Statistics and Excel Export
in Presentation App

Single Value Statistics

Extracting Spectral Values for Time Series

Spectra Time Series

Excel Export and Filters

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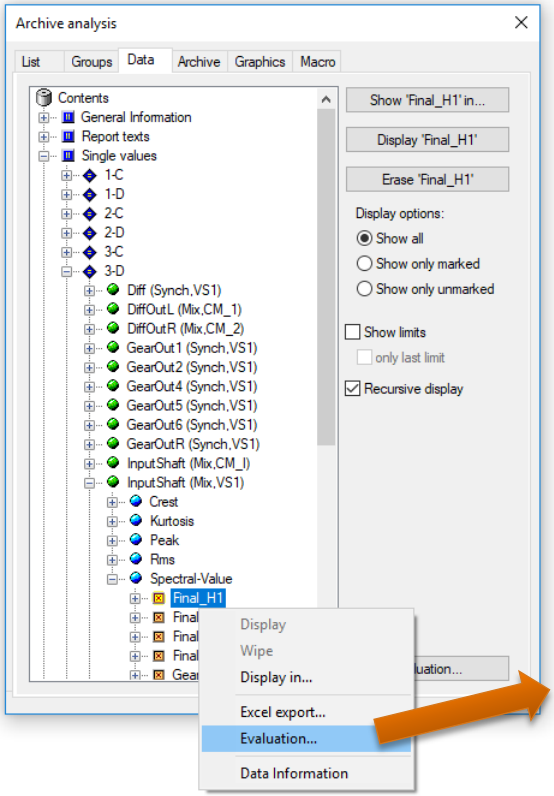
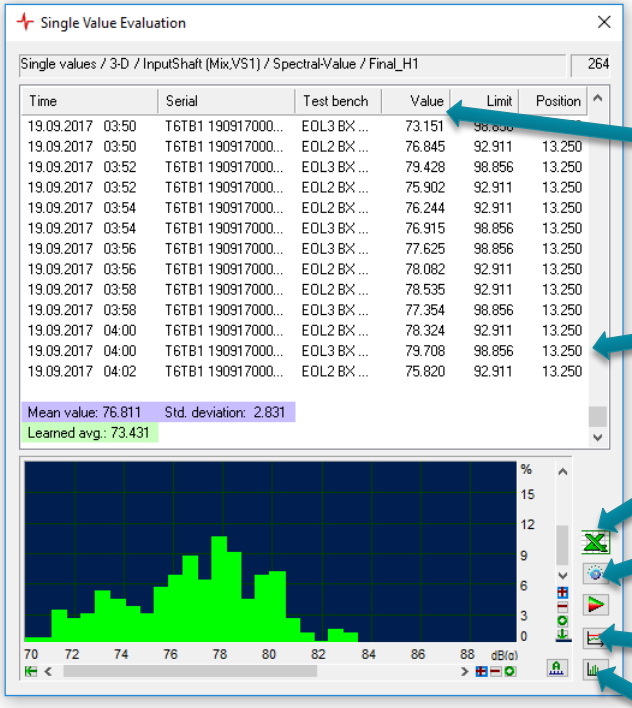
Quick Value Statistics in Presentation

Presentation can show you a simple time series and distribution for any measured value, based on all loaded measurements.
In the Data Contents tree, navigate to the value you want to evaluate, right-click and use the “Evaluation…” command from the context menu:





Click in column heading to sort by ascending value.

List shows average and standard deviation at the end.

Export list to Excel

Settings

Display time series

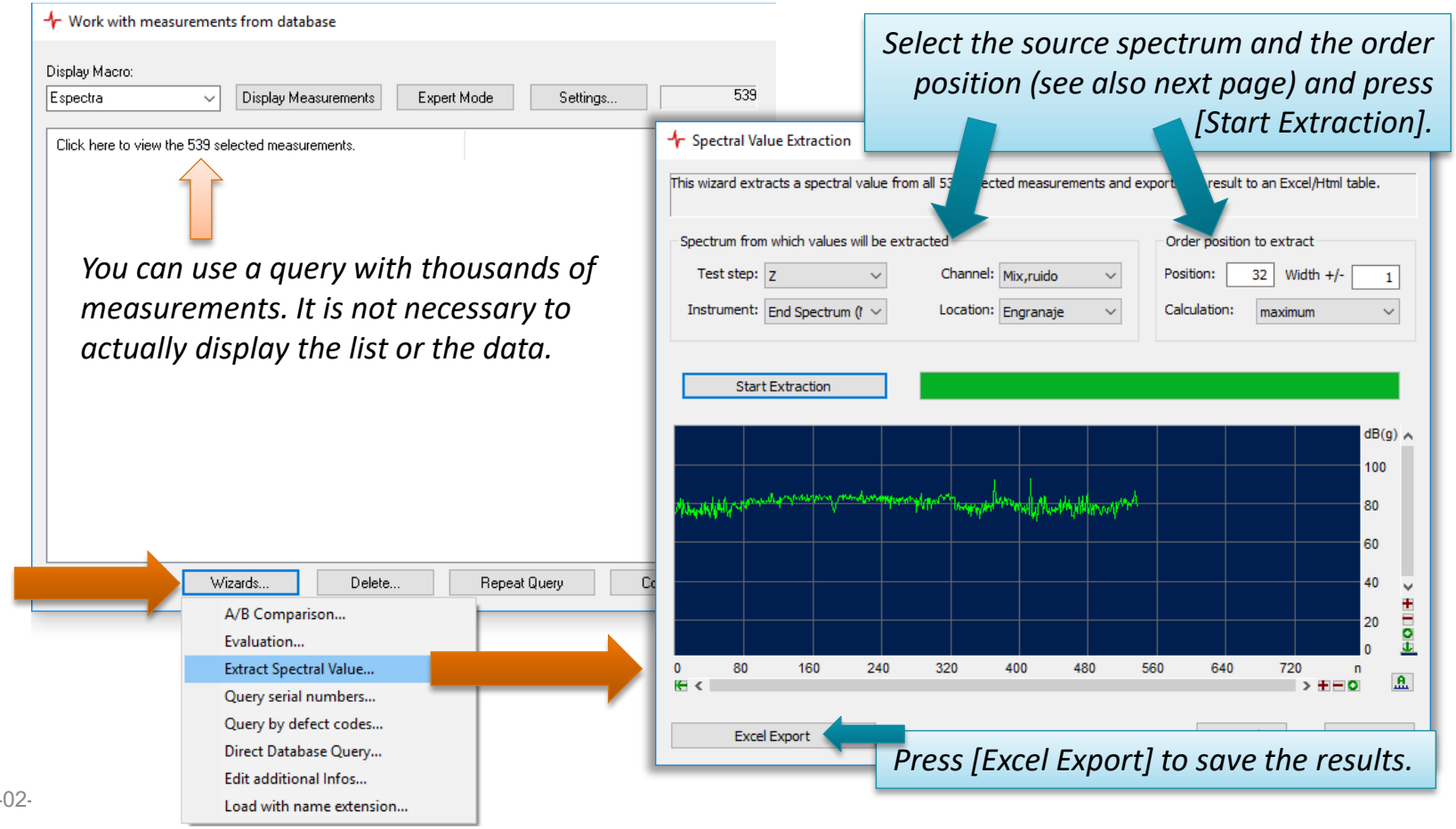
Display distribution

If you have placed the measurements into groups, the Single Value Evaluation will also show these groups. This way you can compare the group distributions.

Extracting Spectral Value Time Series

The result data base contains spectral values only for predefined orders, typically the gearmesh harmonics, which have been set up in the parameters database.

If the time series for an arbitrary spectral value is required, or for a 'Track Interval' value from order tracks, this can be done with Presentation's "Spectral Extraction" wizard, which is called from the Database Query window:

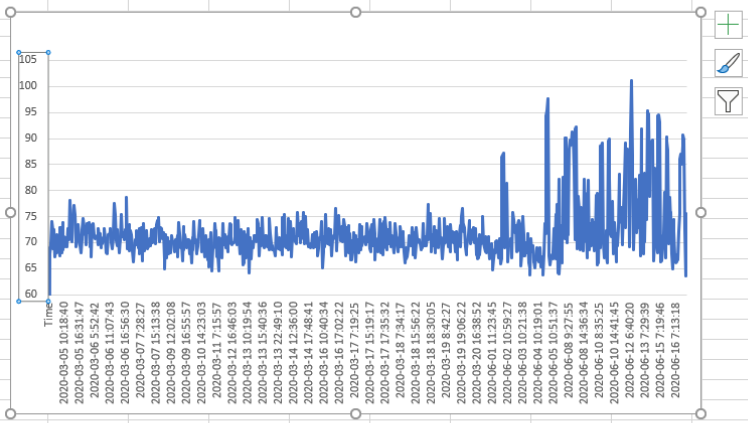


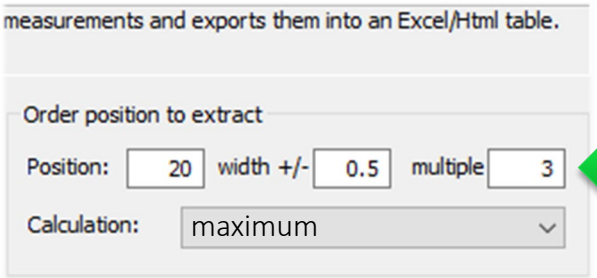
Spectral Value Time Series Results

The time series exported from the “Extract Spectral Value” wizard is a Html file which can be directly opened with Microsoft Excel.

Use Excel tools to create a graph from columns C and D to see the time series and check for specific events in time:

	A	B	C	D
1	**maximum 20**			
2				
3	**Spectrum (Max), 1-sC, Mix,VS-Z Input Shaft**			
4				
5	**Position 20 ± 0.5, maximum**			
6				
7	N	Serial number	Time	Value [-]
8	0	7413KP09000	2020-03-05 7:31:46	69,02697
9	1	7413KP08999	2020-03-05 7:35:44	67,894844
10	2	7413KP09005	2020-03-05 7:52:37	69,846359
11	3	7413KP09006	2020-03-05 7:56:22	73,98571
12	4	7413KP09007	2020-03-05 8:00:08	72,56575
13	5	7413KP09002	2020-03-05 8:04:15	68,778381
14	6	xxx	2020-03-05 8:40:36	72,523415
15	7	7413KP09049	2020-03-05 9:23:46	67,194664
16	8	xxx	2020-03-05 9:28:04	68,624435
17	9	7413KP09053	2020-03-05 9:31:47	68,142113
18	10	7413KP09052	2020-03-05 9:35:36	71,544098
19	11	7413KP09050	2020-03-05 9:39:20	70,088875
20	12	7413KP09054	2020-03-05 9:53:13	69,986557
21	13	7413KP09055	2020-03-05 9:57:07	67,537399
22	14	7413KP09057	2020-03-05 10:00:53	72,876495
23	15	7413KP09057	2020-03-05 10:03:49	72,91523
24	16	7413KP09059	2020-03-05 10:05:34	68,114426
25	17	7413KP09058	2020-03-05 10:09:27	73,907242
26	18	7413KP09056	2020-03-05 10:13:14	68,668556
27	19	7413KP09061	2020-03-05 10:18:40	71,113106



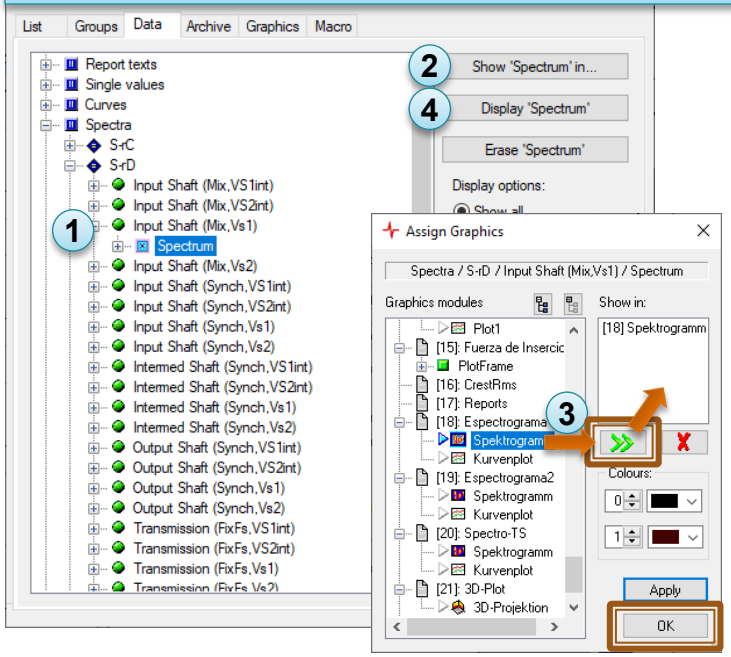


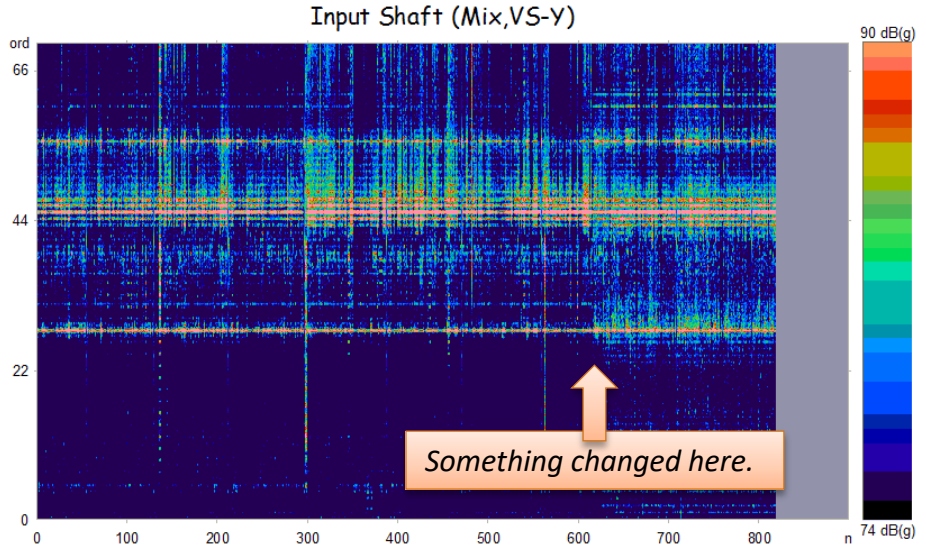
A note about the order position:
With Position=20, width=0.5 and multiple=3 you get the intervals [19.5,20.5];[39.5,40.5];[59.5,60.5]. Depending on the selected evaluation, you can have the maximum, the sum or other values calculated from these intervals.

Spectra Time Series

The “Spectra Time Series” display shows the spectra of all loaded measurements as a spectrogram graph. This can be used to detect overall changes or regular patterns in the noise characteristic.

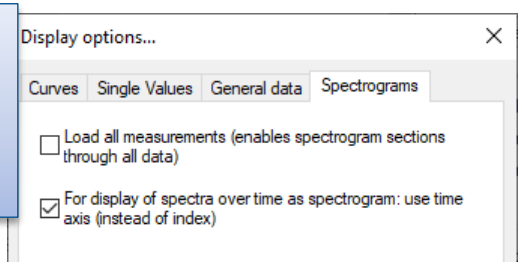
1. Select the according ‘Spectrum’ node in the data contents tree.
2. Press [Show ‘Spectrum’ in…] button
3. Assign a spectrogram graphics module.
4. Press [Display ‘Spectrogram’] button.
5. Open the according layout page. Right-click in the spectrogram to access and adjust scaling.





Some Presentation projects already have a Rapport (macro) for “Spectra Time Series” which can be used instead of manually assigning the graphics module (steps 1-4).

Right-click on the ‘Spectra’ root node in the contents tree to access the display options.
Go to the ‘Spectrogram’ tab and set this checkmark to get a time axis:

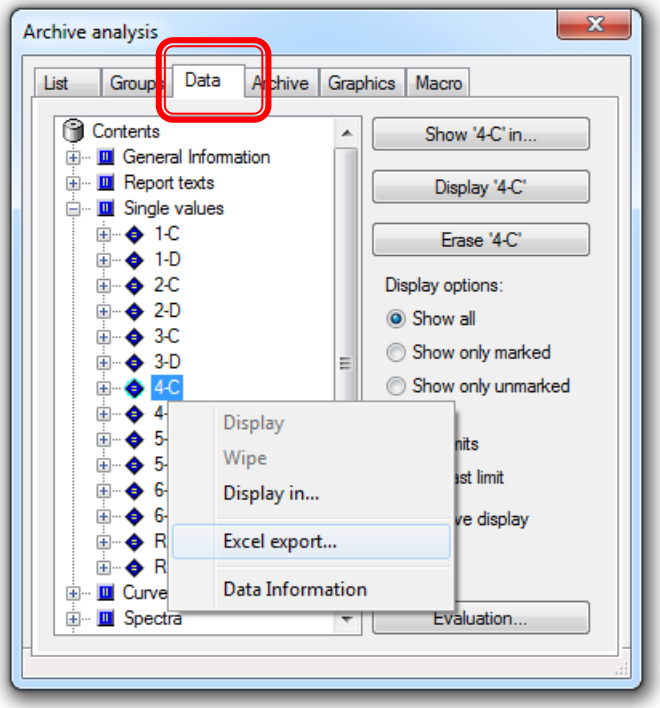


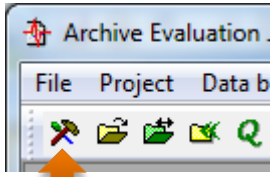
Exporting Data to Excel

Load the measurements from which you want to export data into Presentation.

If you want to export single values, you can proceed directly.
If you want to export curve data, you may have to display the curves in order to load the data into memory.

Open the Control window and switch to the “Data” tab:





Right-click onto the node you want to export.
You can select a base node like “Spectra” or “Single Values”, or a sub-node.
From the context menu, choose the command “Excel Export…”

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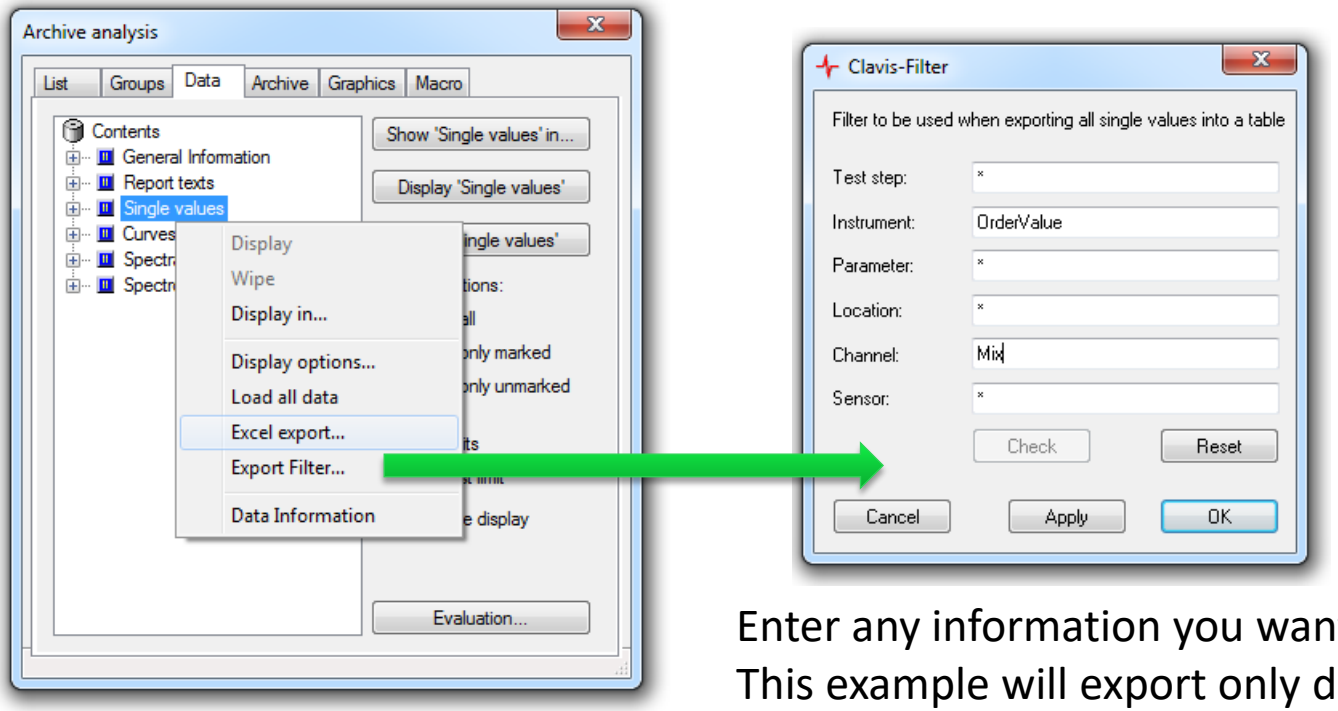
Setting Export Filters

The best way to control which data are exported is using the Export Filter.
Right-click on a base node like „Single Values“ and choose the command „Export Filter…“

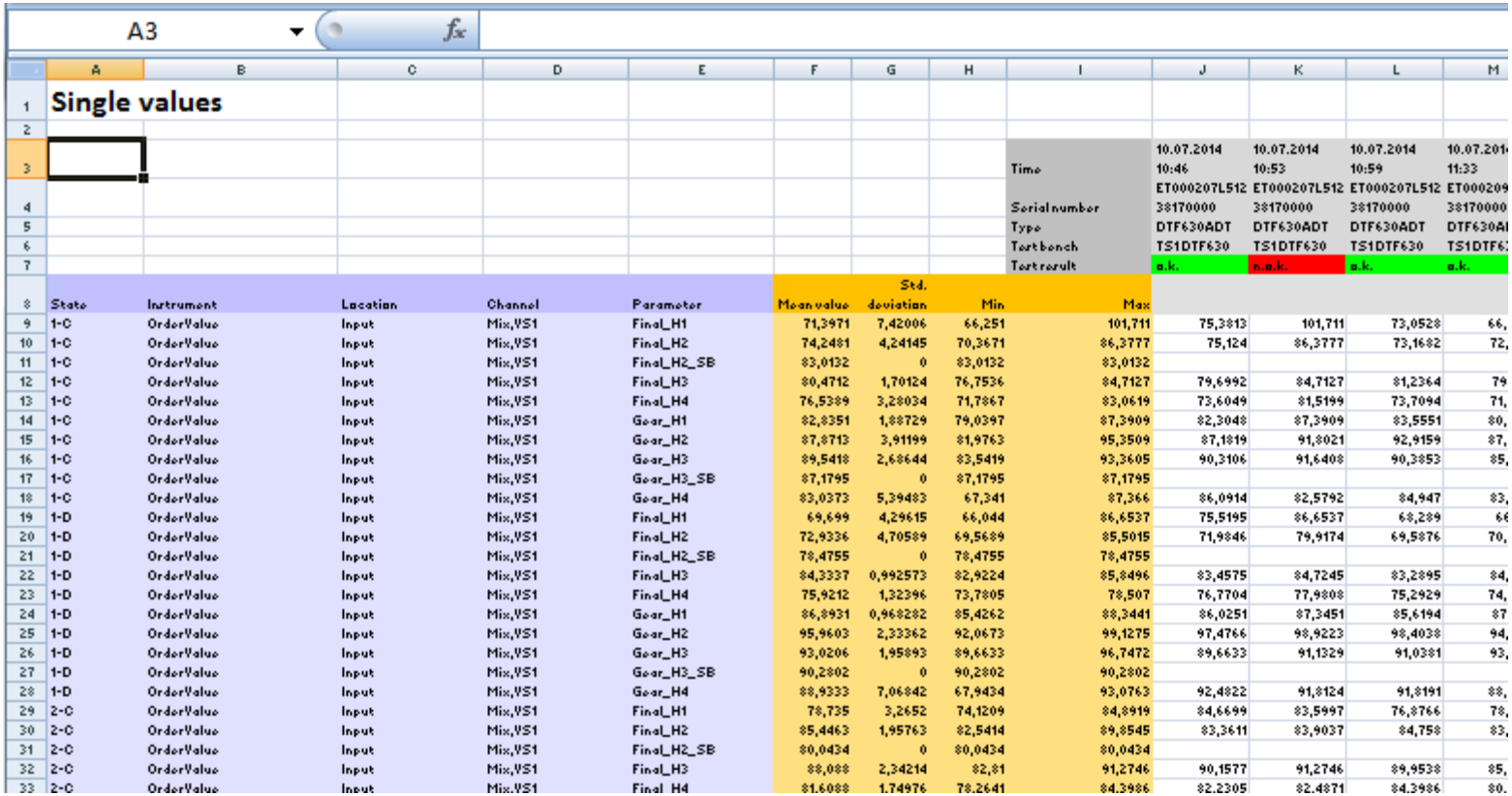


Enter any information you want to use as a filter. This example will export only data which have the instrument “OrderValue” *and* the channel “Mix”. Make sure not to mis-spell the names.

The export filter is used for all subsequent Excel exports until you change the filter or restart Presentation.

Export Results

When you execute the „Excel Export“ command, you will be prompted for a file name. The export has the file format html. These htm files can be opened directly with Excel:



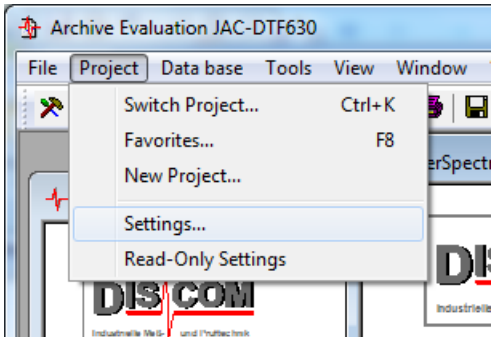
A3

Single values

								Time	10.07.2014 10:46	10.07.2014 10:53	10.07.2014 10:59	10.07.2014 11:33
								Serial number	ET000207L512 38170000	ET000207L512 38170000	ET000207L512 38170000	ET000209 38170000
								Type	DTF630ADT	DTF630ADT	DTF630ADT	DTF630A
								Test bench	TS1DTF630	TS1DTF630	TS1DTF630	TS1DTF6
								Test result	o.k.	n.o.k.	o.k.	o.k.
State	Instrument	Location	Channel	Parameter	Mean value	Std. deviation	Min	Max				
1-C	OrderValue	Input	Mix,VS1	Final_H1	71,3971	7,42006	66,251	101,711	75,3813	101,711	73,0528	66,
1-C	OrderValue	Input	Mix,VS1	Final_H2	74,2481	4,24145	70,3671	86,3777	75,124	86,3777	73,1682	72,
1-C	OrderValue	Input	Mix,VS1	Final_H2_SB	83,0132	0	83,0132	83,0132				
1-C	OrderValue	Input	Mix,VS1	Final_H3	80,4712	1,70124	76,7536	84,7127	79,6992	84,7127	81,2364	79
1-C	OrderValue	Input	Mix,VS1	Final_H4	76,5389	3,28034	71,7867	83,0619	73,6049	81,5199	73,7094	71,
1-C	OrderValue	Input	Mix,VS1	Gear_H1	82,8351	1,88729	79,0397	87,3909	82,3048	87,3909	83,5551	80,
1-C	OrderValue	Input	Mix,VS1	Gear_H2	87,8713	3,91199	81,9763	95,3509	87,1819	91,8021	92,9159	87,
1-C	OrderValue	Input	Mix,VS1	Gear_H3	89,5418	2,68644	83,5419	93,3605	90,3106	91,6408	90,3853	85,
1-C	OrderValue	Input	Mix,VS1	Gear_H3_SB	87,1795	0	87,1795	87,1795				
1-C	OrderValue	Input	Mix,VS1	Gear_H4	83,0373	5,39483	67,341	87,366	86,0914	82,5792	84,947	83,
1-D	OrderValue	Input	Mix,VS1	Final_H1	69,699	4,29615	66,044	86,6537	75,5195	86,6537	68,289	66
1-D	OrderValue	Input	Mix,VS1	Final_H2	72,9336	4,70589	69,5689	85,5015	71,9846	79,9174	69,5876	70,
1-D	OrderValue	Input	Mix,VS1	Final_H2_SB	78,4755	0	78,4755	78,4755				
1-D	OrderValue	Input	Mix,VS1	Final_H3	84,3337	0,992573	82,9224	85,8496	83,4575	84,7245	83,2895	84,
1-D	OrderValue	Input	Mix,VS1	Final_H4	75,9212	1,32396	73,7805	78,507	76,7704	77,9808	75,2929	74,
1-D	OrderValue	Input	Mix,VS1	Gear_H1	86,8931	0,968282	85,4262	88,3441	86,0251	87,3451	85,6194	87
1-D	OrderValue	Input	Mix,VS1	Gear_H2	95,9603	2,33362	92,0673	99,1275	97,4766	98,9223	98,4038	94,
1-D	OrderValue	Input	Mix,VS1	Gear_H3	93,0206	1,95893	89,6633	96,7472	89,6633	91,1329	91,0381	93,
1-D	OrderValue	Input	Mix,VS1	Gear_H3_SB	90,2802	0	90,2802	90,2802				
1-D	OrderValue	Input	Mix,VS1	Gear_H4	88,9333	7,06842	67,9434	93,0763	92,4822	91,8124	91,8191	88,
2-C	OrderValue	Input	Mix,VS1	Final_H1	78,735	3,2652	74,1209	84,8919	84,6699	83,5997	76,8766	78,
2-C	OrderValue	Input	Mix,VS1	Final_H2	85,4463	1,95763	82,5414	89,8545	83,3611	83,9037	84,758	83,
2-C	OrderValue	Input	Mix,VS1	Final_H2_SB	80,0434	0	80,0434	80,0434				
2-C	OrderValue	Input	Mix,VS1	Final_H3	88,088	2,34214	82,81	91,2746	90,1577	91,2746	89,9538	85,
2-C	OrderValue	Input	Mix,VS1	Final_H4	81,6088	1,74976	78,2641	84,3986	82,2305	82,4871	84,3986	80.

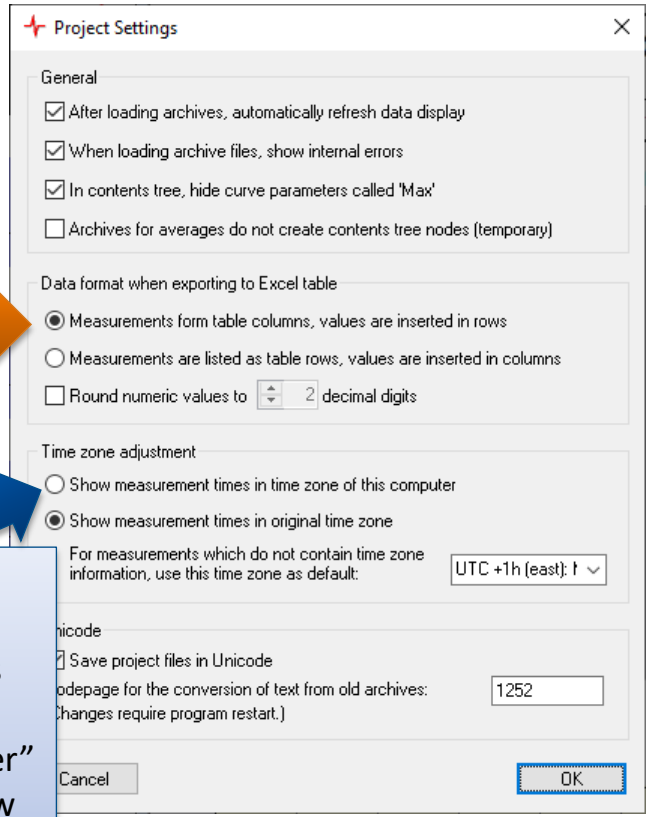
When exporting multiple spectra or curves, Presentation will create a separate file for each test step/rotor combination. The file name you choose will be used as the name of a folder where these files are placed. Presentation creates the folder if necessary.

Export Options



From the Project menu, choose „Settings…“

In the project settings, you can select whether to export measurements as rows or as columns, and you can specify a rounding to a number of digits.



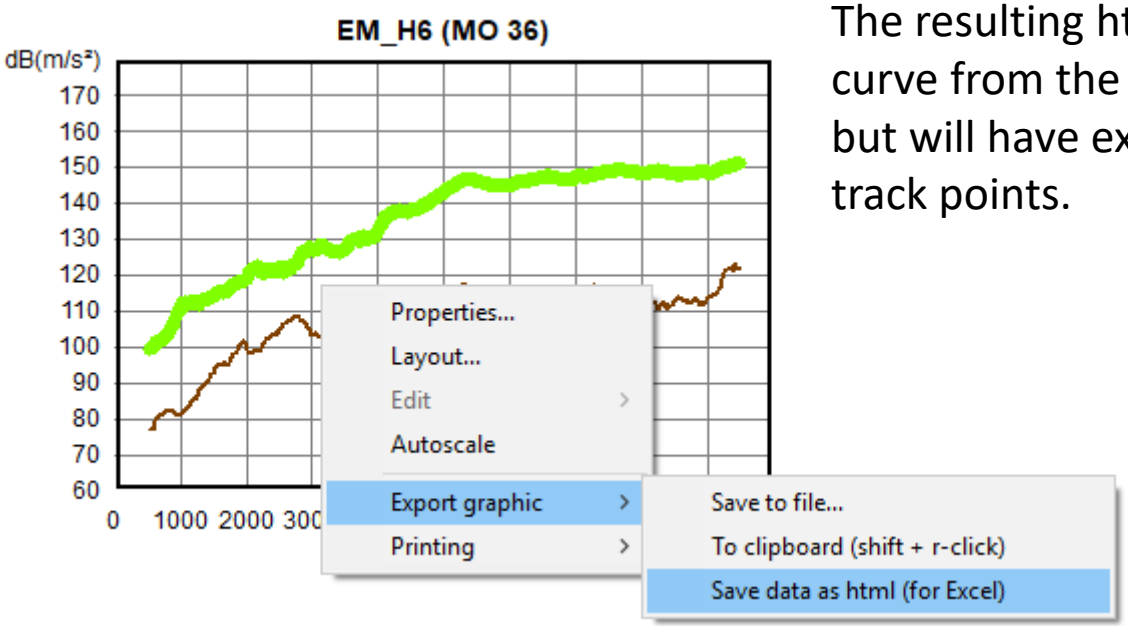
A remark about time zone adjustment:
Suppose, the test stand is in Detroit (UTC-5), your computer is in Paris (UTC+1), and the measurement was done in the Detroit morning.
“Show measurement times in time zone of this computer” will display a measurement time stamp of 13:30h, “Show in original time zone” will display 07:30h as measurement time stamp.

Exporting Tracks

When exporting tracks from the Data tab (as described on page 6), all tracks have to be adapted to use a common *x* axis (because the desired result is a single Excel table with a common *x* axis column).

Therefore, the data points in the exported table may differ from the original data points (= trigger steps).

If you need to export the original, unmodified data points, display the desired track in a graph, right-click inside the graph to access the context menu, and use the according export function from there:



The resulting html/Excel file will contain each curve from the graph as a separate section, but will have exactly and only the measured track points.