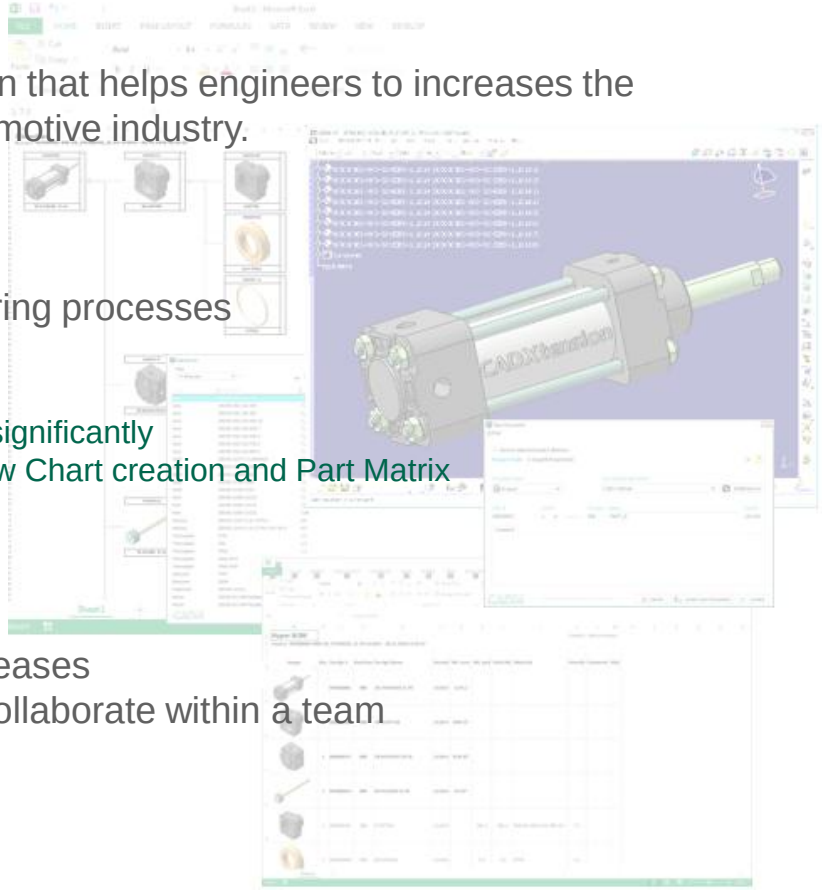
# Introduction

developed from engineers for engineers

CADx offers a comprehensive tool collection that helps engineers to increases the efficiency especially in the cost-driven automotive industry.



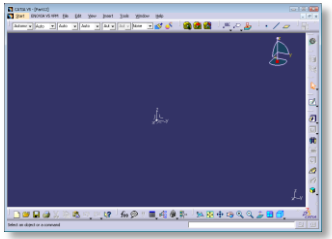
- Intuitive operation
- Increases efficiency in general engineering processes
  - Avoids general potential failure
  - Speeds up data creation and handling significantly
  - Fully automated BOM creation incl. Flow Chart creation and Part Matrix
  - Aided material definition for parts
  - Automated drawing frames
  - Automated title block fill out
- Compatible with all current Catia V5 releases
- No extra server installation needed to collaborate within a team
- Installation on user level possible
- Simple maintenance
- Coexistence with any PLM system

