

Factory Planning

Naming Conventions

for CAD Drawings in Factory Planning

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1 Background

Uniform specifications for designation are to be used for effective working with CAD documents in factory planning, in particular for cross-technology coordination of the various trades.

2 Scope of validity

The Naming Conventions apply to all CAD files from the technologies and areas listed below (CAD files of product and tool, jig and fixture design with CATIA or ProE are not affected by this):

- Technology Powertrain and Chassis (ANFW) (confirmed)
- Construction Engineering (BAUP) (confirmed)
- Office Space Planning (RAUM) (confirmed)
- CDC Dingolfing (CDCD) (confirmed)
- Power Systems (ENGT) (confirmed)
- Fire Brigade (FEUW) (confirmed)
- FIS Operators Circle (confirmed)
- Facility Management (GEBW) (confirmed)
- Building Supply/Disposal Power and Media (confirmed)
- Logistics (LOGI) (confirmed)
- BMW Motorsport (MOSP) (confirmed)
- Technology Assembly (MONT) (confirmed)
- Technology Surface (LACK) (confirmed)
- Press Shop (PRES) (under review)
- Technology Body in White (ROHB) (under review)
- Rolls-Royce (confirmed)
- Technology Vehicle Component and Systems (KOMP) (confirmed)
- Sales (VERT) (under review)
- CKD/Production Abroad (confirmed)
- Plant Structure (WERK) (under review)

3 Principles

The following principles form the basis of the naming conventions:

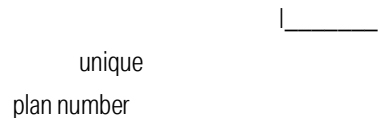
- The naming conventions apply only to specific file types (see Chapter "File types of factory planning files"). Files of other types are not negatively impacted by the functions on naming conventions.
- The files are managed with ProjectWise.
- Each factory planning file has a separate, unique plan number (each plan number exists only once in the system).
- Versions of a factory planning file are identified with the same plan number. They are differentiated on the basis of the ProjectWise version attribute (version number is incremented in ascending sequence).
- Versions of a factory planning file are saved to the same directory as the current factory planning file.
- When importing or updating a factory planning file with plan number, the old status of this plan number is overwritten, i.e. the file is placed automatically in the same directory as the old version of this plan number. (This means that the user needs write permission for this file).
- Alternatives further to a factory planning file are managed as an independent factory planning file with their own plan number. They are not managed as an element in the file name or managed by the system but can be saved in continuous text.
- When a factory planning file is copied, a new plan number is assigned. A copy serves to derive a new alternative.
- If factory planning files which do not comply with the naming conventions are imported in PW, the user must adapt the file names on import.

4 Structure of the file name

The example below shows an overview of the individual components of the file name. The individual elements are separated by underscore characters. The number of letters or digits of positions 1 to 7 must be complied with precisely.

STA_AUS_0710_0500_G-010_BAUP_12345678_Continuous text.dgn

1. 2. 3. 4. 5. 6. 7. 8. 9.



A unique plan number is generated for unique identification of CAD plans. This is formed by an 8-digit number.

The individual positions have the following significance:

1. Trade / plan content
2. Plan type / work phase
3. Plant
4. Building
5. Floor / level / other position descriptions
6. Responsible technology / area
7. Plan number
8. Continuous text
9. File extension

4.1 Trade / plan content

The "Trade / plan content" element describes the planning scope to which the file belongs. For example, the abbreviation "STA" indicates that the file describes steel construction packages.

"Trade / plan content" is dependent on element "Responsible technology / area". This means that only abbreviations which are also assigned to the relevant technology are permitted (see Chapter "Overview of the abbreviations, sorted by technologies").

4.2 Plan type / work phase

The "Plan type / work phase" element describes in what form or in what quality the relevant plan content is represented. Abbreviation "AUS" for instance indicates that the plan content is represented in execution quality.

"Plan type / work phase" is dependent on element "Responsible technology / area". This means that only abbreviations which are also assigned to the relevant technology are permitted (see Chapter "Overview of the abbreviations, sorted by technologies").

4.3 Plant

The "Plant" element corresponds to the location number in accordance with the BMW group code for locations (e.g. 0710 for Leipzig plant). The location numbers offered for selection in ProjectWise are taken from FIS. Missing entries can thus be added by the relevant FIS Location Manager.

4.4 Building

The "Building" element corresponds to the building number in accordance with the BMW group code for locations (e.g. 0500 for building 050.0 (assembly shop, Leipzig plant). The building numbers offered for selection in ProjectWise are taken from FIS. Missing entries can thus be added by the relevant FIS Location Manager.

4.5 Floor / level / other position descriptions

This element of the file name may be populated in three different ways:

- Level: **00680**

The level entry is in centimetres and has five digits in the case of positive values and four digits plus a minus sign (5 characters in total) in the case of negative values. The zero metre level is the designated 00000.

Examples:

00000 corresponds to the zero metre level

00680 corresponds to a height specification of +6.80 m above shop floor

-0150 corresponds to a height specification of -1.50 m below shop floor

- Floor: **G0020**

A "G" is prefixed when specifying floors. The following examples clearly indicate the significance:

- G0020 2nd floor
- G0011 Mezzanine
- G0010 1st floor
- G0001 Mezzanine
- G0000 Ground floor
- G-001 Mezzanine
- G-010 1st basement level

In addition, the following abbreviations may also occur in this case.

Abbreviation	Description
AN-NO	North-East view
AN-NW	North-West view
AN-SO	South-East view
AN-SW	South-West view
ANS-N	North view
ANS-O	East view
ANS-S	South view
ANS-W	West view
ANSIC	Views
DACHA	Roof top view
DACHZ	Air handling units
DETAI	Details
FASSA	Facade sections
FUNDA	Foundation / basement
LAGEP	Location plan
PENTH	Penthouse
SCHEM	Schematic
SCHNT	Section
SN-AA	section line AA

Abbreviation	Description
SN-BB	section line BB
SN-CC	section line CC
SN-DD	section line DD
SN-EE	section line EE
SN-FF	section line FF
SN-GG	section line GG
SN-HH	section line HH
SN-II	section line II
SN-JJ	section line JJ
SN-KK	section line KK
UEBER	Cross-floor

4.6 Responsible technology / area

This item signals what technology or area is responsible for creating the document. The following abbreviations are possible:

Abbreviation	Description
ANFW	Powertrain and Chassis
BAUP	Construction Engineering
CDCD	CDC Dingolfing
ENGT	Power Systems
FEUW	Fire Brigade
GEBW	Facility Management
KOMP	Vehicle Component and Systems
LACK	Technology Surface
LOGI	Logistics
MONT	Technology Assembly
PRES	Press Shop
RAUM	Office Space Planning
ROHB	Technology Body in White
VERT	Sales
WERK	Plant Structure

4.7 Plan number

The eight-digit plan number is used to be able to uniquely identify a document. The number is assigned by ProjectWise when the document is created.

External suppliers are provided with plan numbers by an e-mail mechanism or have the option of creating documents directly in ProjectWise via the ProjectWise web link.

External companies may also use the dummy value "xxxxxxx". However, the file name must be adapted in this case when placing the files in ProjectWise.

4.8 Continuous text

In order to facilitate identification, a description (max. 60 characters) is included in the file name.

Only the letters (a-z,A-Z, äöü, ÄÖÜ), the figures (0-9) and the special characters hyphen "-" and underline "_" are allowed.

4.9 File extension

Only quite specific file types are subject to the naming conventions, i.e. only these file types are assigned their own plan number. All other file types are either converted documents and thus have the same file name apart from the file type or they are entirely independent (e.g. Word or Excel files).

The following file types are subject to the naming conventions.

- DGN
- HTC
- HLN

5 Overview of the abbreviations, sorted by technologies

5.1 Powertrain and Chassis (ANFW)

The following abbreviations may be used for file names of Powertrain and Chassis:

Trade / plan content	Description
ANL	Installation layout
BAU	Construction plan
FIS	FIS Area plan
FOE	Materials handling
FUN	Foundation plans
GLP	Layout Production Line
LOG	Logistics planning
MED	Media plan
STA	Steel construction (installations)
STR	Structural plans
XXX	Dummy value

Plan type / work phase	Description
AUS	As-built drawing
BLO	Block layout
EXT	Detailed plans of external suppliers
FLA	FIS area plan
IST	Inventory
PLS	Planning status
RES	FIS resymbolisation / snapshot
VLY	Preliminary layout
XXX	Dummy value

5.2 Construction Engineering (BAUP)

The following abbreviations may be used for file names of Construction Engineering:

Trade / plan content	Description	Content
ANL	Installation layout	
AUS	Recess plan	
BAU	Construction plan	
BEG	Exterior installation and planting plan	
BEW	Bending schedule	
BRA	Fire protection	
FLU	Plan of escape routes	
GAT	Building automation	All contents for building control systems, Measuring and control systems, Interface for safety features and equipment and building services engineering
KON	Steel construction for buildings	
LAG	Surveyor's plan	
POS	Positions plan	
PRI	Priority plan	
RAS	Grid	Building grid
SCH	Formwork plan	
STA	Steel construction (installations)	
XXX	Dummy value	

Trade / plan content	Description	
ANL	Installation layout	AUS
AUS	Recess plan	EIN
BAU	Construction plan	ENT
BEG	Exterior installation and planting plan	GLE
BEW	Bending schedule	IST
BRA	Fire protection	KOS
FLU	Plan of escape routes	MBS
KON	Steel construction for buildings	MON
LAG	Surveyor's plan	PGL
POS	Positions plan	SZS
PRI	Priority plan	TEK
RAS	Grid	VOR
SCH	Formwork plan	XXX
STA	Steel construction (installations)	
XXX	Dummy value	



Plan type / work phase	Description
AUS	Construction drawing
EIN	Planning application drawings / Approved drawings
ENT	Design
GLE	Basic evaluation
IST	As built
KOS	Concept studies
MBS	Feasibility studies
MON	Assembly drawing
PGL	Project basis
SZS	Feasibility study 1.Step
TEK	Amendments of approved drawings
VOR	Preliminary draft
XXX	Dummy value

The continuous text at documents of Constructions Engineering configure as follows:

- | | |
|--------------------------|------------------------------|
| 1. phase of construction | BA1 (consecutively numbered) |
| 3. 3D-Model | 3D (2D-Model unmarked) |
| 4. Options | V1 (consecutively numbered) |

5.3 CDC Dingolfing (CDCD)

The following abbreviations may be used for file names of CDC Dingolfing:

Trade / plan content	Description
ANL	Installation layout
AUS	Recess plan
BAU	Construction plan
BEW	Bending schedule
BRA	Fire protection
ELT	Electrical systems
ETM	Combined sewage drainage
ETR	Rainwater drainage
ETS	Sanitary sewage drainage
FIS	FIS Area plan
FOE	Materials handling
LOG	Logistics planning
MBL	Furnishing plan
MED	Media plan
NAT	Telecommunications engineering
REI	Cleaning surfaces
RLT	Ventilation (room air)
SOZ	Welfare, office facilities
STA	Steel construction (installations)
VER	Supply (district heating, fuel)
XXX	Dummy value

Plan type / work phase	Description
AUS	As-built drawing
BEG	FIS planting and exterior installation plan
EIN	Entry
ENT	Draft
GES	FIS floor plan
IST	Inventory
LIE	FIS site plan
MAS	FIS master plan
RES	FIS resymbolisation / snapshot
TFP	FIS technology area plan
XXX	Dummy value

5.4 Power Systems (ENGT)

The following abbreviations may be used for file names of Power Systems:

Trade / plan content	Description
AMA	Alarm system
AUS	Recess plan
BMA	Fire detection system
ELT	Electrical systems
EMA	Burglar alarm system
ENT	Electrical systems and telecommunications
ETM	Combined sewage drainage
ETR	Rainwater drainage
ETS	Sanitary sewage drainage
GMA	Danger alarm system
INT	Installation ventilation and air conditioning
ME1	Water supply and disposal
ME2	Heating, Cooling, compressed air, coolant
ME3	Gas and fuel installations
NAT	Telecommunications engineering
RLT	Ventilation (room air)
SPR	Sprinkler plan
XXX	Dummy value

Plan type / work phase	Description
AUS	As-built drawing
EIN	Entry
ENT	Draft
GLE	Basic evaluation
IST	Inventory
KOS	Concept studies
MBS	Feasibility studies
MON	Assembly drawing
PGL	Project basics
SZS	Szenario studies
TEK	Amendment to application drawing
VOR	Preliminary draft
XXX	Dummy value

5.5 Fire Brigade (FEUW)

The following abbreviations may be used for file names of Fire Brigade:

Trade / plan content	Description
ALA	Automatically extinguishing system
BRA	Fire protection
EPL	Plan of attack for Fire Brigade
FLU	Plan of escape routes
LAG	Surveyor's plan
MED	Media plan
SPR	Sprinkler plan
VBS	Preventive fire protection
XXX	Dummy value

