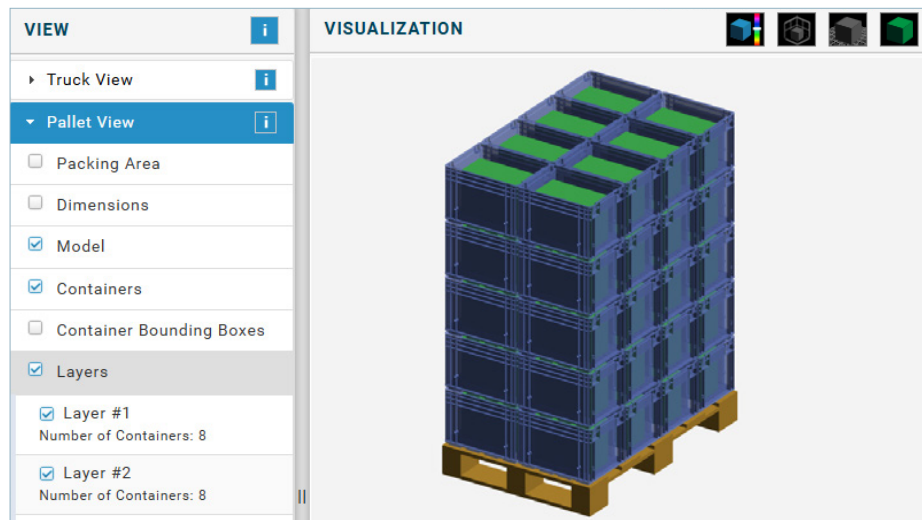
Multi-Level load planning from container to transport

PackAssistant can calculate both the arrangement of containers on pallets and the arrangement of pallets in the truck. Alternatively, the containers can also be packed directly into the truck.

On the results page, the load is visualized together with the containers and pallets. The contents of the container are shown as a colored box.

CONTAINERS			
PALLET			
TRUCK			
Name	Length (X) [mm]	Width (Y) [mm]	Height (Z) [mm]
Megatrailer	13600	2450	3000
☒ Select Truck			
Maximum Number of Layers			

The user interface allows containers and pallets to be selected and the loading of trucks to be planned.



Visualization of palletizing, including the container model.

Packing and logistics costs at a glance

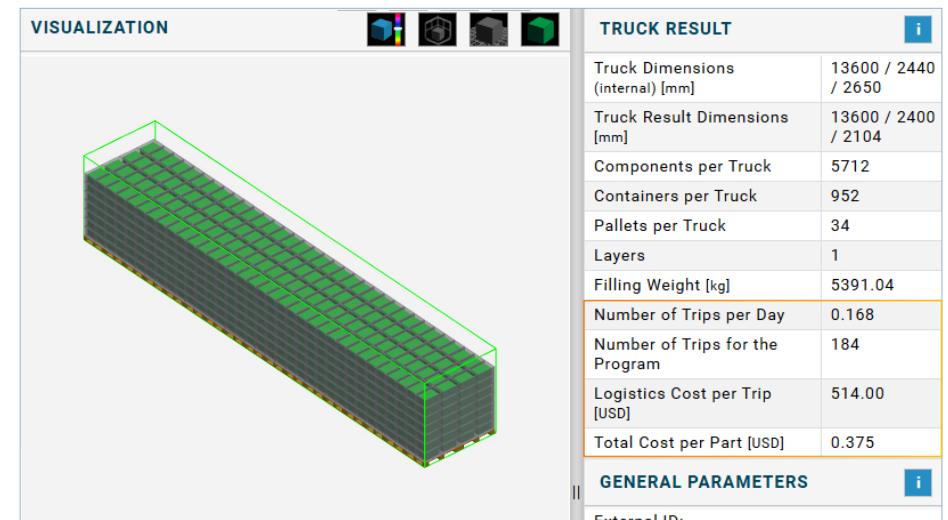
Transparently compare and select loading options

PackAssistant calculates one or more packing options for each container and displays the associated costs. The software factors in different packing materials as well as container and logistics costs.