# Operation Overview

developed from engineers for engineers

Creating parts according predefined nomenclature

2

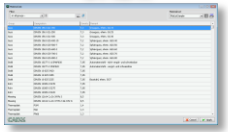


CADx

1

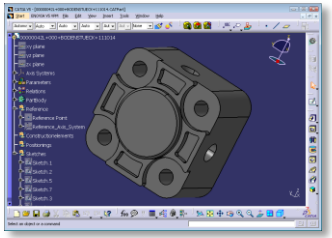
3

CADx



4

Applying Meta Data

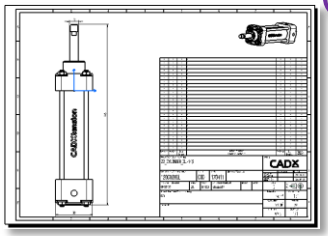


CADx

8

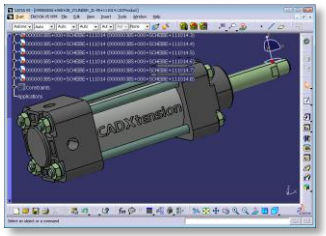
Automated Drawing Frame

9



5

Final Product

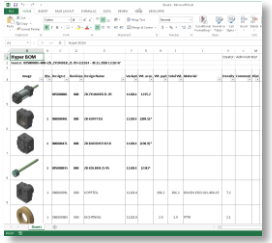


6

CADx

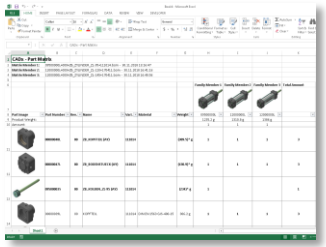
Quantity + Multi Level BOM

7a



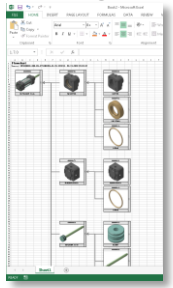
Part Matrix of product family

7b



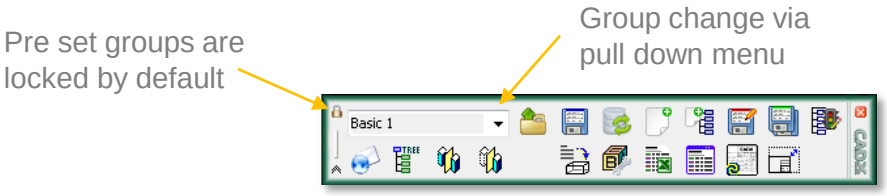
Manufacturing flow chart

7c



# CADx Toolbar

1




All CADx tools are available through a “stand-alone” toolbar application. This allows you to use the tools right after installation. There is no need to put your hands on Catia. This is very beneficial if you are dealing with more then one Catia release.

The toolbar comes with a pre setup of all available tools. They are separated in different groups according its purpose. This helps to retain an perfect overview.

It is also possible to put your own tools and applications on the toolbar with a few mouse clicks. Even links to any type of documents, network directories and even web links are possible. This makes the software to a single point of entrance to all needed tools and information.

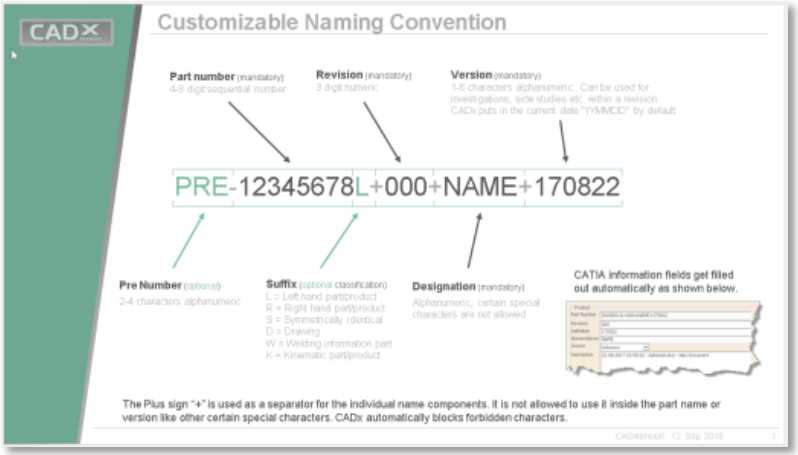
Users can also share their toolbar setups with other team member fast and easy.

# CADx Nomenclature

2

CADx provides data management tools which allows you keep your CAD documents always in order like you would expect from a modern PLM system. But in fact CADx does this job more intuitive and way faster than known PLM systems, especially if you come from a flat-file environment.