Plan type / work phase	Description
AUS	As-built drawing
BLO	Block layout
DET	Details
ENT	Draft
PLS	Planning status
VOR	Preliminary draft
XXX	Dummy value

5.6 Facility Management (GEBW)

The following abbreviations may be used for file names of Facility Management:

Trade / plan content	Description
AMA	Alarm system
BAU	Construction plan
BEG	Exterior installation and planting plan
BEW	Bending schedule
BMA	Fire detection system
BRA	Fire protection
ELT	Electrical systems
EMA	Burglar alarm system
ENT	Electrical systems and telecommunications
FIS	FIS Area plan
FLU	Plan of escape routes
GMA	Danger alarm system
INT	Installation ventilation and air conditioning
KON	Steel construction for buildings
LAG	Surveyor's plan
ME1	Water supply and disposal
ME2	Heating, Cooling, compressed air, coolant
ME3	Gas and fuel installations
NAT	Telecommunications engineering
PRI	Priority plan
REI	Cleaning surfaces
RLT	Ventilation (room air)
SCH	Formwork plan
SPR	Sprinkler plan
XXX	Dummy value

Plan type / work phase	Description
AUS	As-built drawing
BEG	FIS planting and exterior installation plan
EIN	Entry
ENT	Draft
FLA	FIS area plan
GES	FIS floor plan
IST	Inventory
LIE	FIS site plan
MAS	FIS master plan
RES	FIS resymbolisation / snapshot
TEK	Amendment to application drawing
TFP	FIS technology area plan
VAR	Variant
VOR	Preliminary draft
XXX	Dummy value

5.7 Vehicle Component and Systems (KOMP)

The following abbreviations may be used for file names of Vehicle Component and Systems:

Trade / plan content	Description
ANL	Installation layout
APP	Application technology
AUS	Recess plan
BAU	Construction plan
FIS	FIS Area plan
FOE	Materials handling
LOG	Logistics planning
PRO	Process engineering
RLT	Ventilation (room air)
STA	Steel construction (installations)
TRO	Dryer
XXX	Dummy value

Plan type / work phase	Description
AUS	As-built drawing
ENT	Draft
IST	Inventory
PLS	Planning status
RES	FIS resymbolisation / snapshot
TFP	FIS technology area plan
XXX	Dummy value

5.8 Technology Surface (LACK)

The following abbreviations may be used for file names of Technology Surface:

Trade / plan content	Description
APP	Application technology
BGK	Traffic concept
ELT	Electrical systems
EXB	Explosion-protected areas
FIS	FIS Area plan
FLU	Plan of escape routes
FOE	Materials handling
INT	Installation ventilation and air conditioning
KAB	Cabins/booths
LFT	Installation ventilation and air conditioning
LOG	Logistics planning
MED	Media plan
SOZ	Welfare, office facilities
STA	Steel construction (installations)
STT	Control engineering
TRO	Dryer
XXX	Dummy value

Plan type / work phase	Description
BLO	Block layout
ENT	Draft
IST	Inventory
PLS	Planning status
RES	FIS resymbolisation / snapshot
TFP	FIS technology area plan
XXX	Dummy value

5.9 Logistics (LOGI)

The following abbreviations may be used for file names of Logistics:

Trade / plan content	Description
FIS	FIS Area plan
FLU	Plan of escape routes
LOG	Logistics planning
STR	Structural plans
XXX	Dummy value

Plan type / work phase	Description
BLO	Block layout
IST	Inventory
RES	FIS resymbolisation / snapshot
TFP	FIS technology area plan
XXX	Dummy value

5.10 Technology Assembly (MONT)

The following abbreviations may be used for file names of Technology Assembly:

Trade / plan content	Description
ANL	Installation layout
FIS	FIS Area plan
FOE	Materials handling
LOG	Logistics planning
STA	Steel construction (installations)
STR	Structural plans
XXX	Dummy value

Plan type / work phase	Description
ARC	Archive dokument
DOC	Documentation
ENT	Draft
FER	Production release
IST	Inventory
PLS	Planning status
RES	FIS resymbolisation / snapshot
TFP	FIS technology area plan
XXX	Dummy value

5.11 BMW Motorsport (MOSP)

The following abbreviations may be used for file names of BMW Motorsport:

Trade / plan content	Description
BAU	Construction plan
BEG	Exterior installation and planting plan
BEW	Bending schedule
BRA	Fire protection
ELT	Electrical systems
ENT	Electrical systems and telecommunications
FIS	FIS Area plan
FLU	Plan of escape routes
INT	Installation ventilation and air conditioning
KON	Steel construction for buildings
LAG	Surveyor's plan
ME1	Water supply and disposal
ME2	Heating, Cooling, compressed air, coolant
ME3	Gas and fuel installations
NAT	Telecommunications engineering
PRI	Priority plan
REI	Cleaning surfaces
RLT	Ventilation (room air)
SCH	Formwork plan
SPR	Sprinkler plan
XXX	Dummy value

Plan type / work phase	Description
AUS	As-built drawing
BEG	FIS planting and exterior installation plan
EIN	Entry
ENT	Draft
FLA	FIS area plan
GES	FIS floor plan
IST	Inventory
LIE	FIS site plan
MAS	FIS master plan
RES	FIS resymbolisation / snapshot
TEK	Amendment to application drawing
TFP	FIS technology area plan
VAR	Variant
VOR	Preliminary draft
XXX	Dummy value

5.12 Press Shop (PRES)

The following abbreviations may be used for file names of Press Shop:

Trade / plan content	Description
ANL	Installation layout
FIS	FIS Area plan
FOE	Materials handling
LOG	Logistics planning
STA	Steel construction (installations)
STR	Structural plans
XXX	Dummy value

Plan type / work phase	Description
DOC	Documentation
ENT	Draft
FER	Production release
IST	Inventory
PLS	Planning status
RES	FIS resymbolisation / snapshot
TFP	FIS technology area plan
XXX	Dummy value

5.13 Quality management (QUMA)

The following abbreviations may be used for file names of Quality management:

Trade / plan content	Description
FIS	FIS Area plan
XXX	Dummy value

Plan type / work phase	Description
FLA	FIS area plan
XXX	Dummy value

5.14 Office Space Planning (RAUM)

The following abbreviations may be used for file names of Office Space Planning:

Trade / plan content	Description
BAU	Construction plan
BLO	Block layout
FIS	FIS Area plan
FLP	Area planning
MBL	Furnishing plan
XXX	Dummy value

Plan type / work phase	Description
ENT	Draft
IST	Inventory
RES	FIS resymbolisation / snapshot
TFP	FIS technology area plan
XXX	Dummy value

5.15 Technology Body in White (ROHB)

The following abbreviations may be used for file names of Technology Body in White:

Trade / plan content	Description
ANL	Installation layout
FIS	FIS Area plan
FOE	Materials handling
LOG	Logistics planning
STR	Structural plans
XXX	Dummy value

Plan type / work phase	Description
AUS	As-built drawing
BAS	Basic layout
BLO	Block layout
IST	Inventory
RES	FIS resymbolisation / snapshot
TFP	FIS technology area plan
XXX	Dummy value

5.16 Sales (VERT)

The following abbreviations may be used for file names of Sales:

Trade / plan content	Description
AUT	Automated Storage Device
FIS	FIS Area plan
MEZ	Mezzanine
PAL	Pallet racks
XXX	Dummy value

Plan type / work phase	Description
ABG	Agreed
FER	Production release
KON	Concept
MON	Assembly drawing
RES	FIS resymbolisation / snapshot
TEN	Tender
TFP	FIS technology area plan
XXX	Dummy value

5.17 Plant Structure (WERK)

The following abbreviations may be used for file names of Plant Structure:

Gewerk / Planinhalt	Beschreibung
FIS	FIS Area plan
STR	Structural plans
XXX	Dummy value

Planart / Leistungsphase	Beschreibung
BLO	Block layout
IST	Inventory
RES	FIS resymbolisation / snapshot
TFP	FIS technology area plan
XXX	Dummy value

5.18 Dies and Tooling (WZAB)

The following abbreviations may be used for file names of Dies and Tooling:

Trade / plan content	Description
ANL	Installation layout
FIS	FIS Area plan
FOE	Materials handling
LOG	Logistics planning
STA	Steel construction (installations)
STR	Structural plans
XXX	Dummy value

Plan type / work phase	Description
DOC	Documentation
ENT	Draft
FER	Production release
FLA	FIS area plan
IST	Inventory
PLS	Planning status
RES	FIS resymbolisation / snapshot
XXX	Dummy value