Compano Online Software

Mapping User-defined Fields
COS PIM

Version 7.1

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Content

1 Introduction

This manual describes how to implement the option to map user-defined fields to features and values of a classification system, within Compano Online Software.

The values of user-defined fields can be mapped to ETIM values. This is a good solution for scenarios where you need to add more technical product information to COS than the current ETIM-standard can handle, or when you prefer to import technical data directly from your ERP and map this to corresponding ETIM-feature Values.

Example
A product is available in the colours *Light Grey* and *Dark Grey*, however for the corresponding ETIM-feature *Material Colour* only the option *Grey* is available.

Solution
A user-defined field *Colour* is created with both colour values *Light Grey* and *Dark Grey*. Both values are then mapped to the ETIM-feature *Material Colour* value *Grey*.

Both colours are now 'correctly' mapped to ETIM and will be uploaded as *Grey* to a data pool, while a data feed to your product website can still distinguish between *Light Grey* and *Dark Grey* products.

1.1 Concepts

COS	Compano Online Software
PIM	Product Information Management system
ERP	Enterprise Resource Planning software, often also used for storing and managing product information. Examples of ERP software are, for instance, SAP, Infor M3, Microsoft Dynamics
Classification system	System of standards used for classification of product data, for instance *ETIM, Q-model, EZ-base*.
ETIM	International standard for classification of product data for the construction and engineering sector
Dedicated application	A dedicated COS application (i.e. not shared with others) on a shared or dedicated server
User-defined field (UDF)	Extra, non-standard data field which can be defined and implemented by users of COS. Sometimes also called: ***free field***
Entity	Data object in COS. For instance: Product, Item, Relation, Manufacturer, etc.

1.2 Requirements

User-defined fields are only available in a ***dedicated COS application***. For more information, please contact sales@compano.com.

2 Creating and mapping user-defined fields

This section describes how values in user-defined fields can be ***mapped*** to ETIM-feature values.

Note: User-defined fields can be mapped to ***more than one*** ETIM-feature. This way various ETIM-features can share one and the same value of a user-defined field.

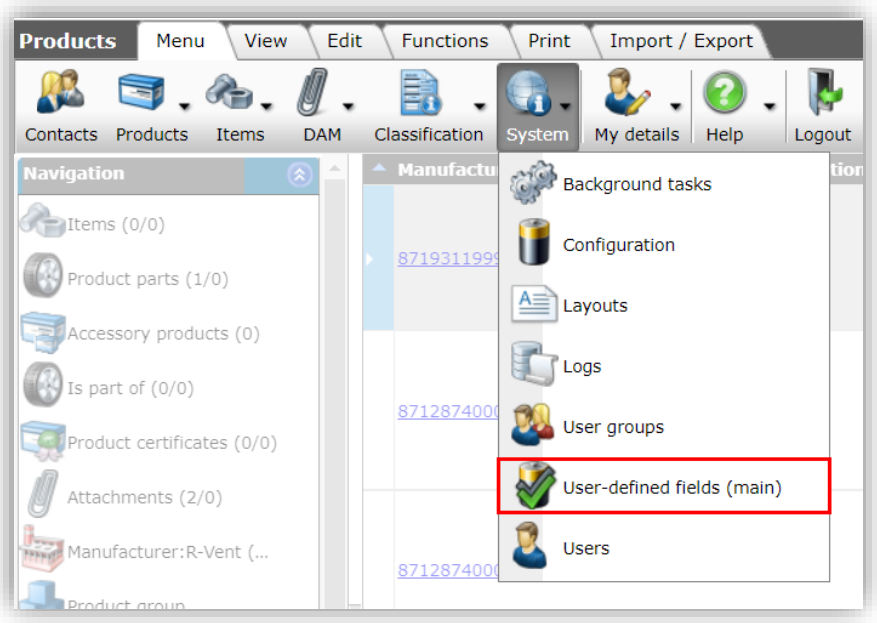
2.1 Step 1: Creating a user-defined field

This step briefly describes how to create relevant types of user-defined fields. Of course, you could also map user-defined fields already present in your application.

Note: Detailed information on creating user-defined fields can be found in the Manual User-defined Fields on the Compano Help website.

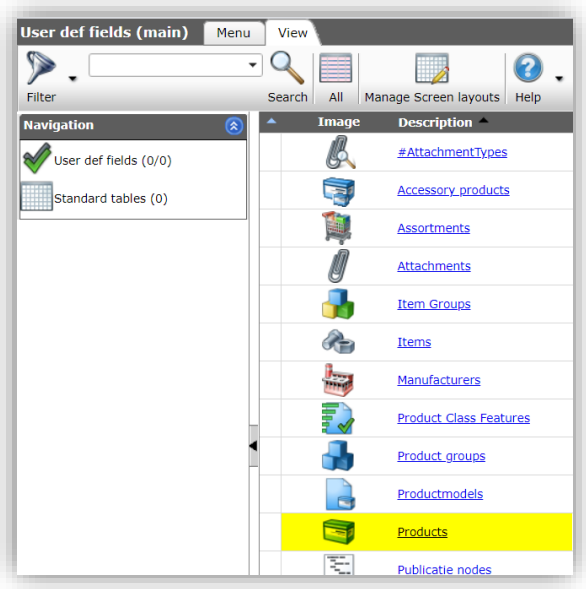
To create a user defined field for mapping:

1. Through the main *Menu* go to *System > User-defined fields (main)*.

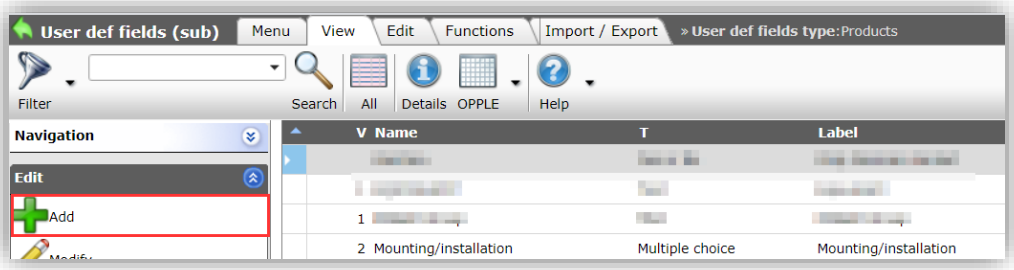


2. On the next screen, click on *Products*.

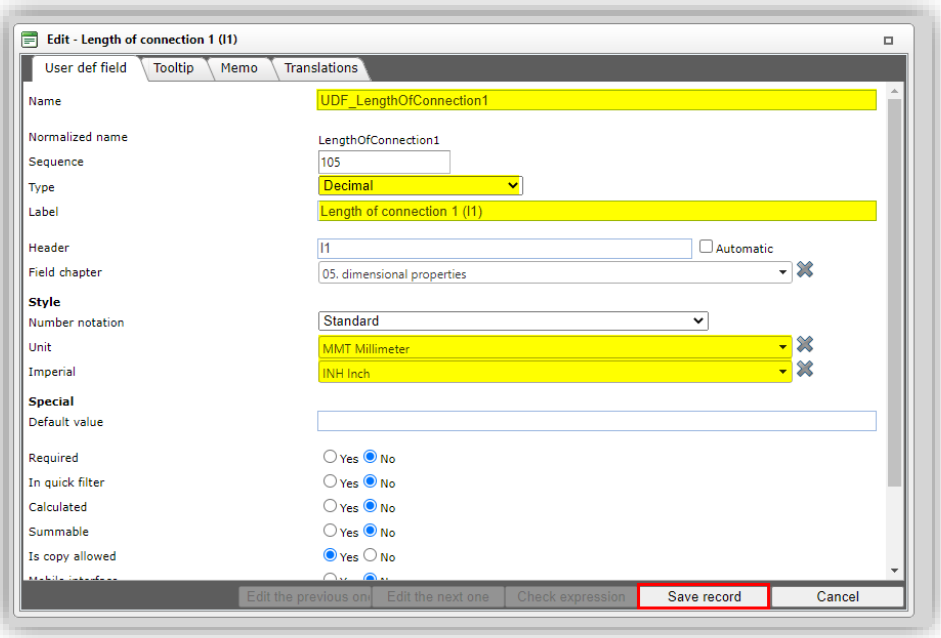
   Important: For mapping of technical product data to ETIM-features, the user-defined field needs to be created at the ***Product*** level:



3. In the next screen, under *Edit,* click on *+Add* to add a new user-defined field:



4. In the pop-up screen, you can now select which *Type* of user-defined field you wish to create:



Fill out the following fields:

a. **Name**: Type a name for the user-defined field. It is good practise to add the prefix *UDF_* to the name of the field. This way user-defined fields are easily recognized and not confused with other, standard data fields.

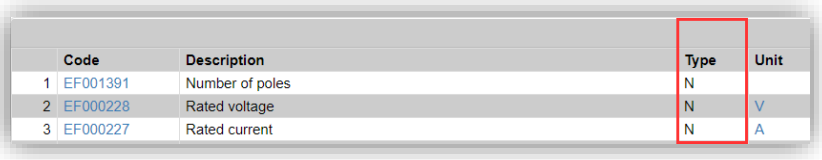
b. **Sequence** (optional): User-defined fields will be shown on a separate tab with each product (or other entity). The order in which the fields are shown can be controlled by typing a sequence number.
c. **Type**: Select the *Type* of user-defined field you wish to create.

Important: Should you need to map the user-defined field to an ETIM -feature, then ***both should have corresponding data types***:

ETIM-feature type[1]	Typical UDF type to use	Other mapping options
A – alphanumeric = list of possible values (e.g. red, green, long, short, …)	Single choice	Multiple choice (needs to be mapped to exactly 1 choice)
L – logic = yes or no questions (also known as Boolean; "true" or "false")	Yes or No	Multiple choice (needs to be mapped to exactly 1 choice)[2]
N – numeric = one numeric value	Decimal	• Integer (read-only) • Single choice (double value) • Multiple choice (double value) • Standards table
R – range = two numeric values that limit a range of values	Range	None
C – coordinate = (x, y ,z) coordinates of a position or of a direction (Modelling class)	Note: not available in Compano software.	-
M – matrix = table ('if X then Y'), which serves to exchange multiple pairs of related values, for example to build a graph	Matrix	None

d. **Label**: Type a Label name for the field; this label will be shown as a description of the user-defined field on, for instance, the user-defined fields tab.
e. **Head**: Type a Header name for the field; this header will be shown as a description of the user-defined field in data overviews.
f. **Other fields**: Other field options are depended on the type of user-defined field created; in principle you can ignore these fields when creating UFDs for mapping.