- Standardizes Nomenclature
- Revisioning
- Versioning (side studies)
- Customer number swap
- Mass data migration
- Data transfer via FTP incl. report



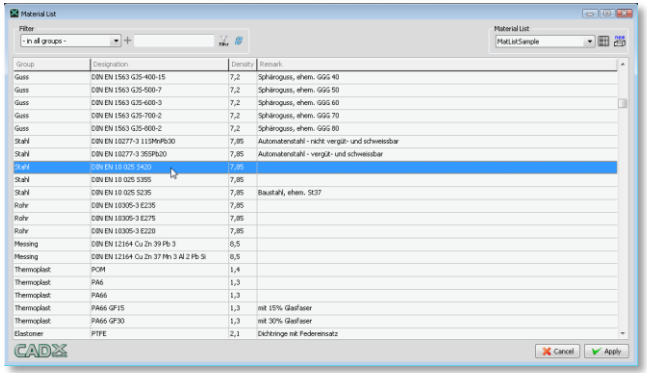

And many other functions, which can be even adopt to your special needs.

# CADx Material Management

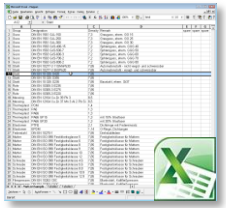
3

The Material Management tool helps you to maintain your product materials. They will shown in a standardizes format in all your CATParts. If you are using CADx Title Block tool the material description, incl. weight, surface and volume gets automatically populated to the corresponding CATDrawing during a title block update.
The user just need to select a preferred material out of a materialist which can be maintained by your CAD users or even from your purchasing colleagues using Excel.
If provided also the commodity information will be placed in your CATParts and will shown up in your BOM's to pre sort your single parts for purchasing purposes.

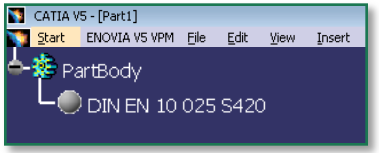
CADx Material List




Maintain via Excel



Material information

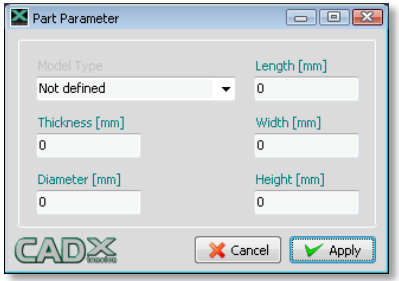


# CADx Document Metadata

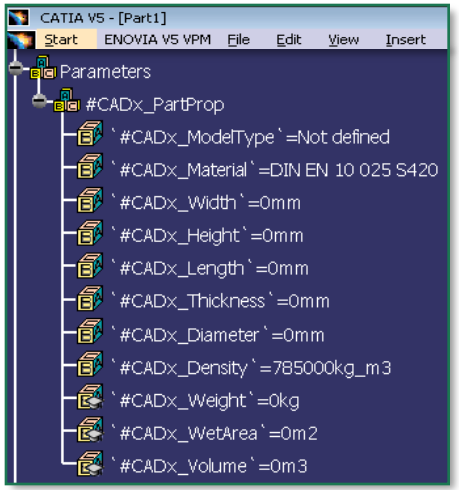
4

Besides material information also other meta data can be maintained with CADx. Those information will be stored in the CATPart tree as Parameters and can be used for BOM outputs as well to control 3D geometry. If you are using the dimensional parameters to control your 3D rough body you will also have this information also available in your BOM to provide purchasing more detailed information for quoting your parts.

