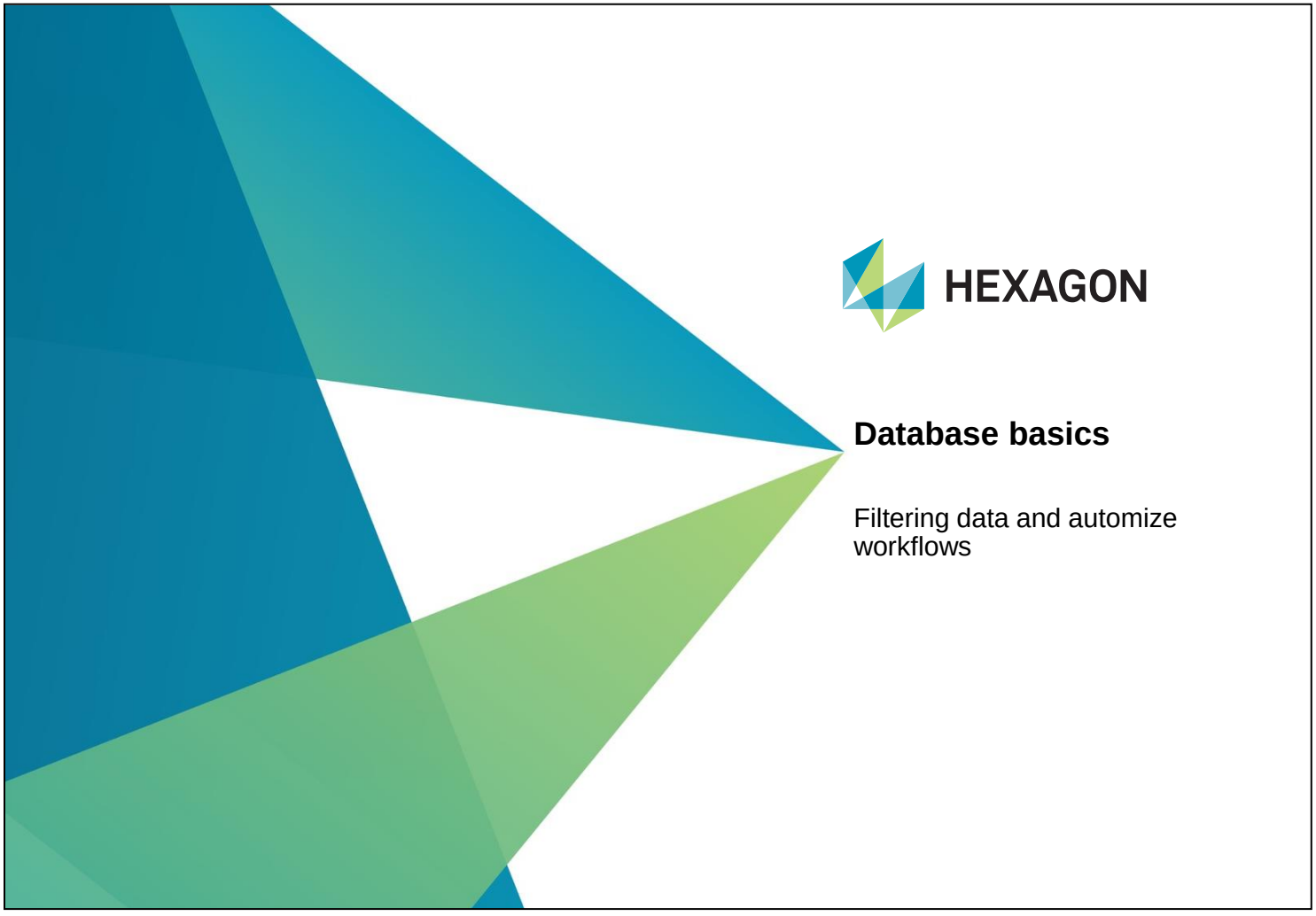

HEXAGON
Database basics
Filtering data and automize workflows

Notes:

Topics

- Basics
  - K-Fields
  - Save data to a database
  - Structure of "Read from database"
- Filter
  - Overview filters
  - Simple filters
  - Quick filters
  - Advanced filters

Notes:

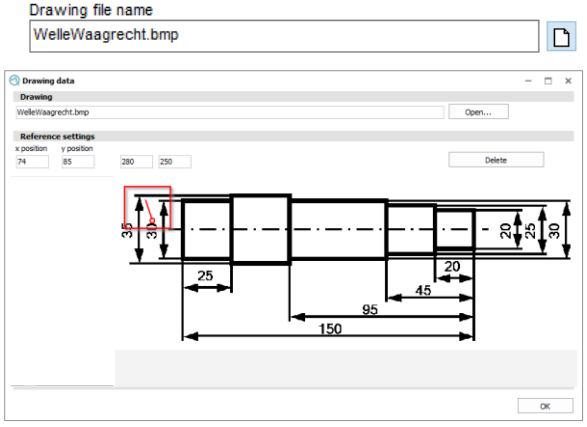
K-Fields

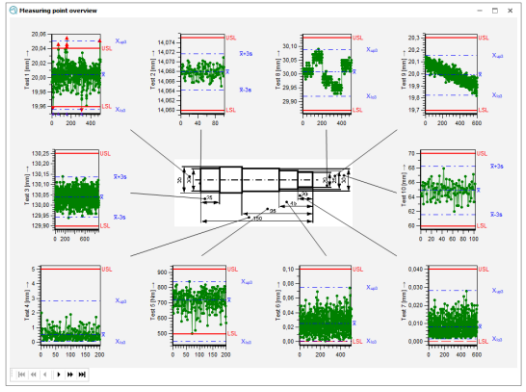
- Every information within a dataset is a so called „K-Field“
- K-Fields (Key-Fields) are defined AQDEF or in firm specific lists
- The input masks in the database can be adjusted to see all of these fields
- The fields are used to sort the data in the database correctly
- Measurement systems write these K-Fields and can be validated
- If the information is written to the wrong K-Field it is hard to find it
- You can only search for the fields which are existing(!)

Notes:

K-Fields

- Each dataset is divided in at least 3 levels:
  - Part level (e.g. tin foil, rod, ball bearing, reason for test)
  - Characteristics level (e.g. diameter, weight, hight, specification)
  - Messwertebene (z.B. 1. value, 2. value, batch number, Date..)
  - To map this information load a file from the database, go to the characteristics level and change the K-Field „Drawing file name“ (after selection click the graphic for the red mark)
  - To open go to | Graphics | Summary graphics | Further to see the result





Notes:

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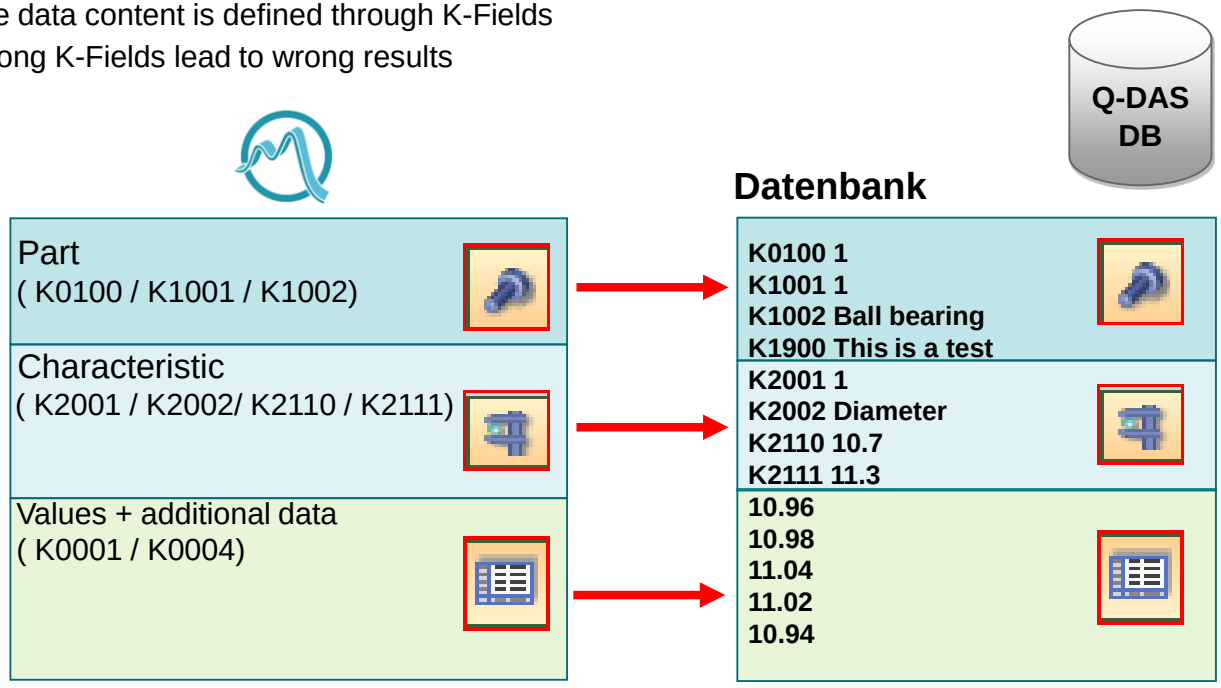
K-Fields

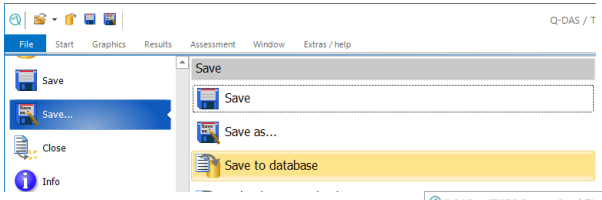
- There are no file names in the database
- The data content is defined through K-Fields
- Wrong K-Fields lead to wrong results

