

Notes:



Database basics

Filtering data and automize workflows

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(!)

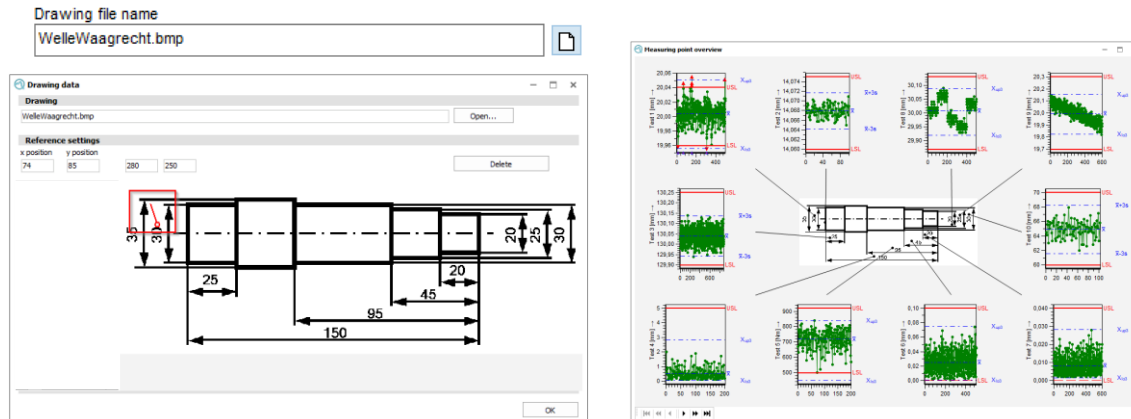
Notes:



Notes:

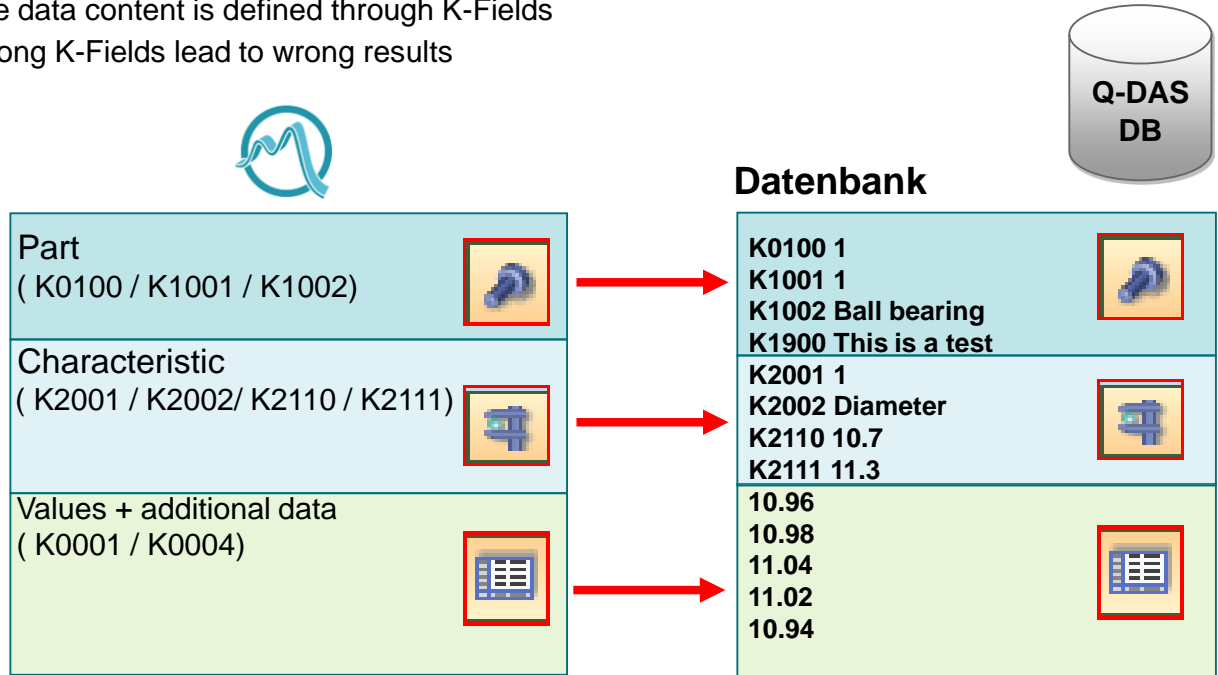
K-Fields

- 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, high, 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