CADx input form



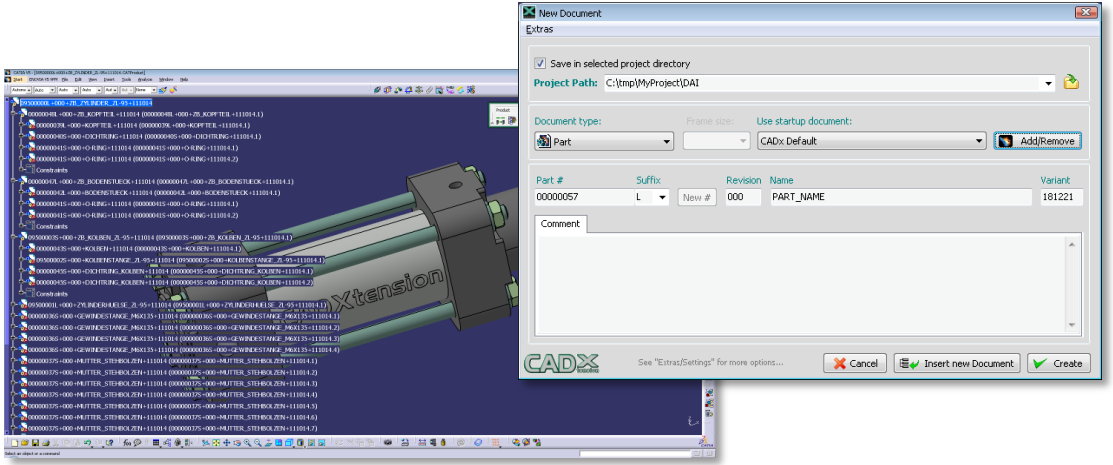

Material information



# CADx Final Product

5

Using CADx document tools guaranties you to always end up in consistent nomenclature and material definition of all your parts. The build numbering engine avoids double numbering even in a multiple user environment. CADx also checks for instance against using two different revisions of one part number within one product and many more… This is a very robust foundation to create BOM and communicate to other departments of your company as well as to customers and suppliers.

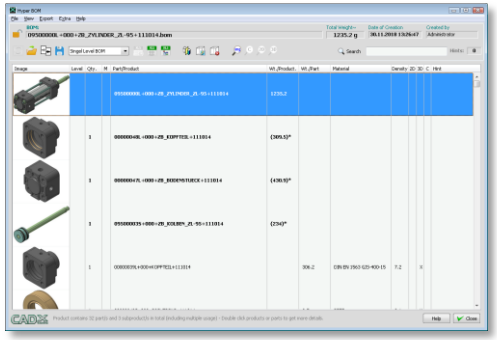


# CADx Hyper BOM

6

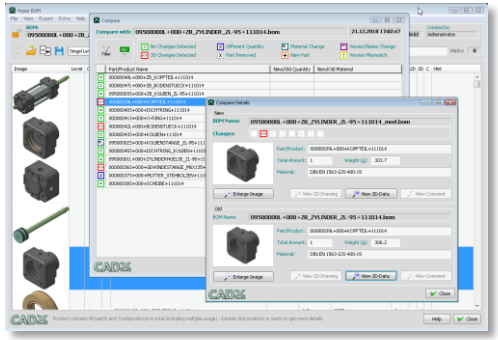
One of the most time-consuming engineering side task is to create the BOM of your final Product. It also has a large margin for errors. But if you are using consequently our tools to create and maintain your Parts and Products CADx Hyper BOM tool creates you BOM 100% automatically and absolutely accurate against your CAD Data.
With Hyper BOM you can display, modify* and compare BOM's. You can switch between Quantity and Structured BOM view as well as creating Part Matrix BOM's and Production Flowcharts**

Single-Level BOM



Part Matrix BOM

Compare BOM



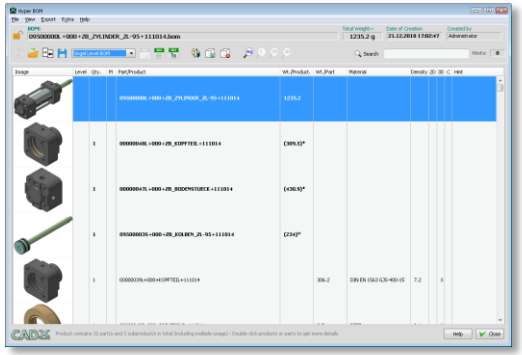
*) Unless the BOM is locked - what you should always to before hand it out to any third party
**) CAD product must be setup according production sequence's

