

## New functionality

- 1) Phi-TEC I systems are now supported on labCONSOL
- 2) The HLC editor has been added to labCONSOL. This custom editor is required for Phi-TEC systems. It allows adding/removing test can\* types and modifying heat loss compensation (HLC) values for each test can\* type. The HLC editor pops up at the start of an experiment and can also be found in the Calibration hub, under 'Select can type'. (see page 2)
- 3) TSu and Phi-TEC I plans quit through a cool down and/or a safe end step. Banner messages were added for additional safety during those steps (see page 3).
- 4) The default workspace for Phi-TEC I includes a list of relevant properties in Property Viewer. Default data export settings can be selected for each plan type; the export format is as is required for data analysis in iQ software. (see pages 3-5)

*\*also known as 'test cell'*

## Improvements

- a. labCONSOL installer now installs the software in C:\WINISO. This means there is no need to install labCONSOL for each user profile on the same PC.
- b. Values (beyond those entered in the Plan Configurator) can now be edited in TSu plans.
- c. The default workspace for TSu has been improved to include a list of relevant properties to be displayed in Property Viewer. The default data export settings now match the requirements for data analysis in iQ.
- d. The export file format (.iq or .csv) now defaults to the last one used.
- e. When starting an experiment from a plan, there is no longer the option to change the saving interval. This has been removed as it was not relevant to experiments run from a plan. The data save rate can still be changed in the plan, for each step. When logging is started without a plan, the option to change the saving interval remains.
- f. The option of not saving data has been added to plan steps. The option 'None' has been added to the existing options of 'Fixed' (data saved at the entered interval) and 'Auto' (calculated by the software based on a pre-set parameter).

## Bugs fixed

- iQ now displays comments and contents of the plan steps when the data is exported from labCONSOL.

## 1) HLC editor

The HLC editor will pop up when the Start Plan button is pressed.

The 'Select can type' window lists all the current test cans\* that have been calibrated on the system and their heat loss compensation values.

Select can type									
	Description	Quality Factor	Convection Factor	Convection Exponent	Conduction Factor	Radiation Factor	Max. Correction	Fixed Offset Correction	Max. Out
<input type="radio"/>	1-8 Stainless Steel and Has	1.00000	0.00018	0.70000	0.01500	0.50000	1000.00000	0.00000	12.00
<input type="radio"/>	1-4 Stainless Steel	1.00000	0.00018	0.70000	0.01600	0.20000	1000.00000	0.00000	12.00
<input type="radio"/>	1-4 Hastelloy	1.00000	0.00018	0.70000	0.01600	0.10000	1000.00000	0.00000	12.00
<input checked="" type="radio"/>	1-4 Glass	1.00000	0.00019	0.90000	0.01600	0.10000	1000.00000	0.00000	12.00
<input type="radio"/>	Type 4	1.00000	0.00018	0.70000	0.01500	0.50000	1000.00000	0.00000	12.00
<input type="radio"/>	Max	1.00000	0.00019	0.90000	0.01600	0.10000	1000.00000	0.00000	12.00

EDIT CANCEL OK

To select the test can\* to be used for the experiment, click on the relevant row. The selected test can\* will be highlighted. Click OK.

To modify the values for a test can\*, add or remove a test can\*, select 'EDIT' at the bottom of the HLC editor.

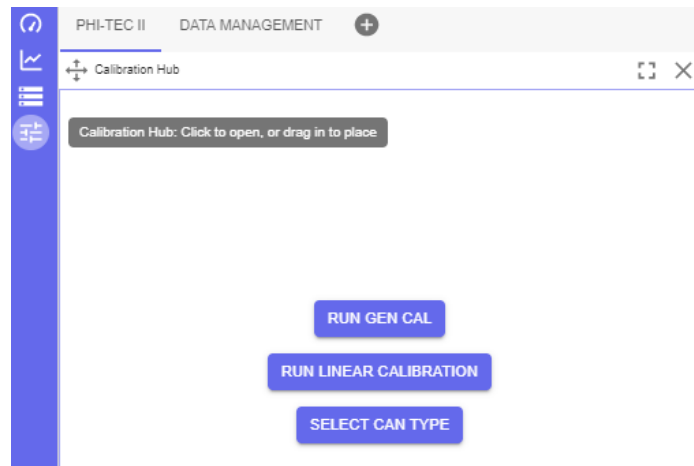
Edit HLC parameters									
	Description	Quality Factor	Convection Factor	Convection Exponent	Conduction Factor	Radiation Factor	Max. Correction	Fixed Offset Correction	Max. Out
<input type="checkbox"/>	1-8 Stainless Steel and Has	1.00000	0.00018	0.70000	0.01500	0.50000	1000.00000	0.00000	12.00
<input type="checkbox"/>	1-4 Stainless Steel	1.00000	0.00018	0.70000	0.01600	0.20000	1000.00000	0.00000	12.00
<input type="checkbox"/>	1-4 Hastelloy	1.00000	0.00018	0.70000	0.01600	0.10000	1000.00000	0.00000	12.00
<input type="checkbox"/>	1-4 Glass	1.00000	0.00019	0.90000	0.01600	0.10000	1000.00000	0.00000	12.00
<input type="checkbox"/>	Type 4	1.00000	0.00018	0.70000	0.01500	0.50000	1000.00000	0.00000	12.00
<input type="checkbox"/>	Max	1.00000	0.00019	0.90000	0.01600	0.10000	1000.00000	0.00000	12.00

+ ADD CANCEL SAVE

The list is now editable and titled 'Edit HLC parameters'.

Make the relevant changes and click 'SAVE'.

The HLC editor can also be accessed at any time (including while an experiment is running), by opening the 'Calibration hub' app.

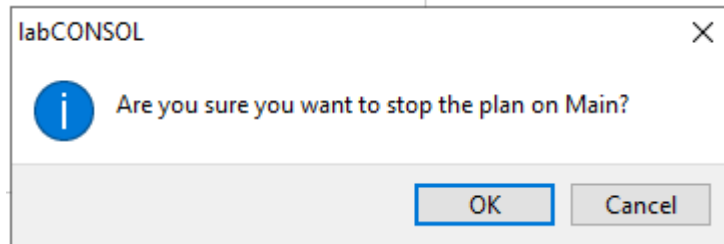


Clicking on the 'Select can type' button will open the HLC editor as described previously.

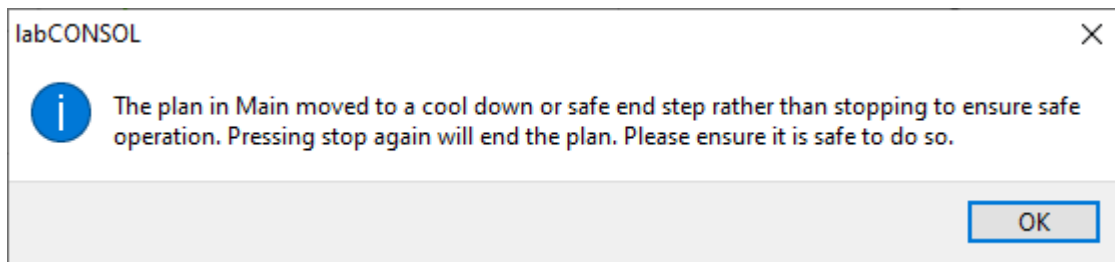
## 2) Plans quit through a cool down or safe end step

For safety, TSu and Phi-TEC I plans will quit through a cool down and/or safe end step.

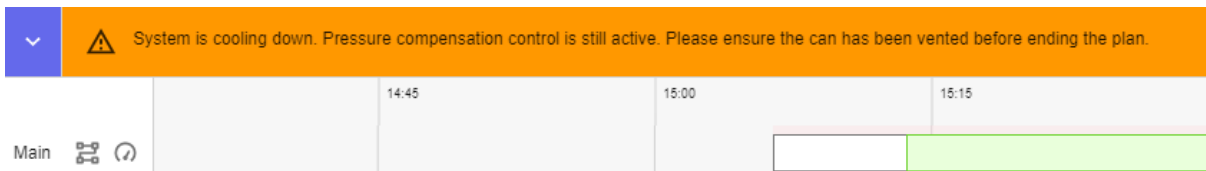
When pressing the Stop button, this message will pop up:



Pressing OK will result in another dialogue box that can be cleared by pressing OK:



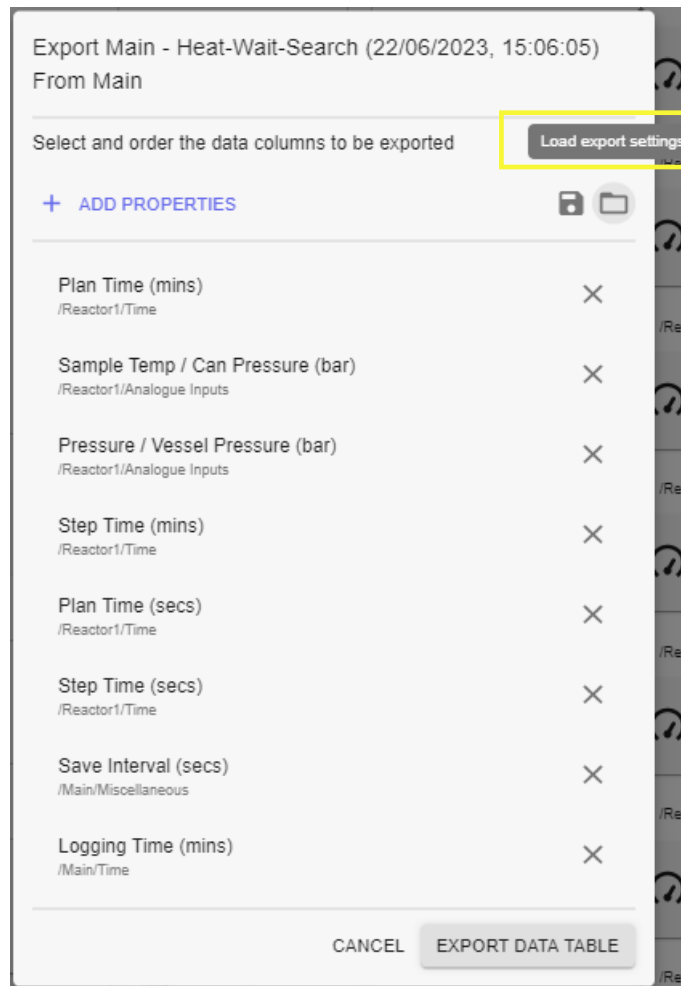
A banner message will however remain for the whole duration of the step, to remind the user about handling the system safely (the message will depend on the system used):



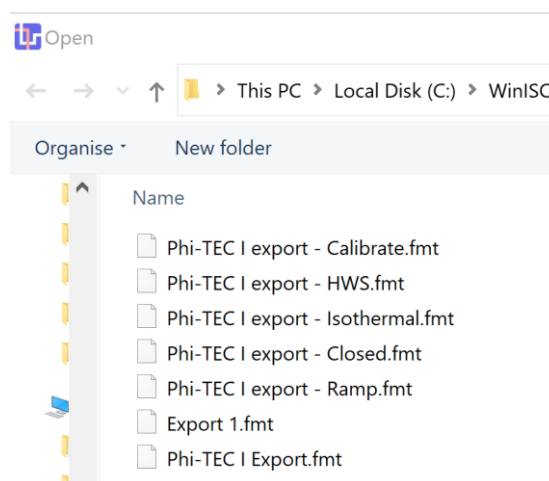
## 3) Default export settings

For TSu and Phi-TEC systems, it is important to select the right list of properties in the right order for analysis of the data in iQ software.

When exporting the data, select the folder icon 'Load export settings' to open the default options for the system:





Select the relevant export settings from the open folder:



For example, for a 'Heat-Wait-Search plan' on Phi-TEC I, select 'Phi-TEC I export – HWS' and click 'Open'. The list of properties to be exported will appear:

Export Main - Heat-Wait-Search (07/08/2023, 16:07:39)  
From Main

Select and order the data columns to be exported

+ ADD PROPERTIES  

Plan Time (secs) <small>/Reactor1/Time</small>	×
Can Temp / Can Temp (°C) <small>/Reactor1/Analogue Inputs</small>	×
Can Pressure / Can Pressure (bar) <small>/Reactor1/Analogue Inputs</small>	×
Phitec / Temperature Top (°C) <small>/Reactor1/Devices/Phitec</small>	×
Phitec / Temperature Bottom (°C) <small>/Reactor1/Devices/Phitec</small>	×
Plan Time (mins) <small>/Reactor1/Time</small>	×
Phitec / Phitec Set Point (°C) <small>/Reactor1/Devices/Phitec</small>	×
Phitec / Power Level Top (%) <small>/Reactor1/Devices/Phitec</small>	×
Phitec / Power Level Bottom (%) <small>/Reactor1/Devices/Phitec</small>	×
Can Temp / ROC (°C/min) <small>/Reactor1/Miscellaneous</small>	×

CANCEL EXPORT DATA TABLE

Click 'Export data table'.