On the results page, PackAssistant determines the cost per part, based on a container, a pallet, or a complete

truck. For truck loads, the software also displays the cost per trip.

This provides a quick comparison of packaging options as a basis for sound business decisions in packaging planning, quote preparation, and logistics.



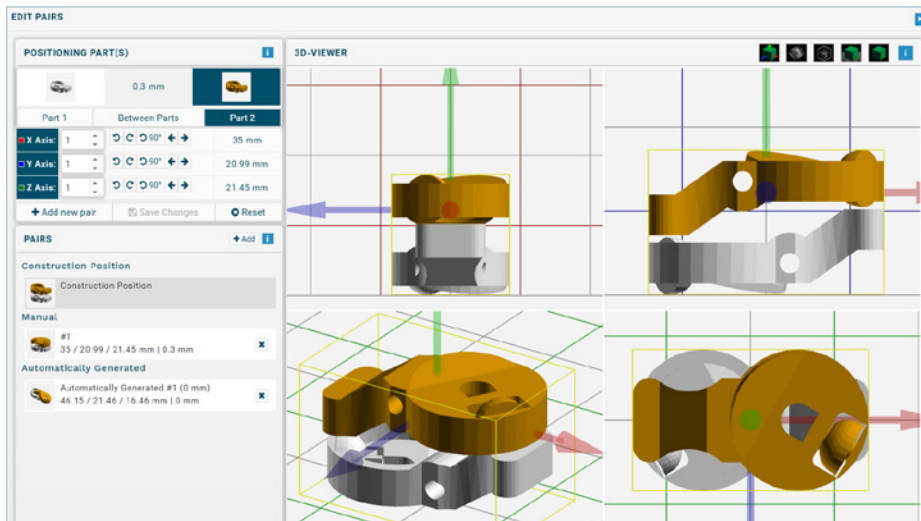
View of the planned truck load with key logistics and cost figures.

Pairings

Two identical parts form a single unit

PackAssistant can also create pairs. This is useful when parts need a defined position relative to each other, for example, to protect one side, ensure stability, or achieve an optimal arrangement. If PackAssistant does not automatically find the desired orientation, users can define the pair manually. Both parts then form a single unit.

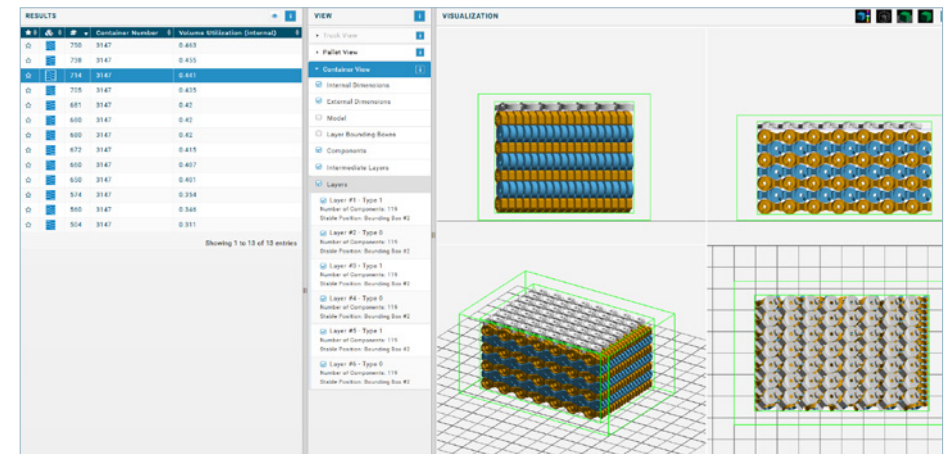
- A pair always consists of two identical parts.
- PackAssistant includes a 3D editor that allows users to individually set the rotation and position of the parts.
- If desired, the software can automatically suggest suitable pairs, whereby the minimum distance is adjustable.