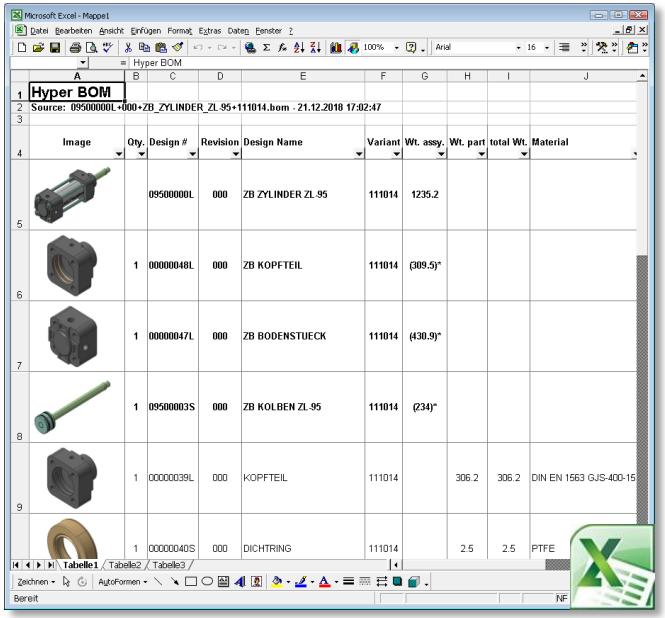
# CADx BOM Export to Excel

7a

Export Single-Level or Structured BOM to Excel.
Because Hyper BOM will always write out BOM's in the very same format it is an excellent foundation to connect to other Excel based automation for further processing.

Single-Level or Structured BOM





Hyper BOM

Source: 09500000L+000+ZB_ZYLINDER_ZL-95+111014.bom - 21.12.2018 17:02:47

| Image | Qty. | Design # | Revision | Design Name | Variant | Wt. assy. | Wt. part | total Wt. | Material |
|---|---|---|---|---|---|---|---|---|---|
| | | 09500000L | 000 | ZB ZYLINDER ZL-95 | 111014 | 1235.2 | | | |
| | 1 | 00000048L | 000 | ZB KOPFTEIL | 111014 | (309.5)* | | | |
| | 1 | 00000047L | 000 | ZB BODENSTUECK | 111014 | (430.9)* | | | |
| | 1 | 09500003S | 000 | ZB KOLBEN ZL-95 | 111014 | (234)* | | | |
| | 1 | 00000039L | 000 | KOPFTEIL | 111014 | | 306.2 | 306.2 | DIN EN 1563 GJS-400-15 |
| | 1 | 00000040S | 000 | DICHTRING | 111014 | | 2.5 | 2.5 | PTFE |

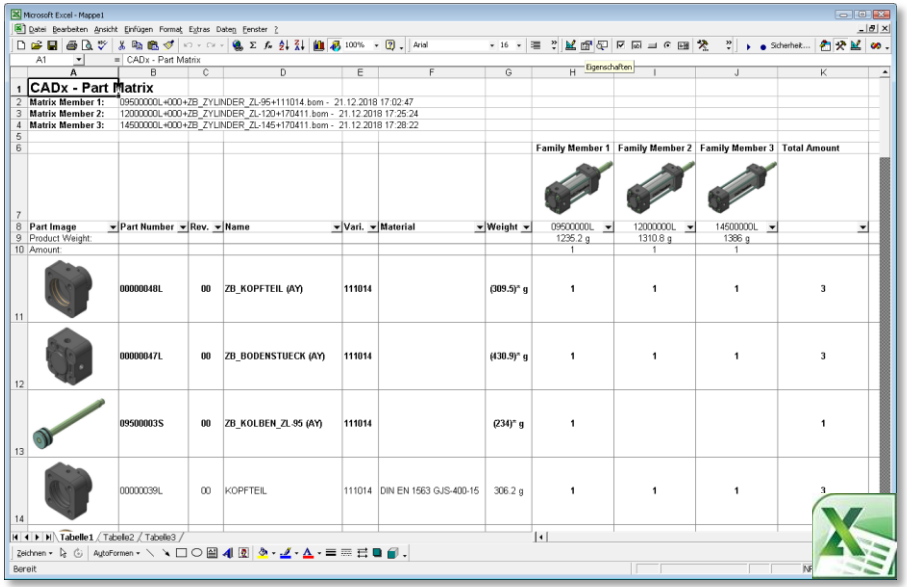
developed from engineers for engineers

# CADx BOM Export to Excel

7b

Export Part Matrix BOM to Excel.
Shows re-usage of every single part including total amount across your product family.

