

# You're only **five steps away** from total validation...



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#### TQ Soft and IP Reports Installation and Setup

#### IP Reports

- Insert the IPReports CD, and when prompted select 'Open Folder to View Files'. Right click gs.exe and select 'Run as Administrator' to install. Follow instructions in the setup wizard; default settings can be used.
- Right click IPReports\_1.4\_Build0008\_Install.exe and select "Run as Administrator" The installation procedure is fairly standard with the exception of a printer installation screen near the end; it will display a screen with a button titled "Setup Now - Click to start printer setup." This printer installation should be skipped and performed later.
- 3. Insert the **red dongle** into a USB socket on your PC. If the **dongle indicator LED** doesn't illuminate then locate and right-click on C:\ISL\IPReports\Tools\USB\_Dongle\setupdrv.exe and select "Run as Administrator" to install.
- 4. **IMPORTANT! Right click** the IPReports logo on the desktop, then choose '**Run as Administrator**'. This will lock down the correct settings. Exit IPReports
- 5. Right click **IPReports\_1.4\_Build0015\_Update.exe** on the CD and select **"Run as Administrator"** to install.
- 6. Run **IPReports** once then exit.
- 7. Make sure that you have a .pdf reader on your computer, such as **'Adobe Reader'** that can be downloaded free from the **'Adobe'** website.
- Using windows explorer, locate and right click
   C:\ISL\IPReports\Tools\IPReportWriterSetup.exe and select "Run as Administrator". This installs a PDF printer that uses the ghostscript driver installed in step 1.
- Open IPReports. Select edit->preferences then choose the IPReportWriter printer. Click 'Save' and then 'Back'

#### TQ Soft

- 1. Insert the TQ Soft CD and follow the installation wizard, when prompted selecting C:/Logsys as the install directory. Insert the TQSoft dongle into a free USB slot.
- 2. If the Dongle does not light up then locate the Dongle Driver in **C:/logsys/Dongle Driver** and run the setup

#### Fluke NetDAQ

- 1. After install finishes, explore the TQSoft CD through My Computer, open **fluke2680 Support** and then double click **NTool32\_DLL** and run through setup wizard.
- Change IP Address in Control Panel, Network and Sharing Centre, Change Adapter Settings, right click on Local Area Network, properties, highlight Internet Protocol Version 4 (IPV4), properties, change IP to: 198.178.246.100, and Subnet Mask to: 255.255.255.0, press OK and close out.

Serial Drivers (if using the Isopharm USB to Serial Converter) and general settings

- 1. Double click the CDM20824\_Setup application to install the serial to USB convertor drivers
- 2. Go to Start>Control Panel>Device Manager>Ports to see which ports Windows has allocated to the USB to Serial adapter. *Note* TQSoft requires these ports to be numbered 16 or lower.
- 3. Go back into **Control Panel** and then select **Hardware and Sound, Power Options, Change plan settings** on current plan, and set both **Turn off the Display** and **Put the Computer to Sleep** dropdowns to **Never.** This will prevent the Windows going into hibernation during a test cycle.

TQSoft and IPReports are now ready to use. If you have any queries on the installation, please contact Isopharm at 01709 525256 and choose the option for TQSoft/IPReports technical support. *Please note the user will also require full read/write access to the following folders on the C:\ drive as well as all subfolders and files:* 

#### C:/Logsys

C:/ISL

They will also require full use of any USB slots available

#### Creating a New User in TQSoft

- Identify and double click on the TQSOFT icon on the computer screen.
- Go to the Setup menu in TQSoft and select 'Edit Security'

Change Password Date Samalia	25					244	25	28	. 0	ye Hoto
Audit Toul + Company Name and General Setup Options		QuetDroke	Serosa	Detailing	jepuis Display	Line Sage	Test Hokes	Hadak: Tanta	Bepost Forms	0
lat Churriser Records Fait Churrent Configuration Edit Text Specifications Default Chur Configure Default Chur Loting Configure Notes State			TYTE							
ercal										
ntal New Saturated Steam Tables Litt Program		Í	Portable Versiox 6.0.4	Isopharm Data Acquisition Sy (294-July2017)	stava					

• Type in each required User name and after each name is entered, press the Add to List Button.

Dperator	Hardware	Setup	Test Spec	Tests	Beport Forms	Add Signature
		_	New			
we.brigh	ton		Name	John Smith		Add to Lis
			dave.brightor De-Activate		enew Passwor	rd
			Password Co	ntrols		
			Password and Password Age	I ID Min Lengt e Limit (days):	h: 5 30	·
			inacivity Lime	out	100	.00.00

You will be asked if the new user should be given Administrator, Manager or Operator security status. This affects which TQSoft settings the user can change, but can be amended later if required.
The Audit Trail Reason for Change window will appear (Type in a reason if you wish) then press OK.

• The New user is added to the Left Hand Side.

• Highlight the new User. The Password Age Limit option forces the user to reset their password after the number of days set. If you do not wish to use this feature a maximum of 9999 can be entered. Inactivity Timeout is turned off (00:00:00) by default. If TQSoft does not detect any button presses or key presses for this amount of time, the password window will appear, and no other operations will be allowed until the password, or a new ID and password are correctly entered. If a test is running,

TQSoft will run as normal, but a password must be entered to carry on after the test is completed. • Highlight on the User on the left hand side. Then click on to Hardware/Setup/Test Spec/Tests to select what the user highlighted can or cannot do in TQSoft. For example if you do not want the user to have access to Edit Security (the area of the Software we are in now), un-tick the feature Edit Security in the Setup Section • Note To allow stage lines to be inserted while running a cycle, the 'Stages' 'Real Time' option needs to be selected.

Operator	Hardware	Setup	Test Spec	Tests	Report Forms	Add Signature
ve.brighton	nging bit Trail bort ails on Records for Test nnel Configuration	य य य य य । ४ म य य	Data Listing Test <u>N</u> otes Export to ASCII Format C Analyse Test -Calc and Limits Report Crop Data	SV file ID	<ul> <li>Historic Tests</li> <li>✓ Configure</li> <li>✓ Data Management</li> <li>✓ Archiving</li> <li>✓ View</li> <li>✓ Add Signature</li> <li>✓ Beport Forms</li> </ul>	
Defective     Defective     Chart Dis	e Probes					

• Repeat this process for all users. Once completed press OK in the bottom right hand corner. To complete the New User setup, select 'Setup' then 'Enter Password'

Setup Logger Thermal Bath Temperature Ref Data	Management Current	Test (:25:2) Help
Enter password		
Change Password	103	
Edit Security		
Audit Trail	<u>I</u> est Details	Chart Display
Company Name and General Setup Options		JL
Test Equipment		
Edit Chamber Records		
Edit Channel Configuration		
Edit Test Specifications		
Default Chart Configure		
Default Data Listing Configure		
Printer Setup		
email		
email View Saturated Steam Tables		

• A Login box appears with a New User box. Select 'New User'

	LOGIN	
	Press ENTER to finish an entry, or	ESC to go back.
ID		New User
Canc	el	

• Click the dropdown, and a list of new users will appear. Select the correct account and press 'Enter'

•	
John Smith	
	John Smith

- Type in a new ID (username) and press 'Enter'. Note that this is case sensitive.
- Repeat your ID to Confirm and press 'Enter'
- Type in a Password (again case sensitive) and press 'Enter'
- Repeat your Password to Confirm and press 'Enter'
- Once the 'Password Valid Until' date appears press 'Enter' again.
- Now to go Setup and Edit Security again
- Highlight the 'Demo' user and then press 'De-activate'. Then Press OK.
- You can renew you Password at any time, by highlighting on the name and use the Renew Password tick box and press OK. You can also deactivate any user at any time.
- Close down TQSoft and re-open it. The login box will reappear.
- Type in your ID, then your Password to open TQSoft.

#### **Company Name and General Setup Options**

Go to Set up and press on General Setup Options
 Setup Logger Thermal Bath Temperature Ref

Enter password
Change Password
Edit Security
Audit Trail
Company Name and General Setup Options
Test Equipment
Edit Chamber Records
Edit Channel Configuration
Edit Test Specifications
Default Chart Configure
Default Data Listing Configure
Printer Setup
email
View Saturated Steam Tables
Exit Program

• Type in the Company Name and this name will be printed out at the top of all the TQSoft documentation such as Charts, Data Listings etc.

• Type in the Computer Name in the System ID, so the Audit Trail knows which PC has been used for each application completed.

#### • Select the date Format below.

🕄 Setup		×
Company name:	Isopharm	
System identifier:	DBI	
🗆 Audit Trail Arch	iiving	
✓ Store Cal, Cal c	check reports and Audit records with each Test	
Signature at en	d Test and Calibration	
🔽 Show calibratio	on summary report for tests	
I Show calibration	on resuts tables in calibration reports	
Show I-Calc set	tups in Test Setup report	
Date Format		
European (d)	id/mm/yyyy)	
C US (mm/dd/	(יפיניע)	
C Asian (yyyy/	mm/dd)	
Cancel		<u>o</u> k

• If the option Store Cal, Cal Check, and Audit records with Test record in Company Name and General Setup Options is on, then an audit database is created and managed for each test record along with the other files for each test record. In this case the option Audit Trail on the Current Test drop down menu can be used to view and manage these audit trails. It also means that TQSoft will remember which Calibration and Calibration Check record is associated with each test when you backup the data or complete a Report.

• Audit Trail Archiving is covered in the Advanced Course.

#### **Test Equipment**

Go to Setup and Test Equipment
 Setup Logger Thermal Bath Temperature Ref

Enter password
Change Password
Edit Security
Audit Trail
Company Name and General Setup Options
Test Equipment
Edit Chamber Records
Edit Channel Configuration
Edit Test Specifications
Default Chart Configure
Default Data Listing Configure
Printer Setup
email
View Saturated Steam Tables
Exit Program

• This area allows you to fill in details of all test equipment being used – multiple types can be recorded, and the correct one selected at the start of each test.

• Highlight 'Logger/Recorder' and select 'New' at the bottom right of the box (or right click and select)



• A new datalogger called 'New1' will appear on the left. Highlight this, and the equipment details area will show on the right. Complete this with the correct information, and then select 'Save Changes'

3 Test Equipment	
Test Equipment Cogger / Recorder Cogger / Recor	Logger / Recorder         Serial No.         Description         Manufacturer         Fluke         Model         2640A         Test House         Calibration date         Renew Date         Uncertaintly         Fissware         Save changes
	Qelete Select Quit

• 'New1' will now be replaced by the serial number and description of the new logger. Highlight this, right click and choose 'Select' to mark this as the default datalogger for future tests.

Test Equipment Uogger / Recorder	2)
Temp. Ref. Unit Thermal Bath	Audit Calibrations Audit Tests Delete
	Select
	Deselect

• Continue this process for all relevant equipment, then Quit

## Chamber Records (formerly 'Machine Records') • Go to Setup and Edit Chamber Records.

21 T	QS Data Acquisition System
Setu	D Logger Thermal Bath Temperature Ref
	Enter password
	Change Password
	Edit Security
	Audit Trail
	Company Name and General Setup Options
	Test Equipment
	Edit Chamber Records
	Edit Channel Configuration
	Edit Test Specifications
	Default Chart Configure
	Default Data Listing Configure
	Printer Setup
	email
	View Saturated Steam Tables
	Exit Program

• A box showing current sites will appear. Either select 'Chamber' then 'New' at the bottom right, or right click 'Chamber' and select 'New'

Chamber	
Chamber	
Europein Manufat	
Comple Hospital	
	New
	Bew

• You will be asked to enter a reference number for the new chamber. The default will start AC000xxx. Isopharm would recommend changing this to either the serial number or some other recognisable reference, as this reference will be used to refer to the chamber later.

Enter Reference	
Each chamber needs a unique reference the hard disk for data storage.	e. This is used as a folder name on
If you are using this logging system as po co-ordinate the chamber folder name wit visit the same chamber they should both	art of a team it is important to h the other users, i.e. if two engineers use the same unique folder name.
You would normally use the Chamber Se but you can use the default folder name s	rial Number or an abbreviation of it. shown below.
AC000002	
Cancel	<u>D</u> K

• Enter the details for the chamber. The site name, when entered, will be used to group chambers on the left side of the screen. Note that the Ref Code is greyed out and cannot be changed. Once this has been done, select 'Save Changes'

Chamber	ID Schedules Details Custom Sensors				
-	Site name;				
Example Hospital	New Site				
New Site	Serial number: Ref Code:				
	123456A AC00002				
	Name:				
	Autoclave 1				
	Plant reference: Room number:				
	ABCD				
	Authority:				
	The NHS Hospital Trust				
	Department:				
	CSSD				
	Delete New Save ch				

• If you have multiple chambers at the same site, you can highlight a chamber record that has already been entered, then select 'New'. This allows common details to be pre-filled for the new chamber.

#### **Channel Configuration**

• Each channel can be set to a wide range of input types depending on the application. The most common of these is Type T thermocouple.

Select Setup, then Edit Channel Configuration

2 TO	QS Data	Acquisition Sys	tem	
Setup	Logger	Thermal Bath	Temperature Ref	Data N
	Enter passw	ord		
	Change Pas	sword		
	Edit Security	/		
	Audit Trail			•
	Company N	lame and Genera	al Setup Options	
	Test Equipn	nent		
	Edit Chamb	er Records		
	Edit Channe	l Configuration		
	Edit Test Sp	ecifications		
	Default Cha	rt Configure		
	Default Data	Listing Configu	ire	
	Printer Setu	р		
	email			
	View Satura	ted Steam Table	s	
	Exit Program	n		

• TQSoft v6 can support up to 128 channels, but most dataloggers have either 16 or 20. Each channel that is to be used needs to be configured correctly.

• Select a Channel Configuration and give it a name of your choice. Universal Channel Configuration is the default.

