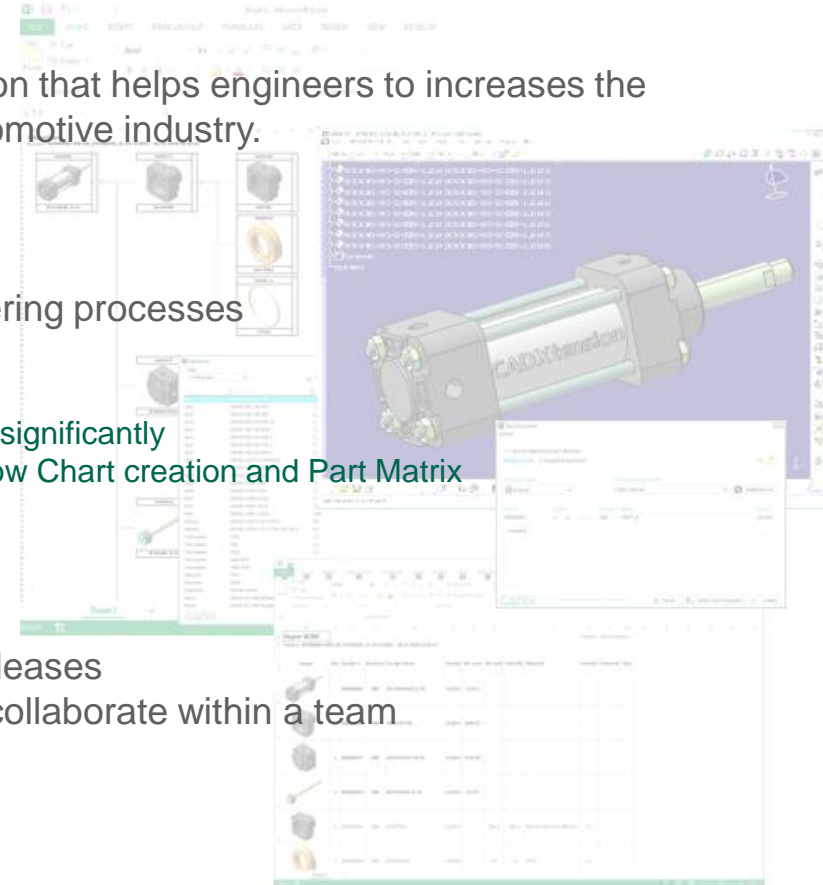


CADx offers a comprehensive tool collection that helps engineers to increase the efficiency especially in the cost-driven automotive industry.

- 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



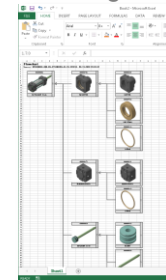
Creating parts according predefined nomenclature



7a



7c



1

Pre set groups are locked by default

Group change via pull down menu

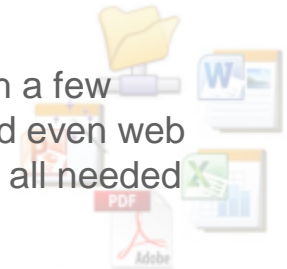


All CADx tools are available through a “stand-alone” toolbar application. This allows you to use the tools right after installation. There is no need to put your hands on Catia. This is very beneficial if you are dealing with more then one Catia release.

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.

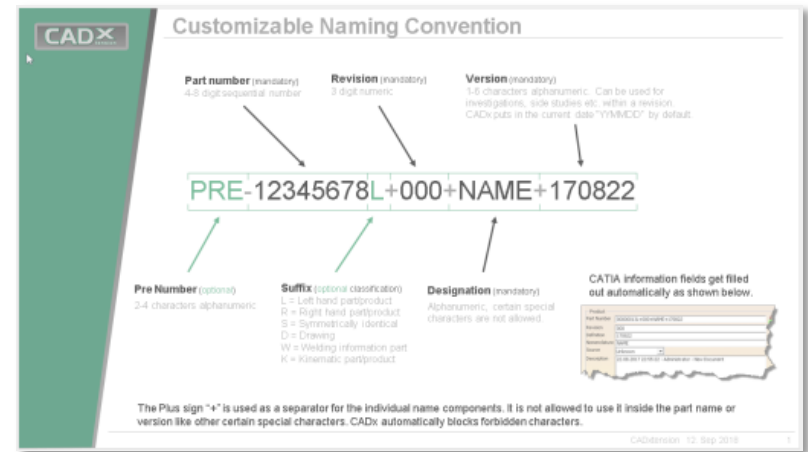
It is also possible to put your own tools and applications on the toolbar with a few mouse clicks. Even links to any type of documents, network directories and even web links are possible. This makes the software to a single point of entrance to all needed tools and information.

