

## A0001 - Custom Contract and Custom Order Unit in Purchase Order with Contract

### SAP Functional Specification Document

#### Enhancement

Object ID	A0001
Object Type	Enhancement
System	<input checked="" type="checkbox"/> SAP <input type="checkbox"/> Satellite App: {Application Name}
Object Title	Custom Contract and Custom Order Unit in Purchase Order with Contract
Stream Area	<input type="checkbox"/> Sales & Promotion <input type="checkbox"/> Distribution <input type="checkbox"/> Warehouse <input checked="" type="checkbox"/> Procurement <input type="checkbox"/> Production Planning <input type="checkbox"/> Quality Management <input type="checkbox"/> Plant Maintenance <input type="checkbox"/> Finance Accounting <input type="checkbox"/> Finance Controlling <input type="checkbox"/> Project System <input type="checkbox"/> Success Factor <input type="checkbox"/> Master Data Governance
Complexity	<input type="checkbox"/> Low <input type="checkbox"/> Medium <input checked="" type="checkbox"/> High <input type="checkbox"/> Very High

#### Guidelines for Writing Form Functional Specification

1. The content in **BLUE** is the synopsis of what the section of FSD should contain. Please remove the content in blue before updating the respective sections.
2. Update “Table of contents” section before base lining/delivering/updating of the Functional Specification Design.
3. Section 1 – “Document History” is mandatory to log initial and further changes to the Functional Specification Design. Please highlight in different color if, critical content pertaining to a Change Request is being updated.
4. Enable Track changes if to modify Baseline Functional Specification Design.
5. Process flow diagram should be mentioned in detail.
6. Sections 6 should capture all possible business test cases. This will become the base for technical unit testing (TUT) and functional unit testing (FUT).
7. Please remove all sample texts and sample attachments after writing the FS. They are only indicative in nature.

## 1 Document Control Information

### 1.1 Document Edit History

### . 1.2 Document Review and Sign Off

## 2 Functional Specification Details

### . 2.1 Impacted Sub-Process

### . 2.2 Assumption

### . 2.3 Risks

## 3 Operational Considerations

### . 3.1 Prerequisite

### . 3.1 Data Source

### . 3.2 Trigger

### . 3.3 Dependencies

#### 1. 3.3.1 Environment / Configuration

#### 2. 3.3.2 Development Dependencies

#### 3. 3.3.3 Run / Execution Dependencies

### . 3.4 Expected System Load

## 4 Functional Design Considerations

### . 4.1 Detailed Description of Enhancement

#### 1. 4.1.1 Custom Search help for Material Group

#### 2. 4.1.2 Development for Contract Processing

##### 3. 4.1.2.1 Custom Field in Contract Transaction (ME31N/ME32N/ME33N)

##### 4. 4.1.2.2 Purchase Contract Validation

#### 5. 4.1.3 Development for Request for Quotation Processing

##### 3. 4.1.3.1 Custom Field in Request for Quotation Transaction (Apps: Manage RFQs)

#### 7. 4.1.4 Development for Purchase Order Processing

- 3. 4.1.4.1 PO Unit Conversion
- . 4.2 Access Method or Path
- 5 Security and Controls
  - . 5.1 Security Requirements
  - . 5.2 Auditing and Control Requirements
- 6 Functional Unit Test Scenarios
  - . 6.1 Test Scenario / Data
  - . 6.2 Error Handling, Validation, Correction and Recovery
- 7 Attachments and Documentation

1 Document Control Information

1.1 Document Edit History

Version	Date	Additions/Modifications	Prepared/Revised by
Version 0.1	20-Mar-2025	Initial Version	Victor Wijaya

1.2 Document Review and Sign Off

The individuals listed here will be required to review and approve this document.

**Reviewed By:**

The “Reviewed By” signature indicates the individual(s) who reviewed this document for content and clarity, and to the best of their knowledge, this document satisfactorily achieves the purpose and scope defined herein:

	Name	Title/Role <Designation, Department>
Reviewed By	Yusuf Karun	IT Lead
Signature	@Yusuf Karlun	Date: Apr 15, 2025

**Approved By:**

The “Approved By” signature indicates the individual(s) who approved this document for content and clarity, and to the best of their knowledge, this document complies with corporate policies and procedures:

	Name	Title/Role <Designation, Department>
Approved By	Cicilia Gunawan	BPL
Signature	@Cicilia Gunawan	Date: Apr 15, 2025

## 2 Functional Specification Details

### 2.1 Impacted Sub-Process

Impacted business process flow is A-030-060 Outline Agreement.

### 2.2 Assumption

Based on business practice in WINGS group, there are a contract that is dealt based on consumed weight of the packaging's material (KG) whereas the PO transaction is based on PCS/ROL and by spec whereas procurement team create the contract for external material group and Item in PO is split per MID within same external material group. For this case, PO has a same UoM with the contract that will be covered by conversion between PO order unit with contract order unit. In order to accommodate this business process, this development is needed.

There is also customer field to accommodate halfway design to identify the distributed quantity for non-go live companies.

### 2.3 Risks

If this development object is not created, there are risks in business operations, such as:

- Manual input during contract creation

## 3 Operational Considerations

Outline the requirements for the development object. The requirements, business rules and design specifications are combined in this document to provide a comprehensive view of the

functional design.

### 3.1 Prerequisite

To Support this development, a custom table for mapping between material group & external material group is needed

#### 1. Custom Table mapping between material group & external material group (ZMM\_MAP\_MATGROUP)

This custom table will be maintained by user, so transaction code is needed to maintain this table. Here are fields for this table:

Field Name	Field Description	Data Type / Field Size	Remarks
MTART	Material Group	MARA-MTART	Key
EXTWG	External Material Group	MARA-EXTWG	Key
ZEXT_GROUP_DESC	External Material Group Description	Char (50)	This additional external material group is needed to cover a long description of external material group.
ZGEN_SPEC	General Specification	Char (60)	This information will be used: <ul style="list-style-type: none"><li>• As additional information in PO form.</li><li>• As additional information in BI report - material analysis.</li><li>• As source data for MDG during</li></ul>
ZSPEC_CODE	Specification Code	Char (150)	
ZWIDTH	Width (mm)	Num (5)	
ZHEIGHT	Height (mm)	Num (5)	
ZLENGTH_MM	Length (mm)	Num (5)	
ZLENGTH_M	Length (M)	Num (5)	
ZBOTTOM	Bottom (mm)	Num (5)	
ZCOLOR	Color	Num (2)	

ZFINISHING	Finishing	Char (50)	material master creation
ZUOM	UoM	Char (3)	

2. Additional custom field in purchase contract/request for quotation (table: EKPO), with this fields

Field Name	Field Description	Data Type / Field Size	Remarks
ZEXTWG	External Material Group	MARA-EXTWG	Display only
ZEXT_GROUP_DESC	External Material Group Description	Char (60)	
ZGEN_SPEC	General Specification	Char (150)	
ZSPEC_CODE	Specification Code	Num (5)	
ZWIDTH	Width (mm)	Num (5)	
ZHEIGHT	Height (mm)	Num (5)	
ZLENGTH_MM	Length (mm)	Num (5)	
ZLENGTH_M	Length (M)	Num (5)	
ZBOTTOM	Bottom (mm)	Num (2)	
ZCOLOR	Color	Char (50)	
ZFINISHING	Finishing	Char (60)	
ZPROC_PARTNER	Related Company Buyer	BUT000-PARTNER	This additional information is required to accommodate halfway design for non-go live company.

### 3.1 Data Source

N/A

### **3.2 Trigger**

This process is triggered based on agreement between contract creator and vendor.

### **3.3 Dependencies**

#### **3.3.1 Environment / Configuration**

List of configuration works, which are considered:

- Plant
- Outline Agreement Type
- Item Category for Outline Agreement

#### **3.3.2 Development Dependencies**

N/A

#### **3.3.3 Run / Execution Dependencies**

N/A

### **3.4 Expected System Load**

This development object will be executed average load.

## **4 Functional Design Considerations**

### **4.1 Detailed Description of Enhancement**

#### **4.1.1 Custom Search help for Material Group**

Custom Search help for material group is needed for field, which is mentioned in below image.

< **SAP** Purchase Contract ▾

Q ⓘ VW

**New Purchase Contract**

▾ nation General Information Delivery and Payment ▾ Reference **Header Conditions** Items Partner Approval Details Notes Attachments ▾

**Items**

**Purchase Contract Items** Standard ▾ Search Q Create Create Purchase Order Delete Restore Block Unblock ...

<input type="checkbox"/> 1st Assignment Category	Material	Short Text	Material Group	Product Type Group
<input type="checkbox"/> ▾	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>

Create Save In Preparation Discard Draft

The expected search help:

External Material Group	<input type="text" value="[A]"/>
Material Group	<input type="text" value="[B]"/>

Search

Result of search help:

External Material Group	Ext. Mat Group	Material Group	Mat. Group Desc
[R-A]	[R-B]	[R-C]	[R-D]

When user select the external material group, then system automatically executes these following actions:

1. Material group (EKPO-MATKL) is automatically filled in.
2. External material group (EKPO-ZEXTWG) is automatically filled in.
3. Short text (EKPO-TXZ01) is automatically filled in.

Automatic modified data uses BADI MM\_PUR\_S4\_CTR\_MODIFY\_ITEM.

#### 4.1.2 Development for Contract Processing



#### 4.1.2.1 Custom Field in Contract Transaction (ME31N/ME32N/ME33N)

Location for additional custom field in contract transaction:

1. External material group (EKPO-ZEXTWG). Location is mentioned in image below:

The screenshot shows the 'Items' tab in the SAP contract transaction. The 'Purchase Contract Items' table is displayed with columns: Short Text, Material Group, Product Type Group, Target Quantity, and Net Order Price. A red box highlights the 'Material Group' column, indicating the location for the custom field EKPO-ZEXTWG.

2. Related company buyer (EKPO-ZPROC\_PARTNER). Location is mentioned in image below:

The screenshot shows the 'Items' tab in the SAP contract transaction. The 'Purchase Contract Items' table is displayed with columns: Target Quantity, Net Order Price, Price Unit, Plant, Blocked, Deleted, Denominator, and Numerator. A red box highlights the 'Blocked' column, indicating the location for the custom field EKPO-ZPROC\_PARTNER.

#### 4.1.2.2 Purchase Contract Validation

This validation uses BADI MM\_PUR\_S4\_CTR\_CHECK.

##### Condition

This validation is applicable only for line item with item category(PURCHASECONTRACTITEM\_TABLE-EPSTP) = 'M'.

##### Validation Logic

Steps for validation logic:

1. If plant for line item is empty (PURCHASECONTRACTITEM\_TABLE-WERKS = '') and related company buyer (PURCHASECONTRACTITEM\_TABLE-ZPROC\_PARTNER = '') is empty, then system displays error message: "Plant or related company buyer must be filled in for contract with item category M".
2. If plant for line item is not empty (PURCHASECONTRACTITEM\_TABLE-WERKS <> '') and related company buyer (PURCHASECONTRACTITEM\_TABLE-ZPROC\_PARTNER <> '') is

not empty, then system displays error message: “Please input only plant or related company buyer for contract with item category M”.

**Note:** Related company buyer only filled in for company not in S4 (no plant information in BP).

### 4.1.3 Development for Request for Quotation Processing

#### 4.1.3.1 Custom Field in Request for Quotation Transaction (Apps: Manage RFQs)

Location for additional custom field in contract transaction:

1. External material group (EKPO-ZEXTWG). Location is mentioned in image below:

The screenshot shows the SAP 'New Request for Quotation' transaction. The 'Request for Quotation Items' tab is active, displaying a table with columns: RFQ Item, Short Text, Material, and Material Group. The 'Material Group' field is highlighted with a red box. Below the table, there are fields for Plant, Requested Quantity, Delivery Date (with a date picker showing 'e.g. 31.12.2025'), and Info Record Update (checkbox).

### 4.1.4 Development for Purchase Order Processing

#### 4.1.4.1 PO Unit Conversion

To accommodate flexible packaging contract, PO unit conversion between order unit and order price unit for PO item is determined automatically. Steps for the conversion are:

1. Get purchasing info record (PIR) characteristic (konversi kardus) based on combination material & supplier by using function module BAPI\_OBJJCL\_GETDETAIL, with input:

Field	Input
Input	
OBJECTKEY	[EKPO-MATNR] + [EKPO-LIFNR]
OBJECTTABLE	'EINA'

CLASSNUM	'057
CLASSTYPE	'CL_PIR'
<b>Result</b>	
ALLOCVALUESNUM	

2. Get the value of conversion (ALLOCVALUESNUM-VALUE\_FROM) from step 1 in ALLOCVALUESNUM for characteristic 'CT\_KONVERSI'.
3. Convert the value into integer (5).
4. Update order unit ↔ order price unit in purchase order based on the value from step 3 by using BADI ME\_PROCESS\_PO\_CUST. System change field numerator for order price unit (MEPOITEM-BPUMZ).

## 4.2 Access Method or Path

### Execution:

- ☐ Custom Transaction Code : \_\_\_\_\_
- ☐ Custom Fiori App. : \_\_\_\_\_
- ☒ Standard Transaction Code : ME31K, ME32K, ME33K, ME21N, ME22N, ME23N
- ☒ Standard Fiori App. : Manage Purchase Contract, Manage Purchase Order
- ☐ Other : \_\_\_\_\_

## 5 Security and Controls

### 5.1 Security Requirements

Authorization Object	Authorization Field
N/A	

### 5.2 Auditing and Control Requirements

N/A

## 6 Functional Unit Test Scenarios

### 6.1 Test Scenario / Data

Step #	Test Type	Scenario Title	Steps Performed	Expected Results	Actual Results
1	Positive Test	Search Help	<ol style="list-style-type: none"><li>1. Press F4 in field material group.</li><li>2. Search help for external material group is shown</li><li>3. Select the external material group</li></ol>	Material group, external material group and description are automatically filled in	
2	Positive Test	Business Partner can be filled in	<ol style="list-style-type: none"><li>1. User input business partner for non-go live company</li></ol>	Business partner can be inputted	
3	Positive Test	Contract is saved with the complete data, such as: plant, external material group and BP (for non go-live company)	<ol style="list-style-type: none"><li>1. User press save button</li><li>2. Success message is shown.</li></ol>	Contract can be saved	
4	Negative Test	In one line item contract,	<ol style="list-style-type: none"><li>1. User press save</li></ol>	Error message:	

		plant or BP is not filled in	button. 2. Error message is shown	“Plant or related company buyer must be filled in for contract with item category M” is shown	
5	Negative Test	In one line item contract, both plant or BP is filled in	1. User press save button. 2. Error message is shown	Error message: “Please input only plant or related company buyer for contract with item category M” is shown	

## 6.2 Error Handling, Validation, Correction and Recovery

No.	Exception Desc.	Mess. Type	Language	Message Text (50 Characters only)
1.	Error for plant or BP is not filled in contract line item	E	EN	Plant or related company buyer must be filled in for contract with item category M
2	Error for both plant and BP are filled in contract line item	E	EN	Please input only plant or related company buyer for contract with item category M

## 7 Attachments and Documentation

N/A