[1] The *Type* of an ETIM-feature can be found through the ETIM website. Simply search for the ETIM class that contains the feature, then consult the feature table for the correct type:



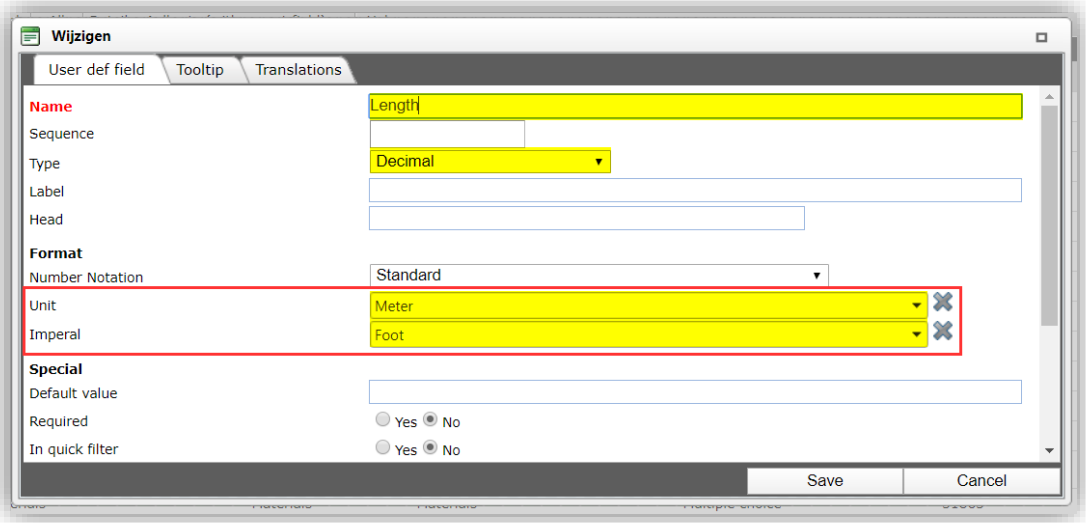
	Code	Description	Type	Unit
1	EF001391	Number of poles	N	
2	EF000228	Rated voltage	N	V
3	EF000227	Rated current	N	A

[2] In some cases a list of Logic Fields, for instance a set of Quality Marks, could be mapped to only ***one*** Multiple Choice UDF; each of the Quality Marks are then linked to one of the UDF options.

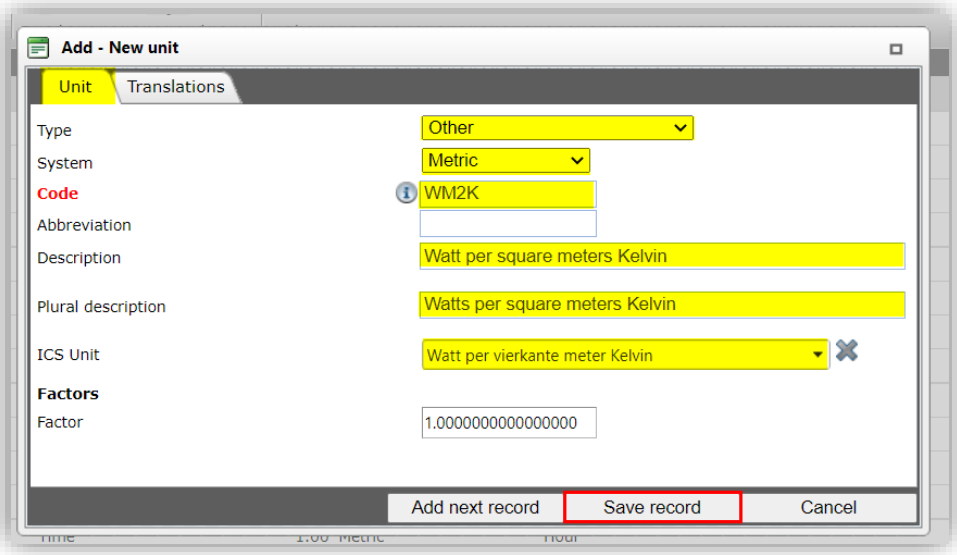
2.1.1 UDF Type: Special options

Some user-defined field Types have special options:

- **Single / Multiple choice**: For a UDF of the type *Single / Multiple Choice*, the different ***Field Options*** need to be added. For more information, see 2.3 Step 3: Create Field Options.
- **Decimal** and **Range**: UDFs of the type *Decimal* or *Range* can contain both a ***Metrical*** and ***Imperial Unit***[3]. Please, specify which unit of measurement is used, for instance `millimeter (MMT)`:



- **Non-default unit**: If the UDF concerns unit that is not present in COS by default, for instance *Watt / m^2 Kelvin,* then this unit needs to be added manually:
    1. Go to *Menu > System > Configuration > Units*
    2. Under *Edit*, click on *+Add.*
    3. In the pop-up window:



    a. **Type**: Select the type of unit
    b. **System**: Select either the Metric or Imperial system
    c. **Description**: Enter a description for the unit

[3] If not relevant, simply leave the Imperial Unit field empty.

d. **Plural description**: Enter a plural description for the unit
e. **ICS Unit**: Select the appropriate ICS Unit.

4. Click on *Save*.

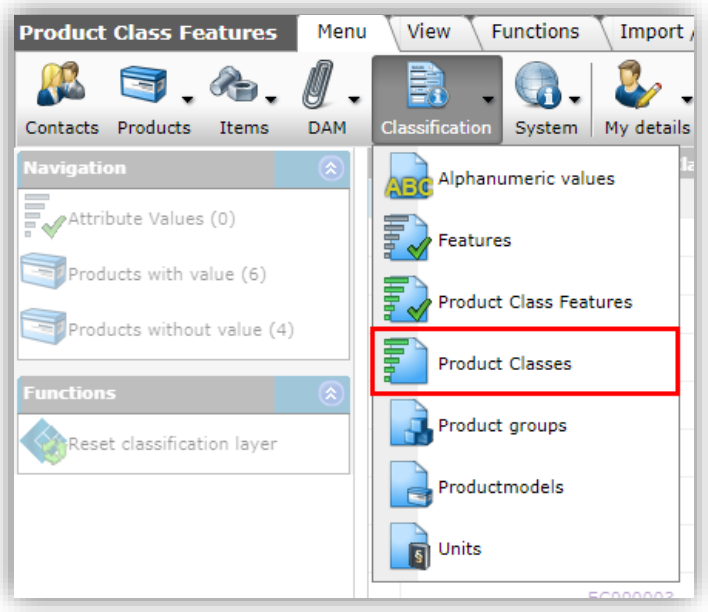
2.2 Step 2: Mapping ETIM-features to user-defined fields

Now that the user-defined field has been created, it can be mapped to one (or more) ETIM-features.

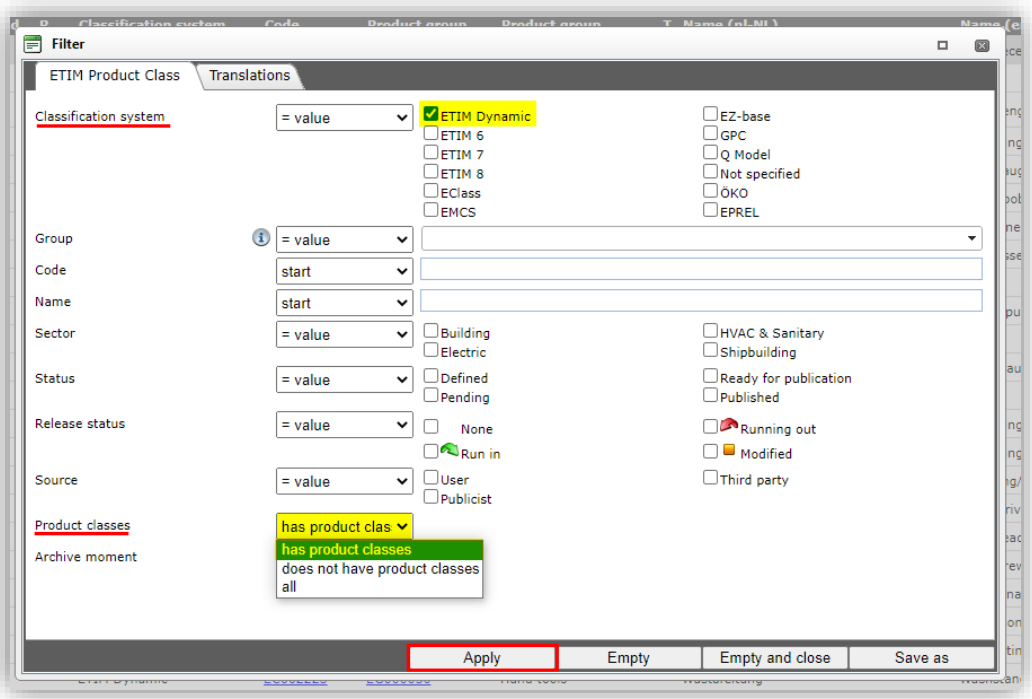
Example
The mapping will be explained using the following example:

Map ETIM-feature `EF020151` to user-defined field `LengthOfConnection1`
To map an ETIM-feature to a user-defined field:

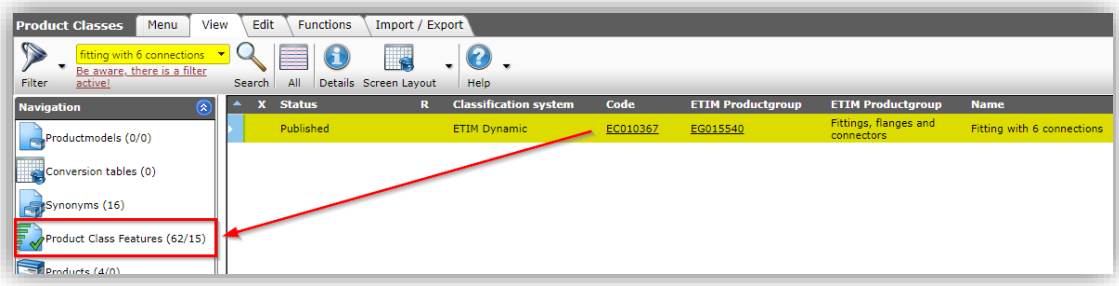
1. Through the Menu, go to *Classification > Product Classes:*



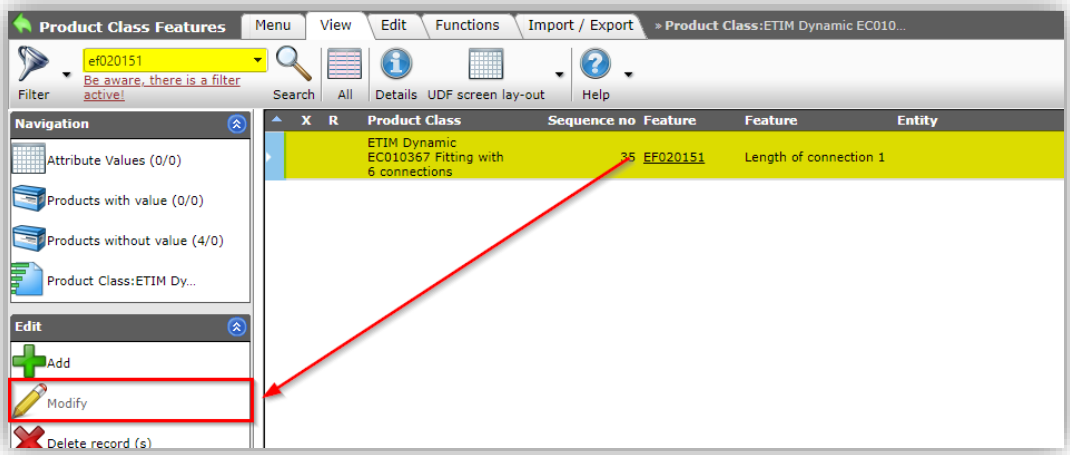
2. As you will only want to map to Product Class Features that ***are in use for your products***, set a Filter to:
   a. **Classification system**: Set this to the relevant Classification system. Usually, this will be *ETIM Dynamic*, however you will have the option to map to other classification systems if these have been implemented in your COS, for instance: *ETIM 8, Qmodel, EZ-base*, etc.
   b. **Product classes**: Set this to *has product classes.*



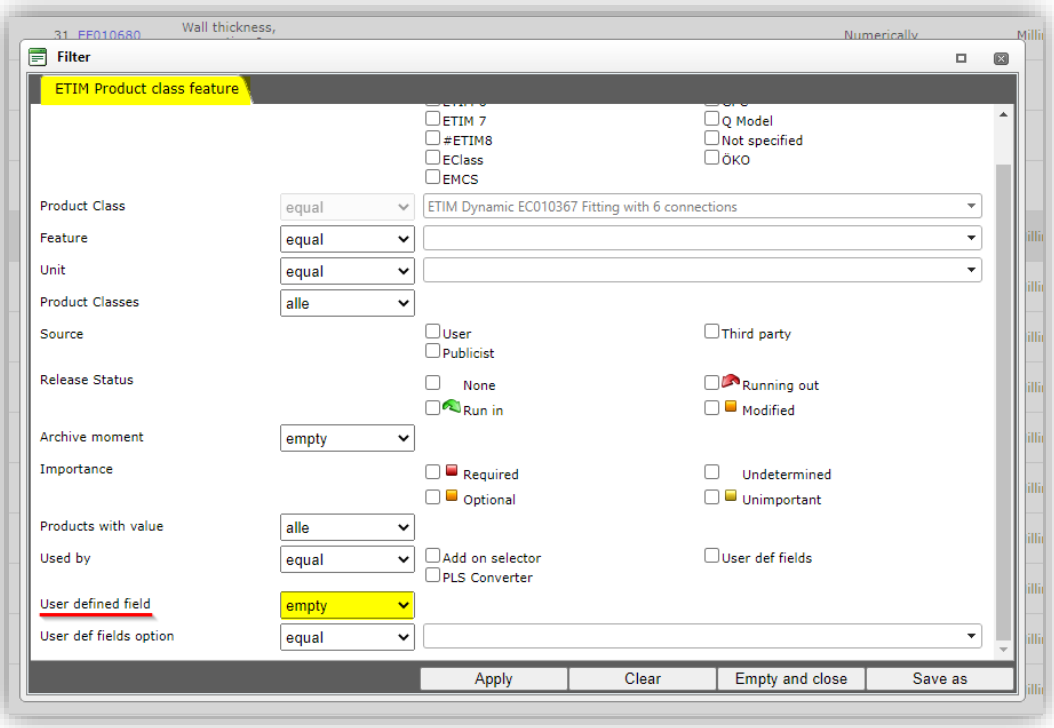
3. Next, in the resulting list, search for the class that contains the feature to which you wish to map your user-defined field, for instance *Fitting with 6 connections*.



4. Under *Navigation* in the left side panel, click on *Product Class Features*.
5. On the Product Class Features screen, ***Search*** for the ETIM-feature to which you need to map the user-defined field, for example `EF020151`:, and click under Edit click on *Modify*.

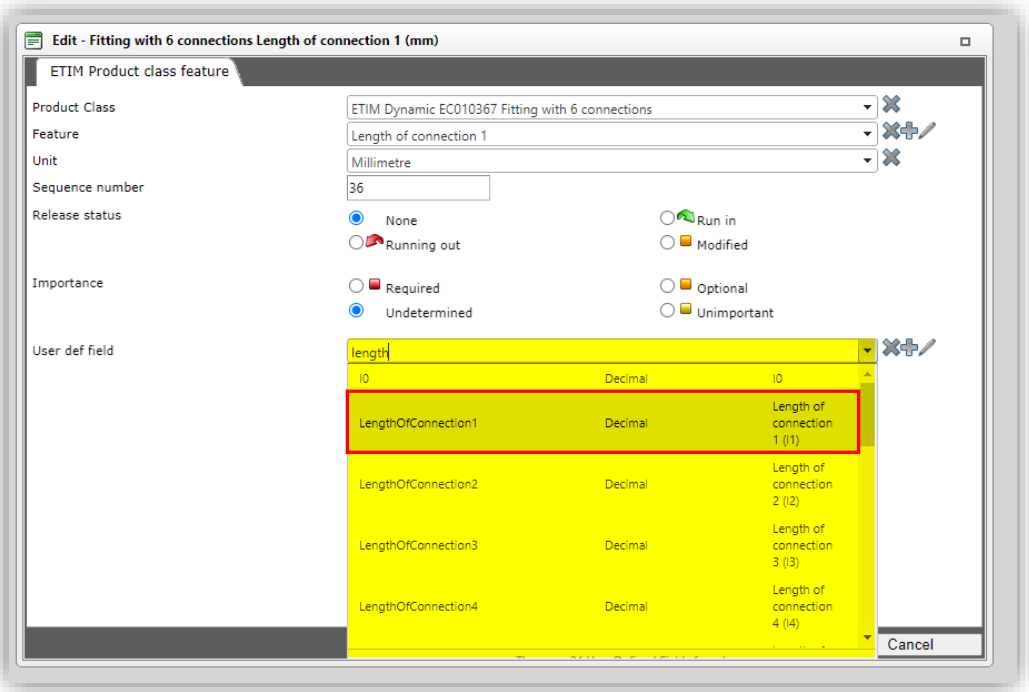


Note: Optionally, set a Filter on the Product Class Features screen to only show features that have not yet been mapped:



a. **User defined field**: Set to *Empty* to only show features that have not yet been mapped.

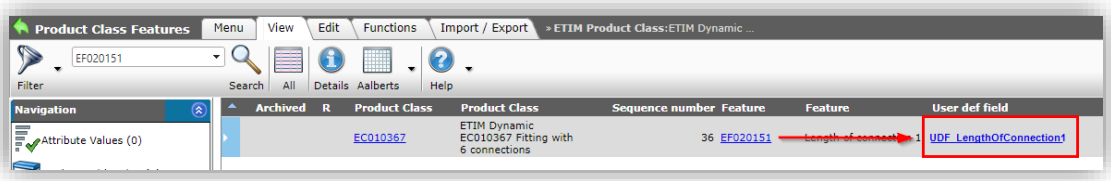
6. In the pop-up window, under User def field, search for the user-defined field to be mapped and select it:



Important: If the desired user-defined field does not show in the drop-down menu, but you know it exists, please see the paragraph on 0 Troubleshooting a 'missing' user-defined field.

7. Click on *Save record*.

The resulting mapping will now show on the Product Class Features screen:

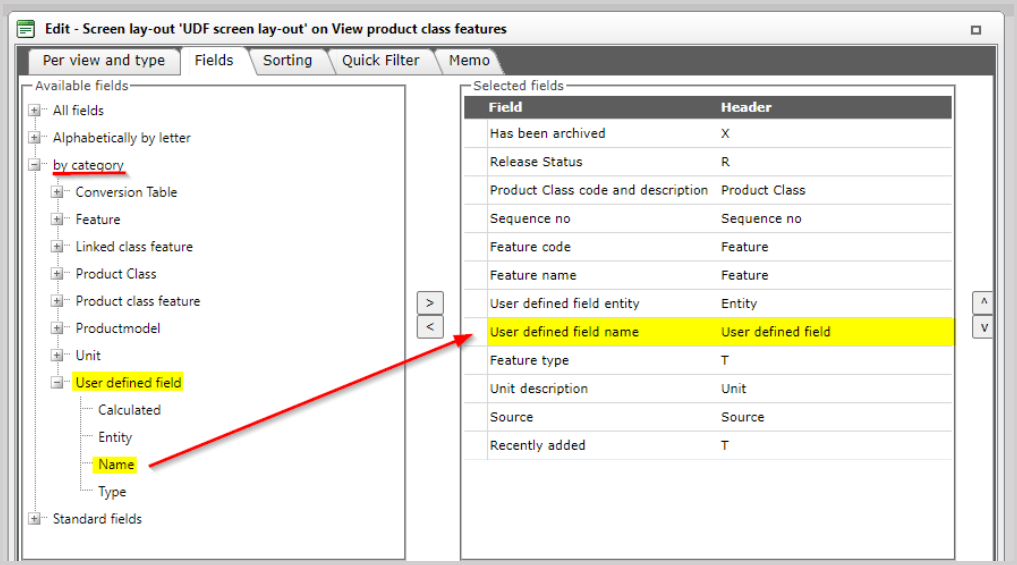


Note: Repeat this procedure for all ***other*** features within this ETIM Class to which you need to map user-defined fields.

Product Class Features custom screen lay-out

It is recommended to define a custom screen lay-out for the Product Class Features screen which includes the column *User-defined field name*. This lay-out will readily show which features have already been mapped.

Note: In the Edit Screen lay-out window, you will find this field under *Available fields > by category > User defined fields > Name*:



2.2.1 Troubleshooting a 'missing' user-defined field

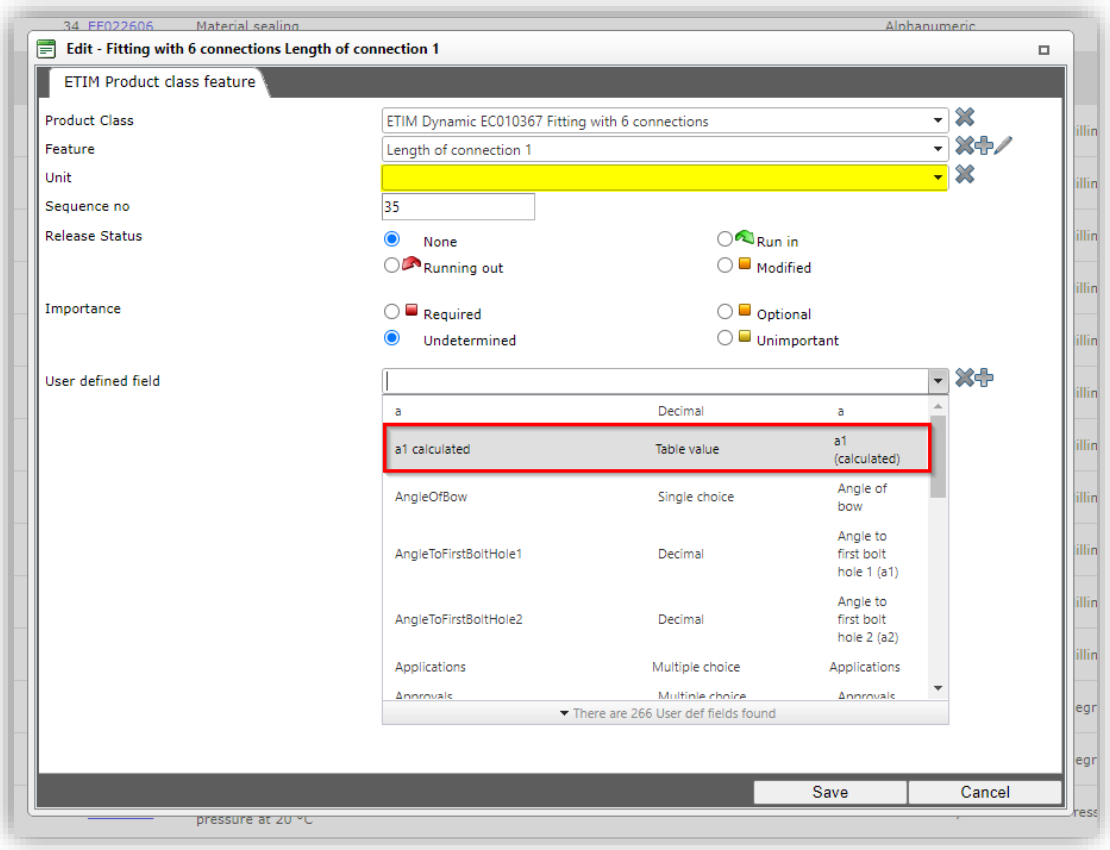
If the desired user-defined field does not show in the drop-down menu, but you know it exists, check these two scenarios:

Scenario 1: Unit mismatch
For each ETIM-feature a unit of measurement (millimeter, kilogram, etc.) is defined. The user-defined field should make use of the same unit, i.e. you cannot map millimeters to meters or kilograms.

Scenario 2: Standards tables
When mapping user-defined fields of the type *table value* (standards tables), sometimes these values do not show in the drop-down list because of a unit mismatch. This situation can be remedied as follows:

1. Modify the ETIM product class feature by erasing the ***Unit*** (for instance, millimeter) of the feature

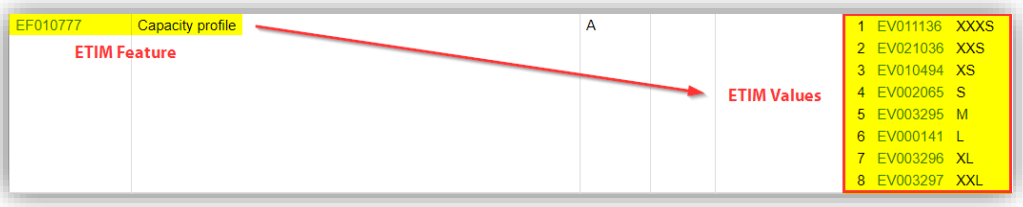
2. Save
3. Again, modify the ETIM product class feature:
    - **User defined field**: The missing user-defined field of the type *Table value* should now show in the drop-down list; select it.
    - **Unit**: Reset the Unit field to the unit of measurement that you previously erase
4. Save



2.3 Step 3: Create Field Options (Single Choice fields only)

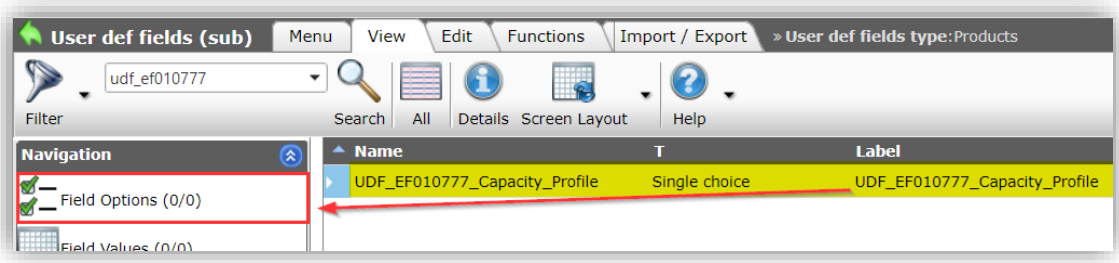
For user-defined fields of the *Single Choice* type, you will need to create *Field Options* and map these to the corresponding ETIM Values.

In this example the user-defined field `UDF_EF010777_Capacity_Profile` will be mapped to the corresponding ETIM-feature `EF010777 Capacity Profile`:

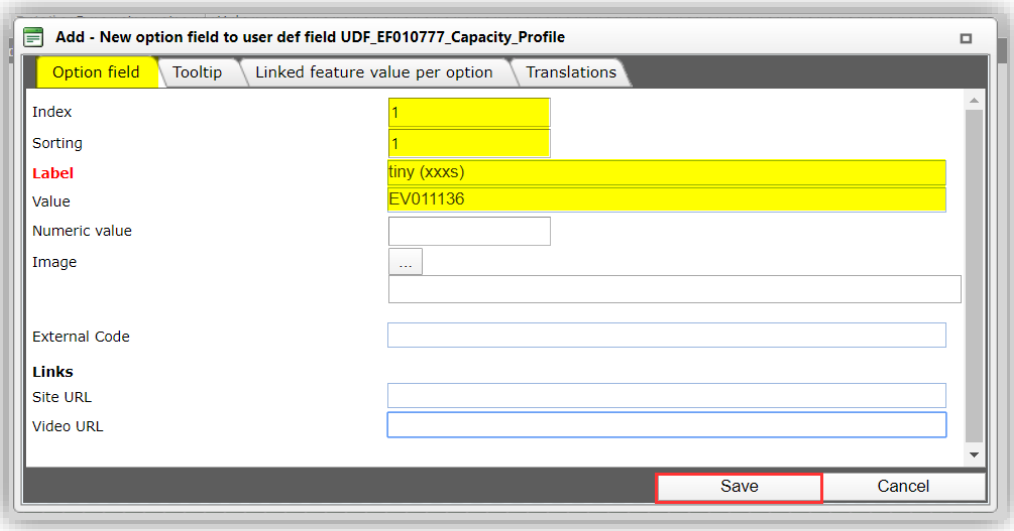


Important: If the values of your user-defined field ***exactly*** correspond to the values of the ETIM-feature, add the Field Options in the order in which they appear at the ETIM-feature. In this example: start with the option that will be mapped to `XXXS`, next the option `XXS`, etc. This procedure will save you time later on.

1. Go to *Menu > System > User def fields (main)* and click on *Products*
2. Search and select the user-defined field of the *Single choice* type for which you need to add field options and, under *Navigation*, click on *Field Options*:

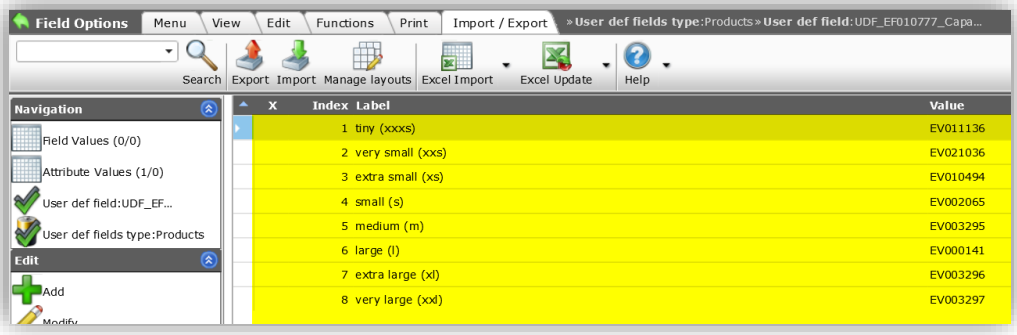


3. In the next screen, click on *+Add* to add a new *Field Option*.



   a. **Index**: This field will be filled out automatically, in order.
   b. **Sorting**: Enter a number for the sorting order. Note: preferably add the field options in the same order as they appear with the ETIM-feature.
   c. **Label**: Enter a label for the field option. Note: For easy reference, this should correspond to the value that will be imported from your ERP. In this example: the value tiny (`xxxs`) will be mapped to the corresponding ETIM Value
   d. **Value**: Enter a value for the field option. Tip: Should the values of your user-defined field correspond to the values of the ETIM-feature, then consider to enter the EV-codes (for example, EV011136) of the corresponding ETIM Values. This procedure will facilitate ***automatic mapping***, which will save you considerable time later on.
   e. **Other fields**: Leave the other fields in this popup window blank.

4. Save the newly created Field Option.
5. The result should look something like this:



2.4 Step 4: Mapping Field Options to ETIM Values (Single Choice fields only)

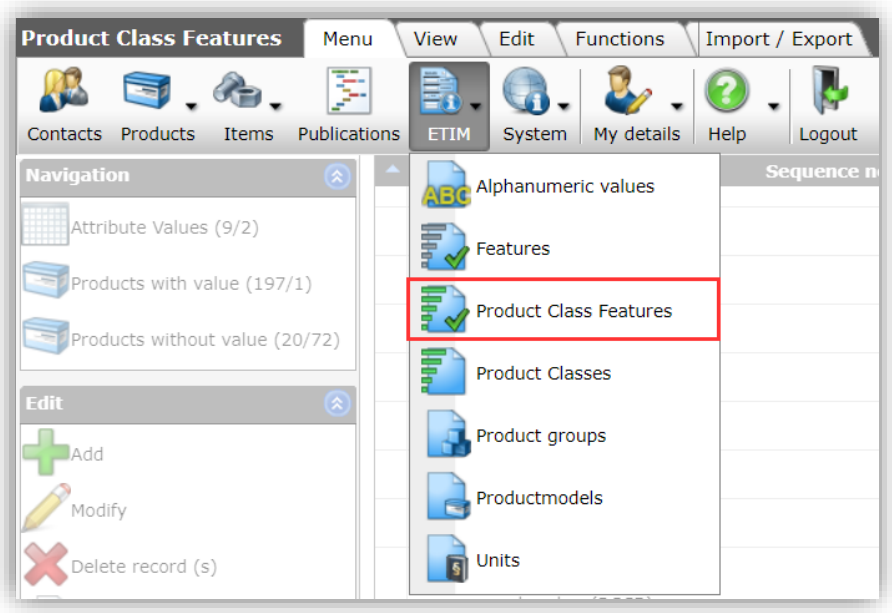
Now that the field options have been created, they can be mapped to ETIM values. This can be done:

- **Manually**: Each Single Choice option will be mapped to a corresponding Field Option.
- **Automatically**: Field Option can be mapped automatically if the Field Option values exactly match the values of the Single Choice ETIM-feature.
- **Multiple**: Optionally, multiple Field Options can be mapped to ***one*** ETIM value.

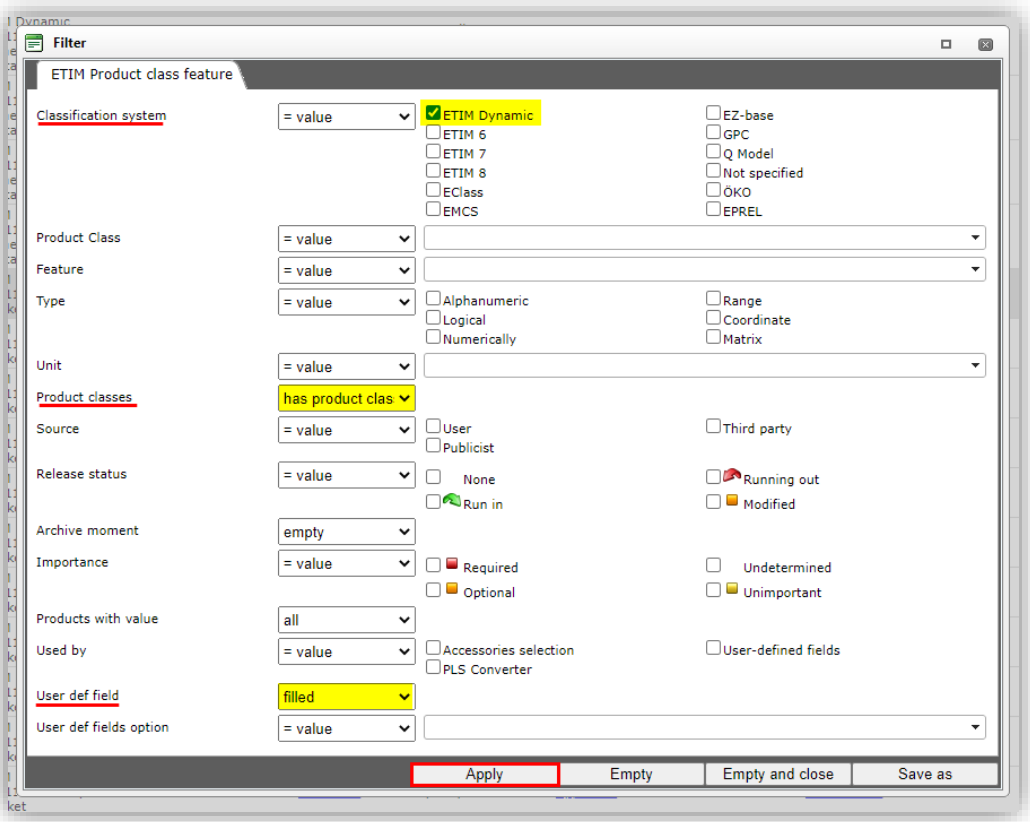
2.4.1 Mapping an ETIM value to a Field Option

To map an ETIM value to a Field Option:

1. Through the *Menu* go to *ETIM > Product Class Features*:

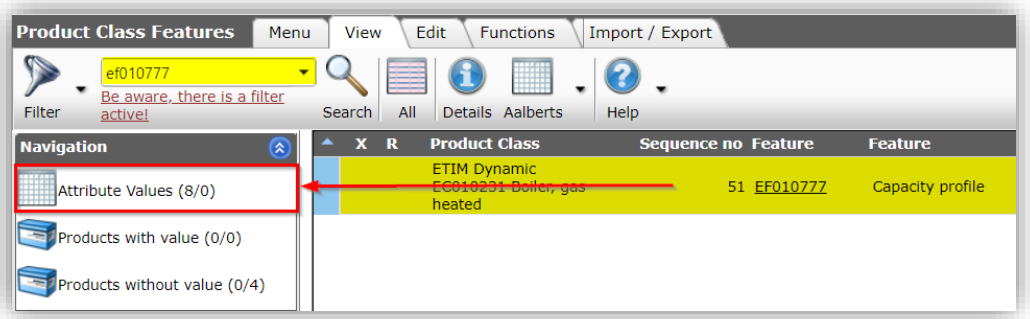


2. As you will only want to map to ETIM-features that are used for your products, set a Filter to:

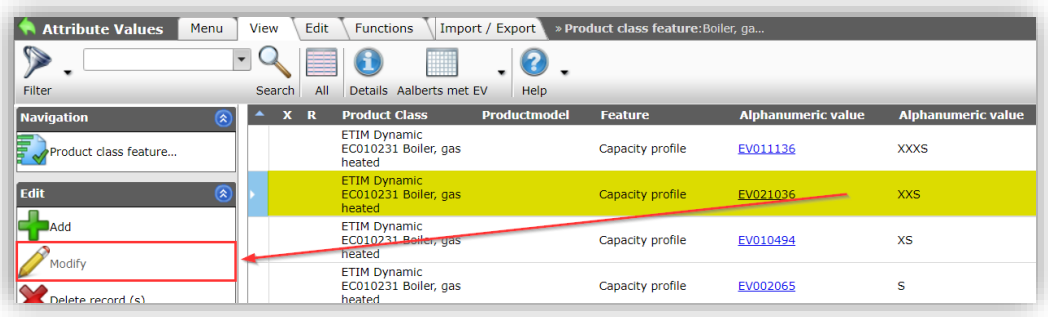


a. **Classification system**: Set this to the relevant *Classification system*. Usually, this will be *ETIM Dynamic*, however you the option map to other features of other classification systems (*ETIM 7, Qmodel, EZ-base*, etc.).
b. **Product class**: Set this to: *has product class product classes.*
c. **User def field**: Set this to: *filled*.

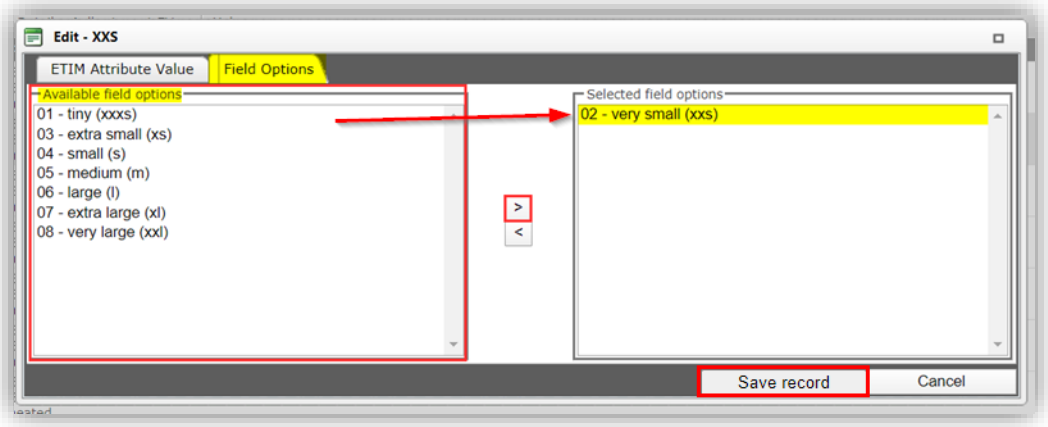
3. Next, in the resulting list, search for the ETIM-feature to which you need to map the user-defined field. For instance, `EF010777`, and click on *Attribute Values*.



4. In the next screen, select an *Attribute Values* and click on *Modify*.



5. In the pop-up window, go to the *Field Options* tab and, from the *Available field options* select and transport the user-defined Field Option you wish to map:

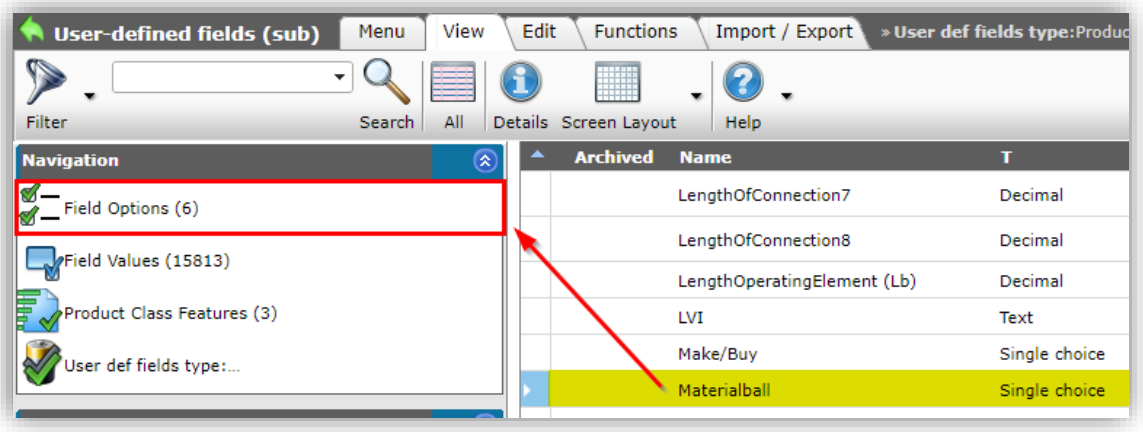


6. Click on *Save*.
7. Repeat this procedure for ***all other values*** that need to be mapped.

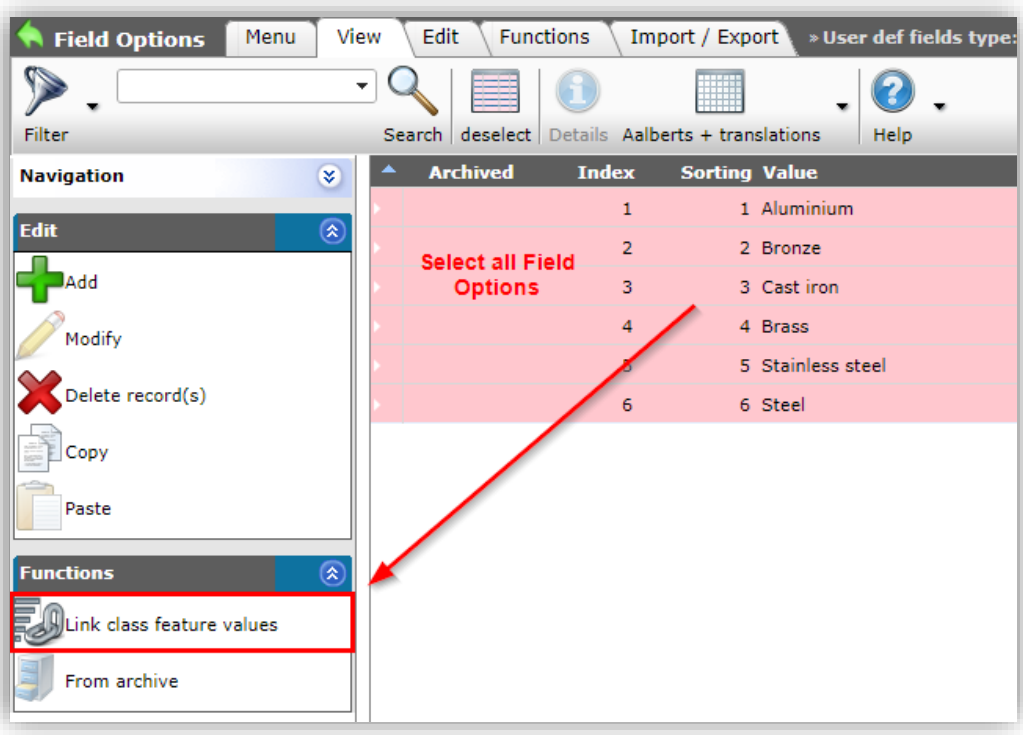
2.4.2 Automatically mapping Field Options

Often, the Field Options of a user-defined field closely match the values of an ETIM-feature. If this is true for your user-defined field, you can attempt an ***automatic mapping*** of the Field Options:

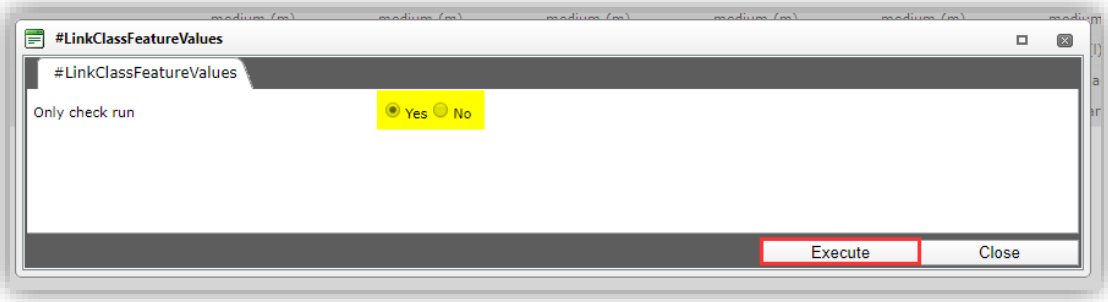
1. Through the Menu, go to *System > User-defined fields (main)*.
2. On the overview, click on *Products*.
3. Search and select the user-defined field of type Single Choice where you want to attempt an automatic mapping and, under Navigation, click on *Field Options*:



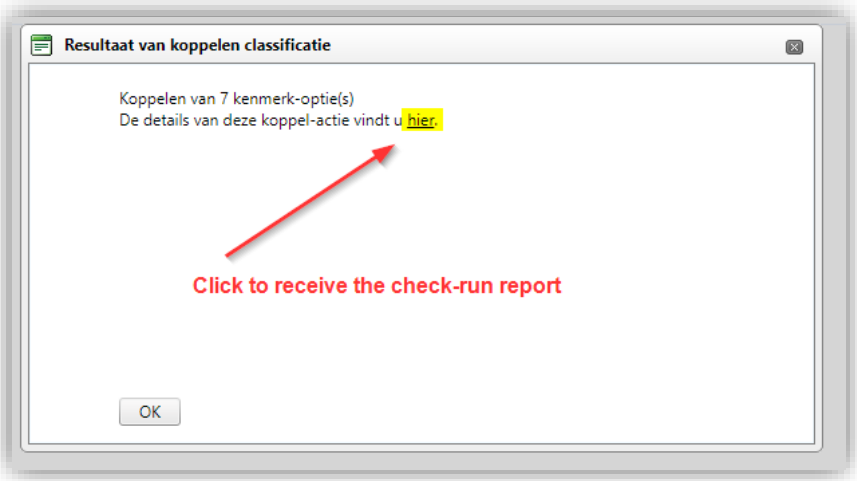
4. On the *Field Options* screen, ***select all*** Field Options and, under Functions, click on *Link class feature values*.



5. In the pop-up window you have the option to first execute a check run only (set to *Yes*); this is recommended.



6. Once you have clicked on *Execute*, you will receive a link to a (test) report:

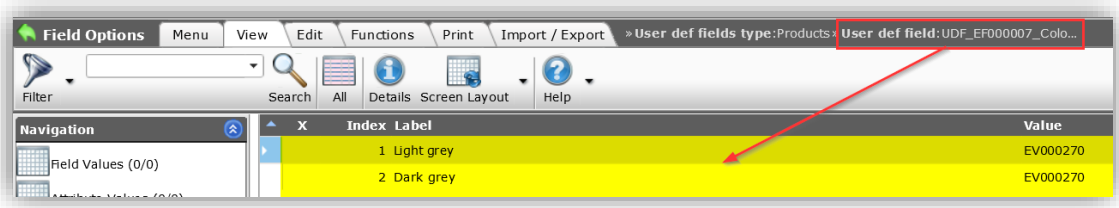


7. Check the test report for errors and correct them, then click on *#LinkedClassFeatureValues* again, set *Only check run* to *No* and *Execute*.

Note: Any Field options that could not be matched and were not automatically mapped, can be mapped manually.

2.4.3 Mapping multiple Field Options to one ETIM value

A product is available in the colours *Light Grey* and *Dark Grey*, however for the corresponding ETIM-feature *Colour* only the option *Grey* is available. A user-defined field *Colour* was created with both colour values *Light Grey* and *Dark Grey*.



Both values can now be mapped to the ETIM-feature *Colour* value *Grey*.

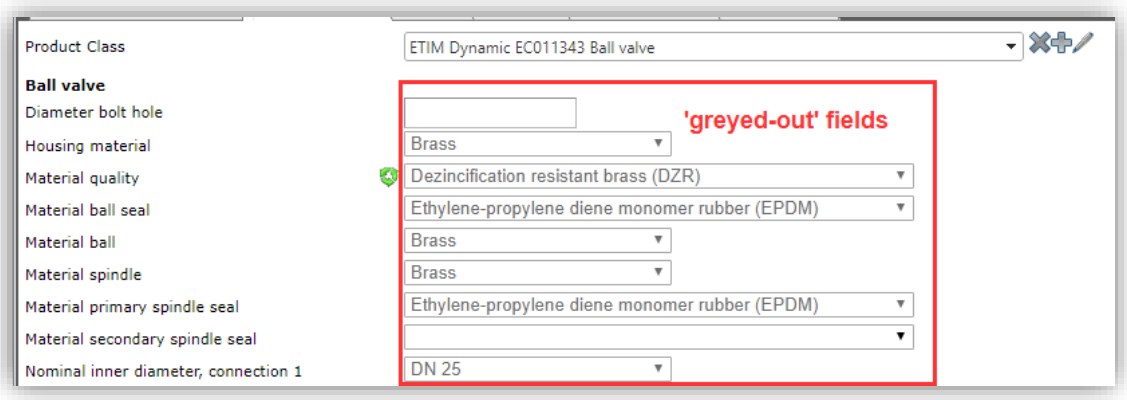
Follow the procedure in paragraph *2.4.1 Mapping an ETIM value to a Field Option* to map ***both*** the Field Options, *Light Grey* and *Dark Grey* to the ETIM value *Grey*. Simply select both option from the *Available field options* list, transport to *Selected field options* and click *Save*.