3D view of the pair editor

Output of results

Clear results facilitate packaging selection



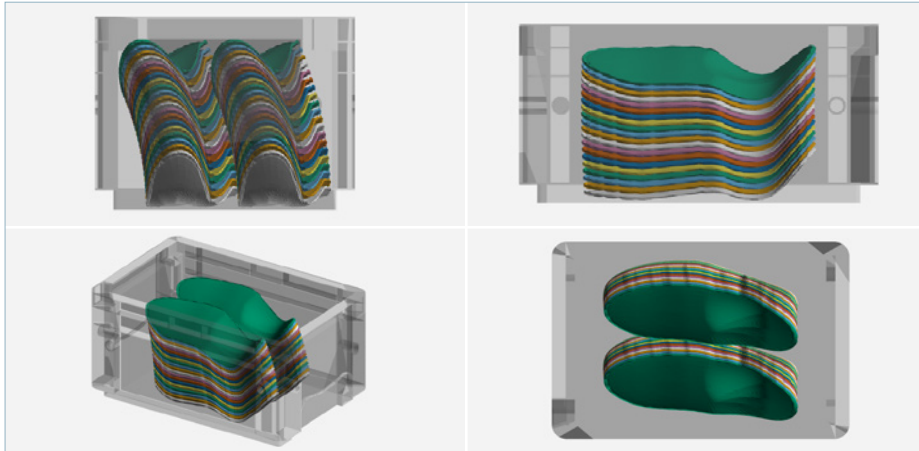
Fast comparison of calculated options in a clear table on the left.

Packing report and 3D CAD output

PackAssistant generates 3D images for each packaging solution that serve as packaging instructions. These images visualize the packaging solution, simplify the preparation of commercial quotes, and give customers a realistic view of the proposed packaging. Detailed drawings or graphics are no longer required.

For an even more realistic presentation of the results, the 3D container data can also be imported. This allows results to be displayed directly in the container, making the packer's job easier.

The container model also offers a flexible transparency setting to ensure the view of the result remains clear.



Display of packing options in the visualized CAD container from all relevant views.

Additionally, the software can export results as 3D datasets in JT, STEP, and VRML formats. This feature allows for a more illustrative presentation of the packing arrangement and enhances the packaging instructions if necessary.

Using a standalone 3D viewer, users can generate sections and views of the packing results.

Technical specifications

- PackAssistant is offered as a floating license.
- FlexNet Publisher is used for software licensing.
- PackAssistant runs on any standard PC with Windows.
- The parts can be imported in any of the following formats: JT (*.jt), STEP (*.stp, *.step), IGES (*.igs, *.iges), VRML (*.vrl) and STL (*.stl).
- Results can be exported as packing reports in Microsoft Excel/Word or as CAD data in the formats JT, STEP and VRML.

Packaging instructions

PackAssistant generates packaging instructions as Microsoft Excel or Word files. These can be customized to meet specific company requirements. Clear and illustrative graphics make it easier to implement the planned packaging.

Automatisches Speichern Electric Shaver Part3.step_Compartment_3215_440_2025-07-24_155931_3d212.xlsx - Geschützte Ansicht

Datei Start Einfügen Seitenlayout Formeln Daten Überprüfen Ansicht Add-Ins Hilfe Acrobat

A1 Packing Report Created by

	A	B	C	D	E	F	G	H
22	Number	3215			Tare Weight	0,57		
23								
24		Internal Dimensions	External Dimensions		Additional Distances			
25	Length	243	300		left / right	0	0	
26	Width	162	200		front / rear	0	0	
27	Height	129,5	147		top / bottom	0	0	
28	Volume	5,098	8,82					
29								
30	Result							
31	External ID	79a023237ce240b882ba4ce07da85e04						
32	Number of Components	440			Result Dimensions			
33	Number of Layers / Stacks	5			Length	230,93		
34	Number of Layer / Stack Types	1			Width	140		
35	Max. Used Part Rotations per Layer / Stack Type	1			Height	118,455		
36	Total Weight	10,69			Filling Weight	10,12		
37		Components per m³	Volume Utilization	DSVR				
38	Internal Dimensions	86310,1	0,271					
39	External Dimensions	49886,621	0,157					
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Coversheet Layer or Stack Type