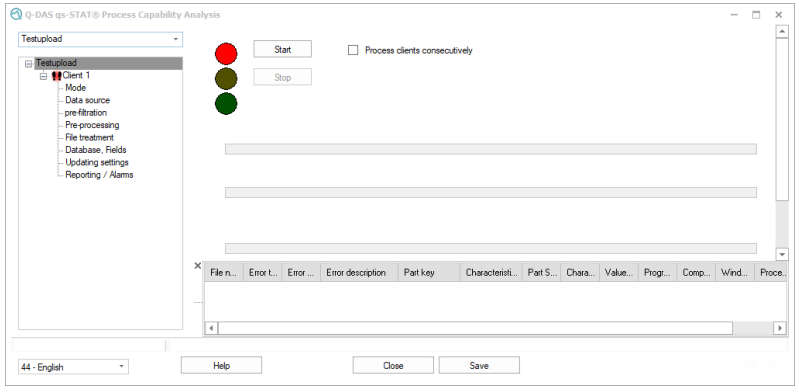


Notes:

Save data to a database

- For single files | File | Save… | Save to Database can be used
- A more professional tool is the data management tool „upload“ which checks the dataset and stores it to the correct dataset in the database
- The first option is more used for procella, the second for measurement machines or other data sources which provide *.dfq files

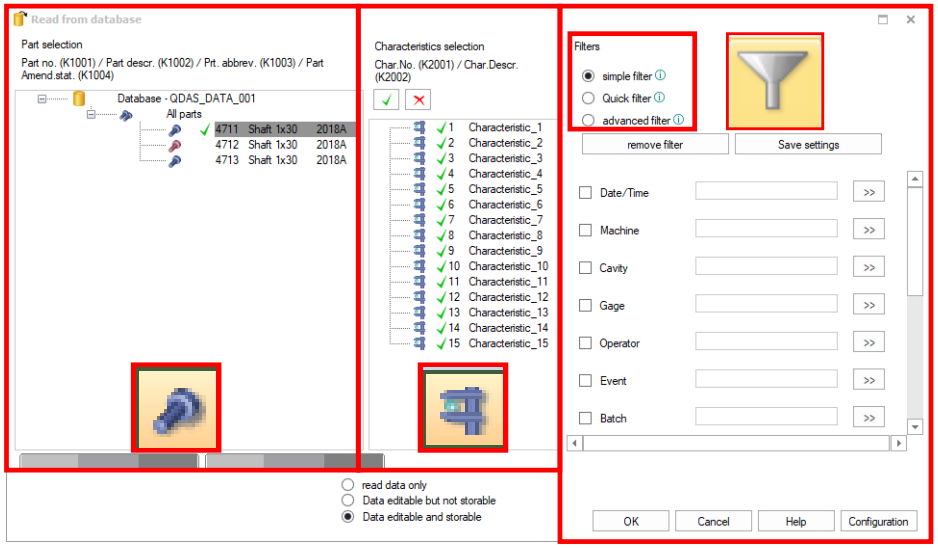




Notes:

Layout „Read from Database“

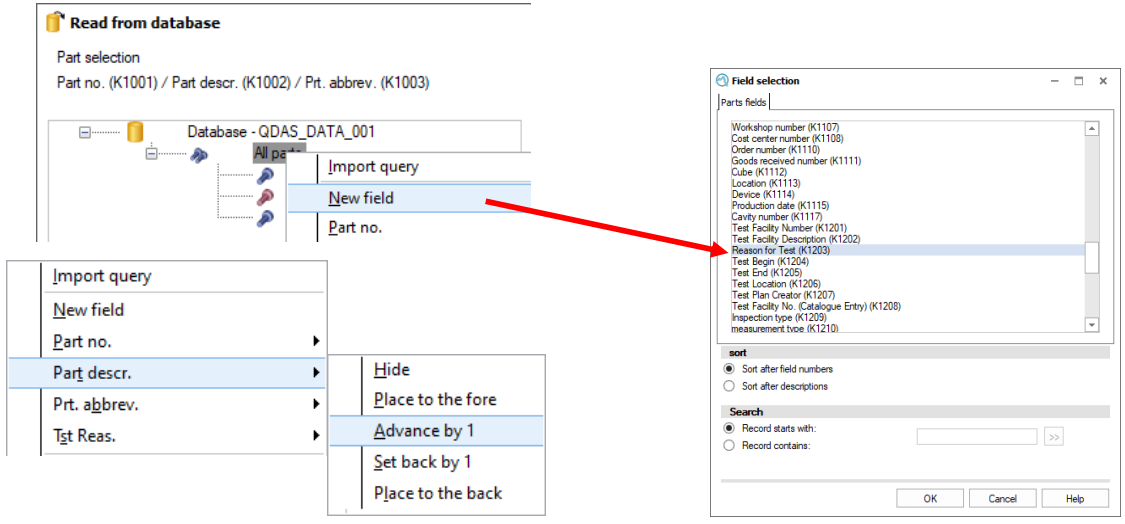
- Part selection
- Characteristics selection
- Filters



