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User Manual - Product Configurator

Data 2020/11/12 Rev.02

User Manual

Product Configurator

Prepare by
Alterna

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1 PREMISE

The hereby document represent a user guide of the "Product Configurator" app.

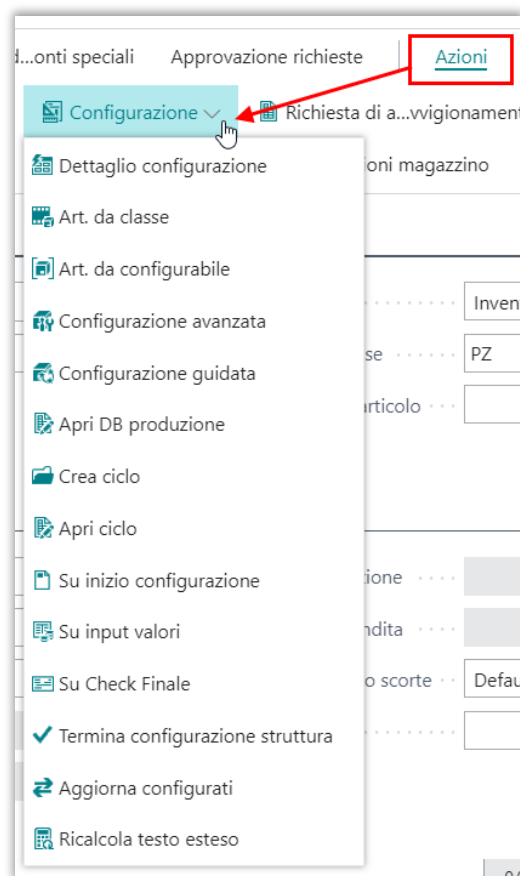
2 APP SETUP

The configurator setup let you to setup the base rule you want to manage while using configurator.

The main setup items are:

- Configurator Setup
- Product Configurator Languages
- Base Characteristic
- Item Encoding Profile
- Characteristic Group
- Bill of Material Configurable Fields

The main function concerning configurator, connected with items, hence that do not deal with configurator setup, are contained in the Item list and also in the Item Card, under the menu **ACTION>CONFIGURATOR**.



Picture 1 – Section Item Configuration

2.1 Configurator Setup

In **Configurator Setup** card are hold different parameter that have to be setup. The latter are useful to setup the different functionalities for configurator. In Configurator Setup is also possible to **Enable Local Trace**, that you can use to trace the operation involved in the product configurator process.

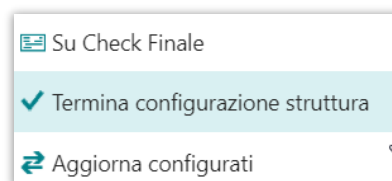
Picture 2 - Setup Configurator Product

General Section Involved:

- **Activate Product Configurator:** ✓
- **Characteristic description on rule text:** ✓; → let you to see characteristic description, and not only characteristic code, in the rule text of define configuration ;
- **Model Characteristic Code:** fill the field after creating the model characteristic, but before the creation of the Characteristic Value Choices → Model Characteristic represent also the characteristic used for configurable pricing.
- **Custom Product No.** → create and insert a serial number with the properties **default number active**.

Other setups concern:

- **Release Structure on Custom Item:** ✓ → let you to certify the entire structure of a custom item;
- **Document line configuration mood** → in this field you can choose the way for configuring an item in sales document. Is possible to choose **Wizard**, for commercial approach, or **advanced configuration** for a more technical view.
- **Hide not Mandatory Characteristic** → it let you to hide the non-mandatory (selected into the item class) characteristic during the configuration process of a configurable item. This help you to avoid error during the configuration process;
- **Configure all level on sale** → let you to configure all bill of material level for item created from a sales order. If the field is marked as true, it will possible to use configure item after the configuration. In order to complete item configuration, in these cases, you have to select **Finish Configuration Structure**;



Picture 3 – Function End and Configure Structure

- **Auto refresh item on sale** → it determined the frequency and the mode of the refresh of a bill of material and of a production routing of a configured item already inserted into a sales order (preventing you to go into the configuration process). The different options of the fields are:
 - **Always:** it always refreshes item structure, without asking any confirmation;
 - **Never:** it never refreshes item structure, and it gives you back an error message if you use in a sales order an item with an update request. In this case you should go ahead in the sales order using the configurable item and not the configured one (the one that need an update);
 - **Ask Confirm:** when you validate the item code into a sales order, BC will give back to you a confirmation message;
 - **On Release:** it always refreshes item on sales, every time you release a sales order.
- **Routing Configuration Layout** → it determines the layout of configurable routing. (see [How Configure a Production Routing](#)). The different options are:
 - **Single Task:** it shows you all the tasks involved without details.

- **Complete:** it shows all the lines involved in all task.
- **Not use characteristic for Excel Import** → in this field you can choose the 'not used' char for the import from excel of configurable item (see [Import Item From Excel](#));
- **Item Extended Update:** ✓ → allow you to use extended text.

Item Extended Texts

Item Extended Update	<input type="checkbox"/>	Sales Blanket Order	<input checked="" type="checkbox"/>
Sales Quote	<input checked="" type="checkbox"/>	Purchase Blanket Ord...	<input checked="" type="checkbox"/>
Sales Invoice	<input checked="" type="checkbox"/>	Service Order	<input checked="" type="checkbox"/>
Sales Order	<input checked="" type="checkbox"/>	Service Quote	<input checked="" type="checkbox"/>
Sales Credit Memo	<input checked="" type="checkbox"/>	Sales Return Order	<input checked="" type="checkbox"/>
Purchase Quote	<input checked="" type="checkbox"/>	Purchase Return Order	<input checked="" type="checkbox"/>
Purchase Invoice	<input checked="" type="checkbox"/>	Automatic Comment	<input type="checkbox"/>
Purchase Order	<input checked="" type="checkbox"/>	All Language Codes	<input type="checkbox"/>
Purchase Credit Memo	<input checked="" type="checkbox"/>		

Picture 4 – Product Configurator Setup (Extended Text)

2.1.1 Configuration Trace

Configuration Trace, when activated, provides you a list of all the action, that have taken place during item configuration. It traces actions from manual input and the actions that take place because of rules setup. This functionality can be helpful to understand if rules are applied in the right way and order during configuration process; trace is helpful to understand, in case of errors during configuration process, where they have taken place.

There are two different options for configuration trace:

1. **Enable Trace:** when is ✓ it activates the trace for all users;
2. **Enable Local Trace:** it activates trace for single user. To disable it select **Disable Local Trace**.

You can view all trace movement selecting **Trace** from setup page, else checking **trace** from advanced configuration.

TRACCIA AZIONI SU SESSIONE CONFIGUR. DATA DI LAVORO: 4/1/2019										
<div> <div>▶ Abilita traccia mia sessione</div> <div>■ Disabilita tra... mia sessione</div> <div>Traccia</div> <div>Regola Applicata</div> <div>Visualizza opzioni</div> </div>										
Log DateTime	Codice Caratteristica	Descrizione Caratteristica	Cod. Caratter. Dipendente	Nome Caratter. Dipendente	Cod. Caratter. Principale	Nome Caratter. Principale	Origine Azione	Tipo azione	Valore	Descrizione Scelta
4/9/2020 10:35 AM	CATART	Item category					Classe	Inserisci		
4/9/2020 10:35 AM	CODART	Item number					Classe	Inserisci		
4/9/2020 10:35 AM	COLLECTION	Collection					Classe	Inserisci		
4/9/2020 10:35 AM	WOODRW	Raw wood					Classe	Inserisci		
4/9/2020 10:36 AM	WOODRW	Raw wood					Input Manu...	Assegna	WALNUT	Walnut wood raw

Picture5 – Trace Session

2.2 Product Configurator Languages

In **Product Configurator Languages** page, you have to insert all languages you desire to manage with configuration translation.

LINGUE CONFIGURATORE PRODOTTO DATA DI LAVORO: 4/1/2019			
Cerca + Nuovo Modifica lista Elimina Apri in Excel			
Cod. lingua ↑		Nome lingua	
	ENU		Inglese
	ITA		Italiano
	FRA		Francese
	ESP		Spagnolo
	DEU		Tedesco

Picture 6 – Configurator Languages

2.3 Profile

A new Profile is added to Business Central with the installation of the app: **APSCONFIGURATOR PROFILE**.

← Personalizzazioni utente Data del lavoro: 01/04/2020	
Cerca + Nuovo Gestione Apri in Excel	
ID utente	ID profilo ▼
LLEMBO	APSCONFIGURATORPROFILE
<u>BCUSER</u>	APSCONFIGURATORPROFILE

Picture 7-Configurator Profile

The profile provides a Role Centre page customized for the user that will deal with configuration.

CRONUS_SCENARI_CONF
| Setup Configuratore prodotto ▼
 | Configurazione articolo ▼
 | Prezzi di configurazione ▼
 | Vendite ▼
 | Produzione ▼

[Articoli Configurabili](#)
[Articoli configurati](#)

Azioni

[+ Caratteristica base](#)
[+ Classe Configurazione](#)
[> Storico](#)

Attività Configuratore prodotto

Configurator

Classi di configurazione 1 >	Caratt. base di configurazione. 3 >	Modelli di configurazione 2 >	Regole di configurazione 2 >	Profilo Codifica Articoli 3 >
---	--	--	---	--

Picture 8-Configurator Role Centre

3 APP FUNCTIONALITIES

3.1 Base Characteristic

Base Characteristic are the basic elements involved in the configuration process and represent the item attribute that can be selected for each single item.

CARATTERISTICHE BASE | DATA DI LAVORO: 4/1/2019

Cerca + Nuovo Gestione Scelte Caratteristica Traduzioni Caratteristica Caratteristiche Dipendenti Apri in Excel Visualizza opzioni

Codice ↑	Descrizione	Tipo Dato Caratteristica	Profilo di Utilizzo	Usa Scelte da Cod. Caratteristica	Cod. Gruppo Input di Default	Bloccato Utilizzo	Esistono Scelte Locali	Esistono Traduzioni	Stato	Grassetto
CATART	Item category	Scelta Tabellare	Configura Articolo			<input type="checkbox"/>	SI	SI	Aperta	<input type="checkbox"/>
C-BACKREST	Coating backrest	Scelta Tabellare	Configura Articolo	COATING(R)		<input type="checkbox"/>	No	No	Aperta	<input type="checkbox"/>
COATING(R)	Coating (REPOSITORY)	Scelta Tabellare	Configura Articolo			<input type="checkbox"/>	SI	No	Aperta	<input type="checkbox"/>
CODART	Item number	Scelta Tabellare	Configura Articolo			<input type="checkbox"/>	SI	No	Aperta	<input type="checkbox"/>
COLLECTION	Collection	Scelta Tabellare	Configura Articolo			<input type="checkbox"/>	SI	No	Aperta	<input type="checkbox"/>
COLOR	Color	Scelta Tabellare	Configura Articolo			<input type="checkbox"/>	SI	No	Aperta	<input type="checkbox"/>
C-PILLOW	Pillow coating	Scelta Tabellare	Configura Articolo	COATING(R)		<input type="checkbox"/>	No	No	Certificata	<input type="checkbox"/>
C-SEAT	Coating seat	Scelta Tabellare	Configura Articolo	COATING(R)		<input type="checkbox"/>	No	No	Aperta	<input type="checkbox"/>
FABRIC	Fabric	Scelta Tabellare	Configura Articolo	COATING(R)		<input type="checkbox"/>	No	No	Aperta	<input type="checkbox"/>
THREAD COL	Thread color	Scelta Tabellare	Configura Articolo			<input type="checkbox"/>	SI	No	Certificata	<input type="checkbox"/>
TOPCOATING	Top coating	Scelta Tabellare	Configura Articolo			<input type="checkbox"/>	SI	No	Aperta	<input checked="" type="checkbox"/>
TOPRAW	Top raw	Scelta Tabellare	Configura Articolo			<input type="checkbox"/>	SI	No	Aperta	<input type="checkbox"/>
VENDOR	Vendor	Codice	Configura Articolo			<input type="checkbox"/>	No	No	Aperta	<input type="checkbox"/>
WOODRW	Raw wood	Scelta Tabellare	Configura Articolo			<input type="checkbox"/>	SI	No	Certificata	<input type="checkbox"/>
WOODVR	Vanished wood	Scelta Tabellare	Configura Articolo			<input type="checkbox"/>	SI	No	Aperta	<input type="checkbox"/>

Picture 9 – Base Characteristic List

A base characteristic is marked by the following elements:

- **Code**
- **Description**
- **Using profile:** it add boundaries on the use of the characteristic. It can assume the following value:
 - Item Configuration
 - BOM Line Configuration
 - Routing Line Configuration
 - Rule Action Condition Only
 - Rule Condition Only
- **Max length choice code:** it let you to boundaries the max length of the choice code;
- **Max length choice text item:** it let you to boundaries the max length of the item description;
- **Characteristic Data Type:** Could be:
 - Tabular Choice: values are taken from a specific list.
 - Numeric: is possible to assign decimal places (precision value) and min and max allowed value;
 - Code: is used for activate the field **BOM Table Type**
 - Date Formula: BC date formula (e.g. 1Y, 1W..)
- **DB Table Type:** define an external source (taken from BC) for characteristic.
 - Item: let you to configure field in item table(T27)
 - Customer: let you to get information from sales document
 - Sales Document: let you to get information from the sales document from where you are configuring item;
 - Bill of Materials Line: it let you to filled up fields concerning bill of materials;
 - Routing Line: let you to valorise fields in the table routing line.
- **BOM Field No.:** it refers to Bill of Material Fields (see [Configurable Field](#))
- **USED BLOCKED:** is used for not tabular choice and with a value for Bill of Material field. If ☒ characteristic is not shown in local variable during configuration process. (see [Advance Configuration](#));

- **Dependent Characteristic Exist:** it let the characteristic to use value of another characteristic. Usually a "repository" characteristic is created and after is associate to all characteristic
- **Use Choice By Characteristic Memo:** allow to impose filter to apply to the repository characteristic;
- **Cod. group default input:** determine the characteristic group, useful in configuration Wizard (see [Characteristic Group](#));
- **Default Max Value:** maximum value for numeric characteristic;
- **Default Min Value:** minimum value for numeric characteristic;
- **Precision Value:** allow to define the decimal places in case of using numeric characteristic. (e.g. "0.01" means the max decimal places are two);
- **Update Item Extended Text:** if ☒ when released the characteristic BC will update extended text. It works just if the Extended Text field is true in configurator setup;
- **Bold:** when is ☒ characteristic code is Bold. Is helpful to understand the most important characteristic;
- **Status:** show if status is Open or Certified.

Base Characteristics Card | Work Date: 4/1/2020

Camera

Process | Related Info | Actions | Fewer options

General

Code	CAMERAS	Field DB name	
Description	Camera	Default Min Value	0
Using Profile	Item Configuration	Default Max Value	0
Text for Item Description		Precision Value	0
Characteristic Data Type	Tabellar Choice	Update Item Extended Text	<input type="checkbox"/>
Max Length Choice Code	10	Local Choices exist	Yes
Max Length Choice Text Item	50	Translations exist	No
Use Choices By Characteristic		Dependent Charact. Exist	<input type="checkbox"/>
Use Choices By Charact. Descr.		Prices Exist Sale Option	<input type="checkbox"/>
Use Choice By Char. - Memo		Used By Other Characteristics	No
Code Group Input of Default		Used By Configuration Class	<input type="checkbox"/>
DB Table Type		Used By Configuration Rules	<input type="checkbox"/>
Use Blocked	<input type="checkbox"/>	Status	Open
DB Field No.	0	Bold	<input type="checkbox"/>
Caption Field DB name			

Picture 10 - Base Characteristic

3.1.1 Base Characteristic Choice

For **Tabular Choice Characteristic** is possible to define the list of specific value.

Color | Work Date: 4/1/2020

Base Characteristics Choices | Search | New | Edit List | Delete | Translations

Choice Code ↑	Description	Sequence	Text for Item Description	Priority (1=Min 99=Max)	Cus... Cho...	Transl... Exists
BLACK	Black	0		0	<input type="checkbox"/>	No
CUSTOM	Custom	0		0	<input checked="" type="checkbox"/>	No
RED	Red	0		0	<input type="checkbox"/>	No
→		0		0	<input type="checkbox"/>	No

Picture 11 – Tabular Choice

Below the fields involved into a Tabular Choice List:

- **Code**
- **Description**
- **Text For Item Description** → if filled is used as description for configurable/configurate item;
- **Custom Choice** → when true marked the choice as custom value. When there is at least one custom choice will be created a custom item.
- **Translation Exist** → marked if the translation table for that choice is compile (base characteristic Choice>Translation).

Choice Code ↑	Description	Sequence	Text for Item Description	Priority (1=Min 99=Max)	Cus... Cho...	Transl... Exists
→ BLACK	Black	0		0	<input type="checkbox"/>	No
CUSTOM	Custom	0		0	<input checked="" type="checkbox"/>	No
RED	Red	0		0	<input type="checkbox"/>	No

- **Sequence** → let you to organize and to sort choices;
- **Numeric Index** → is used for tabular choice for assigning a value in Bill of Material and Routing;
- **Not Used in Extended Text** → just in case the setup "Refresh Extended Text" is True; when the value is True it let you to not include some choices into the extended text;
- **Linked Characteristic** → show if to that specific choice are linked specific characteristic. Is possible to connect specific characteristic to the value of other characteristic (for example with this functionality you can connected the choice Cover Colour to the Choice Smartphone Colour).

3.1.1.1 HOW: create a Characteristic

For Creating a Base Characteristic select NEW from the Base Characteristic.
Insert Code, Description, and the Other Setup.

3.1.1.2 HOW: create Characteristic Choice

From Characteristic Base Page select **Base Characteristic>Characteristic Choice**.
Filled Code and Description and complete setup.

3.1.1.3 HOW: Setup Characteristic Link

Go to the page of the First Characteristic (hence the one that determine the value of the other characteristics).

Select **Characteristic Links**.

Base Characteristics Card | Work Date: 4/1/2020

Memory

Process [Related Info](#) | Actions Fewer options

[Characteristic Translations](#)
[Characteristic...es Traslations](#)
[Characteristics Links](#)
[Where Used by Dependencies](#)

Code MEMORY Field DB name

Description Memory Default Min Va

Picture 12 – Characteristic Link

In **Characteristic Link** insert the Linked Characteristic Code. **Select Choices** for filling the values.

Caratteristiche Dipendenti

Cerca + Nuovo [Modifica lista](#) [Elimina](#) [Scelette](#) [Apri in Excel](#) Visualizza opzioni

Cod. Caratteristica Dipendente ↑	Descr. Caratter. Dipendente	Tipo Dato Caratteristica	Tipo Dipendenza	Sequenza	Disabili... Uso Priorità	Abilita su Scelte	Valore Minimo	Valore Max
→ THREAD COL	Thread color	Scelta Tabellare	Valore su Scelta	0	<input type="checkbox"/>	<input type="checkbox"/>	0	0

Picture 13 – Characteristic Choice Link

In the field **Input Value** insert the value you want to assign to the characteristic.

Codice Caratteristica Dipendente ↑	Codice Scelta	Descrizione Scelta	Cod. Caratteristica Dipendente ↑	Nome Caratteristica Dipendente	Valore Assegnato	Descr. Scelta Caratt. Dipendente	Sequenza	Disa... Carat...	Tipo Dipendenza
→ COLOR	BLUE	Blue	THREAD COL	Thread color	BLU	Blue Thread	0	<input type="checkbox"/>	Valore su Scel...
COLOR	CST	Custom	THREAD COL	Thread color			0	<input type="checkbox"/>	Valore su Scel...
COLOR	RED	Red	THREAD COL	Thread color	RED	Red thread	0	<input type="checkbox"/>	Valore su Scel...

Picture 14 – Link Characteristic

NOTE: relationship among the two characteristic is fixed. Is not possible to modify the value of the link characteristic during configuration procedure.

3.1.1.4 HOW: setup translation for Base Characteristics and their choice

From the Base Characteristic Page select Characteristic Translation in order to setup characteristic translation, and translate Characteristic Choice for setup translation of its Choice.

Picture 15 – Translation Action

3.2 Configurable Field

In the page **DB Field Selection** is possible to insert all the field you want to setup as configurable for the following tables:

- Item: fields will be configurate in configurate item;
- Customer: from the fields will be taken info for configuration process;
- Sales Document: from the fields will be taken info for configuration process;
- BOM line: marked fields will be filled up in the item that will be configurate;
- Routing Line: marked fields will be filled up in the item that will be configurate;

Tipo Tabella ↑	Nr. campo ↑	Nome campo	Tipo di campo	Nr. Tabella Relazione
Articolo	31	Nr. fornitore	Codice	23
Articolo	95	Cod. paese di origine	Codice	9
Cliente	15	Cod. regione	Codice	286
Documento Vendita	2	Vendere a - Nr. cliente	Codice	18

Picture 16 –Configurable Field

3.3 Item Characteristic Group

Characteristic Group are useful for group together characteristic during the use of configuration **Wizard**.

The field **Default Input Sequence** indicate the sequence in which you prefer to show the group.

GRUPPI CARATTERISTICHE | DATA DI LAVORO: 4/1/2019

✓ SALVATO

Cerca

Nuovo

Modifica lista

Elimina

Apri in Excel

Codice ↑	Descrizione	Sequen. Input Default	Nota Standard
→ G1	Gruppo 1	100	
G2	Gruppo 2	200	

Picture 17 – Characteristic Group list

WIZARD DI CONFIGURAZIONE PRODOTTI

Page 1 of 2 - Ordine No. 101012 - Item: N.SNRCHAPF Sunrise chair

Group No. G1

Descrizione Caratteristica	Valore	Description	Val... Ob...	Scelta Cus...	Note In
→ Coating backrest	C006	Coating 006	<input type="checkbox"/>	<input type="checkbox"/>	
Coating seat			<input type="checkbox"/>	<input type="checkbox"/>	

Indietro
Avanti
Riepilogo
Fine

Picture 18 – Configuration Wizard With Group

3.4 Item Encoding Profile

Encoding profile let you to define the structure of item code and item description of configurable Item. This determine the code assign to an item once the configuration procedure is done.

PROFILI CODIFICA ARTICOLI DATA DI LAVORO: 4/1/2019											
	Cerca		Nuovo		Modifica lista		Elimina		Apri in Excel		
Codice ↑	Descrizione	Tipo Codifica Articolo	Nr. serie	Mask Codice Articolo	Mask Progressivo Art.	Tipo Progressivo nel Mask	Mask Descrizione Articolo	Mask Descrizione Articolo 2			
ART.CNF	Configurable items	Mask Codifica		N.[CODART]			[CODART]				
ART.SPC	Custom items	Mask Codifica		[CODART]/C[CNT]	0000	Check Codifica	[CODART]				
ART.STD	Standard items	Mask Codifica		[CODART]/[CNT]	0000	Check Configurazione	[CODART]				

Picture 19 – Item Encoding Profile

The encoding structure can be defined by:

- No-Numeric Characteristic Value
- Constant
- Sequence

Item Mask Code → this field have to be filled up with the formula used to build up the item code. Characteristic Code have to be used in square branch (es. "[]"). The value "[CNT]" represent a counter for a progressive coding.

Referring to the picture above, the code "ART.STD" is build up in the following way:

- Characteristic Value "[CODART]"
- Fixed Text "/"
- Counter: [CNT]
- The length of counter is defined in the field item counter mask.

Item Mask Description → here you build up the mask for the construction of the description of item;

Encoding code must be assign in each **Configuration Class**.

3.5 Configuration Class

Configuration Class is the tool that put together characteristic and rules that you can apply to an item or to a group of item.

With configuration class you can define the order in which characteristic and characteristic group are presented in configurable and configure item. It also contains item encoding profile.

Configuration Class let you to:

- Divide product into class. The relationship among product and class could be 1:1 or 1:n;
- Decide which are the main characteristics and impose default value for each characteristic;
- Classify item using default value of characteristic.
- Search items using criteria as item class/characteristic/characteristic Value;

CLASSI CONFIGURAZIONE | DATA DI LAVORO: 4/1/2019

Visualizza Tutto Cerca + Nuovo Gestione Lista Articoli per Classe Apri in Excel

Nr. ↑	Descrizione	Cod. Profilo Codifica Art.	Descr. Profilo Codifica Art.	Stato
CHAIRS	Chairs	ART.STD	Standard items	Certificata
CHAIRS BACKR...	Chairs backrest	ART.STD	Standard items	Certificata
CHAIRS RAW B...	Chairs raw base	ART.STD	Standard items	Certificata
CHAIRS VARN. ...	Chairs varnished base	ART.STD	Standard items	Certificata
CHARIS SEAT	Chairs seat	ART.STD	Standard items	Certificata
FABRIC	Fabric	FAB.STD	Fabric standard items	Certificata
PILLOW	Pillow	ART.STD	Standard items	Certificata
PILLOW SF	Pillow semifinished	ART.STD	Standard items	Certificata
SMARTPHONE	Smartphone	IPHONE.STD	Iphone standard	Aperta
TABLES	Table class	ART.STD	Standard items	Certificata
TABLES RAW B...	Tables raw base	ART.STD	Standard items	Certificata
TABLES RAW T...	Tables raw top	ART.STD	Standard items	Certificata
TABLES VARNI...	Tables varnished base	ART.STD	Standard items	Certificata
TABLES VARNI...	Tables varnished top	ART.STD	Standard items	Certificata

Picture 20 – Configuration Class List

In tab General, you find the following elements:

- **Class No.**

- **Class Description**
- **Configurable Item Encoding Profile Code** → define how will be codified configurate items of this specific class;
- **Item Encoding Profile Code** → define how will be codified configurable items of this specific class;
- **Custom Item Encoding Profile Code** → define how will be codified custom items of this specific class;

In tab **Details** the peculiar fields are:

- **Usage Note** → for an additional description in the item class;
- **Automatic insert item in configuration** → is usually active ✓. When unable in case the bill of material you are codifying needs a component from that specific class, and the latter is not codified yet. This avoid to create new item when you deal with configurable bill of material.