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



CADx 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.

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.

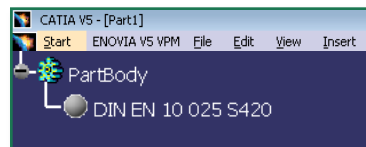
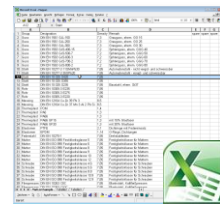
The user just need to select a preferred material out of a materialist which can be maintained by your CAD users or even from your purchasing colleagues using Excel. If provided also the commodity information will be placed in your CATParts and will shown up in your BOM's to pre sort your single parts for purchasing purposes.

CADx Material List

Group	Designation	Density	Remark
Guss	DIN EN 1563 G25-400-15	7,2	Sphäroguss, ehem. GG5 40
Guss	DIN EN 1563 G25-500-7	7,2	Sphäroguss, ehem. GG5 50
Guss	DIN EN 1563 G25-600-3	7,2	Sphäroguss, ehem. GG5 60
Guss	DIN EN 1563 G25-700-2	7,2	Sphäroguss, ehem. GG5 70
Guss	DIN EN 1563 G25-800-2	7,2	Sphäroguss, ehem. GG5 80
Stahl	DIN EN 10277-3 1.1394Pb30	7,85	Automatenstahl - nicht vergüt- und schweißbar
Stahl	DIN EN 10277-3 35Pb30	7,85	Automatenstahl - vergüt- und schweißbar
Stahl	DIN EN 10 025 S235	7,85	
Stahl	DIN EN 10 025 S235	7,85	Baustahl, ehem. St37
Stahl	DIN EN 10005-3 E235	7,85	
Stahl	DIN EN 10005-3 E275	7,85	
Stahl	DIN EN 10005-3 E220	7,85	
Flussing	DIN EN 12164 Cu-Zn-39 Pb-3	8,5	
Flussing	DIN EN 12164 Cu-Zn-37 Pb-3 Al 2 Pb-5	8,5	
Thermoplast	PA6	1,14	
Thermoplast	PA6	1,13	
Thermoplast	PA66	1,13	
Thermoplast	PA66 GF15	1,13	mit 15% Glasfaser
Thermoplast	PA66 GF30	1,13	mit 30% Glasfaser
Elastomer	PTFE	2,1	Dichtungen mit Federeinsatz

Maintain
via Excel

Material
information



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

The screenshot shows a 'Part Parameter' dialog box with the following fields:

Model Type	Length [mm]
Not defined	0

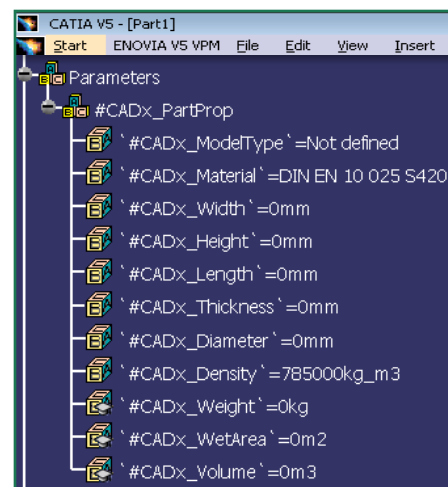
Thickness [mm]	Width [mm]
0	0

Diameter [mm]	Height [mm]
0	0

At the bottom, there are 'Cancel' and 'Apply' buttons, and the CADx logo.