K-Fields

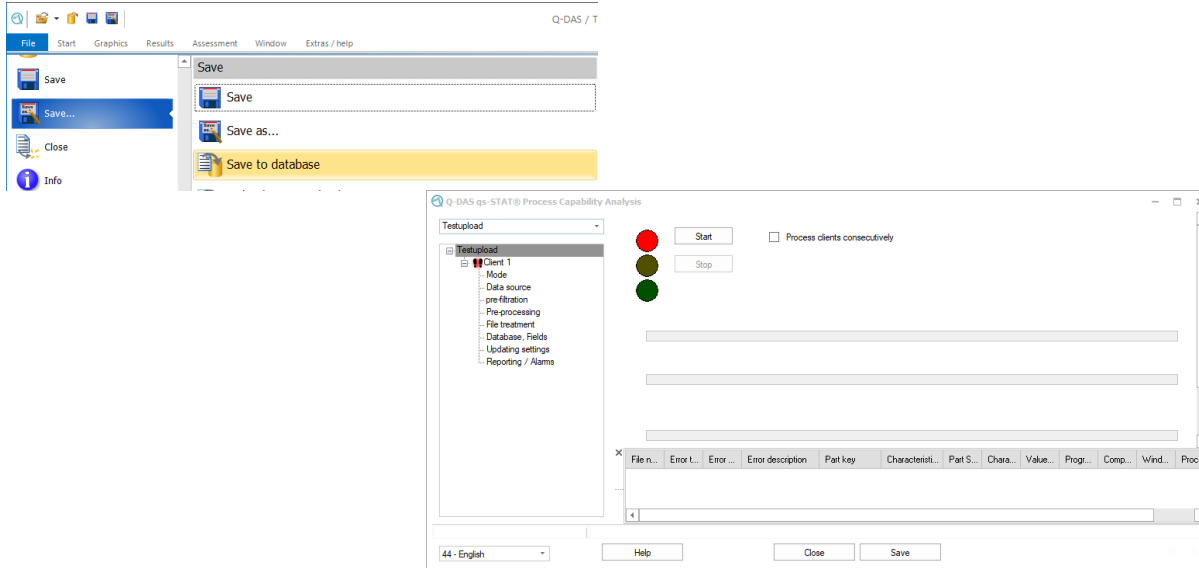
- There are no file names in the database
- The data content is defined through K-Fields
- Wrong K-Fields lead to wrong results



Notes:

Save data to a database

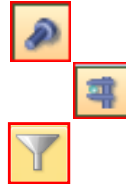
- For single files | File | Save... | Save to Database can be used
- A more professional tool is the data management tool „upload“ which checks the dataset and stores it to the correct dataset in the database
- The first option is more used for procella, the second for measurement machines or other data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



Notes:

Layout „Read from Database“

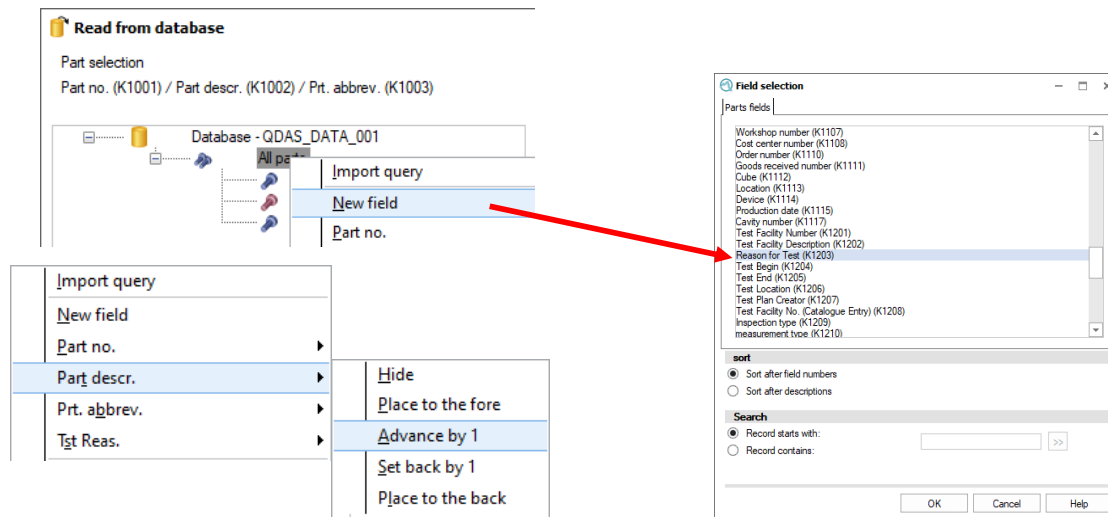
- Part selection
- Characteristics selection
- Filters



