

3D spare parts catalogs

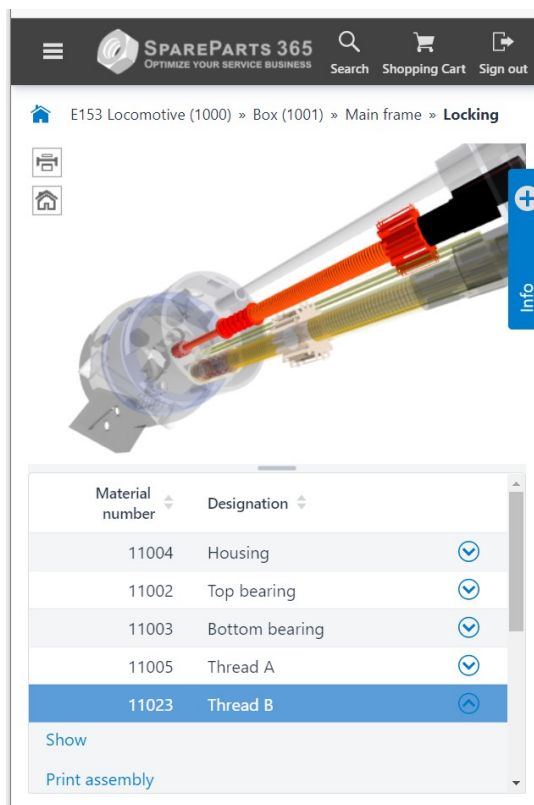
"Classic" spare parts catalogs, which are usually delivered in paper form or as PDF files, usually contain 2D representations of the assemblies contained.

Ideally, so-called exploded views are created as 2D graphics, which make it possible to clearly display the individual parts and their installation location.

However, this requires some additional effort, which is why conventional design drawings are sometimes still used, which are generated directly from the CAD system. The advantage of the lower creation effort is offset by the poorer findability of a required spare part.

3D data for spare parts catalogs

For several years now, companies have therefore started to use 3D data from design directly for spare parts catalogs.



3D representation in SpareParts 365, mobile view

Advantages

This has several advantages:

- Minimal effort required for the provision of graphics for the spare parts catalog
- Avoidance of additional work steps, such as the assignment of item numbers and the creation of a perspective exploded view
- Convenient and modern possibility of parts identification in an electronic spare parts catalog

Boundary conditions

However, there are also some points to consider if you want to take this step:

- By their very nature, 3D graphics are only suitable for an electronic spare parts catalog, for a print edition they are not usable.
- Since the parts lists usually do not come directly from the CAD system, but rather from the ERP system, it must be possible to link the individual assemblies and parts, e.g. via the material number. Unfortunately, this is not given in all cases, so that processes have to be adapted or design data must be reworked.
- The structure of the assemblies in the design must also be suitable for service; the BOM structure must be mapped to the corresponding model.
- The models of entire plants or machines are usually too large to be used directly for display in a spare parts catalog. Therefore, it may be necessary to work with 2D representations (e.g. schematic) for the upper hierarchy levels after all, or to generate correspondingly simplified 3D models with sufficiently small data volumes.
- In some cases, it is undesirable that certain details of a machine are depicted too precisely, thereby disclosing important know-how.
- Also, the principal consent of the management or the design management for the publication of 3D data should be obtained in advance in order to avoid unpleasant surprises when the project is approved.

3D spare parts catalogs with SpareParts 365

SpareParts 365 offers the option to use 3D data from design for the creation of spare parts catalogs.

3D files in JT or STEP formats can be used as source formats, i.e. all common CAD systems are thus supported.

The display of 3D models in the spare parts catalog takes place in the browser, using HTML5 and WebGL. For this purpose, the JT or STEP files are converted in an intermediate step into a format that can be displayed directly in the browser.

This conversion uses an interactive tool that can also be used to remove or distort individual elements.

To link the 3D models with the BOM items, corresponding data must be available – as a rule, this is the material number. Since material numbers are often not contained 1:1 in the 3D data, the

link can also be made via so-called "regular expressions", e.g., if the material number is included as part of the naming of elements.

SpareParts 365 then allows the catalog user to rotate, move, hide and select parts in the 3D models.

3D Splitter

In the spare parts catalog, for each individual assembly for which a 3D graphic is to be displayed, a corresponding 3D file is required that represents all the parts contained in this assembly.

If the creation of these individual 3D files per assembly from the CAD or PLM system is too time-consuming, this can alternatively be realized via an additional tool "3D Splitter".

This tool automatically generates an associated 3D file from a model with a complete machine for each of the assemblies contained in the machine BOM, which can then be used to create the spare parts catalog.

Sample catalog with SpareParts 365

Let us advise you free of charge and without obligation – we will work with you to determine the extent to which 3D spare parts catalogs with SpareParts 365 can support you in your service or after sales business in the future.

We are also happy to create a sample catalog based on exemplary data from your company, so that you can get a more detailed impression of the solution on this basis.

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