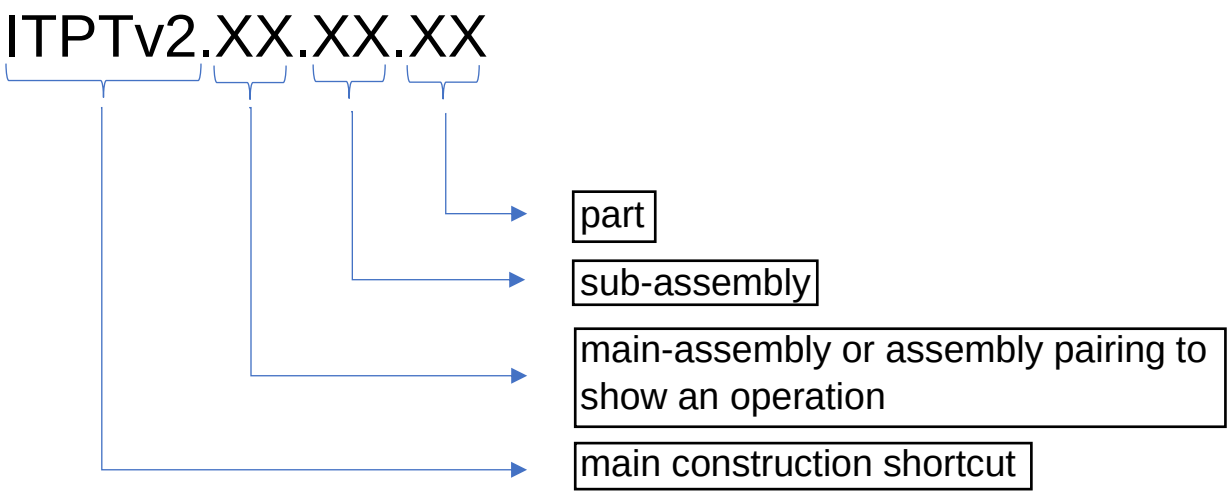
Contents

1. Part number structure

Each part, sub-assembly or main assembly has a part number.
This is composed as follows:



The part number can be found in each title block of the respective drawing or in the parts list of a sub-assembly or main assembly.

Example 1:
ITPTv2.***00***.***00***.***00*** (not ready yet)
Would be an overview of the ITkPixTool and its assemblies as well as individual loose related parts e.g. off-the-shelf parts, bought-in parts or single machined parts

Example 2:
ITPTv2.00.00.***01***
This is a single part which would be directly assigned to the ITkPixTool

Example 3:
ITPTv2.***02***.00.00
This is second main-assembly of the ITkPixTool

Example 4:
ITPTv2.***01***.00.***02***
This is the second machined part of first main-assembly of the ITkPixTool

