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| Test Script  SAP S/4HANA - 18-09-20 | public |
| Make-to-Order Production for Sales Kits with Variant Configuration (4OC\_DE) |

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# Purpose

Customers want to have a way to use Variant Configuration and show the component as sales kits (SET) during order taking and follow up processes.

This scope item shows a Make-to-Order Production scenario for sales kits using advanced variant configuration for an efficient state-of-the-art configuration of a material ordered by a customer.

The configurable material is defined as a SET material. In this process, a sales order is created with an individual configuration for a robot bundle. This is captured by defining the different component characteristics desired by the customers and considering the constraints and dependencies of the components. The sales price calculation is then based on the individually chosen characteristics of the components. The sales order is considered for production planning when doing the materials requirements planning (MRP). The production execution for the individual robot bundle takes place before delivering it to the customer. The process finishes with the billing to the customer.

This document provides a detailed procedure for testing this scope item after solution activation, reflecting the predefined scope of the solution. Each process step, report, or item is covered in its own section, providing the system interactions (test steps) in a table view. Steps that are not in scope of the process but are needed for testing are marked accordingly. Project-specific steps must be added.

# Prerequisites

This section summarizes all the prerequisites for conducting the test in terms of systems, users, master data, organizational data, other test data and business conditions.

## System Access

|  |  |
| --- | --- |
| System | Details |
| System | Accessible via SAP Fiori launchpad. Your system administrator provides you with the URL to access the various apps assigned to your role. |

## Roles

Assign the following business roles to your individual test users. Alternatively, if available, you can create business roles using the following spaces with pages and predefined apps for the SAP Fiori launchpad and assign the business roles to your individual test users.

Note These roles or spaces are examples provided by SAP. You can use them as templates to create your own roles or spaces.

For more information about business roles, refer to Assigning business roles to a user in the [Administration Guide to Implementation of SAP S/4HANA with SAP Best Practices](https://help.sap.com/viewer/S4HANA2020_AdminGuide) .

|  |  |  |
| --- | --- | --- |
| Name | ID | Log On |
| Internal Sales Representative | SAP\_BR\_INTERNAL\_SALES\_REP |  |
| Inventory Manager | SAP\_BR\_INVENTORY\_MANAGER |  |
| Production Engineer - Discrete Manufacturing | SAP\_BR\_PRODN\_ENG\_DISC |  |
| Administrator | SAP\_BR\_ADMINISTRATOR |  |
| Product Configuration Modeler | SAP\_BR\_PRODUCT\_CONFIG\_MODELER |  |

For more information about business roles, refer to Assigning business roles to a user in the [Administration Guide to Implementation of SAP S/4HANA with SAP Best Practices](https://help.sap.com/viewer/S4HANA2020_AdminGuide).

## Master Data, Organizational Data, and Other Data

The organizational structure and master data of your company has been created in your system during activation. The organizational structure reflects the structure of your company. The master data represents materials, customers, and vendors, for example, depending on the operational focus of your company.

Use your own master data to go through the test procedure. If you have installed an SAP Best Practices baseline package, you can use the following baseline package sample data:

Manufacturing / Trading

Production Plant

|  |  |  |  |
| --- | --- | --- | --- |
| Data | Sample Value | Details | Comments |
| Material | AVC\_RBT\_BUNDLE | Robot Bundle |  |
| Material | AVC\_RBT\_ROBOT | Robot Base Unit |  |
| Material | AVC\_RBT\_APPL\_UNIT | Painting Unit |  |
| Material | AVC\_SEALING | Sealing Unit | Initial stock posting required |
| Material | AVC\_PAINTING | Painting Unit | Initial stock posting required |
| Material | AVC\_RBT\_CNTRL\_UNIT | Control Unit |  |

Bill of Material Structure

This overview shows the bill of material structure and the usage of each component if you have activated all optional enhancements.