• Assuming the input will be from a thermocouple, select 'Input T (0.01)' or 'Type T range 10mV'. Ensure the units (e.g. °C) and decimal places are correct for your application. It is also possible to change the Label (displayed on the chart), location and chart colour at this point. Once this is complete, press 'OK'

Change the name         Name:       Universal Channel Configuration         File Name       Chan0001.dat         Channel details       Channel number         Channel number       1       Labet         Channel Jype:       TypeT range: 10mV         Units:       C       _         Decimal places:       2         Qhart Colour:       Yellow       _         Lgcation:       Load	elect char	nnel file:	Univ	ersal Chan	nel Confi	guration	
Name: Universal Channel Configuration File Name Chan0001.dat Channel details Channel number 1 Labet Tmp1 Channel Type: Type Transc 10mV Units: "C Decimal places: 2 Chant Colour: Yellow Lgcation: Load	hange th	e name					
File Name Chan0001.dat Channel details Channel number 1 Labet Tmp1 Channel Type: Type Transe 10mV Units: 1°C  Decimal places: 2 Dat Colour: Yellow  Lgcation: Load	lame:	Unive	rsal Char	nel Config	uration		
Channel details Channel number       Image:     Image: <t< th=""><th>ile Name</th><th>Chan</th><th>0001.dat</th><th></th><th></th><th></th><th></th></t<>	ile Name	Chan	0001.dat				
Channel number 1 Labet Tmp1 Channel Type: Type T range: 10mV Units: TC V Decimal places: 2 Chant Colour: Yellow V Load	hannel d	etails					
Channel number 1 Labet Tmp1 Channel Type: Type T. tange: 10mW Units: TC V Decimal places: 2 Dhart Colour: Yellow V Lgcation: Load	_			1.1.1	1.0		
Channel <u>Type:</u> Type:     Type: 10mV       Units:     1C       Decimal places:     2       Datt Colour:     Yellow       Lgcation:     Load	Jhannel nu	mber	11	Label	Im	p1	
Channel Type: Type Transe: 10mV Units: "C • Decimal places: 2 Chart Colour: Yellow • Load							
Units: TC  Qecimal places: 2 Qhart Colour: Yellow  Load	Channel Iy	pe:	Type T	range: 10m	/		
Decimal places: 2 Chart Colour: Yellow Load	Inits:		°C	*			
Dhart Colour: Yellow 💌	Decimal pla	ces:	2		_		
Load	Chart Colou	r.	Yellow	*			
	gcation		Load	110			_
					- 1		

• If the Channel Type is changed, you will be asked if you wish to copy this configuration to all other probes with a higher number. Select Yes if all the thermocouples will be of the same type and you wish to do so

- Repeat for all other temperature channels by using the left and right arrows at the bottom
- To set up Pressure go to the last channel on your Datalogger (For Agilent is would be Channel 16, For Fluke it would be Channel 20).
- Select the correct channel Type (for Agilent it would be +/-10V, for Fluke it would be 3V Range.

• Select the units required, and Decimal Places (this should be 0 if mB or mBA is used, 3 if Bar or BA is used or 2 if KPa is used) and the chart colour of your choice. Press OK.

Select char	nnel file	Universal Channel Configuration	1
Name: File Name	Unive	ersal Channel Configuration	
Channel d	letails –		
Channel Iv Units: Decimal pla Chart Colou Location:	pe: ices: r.	INPUT_T(0.1) INPUT_S0mV INPUT_300mV INPUT_4bc20mA-100_0hm_Shunt INPUT_T(0.1) INPUT_T(0.01) INPUT_K INPUT_L	

• *Note* You can create other devices such as Humidity etc. in exactly the same method as the Pressure Channel by typing in the Units of your choice.

#### **Test Specifications (Basic)**

• Go to Setup and Edit Test Specifications.

Select Name		
Select a test spec:		
<ul> <li>Test Specification</li> <li>Sterilizing te</li> <li>Disinfection</li> </ul>	nperature temperature	

• A list of all the Test Specifications appear, divided into Sterilising and Disinfection depending on the type of test. To view or edit an existing Test Specification highlight it and click next or right click and select 'edit'

• To create a new Test Specification, press New. *Note* if you want to create a new Test Specification that is very similar to an existing template (e.g. a 2nd Test Specification which is identical to the one already created, except the Probe locations are in different positions), you can copy the existing template, and then modify the new one. For example, if you want to use the "Porous Load 134C 3 probes' Test Specification as the basis for the

new one, highlight it on the list, then press new. A message will then appear asking if you wish to use this template as the basis for a new one.

	Porous Load 121C 3 Probes Full Load Porous Load 121C 3 Probes Small Load	^
	Porous Load 121C 7 Probes	
	Porous Load 134C 12 Probes Chamber Wall	
	Porous Load 134C 3 Probes Full Load	
	Porous Load 134C 3 Probes Small Load	
	Porous Load 134C 7 Probes	
		83
(?	Do you want to use Porous Load 134C 3 Probes Full Load as a basis for the new one?	or

• New Test Specifications are given a default name, for instance SY0022.pa2. Highlight this test, then right click and select 'Edit'

Selecta	test spec:			
	Porous Loa	ad 134C 7 Set	Hudd. Tube.	*
	Sec Lab 10	00 Freesteami	ng Auto Control	
	Sec Lab 11	5C Fluids Aut	o Control	
	Sec Lab 12	21C Fluids/Bijd	oux Baskets Auto Contr	rol
	Sec Lab 12	21C Full Load I	Fluids Yearly	
	Sec Lab 12	21C Glassware	e Auto Control Test	
	Sec Lab 12	21C Simplified	PRQ Fluids Quarterly	
	Sec Lab 12	26C Plastic/Mi	xed Discard Auto Cont	rol
	Sec Lab 12	26C PRQ Mixe	d Discard Yearly	
	Sec Lab 12	26C Small Loa	d Mixed Dis Quarterly	-
	Sec Lab 12	26C Small Loa	d Plastic Disc Yearly	=
	SY0022 pe	2		-
÷	Disinfection ter	New		-
-		Edit		
< Br	ack		Delete	Next >

• The General area of the Test Specification allows you to edit a range of basic functions.

General	Calculations	Lethality	Probes	Stages	I-calc List	I-calc Specs	Custom
Name: Femperature un Pressure units Scan Interval (s Estimated test d Edit Notes/Rep Calibration File:	its <sup>1</sup> C BA ecs) 1 uration: 00:0 ort file for this Test:	022.pa2	Version: Date of last re	vision:	enlizing temperatu 14.0 Deg. Use 24 hour cloc Stage Analysis tomatic Settin Continuous Moni Start new file at r	s re 💽 k gs storing nidnight	
Channel Configu Universal Chan	uration File: mel Configuration			↓ Log	o stop logging att g off channel g off temperature		Dea

• Name is used to identify the test specification and should be changed to something easily recognisable.

• **Temperature Units** and **Pressure Units** are specified for each test, but should match the Channel Configuration.

• The scan interval is used to set the scan rate of the datalogger. It will be constant

throughout the test. This should usually be set to 1 second. The amount of data shown in the data list can be modified elsewhere.

• Estimated Test duration is used only to size the chart for real time monitoring before the test has started. (It resizes the chart automatically for you once the test is complete regardless of the number entered here).

• Version and date of revision is a means of tracking modifications to test specifications.

• The **thermocouple file** specifies which set of calibration values will be activated and used when the test is started (see advanced course). This will usually be Calibration Set 1 if you have a single set of thermocouples calibrated.

• The **channel configuration** file is the channel configuration that will be loaded and used once the test is started. Select the channel configuration file before selecting probes.

• Sterilising/Disinfection/Target temperature sorts the Test Specifications on the first screen. If the box below marked 'Stage Analysis' is ticked, TQSoft will also automatically insert the correct Start and End of stage markers when all probes are above the required temperature.

Test Specificati	on SY0022.pa2						
General	Calculations	Lethality	Probes	Stages	I-calc List	I-calc Specs	Custom
Name: Temperature un Pressure units Scan Interval (s Estimated test d Edit Notes/Rep Calibration File:	its C BA ecs) 1 Juration: 00:0 ort file for this Test:	022.pa2	Version: Pate of last re-		Analysis Settings Sterilizing temperature 34.0 Deg. Use 24 hour cloc 5 Stage Analysis Automatic Setting Continuous Monif Start new file at n	s re v k gs coring vidnight	
[Calibration Set	1			Т A	uto stop logging aft	er:	dd:hh:mm
Universal Chan	uration File: inel Configuration			• b	og off channel og off temperature		Deg.
<u>C</u> ancel							QK

• The **Use 24 hour clock** option controls the format of time in the test record. If checked, time will be stored as actual time of day, if unchecked time will be stored as 00:00:00 at the start of the test.

• Auto stop logging after allows you to automatically switch off logging a set time after a test has started. (NB Having this checked allows the **continuous monitoring** check box to be used. This will have the effect that TQSoft will automatically re-start logging with the next incremental test number available. Having **continuous monitoring** checked allows the **start new file at midnight** option to be used.)

• Log off channel and log off temperature can be used to switch off logging when a specified channel has exceeded and then drops below the specified value. (For Fluid load type of cycles only- do NOT use on Porous Load cycles).

• The Data Listing button allows you to set parameters for the data listing

General	Calculations	Lethality	Probes	Stages	I-calc List	I-calc Specs	Custom
Name: Temperature ur Pressure units Scan Interval (s Estimated test o	nits °C BA ecs) 1 duration: 00:0	022.pa2	Version: Date of last rev		nalysis Settings terilizing temperatur 34.0 Deg. Use 24 hour cloch Stage Analysis	e 🔽	
dit Notes/Hep	for the for this 1 est:		-2		utomatic Setting Continuous Monit	<b>js</b> oring	
Calibration File:	1				Start new file at m	idnight	
Calibration Set	uration File:			AL	to stop logging afte	sr.	dd:hh:mm
					g or channel		

• Use Locations for Column headings is generally not ticked. It would say for example Drain instead of Tmp1 depending on the settings in the Channel Configuration

- Print Stage Information should be ticked if you wish to see stage data in the Data Listing
- Landscape should be used if more than 13 columns are used.

#### • The Chart button allows you to set parameters for the Chart display

rest specification	on SY0022.pa2						
General	Calculations	Lethality	Probes	Stages	I-calc List	I-calc Specs	Custom
Name: Temperature uni Pressure units Scan Interval (si Estimated test d Edit Notes/Rep	its °C BA ecs) 1 Juration: 00:0 ort file for this Test:	022.pa2	Version: Date of last rev	Ar St II3 Au Au	alysis Settings enlizing temperatur 14.0 Deg. Use 24 hour clock Stage Analysis tomatic Setting	k gs	
Calibration File:	1		Circ		Start new file at m	oring idnight	- dd blemm
	ration File:			Lo	o stop logging are to off channel		GUINTINN

• To change the unit of the Chart select the units you want. For example if the temperature is in °C, then select these units and then enter the Maximum and Minimum Temperature Values required for the temperature axis

• If non-standard units are required, for example Humidity, you can type RH% into the units and then add your scale and this will be entered onto your chart (on the right hand side)

• The Probes area allows you to specify a location for each probe.

General	Calculations	Lethality	Probes	Stages	I-calc List	I-calc Specs	Custom
No. Label	Location						
1 Tmp1	Drain						
2 Tmp2	Test Pack					0.1	
3 Tmp3	TopSheet					Sele	ct Probes
16 Press	Pressure						
							anifan
							osidon
a							<b></b>
Cancel							<u>0</u> K
Click on Se	elect Probes a	nd select the	channe	ls requir	ed by check	ing the box,	then press
0022.pa2							
▼ [Tmp1]	Tmp11	Tmp21	Г (Г	Tmp31	T Tmp4	11	
▼ Tmp2	Tmp12	Tmp22	2	Tmp32	T Tmp4	12	
▼ Tmp3	Tmp13		в	Tmp33		13	
Tmp4	Tmp14	T Tmp24	Г	Tmp34	T Imp4	14	
Tmp5	Tmp15	T Tmp25	5	Tmp35		15	
	Press			Tmp36		16	
Tmp7	L Imp17	E Imp2		Tmp37	T Imod	17	
T		- Te-20		Tes20		10	
Tmpa	T Tmp18	T mp20		1 mp 38	1 mp4	ю	
Tmp9	Tmp19	Tmp29	9 F	Tmp39			
	and the set	and the second se					
Tmp10	Tmp20	Tmp30		Tmp40			

• Type in the Location for each probe and press 'Enter'.

•For IPReports to perform some automatic thermometric analysis for you, specific naming conventions should be used - note this is only important for Autoclave Testing.

- Chamber Pressure Sensor PRESSURE
- Drain/Vent Sensor DRAIN or VENT or DISCHARGE
- Chamber Free Space Sensor FREESPACE
- Test Pack Sensor PACK or LOAD
- Top Pack Sensor (Top Sheet) TOPSHEET
- Bottom Pack Sensor BOTTOM
- Water Reservoir Sensor RESERVOIR

•The **Calculations** area allows TQSoft to perform a range of automatic calculations on the data and show these on the chart and/or data list. These are Scan Calculations (as opposed to Interval Calculations or I-Calcs.) and therefore are a calculation performed on each scan of data from the datalogger

st Specifica	tion SY0022.pa2						
General	Calculations	Lethality	Probes	Stages	I-calc List	I-calc Specs	Custom

Maximum temperature: Minimum temperature: Max - Min temperature: Average temperature: Average - Min.: Max - Average:	Chart	☐ Data List ☐ Data List ☐ Data List ☐ Data List ☐ Data List ☐ Data List ☐ Data List	Max. temp. channel: Min. temp. channel:	□ Data List □ Data List	
Saturation temperature: Saturation pressure:	Chart 🗖 Chart T	☐ Data List ☐ Data List	Pressure channet: Temp. channet:	16 Press	×
<u>C</u> ancel					<u>O</u> K

• Tick the boxes if you want these calculations to be added to your Chart and Data

Listing. If they are to be displayed on the chart you can choose the colour from the box here) • Max Temp Channel and Min Temp Channel are good information for the hottest and Coldest Channels for Washer Disinfectors.

• TQSoft includes Saturated Steam Tables. From these tables it can calculate the Theoretical Saturated Pressure from a given temperature, or visa-versa (i.e. what the Theoretical temperature from the Pressure reading assuming the steam was 100% saturated).

• For readings on the Theoretical Saturation Pressure from any given temperature click on the Saturation Pressure box (Data List as shown above) and select which temp channel to do the calculations from (usually the drain probe).

• For readings on the Theoretical Saturation Temperature from the given pressure click on the Saturation Temperature box (Data List) and select which pressure channel to do the calculations from.

•The **Lethality** area is covered in more detail in the Advanced Training Course. This allows either F(0), A(0) or a custom lethality calculation to be displayed on the chart and/or data list from any or all probes.

st Specificatio	on SY0022.pa2						
General	Calculations	Lethality	Probes	Stages	I-calc List	I-calc Specs	Custom
	c	F(0)	• A(0)	C Cust	om Lethality	Settings	
Base temperate	ure: 80.0 De	eg, ZValue: []	0.0		☐ Chart t	o show lethality as hality in Data Listir	ás ng
Minimum lethai Min Instant Lei	ity: ⊏Ch thaitu ⊏Ch	art 📕 🗆 🛙	) ata List ) ata List	Min. leth. char Min. inst. chan	nel ∏ Data L nel ∏ Data L	.ist ist	
Select Probe:	a 1.2.3					_	
Start lethality o	r: 65.0 De	eg.					
Cancel							<u>o</u> k

• The **Stages** area controls which Stage Lines will be available from the 'Enter Stages' button while a cycle is being logged using this Test Specification. Note that all Stage Lines are available once a cycle is complete.