Tipo di messaggio	Descrizione Caratteristica	Cod. Caratter. Dipendente	No... Car... Dip...	Testo Messaggio
→ Errore	:			Non Esiste Articolo conf.to su configurabile N.SNRCHASL01.

Picture 21 – Error Components in bill of Material

- **Admit Item Created by Characteristic Configuration** → let to use the function Manage Combination, for technical configuration. (see [Multiple Configuration](#))
- **Exclude Custom Item** → if ✓ doesn't allow to create custom item;

Messaggi Configurazione				
Tipo di messaggio	Codice Caratteristi...	Descrizione Caratteristica	Testo Messaggio	
→ Errore	:	C-BACKREST Coasting backrest	La classe di configurazione CHAIRS BACKREST non permette articoli CUSTOM.	

Picture22 – Error Exclude Custom Item Use

- **Hide not mandatory characteristic** → if this field is non active in configurator setup, when true in the class let you to hide not mandatory characteristics for that specific class;
- **Exclude not used characteristic** → if ✓, not used characteristic are not reported on item configuration details.

CHAIRS

Certifica

Riapri

Lista Articoli per Classe

Azioni

Meno opzioni

Certifica

Riapri

Lista Articoli per Classe

Generale

Nr.

CHAIRS

Cod. Profilo Codifica Art.

ART.STD

Descrizione

CHAIRS

Cod. Profilo Codif. Art. Custom ..

ART.CST

Cod. Prof.Codifica Art. Conf.le ..

ART.CNF

Picture 23 – Configuration Class Header

Tab **Default Item** contains information that will be copy on configurable item that will come from that specific class.

Some fields are:

- **Rounding Precision:** refer to rounding precision in item card, usually is setup as 1;

- **Default Item Template:** represent standard item template to apply to the configurable item; using this field you can easily apply unit of measure, reordering policy..);

Default Articolo			
Precisione arrotondamento	<input type="text" value="1"/>	Modello articolo di default	<input type="text" value="ARTI000001"/>
Metodo consuntivazione	<input type="text" value="Manuale"/>	Nome modello articolo di default ..	<input type="text" value="Articolo"/>
Nr. Ciclo Base	<input type="text"/>	Critico	<input type="checkbox"/>
Fuori Listino	<input type="checkbox"/>		

Picture 24 - "Default" section configuration class

In Characteristic Section there is the list of all the base characteristic that will be apply to the item connected to this class. For each characteristic you can define also the following fields:

- **Item Group Code** → in case you want to deal with group;
- **Characteristic Sequence** → represent the proposal sequence of the value in the class;
- **Choice Filter** → you can limit the choice of specific characteristic applying filter. For example, using **C*** as filter, the system will show just choice starting with C* ;
- **Mandatory on Fixed Item** → if ☒ it won't be possible to complete configurable item if that value is blank;
- **Mandatory on Configure Item** → if ☒ it won't be possible to create a new item without the value of that specific characteristic;
- **Not Used** → if ☒ flag not used will be in characteristic line. The not used characteristic will not be asked during configuration process.
- **Default Value** → let you to assign a default choice of the characteristic; it can be modified during configuration;

Caratteristiche

Gestione

+

Nuova riga

-

Elimina riga

Codice Caratteristica	Descrizione Caratteristica	Cod. Gruppo Input	Sequen. Caratt. ↑	Filtro Scelte Locale Memo	Valore predefin...	Obbligo su Art. Conf.to	Obbligo su Art. Conf.le	Valore min.	Valore Max
→ COLLECTION	⋮ Collection	G1	10			<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	0	0
CODART	Item number	G1	20			<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	0	0
CATART	Item category	G1	30			<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	0	0
C-BACKREST	Coating backrest	G1	40		C006	<input type="checkbox"/>	<input type="checkbox"/>	0	0
C-SEAT	Coating seat	G1	50			<input type="checkbox"/>	<input type="checkbox"/>	0	0
WOODVR	Vanished wood	G2	60	C*		<input checked="" type="checkbox"/>	<input type="checkbox"/>	0	0

Picture 25 - Characteristic

In configuration class you also have the possibilities to setup configuration rule (see [Configuration Rules](#)).

Once completed setup or once modified configuration class, you have to change the status in certified, using the action **Certifica**.

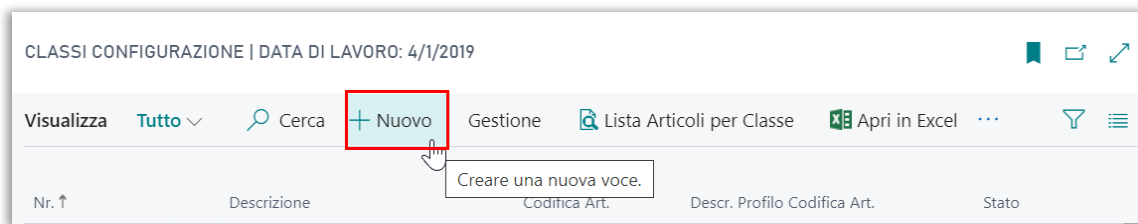
CHAIRS

Funzioni ▾
Certifica (F9)
stato ▾

Picture 26 – Certificate

3.5.1.1 HOW: create configuration class

From Configuration Class List click on **NEW**.

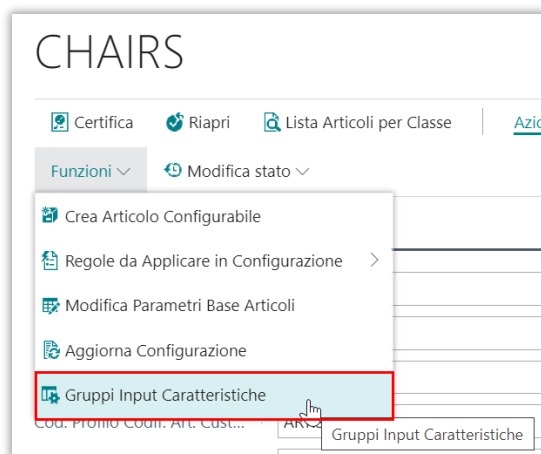


Picture 27 – Insert New Class

Compile the card as indicate in the chapter [Configuration Class](#).

3.5.1.2 HOW: assign input group to characteristic

When class status is **Open**, before assigning characteristic group (in characteristic line) go in **Action>Function>Characteristic Group Input** and insert the group that will be used to that specific class. You can also indicate **default input sequence**; when using configuration wizard classes with the smallest sequence number will be the first to be shown.



Picture 28 – Characteristic Input Group

Cerca + Nuovo Modifica lista Elimina Apri in Excel				
Codice gruppo ↑	Descrizione Gruppo	Sequen. Input Default	Tipo Condizione Gruppo Test	Nota Specifica
→ G1	Gruppo 1	100		
G2	Gruppo 2	200		

Picture 29 – Characteristic Input on Class

After this is possible to associate single characteristic to specific group.

Codice Caratteristica	Descrizione Caratteristica	Cod. Gruppo Input
→ COLLECTION	Collection	G1
CODART	Item number	G1
CATART	Item category	G1
C-BACKREST	Coating backrest	G1
C-SEAT	Coating seat	G1
WOODVR	Vanished wood	G2

Picture 30 – Input Group

3.6 Configurable Item

Configurable items are starting item for creating configurate item. Configurable items are created from the configuration class, using specific function.

A configurable item is built up in the following way:

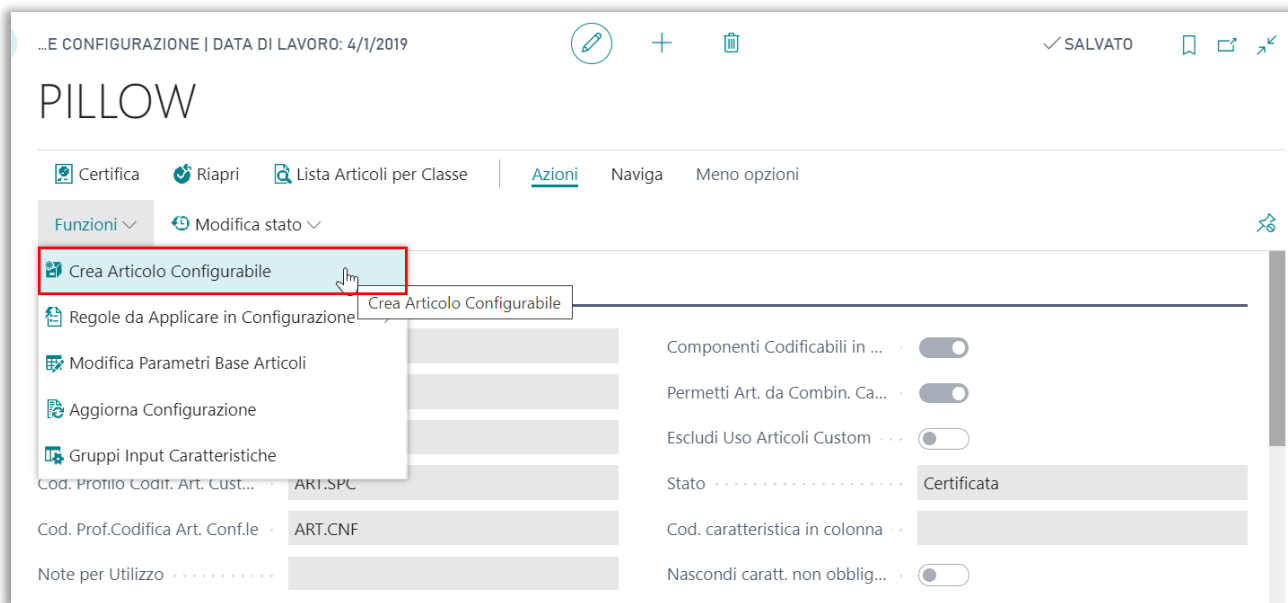
- Takes from class characteristic and their default value;
- Is possible to pre assign specific value to characteristic already present in the class. The latter represent a pre- configuration of some characteristic comparing to the configurable one;
- **Is not a product managed by Supply Chain;** the item is not usable in sales document;
- Is possible to assign specific information as you do with item;
- You can assign to configurable item specific configuration rules (see [Assign configuration rules](#));
- From configurable item is possible to create configurate item.

A configurable item, in **Configuration** section, in item card will present:

- **Configuration Profile:** Configurable;
- **Configuration Class No:** contains item class;
- **Configurable Item No:** blank;
- **Pattern Entry No:** represent the unique value that identify configuration and represent the connection among item table and configuration table;
- **Custom Item:** blank.