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

Characteristics selection

Char.No. (K2001) / Char.Descr. (K2002) / LSL (K2110) / USL (K2111)



Char.No.	Char.Descr.	LSL	USL
1	Characteristic_1	173,100	201,900
2	Characteristic_2	72,000	220,900
3	Characteristic_3	13,300	45,100
4	Characteristic_4	151,400	204,600
5	Characteristic_5	87,300	239,000
6	Characteristic_6	0,700	2,700
7	Characteristic_7	128,700	201,400

New field

Char.No. ▶

Char.Descr. ▶

LSL ▶

USL ▶

Show filter

Edit characteristics fields

Delete Characteristic

Delete all characteristics displayed in green

Field selection

Characteristics fields

Element address (K2098)

Target value (K2100)

Nominal value (K2101)

Pmax (K2102)

Tolerance class (K2103)

Tolerance value (K2104)

Parts OK at Censoring (K2105)

Lower Specification Limit (K2110)

Upper Specification Limit (K2111)

Lower Scrap Limit (K2114)

Upper Scrap Limit (K2115)

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 selecting a part provides a confirmation message

Notes:

Read from database

Part selection
Part no. (K1001) / Part descr. (K1002) / Pft. abbrev. (K1003) / Tit Reas. (K1203)

Characteristics selection
Char.No. (K2001) / Char.Descr. (K2002) / LSL (K2110) / USL (K2111)

Database - QDAS_DATA_001

All parts

Char.No.	Char.Descr.	LSL	USL
1	Characteristic_1	173,100	201,900
2	Characteristic_2	72,000	220,900
3	Characteristic_3	13,300	45,100
4	Characteristic_4	151,400	204,600
5	Characteristic_5	87,300	239,000
6	Characteristic_6	0,700	2,700
7	Characteristic_7	128,700	201,400
8	Characteristic_8	103,500	249,700
9	Characteristic_9	10,700	40,900
10	Characteristic_10	105,800	191,600
11	Characteristic_11	120,100	252,900
12	Characteristic_12	21,700	84,000
13	Characteristic_13	83,800	175,000
14	Characteristic_14	136,300	249,000
15	Characteristic_15	32,700	124,900

Confirmation

No data was selected. Do you still want to exit the dialog?

Yes No

Filter

- Simple filter
- Quick filter
- Advanced filter

Notes:

simple filter ⓘ
 Quick filter ⓘ
 advanced filter ⓘ

Filter selection

Assembly
 Char. No. 1
 free and significant

simple filter ⓘ
 Quick filter ⓘ
 advanced filter ⓘ

Quick filter

Part no. (K1)	Part descr.	Part Amend.stat. (K1)	Char.No. (K201)	Char.Descr. (K2002)	Time/Date (K0004)

simple filter ⓘ
 Quick filter ⓘ
 advanced filter ⓘ

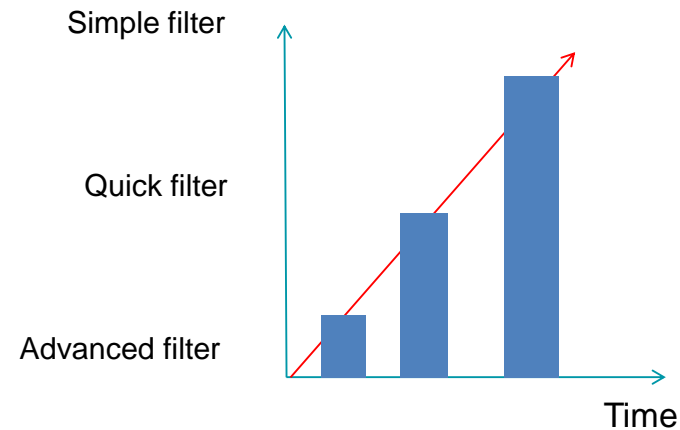
Date/Time >>
 Machine >>
 Cavity >>
 Gage >>
 Operator >>
 Event >>
 Batch >>
 Order >>
 Text >>
 Charact. Class >>
 Part ID >>
 Production number >>
 Subgroup >>
 Part no. >>
 Contract >>



Notes:

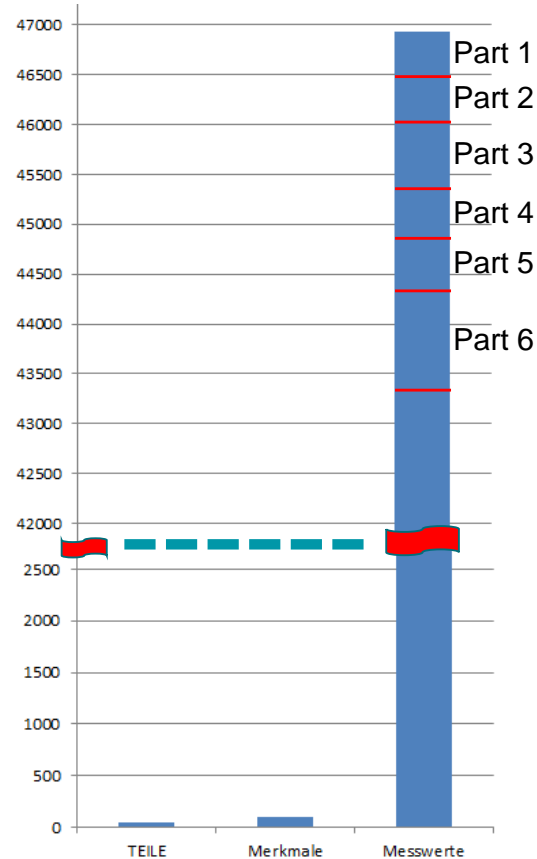
Why use which filter?

- 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



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:

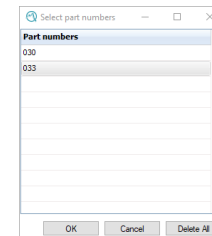
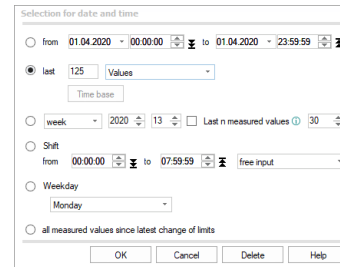
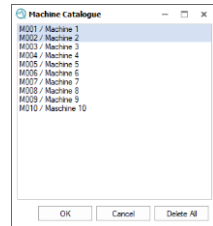
simple filter ⓘ
 Quick filter ⓘ
 advanced filter ⓘ

Date/Time >>
 Machine >>
 Cavity >>
 Gage >>
 Operator >>
 Event >>
 Batch >>
 Order >>
 Text >>
 Charact. Class >>
 Part no. >>
 Contract >>

Value level

Characteristic level

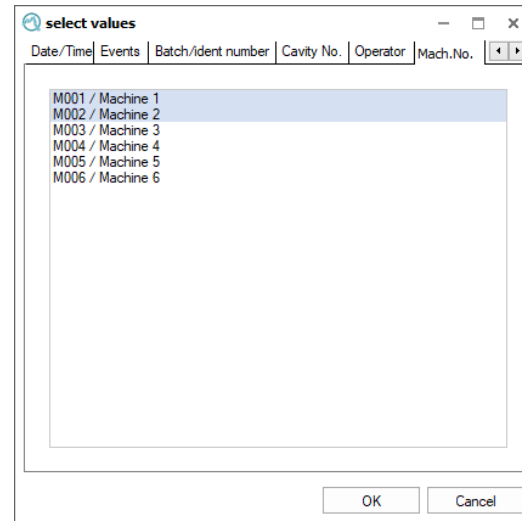
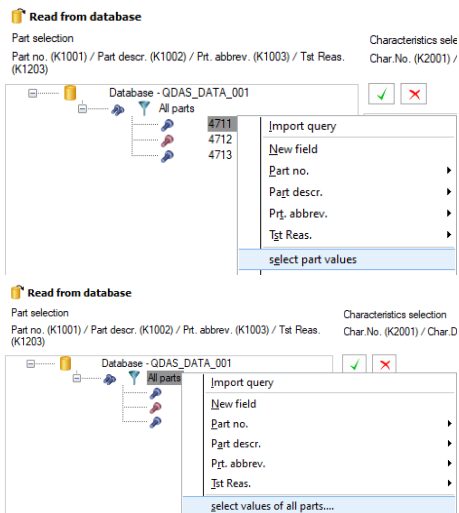
Part level



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:

The workflow consists of the following steps:

- Read from database:** Selecting part 4711 (Shaft 1x30) from the database.
- automatic selection:** Choosing 'Machine (Descr.)' as the 1st level allocation criteria.
- Characteristics selection:** A list of 15 characteristics is shown, with 'Characteristic_1' selected (173,100, 201,900).
- Value chart Individuals:** A scatter plot showing the distribution of values for the selected characteristics across different machines.
- Configuration:** The 'display allocation' panel is set to 'Cascaded' and 'Number of characteristics' is set to 5.

Quickfilter

- Every K-field of each level can be integrated by drag & drop
- Each level has a different color 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

Quick filter

Part no. (K1)	Part descr.	Char.No. (K2001)	Char.Descr. (K	Time/Date (K0004)
	shaft			

Machine Catalogue

Selection for date and time

Field selection

Field selection dialog tabs: Parts fields, Characteristics fields, Group fields, value fields

Field selection list:

- measured value (K0001)
- attribute (K0002)
- Time/Date (K0004)
- Event (K0005)
- Batch number (K0006)
- Cavity number (K0007)
- Operator name (K0008)
- Test (K0009)
- Machine number (K0010)
- Process parameter (K0011)
- Gage number (K0012)
- Process parameter value (K0013)
- Part ID number (K0014)
- Production number (K0016)
- Order (K0053)
- Subgroup ID (K0080)
- Value position in subgroup (K0081)
- WVTEIL
- WVMERKMAL

sort:

- Sort after field numbers
- Sort after descriptions

Search:

- Record starts with:
- Record contains:

Notes:

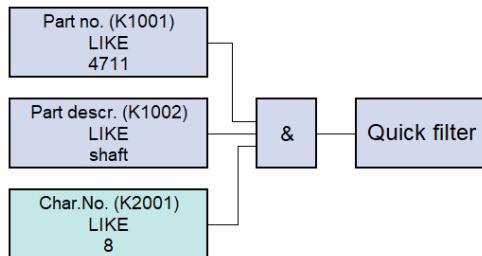
Create „And“ and „OR“ filters

- 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

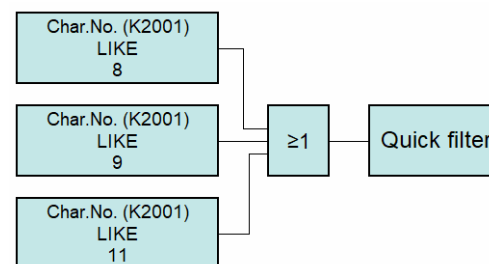
(1)



Quick filter

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

(2)



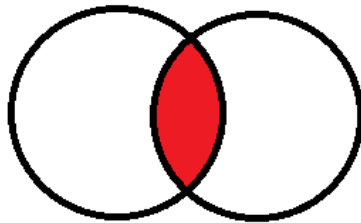
Notes:

Notes:

Difference in „OR“ and „AND“ filters

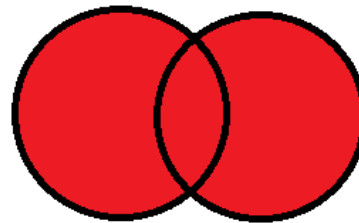
- A „AND“ filter finds a field if condition 1 and condition 2 are both fulfilled
- If only one condition matches there will be no result
- A „OR“ filter will match if at least one condition or all conditions are matched

AND



Condition 1 and condition 2 are met

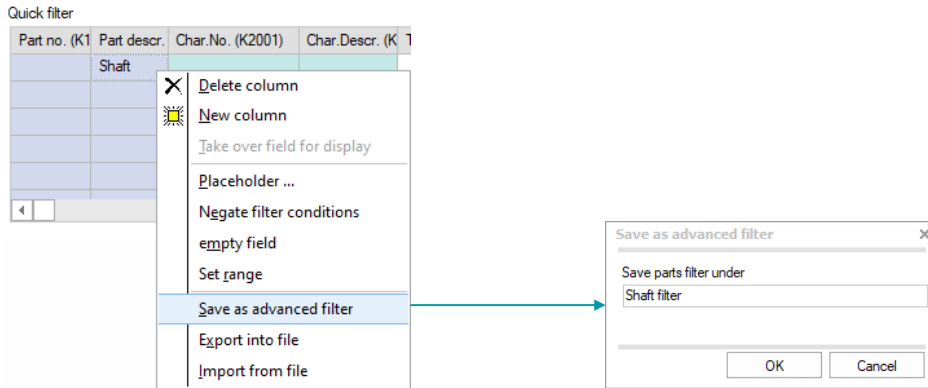
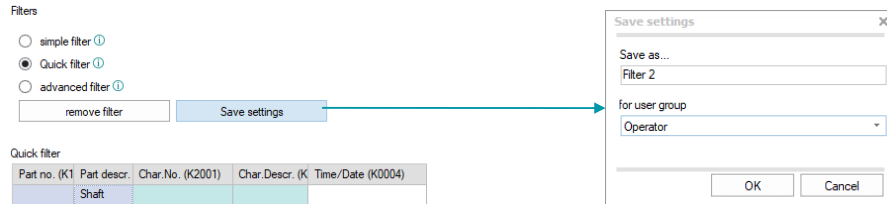
OR



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

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:

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 department, Machine adjustment, quick response from measurement laboratory for specific characteristics, departments...