Notes:

Additional information

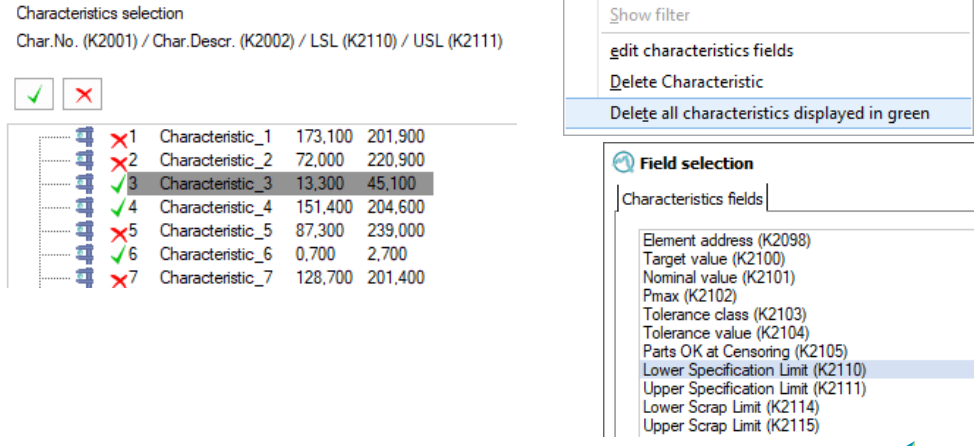
- Right click to „all parts“
- Activate „New field“
- Select the wanted (K-Feld) and confirm with OK. (If more than one field is required drag & drop is also possible form the field selection)
- The order influences the sorting sequence. By right click on „All parts“ the sorting order can be changed



Notes:

Additional fields on characteristics level

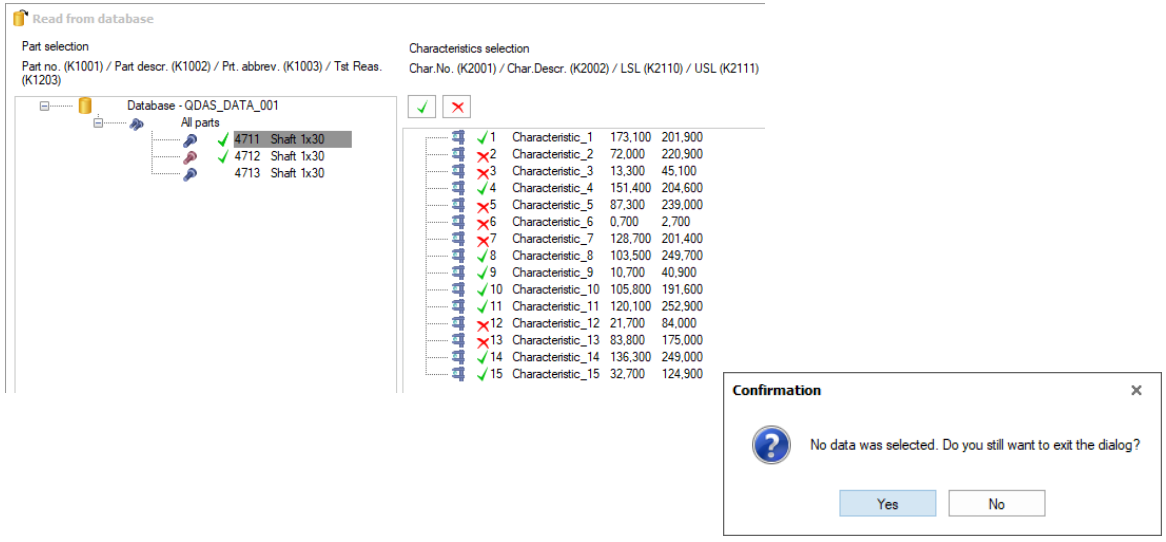
- Add new fields (e.g. specifications K2110 / K2111)
- Edit text fields directly (number fields are not changable)
- Activate or deactivate characteristics (green and red symbol)
- Deletion of characteristics
- Display active filters



Notes:

Usage hints

- To open a part just double click it
- To open more than one part at the same time use <ctrl> or <shift>
- To deactivate characteristics click on the green checkmark
- Clicking „OK“ without selekting a part provides a confirmation message



Notes:

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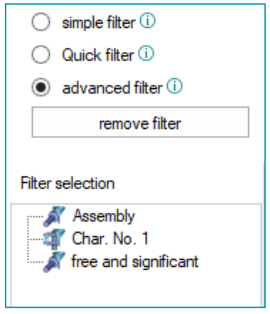
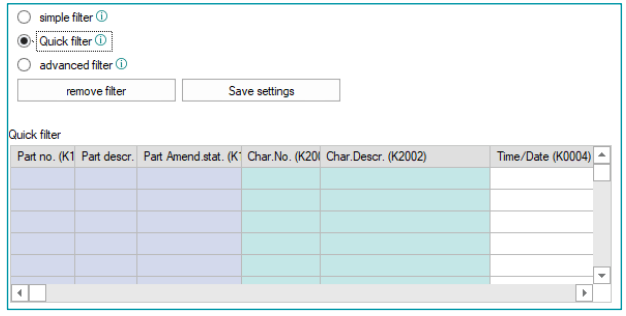
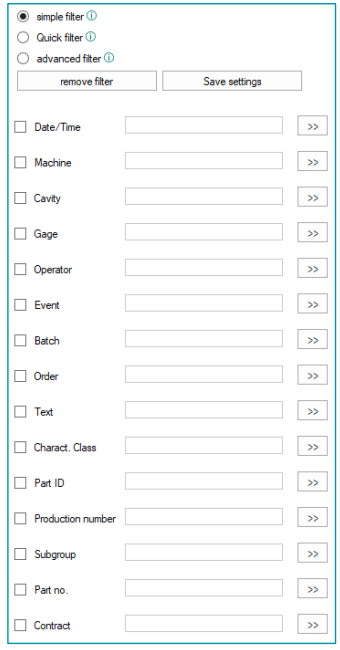
Filter

- Simple filter
- Quick filter
- Advanced filter



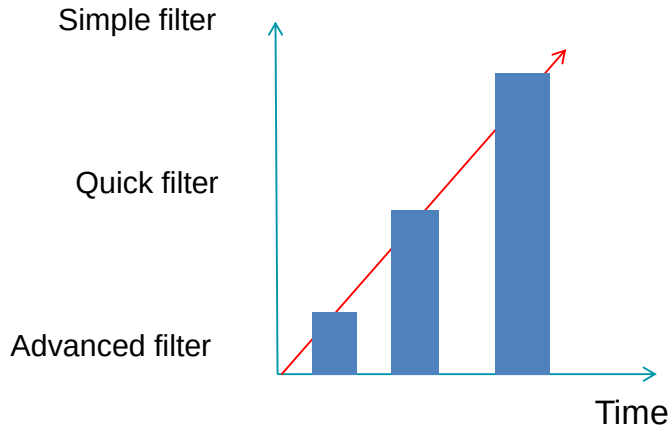




Notes:

Why use which filter?

- Simple filters are used if the database is still small and are mostly focused at the value level
- Quick filters are fast even with bigger databases and can search for any K-field and a view result fields
- Advanced filters can be used to create selections and can be used for all fields and more result fields
- Each filter can be fast, but generally advanced filter can be faster than simple filters

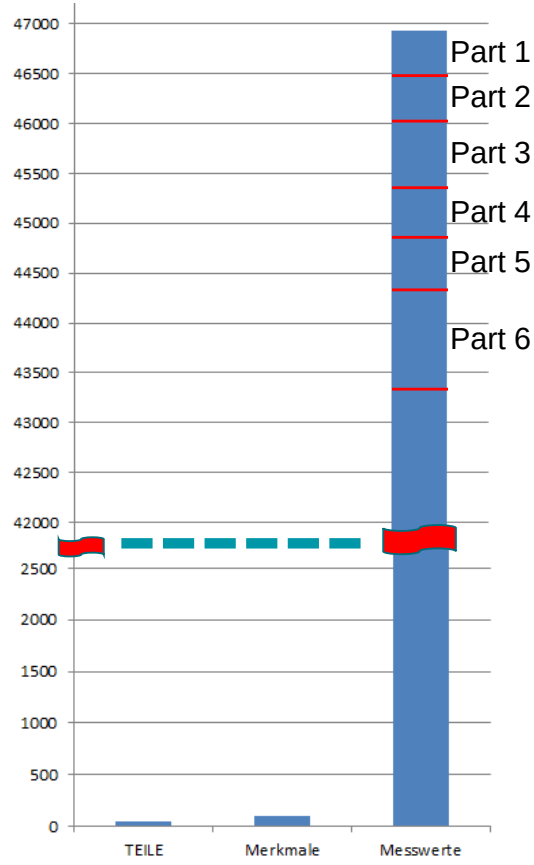


Notes:

Simple filter

- Advantages:
  - All active fields will be connected as a „and“ filter
  - It is fast to use if the database is small
  - Can be saved as a quick filter
  - Is very easy to be used and explained
  - A part level field can be used to speed up the filter