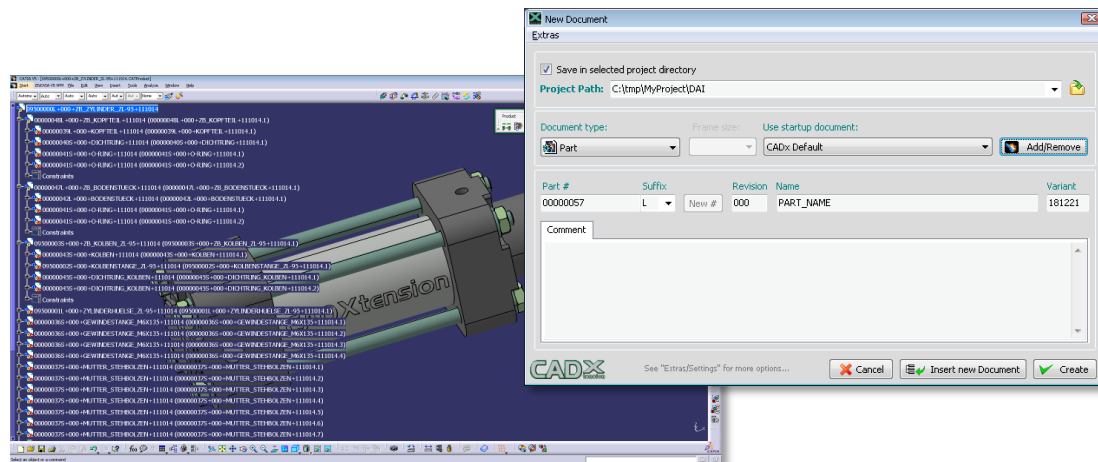


Material information



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.



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

File Edit View Insert Format Tools Help

00000040-1000-10_20_10000_10_45+110014-Item

Total Weight: 13225.7 g Date of Creation: 06.11.2019 13:26:47 Created by: Administrator

Search

Item No. Qty. UoM Part Number Part Description Part Name Quantity In BOM

1	1		60000040-1000-10_20_10000_10_45+110014	13225.7		
2	1		60000040-1000-10_20_10000_10_45+110014	1365.13		
3	1		60000040-1000-10_20_10000_10_45+110014	1480.97		
4	1		60000040-1000-10_20_10000_10_45+110014	1724.7		
5	1		00000040-1000-10_20_10000_10_45+110014	39.2	100.00	100.00

Product contains 1 part(s) and 3 subpart(s) in total (including phantom object). Double click part(s) or part(s) to get more details.

Help

Part Matrix BOM

[illegible]

Compare BOM

The screenshot displays the CADKEY software interface with the 'Compare with' dialog box open. The dialog compares the current assembly '005000000 - 0001_20_270_1200R_12_95 - 1110314_1.asm' with a previous version '005000000 - 0001_20_270_1200R_12_95 - 1110314_0.asm'. The 'Changes' tab is active, showing a list of changes including 'Part Deleted: 005000000 - 0001_20_270_1200R_12_95 - 1110314_0.asm' and 'Part Deleted: 005000000 - 0001_20_270_1200R_12_95 - 1110314_0.asm'. The 'Energy Usage' tab is also visible, showing 'Energy Usage: 0.000000000 - 0001_20_270_1200R_12_95 - 1110314_1.asm'.

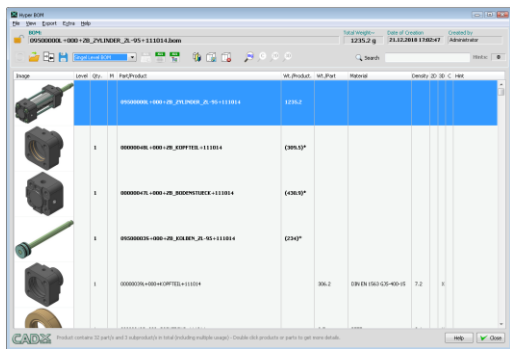
*) Unless the BOM is locked - what you should always do before handing it out to any third party

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

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



Microsoft Excel - Maple1

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
	1	09500000L	000	ZB_ZYLINDER_ZL 95	111014	1235.2			
	1	00000040L	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

Zeichnen: AutoFormen: Bereit

7b

Export Part Matrix BOM to Excel.

Shows re-usage of every single part including total amount across your product family.

Hyper BOM

Part Image	Part Number	Family Member 1	Family Member 2	Family Member 3	Total Amount
	09500000L-000+ZB_ZYLINDER_ZL-95+111014.bom - 21.12.2018 17:02:47	1	1	1	3
	12000000L-000+ZB_ZYLINDER_ZL-120+170411.bom - 21.12.2018 17:25:24	1	1	1	3
	14500000L-000+ZB_ZYLINDER_ZL-145+170411.bom - 21.12.2018 17:28:22	1	1	1	3

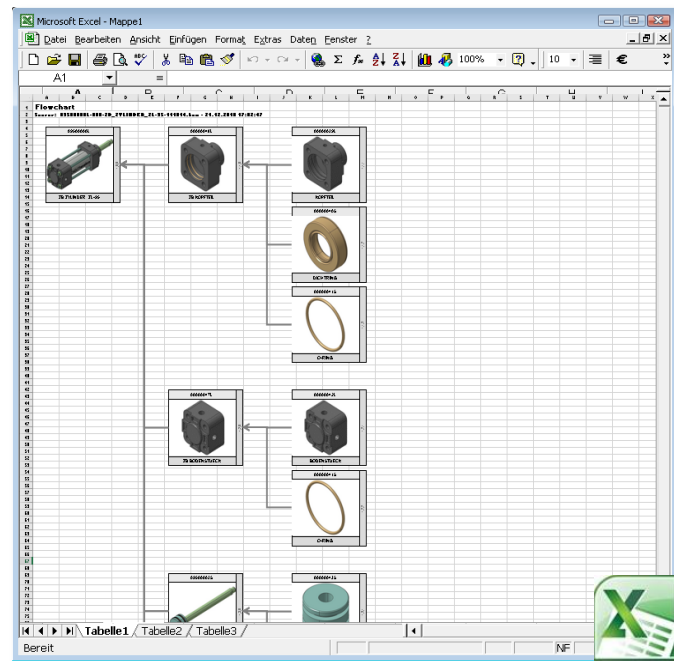
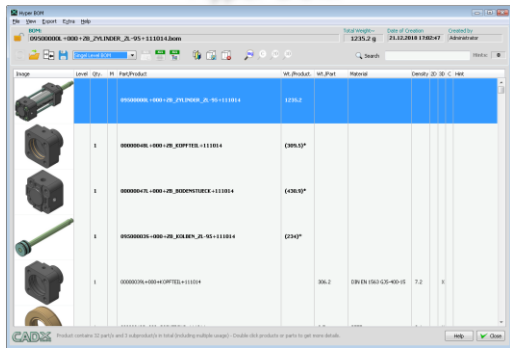


Part Image	Part Number	Rev.	Name	Vari.	Material	Weight	Family Member 1	Family Member 2	Family Member 3	Total Amount
	09500000L		ZB_ZYLINDER_ZL-95+111014.bom - 21.12.2018 17:02:47			1255.2 g	1	1	1	3
	12000000L		ZB_ZYLINDER_ZL-120+170411.bom - 21.12.2018 17:25:24			1310.8 g	1	1	1	3
	14500000L		ZB_ZYLINDER_ZL-145+170411.bom - 21.12.2018 17:28:22			1306 g	1	1	1	3

7c

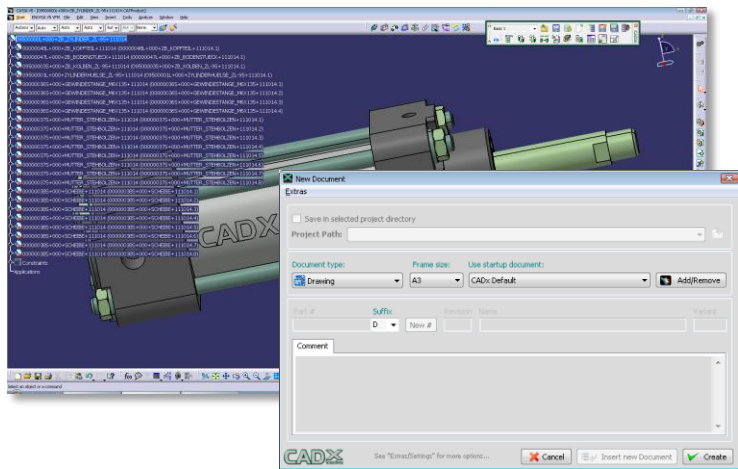
Export Process Flow Chart to Excel.
Shows assemble sequence* of your multi level product.

Hyper BOM

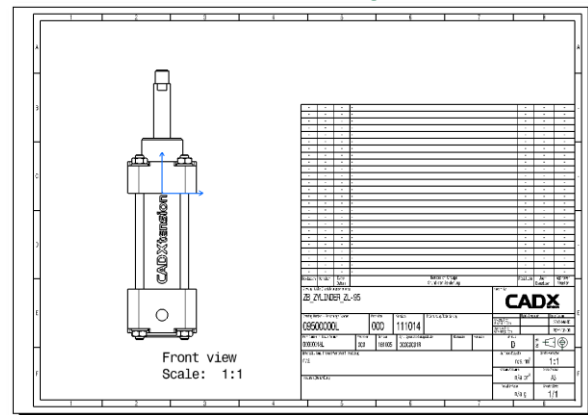


**) CAD product must be setup according assemble sequence's

CADx Drawing Frame Automation allows you to 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



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 populates on the drawing title block.

CADx Title Block Editor

2D Information

Drawing Number: 00000039L Drawing Title: KOPFTEIL Revision: 000 Version: 111014 Tolerance: ISO 2768-1

Scale: 1:1 Size: A3 Sheet: 1/1 Crator: Administrator Date: 2018/12/21 Approver: Date: 2019-MM-DD Status: D

3D Information (Linked Document)

Part Number: 00000039L Revision: 000 Version: 111014 Sym. Part Number: Revision: Version:

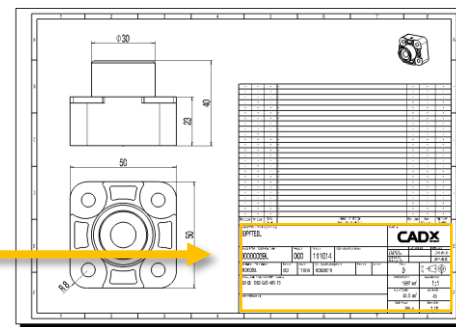
Material Information

Material Designation: DIN EN 1563 GJS-400-15 Treatment: Trowalisiert

Surface / mm2: 15957 Volume / cm3: 42.5 Weight / g: 306

CADx

Cancel Apply



Drawing Title / Zeichnungsbezeichnung: KOPFTEIL Part by: CADx tension

Drawing Number / Zeichnungs-Nr.: 00000039L Revision: 000 Version: 111014 Tolerancing/Toleranzung: ISO 2768-1 Checked by: Administrator Date: 2018/12/21

Part Number / Teile-Nr.: 00000039L Revision: 000 Version: 111014 Sym. Opposite/Symgegens.: Revision: Version: Approved by: Administrator Date: 2019-MM-DD Status: D

Material / Werkstoff: DIN EN 1563 GJS-400-15 Surface/Fläche: 15957 mm² Scale/Vergrößerung: 1:1

Treatment/Behandlung: Trowalisiert Volume/Volumen: 42.5 cm³ Size/Größe: A3

Weight/Masse: 306 g Sheet/Blatt: 1/1

Thank You