Hyper BOM

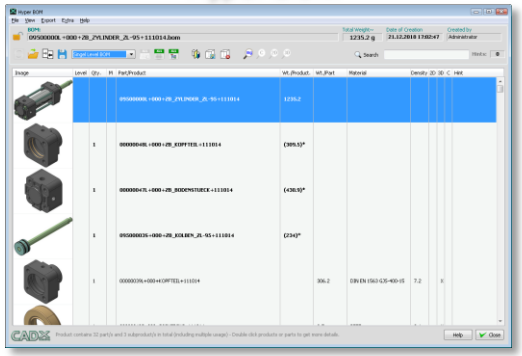


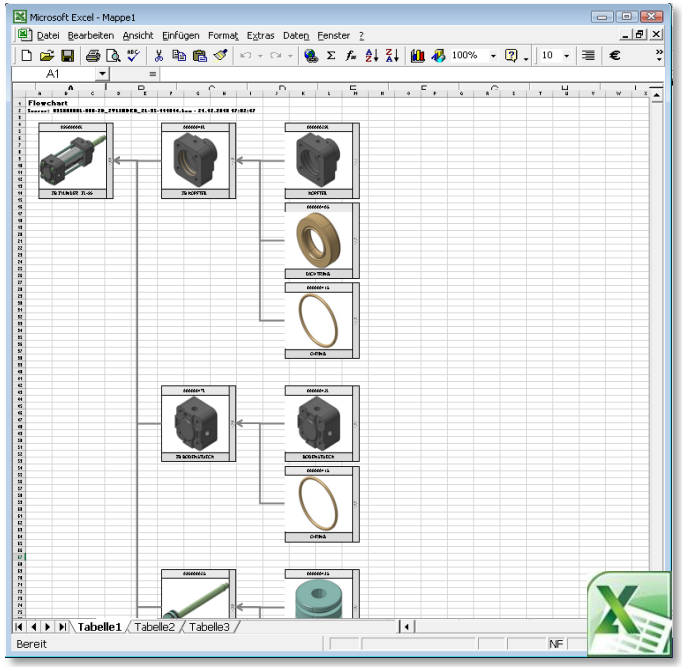
# CADx BOM Export to Excel

7c

Export Process Flow Chart to Excel.
Shows assemble sequence* of your multi level product.