3 Filling out mapped (ETIM) features

3.1 Greyed-out fields

Important: Once user-defined fields have been mapped to ETIM, some types[4] of mapped ETIM-features can ***no longer*** be filled out from the Product Classifications screen. To indicate this, the fields are greyed-out. Values for these mapped ETIM-features need to be entered by filling out by the linked user-defined field.

[4] A numerical type mapped to an Integer, or an alphanumerical type mapped to single or multiple choice, or a logical value cannot be filled out from the ETIM-feature edit screen.



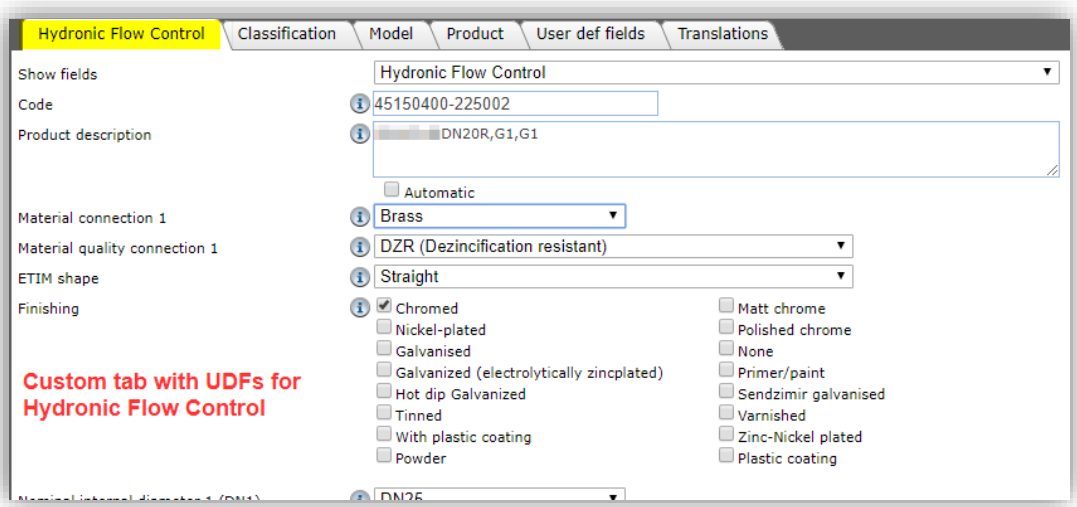
Note: Usually, greyed-out fields concern ETIM-features which have alphanumeric values. However, should you encounter greyed-out ETIM fields of the logical type, then it could be the case that a user-defined ***integer*** field has been mapped to an ETIM-feature of the ***numerical*** type. See also paragraph *6.2. Mapping list values to a single ETIM value*.

3.1.1 Filling out features mapped to calculated fields

(ETIM) features which are mapped to calculated fields of the decimal type are an exception; they can ***only*** be filled out by entering (or changing) the value of the (user-defined) field(s) on which they possibly depend[5]. See also paragraph *6.1. Calculated user-defined fields*.

3.2 Collection tab

When using large numbers of user-defined fields, one or more custom tabs can collect fields that belong together. A collection tab can save considerable time when filling out user-defined fields:



Should you wish to use a collection tab for your user-defined fields, please consult the *Manual User-defined Fields*, which is available on the Compano Help website.

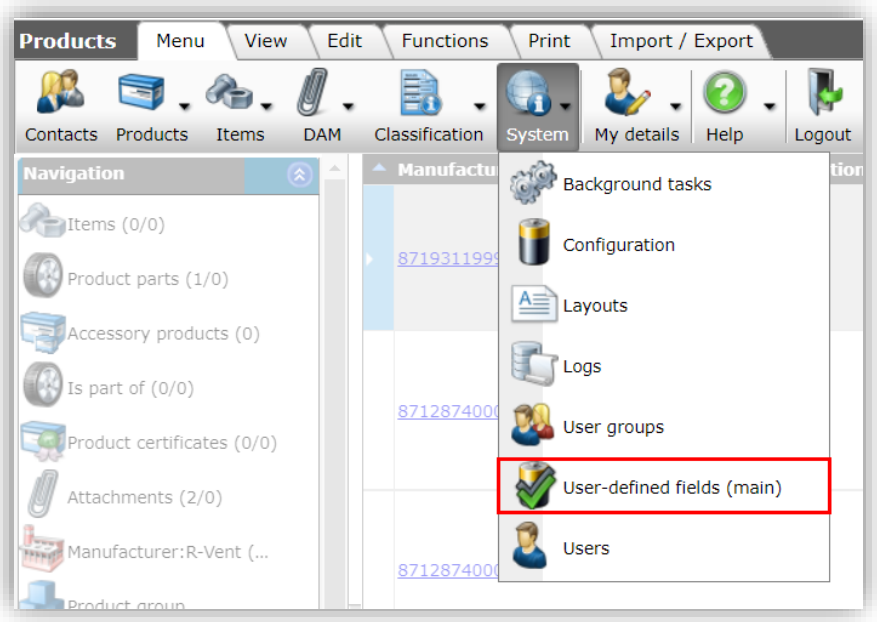
4 Remove mapping

When cleaning up unused user-defined fields, first any mappings to (ETIM) features need to be removed.

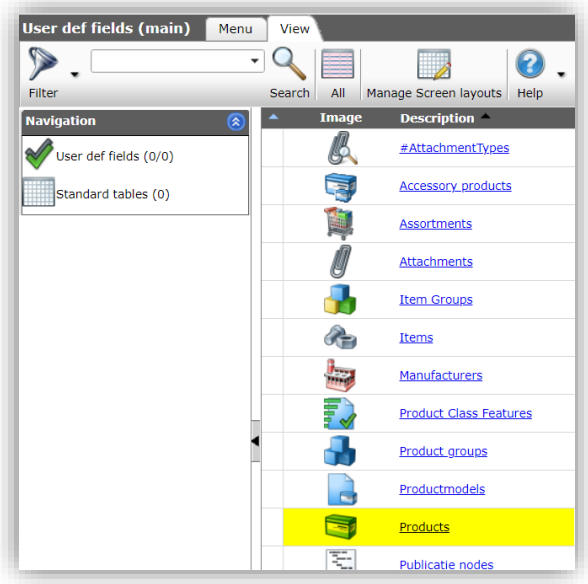
[5] Note: Calculated user-defined fields need not depend on other user-defined fields; the expression could also depend on regular system fields or contain no fields at all.

To remove (unlink) the mapping of UDFs to Product Features:

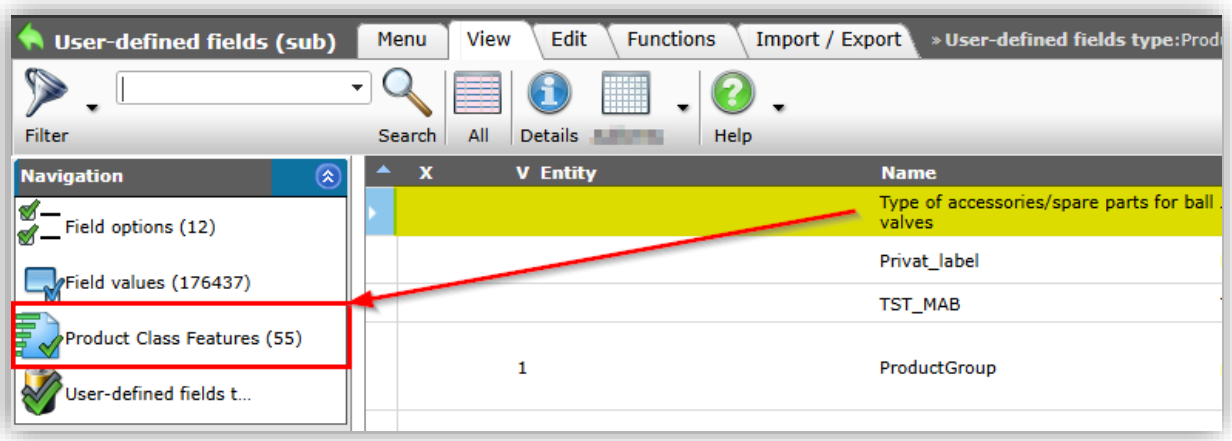
1. Through the main *Menu* go to *System > User-defined fields (main)*.



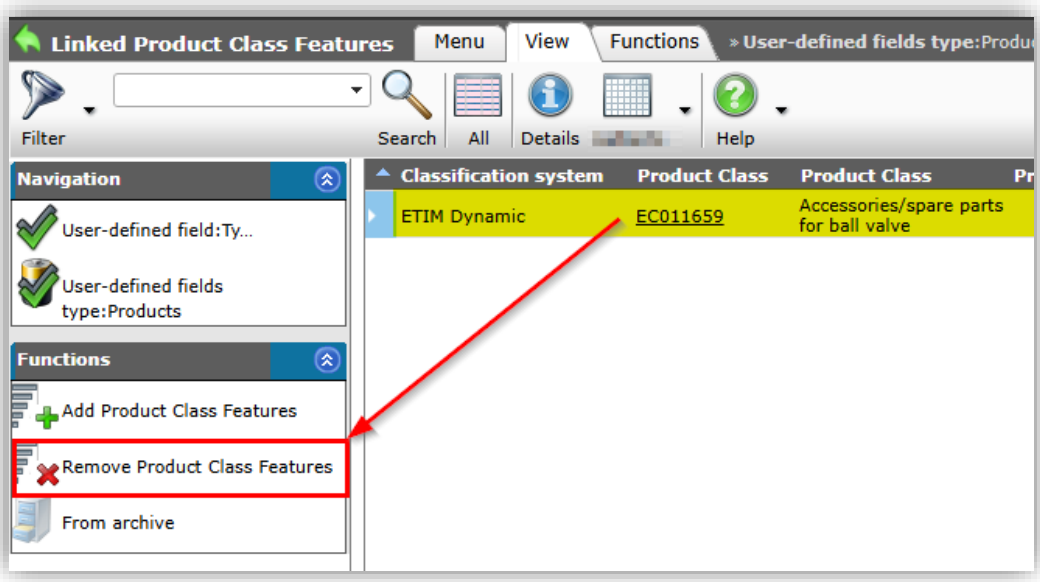
2. On the next screen, click on *Products*.



3. On the next screen, select the UDF that you need to unlink and, under Navigation, go to the linked *Product Class Features*.



4. With the linked product class feature(s) selected, under Functions, click on *Remove Product Class Features*.



5. Any mappings are now removed, including any mappings to archived features.

5 Multi-model mapping

User-defined features can be mapped to multiple, different classification systems[6]. Other classification systems include, amongst others, GPC, eCl@ss, EZ-Base, EMCS and Q-model.

Examples
A user-defined field could be mapped to:

- Both an *ETIM Dynamic* feature and an *EZ-base* feature,
- Or, within the ETIM-system, to both *ETIM Dynamic* and *ETIM 7* features.

[6] To be able to map to multiple classification systems, you will need a *Multi-model* license. Please contact sales@compano.com.

5.1 Example: Mapping to both ETIM Dynamic and ETIM7

One example of multi-model mapping would be to map to both ETIM Dynamic and ETIM 7 classes. To map to both versions of the ETIM classification system, simply follow the steps 1 through 4, first mapping for one system then the other.

5.2 Mapping to a new ETIM iteration

To save on time, the ***ETIM UP conversion tool*** can be used to copy classes, features and value information for your products to a fixed ETIM iteration such as ETIM 7 or ETIM 8. This copy-action can include any values derived from mapped user-defined fields, however this will depend on if and how the mapping of user-defined fields has been set-up for the ETIM iteration to which values are pasted. Please consult Compano should you consider such a mapping action.

The ETIM UP conversion tool is available from the ETIM website: https://etimup.ketenstandaard.nl/

Note: It is recommended to use the ETIM UP conversion tool ***as soon as*** a new iteration of ETIM is fixed, for instance ETIM 8.

5.3 Mapping to other classification systems

User-defined fields can also be mapped to classification systems other than ETIM. Please consult Compano should you need to map user-defined fields to another system.

6 Special use cases

User-defined fields allow for special use cases, such as:

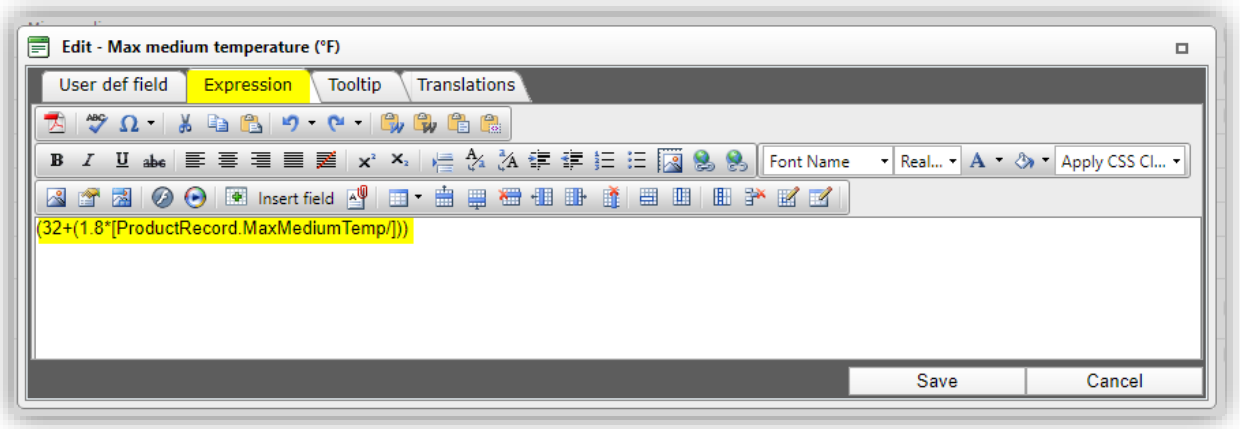
- Calculate values using mathematical expressions or standards tables
- Map list values to a single ETIM value
- Map both metric and imperial values

6.1 Calculated user-defined fields

Calculated user-defined fields contain a expression which calculates a value. The expression can be a purely mathematical expression and/or make use of the values of other user-defined or regular data fields, such as in the example below.

Example
The `MaxMediumTemp_F` is calculated in degrees *Fahrenheit* based upon the user-defined field `MaxMediumTemp` with a value in degrees *Celcius*:

V	Name	Label	Head	T
25	MaxMediumTemp	Max medium temperature (°C)	Max medium temperature	Decimal
26	MaxMediumTemp_F	Max medium temperature (°F)	Max medium temperature (°F)	Decimal



6.1.1 Mapping calculated user-defined fields

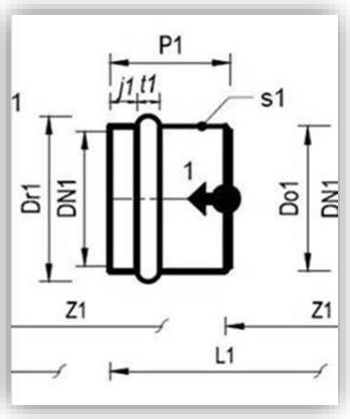
Calculated user-defined fields of the *Decimal type* can be mapped to ETIM using the normal mapping process as described in steps 1 through 4. Of this manual.

6.1.2 Mapping standards tables

A standards table represents a fixed number of product specifications, for instance *dimensions*, which all relate to one specific aspect of the product, for instance *size*. By entering the size ('in'-value) the related dimensions ('out'-value) are known.

Example
A fitting is available in the following sizes:

Size (DN1)	j1	t1	P1	s1
12	0	6,2	17	1,5
15	0	7	20	1,5
18	0	7	20	1,5
22	0	8	21	1,5
28	0	8,2	23	1,5
35	0	8,2	26	1,5
42	0	9,8	30	1,5
54	0	9,7	35	1,5
66,7	0	13,6	50	1,8
76,1	0	14,8	55	2
88,9	0	17	63	2
108	0	20,2	77	2



From this table follows, given the size *DN1=28,* the dimension of the product are: *j1 = 0, t1 = 8,2, P1 = 23,* etc.

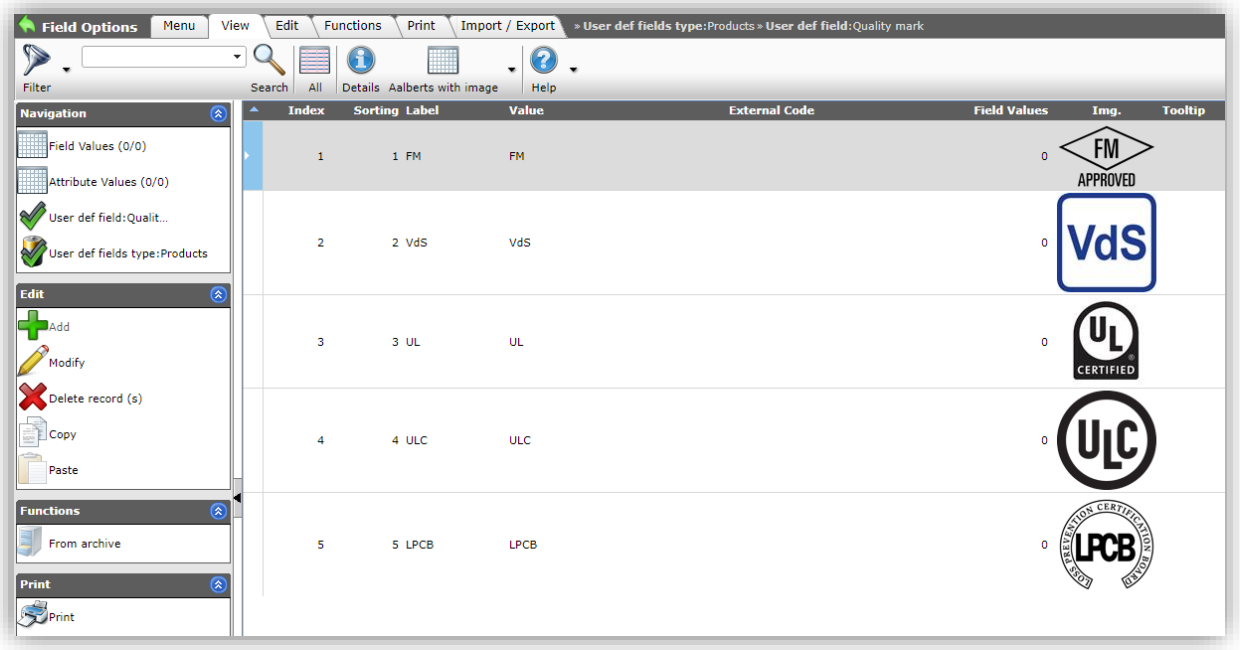
Both in- and out-values need to be created as user-defined fields and can be mapped to classification (ETIM) features.

For more information on standards tables and mapping to (ETIM) features please consult Compano Support.

6.2 Mapping list values to a single ETIM value

A single ETIM value can be mapped to a multiple choice list value or a calculated user-defined field. For instance, certificates are usually entered in ETIM as a logical *yes/no* feature. However, these certificates can be mapped to a user-defined multiple choice list, listing all available certificates:

10	EF021905	FM quality mark	L
11	EF021906	VdS quality mark	L
12	EF021907	UL quality mark	L
13	EF021908	ULC quality mark	L
14	EF021909	LPCB quality mark	L



6.3 Mapping to metric/imperial features

Metric and imperial fields in Compano are linked. This means that once you fill out metric field, the imperial field value is calculated and vice versa.

Mapping metric/imperial features to ETIM-features complicates things. To prevent problems with mapping, the Compano software generates the imperial field 'on the fly' as soon as the metrical field is mapped. This generated imperial field is then ***automatically mapped*** to the corresponding ETIM imperial field.

Important: Between metric and imperial fields a ***computed relation*** exists. For instance, millimeters are computed to inches and vice-versa. Thus, once one field is filled out, both the metric and imperial field will be set to ***read-only***. The same is true for mapping user-defined fields to an imperial field; both the metric and the imperial field will be set to ***read-only*** once mapped. This means that their values can only be changed by changing the value of user-defined field.