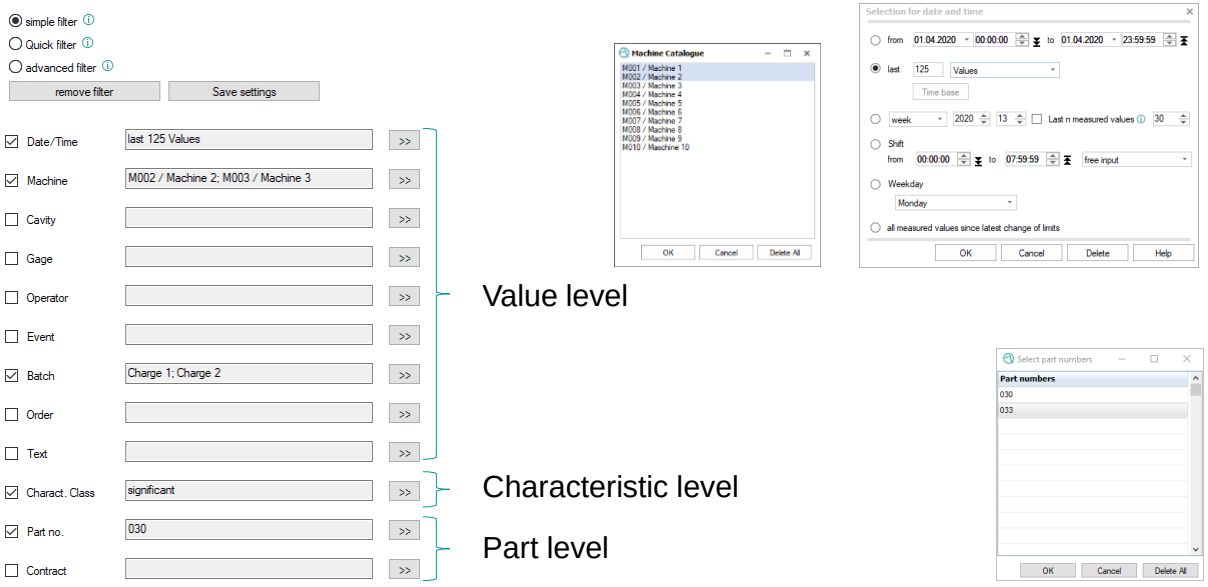
- Disadvantages:
  - The more measurements are in the database, the longer the selection will need to be executed if no part field is used
  - Only the provided fields can be searched



Notes:

Simple filter usage

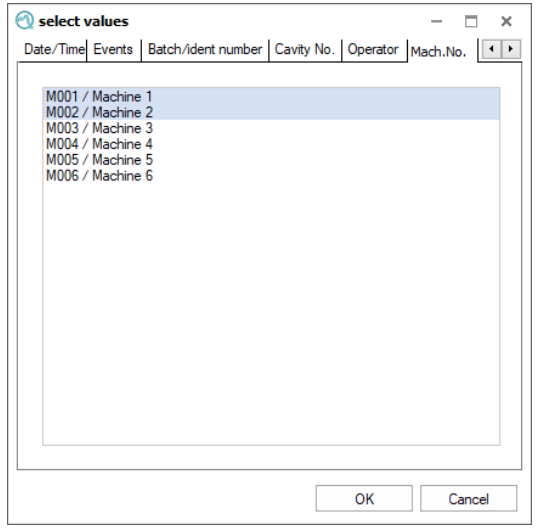
- Selection of fields can be activated with a checkmark
- The fields can be adjusted with the double arrow symbol
- Selection on characteristic level: Characteristics class
- Selection on part level: Contract and part no.



Notes:

Find additional data in datasets

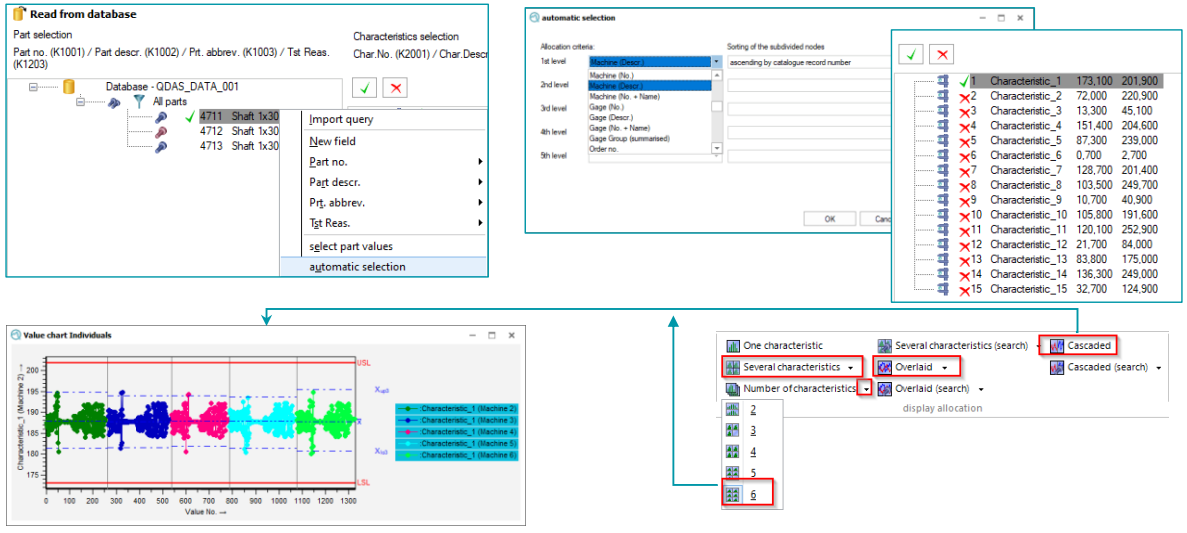
- Value level fields can be selected in the part selection area by right click. That‘s sometimes faster than a simple filter(!)
- Combined options are connected as „and“-conditions
- This option can be used to get an overview about the additional data within a dataset(!) or „to spy“ into data
- This option can be combined with quick and advanced filters