Packaging instructions in Excel

Add-on module for automation

With the new automation interface, PackAssistant can receive data from other programs to automatically create projects and start optimizations. There is no limit to the number of projects. Users do not need to intervene or wait during this process.

The benefits of the new add-on module include better integration of PackAssistant into company-specific processes and a faster workflow.

The add-on module can be used in two ways:

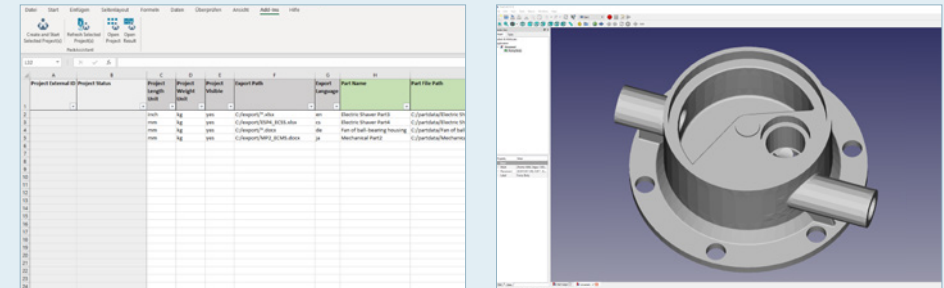
- **Excel Add-In:** The module includes an Excel add-in. Projects can be sent directly from Excel to PackAssistant and started immediately. Once optimization is complete, the best result is written back into the Excel file automatically.

- **Direct use of the interface:** The module uses the standardized JSON format to exchange data between PackAssistant and other software applications. This allows PackAssistant to be connected with any program that can call external applications once configured properly. The Excel add-in is one example of such a connection since it already uses the interface.

Requirements

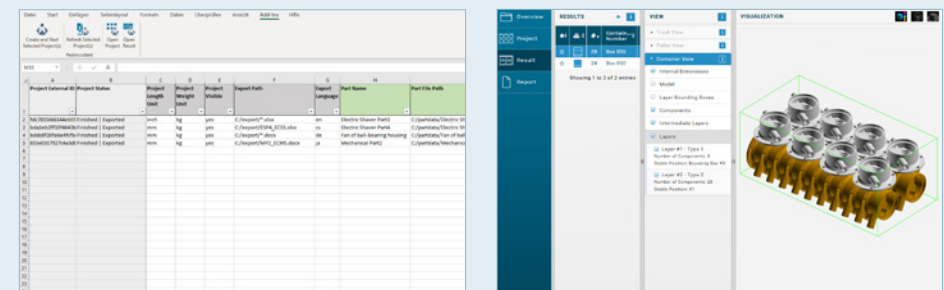
1. Requires PackAssistant version 5.0.0
2. Separate license for the use of the add-on module (already included in the corporate license)

1. Projects can be created directly in Excel or PackAssistant can be integrated via an interface from external applications (CAD, PLM, etc.).



2. PackAssistant optimizes all projects automatically.

3. PackAssistant visualizes the results and transfers them back to Excel or the connected application.



Development

Fraunhofer Institute for
Algorithms and Scientific
Computing SCAI
Business Area Optimization

Schloss Birlinghoven 1
53757 Sankt Augustin
Germany
www.scai.fraunhofer.com

Distributor

scapos AG
Schloss Birlinghoven 1
53757 Sankt Augustin
Germany

Phone +49 2241 14-4403
www.scapos.com

Contact and further information

www.packassistant.com

info@packassistant.de