Test Specificatio	on SY0022.pa2						
General	Calculations	Lethality	Probes	Stages	I-calc List	I-calc Specs	Custom
Cycle Starter Negative Puls Positive Puls Heat Up [INT Sterilisation 5 Machine Ste Sterilisation f Machine Ste Air Admissio Cycle Compl	d [INT:02.00 CO Ising [INT:01.00 f:00.30 CODE:13 Start [INT:00.10 rilisation Start [II End [INT:05.00 Co rilisation End [IN n [INT:05.00 CO ete [INT:00.00 C	DE:1] CODE:5] XODE:6] 2] CODE:13] NT:00.10 COD XODE:14] VT:05.00 COD9 VDE:26] XODE:27]	E:83] E:84]			Selec	ct Stages
<u>C</u> ancel							<u>O</u> K

• To add or remove stage lines, press 'Select Stages'

• To delete a stage from this Test Specification, simply highlight it on the right hand side and press 'Delete'. If a stage is deleted by mistake, it can simply be added again.

• To add a stage line to the Test Specification from the library on the left, highlight the required stage on the left and the stage on the right which will follow it, then press 'Insert. In this example 'Leak Test Start' will be inserted between 'Cycle Started' and 'negative Pulsing'

T.	and an an office of	tion strong with	
16	est specifica	cion stage edit	
All Fossible Stages Cycle Started [INT:02.00 CODE:1]		Slages for selected Test Cycle Started [INT:02:00 CODE:1]	
Pre Vacuum [INT:02:00 CODE:4] Losk Text Start [INT:02:00 CODE:5] Negative Pulsing [INT:01:00 CODE:5] Positive Pulsing [INT:01:00 CODE:5] Pres Steam [INT:01:00 CODE:7] Heat Up [INT:00:05 CODE:12] Equilibration Start [INT:00:10 CODE:37] Sterilisation Start [INT:00:10 CODE:13] Machine Sterilisation Start [INT:00:10 CODE:13] Machine Sterilisation Start [INT:00:00 CODE:4] Sterilisation End [INT:05:00 CODE:14] Machine Sterilisation End [INT:05:00 CODE:4] Condensing [INT:05:00 CODE:20] Post Vac [INT:05:00 CODE:24] Drying [INT:05:00 CODE:24] Drying [INT:05:00 CODE:26]		Positive Pulsing [INT:01.00 CDDE:6] Heat Up [INT:00.30 CDDE:12] Sterilisation Stat (INT:00.10 CDDE:13] Machine Sterilisation Stat [INT:05.00 CDDE:14] Machine Sterilisation End [INT:05.00 CDDE:84] Air Admission [INT:05.00 CDDE:26] Cycle Complete [INT:00.00 CDDE:27]	
E dit		Delete E dit	
Cancel			<u>o</u> k

• By highlighting a stage, then selecting 'Edit' it is possible to change the Display Interval for the stage. This controls how frequently data is displayed on the Data List while in Summary mode. Either enter the required Interval directly, or use the arrow buttons to increase/decrease the timer. Once this is correct press 'OK'

C Test specification stage edit		83
	Test specification stage edit	
	Modity Interval	
	Negative Pulsing [INT:01.00 CODE:5]	
	Data display interval: 01:00 +	
	<u>C</u> ancel <u>O</u> K	
Lancel	_	<u>U</u> K

•Note editing the Interval on the left side changes the Interval in the stage library, while editing the Interval on the right will affect this Test Specification ONLY and the Interval in the library will remain the same.

#### I-Calcs List This is covered in the Advanced Training Course (except Chart Line)

• This section of the Test Specification allows you to insert a line on the chart to indicate your Lower,

#### Upper and SuperHeat Limits.

est Specificati	ion SY0022.pa2						
General	Calculations	Lethality	Probes	Stages	-calc List	I-calc Specs	Custom
DEFAULT S	STERILIZATION STERILIZATION	LIMITS 1 SUPER HEA	T LIMIT				▲ ▼ Delete New
<u>C</u> ancel							QK

- Highlight Default Sterilisation Limits 1, then select 'I-Calc Specs'
- Enter Start Stage as Cycle Started and End Stage as Cycle Complete
- Click on Limit Values

• Enter your Upper and Limit values. For example for a 134C Porous Load, type in 134 for the lower limit, 137 as the upper limit and °C as the Units. The line colour can also be selected here.

Chart Line Name DEFAULT STERILIZATION LIMITS 1 Interval spec Limit values Actions Target value Show limit line on chart Upper limit 137 °C • Lower limit 124 °C •
Target value     Image: Construction       Upper limit     137       Lower limit     134

• Press on I Calcs List again and select Super Heat Limit

• If this is not required (e.g. for a Washer Disinfector), press 'Delete', otherwise follow the same procedure again, entering the appropriate Super Heat temperature (e.g. 142°C for a 134°C Porous Load cycle)

I-Calcs Specs This is covered in the Advanced Training Course (except Chart Line).

#### Setting Up the Agilent Logger

- Using the Agilent front panel, configure the data output as follows
- Press stored together
- Select the RS-232 interface using rotary selector (not GPIB).
- Press
   STO/RCL
- Set 9600 as the baud rate
- Press
   STOIRCL
- Set the parity and number of data bits as None (8 data bits)
- Press
- Set the flow control method to None
- Save changes and Exit.
- Open TQSoft go to Logger and Select Logger



• Find Agilent 34970A from the drop down menu

TMI Orion TYPE 2 Kaye KL/Portable/Digi KAYE VALIDATOR 2000	
Agilent 34970A	
Aglient 34972A Grant Squirrel 2040 Simulation Anville 825 Select which comms port to us	se:
Hardware handshaking	

• TQSoft will automatically set the correct Baud Rate, Databits and Parity

• Select the correct Comms Port from the dropdown menu and Press OK.

Select type of Logger	
Loggers:	
Agilent 34970A	*
Baud Rate	
9600 👻	
Data Bits	
8	
Parity	
N	
Select which comms port to use:	
	-
Com1	<b>^</b>
Com2 (8002)Invalid port number	
Com3 (8002)Invalid port number	E
Com5 (8002)Invalid port number	1
Com6 (8002)Invalid port number	Ц
Com7 (8002)Invalid port number	
Com8 (8002)Invalid port number	-

• *Note* In this example Com 1 is used, but this will vary depending on your PC. It is important that the Com port used is number 16 or below.

• Select the correct Channel Configuration and press OK.

#### Setting Up the Fluke NetDAQ Logger

• Connect the NetDAQ to the PC using the Ethernet cable, then power on the NetDAQ. The PC now requires configuring to communicate correctly.

• Insert the TQSoft CD, then 'Open folder to view files' when prompted



#### • Double Click on the Fluke 2680 Folder

Name	Date modified	Туре	Size	
Files Currently on the Disc (13)				
Fluke2680Support	04/09/2008 01:57	File folder		
🍌 Grant Squirrel 20xx USB	06/12/2011 03:55	File folder		
J HyperTerminal	23/04/2013 19:05	File folder		
🎍 Manuals	04/09/2008 01:56	File folder		
autorun	23/06/2001 09:18	Setup Information	1 KB	
🌄 setup	26/05/2014 18:39	Application	39,401 KB	
setupdrv	24/06/2010 21:18	Application	270 KB	
SETUPDRV64	02/02/2007 18:05	Application	269 KB	
👼 setupPharmaDemo	17/10/2007 17:55	Application	746 KB	
S UKEYVDD.DLL	30/11/2000 01:23	Application extens	5 KB	
USBKEY	10/12/2001 08:59	Setup Information	3 KB	
🚳 Usbkey.sys	05/01/2001 09:01	System file	13 KB	
🚳 usbkey.vxd	07/08/2000 04:28	Virtual device driver	11 KB	

• Double Click on the NTool32.dll file to install the Fluke NetDAQ drivers and follow the installation instructions.

- When this is complete, press Finish
- Press the Start button and then open Control Panel
- Select 'Network and Internet'

3 Control Panel +		
	Adjust your computer's settings	View by: Cate
	System and Security Review your computer's status Back up your computer Find and fix problems	User Accounts Change account type Appearance and Personalization
	Network and Internet View network status and tasks Choose homegroup and sharing options	Change the theme Change desktop background Adjust screen resolution
	Hardware and Sound View devices and printers	Clock, Language, and Region Change keyboards or other input methods
	Programs Uninstall a program Get programs	Ease of Access Let Windows suggest settings Optimize visual display

### Select 'Network and Sharing Center'

Control Panel Home	View network status and tasks Connect to a network View network computers and devices Add a wireless device to the network
Network and Internet Hardware and Sound Programs Jser Accounts Appearance and Personalization Clock, Language, and Region	HomeGroup     Choose homegroup and sharing options     Internet Options     Change your homepage   Manage browser add-ons   Delete browsing history and cookies

#### Select 'Local Area Connection'

<b>N</b>	- 🗶 -			See full ma
DB-PC-00594 (This computer)	Multiple networks		Internet	
View your active networks			Con	nect or disconne
isopharm.local Domain network		Access type: Connections:	Internet	inection
Unidentified network Public network		Access type: Connections:	No network ac VMware Netwo VMnet1 VMware Netwo VMnet8	cess ork Adapter ork Adapter
elect 'Properties'			]	
Local Area Connection Status			23	
General				
Connection				
IPv4 Connectivity:		Internet		
IPv6 Connectivity:	No ne	twork access		
Media State:		Enabled		
Duration:		03:40:14		
Speed: Details		1.0 Gbps		
Activity				
Sent —	- 🦊 –	Received		
Buters E1 CO1 CA	ю	394,407,365		
Bytes: 51,681,64				
Properties Picola	Diagnose			

• Highlight 'Internet Protocol Version 4 (TCP/IPv4) and then select 'Properties'

Griding	<u> </u>	
Connect using:		
NVIDIA nForce	10/100/1000 Mbps Et	hemet
This connection uses	the following tems:	Configure
Clert for Mr	ment Networks	
VMware Brid	ige Protocol	
QoS Packet	Scheduler	
File and Print	ter Sharing for Microsoft	Networks
- Internet Prot	ocol Version 6 (TCP/IP)	(6)
Internet Prot	ocol Version 4 (TCP/IPv	(4)
-	opology Discovery Map	per I/O Driver
M - Link-Layer T		nonder
<ul> <li>✓ Ink-Layer T</li> <li>✓ Ink-Layer T</li> </ul>	opology Discovery Resp	portion
<ul> <li>✓ → Link-Layer T</li> <li>✓ → Link-Layer T</li> </ul>	opology Discovery Resp Uninstall	Properties
Link-Layer T      Link-Layer T      Install  Description	Opology Discovery Res Uninstall	Properties
Link-Layer T     Link-Layer T     Link-Layer T     Link-Layer T     Link-Layer T     Install     Description     Transmission Contr     wide area network     across diverse inter	Opology Discovery Resp Uninstall of Protocol/Internet Prot protocol that provides of rconnected networks.	Properties tocol. The default
Link-Layer T     Link-Layer T     Link-Layer T     Install      Description     Transmission Contr     wide area network     across diverse inter	opology Discovery Resp Uninstall of Protocol/Internet Prot protocol that provides of reconnected networks.	Properties tocol. The default

• Select 'Use the following IP address' and enter 198.178.246.100 as the IP address and 255.255.255.0 as the Subnet Mask.

ou can get IP settings assigned au is capability. Otherwise, you need r the appropriate IP settings.	tomatically if your network supports to ask your network administrator
Obtain an IP address automatic	cally
Use the following IP address:	
IP address:	198 . 178 . 246 . 100
Subnet mask:	255 . 255 . 255 . 0
Default gateway:	· · ·
Obtain DNS server address aut	tomatically
Use the following DNS server a	ddresses:
Preferred DNS server:	
Alternate DNS server:	
Validate settings upon exit	Advanced

• Press OK, then OK again (at Internet Protocol window) and then close Network Connections.

#### • Go to TQSoft and then Press Logger and then Select Type of Logger

Setup	Logger Thermal Bath Temperature Ref Data Ma	inagement
	View Channels	
1	Select type of Logger/Recorder	
	Logger Control	
Chamb	Select Channel Configuration (Download)	Ie
	Digital IO	
	Calibration Files	
	Calibration	
	Advanced Calibration	
	Calibration Records	
	Calibration Checking (Validation)	
	Calibration Checking Records	
	Manual Calibration Adjust	
	Channel Stability and Fluctuation	

• Select on Fluke NetDAQ. TQSoft will automatically select the correct IP address and settings

Tuke NetDAU	
Fluke NetDAU Series I	Logger
Select Connection	Reset Default
Connection Mode:	Isolated
TCP Port Number:	4369
Base Channel Number	1
IP Address: 198	.178.246.1
Modeł	26404

- Press 'OK' and connection will be confirmed.
- Select the correct Channel Configuration and press OK.

• The Test Equipment Window will now open – check that the correct details are entered here and the correct logger is selected, then press 'Quit'

C Test Equipment	
Test Equipment Logger / Recorder  Temp. Ref. Unit Thermal Bath Pressure Ref. Unit	Logger / Recorder       Serial No.     12345       Description     Netdaq       Manufacturer     Flake       Model     2640A       Test House     None       Cert. No.
	Deselect Quit

• Note If the PC is connected to the internet through the Ethernet cable at any point, Windows will automatically attempt to create a working connection for you. This may lead to the IP settings being changed back to 'Obtain an IP address automatically' and preventing communication with the NetDAQ. In this case, simply follow the steps above to reconfigure the IP address to the correct settings.

#### **Calibrating Thermocouples**

Calibration of a thermocouple requires at least three temperature points. These should be the lowest and highest temperatures likely to be relevant to a test, and a checkpoint between these to ensure that all parameters are met across the whole temperature band.

This calibration data will be used for all tests performed using this calibration file until another calibration is performed. You will require a suitable temperature calibrator or thermal bath, and, depending on the guidelines to which you are working, you may also require an independent reference probe.

TQSoft is capable of communicating with a wide range of temperature baths and thermometers. This allows TQSoft to drive the unit, controlling the temperature without requiring a manual input. If this is coupled with a temperature reference probe that also communicates with TQSoft it also allows automatic calibration of thermocouples, removing the need to enter or accept settings at each stage and allowing other work to be undertaken while calibration takes place.

#### Setting up the Thermal Heat Source in TQSoft (if required)

•Select 'Thermal Bath' and then 'Select type of Thermal Bath'

Setup	Logger	Thermal Bath	Temperature Ref
sur-table		Select typ	e of Thermal Bath
1	作!	Thermal	Bath Control
		Stability (	Criteria

Select the correct bath type from the dropdown menu. For example for a Jofra CTC320 select 'JOFRA CTC/ITC/MTC'. TQSoft will select the correct Baud Rate, Data Bits and Parity automatically.
Select the correct Comms port and press OK. *Note* The Comms port must be numbered 16 or below

<u>I</u> hermal baths		
JOFRA CTC ITC MTC		•
<u>B</u> aud Rate		
9600	•	
Data Bits		
8	•	
Parity		
N	-	
13		
Select which comms port to use:		
Select which comms port to use:	-	
Select which comms port to use:		
Select which comms port to use: Com1 Com2 (8002)Invalid port number Com3 (8002)Invalid port number	• •	

• To check communications are working correctly, select 'Thermal Bath' and 'Thermal Bath Control'. Ensure a temperature reading from the thermal bath is showing, then enter a setpoint value, send it to the bath and check that the bath changes temperature.