This is a super BOM list for configurable materials. Not all components necessarily used in production order.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Material | Level | Material Type | Unit | Characteristics of Material | Optional Enhancements |
| AVC\_RBT\_BUNDLE | 0 | KMAT | PC | Configurable Robot Arm |  |
| AVC\_RBT\_ROBOT | 1 | KMAT | PC | Robot Base Unit |  |
| AVC\_RBT\_APPL\_UNIT | 1 | KMAT | PC | Robot Application Unit |  |
| AVC\_SEALING | 1 | HAWA | PC | Sealing Unit |  |
| AVC\_PAINTING | 1 | HAWA | PC | Painting Unit |  |
| AVC\_RBT\_CNTRL\_UNIT | 1 | KMAT | PC | Control Unit |  |

Sales Center

|  |  |  |  |
| --- | --- | --- | --- |
| Data | Sample Value | Details | Comments |
| Sales Organization | 1010 |  | National |
| Distribution Channel | 10 |  | Direct Sales |
| Customer | 10100001 |  |  |

For more information on creating master data objects, see the following [Master Data Scripts (MDS)](https://support.sap.com/content/dam/SAAP/Sol_Pack/BP_OP_ENTPR/BP_OP_ENTPR_S4HANA2020_7_Master_Data_EN_XX.htm)

Table 1: Master Data Script Reference

|  |  |
| --- | --- |
| MDS | Description |
| BND | Create Customer Master |
| 2NI | Create Application Group and Characteristic Display |
| 2T7 | Create Product Master of Type "Configurable Material" |
| BNJ | Create Production Work Center |
| BNK | Create Material BOM for Production and Sales |
| BNL | Create Routing |
| BLD | Create Production Version |

## Business Conditions

Before this scope item can be tested, the following business condition must be met.

|  |  |
| --- | --- |
| Scope Item | Business Condition |
| BEG - Standard Cost Calculation | You have completed the step described in the Test Script Standard Cost Calculation (BEG). |
| BNZ - Create New Open MM Posting Period | You have completed the step described in the Create New Open MM Posting Period (BNZ) master data script. Posting Period is up to date. |
| 22T - Setup Configurable Model using Variant Configuration (Optional) | If you are going to execute 1YT with Setup Configurable Model using Variant Configuration Sample Master Data, you must have completed the preliminary step in 1YT for CM-FL-V01 material to enable the material for production and sales and distribution process. |

## Preliminary Steps

### Initial Stock Posting for the Material in BOM

Purpose

In a real business case, the materials are usually purchased from external vendors; in that case, that process is covered by the standard purchasing or subcontracting processes. This process step shows you how to post initial stock directly to the storage locations. Note that you only need to post initial stock in case there is none available or the current stock is insufficient. Ensure that at least as many components for the configurable material, for example, forklifter, are available as you intend to sell in the later step.

Procedure

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Test Step # | Test Step Name | Instruction | Expected Result | Pass / Fail / Comment |
| 1 | Log On | Log on to the SAP Fiori launchpad as an Inventory Manager. | The SAP Fiori launchpad displays. |  |
| 2 | Access the App | Open  Manage Stock (F1062). | The Manage Stock (F1062) screen displays. |  |
| 3 | Input Material | Make the following entry and choose Enter:   * Material (deprecated) - Post load validation (F2615): AVC\_RBT\_PAINTING or AVC\_RBT\_SEALING, for example * Plant:1010 |  |  |
| 4 | Select Stock | Select the icon beside the stock that you want to add initial stock, for example:  Storage Location: 101B  Unrestricted - Use Stock | A dialog box opens. The Storage Location, Stock Type, and Current Quantity display according to your entries in the previous steps. |  |
| 5 | Add Initial Entry | Make the following entries and choose Post:   * Document Date: <today> * Posting Date: <today> * Stock Change: Intial Entry * Quantity: <Enter a number> | The Material document XXX created. message displays. The stock has been added. |  |

# Overview Table

This scope item consists of several process steps provided in the table below.

If your system administrator has enabled spaces and pages on the SAP Fiori launchpad, the homepage will only contain the essential apps for performing the typical tasks of a business role.

You can find all other apps not included on the homepage using the search bar.

If you want to personalize the homepage and include the hidden apps, navigate to your user profile and choose Settings > App Finder .

|  |  |  |  |
| --- | --- | --- | --- |
| Process Step | Business Role | Transaction/APP | Expected Results |
| [Create Sales Order with Configurable Material](#unique_9) [page ] 9 | Internal Sales Representative | Manage Sales Orders (F1873) |  |

# Test Procedures

## Create Sales Order with Configurable Material

Test Administration

Customer project: Fill in the project-specific parts.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Test Case ID | <X.XX> | Tester Name |  | Testing Date | Enter a test date. |
| Business Role(s) |  | | | | |
| Responsibility | <State the Service Provider, Customer or Joint Service Provider and Customer> | | | Duration | Enter a duration. |

Purpose

Sales order is created with an individual configuration for a robot bundle.

Procedure

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Test Step # | Test Step Name | Instruction | Expected Result | Pass / Fail / Comment |
| 1 | Log On | Log on to the SAP Fiori launchpad as an Internal Sales Representative. | The SAP Fiori launchpad displays. |  |
| 2 | Access the App | Open Manage Sales Orders (F1873). | The Manage Sales Orders (F1873) screen displays. |  |
| 3 | Navigate to Create Sales Order Screen | On Manage Sales Orders (F1873) screen, select Create Sales Order - VA01. |  |  |
| 4 | Enter the Order type OR (Standard Order) | On the Create Sales Order: Initial Screen, make the following entries and choose Continue:   * Order Type: OR * Sales Organization: 1010 * Distribution Channel: 10 * Division: 00 |  |  |
| 5 | Enter Order Details | On the Create Standard Order: Overview screen, make the following entries and press Enter:   * Sold To party: 10100001 * Ship To party: 10100001 * Cust. Reference: Reference number Enter a customer purchase order number as reference * Rep. Deliv. Date: <Current date + 5 days> |  |  |
| 6 | Enter Characteristic Value | There are two optional ways to configure the characteristic value for the material. You can choose to execute either step 6.  In the All Items section, enter the following value and choose Enter.   * Material Number:AVC\_RBT\_BUNDLE   Quantity: for example, 1 PC  If you want to create billing plan for this sales order, manually enter the following value as well. If not, press Enter.   * ItCa (Item category): CBTM   On the Variant Configuration screen, select value for characteristics below and choose Done.   * Robot Bundle Robot Appplication: <Sealing> * Service Level agreement:   <8h at five days a week>   * Robot Base Unit   Reach(Minimum)-Requested  <10>.  Reach(Maximum)-Requested  <50> |  |  |
| 7 | Save Document | Choose Save Document. Make a note of the sales order number: \_\_\_\_\_\_\_\_\_\_. | The order is saved.  Note If the sales order might require approval, please refer to scope item Sell from Stock (BD9), and complete the activities of Process Sales Order Approval. |  |

# Appendix

## Succeeding Processes

After completing the activities in this test script, you can continue testing the following business processes:

|  |  |
| --- | --- |
| Process | Business Condition |
| J59 - Accounts Receivable | Complete the following activities:   * Posting a Customer Invoice in Accounting * Overdue Receivables * Display Customer Balances * Manage Customer Line Items |
| BEI - Period-End Closing - Plant | Complete the following activities:   * Perform the period end financial accounting activities for the plant. These are executed collectively as a part of month-end closing, and can only be executed once a month. |

### Manufacturing Steps Production Order Processing (Optional)

Purpose

This process step shows you how to create stock (Sales order stock) for material finished goods, the detail steps please find in test script BJE.

Procedure

To produce the material and get it into Sales Order stock, execute the following steps described in the Business Process Documentation Test Script of the scope item Make-to-Order Production - Finished Goods Sales and Final Assembly (BJE).

Use materials from this scope item for Make-to-Order production:

|  |  |
| --- | --- |
| Master Data | Sample Value |
| Material | AVC\_RBT\_CNTRL\_UNIT, AVC\_RBT\_ROBOT |
| Plant | 1010 |
| Area of Responsibility Production Supervisor | Plant 1 DE 1010 MTO VC -Valuated (YB3) |

Before Execute scope item BJE, you need to manually create below manufacturing master data:

|  |  |  |
| --- | --- | --- |
| Master Data | Reference Master Data Script | Reference Input Parameter Value |
| Material-Working Schedule View | 2T7-Create Product Master of Type "Configurable Material"  (Step: Create Product Master Data – Work Scheduling) | Material: AVC\_RBT\_CNTRL\_UNIT, AVC\_RBT\_ROBOT  Prod. Sched. Profile: YB0003 |
| Routing | BNL-Create Routing | Material: AVC\_RBT\_CNTRL\_UNIT  Plant: 1010  Choose Copy From Routing: 41010031  Overall Status: 4  Note down the group number start with 5\*  Repeat the same for material AVC\_RBT\_ROBOT |
| Production Version | BLD-Create Production Version | Material: AVC\_RBT\_CNTRL\_UNIT, AVC\_RBT\_ROBOT  Version: 0001  Minimum Lot Size: 1  Maximum Lot Size: 99,999,999  Task List Type: Routing  Group: <Group number noted down for each material in previous step>  Group Counter: 1  Alternative BOM: 1  BOM Usage: 3 |

Follow below steps in scope item BJE to complete make-to-order production:

|  |  |
| --- | --- |
| Test Procedure No. of BJE | Test Procedure |
| 4.4.1 | Material Requirements Planning for Sales Order |
| 4.6.1 | Create Production Order (CO01) |
| 4.6.2 | Release Production Orders (CO05N) |
| 4.6.3 | Pick Components (Picking List) |
| 4.6.4 | Confirm Assembly Activities |
| 4.6.5 | Posting Goods Receipt for Production Order |

### Delivery and Billing Processing (Optional)

Purpose

This process step shows you how to deliver material to the customer and handle the billing, the detail steps please find in test script BD9.

Procedure

Please execute the following steps using the master data from this document (see also the following table).

|  |  |
| --- | --- |
| Master Data | Sample Value |
| Material | AVC\_RBT\_BUNDLE |
| Plant | 1010 |

|  |  |
| --- | --- |
| Test Procedure No. of BD9 | Test Procedure |
| 4.9 | Create Delivery |
| 4.12 | Execute Picking |
| 4.17 | Post Goods Issue |
| 4.22 | Create Billing Document |

## Relevant Processes

If the following processes are enabled in your system, you can also test these business processes for the configurable material described in this test script.

|  |
| --- |
| Process |
| BD9 - Sell from Stock |
| BDD - Customer Returns |
| BDG - Sales Quotation |
| BDH - Sales Order Entry with One-Time Customer |
| BDQ - Invoice Correction Process with Debit Memo |
| BDW - Returnables Processing |
| BKL - Invoice Correction Process with Credit Memo |
| BKZ - Sales Order Processing with Invoice List and Collective Billing |
| BKX - Sales Order Processing - SEPA Direct Debit Handling |
| BKP - Accelerated Customer Returns |
| 1F1 - Debit Memo Processing |
| 1EZ - Credit Memo Processing |
| 1B6 - Sales Rebate Processing |
| 1MC - Convergent Billing |
| 1Z1 - Digital Payments - Sales |

Typographic Conventions

|  |  |
| --- | --- |
| Type Style | Description |
| Example | Words or characters quoted from the screen. These include field names, screen titles, pushbuttons labels, menu names, menu paths, and menu options.  Textual cross-references to other documents. |
| Example | Emphasized words or expressions. |
| EXAMPLE | Technical names of system objects. These include report names, program names, transaction codes, table names, and key concepts of a programming language when they are surrounded by body text, for example, SELECT and INCLUDE. |
| Example | Output on the screen. This includes file and directory names and their paths, messages, names of variables and parameters, source text, and names of installation, upgrade and database tools. |
| Example | Exact user entry. These are words or characters that you enter in the system exactly as they appear in the documentation. |
| <Example> | Variable user entry. Angle brackets indicate that you replace these words and characters with appropriate entries to make entries in the system. |
| EXAMPLE | Keys on the keyboard, for example, F2 or ENTER. |

|  |
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