Hyper BOM



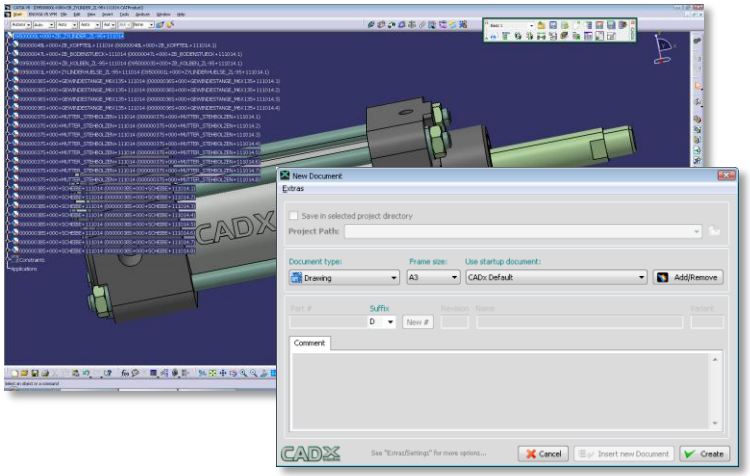



**) CAD product must be setup according assemble sequence's

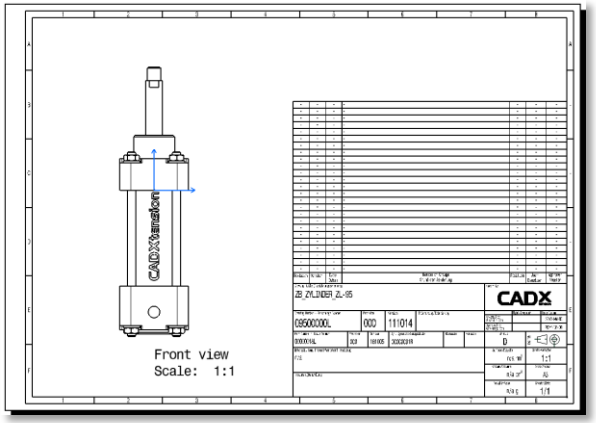
# CADx Drawing Frame Automation

8

CADx Drawing Frame Automation allows you do create and resize pre defined drawing frames. Frame sizes are available from A3 up to A0x400. All entries of title block and revision history will remain while resizing the frame.




Automated Drawing Frame

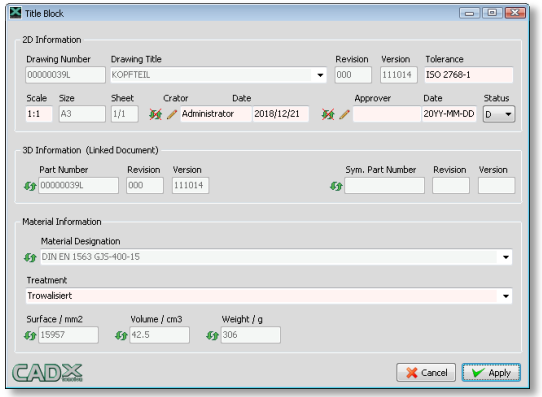


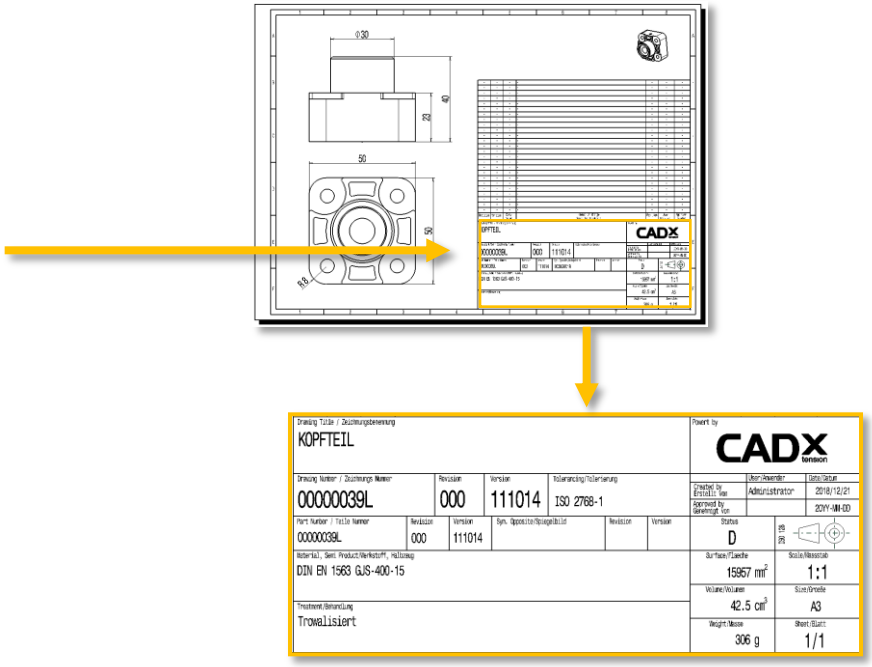
# CADx Drawing Title Block

9

The CADx title block tool retrieves data from the linked document  such as part number, part name and revision. In case of linked parts also material information, weight, volume etc. and populats on the drawing title block.

CADx Tilte Block Editor



developed from engineers for engineers

# Thank You