#### Setting up the Temperature Reference in TQSoft

• Select 'Temperature Ref' and press Select type of Reference Probe.

Setup Logger T	hermal Bath Tempera	ture Ref Data Man	agement Current Test
Scription	Sele	ect type of Reference	Probe
, X= 1	Ref	erence Probe Contro	1
Chamber Records	Calibration Checking	Start Logging	Test Details

• Select the correct Reference Probe from the dropdown menu, for example Jofra DTI 50 -TQSoft will select the correct Baud Rate, Data Bits and Parity automatically.

• Select the correct Comms port and press OK. *Note* The Comms port must be numbered 16 or below.

• To check communications are working correctly, select 'Temperature Ref' and 'Reference Probe Control'. Ensure a temperature reading from the Reference Probe is showing

#### **Temperature Calibration (Automatic)**

• Click on 'Logger' and then 'Calibration' in the drop down menu.

TQS	Data Acquisition System	
Setup L	ogger   Thermal Bath Temperature Ref Data Mana	gement
1	View Channels Select type of Logger/Recorder Logger Control	
Chaml	Select Channel Configuration (Download) Digital IO	Ies
	Calibration Files	
	Calibration	
	Advanced Calibration Calibration Records Calibration Checking (Validation) Calibration Checking Records Manual Calibration Adjust	
	Channel Stability and Fluctuation	

• Type a suitable name in the 'Job Reference' box. The calibration file should usually be left as the default. *Note* The Operator name, time and date are taken from the computer settings, and are not editable - these should be checked before continuing. Select 'OK'

C3. Please ent	er calibration det	ails	
Select call	ibration file	Calibration Set 1	-
Job Ref:	Equipment tes	4	NOTE: Calibration
Operator:	David Brightor	1	kept in Test Equipment on
Date:	06/08/2014		Setup menu.
Time:	10:28:31		
<u>C</u> ancel			<u>0</u> K

• Select which thermocouple you wish to calibrate and turn OFF the Pressure Channel, then press 'OK'

Select Channels				
₩ Tmp1	Tmp11	Tmp21	Tmp31	Tmp41
<b>▼</b> Tmp2	Tmp12	Tmp22	Tmp32	Tmp42
<b>▼</b> Tmp3	Tmp13	Tmp23	Tmp33	Tmp43
₩ Tmp4	Tmp14	Tmp24	Tmp34	Tmp44
🔽 Tmp5	Tmp15	Tmp25	Tmp35	Tmp45
<b>⊽</b> Tmp6	Press	Tmp26	Г Ттр36	Tmp46
₩ Tmp7	Tmp17	Tmp27	Tmp37	Tmp47
Tmp8	Tmp18	Tmp28	□ Ттр38	Tmp48
Tmp9	🗆 Tmp19	Tmp29	Tmp39	
Tmp10	Tmp20	Tmp30	Tmp40	
All On All C	0# <u>O</u> K			

• Enter the required setpoints and stability parameters. The example below shows the standard parameters used, along with usual checkpoints for an autoclave.

• For Automatic Calibration, ensure sure the 'Calibration', 'Automatic' and 'Use Temperature Reference' options are selected, then press 'OK'. If there is no communication between the equipment and TQSoft, the 'Automatic' option will be greyed out, and calibration should be performed manually – this is discussed further in the next section.

Setpoints		Stability	
Low Point High Point Check Point O Do Low First O Do High First	100 140 134	0.2 Degrees per minute for Allowed deviation from Reference Reference stability criteria Report after Setpoint stability for Report Interval Report max deviation allowed	2         minutes           2.0         Deg.           0.05         Deg. for 1 min.           1         minutes           15         seconds           0.5         °C
Options ✓ Automatic Using a Voltage O Calibration Chec ⊙ Calibration	Reference sk	Source of Reference Value Use Temperature Reference Use Entered Setpoint(s)	ce
Cancel			<u>o</u> k

• TQSoft now automatically checks the stability of all the thermocouples and the reference probe.

• ALL probes selected for calibration must achieve the stability criteria, here for example it is 0.2 degrees for 2 minutes

• The allowed deviation from Reference is applied as soon as the calibration is calculated. If the difference between any uncalibrated probe value, and the reference value, is greater than this figure, then the probe is labelled as a **BAD** probe in the calibration

report and should not be used. The allowed deviation is applied at both the Low and High points.
The reference stability criteria is simply the biggest drift allowed for the reference value over one minute. A countdown is provided for this too, and is reset as soon as the reference value drifts too far. If entered set points are being used as reference values then this criteria is irrelevant.

• Once stability has been met, TQSoft then calibrates all thermocouples at the same time and then carries out the tracking run.

• The report duration and interval are used to generate a (post calibration) report on the calibrated values after High and Low point calibrations. The *report max. deviation* allowed is a limit on the difference between each channel's value and the reference value during the report interval (i.e. after the probe has been calibrated). If the difference is exceeded the channel will have a **FAIL** notice appear in the calibration report results section.

• After the reporting is completed, TQSoft then sends a command to the thermal bath to go to the next set point temperature, and the process is repeated.

• Once calibration has been completed on all setpoints, a new screen will appear to allow you to view a preview of the calibration report.

21/05/2014	16:23:16	Test	Calibratic	on Set 1				
27/05/2014	10:59:25	Test	Calibratic	on Set 1				
27/05/2014	15:35:38	Test	Calibratio	on Set 1				
28/05/2014	11:37:56	Test	Calibratio	on Set 1				
0/06/2014	10.55.42	Test	Calibratio	on Set 1				
Channel Detail	s Summary —							
Channel Detail Tmp1 matt	s Summary —	10/06	/2014	11:31:08	140.39	140.6	100.33	100
Channel Detail Tmp1 matt Tmp2 matt	s Summary — hew.hardy hew.hardy	10/06	i/2014 i/2014	11:31:08 11:31:08	140.39 140.39	140.6 140.7	100.33 100.33	100 100
Channel Detail Tmp1 matt Tmp2 matt	s Summary hew.hardy hew.hardy	10/06 10/06	5/2014 5/2014	11:31:08 11:31:08	140.39 140.39	140.6 140.7	100.33 100.33	100
Channel Detail Tmp1 matti Tmp2 matti	s Summary hew.hardy hew.hardy	10/06 10/06	/2014 /2014	11:31:08 11:31:08	140.39 140.39	140.6 140.7	100.33 100.33	100
Channel Detail Tmp1 matt Tmp2 matt	s Summary hew.hardy hew.hardy	10/06 10/06	5/2014 5/2014	11:31:08 11:31:08	140.39 140.39	140.6 140.7	100.33 100.33	100
Channel Detail Tmp1 matt Tmp2 matt	s Summary hew.hardy hew.hardy	10/06 10/06	;/2014 ;/2014	11:31:08 11:31:08	140.39 140.39	140.6 140.7	100.33 100.33	100

Once you have viewed the calibration report, press 'OK'. A prompt will appear asking if calibration is now complete. If you require pressure, it is important to select 'No' and proceed to pressure calibration – this allows both sets of calibration data to appear on the same document.
 Note if you are using IPReports it is unnecessary to print the calibration report, as this can be

• Note If you are using IPReports it is unnecessary to print the calibration report, as this can be imported automatically into your completed Validation Report.

#### **Temperature Calibration (Manual)**

If there is no communication between available between TQSoft and your temperature bath and/or reference probe, information about each stage of calibration should be entered manually. • Click on 'Logger' and then 'Calibration' in the drop down menu.

TQS	Data Acquisition System	
Setup [	Logger Thermal Bath Temperature Ref Data Mana	gement
1	View Channels Select type of Logger/Recorder Logger Control	
Chamt	Select Channel Configuration (Download) Digital IO	Ies
	Calibration Files	
	Calibration	
	Advanced Calibration Calibration Records Calibration Checking (Validation)	
	Calibration Checking Records Manual Calibration Adjust	
	Channel Stability and Fluctuation	

• Type a suitable name in the 'Job Reference' box. The calibration file should usually be left as the default. *Note* The Operator name, time and date are taken from the computer settings, and are not editable - these should be checked before continuing. Select 'OK'

C Please ent	er calibration det	ails	×
Select call	ibration tile	Calibration Set	1. 🔹
Job Ref:	Equipment tes	۶¢	NOTE: Calibration
Operator:	David Brighto	n	kept in Test Equipment on
Date:	06/08/2014		Setup menu.
Time:	10:28:31		
<u>C</u> ancel			<u>0</u> K

• Select which thermocouple you wish to calibrate and turn OFF the Pressure Channel, then press 'OK'

₩ Tmp1	Tmp11	Tmp21	Tmp31	Tmp41
₩ Tmp2	Tmp12	Tmp22	Tmp32	Tmp42
₩ Tmp3	Tmp13	Tmp23	Tmp33	Tmp43
<b>▼</b> Tmp4	Tmp14	Tmp24	Tmp34	Tmp44
<b>√</b> Tmp5	Tmp15	Tmp25	Tmp35	Tmp45
<b>▼</b> Tmp6	Press	Tmp26	□ Ттр36	Tmp46
₩ Tmp7	Tmp17	Tmp27	Tmp37	Tmp47
Tmp8	Tmp18	Tmp28	🗖 Ттр38	Tmp48
Tmp9	Tmp19	Tmp29	Tmp39	
Tmp10	Tmp20	Tmp30	Tmp40	

• Enter the required setpoints and stability parameters. The example below shows the standard parameters used, along with usual checkpoints for an autoclave.

• Ensure the 'Calibration'	option is checked	, then press 'OK'

Calibration Setup	
Setpoints	Stability
Low Point 100 High Point 140 Check Point 134	0.2Degrees per minute for2minutesAllowed deviation from Reference2.0Deg.Reference stability criteria0.05Deg. for 1 min.Report after Setpoint stability for1minutesReport Interval15secondsReport max deviation allowed0.5°C
Options Automatic Using a Voltage Reference O Calibration Check Calibration	Source of Reference Value O Use Temperature Reference O Use Entered Setpoint(s)
Cancel	<u>o</u> k

• TQSoft now automatically checks the stability of all the thermocouples and the reference probe at the first calibration point

• ALL probes selected for calibration must achieve the stability criteria, here for example it is 0.2 degrees for 2 minutes. Once stability is achieved, a countdown will start. It is important to wait for this to reach zero.

• The reference stability criteria is simply the biggest drift allowed for the reference value over one minute. A countdown is provided for this too, and is reset as soon as the reference value drifts too far. If entered set points are being used as reference values then this criteria is irrelevant.

• Once both countdowns have reached zero, enter the reading from the Reference, and press 'Proceed'

	Channe No.	l Value (*C	Countdown on Stability Requirements	Biggest Drift last 60 seconds	Deviation from Reference	
Slowest to Stability	1	100.5	00:50	0.1	0.5	
Largest Deviation	2	100.6	- · · ·		0.6	
Reference Channel	-	100.00	0.00	0.00	,	

• The allowed deviation from Reference is applied as soon as the calibration is calculated. If the difference between any uncalibrated probe value, and the reference value, is greater than this figure, then the probe is labelled as a **BAD** probe in the calibration report and should not be used. The allowed deviation is applied at both the Low and High points. • TQSoft will now perform a tracking run for the time previously specified. During this period the (uncalibrated) deviation from the reference will be displayed at the specified interval. Each probe can be viewed individually by selecting it from the dropdown on the left.

Channel Selected	Time	Reference	eMeasure	d Deviation
1	11:11:18	100.33	100.6	0.3
	Time	Reference	e Calibrate	d Max Dev.
Report Time to go	11:11:34	100.33	100.3	0.0
riepoit nine to go	11:11:49	100.32	100.3	0.0
00:15	11:12:04	100.32	100.3	0.0

•Once the Report timer has counted down to zero, TQSoft will automatically begin calibration at the next setpoint. The Temperature bath should now be set to this temperature. Once stability is achieved, the same procedure can be followed, again entering the reading from the Reference and pressing proceed when the countdowns have reached zero.

	Channe No.	l Value (°C	Countdown on Stability Requirements	Biggest Drift last 60 seconds	Deviation from Reference	
Slowest to Stability	1	140.7	00:50	0.1	0.3	
argest Deviation	2	140.7	-		0.3	
Reference Channel	-	140.40	0.00	0.00		

A second tracking run report will run, and then TQSoft will move to the Calibration Check Point.
At this stage the thermocouples have now been adjusted to take into account any temperature variation between the Reference and measured temperature. Adjust the Temperature bath to the correct temperature and wait for the temperature to stabilise.

• Again, enter the correct reading from the Reference – as the thermocouples are now calibrated this is now simply a check to ensure that they are within the required parameters. Once the stability countdowns have both reached zero, press 'Proceed' to enter the final tracking report.
	Channe No.	el Value (°C	Countdown on Stability Requirements	Biggest Drift last 60 seconds	Deviation from Reference
Slowest to Stability	2	134.4	01:20	0.1	0.0
Largest Deviation	1	134.5			0.1
Reference Channel	-	134.4	00.00	0.00	

• Once calibration has been completed on all setpoints, a new screen will appear to allow you to view a preview of the calibration report.

21/05/2014	16:22:16	Test	Calibrati	ion Set 1				
27/05/2014	10:59:25	Test	Calibrati	ion Set 1				
27/05/2014	15:35:38	Test	Calibrati	ion Set 1				
28/05/2014	11:37:56	Test	Calibrati	ion Set 1				
0/06/2014	10:55:42	Test	Calibrat	on Set 1				
Channel Detail:	s Summary —							
Channel Detail: Tmp1 mattl	s Summary — hew.hardy	10/06	/2014	11:31:08	140.39	140.6	100.33	100
Channel Detail Tmp1 matti Tmp2 matti	s Summary hew.hardy hew.hardy	10/06 10/06	/2014 /2014	11:31:08 11:31:08	140.39 140.39	140.6 140.7	100.33 100.33	100
Channel Detail Tmp1 mattl Tmp2 mattl	s Summary hew.hardy hew.hardy	10/06 10/06	/2014 /2014	11:31:08 11:31:08	140.39 140.39	140.6 140.7	100.33 100.33	100
Channel Detail Tmp1 mattl Tmp2 mattl	s Summary hew.hardy hew.hardy	10/06 10/06	/2014 /2014	11:31:08 11:31:08	140.39 140.39	140.6 140.7	100.33 100.33	100
Channel Detail Tmp1 matti Tmp2 matti	s Summary hew.hardy hew.hardy	10/06 10/06	/2014 /2014	11:31:08 11:31:08	140.39 140.39	140.6 140.7	100.33 100.33	100
Channel Detail Tmp1 mattl Tmp2 mattl	s Summary — hew.hardy hew.hardy	10/06 10/06	/2014 /2014	11:31:08 11:31:08	140.39 140.39	140.6 140.7	100.33 100.33	100

Once you have viewed the calibration report, press 'OK'. A prompt will appear asking if calibration is now complete. If you require pressure, it is important to select 'No' and proceed to pressure calibration – this allows both sets of calibration data to appear on the same document.
Note If you are using IPReports it is unnecessary to print the calibration report, as this can be imported automatically into your completed Validation Report.