Notes:

Automatic selection

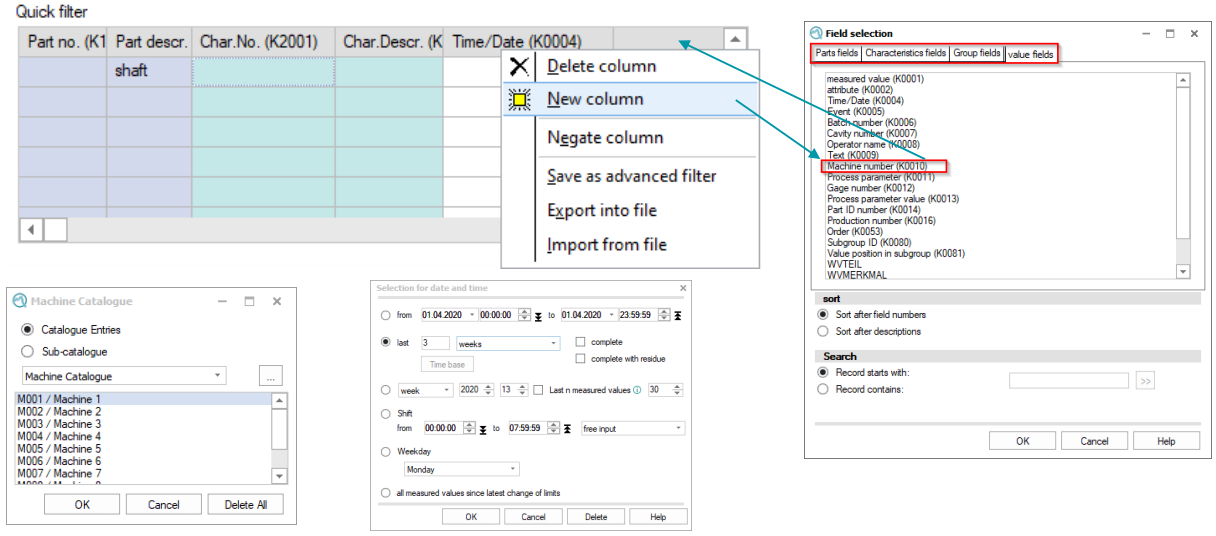
- Right click to the part 4711 and select automatic selection
- Chose for example „machine (Descr.)“ as 1st level
- Click OK and chose only the 1st characteristic to keep it simple
- In | Part / characteristic | display allocation cascaded can be selected
- The number of characteristics can be adjusted if needed (standard is 4)



Notes:

Quickfilter

- Every K-field of each level can be integrated by drag & drop
- Each level has a different color to to distinguish them
- All text fields are „LIKE“ filters (as opposed to „=“ filters)
- By clicking <enter> an entry will be filtered
- Catalog fields and Date/Time provide different dialogs



Notes:

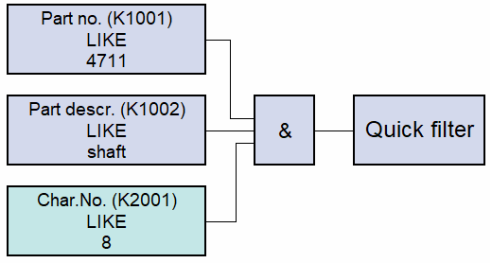
Create „And“ and „OR“ filters

- Everything in different columns is combined as „AND“ Filter (1)
- Everything within a column is an „OR“ filter (2)

Quick filter

Part no. (K1	Part descr.	Char.No. (K2001)
4711	shaft	8

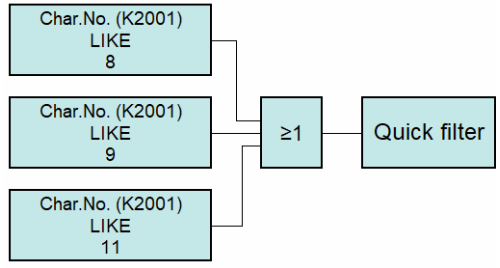
(1)



Quick filter

Part no. (K1	Part descr.	Char.No. (K2001)
		8
		9
		11

(2)