2. Part and drawing revision

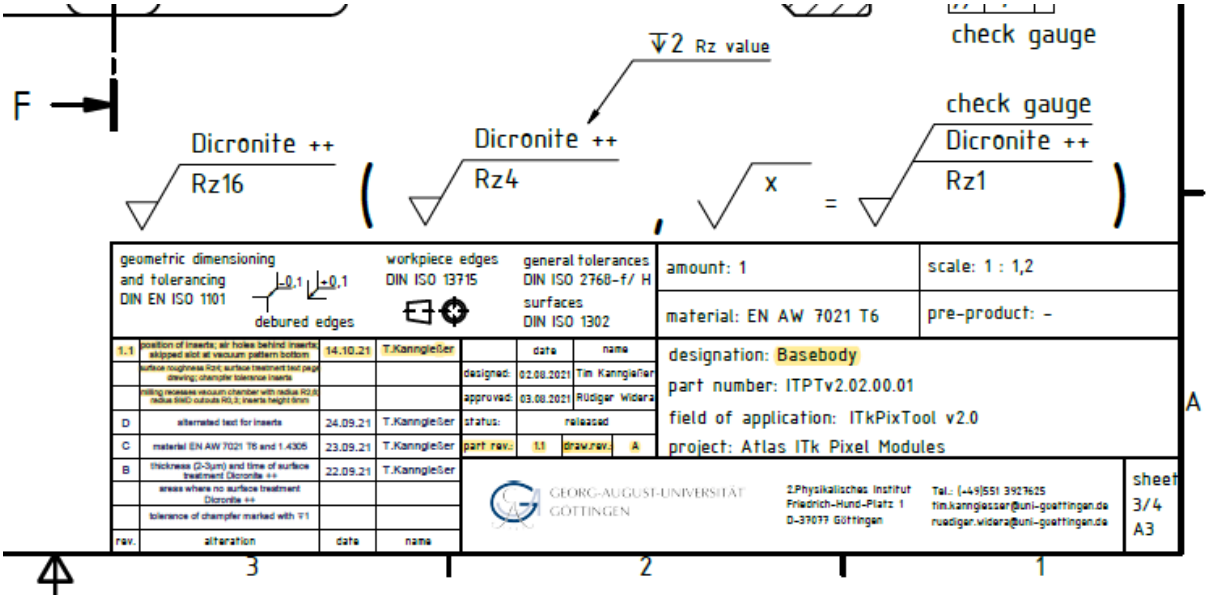
Each section of the tool i.e. a part, sub-assembly or main-assembly has a revision number.
The revision represents a significant alteration e.g. geometric or functional alteration. This number is numbered mathematically. (called: part rev.)

Each drawing of the tool i.e. part, sub-assembly or main-assembly also has a revision number.
The revision of a drawing represents an alteration to the drawing itself, e.g. alteration of manufacturing instructions. (called: draw.rev.)

This number is consecutively numbered alphabetically and always refers to the latest stated part revision.

These two revision terms can be found in the title block of the drawing, as well as the corresponding alteration in the table of the title block.
This is to ensure the clear tracking of versions and their alterations.

Example:



Single part Basebody with part revision 1.1 and drawing revision starting new with A specified in the title block of the drawing.

Part rev.1.1 points out to 3D part alteration with associated drawing changes.

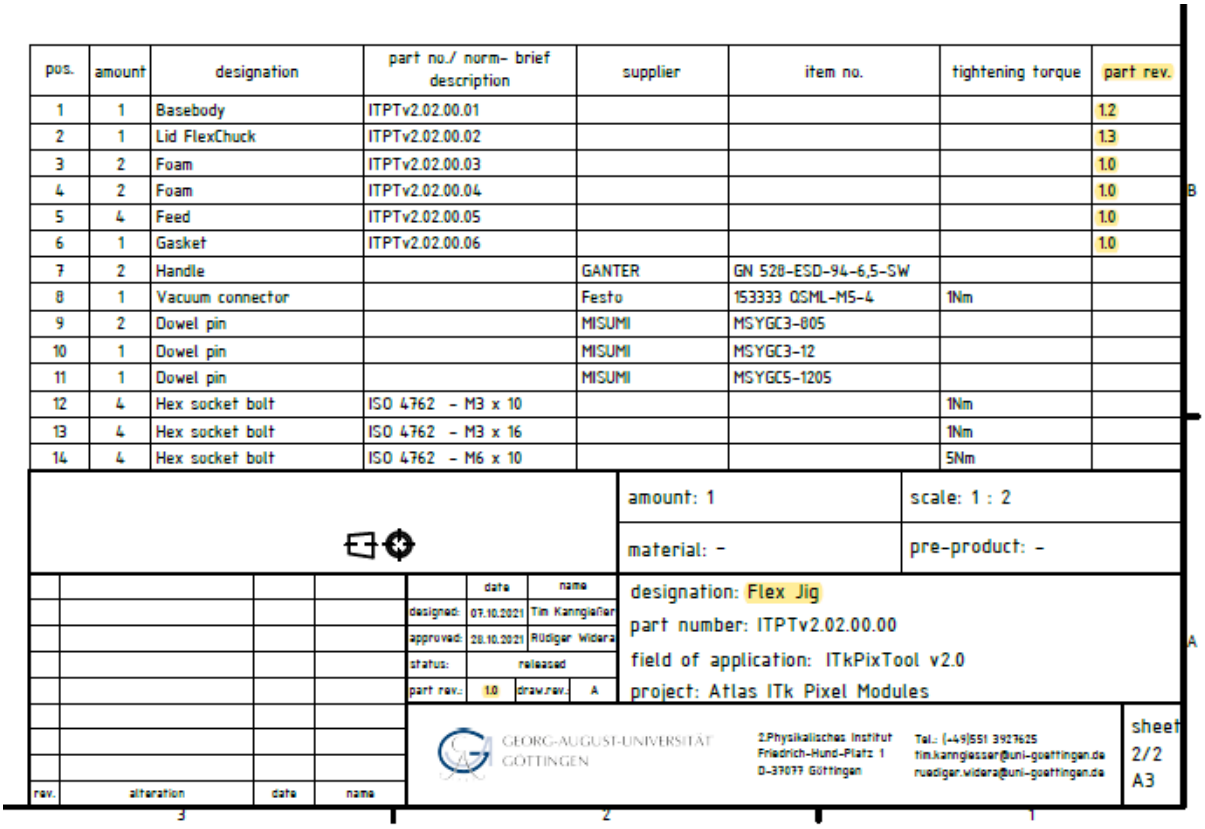
The drawing revision starts new at letter A if a part revision alteration happens.

3. Listing parts and sub-assemblies at part list

In order to be able to understand which parts or sub-assemblies with the corresponding revision belong to the respective higher-level assembly, the part revisions are written in parts list of the higher-level assembly drawing.

Except for the drawing revisions, these are only given on the corresponding individual drawings.

Example:



pos.	amount	designation	part no./ norm- brief description	supplier	item no.	tightening torque	part rev.
1	1	Basebody	ITPTv2.02.00.01				1.2
2	1	Lid FlexChuck	ITPTv2.02.00.02				1.3
3	2	Foam	ITPTv2.02.00.03				1.0
4	2	Foam	ITPTv2.02.00.04				1.0
5	4	Feed	ITPTv2.02.00.05				1.0
6	1	Gasket	ITPTv2.02.00.06				1.0
7	2	Handle		GANTER	GN 528-ESD-94-6,5-SW		
8	1	Vacuum connector		Festo	153333 QSML-M5-4	1Nm	
9	2	Dowel pin		MISUMI	MSYGC3-805		
10	1	Dowel pin		MISUMI	MSYGC3-12		
11	1	Dowel pin		MISUMI	MSYGC5-1205		
12	4	Hex socket bolt	ISO 4762 - M3 x 10			1Nm	
13	4	Hex socket bolt	ISO 4762 - M3 x 16			1Nm	
14	4	Hex socket bolt	ISO 4762 - M6 x 10			5Nm	

amount: 1 | scale: 1 : 2

material: - | pre-product: -

	data	name
designed:	07.10.2021	Tim Kanngießer
approved:	28.10.2021	Rüdiger Widera
status:	released	
part rev.:	1.0	draw.rev.: A

designation: Flex Jig
part number: ITPTv2.02.00.00
field of application: ITkPixTool v2.0
project: Atlas ITk Pixel Modules

GEORG-AUGUST-UNIVERSITÄT GÖTTINGEN
2.Physikalisches Institut, Friedrich-Hund-Platz 1, D-37077 Göttingen
Tel.: (+49)551 3927625, tim.kanngiesser@uni-goettingen.de, ruediger.widera@uni-goettingen.de

sheet 2/2 A3

rev.	alteration	data	name

Flex Jig assembly drawing with assembly part revision 1.0, specified in the title block of the drawing.
In the parts list you can see which assemblies or single manufacturing components with their corresponding revision numbers are hidden behind that assembly drawing.

4. Listing external parts at part list

For external components, the manufacturer/ supplier, as well as standard/ brief description and the item number are listed in the parts list of the assembly drawings of the respective assembly.

Example:

pos.	amount	designation	part no./ norm- brief description	supplier	item no.	tightening torque	part rev.
1	1	Guide Frame	ITPTv2.03.00.01				1.0
2	2	Height Guide	ITPTv2.03.00.02				1.0
3	2	Linear Guide	ITPTv2.03.00.03				1.0
4	1	Chucking Spigot	ITPTv2.03.00.04				1.0
5	1	Clasp	ITPTv2.03.00.05				1.0
6	2	Pressure Roller Holder	ITPTv2.03.00.06				1.0
7	2	Cocking Handle	ITPTv2.03.00.07				1.0
8	2	Pressure Roller	ITPTv2.03.00.08				1.0
9	4	Pressure Roller Screw	ITPTv2.03.00.09			1Nm	1.0
10	4	Spacer	ITPTv2.03.00.10				1.0
11	4	Toggle clamps		NORELEM	005900-004002		
12	6	O-Ring	O-Ring 8x2,5 NBR 70	C. Otto Gehrckens GmbH & Co. KG (COG)	O-Ring 8x2,5 NBR 70		
13	1	Bushing		MISUMI GmbH	KJBSSC8-P3.00-L8		
14	1	Bushing		MISUMI GmbH	KJBSSC8-P5.00-L8		
15	16	Hex socket bolt	ISO 4762 - M3 x 10			1,5Nm	
16	4	Hex socket bolt	ISO 4762 - M3 x 12			1Nm	
17	4	Hex socket bolt	ISO 4762 - M3 x 20			1Nm	
18	8	Hex socket bolt	ISO 4762 - M4 x 8			1,5Nm	
19	4	Countersunk bolt	ISO 7046-1 - M3 x 8 - 4.8 - H			1Nm	
20	4	Dowel pin	ISO 8734 - 3 x 10 - A				
21	8	Dowel pin	ISO 8734 - 4 x 10 - A				
22	16	Special washer		Nord-Lock	NL3ss-Nord-Lock		
23	1	Compressing Spring		Gute Kunst	VD_063R_1		

amount: 1 | scale: 1 : 2

material: - | pre-product: -

	date	name
designed:	19.10.2021	Tim Kanngießer
approved:	28.10.2021	Rüdiger Widera
status:	released	
part rev.:	1.0	draw.rev.: A

designation: Stencil Tool
part number: ITPTv2.03.00.00
field of application: ITkPixTool v2.0
project: Atlas ITk Pixel Modules

GEORG-AUGUST-UNIVERSITÄT GÖTTINGEN

2.Physikalisches Institut
Friedrich-Hund-Platz 1
D-37077 Göttingen

Tel.: (+49)551 3927625
tim.kanngiesser@uni-goettingen.de
ruediger.widera@uni-goettingen.de

sheet 3/3 A3

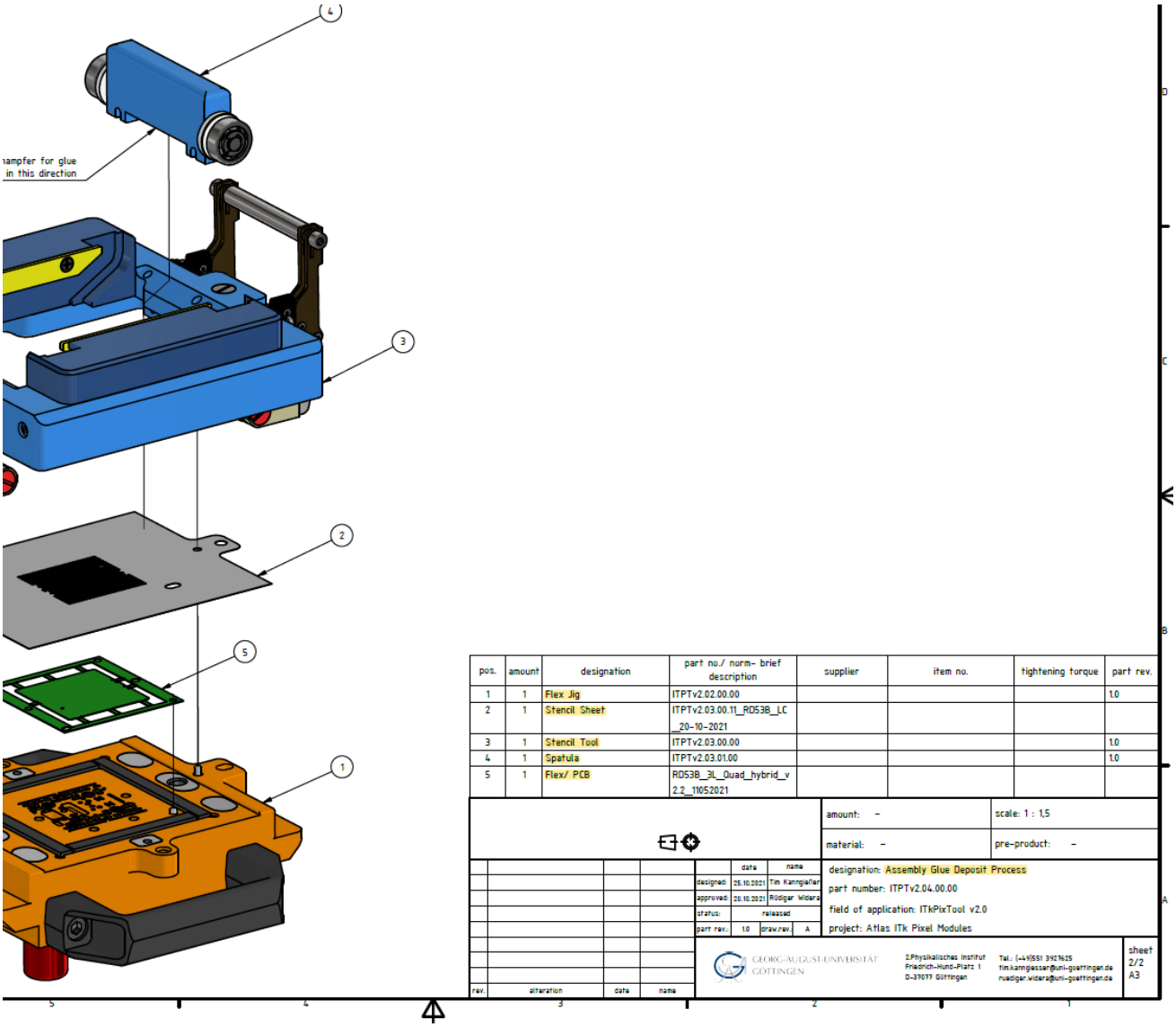
rev.	alteration	date	name

O-Ring as off-the-shelf part/ external part with its norm- brief description, supplier and item number.

5. Assembly for operation

Assembly to show a feature step of the ITkPixTool operation. All needed main-assemblies and additional external parts are listed in the part list.

Example:



pos.	amount	designation	part no./ norm- brief description	supplier	item no.	tightening torque	part rev.
1	1	Flex Jig	ITPTv2.02.00.00				1.0
2	1	Stencil Sheet	ITPTv2.03.00.11_RD53B_LC_20-10-2021				
3	1	Stencil Tool	ITPTv2.03.00.00				1.0
4	1	Spatula	ITPTv2.03.01.00				1.0
5	1	Flex/ PCB	RD53B_3L_Quad_hybrid_v2.2_11052021				

		amount: –	scale: 1 : 1,5
		material: –	pre-product: –

						date	name
					designed:	25.10.2021	Tim Kanngießer
					approved:	28.10.2021	Rüdiger Widera
					status:	released	
					part rev.	1.0	draw.rev. A

designation: Assembly Glue Deposit Process
part number: ITPTv2.04.00.00
field of application: ITkPixTool v2.0
project: Atlas ITk Pixel Modules

rev.	alteration	date	name

GEORG-AUGUST-UNIVERSITÄT GÖTTINGEN

2.Physikalisches Institut
Friedrich-Hund-Platz 1
D-37077 Göttingen

Tel.: (+49)551 3927625
tim.kanngiesser@uni-goettingen.de
ruediger.widera@uni-goettingen.de

sheet 2/2 A3