

# be.as Module for SAP Business One

## White Paper

### **be.as Product Configurator for the reproduction of business product know-how**



The module was designed and developed specially for SAP Business One by be.as GmbH, Pforzheim. It is integrated directly into the master data and processes of SAP Business One and be.as. The be.as product configurator is compatible with SAP Business One and/or the be.as manufacturing solution. In addition, the be.as product configurator is also available as an Internet version and as such can be used as a component for a webshop or an entire e-commerce solution. The be.as product configurator is therefore suitable for a broad range of applications in commercial and manufacturing enterprises.

The be.as product configurator facilitates the reproduction of an enterprise's product know-how. The tool has the following features:

#### **User friendly**

No programming language, just a simple menu-controlled structure and transparent management of product characteristics and variations. The customer's employees can undertake the manufacture and maintenance of the products being configured themselves.

#### **Easy to integrate**

The be.as product configurator can be integrated into the different phases of business processes and functions, such as sales, calculation, engineering, simulation and testing, production order preparation, etc.

#### **Communications compatible**

Access to the product know-how and the product configuration as web-client via the Internet/intranets or as Windows-client directly with SAP Business One / be.as.

#### **Individual**

Due to high scalability in the application of the available methods and functions, highly customer- and product-specific applications can be created, from simple selection masks with few input parameters to multi-phase configurations based on networked controls and calculation formulas.

## Structuring of basic data

The basic system establishes defined **Basic products** with additional assigned **Product attributes** which then facilitate generation of the desired product variations through input of variables during the configuration process.

### Basic products

A basic product consists of:

- item master and additional information
- bill of material, single- or multi-level
- routings for the bill of material assemblies (optional)

### Product attributes

The options for defining product attributes can be applied singly, combined or even interleaved on multi-levels, according to the complexity of the product variations being reproduced. The following elements are available:

- Item parameter  
For each item, additional specific parameters, consisting of parameter name and content can be captured in a table.
- Formulas  
Formulas form the actual core of the be.as product configurator and can produce simple results based on 2 variables, such as length and breadth, and also conduct complex calculations using variables, numerical functions, logical formulas and links, using any fields, e.g. from the item master and bill of material, combined with sales order item data. Another possible function is simply the compiling of product descriptions based on the product configuration.

A formula can consist of the following elements:

- Variables  
The assignment of a variable can occur in many different ways and is controlled by the origin type. These variables define whether the value:
  - comes from the item parameters
  - is calculated from another formula
  - is read from a table
  - comes from item, order header or order line, bill of material or routing
  - is determined from other access data of SAP B1 / be.as
  - is inputted manually during configuration
- Mathematical symbols  
operators, auxiliary symbols, such as simple or square brackets, etc.
- Numerical functions  
e.g. rounding, trigonometric functions, etc.
- Logical formulas and links  
Logical symbols and functions and conditions, such as e.g. AND/OR, NOT AND/OR
- Tables  
Tables can contain fixed values, such as rows of numbers, dimensions, etc. or can be similarly structured based on the variables using the origin type.

- Definition of input parameters during product configuration  
The following input types can be configured in formulas, variables and tables:
  - Free input
  - A suggestion is shown to the control unit and can be adapted manually
  - Input within a specified field
  - Selection from a table

In addition, input parameters can be optionally set up so that general inputs are first queried in a separate window and then more complex inputs are automatically queried in a second stage, depending on the rules.

This has the advantage that, for simpler configurations, for example, a quick-input screen can be defined in the sales order or, for more complex products, the sales personnel can perform general inputs and, in a second stage, the tasks are completed, e.g. in engineering, and the product definitively configured.

### **Assignment of product attributes to the basic products**

The item parameters are recorded directly in the corresponding master data of the item and are therefore assigned automatically.

If the function of the be.as product configurator is activated in the SAP B1 / be.as options, reference to formulas and tables can be stored in all relevant fields of the basic product (items, bills of material and routings).

The accuracy of the required functionality and the result can be continuously checked during assignment by means of a test run.

### **Product configuration**

The product configuration process can be started and conducted in different phases of a business process, compare downstream builds.

For the user however, the configuration process is basically identical and structured as follows:

When selecting a configurable basic product, the configuration process is started either automatically or by pressing a button, depending on the application.

When logging an offer or order, an additional input mask then appears with general input parameters for efficient product specification. In this way the configuration process for the sale is concluded.

If a multi-level breakdown of the product is started, all inputs defined in the product attributes are automatically subject to step-by-step, rule-based query.

## Supported functions / Business processes (Construction stage 1)

The following functions are available in the first construction stage of the be.as product configurator:

- Capture / management of product attributes for multi-level products
- Configuration of single-level or multi-level products
- Use of the be.as product configurator in SAP B1 for the logging of offers and sales orders at level positions for price calculation purposes and option to transfer configured data for offer and order printing.
- Fully integrated further application of configured products according to requirements:
  - to generate the product structure for precalculation purposes, for modification for offer revision purposes, for further processing in engineering and to create a work order for complete production planning and management up to the point of delivery
  - to generate a simple order for the purpose of parts scheduling and assembly, incl. delivery and invoicing
- Configuration of products with direct generation of calculation and/or production structures for the purpose of further processing, as described before.

## Supported functions / Business processes (Construction stage 2)

Construction stage 2 comprises the following additional functions:

- Sales, generation of master data and stock management of various items therewith, after successful product configuration using/without using SAP B1. During reconfiguration, the be.as product configurator automatically recognises identical variations created previously and switches to the variations managed in the inventory.
- Web-client for using the be.as product configurator as part of a webshop or a more comprehensive e-commerce solution.
- Various detail enhancements in the product configuration graphic support.
- Other additional functions according to customer requirements.



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