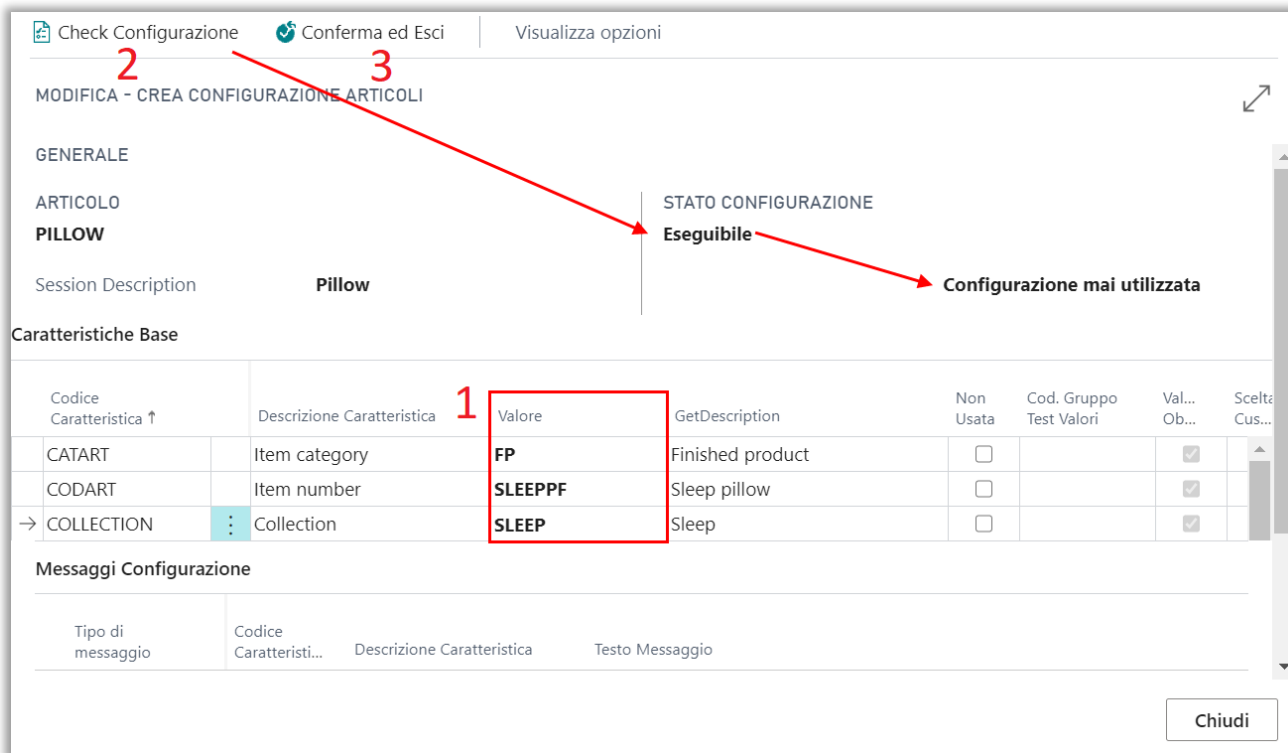
3.6.1.1 HOW: create configurable item

From a configuration class that present status Certified select **Action>Function>Create Configurable Item**.



Picture 31 – Create Configurable Item

In Configuration Wizard will be propose all the Characteristic in the configuration class (if hide non mandatory characteristic is active, the latter will not show).



Picture 32 – Create Configurable Item

Passage in the picture are the following:

PHASE1

In the field **Value** insert the value of the characteristic you want to assign to the configurable item.

There are three different type of characteristic:

1. Mandatory Characteristic: if any blank the configuration check will give back an error;
2. Characteristic for item encoding mask: in case some characteristic take part of encoding profile, they must be compile;
3. Not Mandatory Characteristic: is possible to pre-configure characteristic even if they are not mandatory.

NOTE: all the pre configure characteristic will not be ask during the configuration process. Usually are characteristic that define the type of product you are dealing with (finished product, raw material) or the collection.

Flag not used if ✓, let you to put to the configurable item not used value (see [Configuration Detail](#)). This field is useful to manage different number of characteristic for the same class. If flag the characteristic will not show while configuring item.

PHASE 2

Once compile all the characteristics, click on Check Configuration. This will give back the following message:

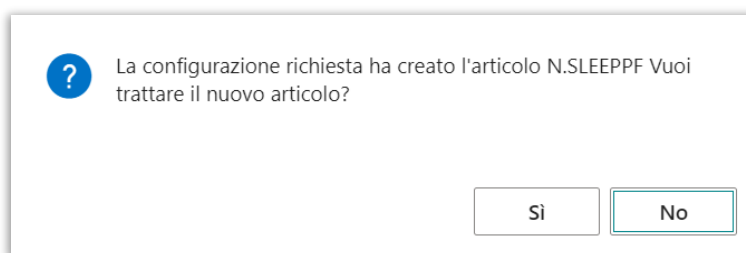
- “Executable” if configure item is ok;
- “Attention” in case there are alert message;
- “Error” in case of error; errors can be checked in configuration message.

Messaggi Configurazione			
Tipo di messaggio	Codice Caratteristi...	Descrizione Caratteristica	Testo Messaggio
→ Errore	⋮		PROFILO CODIFICA: - L'articolo N.SLEEPF esiste già.

Picture 33 – Configuration Message

PHASE 3

Once check the configuration, click on **Confirm and Exit**. BC will propose you to open the configurable item and deal with it.



Picture 34 – End of Configuration Message

Configurable item will be always blocked, and it will not possible to use as a standard item.

3.6.2 Create Configurable Item Using Import to Excel Function

It is possible to create configurable item using import from excel function.

For importing item using excel:

- Base Characteristics and their choice have to be inserted in BC;
- Configuration Class must exist in BC and they must have their status as release;
- Not Used Characteristic Symbol have to be filled up in configurator setup; (see [Configurator Setup](#))

Excel file must be build up in the following way:

First three column of the Excel file (**A, B, C**) are fixed for every import. In particular, **column A** and **column B** are descriptive column; user can use them for reference of the item. **Column C** MUST contain configuration class from where the item is created.

From **column D** you have to insert all the characteristic of the configuration class indicated in column C. The label of Characteristic can be inserting in row 3 (note that during the import you can change Label Column).

Import from excel doesn't impose you to create one excel sheet for each class, but you can put different class in the same excel sheet. Anyway is advised to create different sheet, so proceed with different import for each class.

Below an example of the file:

- Cells representing characteristic of that specific configuration class have to be compile;
- Inserting a value for a specific characteristic means pre-configure the item;
- For define Not Used Characteristic used the symbol setup up in configuration setup for not used character symbol;
- If a cell is empty:
 - You have to choose the characteristic value during item configuration;
 - If the characteristic class do not have that specific characteristic, the import won't take into account that cell. That means that is possible to insert more than one class into the excel file.

	A	B	C	D	E	F	G	H
1								
2				CARATTERISTICHE				
3	Cod.Padre	Descrizione	Classe	Model	Camera	Color	MEMORY	SCREEN
4	A001	SP01	SMARTPHONE	PH2	2	BLK	64	GLS
5	A002	SP02	SMARTPHONE	PH3	3	RED	128	GLS
6	A003	SP03	SMARTPHONE	PH3	2	-	256	CRM
7								
8								

Picture 35 – Import Configurable Item

For running this procedure search Import Configurable Item; in the page, select **import from Excel**.

Select:

- Line No with characteristic code (3 as default);
- Excel File Name;
- Excel Sheet Name.

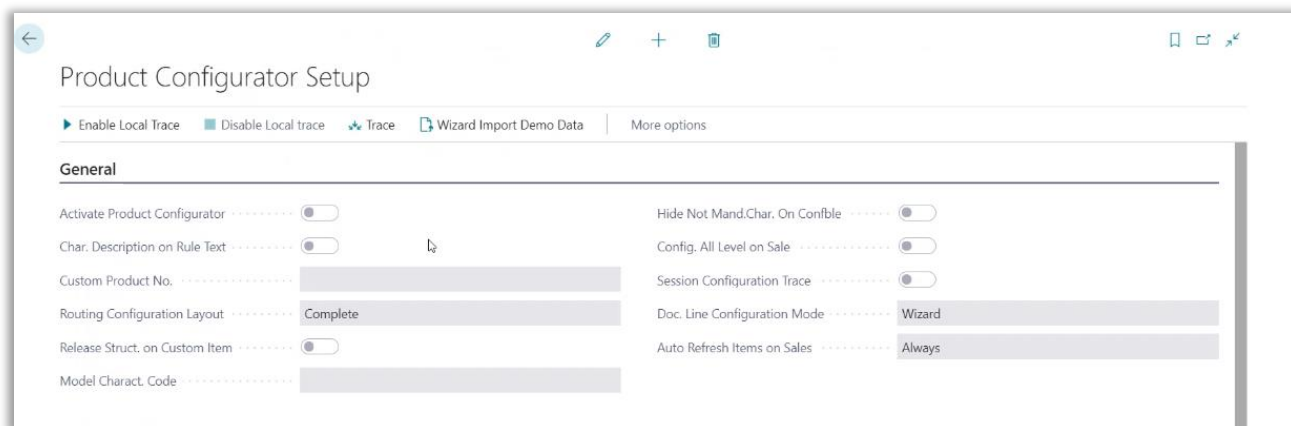
In case of error, they will be reported into di error field.

Select **Create Configurable Item** to complete the procedure.

3.6.3 Import Wizard

In configuration setup is possible to proceed with a Demo Wizard that import for you:

- A rapid Start with all value need for using configurator and configure item
- An Excel contains data for creating configurable item using Import Excel Procedure.



Picture 36– Import Wizard Demo Data

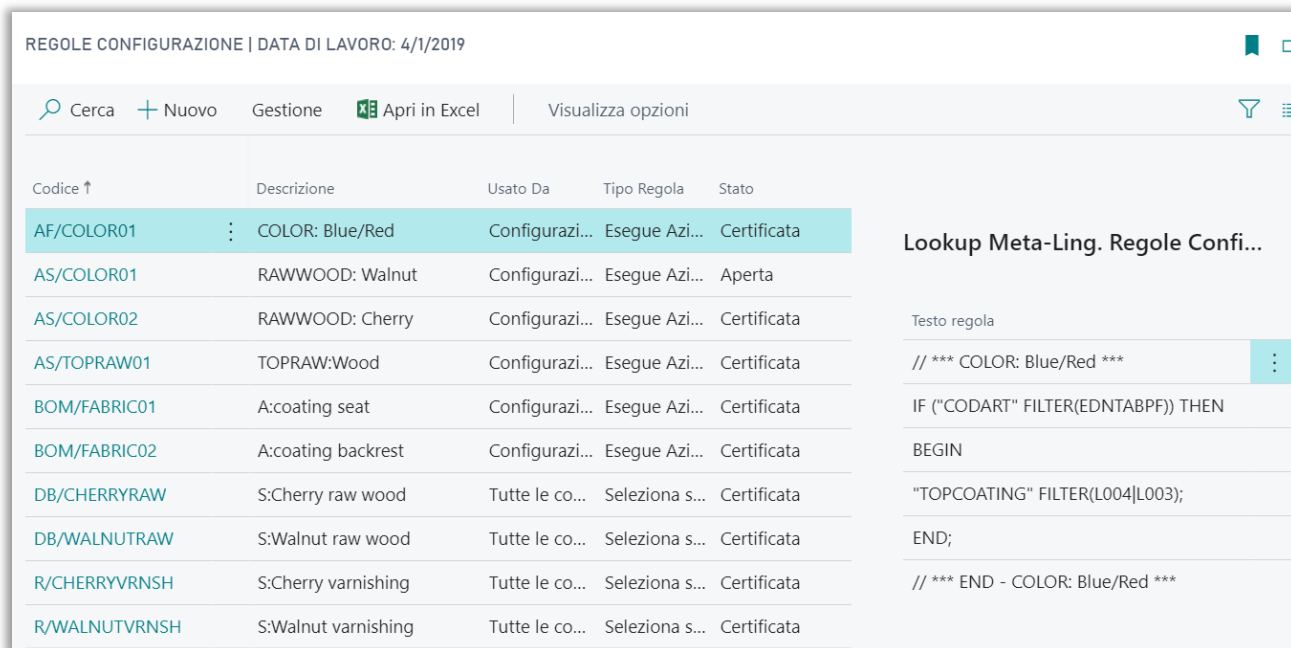
3.7 Configuration Rules.

Configuration Rules can be applied in:

- Item Configuration
- Bill of Material Configuration
- Routing Configuration
- Option Sales Price
- Rules group to apply in sequence.

Configuration Rules Let to:

- Define the relationship among characteristics and their value. Thanks to rule you can:
 - Limit characteristic value;
 - Make mandatory/optional the input of value concerning other characteristic;
 - Assign value of other characteristic;
 - Able or Unable specific characteristic of product;
- Define criteria to build up BOM, routing, pricing of a product on the base of the value of specific characteristic.



Picture 37 – Configuration Rule List

A rule is composed by header and line.





In the header the main elements are:

- **Code**
- **Description** → usually description have to explain what the rule does, so can be easily used in different areas;
- **Used By** → defines a rule application area.
 - **Item Configuration** → the rule is applied to characteristic value during configuration process;
 - **Bill of Material Configuration** → the rule is applied while you build up configuration of bill of material;
 - **Configuration Routing** → the rule is applied building up routing;
 - **All configuration** → this rule can be applied to different areas. An example can be rule filter (rules type: execute action) that can be applied on option prices and on item configuration or rules for both routing and bill of material;
- **Rule Type** → represent the behaviour of the rule.
 - **Execute Action** → trig the rule in an independent way or with one condition.
 - **Select just if condition is TRUE** → let to define condition that if are true, trig specific selection. This type of rules are used for routing and bill of material.
 - **Rules Group** → a rules contains other rules.
- **Use Original Characteristic Value** → if ☒, pre configure characteristic choice will be stronger compare to the ones set up by rules;
- **Status** → for being assign, a rule must be certified.

Generale			
Codice	AF/COLOR01	Usata da Applicazioni	<input checked="" type="checkbox"/>
Descrizione	COLOR: Blue/Red	Usata da Gruppo Regole	<input type="checkbox"/>
Usato Da	Configurazione articolo	Usata da Righe DB	<input type="checkbox"/>
Tipo Regola	Esegue Azioni	Usata da Azioni Ciclo	<input type="checkbox"/>
Note per Utilizzo	A:EDEN	Usata da Prezzi Vendita Opz... ..	<input type="checkbox"/>
Usa Valori Originali Caratter. ..	<input type="checkbox"/>	Stato	Certificata

Picture 38- Configuration Rules Header

Line selection can be of four different type.

 Azioni Prima	 Condizioni	 Azioni Dopo	 Sequenza Regole
--	--	---	--

Picture39 – Rules Action

A rule can have these different elements:

- **Action Before** → action unconnected with specific condition (e.g.: starting value for configuration);
- **Condition** → constrain for the action in the rules (e.g.: test on one or more value of the characteristic);
- **Action After** → action to execute on characteristic in case one condition is TRUE or FALSE;
- **Rules Sequence** → rules list to execute in order. Can be applied just if the rules is Group of Rules.

3.7.1.1 HOW: setup condition for Rules

Conditions:

1. Can be useful for determine if a characteristic contains specific value.

In the picture below you read: to the characteristic WOODVR apply filter W* (in the section apply filter you can use all the filter character you have in BC)

Condizioni		Gestione			
(..		Codice Caratteristica	Descrizione Caratteristica	Condizione	Applica filtro
→	<input type="checkbox"/>	⋮	WOODVR	Vanished wood	FILTER W*

2. Is possible to compare two different characteristic.

In the picture below you read: "if the value of characteristic C-BEACKREST is equal to the value C-SEAT.
"Se il valore della caratteristica C-BEACKREST è uguale al valore della caratteristica C-SEAT.."

Condizioni		Gestione			
(..	Codice Caratteristica	Descrizione Caratteristica	Condizione	Cod. Caratter. Confronto	Descrizione Caratteristica
→ <input type="checkbox"/>	⋮ C-BACKREST	Coating backrest	=	C-SEAT	Coating seat

3. Can be combine together with AND/OR.

In the picture below "if the characteristic CODART is filter with EDNTABPF AND colour characteristic is FILTER BLUE..".

Condizioni		Gestione				
(..		Codice Caratteristica	Descrizione Caratteristica	Condizione	Applica filtro	AND / OR
→	<input type="checkbox"/>	⋮	CODART	Item number	FILTER EDNTABPF	AND
	<input type="checkbox"/>		COLOR	Color	FILTER BLUE	,

3.7.1.2 HOW: setup action on configuration rules

You have different kind of actions, based on the value Action Type. Option are the following:

1. **Choices Filter** → apply filter to the possible value. Filter Selection have as value Included and Excluded. **Apply Choice Filter** show the value that will be shown (included) or not showed (excluded).

Azioni Dopo		Gestione				
Applica se Condizione è		Tipo azione	Codice Caratteristica	Descrizione Caratteristica	Filtro Scelte da Applicare	Selezione Filtro
→ VERA	<div></div>	Filtra Scelte	C-BACKREST	Coating backrest	C003 C005	Inclusi

2. **Assign Value** → Assign a specific Value. Field **Apply Only if Null** if ☒, avoid that the trigger of previous rule overwrite a value assigned before. The field **allow modification Value**, let you to modify the value assign during configuration.

Azioni Dopo		Gestione				
Applica se Condizione è	Tipo azione	Codice Caratteristica	Descrizione Caratteristica	Formula Calc. / Assegna Valore	Applica solo se NON valorizzata	Permetti Modif. Valore su Assegn.
→ VERA	⋮ Assegna Valore	C-BACKREST	Coating backrest	C002	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

3. **Assign Characteristic** → assign to a characteristic a value based on another characteristic (the one in the field assigned characteristic name);

Azioni Dopo		Gestione				
Applica se Condizione è	Tipo azione	Codice Caratteristica	Descrizione Caratteristica	Cod. Caratter. Assegnata	Nome Caratteristica Assegnata	
→ VERA	⋮ Assegna Caratteristica	C-BACKREST	Coating backrest	C-SEAT	Coating seat	

4. **Calc. Formula** → assign a value define in a formula, that let to use variable value of every characteristic;
 5. **Error** → give you back a blocked error while configurate the value;

Azioni Dopo		Gestione	
Applica se Condizione è	Tipo azione	Testo Messaggio	
→ VERA	⋮ Errore	Questo è un messaggio di ERRORE.	

6. **Attention Message** → give back an attention message while configurate the value;

Azioni Dopo		Gestione	
Applica se Condizione è	Tipo azione	Testo Messaggio	
→ VERA	⋮ Messaggio Attenzione	Questo è un messaggio di ATTENZIONE	

7. **Create Constrain** → select characteristic become mandatory;

Azioni Dopo		Gestione	
Applica se Condizione è	Tipo azione	Codice Caratteristica	Descrizione Caratteristica
→ VERA	⋮ Crea Obbligo	C-BACKREST	Coating backrest

8. **Enable/Disable Characteristic** → allow to hide or unhide a characteristic in configuration wizard;

Azioni Dopo		Gestione		
Applica se Condizione è		Tipo azione	Codice Caratteristica	Descrizione Caratteristica
→ VERA	:	Disabilita Caratteristica	C-BACKREST	Coating backrest

3.7.1.3 HOW: create a selection rules in item/bill of material /routing

Selection rule in bill of material or in routing present the following choices:

- **Used By: Configuration BOM** for Bill of Material Selection Rules, Configuration Routing for Routing Configuration Rules;
- **Configurazione ciclo** per regole di selezione ciclo;
- **All configuration** for rules that can be applied in both cases;
- **Rules Type:** select if condition is TRUE;

This type of rules presents only condition and no action. Action is defined when you apply rule in bill of material and routing.

3.7.1.4 HOW: create an action rule on Bill of Material Line

This rule are useful to assign value to characteristic of item in production Bill of Material. With configurator you assign all characteristic from configurable to configure item. The only way to assign different value or to use in derivate item characteristic that are not presented in principal item is to use trasmission rules in bill of material. (see [Assign rules](#)).

These rules have the following parametrization:

- **Used: Bill of Material Configuration;**
- **Rule Type: Execute Action;**

They could be direct assignment and so present just **action before**, or present **condition** and so **action after**.

Action will be of type **Assign Value or Assign Characteristic**.

Generale	
Codice	BOM/FABRIC01
Descrizione	A:coating seat
Usato Da	Configurazione DB
Tipo Regola	Esegue Azioni
Note per Utilizzo	
Usa Valori Originali Caratter.	<input type="checkbox"/>

Azioni Prima		Gestione			
Nuova riga		Elimina riga			
Tipo azione	Codice Caratteristica	Descrizione Caratteristica	Cod. Caratter. Assegnata	Nome Caratteristica Assegnata	
→ Assegna Caratteristica	FABRIC	Fabric	C-SEAT	Coating seat	

3.7.1.5 HOW: create a group of rules

Group of Rule present the following setup:

- **Used By:** BOM Configuration or Routing Configuration or All Configuration;
- **Rule Type:** Rules Group;

Generale	
Codice	GR/WOOD
Descrizione	Wood group
Usato Da	Configurazione articolo
Tipo Regola	Gruppo Regole
Note per Utilizzo	
Usa Valori Originali C...	<input type="checkbox"/>
Usata da Applicazioni	<input type="checkbox"/>
Usata da Gruppo Reg...	<input type="checkbox"/>
Usata da Righe DB	<input type="checkbox"/>
Usata da Azioni Ciclo	<input type="checkbox"/>
Usata da Prezzi Vendi...	<input type="checkbox"/>
Stato	Certificata

Selecting the action button **Rules Sequence**, you have the list of action. In this list you have to insert all the rule you want to associate to the group.

Sequenza Regole		Gestione
Cod. Regola	Descrizione Regola	
→ AS/COLOR01	RAWWOOD: Walnut	
AS/COLOR02	RAWWOOD: Cherry	

NOTE: rules group work with sequence rules.

3.7.2 Assign Configuration Rule

Rule can be assign to:

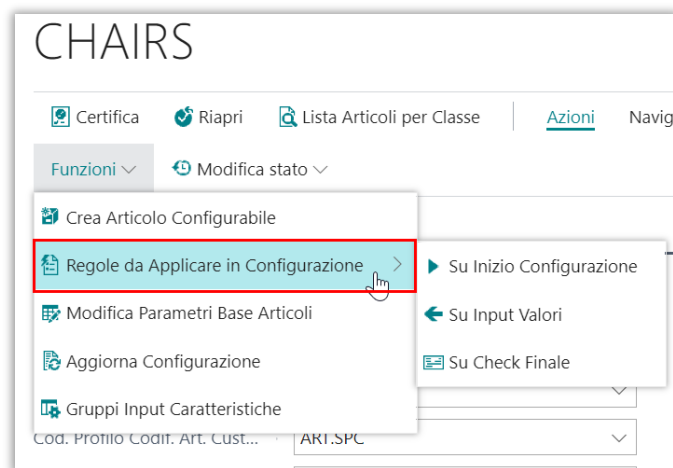
- **Configuration Class** → in this case are applied to all product create from configuration class;
- **Configurable Item** → if assign to this level, are stronger comparing to rule apply to class and are valid just on item;
- **Option Price List** → determine condition for applying price and price increase/decrease; (see [Option Sales Price Option](#))
- **Bill of Material Line** (see [Configurable Bill of Material](#));
- **Routing Configuration** (see [Configuration Routing](#))

3.7.2.1 HOW: assign rule to configuration class.

For assign rule to configuration class, class status have to be **Open**.

Rule application can be activated in three different moments:

1. **On Begin Configuration** → rules in this list are applied on the beginning of configuration;
2. **On Input Value** → rules of this list trigger when each characteristic is inserted;
3. **On Final check** → rules are applied at the end of configuration, once the check is done; (could be use to execute rule that assign value to characteristic that have a relationship with the assign characteristic) (see [Advance Configuration](#))



Picture 40 – Assign Rule on Class

3.7.2.2 HOW: assign rule to configurable item

For associate a rule to a configurable item, go into item List, select configurable item, then action and configuration. There are three different application way:

1. **On Init Configuration**
2. **On input Value**
3. **On final Check**

Rules assign to configurable item are stronger comparing to the one assign on configuration class.

3.8 Configurable Bill of Material and Transmission Principal

Using Configurator, principal item convey all its characteristic on the derivate item. That means that configurable item that works in bill of material line, presented the same characteristic of principal item, or at least a subset, but never different characteristic. We can define this way of work as "transmission principle", with the hypothesis that all the characteristic of derivate item must be filled up.

When a derivate item has mandatory characteristic it looks for them in principal item and in case it will not find it will give back an error.

Anyway some expeption exist and let to assign different characteristic to the derivate item (see [Create action rule for bill of material s](#)).

Usually, configurable bill of material, associate to configurable item, are configurable:
Configuring Bill of Material let you:

1. Used Configurable Components;
2. Apply rules that include item in the bill of material (see [Create selection item rule in bill of material/routing](#));

3. Define formula that used characteristic in their definition;

Righe											Gestione	Componente	Configuratore	Meno opzioni						
Tipo		Nr.	Descrizione	Quantità per	Cod. unità di mis...	% scarto	Cod. collegamento tra ciclo e distinta base	Profilo Configur.	Regola Test Presenza Riga	Reg... Azio...	Formula Quantità per									
	Articolo		N.EDNTABSL04	Eden raw base	1	PZ	0	GEN	Config.le	<input type="checkbox"/>										
	Articolo		SCREW	Screw	1	PZ	0	GEN		<input type="checkbox"/>	[WOODRW]*2									
→	Articolo	⋮	CHERRYWOOD	Cherry wood	1	MC	0	GEN	DB/CHERRYRAW	<input type="checkbox"/>										
	Articolo		WALNUTWOOD	Walnut wood	1	MC	0	GEN	DB/WALNUTRAW	<input type="checkbox"/>										

Picture 41 – Configurable Bill of Material Line

In the picture above:

- Item N.EDNTABSL04 - Eden raw base is a configurable item in the bill of material that will have part of the characteristic of its principal item;
- Item "CHERRYWOOD – Cherry wood" takes part in the bill of material if rules "DB/CHERRYRAW" is TRUE, as well as item "WALNUTWOOD - Walnut wood" takes part in the bill of material if rules "DB/WALNUTRAW" is TRUE;
- Item "SCREW – Screw" present a formula connected to the characteristic Raw Wood ([WOODRW]). The field **quantities** for determine the quantity of that specific item in production.

For setting up quantities for:

- In case of numeric characteristic is enough to indicate the characteristic to use and the formula that have to be apply;
- In case of tabular choice, choice code is an alphanumeric code not usable as calculated value, is possible to associate to each choice a numeric value in the base characteristic choice in the field **Numeric Index**.

Codice Scelta	Descrizione	Sequenza	Testo per Descrizione Articolo	Priorità (1=Min 99=Max)	Scelta Cus...	Esistono Traduzioni	Indice Numerico ↑	Esis... Carat. Dip...
→ CST	Custom	9999	Custom	0	<input checked="" type="checkbox"/>	No	0	<input type="checkbox"/>
CHERRY	Cherry wood raw	0	Cherry woo...	0	<input type="checkbox"/>	No	4	<input type="checkbox"/>
WALNUT	Walnut wood raw	0	Walnut woo...	0	<input type="checkbox"/>	No	8	<input type="checkbox"/>

Picture 42 – Numeric Index for Bill of Material Formula

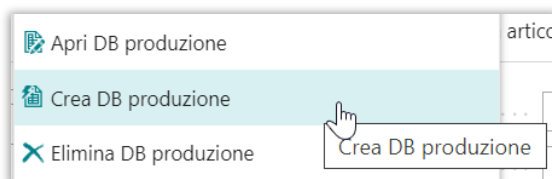
3.8.1.1 HOW: create a configurable Bill of Material

For Creating a configurable bill of material it must be used a function that impose into the configuration profile as Configurable .

Profilo Configurazione	Configurabile
Nr. Classe Configur.	CHAIRS

Picture 43 – Configuration Bill of Material

In item card under section Configuration select **Action, Configuration, Create Production Bill of Material**.



Picture 44 – Bill of Material for Configurable Item

Bill of material is created with the same item code and is automatically inserted into the item card.

NOTE: if bill of material is not configurable it won't be possible to insert configurable item neither insert other configuration rules.

3.8.1.2 HOW: assign configuration rule on bill of material

In section bill of material line select configurator, then rule **for action on line**.

Righe

Gestione

Componente

Configuratore

Meno opzioni

⚡ Regole per l'azione su riga

Tipo	Nr.	Descrizione	Quant... per	Cod. unità di mis...	% scarto	Cod. collegamento tra ciclo e distinta base	Profilo Configur.	Regola Test Presenza Riga	Regole Azioni
→ Articolo	⋮ N.FABRIC	Fabric	12	MQ	0	GEN	Config.le		<input checked="" type="checkbox"/>

Picture 45 – Action Rule on Line

Insert assign rule.

MODIFICA - APPLICAZIONE REGOLE CONFIGUR. - N.SNRCHASL02 - SUNRISE SEAT					
Cod. Regola	Descrizione Regola	Tipo Regola	Usa Valori Originali Caratter.	Note per Utilizzo	
→ BOM/FABRIC01	A:coating seat	Esegue Azioni	<input type="checkbox"/>	-	
			<input type="checkbox"/>		

Picture 46 - Assign Rule for Line Action

If in bill of material line will be an action rule, the flag **Action Rule** will be valorised as True.

This rule can be helpful to a furniture company, that needs to diversify colour or type of fabric for a specific product.

In case of chairs you can have different value for **Sitting Color** (COL-SEDUTA in the example) and **Backrest Color** (COL-SCHIENALE in the example). The items the company is dealing with are Backrest and Sitting, and company for production will buy fabric for covering them.

Art. padre conf.bile	Caratteristiche	Art. figlio conf.bile	Caratteristiche	Art. figlio conf.to
SCHIENALE	COL-SCHIENALE	TESSUTO SCHIENALE	COL-SCHIENALE	TESSUTO SCHIENALE/001
SEDUTA	COL-SEDUTA	TESSUTO SEDUTA	COL-SEDUTA	TESSUTO SEDUTA/001

Is possible to create a generic item for Fabric, that will have the same characteristic of principal item, so creating rules that assign the same value to COL-SCHIENALE and COL-SEDUTA, so it will be generate a unique item for bill of material.

Art. padre conf.bile	Caratteristiche	Regola azione	Art. figlio conf.bile	Caratteristiche	Art. figlio conf.to
SCHIENALE	COL-SCHIENALE	→	TESSUTO	COL-TESSUTO	TESSUTO/001
SEDUTA	COL-SEDUTA	→	TESSUTO	COL-TESSUTO	TESSUTO/001

3.9 Configurable Routing

This function let to:

- Create production routing with a list of different production phases that will change on the base of the different characteristic choice during item configuration;
- Determine variable production timing, based on the characteristic choice.

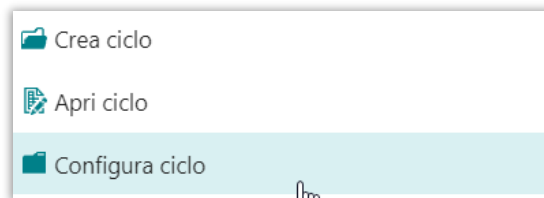
3.9.1.1 HOW: configure a production routing

Routing configuration is connected with **BC standard task code**.

Righe Gestione Operazione Meno opzioni						
Nr. operazione ↑		Tipo	Nr.	Cod. task standard	Cod. collegamento tra ciclo e distinta base	Descrizione
→ 010	⋮	Area di produzione	GEN	CHERRY	GEN	Varnishing cherry wood
020		Area di produzione	GEN	WALNUT	GEN	Varnishing walnut wood

Picture 47 – Configuration Routing Line

After creating a production routing and insert task code, you have to use function configure routing, in configuration section (from routing or from item card).



Picture 48 – Configure Routing

In the opening page will be open the task previously assign in the routing line.

Gestione Gestisci azioni Visualizza opzioni		
VISUALIZZAZIONE - CONFIGURA CICLO LAVORAZIONE - WALNUT · VARNISHING WALNUT WOOD		
Codice ↑	Descrizione	Nr. Azioni su Ciclo
CHERRY	Varnishing cherry wood	1
→ WALNUT	⋮ Varnishing walnut wood	1

Picture 49 – Task for routing configuration

For configuring a phase select the referring line and then click on Manage Action.

As for bill of material line (see [Configurable Bill of Material](#)), also routing is define using rule. In routing line there is a field **Rules Type** that determine different parametrization.

Below the list of the rules:

- **Base** → is mandatory and is filled up if there is a task in routing line. Is not allow to insert of rule in the field Rule Test Present Action; it allow to modify routing timing;
- **Substitutive** → overwrite the application of base rule. It is connect with a route action for let the rule to be active.
- **Integrative** → on the base of verified condition it is useful to use additional time to base rule; you can use more than one integrative rule in the same routing;

- **Unable task** → is used to unable a task (always) or in case a specific condition is true.

...A AZIONI CONFIG. CICLI | DATA DEL LAVORO: 01/04/2020

CHERRY · 1 · 30000

Tipo Regola	Cod. task standard ↑ ▼	Descrizioni Task Standard	Regola Test Presenza Azione	Formula Tempo di Setup	Formula Tempo Lavoraz.	Formula Tempo Attesa
Base	CHERRY	Varnishing cherry wood		10	11	2
Sostitutiva	CHERRY	Varnishing cherry wood	CHK-FINITURA010203	15	16	
→ Integrativa	CHERRY	Varnishing cherry wood	CHK-TSSEDUTA01	2.5	5.5	1
Disabilita Task	CHERRY	Varnishing cherry wood	CHK-FINITURA040506			

Picture 49 – Rules on Configured Routing

For the example above, in case condition will result true, routing will report the following info:

IF TRUE	SETUP TIME	RUN TIME	WAITING TIME
Base	10	11	2
Sostitutiva	15	16	2 (vedi ATTENZIONE)
Base & integrativa	12,5	16,5	3
Sostitutiva & integrativa	17,5	21,5	3 (Vedi ATTENZIONE)
Disabilita task	ND	ND	ND

NOTE: value setup for substitution rules will be applied only if the fields is not empty. If you want to substitute a valorised field with a null value the substitute value have to be valorised as ZERO.

3.10 Configured Item

Configuration of Item can follow two different way:

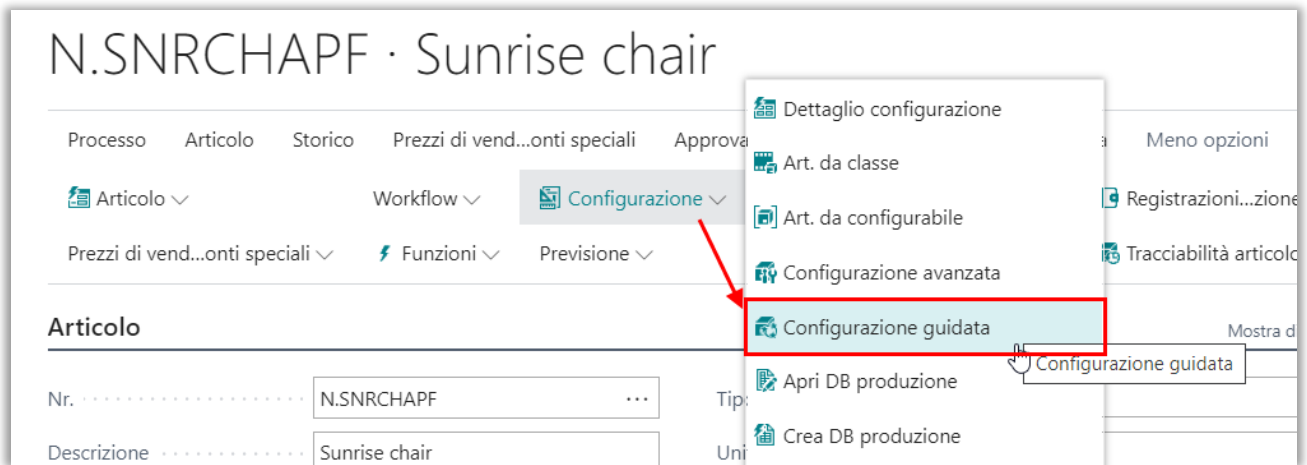
1. **Configuration Wizard**
2. **Advanced Configuration**

Another way for configuration is the Multiple configuration for characteristic combination (see [Multiple Configuration](#)).

On **Configuration Setup** Page you can define the way in which you want to configure item into sales document. Select in Document Line Configuration Mode, Wizard or Advanced Configuration.

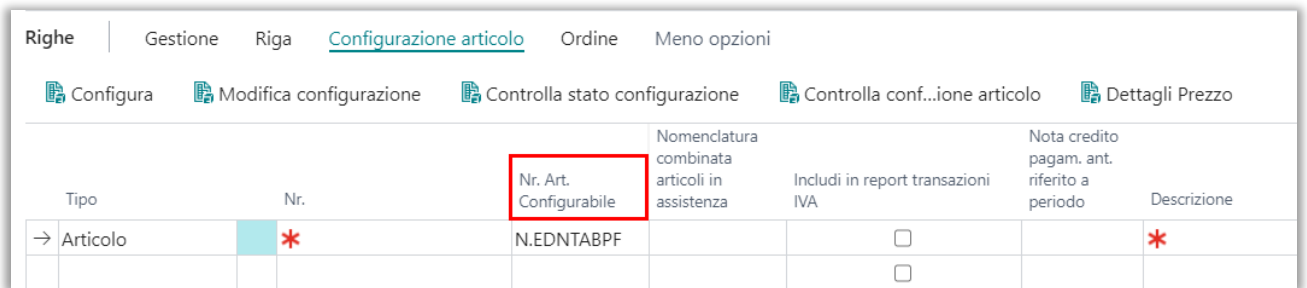
3.10.1 Configuration Wizard

Configuration **Wizard** propose a driven choice of characteristic value, grouped by topic. You can used Wizard from item card or from sales document line.



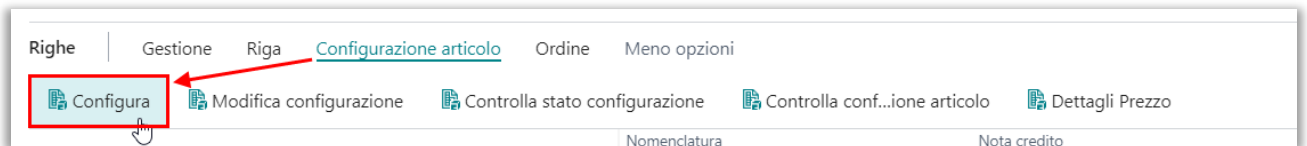
Picture50 – Configuration Wizard From Item Card

For using configuration Wizard from sales order you have to insert into sales line configurable item number, into the proper field as shown in the picture below.



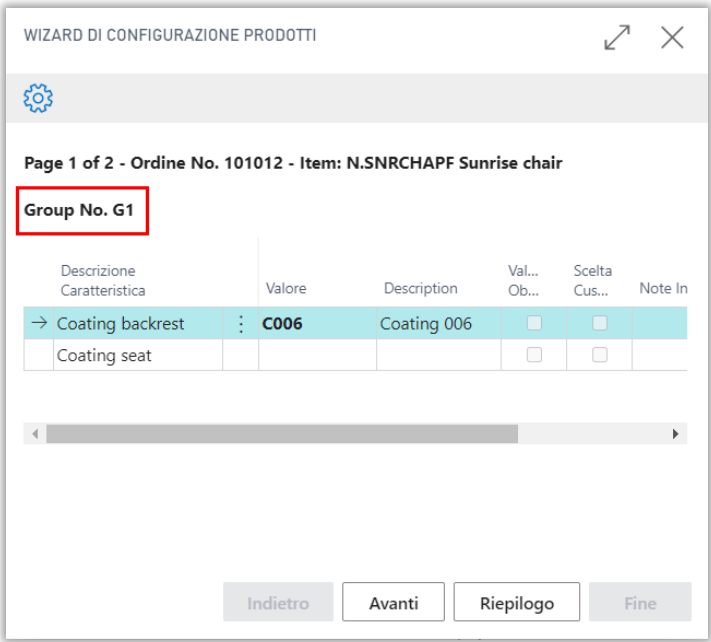
Picture 51 – Insert Configurable Item No.

In Item Configuration, select Configure Item to start with Wizard:



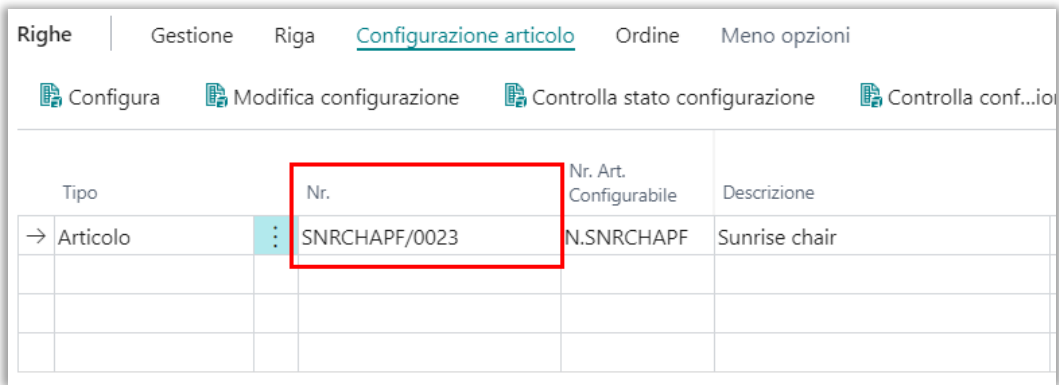
Picture 52 – Configuration Function

Picture Below show how wizard works, showing characteristic grouped by input characteristic group. (see [Assign Input Characteristic Group](#)). Using NEXT and BACK button you can move into wizard page.



Picture 53 – Wizard Page with Group

Once configuration is complete select finish. There will be configuration check, item configuration and the created item will be inserted into sales line.



Picture 54 – Insert configured Item in Document Line

In case of error, they will sum up in a pop up at the end of configuration.

It is always possible to check item configuration for showing and checking configuration.

VISUALIZZAZIONE - WIZARD DI CONFIGURAZIONE PRODOTTI

General

Nr. articolo **SNRCHAPF/0023** Descrizione Ricerca **Configurazione mai utilizzata**

Descrizione **Sunrise chair**

Descrizione 2

Caratteristiche

Descrizione Caratteristica	Valore	Descrizione Scelta	Scelta Cust...	Note Interne Custom
Coating backrest	C006	Coating 006	<input type="checkbox"/>	
Coating seat	C004	Coating 004	<input type="checkbox"/>	
Vanished wood	C004	Cherry wood black	<input type="checkbox"/>	
→ Raw wood	CHERRY	Cherry wood raw	<input type="checkbox"/>	

Picture 55 – Configuration Resume

3.10.2 Advanced Configuration

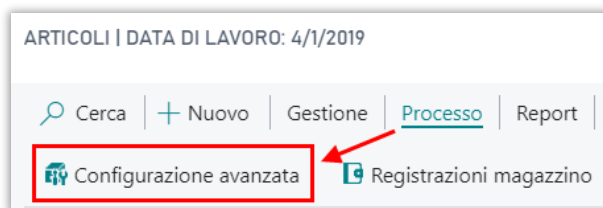
Advanced configuration usually starts from item list or from configurable item card. It is also possible to start advanced configuration from sales line.

A configured item, in item card present the following values:

- **Configuration Profile:** Configured;
- **Configuration Class:** present the class to which the item belong;
- **Configurable item No.:** resent the configurable item from where the start;
- **Configuration Pattern Entry No:** contains value that indicate specific configuration no and also represent the relationship among item table and configurator table;
- **Custom Item:** is ☒ if the item present custom value.

3.10.2.1 HOW: use Advanced Configuration

From configurable item you can activate configuration process, in particular Advanced Configuration. Advanced configuration does not deal with group division as Wizard does.



Picture 56 -Advanced Configuration

In advanced configuration are shown Base Characteristic that have to be compile with specific value. If any Custom Choice, you can specify internal custom Note. This note will be posted also on item that will present that specific characteristic.

Caratteristiche Base					
Codice Caratteristica ↑	Descrizione Caratteristica	Valore	Descrizione	Scelta Cus...	Note Interne Custom
C-BACKREST	Coating backrest	C006	Coating 006	<input type="checkbox"/>	
C-SEAT	Coating seat	CST	Custom	<input checked="" type="checkbox"/>	Custom coating XXX1
→ WOODVR	Vanished wood	C003	Cherry wood natural	<input type="checkbox"/>	
WOODRW	Raw wood	CHERRY	Cherry wood raw	<input type="checkbox"/>	

Picture 57 – Characteristic in Advanced Configuration

Details in advanced configuration regards Bill of Material and unit cost calculation of configured item.

Other functions are:

- **Configuration Check** → verify the configuration value and present error/message; apply configuration rule, calculate multi-level Bill of Material, calculate cost, calculate item mask code;
- **Confirm and Exit** → it execute configuration Check and also are created the related master date (item, bill of material, routing).

Once the configuration Check is Execute the creation of a new item is requested (calculated code) or an existed item (existed item) is proposed:

>

Crea Articolo da Configurazione

GENERALE

Nr. **N.SNRCHAPF**
Descrizione **Sunrise chair**
Stato Configurazione **Eseguibile**
Configurazione CUSTOM

CODIFICA CALCOLATA

Nr. Articolo Calcolato **SNRCHAPF/C0001**
Descr. Articolo Calcolata **Sunrise chair**
Descr. 2 Articolo Calcolata
Descr. Ricerca Art. Calcolata
Esiste Traduzione Articolo **SI**

ARTICOLO ESISTENTE

Nr. Articolo Esistente
Descr. Articolo Esistente
Descr. 2 Articolo Esistente
Descr. Ricerca Art. Esistente

Picture 58 - Check Configuration

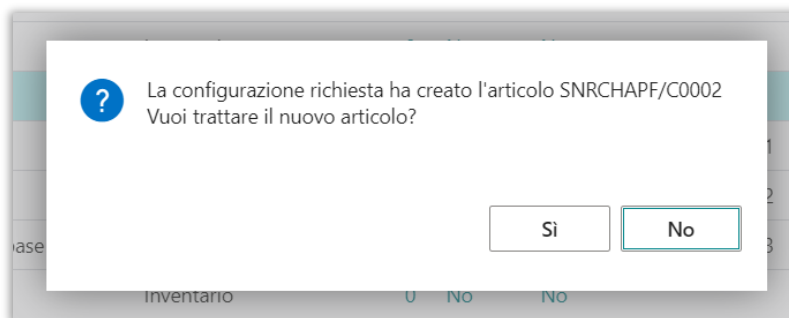
Other sections of advanced configuration are:

- **Product Structure** → it let you to check the structure without applying any rules that will be applied on Check;
- **Final Structure** → after configuration Check; in this section you can check structure error and their message. In case of errors the field Error Exist will setup as True, and using the action View Error Message is possible to check error details. The Action View Configuration Characteristic, let you to check characteristic of the configured item.

Struttura Prod. Finale		Gestione	Visualizza opzioni					
Elimina riga		Espandi tutto	Comprimi tutto	Espandi/Comprimi	Vedi Messaggi Errore	Vedi Caratteri...he di Config.		
Nr.	Tipo	Descrizione	Nr. livello	Esistono Errori	Nr. Distinta Base	Cod. UdM	Quantità per	Tempo di setup
→ GEN	Area di pro...	General	1				0	1
N.SNRCHASL01	Articolo	Sunrise backrest	1		N.SNRCHASL01	PZ	1	0
GEN	Area di pro...	General	2				0	0
N.FABRIC	Articolo	Fabric	2			MQ	10	0
N.SNRCHASL02	Articolo	Sunrise seat	1		N.SNRCHASL02	PZ	1	0
GEN	Area di pro...	General	2				0	1
N.FABRIC	Articolo	Fabric	2			MQ	12	0

- **Local Variable** → is populated in case there are characteristic filled up from database value (see data type in [Base Characteristic](#));
- **Configuration Message** → Contains message taken from configuration.

After Confirmed configuration is possible to see the configured item:



Picture 59 – View Item Request

Configured Item will present all the info of configurable item, included routing and bill of material.

Dettagli config. articolo	
Descrizione	Valore
Caratteristica	
Collection	SUNRISE
Item number	SNRCHAPF
Item category	FP
Coating backrest	C006
Coating seat	CST
Vanished wood	C003

Picture 60 – Item Configuration Detail

With Item creation you have a new bill of material of the item but also of all its components.

Generale

Nr.	SNRCHAPF/C0002 ...	Nome ricerca	SUNRISE CHAIR
Descrizione	Sunrise chair	Nr. versioni	▼
Cod. unità di misura	PZ ▼	Versione attiva	
Stato	Certificata ▼	Data ultima modifica	4/23/2020

Righe | Gestione | Visualizza opzioni

	Tipo	Nr.	Descrizione	Quant... per	Cod. unità di mis...	% scarto	Cod. collegamento tra ciclo e distinta base	Profilo Configur.	Regola Test Presenza Rig
→	Articolo	⋮ SNRCHASL01/0010	Sunrise backrest	1	PZ	0		Config.to	
	Articolo	SNRCHASL02/C0002	Sunrise seat	1	PZ	0	GEN	Config.to	
	Articolo	SNRCHASL03/0004	Sunrise varnish...	1	PZ	0	GEN	Config.to	

Picture 61 – Bill of Material Configured Item

MODIFICA - DISPONIBILITÀ ARTICOLO PER LIVELLO DB

OPZIONE

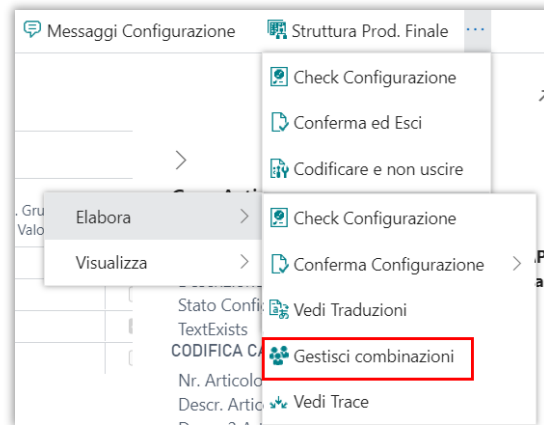
Filtro articolo	SNRCHAPF/C0002 ...	Data uscita	4/1/2019
Filtro ubicazione	...	Calcolato	<input type="checkbox"/>
Filtro variante	...	Mostra disponibilità totale	<input checked="" type="checkbox"/>

Nr.	Descrizione	Collo di bott...	Qtà per padre	Cod. unità di misura	Sistema di rifornimento
→ SNRCHAPF/C0002	⋮ Sunrise chair	<input type="checkbox"/>	1	PZ	Ordine di produzione
SNRCHASL01/0010	Sunrise backrest	<input checked="" type="checkbox"/>	1	PZ	Ordine di produzione
FABRIC/0009	Fabric - Coating 006	<input checked="" type="checkbox"/>	10	MQ	Acquisto
SNRCHASL02/C0002	Sunrise seat	<input type="checkbox"/>	1	PZ	Ordine di produzione
FABRIC/C0002	Fabric	<input type="checkbox"/>	12	MQ	Acquisto
SNRCHASL03/0004	Sunrise varnished base	<input type="checkbox"/>	1	PZ	Ordine di produzione
SNRCHASL04/0002	Sunrise raw base	<input type="checkbox"/>	1	PZ	Acquisto

Picture 62 – Bill of Material Structure Configured Item

3.10.2.2 HOW: use multiple configuration

Multiple Configuration let to codify all the configured item using automatic combination of all characteristic Value. Function is activated from Advanced Configuration (Action > Manage combination), after setting up fixed value requested for calculating different combination;



Picture 63 – Manage Combination

In combination page, you can select the ones from which you desire to create configured item using Set Codification Request or Reset Configuration Request.

In the field existed item are shown item already existed for specific combination.

Once lines are ready is possible to create configured item.

Cerca

Elabora

Report

Apri in Excel

Visualizza opzioni

✓ Set Richiesta Codifica

↶ Reset Richiesta Codifica

Codifica Articoli Configurati

VISUALIZZAZIONE - CODIFICA ART. PER CARATT. COMBinate

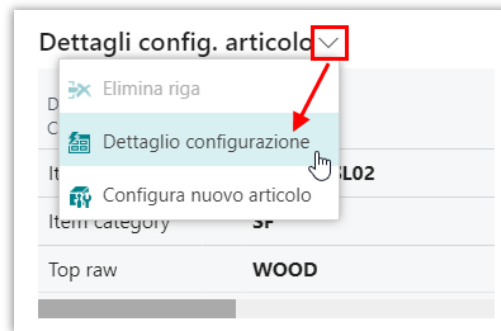
Stato Configuraz...	Richiesta Codifica	Nuova Configurazi...	Nr. Articolo Calcolato	Descr. Articolo Calcolata	Descr. 2 Articolo Calcolata	Descr. Ricerca Art. Calcol...	Nr. Articolo Esistente	Descr. Articolo Esistente
Eseguibile	<input type="checkbox"/>	<input type="checkbox"/>					EDNTABPF/0003	Eden table
Eseguibile	<input type="checkbox"/>	<input type="checkbox"/>					EDNTABPF/0004	Eden table
Eseguibile	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		Eden table				—
Eseguibile	<input type="checkbox"/>	<input checked="" type="checkbox"/>		Eden table				—
Eseguibile	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		Eden table				—

Picture 64 – Select Item for new creation

NOTE: this function is enabled just if in the configuration class flag admit item created by characteristic combination is active and if item doesn't have associated any bill of material.

3.11 Configuration Details

The function Configuration Detail is under the configuration menu of the item card or in item configuration detail factbox in item card.



Picture 65 – Configuration Details

This function presents three different aim:

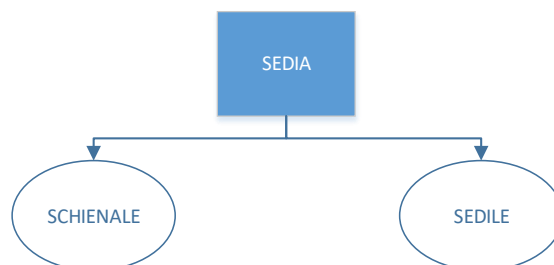
1. Summarize configuration data related to a specific item (configurable or configured);
2. For **configurable** item, is useful for setting up rules and option on characteristic and differentiate them from the ones taken from configuration class;
3. On **configured** item contains update request for bill of material and routing.

For the first function, so summarize configuration data, it is important to know that here are contained all characteristics filled up for a configured item, or the preconfigure ones. It is also indicated configuration profile, configuration class and configurable item reference.

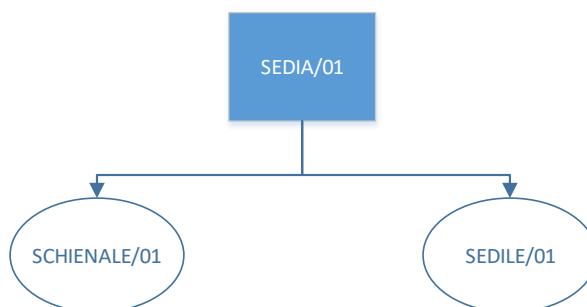
For the second function, hence for specific option on characteristic for configurable item, is important to know that in this section is possible to activate the not used characteristic option (see [Create configurable item](#)). When field not used is active ✓, it let you to exclude one characteristic from configuration process of configured item. That means you can exclude a characteristic from an item or include it again in case was previously excluded.

The third function, is necessary in case you want to update a bill of material or a routing of configured item from which routing and bill of material have been already created.

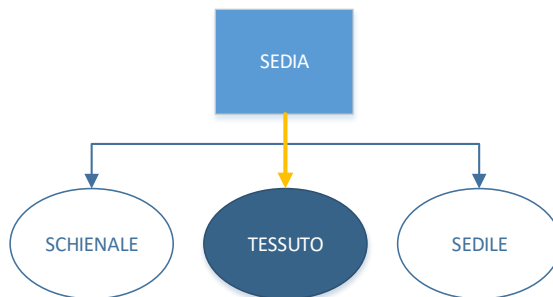
For example, a chair have a bill of material composed by sitting and backward.



From chair are born different item: chair, sitting, backward, with bill of material and routing.



Then, in configurable bill of material of chair item, will be added the item fabric.



When Bill of material is update, for configurable item connected to the bill of material, the field Request Update Bill of Material structure will be flag as true (same in case of routing).

Dati Articolo Configurazione			
Profilo Configurazione	Configurato	Data richiesta	4/1/2019
Nr. Classe Configur.	TABLES	Esistono Regole Locali	<input type="checkbox"/>
Nr. Art. Configurabile	N.EDNTABPF	Esistono Regole Su Inizio	<input type="checkbox"/>
Rif. prezzo articolo fisso	<input type="checkbox"/>	Esistono Regole Su Input	<input type="checkbox"/>
Richiesto Update Struttura DB ..	<input checked="" type="checkbox"/>	Esistono Regole Su Check	<input type="checkbox"/>
Data richiesta di riferimento ...	4/1/2019	Esistono Pattern Prezzi Vend. ...	<input type="checkbox"/>
Richiesto Update Ciclo Lavor...	<input checked="" type="checkbox"/>		

Picture 66 – Configuration Details with update request.

You can force this flag using the following action:

- **Setup Update Routing** → activate the flag for routing activation;
- **Undo Update Routing** → unable the routing update;
- **Setup Update Bill of Material** → activate the flag for bill of material update;
- **Undo Update Bill of Material** → unable the bill of material update;

These functionalities are extremely useful in case you want to recalculate bill of material or routing when this not happen in an automatic way, for example in case you modify the configuration rule in bill of material, for which the certification will not update the update request.

...ZIONE ARTICOLO | DATA DEL LAVORO: 01/04/2020

✓ SALVATO

SNRPF01/0007 · SUNRISE SEDIA

[Azioni](#)
Naviga

☒ Imposta aggiornamento DB
☒ Imposta aggiornamento ciclo
☐ Annulla aggiornamento DB
☐ Annulla aggiornamento ciclo

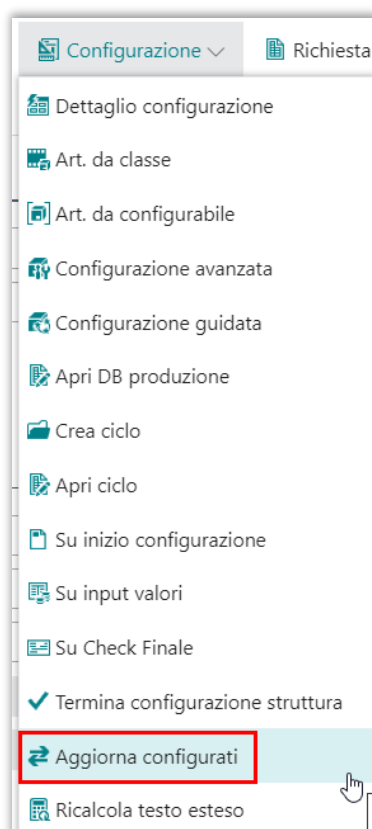
Nr. Classe Configur.	CHAIRS	Esistono Regole Locali	<input type="checkbox"/>
Nr. Art. Configurabile	N.SNRPF01	Esistono Regole Su Inizio	<input type="checkbox"/>
Rif. prezzo articolo fisso	<input type="checkbox"/>	Esistono Regole Su Input	<input type="checkbox"/>
Richiesto Update Struttura DB ..	<input type="checkbox"/>	Esistono Regole Su Check	<input type="checkbox"/>
Data richiesta di riferimento ...		Esistono Pattern Prezzi Vend. ...	<input type="checkbox"/>
Richiesto Update Ciclo Lavor... ..	<input type="checkbox"/>		

Picture 67 – Function for enable/disable update

3.11.1.1 HOW: recalculate routing and bill of material already existed

Bill of material or routing can be update in different way:

1. Automatically when in configuration process of an item (out of sales document), is calculated an already existed item. Its BOM and Routing are recalculate and update;
2. Manually, for updating a configurated item using the function **Update Configured** in the configuration section;

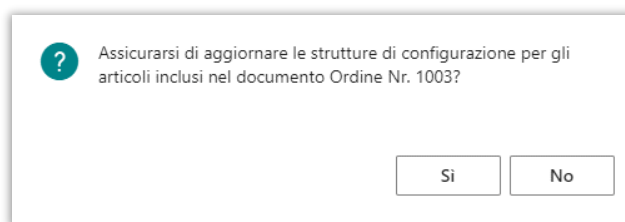


Picture 68 – Function Update Configuration

1. On sales order, on the base of configuration setup on the field **Auto Refresh item on Sales** (see [Configuration Setup](#)) or in item card using function **Action>Update Item Configuration**.

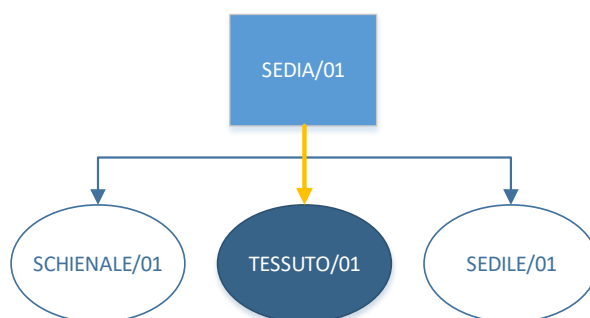


Picture 69 – Function Update Configuration Item



Picture 70 – Update Request Message

When bill of material or routing are update, update flag will be unable.



3.12 Option Sales Price

Option sales price are sequence of economics value of each characteristic, that are read during sales procedure and at the end determine the final price, on the base of characteristic used.

Many price elements can be define as fixed price or as percentage and are usable in sequence or as alternative on the base of the different rules applied. Price can be define for validity date and price type (all customer, customer price group.)

Codice Caratteristica	Valore Scelta	Regola Selezione	Cod. Modello	Applica a Tipo Prezzi Vendita ↓	Codice vendita	Tipo Sovrapprezzo	Valore Sovrapprezzo
WOODVR		R/WALNUTVRNSH		Cliente	10000	Applica Sovrapprezzo	90.00
WOODVR	W002		EDEN	Cliente	10000	Applica Sovrapprezzo	88.00
WOODVR	W002		EDEN	Tutti Prezzi di Vendita		Applica Sovrapprezzo	77.00
WOODVR	C002		EDEN	Tutti Prezzi di Vendita		Applica Sovrapprezzo	1,000.00

Picture 71 – Option Sales Price

Option sales price is similar to standard BC sales price, with the difference the price is applied to each single characteristic. So price is build up on the base of characteristic choice.

For option price you can setup up selection rules made as condition only without any action (see [Configuration Rule](#))..

Nell'esempio sopra riportato:

- La riga 1 indica che, per il cliente 10000, se la condizione della regola "R/WALNUTVRNSH" è verificata in corrispondenza di qualsiasi valore della caratteristica "WOODVR", allora la stessa caratteristica avrà un prezzo pari a 90;
- La riga 2 indica che, per il cliente 10000, in corrispondenza di un valore EDEN della caratteristica modello, se la caratteristica "WOODRV" assume il valore "W002", allora la stessa caratteristica avrà un prezzo pari a 88;
- La riga 3 indica che, per tutti i clienti, se la caratteristica "WOODRV" assume il valore "W002", allora la stessa caratteristica avrà un prezzo pari a 77;
- La riga 3 indica che, per tutti i clienti, se la caratteristica "WOODRV" assume il valore "C002", allora la stessa caratteristica avrà un prezzo pari a 1000;

NOTE: if you want to manage price for customer ALL option have to be manage for customer. Is not possible used mix characteristic one for customer and one for customer group.

4 APP SUBSCRIPTION

Every App feature requires a valid subscription.

At first installation, a trial plan is automatically activated by the system.

After this period, you can subscribe for a product level (feature) using the Alterna Apps page or directly from the system notifications by clicking on the link which opens the product activation wizard.