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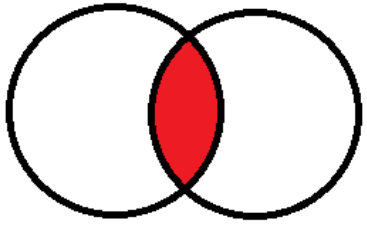
Notes:

Difference in „OR“ and „AND“ filters

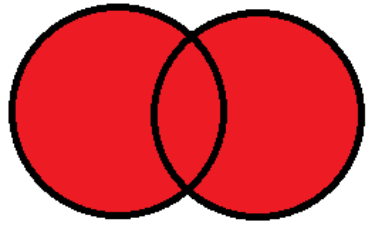
- A „AND“ filter finds a field if condition 1 and condition 2 are both fulfilled
- If only one condition matches there will be no result
- A „OR“ filter will match if at least one condition or all conditions are matched

AND



Condition 1 and condition 2 are met

OR

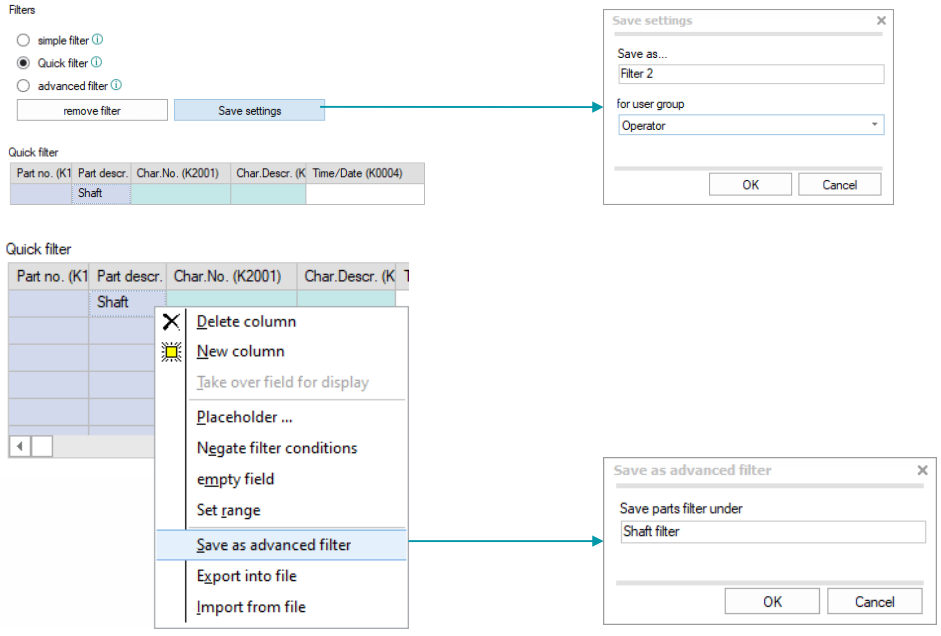


Either Condition 1, or condition 2, or all conditions are met

Notes:

Save Quickfilters

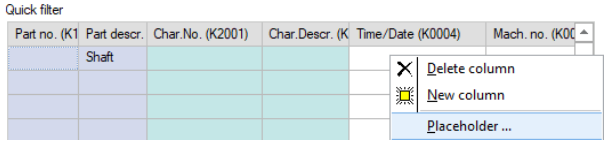
- Quickfilters can be saved as a quick filter or as an advanced filter
- Quickfilters can be created for user groups (Name of creator will be added)
- Saved quick filters have got their own dialog in | File | Database | Quickfilter

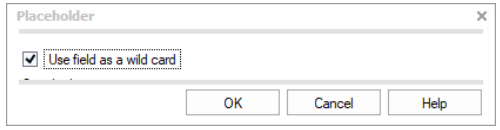


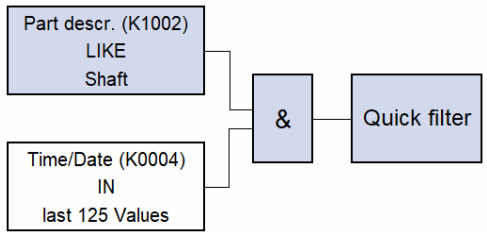
Notes:

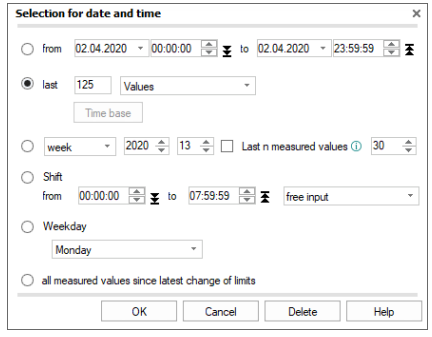
Automatisation quick filter

- For conditions where the content needs to change, but the structure remains the same „placeholders“ are useful
- Example: The part description „shaft“ is always the same, but „date“ could be the last 100 or 125 parts
- Use cases are: Complaint departement, Machine adjustment, quick response from measurement laboratory for specific characteristics, departements…









Notes: