
	<p>JPK – Excel4JPK</p> <p>User manual</p>	
User manual		Version: 2017-04-26 (1.0/002)

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1. Excel4JPK – Product overview

Excel4JPK extends basic functionality of JPK files solution (generating SAF-T files). Excel4JPK allows to join external data into SAF-T reports. BCC solution has been created in separate namespace: /BCC/JPF.

1.1 Technical requirement

Component	Requirement version
Kernel SAP	6.0 or higher
JPK files	2.8 or higher

1.2 Package content

Product ID	Excel4JPK
Product name	Excel4JPK – Uploading Excel or Text files into SAF-T

Excel4JPK transactions:

Transaction ID	Description
/BCC/JPF	JPK – Excel4JPK
/BCC/JPFC	JPK – Excel4JPK - configuration

2. Use of Excel4JPK

Main transaction of Excel4JPK product is transaction /n/BCC/JPF. Transaction allows to upload external Excel or Text files.



Before first use of the product we recommend to adjust the [basic settings](#) of Excel4JPK. Solution may require adjustment of the files definitions.

In transaction /n/BCC/JPF – Management of Excel/TXT files, on selection screen user specify Company Code, JPK file type, and dates from/to – these will limit the loaded and viewed files on next screen. Only JPK file type is required field:

 A screenshot of the "JPK - Management of Excel/TXT files" selection screen. The transaction code "/n/BCC/JPF" is highlighted in a red box. Below it, the "Company Code" field is empty. The "JPK file type" field is highlighted with a red box and contains a dropdown arrow. The "Date from" field is set to "01.03.2017" and the "Date to" field is set to "31.03.2017". There is a checkbox for "Show removed files".

Icon „About application” allows to check Excel4JPK version.

On next screen of Excel4JPK, program shows possible/activated types of upload files:

 A screenshot of the "Excel/Text file types" table. The table has columns for Template, Data imp., JPK, File ID, H/P, File type description, MS Excel, and Text. The first row is highlighted with a red box.

Template	Data imp.	JPK	File ID	H/P	File type description	MS Excel	Text
		VAT	VAT01	H	VAT - Documents (excel)	<input checked="" type="checkbox"/>	<input type="checkbox"/>
		VAT	VAT02	P	VAT - Line Items (excel)	<input checked="" type="checkbox"/>	<input type="checkbox"/>
		VAT	VAT03	H	VAT - Documents + Line Items in one row (excel)	<input checked="" type="checkbox"/>	<input type="checkbox"/>

First button (Template) allows generating empty template files. Next button (Data import) allows to import/upload a given file type.

JPK - Zarządzanie plikami XLS/TXT

Jednostka gosp. 0001 VAT - Dokumenty (excel)
 Data pliku 28.02.2017
 Tekst informacyjny VAT SIWIECK 28.02.2017
 Plik C:\Users\siwieck\Desktop\VAT01_20170329.xlsx
 MS Excel Excel - karta
 Separator - tabulator
 Numer wiersza 4
 Format daty DD.MM.RRRR
 Zn. dziesiętny ,

JPK - Management of Excel/TXT files

Company Code 0001 VAT03 VAT - Documents + Line Items in one row (excel)
 File date 31.03.2017
 Information text VAT for 03.2017
 File C:\Users\chmielewski\Desktop\VAT03_20170420.xlsx
 MS Excel Excel - worksheet
 Separator Tabulator
 Row number 4
 Date format DD.MM.YYYY
 Dec. separator ,
 File import Display lines Apply

Uploading files into solution can be made in 4 steps:

- filling file data ([1] company code, [2] file date, [3] description, [4] selecting file),
- file import [5],
- display lines [6],
- confirm upload file [7],

On every step user can cease import of the file by pressing [8].

Successfully uploaded files will be presented on the list of imported files (on the bottom of management files screen).

Imported Excel/Text files														
File val.	Disp. data	Del file	Logs	File st.	Valid	Package	Activation	Pack...	CoCd	File date	F...	File ID	H/P	File type description
									Y001	31.03.2017	10	VAT01	H	VAT - Documents (excel)
									Y001	31.03.2017	20	VAT02	P	VAT - Line Items (excel)
									Y001	31.03.2017	14	VAT03	H	VAT - Documents + Line Items in one row (excel)
									Y001	31.03.2017	13	VAT03	H	VAT - Documents + Line Items in one row (excel)
									Y001	31.03.2017	6	VAT03	H	VAT - Documents + Line Items in one row (excel)
									Y001	31.03.2017	12	VAT02	P	VAT - Line Items (excel)
									Y001	31.03.2017	11	VAT02	P	VAT - Line Items (excel)
									Y001	31.03.2017	5	VAT01	H	VAT - Documents (excel)
									Y001	31.03.2017	4	VAT01	H	VAT - Documents (excel)

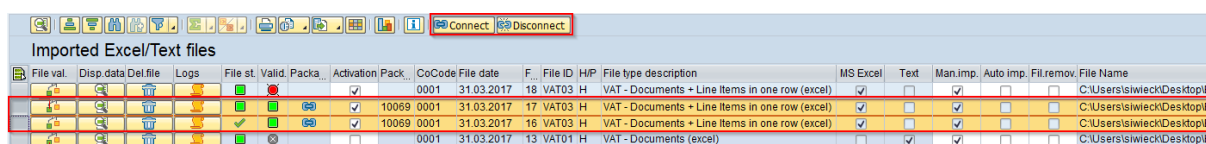
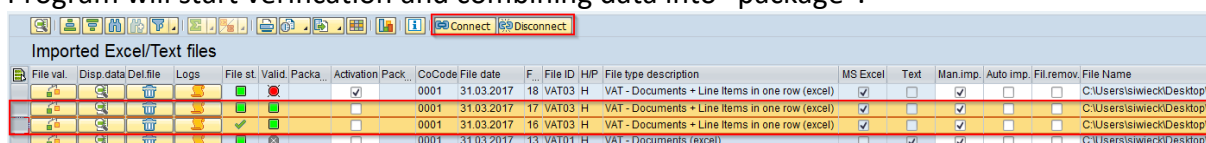
For each file, user can perform validation using “Validate file” button [1]. Uploaded data can be displayed by next button “Display data” [2]. Next buttons allows to delete file [3] or present log changes [4].

Activation of uploaded files

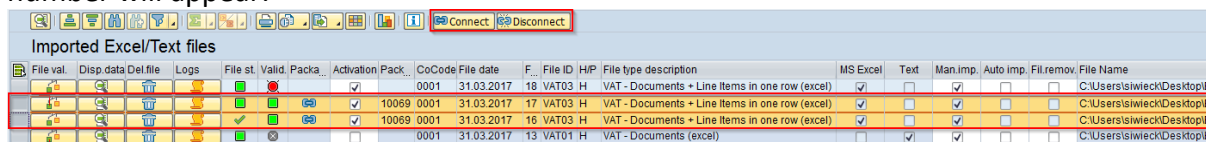
If file consist only of line item data (possible for JPK_VAT structure), then this file can be directly activated by selecting the “Activation” button. Activated files can be uploaded in standard JPK transaction (/n/BCC/JPK). Files that consist of separeate header and line item data have to be marged into “Package” before activation.

Merging header and line items data into Package

Select the lines that consist of header and line items data and then press button “Connect”. Program will start verification and combining data into “package”.



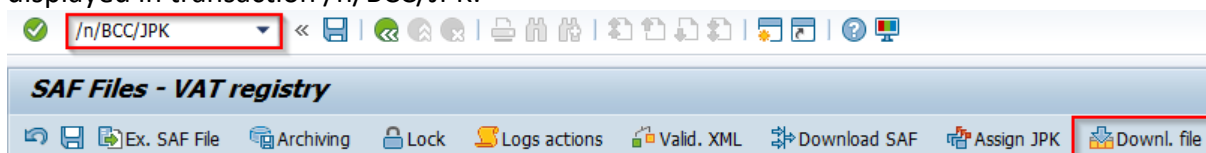
Once the data has been correctly merged into package, then the identifier and package number will appear:



Marged files should be manually activated. Only activated files are available in standard JPK transaction (/n/BCC/JPK).

Attaching files to JPK structures

If loading of external files is activated in the basic JPK product, then additional button will be displayed in transaction /n/BCC/JPK:



Using button presented above, user can manually attach previously activated database.

Automatic join of external files into JPK structures

If loaded file has checked field “Automatic import to JPK” (see below) then this file will be added automatically and combined with SAP data while generation of SAF-T file in basic JPK solution. User do not have to add them manually and this solution will works also in transaction /n/BCC/JPKZ (background).

Auto import field (/n/BCC/JPF)

File val.	Disp. data	Del. file	Logs	File st.	Valid. Packa.	Activation Pack.	CoCode	File date	F...	File ID	H/P	File type description	MS Excel	Text	Man. imp.	Auto imp.	File remov.	File Name
							Y001	31.03.2017	10	VAT01	H	VAT - Documents (excel)				<input checked="" type="checkbox"/>		C:\Users\siwieck\Desktop\I
							Y001	31.03.2017	20	VAT02	P	VAT - Line Items (excel)				<input checked="" type="checkbox"/>		C:\Users\siwieck\Desktop\I

Auto import of file into SAF-T will be made when condition (match) of Company code and file date will be met. All of the external activated files that met the condition will be added to JPK file.

2.1 Basic settings of Excel4JPK

Configuration related to the extension Excel4JPK can be changed in transaction /n/BCC/JPFC.

The screenshot shows the SAP transaction /n/BCC/JPFC. The title bar indicates the transaction is active. The main window displays the 'Display View "File type definitions": Overview'. On the left, a 'Dialog Structure' tree shows the following items: A File type definitions, B Validation - data structu, C Key fields of structur, D Validation - groups of fie, E Fileds/values assignec, F Valudation rues, G Additional validation - ke, and H Additional validation - co. The main table, titled 'File type definitions', contains the following data:

File ID	J...	A	File type desc.
FA001	FA	<input checked="" type="checkbox"/>	FA - Documents (excel)
FA002	FA	<input checked="" type="checkbox"/>	FA - Line Items (excel)
KR001	KR	<input checked="" type="checkbox"/>	KR - ZOIS (excel)
KR002	KR	<input checked="" type="checkbox"/>	KR - Journal entries, ZOIS (excel)
MAG01	MAG	<input checked="" type="checkbox"/>	MAG - Documents (excel)
MAG02	MAG	<input checked="" type="checkbox"/>	MAG - Line Items (excel)
VAT01	VAT	<input type="checkbox"/>	VAT - Documents (excel)
VAT02	VAT	<input type="checkbox"/>	VAT - Line Items (excel)
VAT03	VAT	<input checked="" type="checkbox"/>	VAT - Documents + Line Items in one row (excel)
WB001	WB	<input checked="" type="checkbox"/>	WB - Bank accounts (excel)
WB002	WB	<input checked="" type="checkbox"/>	WB - Bank line items (excel)

A red box highlights the 'double click' button next to the 'VAT03' entry.

View after double click – please refer to advanced settings for more information:

Display View "File type definitions": Details

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Dialog Structure

- File type definitions
- Validation - data structure
 - Key fields of structure
 - Validation - groups of file
 - Fields/values assigned
- Validation rules
- Additional validation - key
- Additional validation - co

File ID VAT03 Ref.file ID

File type definitions

☒ Active

JPK file type VAT

D.head/pos H

File type desc. VAT - Documents + Line It...

Structure /BCC/JPK_ST_VAT_DW

☒ MS Excel Excel - worksheet

☐ Text format

☒ Separator Tabulator

☐ Separator Semi-Colon

☐ Separator Comma

☐ Other Separator

☐ Separators

Date format DD.MM.YYYY

Dec. separator ,

Row number 4

File extension xlsx

☒ Man.imp.into JPK

☐ Automatic import

☐ File remooov.aft.imp.

☐ Lock file sett.

Basic settings in this transaction are predefined by BCC. However, they can be adjusted to end user needs. More complex changes should be made by copies of standard settings and saved in user name space (starting with the first letter Z). Such entries will not be overwritten by updates send by BCC. The simplest changes relates to activation of file structure definition (which structure will be available for uploading in /BCC/JPF transaction) and activation of validation rules.

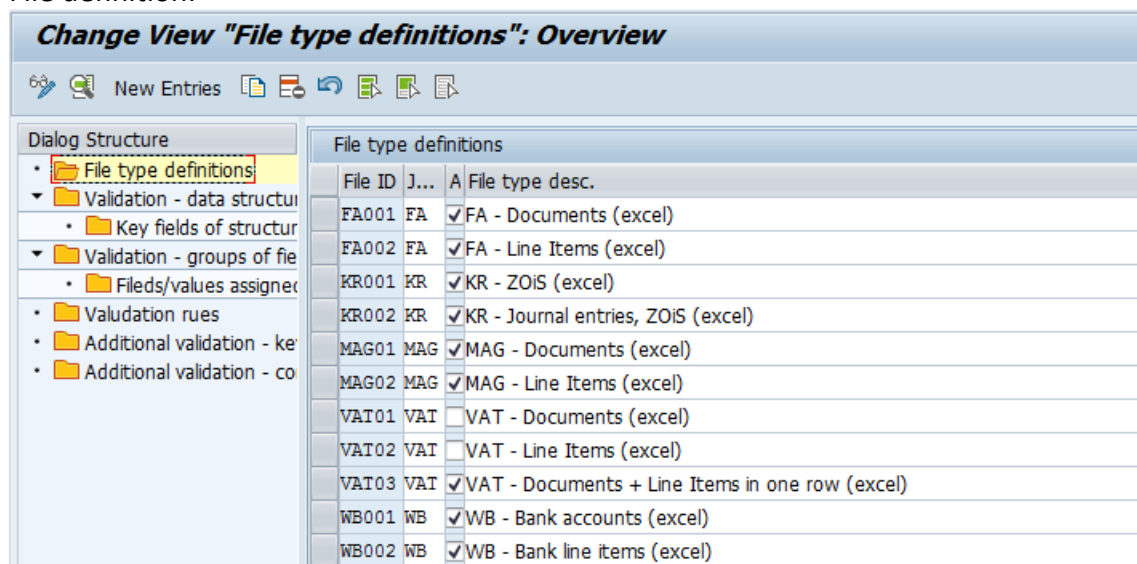
Configuration	Description
File definition – [A]	<p>The installation manual describes the settings changes according to the VAT structure used by basic JPK solution and the implementation class.</p> <p>Basic settings relate to file types definition – user can activate or deactivate each structure. Double click on the structure will move user to detail screen. On this screen user, can modify: decimal format, date format, auto import, manual import etc. For Excel file user can define which tab will consist data to upload (please refer to advanced settings for more).</p> <p>Installation manual describes the settings according to VAT structure which depend on implementing class used in basic JPK solution.</p>
Validation – data structure – [B]	Defines the identifiers of validation structures and assign them to JPK types.
Key fields of structures – [C]	Defines the key fields for the structure (entries should not repeat)

Validation – Groups of fields – [D]	Defines the group of fields and assign them to validation – data structures
Fields/values assigned to group – [E]	Define specific validation proceeding for each fields of structures (eg Error, Warning, Information)
Validation rules – [F]	Define the validation type (by default validation are created for required fields, but ex. possible is to define validation also to set specific value) Installation manual describes the settings according to VAT structure which depend on implementing class used in basic JPK solution.
Additional validation – key fields – [G]	Define an additional validation that verify uniqueness of key fields. For a given data structure (see file definition) the key fields are assigned by ID of validation structure. Validation objects has been created and their names starting with letter K (eg KV1, KV2, KV3). In case of absence of key uniqueness, solution has predefined messages (Error / Warning / Information).
Additional validation – company code – [H]	Defines an additional validation that verify entity compliance in the uploaded file with the company code assigned at selection screen. Configuration indicate the structure fields that containing company code and message types that will be returned in case of any discrepancies (Error / Warning / Information).

2.2 Advanced settings of Excel4JPK (details for file definition and validation)

Detailed description of the common Excel4JPK configuration items:

File definition:



Change View "File type definitions": Details

New Entries

Dialog Structure

- File type definitions
 - Validation - data structure
 - Key fields of structure
 - Validation - groups of fields
 - Files/values assigned
 - Validation rules
 - Additional validation - key
 - Additional validation - columns

File ID: FA001 Ref. file ID:

File type definitions

☒ Active **A**

JPK file type: FA **B**

D.head/pos: H **C**

File type desc.: FA - Documents (excel) **D**

Structure: /BCC/JPK_ST_FA_DOK **E**

☒ MS Excel **F** Excel - worksheet

☐ Text format **F**

☒ Separator Tabulator

☐ Separator Semi-Colon

☐ Separator Comma

☐ Other Separator

☐ Separators

Date format: DD.MM.YYYY **G**

Dec. separator: ,

Row number: 4 **H**

File extension: .xlsx **I**

☒ Man.imp.into JPK **J**

☐ Automatic import **K**

☐ File removal.aft.imp. **L**

☐ Lock file sett. **M**





Field	Description
Active – A	Enable or disable a given file type
JPK file type – B	Assigns the file type to the JPK structure
Document head/position – C	Indicates whether the data in the defined file is related to the header or position (possible entries are: headers and line items or entire document)
File type description – D	Specify the JPK file type
Structure – E	Structure ID of the structure from basic JPK solution (can be verified in → /n/BCC/JPKC → XML structure groups → Structure)
MS Excel/ Text format – F	Select whether to load data from MS Excel or text. For MS Excel, user can optionally specify the ID of the sheet from which the data will be read. For the text file, specify the appropriate separators.
Date format, decimal separator – G	Define settings of date format and which separators will be used in the loaded file.
Row number – H	Number of first line with data (minimum is 4, that means the first 3 lines are technical lines). For 4 or higher row number can be used to upload proper data. First cell consist of the File ID, which provides detection of incorrect loading attempt.
File extension – I	Optional field that enforce the file extension such as .xls, .xlsx, .txt or .csv. By default it is set to .xlsx – can be change in case of using older version of Excel.
Manual import into JPK – J	The default value that means files are going to be uploaded into standard JPK solution manually.

Automatic import into JPK – [K]	Selecting this button will cause that if the file meets the criteria (date, business unit and file type) then it will be automatically added in the generated JPK file (generated by standard JPK solution). Using this option does not require additional user action within basic JPK solution. It works also in JPKZ transaction (background).
Automatic file removal after import – [L]	If this field is checked then once basic JPK solution read the file, then the file will be removed.
Lock file settings – [M]	If this field is checked then user will not be able to change fields from points [J-L] in transaction /BCC/JPF.

Validation – group of fields:

Validation - group of fields

Display View "Filed/s/values assigned to group of fields": Overview



Dialog Structure

- File type definitions
- Validation - data structure
 - Key fields of structure
 - Validation - groups of fields
 - Filed/s/values assigned to group of fields**
 - Validation rules
 - Additional validation - key fields
 - Additional validation - conditions

Filed/s/values assigned to group of fields








Grou...	Value	Message type
FIF001	RESKONTR	E Error
FIF001	BBRUTTO	E Error
FIF001	BELNR	E Error
FIF001	BLART	E Error
FIF001	BLDAT	E Error
FIF001	BMWST	E Error
FIF001	BNETTO	E Error
FIF001	BUDAT	E Error
FIF001	BUKRS	E Error
FIF001	GJAHR	E Error
FIF001	NAZWAKONTR	E Error
FIF001	NIPKONTR	E Error
FIF001	NRFAKT	E Error
FIF001	WAERS	E Error

This screen defines fields of the structure that will be validated also define message type (error, warning, information).

Validation rules

Validation Rules

Change View "Valudation rues": Overview

  New Entries     

Dialog Structure

- File type definitions
 - Validation - data structure
 - Key fields of structure
 - Validation - groups of fields
 - Filed/s/values assigned to group of fields
 - Valudation rues
 - Additional validation - key fields
 - Additional validation - conditions

Validation rues

JPK	R.v/s	H/P	Active	Description rule	Or.rul	Og
FA Invoices	FIF001	H Data header (c	<input checked="" type="checkbox"/>	FA - dokumenty	10	A Field (1)
FA Invoices	FIF002	P Positions of...	<input checked="" type="checkbox"/>	FT - pozycje do...	10	A A Field (1) are required
KR G/L Acco...	FIK001	H Data header ...	<input checked="" type="checkbox"/>	KR - ZOIS	10	A Field (1)
KR G/L Acco...	FIK002	P Positions of...	<input checked="" type="checkbox"/>	KR - pozycje dzi...	10	A Field (1)
MAG Warehou...	FIM001	H Data header ...	<input checked="" type="checkbox"/>	MAG - dokumen...	10	A Field (1)
MAG Warehou...	FIM002	P Positions of...	<input checked="" type="checkbox"/>	MAG - pozycje d...	10	A Field (1)
VAT Records...	FIV001	H Data header ...	<input type="checkbox"/>	VAT - dokumen...	10	A Field (1)
VAT Records...	FIV002	P Positions of...	<input type="checkbox"/>	VAT - pozycje d...	10	A Field (1)
VAT Records...	FIV003	H Data header ...	<input checked="" type="checkbox"/>	VAT - dokumen...	10	A Field (1)
WB Bank sta...	FIW001	H Data header ...	<input checked="" type="checkbox"/>	WB - konta ban...	10	A Field (1)
WB Bank sta...	FIW002	P Positions of...	<input checked="" type="checkbox"/>	WB - pozycje w...	10	A Field (1)

The most complex of JPK settings relates to Validation rules, which defines how and if the validation group will work.

Field name	Description
JPK	JPK Type
Validation rule/ substitution	Validation rule ID
H/P	Determine whether the rule applies to the headers or to line documents
Active	Determines whether the rule is active
Rule description	Rule description
Or.rul	Rule order, numerating of rule orders usually takes values 10,20,30 etc.
Og	<p>Possible action that can be made on field group, such as: Operacja na grupach pól – definiuje różne akcje walidacji np.:</p> <p>A Field (1) are required</p> <p>B Field Value (1) must be from the set (2)</p> <p>C The value of the field (1), extension (exit)</p> <p>D If the specified value (1), the min. value (2)</p> <p>E If specified value (1), the max. value (2)</p> <p>Where:</p> <p>A – means that the field defined in the next column (Group of value) must have a non-empty value</p> <p>B – means that the field defined in the next column (Group of value) must have the value given in the last column</p> <p>C – means that it will be validated by extension, and this extension will be defined in column <i>Value</i> *</p> <p>D – means that if the field defined by next column has a value from the Value column, then at least one of the field defined by last column must be filled in</p> <p>G – means that if the field defined by next column has a value from the Value column, then all of the fields defined by last column must be filled in</p>
Values groups (1)	Validation groups used to verify a prerequisite for operations A-G.
Value	Value Identifier: - extension ID for C operation - value checked in prerequisite for operations D and G
Values groups (2)	Validation groups used to verify the precondition in operations B, D and G.

* Operation C requires the implementation of one of two BADI / BCC / JPK_VALID methods (transaction SE18):

- VALID_FIELD (validation of the selected field)
- VALID_FIELD_STRUCT (except the validated field, this BADI passes entire structure to the method)

Implementation example:

BADI definition (transaction SE18): /BCC/JPK_VALID

Implementing class: /BCC/JPK_CL_EXT_VALID

Interface: /BCC/JPK_IF_VALID_EXT

Enhancement implementation: /BCC/JPK_EI_EXT

METHOD /bcc/jpk_if_valid_ext~valid_field.

DATA: lv_str TYPE string,

lv_c(10) VALUE '0123456789'.

CASE iv_exit.

WHEN 'WB_NRKONTA'.

IF iv_field IS INITIAL.

/bcc/jpk_cl_data=>raise_exception_text(iv_id = 'error'
iv_msgnr = '107').

ELSE.

IF iv_field(1) CA lv_c OR iv_field+1(1) CA lv_c OR
strlen(iv_field) LT 14 OR strlen(iv_field) GT 34.

/bcc/jpk_cl_data=>raise_exception_text(iv_id = 'error'
iv_msgnr = '106'
iv_text1 = iv_field).

ENDIF.

ENDIF.

ENDCASE.

ENDMETHOD.

METHOD /bcc/jpk_if_valid_ext~valid_field_struct.

DATA: lv_str TYPE string.

FIELD-SYMBOLS: <fld> TYPE any.

CASE iv_exit.

WHEN 'FA_NR_NIP'.

* Numer NIP

MOVE iv_field TO lv_str.

ASSIGN COMPONENT iv_field OF STRUCTURE is_struct
TO <fld>.

IF sy-subrc NE 0.

EXIT.

ENDIF.

IF <fld> IS INITIAL.

EXIT.

ENDIF.

IF strlen(<fld>) NE 10.

/bcc/jpk_cl_data=>raise_exception_text(iv_id = 'error'
iv_msgnr = '105'
iv_text1 = <fld>).

ENDIF.

ENDCASE.

ENDMETHOD.

3. More information

More information about Excel4JPK can be found in *Excel4JPK user manual* and on *JPK by BCC* forum:

<https://jpk.bcc.com.pl>