Manual
M_015_004

2D Document Type,
3D SAP Material Type,
Title and Additional Title
in SmarTeam in connection with the SAP Interface

For Use: R& D worldwide
only for Division Commercial Vehicles and Railway

(for Automotive applies W_012_002)

Contents

1 Description of SmarTeam fields ... 3

2 TZ (Part Drawing) with HALB (SAP Material Type) ... 4
2.1 Single Parts (TZ / HALB) ... 4
2.2 Standard Parts (TZ / HALB) ... 5
2.3 Assemblies (TZ / HALB) ... 6
2.4 Purchased Assemblies (TZ / HALB) ... 7

3 SZ (Collection Drawing) with ZCHN (SAP Material Type) ... 8
3.1 Collection Drawing without Weight Specification ... 8
3.2 Collection Drawing of the Single Part with Weight Specification (Railway only) ... 9
3.3 Collection Drawing of the Product with Weight Specification (Railway only) ... 9
3.4 Collection Drawings of the Standard Part ... 10

4 Offer drawing (AZ) ... 10

5 Assembly drawing (MZ) ... 10

6 Spare part drawing (EZ) ... 10

7 Homologations (HOM) ... 10

8 Applicable documents ... 11

9 Changes ... 11

1 Description of SmarTeam fields

The interface SmarTeam/SAP influenced with the transfer to SAP nearly all following processes.

Profile Card Entries:

- **SAP Material Type** — a 3D feature assigned to Parts and Products
- **Document Type** — a 2D feature that appears in the drawing
- **Title** — *designation according to applicable directives (see W_015_014)*
- **Additional Title (Zusatzbenennung)** — *empty, may only be filled for MSG115 and Railway*

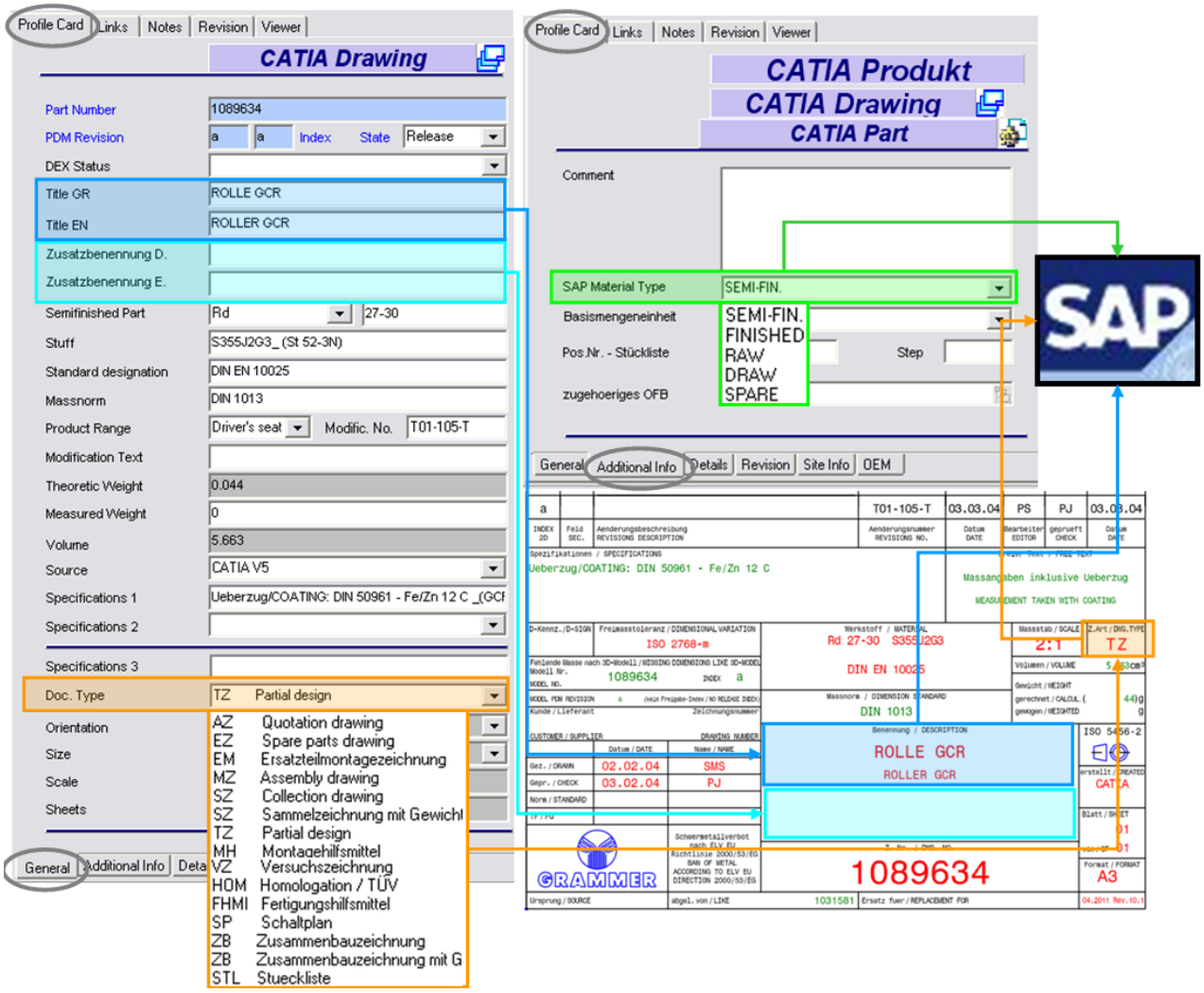

Figure 1: SmarTeam Profile Card and Grammer title block

2 TZ (*Part Drawing*) with *HALB* (SAP Material Type)

2.1 Single Parts (TZ / *HALB*)

The **usual single part** is always **plain** and always **used** within an assembly **at Grammer**.

It can only be a **semi-finished** part because it will be assembled *→ HALB*. Each 3D part is represented on a **TZ** (part drawing) *or on a **SZ** (collection drawing).*

The drawing number is **always** the same as the part number.

In *the area **Division Commercial Vehicles***, **every colour** will be **created** as a "modelled coloured single part" **in 3D**. *The colour is inserted in 3D.*

*In the area **Railway** there are two different approaches depending on the project:*

- *As in the Division Commercial Vehicles division, **each colour** is also created as a "modeled coloured single part" in 3D. The colour is inserted **in 3D**. A TZ with HALB or a SZ with ZCHN is then generated.*
- *In the case of the **colour-neutral construction** only one colour-neutral part is created in 3D for different colours. The part numbers of the coloured parts are shown on the drawing. This is then a SZ with weight specification (see item 3.2)*

The **surface coating**, if existing, is entered in addition to the title. *This is automatically mapped from CATIA Material Catalogue (coating).*
Under no circumstances the vehicle, the vehicle type or the customer's name is insert after the title (except for MSG115).

Profile Card Entries:

- **SAP Material Type** is *HALB.*
- **Document Type** is TZ.
- **Title**: *designation according to applicable directives (see W_015_014).*
  Only the first 40 letters are transferred to SAP.
- **Additional Title** *is only inserted in exceptional cases and is not transferred to SAP.*

Examples:

1241518 HALTEWINKEL PVB.RAL9005	HALB	TZ	*Division Commercial Vehicles*
1224616 SCHAUMTEIL F.S.	HALB	TZ	*Railway*

2.2 Standard Parts (TZ / HALB)

The **standard part** is treated like a **usual single part.**
We differentiate between real standard parts and standard similar parts.

Real standard parts are all parts delivered exactly following a DIN, EN, ISO ... standard. They **do not have a drawing** either.

Standard similar parts are small parts like springs, bandings, buffers and also standard parts with chromate-VI-free coatings.

Profile Card Entries:

- **SAP Material Type** is HALB.
- **Document Type** is TZ, if drawing is available.
- **Title**: *designation according to applicable directives (see W_015_014).*
  Only the first 40 letters are transferred to SAP.
- **Additional Title:** *is only inserted in exceptional cases and is not transferred to SAP.*
- *The corresponding standard is also entered in the profile card at "Standard Designation".*

Customer/Supplier and Customer/Supplier Dwg. Nr: *have to be filled in as accurately as possible,* e.g. enter supplier and supplier's part number.

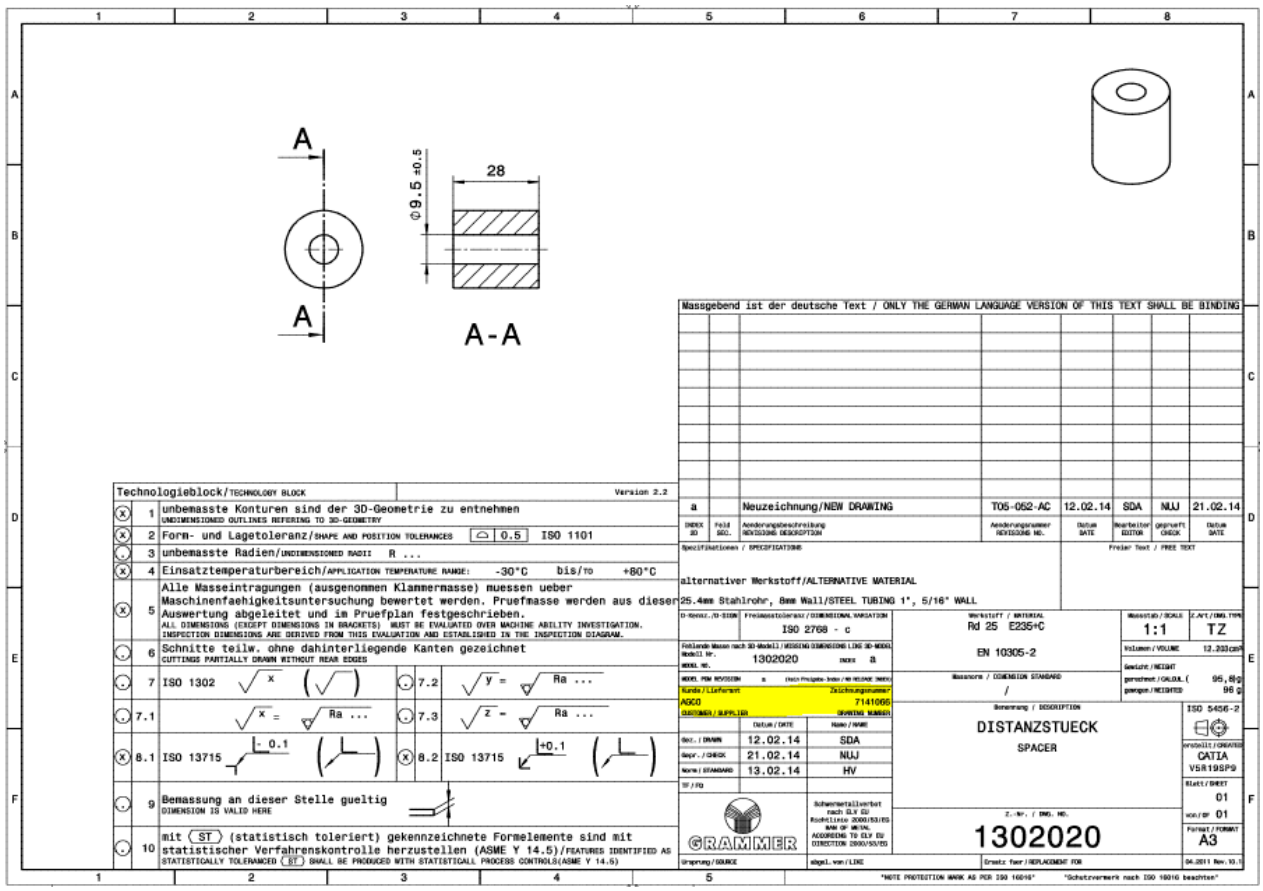

Figure 2: Example for standard similar part

2.3 Assemblies (TZ / HALB)

The **assembly** is always a "**plain"** product. The single parts have their own part numbers and the assembly is always **used** within a higher assembly **at Grammer**.

It can only be a **semi-finished** part because it will be assembled *→ HALB*. As it is plain there is a **TZ (**part drawing) **or** *a **SZ** (collection drawing)* of the part.

In *the area **Division Commercial Vehicles***, **every colour** will be **created** as a "modelled coloured assembly" **in 3D**. *The colour is inserted in 3D.*
The drawing number is **always** the same as the part number.

*In the area **Railway** there are two different approaches depending on the project:*

- *As in the Division Commercial Vehicles division, **each colour** is also created as a "modeled coloured assembly" in 3D. The colours are inserted **in 3D**. The drawing number is always the same as the part number.*
- *In the case of the **colour-neutral construction** only one colour-neutral assemby is created in 3D for different colours. The numbers of the coloured assemblies are shown on the drawing. This is then a SZ with weight specification (see item 3.3)*

You always have to add the **production type in the correct order**. Here are some examples:

- ***CPL.*** for assembled *(also features a Spare Part Drawing EZ)*
- ***WELD.*** for welded
- ***WELD*.RAL7037** for welded and coated
- **VCR.** for chromed
- ***.GL** for glued*

You only add the **production type** performed within the **respective working step**. You do not describe pre-treatments of the single part.

Do **not** mention the vehicle, the customer or the customer's name under any circumstances *(exception with MSG115).*
The customer can be filled in at the field "customer/supplier".

Profile Card Entries:

- **SAP Material Type** is *HALB.*
- **Document Type** is TZ.
- **Title**: *designation according to applicable directives (see W_015_014).*
  The **production type** *is also inserted.*
  Only the first 40 letters are transferred to SAP.
- **Additional Title** *is only inserted in exceptional cases and is not transferred to SAP.*

Examples:

1303713	*SEAT FRAME WELD.CPL.*	*HALB*	*TZ*	*Division Commercial Vehicles*
1154524	GESTELL GS.PVB.RAL9007	HALB	TZ	*Railway*

2.4 Purchased Assemblies (TZ / *HALB*)

*The purchased assembly is similar to the assembly. It can be a **part** or a **product**:*

- *Purchased Assembly as **part**:*
  Example:
  1371707 a HEATING F.R. HALB TZ Division Commercial Vehicles

- *Purchased Assembly as **product**:*
  *Every single part has the **same part number** with the **addition _Pxx**, consecutively numbered.*

  Example:
  1373903 CLIMA MODULE HALB TZ Division Commercial Vehicles
  1373903_P01 CABLE
  1373903_P02 CABLE
  1373903_P03 FAN
  ……
  1373903_P06 CORRUGATED TUBE
  1373903_P07 CONNECTOR
  …

3 SZ (Collection Drawing) with *ZCHN* (SAP Material Type)

*In the area **Division Commercial Vehicles,** SmarTeam shows every colour version which will be transferred to SAP. In the area **Railway** there is also the possibility to draw only the colour-neutral part, the colour variants are only displayed in SAP. The name has no colour name inserted.*

Example:	**SmarTeam**	**SAP**
	139026 CABLE FASTENER	*139026 SZ_CABLE FASTENER*

3.1 Collection Drawing without Weight Specification

The collection drawing without weight specification gathers **equal cross sections** with different lengths and therefore **different weights**.

*If several **different parts** (for example high, low, luxury variant) are indicated with different colours on a drawing, the drawing is given an **extra SZ number**. If necessary, a SZ part (with part number _SZ) is created for display on the drawing. All required parts are added to the drawing. No weight is indicated in the drawing.*

Collection Drawings without Weight Specification are also used for data sheets for covering material too.

Everything that is collected somewhere is always ***ZCHN*** in connection with **SZ**.

Typical examples are power-supply connectors with different lengths and therefore different weights.

The drawing number is **always** the same as the collection number, but the collection number does never exist as a real part. *If necessary,a 3D part with the title …_SZ is created for drawing creation.*

Profile Card Entries:

- **SAP Material Type** is *ZCHN.*
- **Document Type** is SZ (without weight specification).
- **Title**: *designation according to applicable directives (see W_015_014).*
  Only the first 40 letters are transferred to SAP.
- **Additional Title:** *is only inserted in exceptional cases and is not transferred to SAP.*

Example:

138916	*HANDLE F.FAI.*	*SZ*	*ZCHN*	*Division Commercial Vehicles*
138916_SZ	*HANDLE F.FAI.*			*ZCHN*
1073273	*HANDLE F.FAI.RAL9005*			*HALB*
1368477	*HANDLE F.FAI.YELLOW*			*HALB*
…				

3.2 Collection Drawing of the Single Part with Weight Specification (*Railway* only)

The collection drawing of a single part with weight specification gathers **coloured** single parts with the same weight **used** in an assembly **at Grammer**.

Coloured parts with weight specifications are nearly always visible parts as:

- coverings
- handles
- keys / caps

*Everything that is collected somewhere and has the same weight, is always **ZCHN** in connection with **SZ with Weight Specification**.*

In the colour-neutral construction, only one color-neutral part with the drawing number is created. The part numbers of the coloured parts are shown on the drawing.

- *When a drawing from a **part** that has different colours, the part and drawing have the same part number.*
- *In the case of drawings of **parts** in which the structure has only been **mirrored** (left and right) variant and also different colour, the drawing is created by the **left colour neutral part** and also receives the number of the left part. The right part is linked to the drawing.*

Profile Card Entries:

- **SAP Material Type** is *ZCHN.*
- **Document Type** is SZ *(with weight specification).*
- **Title**: *designation according to applicable directives (see W_015_014).*
- **Additional Title** *is only inserted in exceptional cases and is not transferred to SAP.*

Examples:

1346783	*COVER PLATE RR.*	*SZ*	*ZCHN*	*Railway*
1374348	*WALL ADAPTER*	*SZ*	*ZCHN*	*Railway*

3.3 Collection Drawing of the Product with Weight Specification (*Railway* only)

The collection drawing of the product with weight specification gathers **coloured assemblies** with the same weight. All other entries are the same as for the collection drawing of the single part.

Coloured products with weight specifications are **nearly always** visible parts as:

- coverings – plastics welded
- handles – assembled
- keys with coverings

Example:

1382768 MOUNTING ANGLE LS.	*ZCHN*	*SZ with Weight Specification*	*Railway*

3.4 Collection Drawings of the Standard Part

If standard parts with different surface coatings or coverings are in use, these will be shown in a collection drawing. *It get a extra _SZ number.*
The same guidelines apply as for normal collection drawings without weight specification (see point 3.1)

The individual parts will be linked directly to the drawing. A *SZ_*product is not necessary and the single parts *are still HALB.*

1203649	SENKSCHRAUBE	SZ	ZCHN	*Division Commercial Vehicles*	
201996	COUNTERSUNK HEAD SCREW	SP.	HALB	*Railway*	
1038733	COUNTERSUNK HEAD SCREW	SP.	HALB	*Railway*	
016912	COUNTERSUNK HEAD SCREW	SP.	HALB	*Division Commercial Vehicles*	

4 *Offer drawing (AZ)*

Offer drawings have got SAP Material Type "ZCHN".
For guidelines, see Intranet „DMU´s – AZ´s".

5 Assembly drawing (MZ)

*In the area **Division Commercial Vehicles** assembly drawings have got drawing type "MZ" and SAP Material Type "HALB" always.*
Exception: The drawing type "SZ" is used for collections of functional assemblies ("FA_").

*In the area **Railway** a distinction is made between color neutral and "colored" MZs, so these drawings are either available with the SAP material type "ZCHN" or "HALB".*

For guidelines, see Intranet „assembly drawing".

6 Spare part drawing (EZ)

Spare parts drawings always have the addition "CPL." at the end of the designation.
For guidelines, see Intranet „Spare part drawing".

7 Homologations (HOM)

Homologations have got SAP Material Type "ZCHN".
For guidelines, see Work Instruction „Homologations_W_015_009".

8 Applicable documents

Collection CAD/PDM Documents	*A_015_012*
Unification of CAD Standards	*W_015_007*
Homologations	*W_015_009*
Catia V5 Drafting Basics	*W_015_012*
Basics and Methodology CATIA V5 Drawing Execution	*W_015_014*
Specification and Identification of special Characteristics	*W_015_026*
Preparation of Offer Drawings	*Intranet*
Preparation of Spare Part Drawings	*Intranet*
Preparation of Assembly Drawings	*Intranet*

9 Changes

10/2017
Completely revised, only valid for Division Commercial Vehicles and Railway.