#### **Pressure Calibration**

Calibration of a pressure transducer requires measurement at at least three pressure points. These should be the lowest and highest pressure likely to be relevant to a test, and a checkpoint between these to ensure that all parameters are met across the whole pressure band.

This calibration data will be used for all tests performed using this calibration file until another calibration is performed. You will require a suitable pressure transducer and pressure reference unit.

• Click on 'Logger' and then 'Calibration' in the drop down menu.

Setup L	ogger Thermal Bath Temperature Ref Data Ma	nagemer
l	View Channels Select type of Logger/Recorder Logger Control	
Chamt	Select Channel Configuration (Download) Digital IO	I
4.0	Calibration Files	
	Calibration	
	Advanced Calibration	
	Calibration Records	
	Calibration Checking (Validation)	
	Calibration Checking Records	
	Manual Calibration Adjust	
	Channel Stability and Fluctuation	

• Type a suitable name in the 'Job Reference' box. The calibration file should usually be left as the default. *Note* The Operator name, time and date are taken from the computer settings, and are not editable - these should be checked before continuing. Select 'OK'

C Please ent	er calibration det	ails	
Select call	ibration file	Calibration Set 1	•
Job Ref:	Equipment tes	it i	NOTE: Calibration
Operator:	David Brighton	n eq	upment information is now ept in Test Equipment on
Date:	06/08/2014		Setup menu.
Time:	10:28:31		
<u>C</u> ancel			<u>D</u> K

• Click OK, then deselect all the temperature channels and select the pressure channel.

• Note In this example we are using millibar. If you are different units ensure you select accordingly.

• Standard pressure set points are as follows: - Low point 500, High point 3500, Check point 3200. (All in millibar absolute). Ensure the 'Do low first' and 'Calibration' options are selected.

minutes
seconds
Bar

• For the low point of 500, select vacuum on the pressure calibrator and use the pump to apply 500 mBA. Once the reading is stable press PROCEED and wait for approximately 10 seconds while TQSoft performs the required calculations. *Note* the values displayed in TQSoft for both the Low point and High point are both Voltage readings NOT pressure readings.

	Channe	1	Deviation from
	No.	Value (V)	Reference
west to Stability	20	1.211	_
rgest Deviation	20	1.211	_
ference Channel	-	500	

• Select pressure on the pressure calibrator and use the pump to apply 3500 mBA. Once stable again press PROCEED and wait approximately 10 seconds while TQSoft performs the required calculations.

• Repeat the procedure for the Check Point (3200 mBA). Note that the displayed reading in TQSoft has now converted to Pressure Units as TQSoft has worked out the conversion.

	Channe No.	l Value (mB	Deviation from Reference
lowest to Stability	20	3198	-
argest Deviation	20	3198	-
eference Channel	-	3200	

• When 'View Calibration Records from' is displayed with a new date/time/group click on print preview to preview a copy of your pressure calibration report.

• Once calibration has been completed on all setpoints, a new screen will appear to allow you to view a preview of the calibration report.

		-						
21/05/2014	16:23:16	Test	Calibratio	on Set 1				
27/05/2014	10:59:25	Test	Calibratio	n Set 1				
27/05/2014	11:30.36	Test	Calibratio	n Set 1				
0/06/2014	10.55.42	Test	Calibratio	in Set 1				
Channel Details	Summaru							
Channel Detail:	s Summary —	10/05	/2014	11-21-09	140.29	140.6	100.22	100
Channel Details Tmp1 matti Tmp2 matti	s Summary — hew. hardy hew. hardy	10/06/	/2014	11:31:08 11:31:08	140.39 140.39	140.6 140.7	100.33	100
Channel Detail: Tmp1 mattł Tmp2 mattł	s Summary — hew.hardy hew.hardy	10/06/ 10/06/	/2014 /2014	11:31:08 11:31:08	140.39 140.39	140.6 140.7	100.33 100.33	100 100
Channel Detail: Tmp1 matth Tmp2 matth	s Summary hew.hardy hew.hardy	10/06/ 10/06/	/2014 /2014	11:31:08 11:31:08	140.39 140.39	140.6 140.7	100.33 100.33	100 100
Channel Detail: Tmp1 matti Tmp2 matti	s Summary — hew.hardy hew.hardy	10/06/ 10/06/	/2014 /2014	11:31:08 11:31:08	140.39 140.39	140.6 140.7	100.33 100.33	100
Channel Details Tmp1 matth Tmp2 matth	s Summary hew.hardy hew.hardy	10/06, 10/06,	/2014 /2014	11:31:08 11:31:08	140.39 140.39	140.6 140.7	100.33 100.33	100
Channel Detail: Tmp1 mattł Tmp2 mattł	s Summary — hew.hardy hew.hardy	10/06/ 10/06/	/2014 /2014	11:31:08 11:31:08	140.39 140.39	140.6 140.7	100.33 100.33	100

• Once you have viewed the calibration report, press 'OK'. A prompt will appear asking if calibration is now complete

• Note If you are using IPReports it is unnecessary to print the calibration report, as this can be imported automatically into your completed Validation Report.

# Performing a TestClick the 'Start Logging' button

TQS Data A	cquisition System				
Setup Logger T	hermal Bath Tempera	ture Ref 👘 Data Man	agement Current T	est (9528) Help Ab	out
建	P	2	26		
Chamber Records	Calibration Checking	Start Logging	<u>T</u> est Details	Chart Display	Sensors

## • Select the correct chamber from the dropdown (e.g. which machine is being tested)

Chamber Name:	Example	·	0
Cycle <u>N</u> umber:	Example Autoclave 1		Chamber

• Enter the correct cycle number for the cycle about to be run. *Note* TQSoft does not allow you to enter the same cycle number twice for the same chamber

t Logging			
Chamber Name:	Autoclave 1	<u> </u>	í
Cycle Number:	12345		Chamber 🔻

# Select an appropriate Test Specification and click 'Next'

	Lab 134C Fluid Type 6 Probes	
	Lab 134C Fluid Type Simplified Thermometric Test	
	Lab 134C Porous Type 12 Probes	
	Lab 134C Porous Type 6 Probes	
	Lab 134C Porous Type Simplified Thermometric Test	
	Leak Rate Test	
	Performance Qualification 121C	
	Performance Qualification 134C	
	Performance Re-Qualification 121C	
	Performance Re-Qualification 134C	
-	Porous Load 121C 12 Probes Chamber Wall	
	Porous Load 121C 3 Probes Full Load	0
	Porous Load 121C 3 Probes Small Load	
_	Porous Load 121C 7 Probes	
	Porous Load 134C 12 Probes Chamber Wall	
	Porous Load 134C 3 Probes Full Load	=
	Porous Load 134C 3 Probes Small Load	
	Porous Load 134C 7 Probes	
	Porous Load 134C 7 Set Hudd. Tube.	
	Sec Lab 100 Freesteaming Auto Control	
	Sec Lab 115C Fluids Auto Control	
	Sec Lab 121C Fluids/Bijoux Baskets Auto Control	
	Sec Lab 121C Full Load Fluids Yearly	
	Sec Lab 121C Glassware Auto Control Test	*

• Enter an appropriate Job Reference, then press 'Next'. A reference to the type of test is useful (e.g. 'ACT' or 'Thermometric Test 1' when looking for data from this test at a later date.

Porous Load 134C 7 Pro	obes		21
Job Reference:	Equipment test		Auto 👻
Add Test to Report	Г	More 👻	

•The 'Start Logging' button now appears. The timer below can be used to delay the start of logging if required.

• When you are ready to start the cycle, click 'Start Logging'. *Note* Logging should always be started using TQSoft *before* the cycle begins to ensure no data is lost.

Start Logging		
-Start Logging		
	Start Logging	
	00:00:00	

• Now the test has started, select Inputs Display and watch the cycle appear on the chart.

#### Entering Stage Lines While Logging

• Stage lines can be entered either whilst logging a cycle, or once the cycle has completed. However, entering stage lines into TQSoft in real time removes the need to manually record machine stages using a separate stopwatch and notepad.

• When the machine reaches the start of a new stage, select the 'Enter Stage' button

• A box will be displayed, and the next stage line programmed into the Test Specification will be automatically selected, along with the time at which 'Enter Stage' was pressed. If this is correct press 'OK'

13			26					1	25	24
Chamber Records	Calibration Checking	Stop Logging	<u>I</u> est Details	Chart Display	Seniori	Dealing	juputs Display	Enter Stage	Test Motes	Hatosic Teats
Oeros Porsas La	ad 08/08/2014 Equipm	entitett AC00002 C:	LDG5Y5E(AC00002)	data/12349.mbf						2
80.0 VC 140.0 120.0 110.0			O Realtmo	stage inset for 12340	- Insert Silagi Positive Puli	Real time stage in 9 ing [NT-91.90 COD Time [00.05]17	esj	J		
96.0 86.0 70.0 66.0	_	M			Cancel		0	K		

• If you wish to select a different stage line select the correct one from the dropdown.

• If the time is incorrect (e.g the button was not pressed at the correct time), it can also be amended here.

• *Note* If a stage is missed, or you wish to insert them after the test has finished, a full choice of all possible stage lines is available once the cycle is complete.

• The Stage line will now appear on both the Chart and Data List

• This can now be repeated for all the other Stages. Please see the Appendix to see what Stages need to be inserted into the test for different types of Cycles for templates to work correctly in IPReports.

Once inserted, stage lines can also be moved manually by hovering the mouse over the required line, and then clicking and dragging using the 'Values at Pointer' reading to drop it at the correct time
Once the machine has completed the cycle, press the 'Stop Logging' button. A confirmation that you really wish to stop is then required.



• The Chart will be resized to fill the entire screen, regardless of the original x-axis parameters.

## Viewing the Data List

• To view the datalist either during a cycle or for a historic test, select the 'Data Listing' button

	1								11110000	1		
1		200	10	24	A		m	14	24	22-		
				0	mell	0	0	enn	and			3
Cignities Records	Calibration Checking	Stor Loging	I eve Denals	Distibility	Series.	Datalaing	Jingtons Display	Erres Stage	Test Motes	Batava Testa	Beport Foane	

• The datalist for the current cycle will be displayed.

• Full data (i.e. all scans recorded) or Summary data (based on the time intervals selected through the Stage Line) can be selected.

Time	Tmp 1	Tmp 2	Tmp 3	Tmp 4	Tmp 5	Tmp 6	Tmp 7	Tmp 8	9 mT	Tmp10	Tmp11	Tmp12
23/07/01	°C	°C	°C	*C	°C	°C	°C	°C	°C	°C	°C	°C
00:00:00	( ) ( ) ( ) ( ) ( ) ( ) ( ) ( ) ( ) ( )	N			8 19	Cycle Starter	INT:02.00]	2			8	
00:00:05	33.9	35.3	32.5	30.8	31.2	29.5	30.7	33.3	35.4	33.6	34.2	34.8
00:00:32						Prewash [	NT:00.30]					
00:00:33	35.2	35.6	33,1	30.8	32.1	30.6	30.8	33.4	35.7	33.8	34.8	35.3
00:01:03	36.7	35.8	34.2	29.7	33.0	30.8	31.7	33.9	36.2	33.5	35.5	35.1
00:01:33	36.4	35.8	34.2	27.4	33.4	30.7	31.7	34,1	36.6	32.9	35.5	35.3
00:02:03	19.5	19.2	20.5	22.0	19.8	20.0	19.5	19.9	25.4	20.8	21.0	23.
00:02:33	19.4	19.4	19.4	19.5	19.4	19.5	19.3	18.7	20.8	20.1	20.1	20.5
00:03:03	19.3	19.2	19.2	19.2	19.2	19.3	19.2	18.6	20.6	20.0	19.9	19.5
00:03:05						Rinse [IN	T:00.30]					
00:03:07	19.3	19.3	19.2	19.2	19.3	19.3	19.2	18.6	20.7	20.1	20.0	20.
00:03:37	19.7	19.7	19.7	19.8	19.7	19.8	19.6	19.0	21.0	20.4	20.4	20.
00:04:07	20.1	19.9	19.9	20.1	19.9	19.9	19.8	19.2	21.2	20.7	20.9	20.5
00:04:38	20.6	19.9	20.5	20.8	20.5	20.1	19.8	19.2	21.8	21.2	21.2	20.0
00:05:09	21.0	19.9	20.7	21.4	20.9	20.3	20.1	19.2	22.7	21.7	21.8	20.0
00:05:40	21.3	20.1	21.2	21.7	21.2	20.6	20.3	19.3	23.4	22.1	22.1	20.9
00:06:10	21.5	20.1	21,1	20.8	20.9	20.1	20.5	19.4	23.8	21.8	21.7	20.9
00:06:40	21.5	20.2	21.4	20.8	20.9	19.9	20.6	19.6	24.1	21.8	21.8	20.1
00:07:10	16.0	16.0	16.0	16.2	16.0	16.0	15.8	15.2	17.5	16.6	16.6	16.
00:07:40	15.9	15.8	15.8	15.8	15.8	15.9	15.7	15.0	17.2	16.6	16.4	16.
00:08:10	16.2	16.3	16.2	16.3	16.2	16.3	16.1	15.4	17.5	16.9	16.8	16.1
00:08:40	16.6	16.6	16.4	16.5	16.5	16.6	16.4	15.7	17.9	17.3	17.1	17.
00:09:10	16.8	16.8	16.8	16.8	16.8	16.9	16.8	16.1	18.1	17.6	17,5	17.
00:09:40	17.2	17.2	17.0	17.1	17.1	17.1	17.0	16.3	18.4	17.9	17.7	17.
00:10:10	17,4	17.4	17.4	17.4	17.4	17.4	17.3	16.6	18.7	18.1	18.0	18.0
00:10:40	17.7	17.8	17.7	17.7	17.7	17.8	17.6	16.9	19.1	18.5	18.4	18.
00:11:10	18.0	18.0	17.9	17.9	17.9	18.0	17.9	17.2	19.3	18.7	18.7	18.
00:11:40	18.3	18.4	18.2	18.3	18.2	18.3	18.2	17.6	19.6	19.0	18.9	18.9
00:12:10	18.5	18.5	18.5	18.5	18.5	18.5	18.4	17.8	19.8	19.2	19.1	19.
00:12:40	18.7	18.7	18.6	18.7	18.6	18.7	18.5	18.0	20.0	19.4	19.3	19.
00:13:10	18.8	18.8	18.7	18.9	18.8	18.9	18.7	18.1	20.1	19.5	19.5	19.
00:13:40	19.0	18.9	19.0	19.3	19.0	19.0	18.9	18.2	20.4	19.7	19.7	19.5
00:13:56						Pre Rinse [	INT:00.30]					
00:13:56						Acid Rinse	[INT:00.30]					
00:13:57	19.1	18.9	19.0	19.5	19.0	19.0	18.9	18.2	20.6	19.8	19.9	19.
00-14-27	19.3	18.9	19.2	19.7	191	19.0	19.0	18.3	20.9	20.1	20.2	19

## Entering Stage Lines After Completing a Cycle

• Once a cycle is complete (or an older cycle has been selected through the Historic Tests menu), press the 'Chart Display button to bring up the graph.

• Press 'Enter Stage' and a list of all possible stages will appear (on the left), along with all stages entered for this cycle (on the right).

• Highlight the required Stage from the list on the left, and press 'Insert'

Historical sta	ge insert for Ca	Historical stans	inset for CALDESVELEVA		
		Historical stage	Insert for C:\LUGSTS6\EXA	MPLE.mor	
II Passible S ycle Started re Vacuum [I eak Test Sta egative Pulsi tart Pulsing [I ece Steam [IN eat Up [INT: quilibration St achine Steril	Ringes (INT:02:00 CO et (INT:02:00 (INT:01:00 (INT:01:00 CO (IT:01:00 CO (IT:01:00 CO (IT:01:00 CO (IT:01:00 CO (IT:00.11 (INT:00.11 (INT:00.11 (INT:00.11 (INT:00.11 (INT:00.11) (INT:00.	DDE:1] DE:4] CODE:8] 0 CODE:5] DE:5] CCODE:6] 0:27] 12] 0 CODE:37] 0 CODE:37] 0 CODE:37] 0 CODE:33] INT:00.10 CODE:83]	Stages for sele           00:00:00 Cycle           00:03:37 Start I           00:06:14 Positi           00:08:15 Equili           00:08:16 Sterili           00:15:38 Air Ad           00:17:00 Cycle	Acted Test Statted [INT:02.00 CDC Pulsing [INT:00:30 CDD re Pulsing [INT:00.20 Station Statt [INT:00:00 Station Statt [INT:00.10 Seation Statt [INT:00.10 Seation Statt [INT:00.00 CD Complete [INT:00.00 CD	E:1] E:5] 0DE:6] 5 CODE:12] CODE:37] CODE:13] ODE:14] E:26] DDE:27
erilisation Er ichine Steril ndensing [IN st Vac [INT: oling [INT:05 Admission ]	nd (INT:05.00 isation End (I NT:05.00 CODE: 5.00 CODE: 5.00 CODE:35 INT:05.00 CO	CODE:14] NT:05.00 CODE:84] DE:19] 20] 4] 1] JDE:26]			
	Edit		Delete	Edit	
	Edit		Delete	Edit	
Cancel	correct tim	ne (using the format h LLOGSYS6\EXAMPLE.mbf Historical stage	Delete	Edit 'OK' <u>MPLE.mbf</u>	<u></u> K
Cancel	correct tim	he (using the format h LOGSYS6\EXAMPLE.mbf Historical stage	Delete	Edit 'OK'	<u></u> K
Cancel	correct tim	ne (using the format h LOGSYS6\EXAMPLE.mbf Historical stage	Delete	'OK' MPLE.mbf	<u>D</u> K
Cancel	correct tim	ne (using the format h \LOGSYS6\EXAMPLE.mbf Historical stage //nsert Stage Verification of Calibra Time	Delete h:mm:ss) and press insert for C:\LOGSYS6\EXAl ation [INT:00.30 CODE:29] 00:09:16	Edit 'OK' MPLE.mbf	<u></u> K
Cancel Inter the c	correct tim	ne (using the format h \LOGSYS6\EXAMPLE.mbf Historical stage Verification of Calibra Time Cancel	Delete h:mm:ss) and press insert for C:\LOGSYS6\EXA	Eddit 'OK' MPLE.mbf OK	<u>D</u> K
Cancel	correct tim ge insert for C	ne (using the format h LLOGSYS6\EXAMPLE.mbf Historical stage Verification of Calibra Time	Delete h:mm:ss) and press insert for C:\LOGSYS6\EXAl ation [INT:00.30 CODE:29] 00:09:16	Eddit 'OK' MPLE.mbf	<u>D</u> K
Cancel	correct tim	ne (using the format h \LOGSYS6\EXAMPLE.mbf Historical stage Verification of Calibra Time Cancel	Delete h:mm:ss) and press insert for C:\LOGSYS6\EXAl ation [INT:00.30 CODE:29] 00:09:16	Edit 'OK' MPLE.mbf	<u>OK</u>

• As well as showing the time and temperature at the pointer position, the Chart Toolbar can also be used to zoom in to a specific area of the graph, create a blank stage line, and edit the frequency at which the line labels are displayed on the chart.



## **Calibration Checking (Validation)**

Once a test is complete, the equipment used should have its calibration checked to ensure that it is still within the required parameters. Thermocouples should be placed in the same holes as for Calibration to improve accuracy.

• Click on 'Logger' and then 'Calibration Checking (Validation)' in the drop down menu.

21 TQS	Data Acquisition System					
Setup	Logger Thermal Bath Temperature Ref Data Manag					
1	View Channels Select type of Logger/Recorder Logger Control					
Chami	Select Channel Configuration (Download) Digital IO					
	Calibration Files					
	Advanced Calibration					
	Calibration Records Calibration Checking (Validation)					
	Calibration Checking Records					
	Channel Stability and Fluctuation					

• Enter a suitable job reference and ensure the Calibration File is the same as that used for the test, then press 'OK'

C Please ent	er calibration details	
Select call	ibration file	ibration Set 1
Job Ref:	Equipment test	NOTE: Calibration
Operator:	David Brighton	kept in Test Equipment on
Date:	08/08/2014	Setup menu.
Time:	15:32:26	
Cancel		QK

• Select the correct channels and press 'OK'

• Enter a suitable check point and stability parameters. *Note* These should normally be the same as the check point used for Calibration.

• Ensure the 'Calibration Check' option is selected, as well as the 'Automatic' if required, and press 'OK'

Setpoints +/- Error	Stability 0.2 Degrees per minute for	2 minutes
2nd	Reference stability criteria Report after Setpoint stability for Report Interval	0.05 Deg. for 1 min. 1 minutes 15 seconds
Options Automatic Using a Voltage Reference	Source of Reference Value O Use Temperature Refere O Use Entered Setpoint(s)	nce
Calibration Check     Calibration <u>Calibration</u>		<u>D</u> K

• Follow the same procedure as Calibration (see above). For a Calibration Check, however, no low and high point calculations are carried out – the check is simply to ensure that no significant drift has occurred since the calibration was carried out.

• When TQSoft prompts you to say if you have finished checking calibration, select 'No' if you wish to carry out a calibration check for pressure.



## • Press OK

• When 'View Calibration Records from' is displayed with a new date/time/group click on print preview to-preview a copy of your temperature calibration check report.

S. View Check	Records from	n C:\LOGSYS6\lo	ogger01		×
26/06/2007 26/06/2007 31/07/2007 31/07/2007 14/09/2007 14/09/2007 15/01/2009 28/01/2014	12:38:22 12:55:31 10:24:55 10:26:48 11:12:37 11:13:44 11:21:17 14:45:12	Calibrati Calibrati Calibrati Calibrati Calibrati Calibrati Calibrati Calibrati	on Set 1 on Set 1		
08/08/2014	15:38:03	Equipment test	Calibration Set 1		
Channel Detail Tmp1 Davi Tmp13 Davi	s Summary id Brighton id Brighton	08/08/2014 08/08/2014	15:41:45 134.00 15:41:45 134.00	0.1 0.2	

## **Pressure Calibration Check**

• Click on 'Logger' and then 'Calibration Checking (Validation)' in the drop down menu.

TQS	Data Acquisition System
Setup	Logger Thermal Bath Temperature Ref Data Manag
1	View Channels Select type of Logger/Recorder Logger Control
Chaml	Select Channel Configuration (Download) Digital IO
	Calibration Files Calibration
	Advanced Calibration Calibration Records
	Calibration Checking (Validation)
	Calibration Checking Records Manual Calibration Adjust
	Channel Stability and Fluctuation

• Enter a suitable job reference and ensure the Calibration File is the same as that used for the test, then press 'OK'

C Please ent	er calibration detai	ls	
Select cali	ibration file	Calibration Set	1
Job Ref:	Equipment test		NOTE: Calibration
Operator:	David Brighton		kept in Test Equipment on
Date:	08/08/2014		Setup menu.
Time:	15:32:26		
Cancel			<u>0</u> K

• Select the correct pressure channel and press 'OK'

• Enter a suitable check point. *Note* This should normally be the same as the check point used for Calibration.

• Ensure the 'Calibration Check' option is selected and press 'OK'

Calibration Setup		×
Setpoints         +/- Error           1st         3200           2nd	Stability	
3rd	Report after Setpoint stability for minutes	
4th	Report Interval seconds	
5th		
Options		
☐ Automatic ☐ Using a Voltage Reference		
<ul> <li>Calibration Check</li> <li>Calibration</li> </ul>		
Cancel	0	ĮΚ

• For the check point of 3200, select pressure on the pressure calibrator and use the pump to apply 3200 mBA. Once stable press PROCEED and wait for approx 10 seconds.

	Channe No.	l Value (mB	Deviation from Reference
Slowest to Stability	20	3198	-
argest Deviation	20	3198	-
Reference Channel	-	3200	

• TQSoft will ask have you finished Calibration Checking. Press Yes.

• Press OK

• When 'View Calibration Records from' is displayed with a new date/time/group click on print preview-to-preview a copy of your pressure calibration check report.

Once a Calibration Check has been performed, the test is complete. A new test can either be performed, or you can move on to IPReports.

## The Current Test Menu

After the Test is completed the cycle number of the test appears next to the Current Test
Menu. By clicking on the Current Test Menu a number of options are available
Current Test (WDEXAMP) Help About

Recent selection history	•
Test Audit Trail	
Test Report	•
Test Details	
Test Equipment	
Chamber	
Sensors Position	•
Calibration Check Report	•
Calibration Report	•
Channel Configuration	
Stages	
Defective Probes	
Test Notes	•
Chart	
Data Listing	
View ASCII file with Write/WordPad	
Export to ASCII Format CSV file	
Analyse Test	
I-Calc and Limits Report	•
Crop Data	

• **Test Audit Trail.** The Test Audit Trail shows the Audit Trail that is created when the test is started, but is only associated with this test. When the Test is backed up the Test Audit Trail if requested (see Company Name and General set up options) is also backed up so this audit trail follows the test around and is added to no matter which computer you are working from.

• **Test Report Print/Preview** This allows usual information about the Test such as Machine Details, Channel Configurations etc. to be printed out (this may also be imported into IPReports later)

• **Test Details.** Test Details shows Test Specification information specific to this Test. Once a test is completed, critical information such as the cycle number, machine name, date and time cannot be changed and are greyed out. However, non-critical details can be changed.

• In the **General section** for example, the Sterilisation temperature can be changed to Disinfector or Target Temperature. The Data Listing or Chart can also be reconfigured

- In the Calculations section all options can be selected or deselected.
- In the **Probes section** locations of probes can be renamed.
- In the **I-calcs section** new I-calcs can be created and applied
- Chamber allows basic details (but not test critical ones) to be amended
- Calibration Report and Calibration Check Report allow these to be viewed at any time
- Channel Configuration allows the chart label and colour to be amended
- Stages performs the same function as pressing the 'Stages' button (see above)

• **Defective Probes.** If a probe goes open circuit or is redundant (e.g. a duplicate), this can be marked as 'Defective'. This removes the probe from the chart, data list and all calculations. *Note* this does not delete any data, so the probe can be removed from the 'Defective' list at any point.



• Analyse Test. If any changes are made that affect calculations made on the data (for example in the lethality settings), the test should be reanalysed. Select 'Analyse Test' and all calculations will be refreshed.

• Crop Data. Selecting 'Crop Data' gives two options

• Crop on Cycle Start Cycle Complete removes unwanted data from your test results. This is particularly useful if a delayed start is used, or for very long cycles that may be left running unattended.

• Crop and Split after Cycle Complete removes data recorded after the Cycle Complete stage line, moving it to a new file which can be accessed through the Historic Tests menu. The same file name is used with the additional suffix \_s1. Multiple splits can be performed on the same test by moving the 'Cycle complete' stage line – the suffix will then reflect this by using \_s2, \_s3 etc.

Note - if you crop any test cycles, the test should be reanalysed

### **Historic Tests**

• After a test is completed it is automatically added to the Historic Tests folder.

Press the 'Historic Tests' button

	244	21	22	Ļ
			Sector Sector	

#### • A menu will be displayed showing all tests in the selected location on your PC

File Name	Operator	Test Name	Comments	Chamber	JobRet	Date	Time	Counter	
C/L06/SYS/9851/data/12115.mbf	Keith	Lab121 C parout cycle	1	9851	A2/9851/9/.	21/09/2012	10:32:49	12115	-
C:\L0GS\/\$\9651\data\12116.mbf	Keith	Lab115 C parout cycle		9851	A2/9851/9/1	21/09/2012	12:09:57	12116	
C/LDGSYS\9851\deta\12117.mbf	Keith	Lab134 C parous cycle		9951	A2/9851/9/.	21/09/2012	13:36:38	12117	
C:\L0GSYS\9852\data\017393.wbf	Keith	Porous Load 121 12 Leads		9852	A2/9852/9/.	20/09/2012	10:09:36	017393	
C/LDG5Y5\9852\data\17393.mbl	Keith	Cages 121		9852	A2/9852/9/.	20/09/2012	10.16.53	17393	
C/L0GSYS\9852\data\17395.mbl	Keith	Lab 134C Porous Type 12 Probes		9852	A2/9852/9/.	20/09/2012	12:15:00	17395	
C:\LDGSYS\9852\data\17395_1.mbf	Keith	La115 C porous cycle		9852	A2/9852/9/	20/09/2012	13:52:15	17395_1	Ē
C:\LDGSYS\ac000001\data\000322.mbf	Deno	Porous Load 134C 7 Probes		AA89/359	1A	20/12/2012	09:43:17	000322	
C:\L0GSYS\ac000001\data\000323.mbf	Demo	Porous Load 134C 7 Probes		AA89/359	1A	20/12/2012	09:44:21	000323	
C:\L0GSYS\ac000001\data\000324.mbf	Demo	Washer Disinfector 90C 7 Probes		AA89/359	1A	20/12/2012	09:45:12	000324	
C:\L06SYS\ac000001\data\000325.mbf	Demo	Washer Disinfector 90C 7 Probes		AA89/359	1A	20/12/2012	09:45:46	000325	
C:\L0GSYS\ac000001\data\000326.mbf	Demo	Demo Porous Load		AA89/359	1A	20/12/2012	14:02:08	000326	
C:\L0GSYS\ac000001\data\000327.mbf	Demo	Benchtop N type 134C		AA89/359	1A	20/12/2012	14:03:00	000327	
C:\L0GSYS\ac000001\data\000328.mbf	Demo	Lab 121C Porous Type 6 Probes		AA89/359	1A	20/12/2012	14:04:16	000328	
C:\LDGSYS\ac000001\data\000329.mbf	Deno	Washer Disinfector 85C 12 Probes		AA89/359	1A	20/12/2012	14:05:25	000329	
C:\L0G5YS\ac000001\data\000330.mbf	Deno	Washer Disinfector 90C 7 Probes		AA89/359	1A	20/12/2012	14:06:16	000330	
C:\LDG/SYS\ac000001\data\000332.mbf	Deno	Porous Load 121C 7 Probes		AA89/359	1A	20/12/2012	14:09:58	000332	
C:\L0GSYS\ac000001\data\000333.mbf	Deno	Demo PHARMA		AA89/359	1A	20/12/2012	14:18:43	000333	
C:\L06/SYS\ac000001\data\000334.mbf	Demo	Demo PHARMA		AA89/359	1A	20/12/2012	14:19:20	000334	
C:\L06:SYS\ac000001\data\000335.mbf	Demo	Porous Load 121C 7 Probes		AA89/359	1A	20/12/2012	14:20:40	000335	
C:\L0GSYS\ac000001\data\000336.mbf	Demo	Porous Load 134C 12 Probes Chamber W	4	AA89/359		12/09/2013	11:57:35	000336	
C.\L0GSYS\ac000001\data\000337.mbl	Demo	Porous Load 134C 12 Probes Chamber W		AA89/359	12346	12/09/2013	11:58.39	000337	
PALANCIAL CONNERS ALL MANY AND ALL	Parent	Present Land State State State on Physics and		4.8-101-1901	17740	11.000.0010	10.000	000000	

• To filter these results, or change the heading selection, press 'Configure'. From this menu a different source file can be selected, and headings can be selected as either 'Shown' or 'Hidden'.

• Note For IPReports to import data, the 'File Name' header	must be in the	'Shown' colum	ın. Double
click the header name to move it from one column to the other	er.		

C:\LOGSYS	Job Reference			
C: [WIN7_0S]	✓ Chamber			
Gac.\	Date From:			C ON
LOGSYS	Date To:			C ON
014775	← Copied Files     ← Show import f	iles (CSV,H	Uncopied Files YD,UHH)	
Options	Shown		Hidden	
Keep deleted records     Treeview     Sort on date then time     Automatic list remake	File Name Operator Test Name	^ +	Copied Disk Deleted	

To view a previously run test, either double click the required cycle or select it and then press 'OK'
The cycle number will appear next to the 'Current Test' menu at the top of the page. To view information on this cycle, use the 'Chart' and 'Data List' buttons, or select 'Current Test' to view the entire menu.

# Data Management (Migrating to a new PC)

## On the old PC

Insert a memory stick into an available port
Select 'Data Management', then 'General'

调		Ger	hiving	2
hamber Records	Calibration Checking	Start Logging	<u>I</u> est Details	Chart
lect the correct a Management	drive for the memo	ry stick on the right	side	
Selection Into	Calibration (	Check	<i>et Drive details</i> Enter a Network dest	ination
Calibration Reco	rds <u>C</u> onfiguratio	n Files	e:	•
Tests selected Files: Space required	: [ 	Bytes Lom	c: [Windows7_U5] d: c: q: [Lenovo_Recovery ments ] et disk ID:	y]Get
Files processe	ed:	Spar	ce on target:	<b>434,167,808</b> B

# Select 'Configuration Files'

Selection Into		Target Drive or Network folder details
Iests	Calibration Check Records	Enter a Network destination
Calibration Records	<u>C</u> onfiguration Files	<mark>⊿</mark> e:▼
Tests selected:		
Space required:	Bytes	Comments Get Target disk ID:

Choose which files you wish to copy across

Basic Settings – which logger, heat Channel Configurations - including Security Settings – user IDs and pa Calibration Files – historic calibratio Chamber Records – copies chamber Test Specifications – including any	bath is set to default etc. labels etc. asswords on data er records (but not historic dat user defined Test Specs
🔁 Data Management	×
C:\LOGSYS	udit records
C: [WIN7_OS]	•
C/	A
COOSTS	
014775	
Basic Settings (Logger, Window positions,	etc)
CHANNEL CONFIGURATION	
Security Settings	
Calibration Files	
Chamber Records	
✓ Test Specification	
Cancel	<u>o</u> k

• Press OK. A folder called 'Logsys will be created on your memory stick.

• Safely eject the memory stick from the first PC, and insert it into a spare slot on the destination PC

• Copy the Logsys folder from your memory card and paste into your C:/ drive. When warned that a file with this name already exists, choose 'Copy & Replace'

### Setting Up Wireless Loggers In TQS v6

 Install the Madgetech driver by running the 'PreInstaller.exe' application supplied (found in the 'USB' folder)

Date modified	Туре	Size
24/07/2014 14:00	File folder	
24/07/2014 14:00	File folder	
31/08/2010 10:50	Setup Information	2 KB
31/08/2010 10:50	Application	180 KB
31/08/2010 10:50	Configuration sett	1 KB
31/08/2010 10:50	Security Catalog	9 KB
	Date modified 24/07/2014 14:00 24/07/2014 14:00 31/08/2010 10:50 31/08/2010 10:50 31/08/2010 10:50 31/08/2010 10:50	Date modified         Type           24/07/2014 14:00         File folder           24/07/2014 14:00         File folder           31/08/2010 10:50         Setup Information           31/08/2010 10:50         Application           31/08/2010 10:50         Configuration sett           31/08/2010 10:50         Security Catalog

Open TQSoft and select 'Logger', then 'Select type of Logger/Recorder



 From the dropdown box, select 'Battery Loggers (Madgetech, TMI, Gemini), ensure 'Madgetech' is ticket, then 'OK'

oggers: latterv Loager:	s (MadgeTech. ]	FMI. Gemir
I Madaete	chi	
🗆 Gemini		
ancel	Test Connection	<u>O</u> K

The 'Start Logging' button will be replaced with a new icon. Please see 'Programming Wireless Dataloggers' for more information on performing a test.

# Programming wireless dataloggers through TQS v6

• Select the Wireless Logger button

連	P	<b>B</b>	26
Chamber Records	Calibration Checking		Iest Details

•Select 'Start Logging'

Battery Loggers (MadgeTech, TMI, Gemini)					
LOGGERS CONNECTED					
Cancel Refresh Start Logging Download Tests					

• Select the correct chamber from the dropdown menu (previously set up through 'Chamber Records', and ensure the cycle number is correct, then press 'Next'

Start Logging			
Chamber Name: Cycle <u>N</u> umber:	Loan Machine 000001	Chamber	
< Back		Nex	b l

• Select the correct test specification, then press 'Next

Select a jest :	spec:	
縃 Test Spe	cification	A
Ste	nilizing temperature	
	Benchtop B Type 134C	
	Benchtop N type 134C	
	Benchtop S Type 134C	
-	Bmm Lab 121C Full Load Media Yearly	E
	Bmm Lab 121C Media Auto Control	
	Bmm Lab 121C Simplified PRO Quarterly	
	Bmm Lab 126C Mixed Discard Auto Control	
	Bmm Lab 126C PRQ Mixed Discard Yearly	
	Bmm Lab 126C Small Load Mixed Discard Quarterly	
	Bmm Lab 134C Fabric/Prion Auto Control	
	Demo EN554 < 800 litres	
	Demo Facilities Monitoring	
	Demo PHARMA	
	Demo Porous Load	
	Demo Porous Load with I Calcs	
	Fluids 121C 12 Probes	
	Fluids 121C 6 Probes	
	Fluids 121C Simplified Thermometric Test	
	Lab 121C Fluid Type 12 Probes	
	Lab 121C Fluid Type 6 Probes	
	Lab 121C Fluid Type Simplified Thermometric Test	
l	Lab 121C Porous Type 12 Probes	-

• Enter a suitable Job Reference, then press 'OK'

Job Reference:	Thermometric Te	stSL	Auto 🚽
Add Test to Report	Г	More 🔹	

• Highlight the logger in the USB cradle (showing the green tick). Drag and drop into the required location on the left.

• Set the start time as required, then press 'Program' to send this information to the logger

est Spec	LOGGERS CONNECTED	
Benchlop N type 134C 1. Tmp1. Drain << P28988[1] 2. Tmp2. Load 3. Tmp3. Resevoir 16. Press, Pressure	P28988	Serial No. N58864 Model Temperature Recorder Firmware 3.0 Start Time: 30/D4/2014 08:48:00 Date Calibration 11/12/2013
		No. Scans 244 PC Time Zone
		Date of test           14/07/2014           Start Time:           14:17:40

• Put the next logger in the cradle and repeat steps 5 and 6.

• Repeat steps 5 and 6 until all loggers have been programmed and allocated to a location, then press 'OK'



• The screen will revert back to the TQSoft home screen. Your loggers are now programmed and ready to put into the chamber. Logging will start at the time specified, so ensure that the cycle is started after this.

# Downloading data from wireless loggers through TQS v6

Select the Wireless Logger button

潮	P	de la	26
Chamber Records	Calibration Checking		<u>I</u> est Details

• Select 'Download Tests'

Battery Loggers (MadgeTech, TMI, Gemini)
LOGGERS CONNECTED
Cancel Refresh Start Logging Download Tests

• Highlight the test you wish to download. This will also show you which loggers have been allocated to this test. If you have started multiple tests with different loggers, these will all show on the left column. Click 'Next'

Battery Loggers (MadgeTech, TML, Gemini) &St OPEN LOGGER TEST 14/07/2014 Benchtop N type 13	top Logging OGGERS P28988 N58864 P28224	Benchtop N type 1 Date of test: Start Time: Chamber Name: Cycle Number	34C 14/07/2014 14:26:57 Loan Machine 000001_1	
< <u>B</u> ack		Delete		<u>N</u> ext >

• Highlight the connected logger (shown in bold type), and select 'Download'

Battery Loggers (MadgeTech, TMI, Gemini)		
Test Spec	LOGGERS CONNECTED	
Benchtop N type 1340           1. Tmp1, Drain           2. Tmp2, Load << N58864[1]	P28988	Serial No. P28224 Model High Temperature Pressure Record Firmware 3.0 Start Time: 14/07/2014 14:25:17 Date Calibration 21/01/2014 No. Scans 1313 PC Time Zone UTC Voltage Error Error
< <u>B</u> ack	Add Covera	oad <u>O</u> K

• Change the logger in the USB cradle and repeat the process until all loggers show the green 'Downloaded' arrow, then press 'OK' to collate the data from all loggers.



• You can now display the chart or datalist in TQSoft by selecting the 'Chart Display' or 'Data Listing' button as normal, and enter any required stage lines using the 'Enter Stage' button.

APPENDIX 1 – Required stage lines for use in IPReports • For all Sterilisers, the Verification of Calibration Stage is optional.

For Porous Load the following Stages must be used

- Cycle Started
- Negative Pulsing
- Positive Pulsing
- Heat Up
- Equilibration Start
- Sterilisation Start
- Machine Sterilisation Start
- Machine Sterilisation End (Drying)
- Sterilisation End
- Air Admission
- Cycle Complete

For Fluid Load the following stages must be used

- Cycle Started
- Free Steaming
- Heat Up
- Equilibration Start
- Sterilisation Start
- Machine Sterilisation Start
- Machine Sterilisation End (Cooling)
- Sterilisation End
- Vent
- Cycle Complete

For Laboratory Loads the following stages must be used

- Cycle Started
- Negative Pulsing (if applicable)
- Positive Pulsing (if applicable)
- Free Steaming (if applicable)
- Equilibration Start
- Sterilisation Start
- Machine Sterilisation Start
- Machine Sterilisation End (Cooling/Drying)
- Sterilisation End
- Air Admission

For N Type Autoclaves the following stages must be used

- Heat Up
- Equilibration Start
- Sterilisation Start
- Machine Sterilisation Start
- Machine Sterilisation End (Condensing)
- Sterilisation End
- Cycle Complete

For B Type Autoclaves the following stages must be used.

- Cycle Started
- Start Pulsing
- Heat Up
- Equilibration Start
- Sterilisation Start
- Machine Sterilisation Start
- Machine Sterilisation End (Condensing)
- Sterilisation End
- Drying
- Cycle Complete

For Washer Disinfectors the following stages must be used

- Cycle Started
- Disinfection Start
- Machine Disinfection Start
- Machine Disinfection End
- Disinfection End
- Cycle Complete

For LTS the following Stages must be used

- Cycle Started
- Leak Rate
- Negative Pulsing
- Heat Up
- Sterilisation Start
- Machine Sterilisation Start
- Machine Sterilisation End (Drying)
- Sterilisation End
- Air Admission
   Cycle Complete

## **APPENDIX 2 – Frequently asked questions**

## My Fluke Netdaq is not communicating with TQSoft – but it was working yesterday!

The issue is probably with the IP address which Windows uses to communicate with the logger. Windows usually assigns this automatically to communicate with the internet, so Windows may have reassigned your IP address to do this rather than communicate with the logger (this is will certainly happen if you use the Ethernet cable to attach to a modem). To re-establish communication, follow the 'Setting up the Fluke Netdaq Logger' guide on page 25 (N.B there is no need to install the driver again)

# My pressure calibration looks wrong! I am getting a reading of 1.2 in TQSoft when my gauge reads 1 bar.

Note that both the low and high point during calibration of pressure are displayed in Volts rather than as a pressure scale. The correct pressure reading will be displayed when you reach the check point. Note that, depending on the pressure transducer power supply you are using, the voltage received at 1 bar (atmospheric pressure) is approximately 1-1.2 volts.

## I am getting a reading of -327.67 degrees on one of my thermocouples - why is this?

-327.67 is the lowest value possible from a thermocouple (equating to 000000 in a binary output). This therefore indicates an open circuit thermocouple, which should therefore be replaced or repaired, and then recalibrated.

## One of my thermocouples is marked as 'OFF' when it should be ON - why is this?

If a thermocouple fails calibration, TQSoft will automatically turn this thermocouple off so it cannot be used. You should therefore remake and recalibrate this thermocouple. Ensure the channel is turned on in the Channel Configuration (under 'Setup')

# I am trying to log into TQSoft, and a message has appeared telling me the login details are not valid. Help!

TQSoft will only allow 3 incorrect attempts to log in before the user account is locked out to maintain security. To log in again you will need to reset your user accounts – please contact Isopharm for information on how to do this.

# I am getting fluctuating temperature readings when the temperature should be constant/temperatures are spiking during calibration.

This is probably due to electrical interference, either from a 'dirty' electrical supply or an unshielded magnetic source around the site (water or pressure pumps are common sources, in much the same way as hairdryers etc. used to interfere with old TV sets). This can usually be corrected by earthing the datalogger (using the earth point at the rear of the logger) to a suitable earth point.



# **TQReports Training Course**

## **Reminders from TQSoft Training**

- For TQReports to work correctly and do the thermometric analysis for you, we have to use the 'string' of letters to identify where the thermocouple is. Please note this is only important for Autoclave Testing. You can still describe the Pressure as Chamber Pressure if you wish, but you must have the word Pressure in the location description to work.
  - Chamber Pressure Sensor
    - PRESSURE
  - Drain/Vent SensorChamber Free Space Sensor
  - Test Pack Sensor
  - Top Pack Sensor (Top Sheet)
  - Bottom Pack Sensor
  - Water Reservoir Sensor
- DRAIN or VENT or DISCHARGE FREESPACE PACK or LOAD TOPSHEET
- BOTTOM RESERVOIR
- This is done in the location area in the Test Specification OR the Test Details area of TQSoft under the Probes selection.

Test Specification SY0014.pa2							
Gei	neral	Calculations	Lethality	(Probes)	Stages	I-calc List	I-calc Specs
No.	Label	Location					
1	Tmp 1	Drain					
2	Tmp 2	Load					
3	Tmp 3	Free Spa	ice				Select Probes
16	Press	Pressure	;				
<u>C</u> an	icel						<u> </u>

• For the Automatic Control Test Templates to work correctly the following stages have to be inserted into TQSoft.

For Porous Load the following Stages must be used

- Negative Pulsing
- Positive Pulsing
- Heat Up
- Machine Sterilisation Start
- Sterilisation Start
- Machine Sterilisation End (Drying)
- Sterilisation End
- Air Admission





## For Fluid Load the following stages must be used

- Free Steaming
- Heat Up
- Machine Sterilisation Start
- Sterilisation Start
- Machine Sterilisation End (Cooling)
- Sterilisation End
- Vent

## For Laboratory Loads the following stages must be used

- Negative Pulsing (if applicable)
- Positive Pulsing (if applicable)
- Free Steaming (if applicable)
- Machine Sterilisation Start
- Sterilisation Start
- Machine Sterilisation End (Cooling/Drying)
- Sterilisation End
- Air Admission

### For N Type Autoclaves the following stages must be used

- Heat Up
- Machine Sterilisation Start
- Sterilisation Start
- Machine Sterilisation End (Condensing)
- Sterilisation End

For B Type and S Type Autoclaves the following stages must be used.

- Start Pulsing
- Heat Up
- Machine Sterilisation Start
- Sterilisation Start
- Machine Sterilisation End
- Sterilisation End (Condensing)
- Drying

For LTS the following Stages must be used

- Leak Rate
- Negative Pulsing
- Heat Up
- Machine Sterilisation Start
- Sterilisation Start
- Machine Sterilisation End (Drying)
- Sterilisation End
- Air Admission

### For Washer Disinfectors the following stages must be used

- Disinfection Start
- Machine Disinfection Start
- Disinfection End
- Machine Disinfection End





• To Start TQReports click on



• It then loads the software.

A TOReports							() (B 🛛
File Edit Verv I	tiende An Lie de						
Site Nacine	Report PDP, Print Designe	é					
Popert Folders	2			Tendulare Polders	9015 II Load II Load II Load II Load II Dipt E JTspe N Montes Encope Invore vormit after Didn'instanc		
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- On the Left hand side is your own ACTION area where you actually store and compile reports.
- On the right hand side is the TEMPLATE area, where all the templates are stored for all HTM2010 and HTM2030 applications and TQSoft information such as charts, data listings and calibration reports. You also store all your own pictures, images, word and excel documents and PDF documents here.
- If we go to the Templates side and double click on the !Sections folder in the template area.

Template Folders	
🛨 🔚 !My Gr	oups
🚊 💮 🦲 !Sectio	ns
	Browse for file
÷	Documents
÷	Images
	Autoclave
•••••••	Declarations
•••••	Default
• • · · · · · · · · · · · · · · · · · ·	Eschmann
•	Example
• • • • • • • • • • • • • • • • • • •	Fluid Load
• • · · · · · · · · · · · · · · · · · ·	Laboratory
• • · · · · · · · · · · · · · · · · · ·	LTS
• • · · · · · · · · · · · · · · · · · ·	Porous Load
•	PQ
••••••	Summary
• • • • • • • • • • • • • • • • • • •	TQSoft
	UIU
<u> </u>	Washer Disinfector





• If for example we double click on the Porous Load folder, we can see all the templates that are specific for HTM2010 Porous Load Templates.



- NB Notice how the title of template starts with Porous Load\_xxxxx. This is how the templates are grouped together.
- If you have TQReports Designer you can double click on the template and it will open up the designer software with that template you have chosen.

1	ទេស	AND AN AND	Real Oracles	19144 (G. 1923	27.77 L	Lobel Property	Land and the second second
-						A Darte Date	Label-47 211
i. Nashketi	Thermon	settic Test for Small Los	ad			Algement	Laft.untity
wie tin.	Starilization Temp	1. 1	CITIZATION -	Validation		Appearance	Fat
		Erain		NUA		Recommenda	Telore 180
Start of Patiena Period	of Plateau renad	L090		NUM		"est Colour	
	Pree Space	-	NW:		Fank	MS Sare Sell	
	12	Pressure	-	NW		They County	2
	14	Grain		N/A C		Data Format	
Start of likeling Time	t of illelding Time	L080		NUM		Visble	Yes
		Pree Space		NUV :		Lock Pariety	United
	1	Pressure		NUA		Test-71.26	73 9992
	12	Grain		N/A		- FormLagout	
A84	of Helding Time	Loved		NA			the second s
		Tree Space		NUL ;			
	1	Prezoure		NU			
		Drain		NUA .			
Max Values During Holding Time		Lost		HL44			
		Yree Space		N.UA :			and the second s
	17 IS	Pressure		N/J			2.22
	12	Drwin		N.M.			
End of Holding Time	Lund		HLV4				
	Tree Space		N/A		Nayda		
		Pressure		NUA .			
		Exultoration trate:	78/050	NUM YMPOSO			
	Max ditY Drain J Free opace 1 e	enute Into Plateau Period		NU			
Miss diff Drain I free space for remainder of Padeau Pediod		minder of Pinkeuu Period		NA Text-71			
Drain Nuctuation		Drain Suctuation		NA			
		Load Nuctuation		NG:			
	Max difference t	between Drain and Load		NUX			
		Good a second state of the second	and comparison of the	true becomment			





• Now go to the ACTION side of the screen.

6-

- Click on the Site button.
- Type in the location of your machine such as the Hospital Name or the Department of the hospital.
- Click on the Machine button. Machine
- Type in the serial number or the name of the Autoclave/Washer Disinfector.

66

You will repeat the process every time you want to add a new site or add a machine to that site



Click on the Report button to start a new Report.

Site Machine Report PDF/Print Designer

- Now for this example we are going to use a Porous Load Yearly Report however the same approach applies for any type of report.
- Go to the Template Area and Double Click on HTM2010 Porous Load Folder.







Now Click on the Porous Load Yearly and drag and drop to the Action Area into the New Report







• A list of empty templates that are required to be filled in with appear.

Report Folders	
IPDF	
🗄 — 🔲 🔄 Isopharm Sentry Hospi	tal
🚊 🔤 🗖 Autoclave No. 1	
	port
	Porous Load_PageHeader_Y
	Autoclave_Machine Details
	Autoclave_Calibration Test Instruments
	Autoclave_Safety Checks_Y
	Porous Load_Steam Non-Condensable Gas Test
	Porous Load_Steam Superheat Test
	Porous Load_Steam Dryness Test
	Porous Load_Vacuum Leak Rate Test_QYC
	Porous Load_Automatic Control Test_QYC
	Porous Load_Verification of Calibration
	Porous Load_Air Detector_Performance Test Small Load
	Porous Load_Air Detector_Performance Test Full Load
	Porous Load_Thermometric Test for Full Load_QYC
	Porous Load_Thermometric Test for Small Load_QYC
	PQ_Performance Re-Qualification
	Porous Load_Air Detector_Function Test
	Porous Load_Bowie-Dick Test_QYC
	Autoclave_Comments
	Summary_Porous Load_Yearly
	Summary_Verification of Calibration
D 🕒	Summary_Porous Load_Thermometric Test
	Declarations_Sterilizer Yearly

Now double Click on the Autoclave Machine Records. The Machine Records Template opens.

e cat non nop = n	reauy		
Import PDP/Print Save	Close		
Sev. 1.1.0002	Mac	hine Details	
Authority			
Hospital			
Date of Report	04/06/2007	Dates of Tests	
Machine	Manufacturer		-
2	Serial Number		
0	Reference number		
-WE	Model		
518	Usable Chamber Space		litres
0	Date of Mapufacture		

• Click on the Import Button




• This brings up a list of TQSoft's Historical Test

	TOPenerte							
	Tokeports							
	Hie Edit View Help Keady							
			- III)	∽ (	2			
	Site Machine Report PDF/Pri	int Design	Tools B	iack Con	tinue			
	Test Data 🍳 🗙 Validation Data 🔿 🗙							
	Show all reports	Loca	ate most recent !	55 tests	)			
	□ c: ▼	Calibrati Validatio Calibrati	on n on & Validation	×	<b>•</b>			
	<b>a</b> c:1	Time	Date	Machine	Cycle	JobRef	Test Name	File Name
(	S logsys	10:23:18	30/07/2007	14047A	6537_1	Huddersfield Royal Infirmary	121 Logging	c:\logsys\45656553\data\6537_1.mbf
$\sim$	127543	10:02:07	30/07/2007	14047A	6537	Hudderstield Royal Infirmary	126 Logging	c:\logsys\45656553\data\6537.mbf
	4343344	07:53:20	31/07/2007	1404/A	6538	Huddersfield Royal Infirmary	121 Logging	C:\logsys\45656553\data\6538.mDF
	<b>1</b> 45656553							
	5453465							
	54654765							
	566577							
	5/65/656 6544566							
	65454645							
	65765321							
	2921010							
	26565473							
	76567							
	81343 9 04EE34							
	92059023							
	ac000001							
	AC000002							

- On the left hand side you will see a directory list of your entire test from TQSoft.
- For example, if you double click on the logsys folder, you will see a list of all the machine serial numbers. If you double click on one of the serial number folders of your machines you will the tests completed for that machine only.
- If you press on Locate most recent test button, and with the left mouse button drag it towards the right, it will show a list of the most recent tests which is very handy if you're completing a report on your recent tests just completed.

Ŀ	TQReports								
File	e Edit View Help 🔺 Ready								
	Site Machine Report PDF/Pr	i int	Design	Tools Ba	;} ↓ ack Cont	م inue			
	Test Data • X Validation Data • X	29	936	13:26:05	09/08/200	)7 c:\log	isys\81343\data\2936.mbf		>
	Show all reports		Locat	e most recent t	est				
	<b>⊇</b> c: _		Calibration Validation Calibration	n n & Validation	×	-			
ЦĿ	🔄 c:\	_	Time	Date	Machine	Cycle	JobRef	Test Name	File Name
11	🔁 logsys		11:09:48	14/09/2007	AA89/359	000359		Demo Porous L	c:\logsys\ac000001\data\000359.mbf
Ш	123342		11:04:22	14/09/2007	AA89/359	000358		Demo Porous L	c:\logsys\ac000001\data\000358.mbf
Ш	127543		11:21:57	06/09/2007	AA89/359	000357		4 mins	c:\logsys\ac000001\data\000357.mbf
Ш	4343344		10:36:09	06/09/2007	AA89/359	000356		4 mins	c:\logsys\ac000001\data\000356.mbf
Ш	45656553		10:33:57	06/09/2007	AA89/359	000355		4 mins	c:\logsys\ac000001\data\000355.mbf
Ш	5453465		10:24:47	06/09/2007	AA89/359	000354		4 mins	c:\logsys\ac000001\data\000354.mbf
Ш	54654765		10:16:10	06/09/2007	AA89/359	000353		4 mins	c:\logsys\ac000001\data\000353.mbf
Ш	566577		10:02:50	06/09/2007	AA89/359	000352		4 mins	c:\logsys\ac000001\data\000352.mbf
Ш			11:02:17	27/08/2007	AA89/359	000351		Demo Porous L	c:\logsys\ac000001\data\000351.mbf
Ш	= 65454645		10:56:31	27/08/2007	AA89/359	000350		Demo Porous L	c:\logsys\ac000001\data\000350.mbf
Ш	65765321		18:15:34	26/08/2007	5453465	000351		Demo Porous L	c:\logsys\5453465\data\000351.mbf
Ш	72921010		14:42:39	22/08/2007	AA89/359	000349		Porous Load 13	c:\logsys\ac000001\data\000349.mbf
Ш	76565473		14:38:30	22/08/2007	AA89/359	000348		Porous Load 13	c:\logsys\ac000001\data\000348.mbf
Ш	76567		14:37:06	22/08/2007	AA89/359	000347		Porous Load 13	c:\logsys\ac000001\data\000347.mbf
Ш	81343		13:58:25	22/08/2007	AA89/359	000346		Demo Porous L	c:\logsys\ac000001\data\000346.mbf
Ш	845534		11:01:00	16/08/2007	57657656	000350		Demo Porous L	c:\logsys\57657656\data\000350.mbf
	92059023		14:07:00	15/08/2007	54654765	000348		Demo Porous L	c:\logsys\54654765\data\000348.mbf
	🚞 ac000001		15:16:30	14/08/2007	76567	000355		TMI	c:\logsys\76567\data\000355.mbf
	AC000002		13:26:05	09/08/2007	8928	2936	ST03A080807	Porous Load 1:	c:\logsys\81343\data\2936.mbf
	AC000003		13:26:05	09/08/2007	8928	2936	ST03A080807	Porous Load 13	c:\logsys\76567\data\2936.mbf
	AuditMaintenanceStore		14:16:21	31/07/2007	76567	000353 1		Demo Porous L	c:\logsys\76567\data\000353_1.mbf

• Once you have selected your test, it will then show the test your have selected next to Test Data. Then Press OK.





 Then the template is filled in. It takes the information selected from your Machine Details you entered in TQSoft

1 TQRe	ports						
File Edit	View Help 📐 Ready						
) Import	PDF/Print Save Close	9					
S	Rev. 1.1.0002	Machine Details					
- <b>T</b>	Authority	South Yorkshire NHS Trust					
2	Hospital	Sheffield Hospital					
*	Department	CSSD					
	Date of Report	05/06/2007	Dates of Tests	09/05/2007			
	Machine	Manufactur <del>e</del> r	Getinge				
2		Serial Number	92059023				
		Reference number	None				
INF		Model	BACS2000				
RTS.		Usable Chamber Space	litres				
EPOI		Date of Manufacture	2000				
QRI	Service Provider	ISL					

• The Yellow fields means that data can be entered manually here. For example you will notice that the Usable Chamber Space field is empty, but a yellow colour. This means we can now enter manually the Usable Chamber space details.

1 TQRe	ports								
File Edit	View Help 🔺 Ready								
• Import	PDF/Print Save Clo	] Jse							
Machine Details									
	Authority	South Yorkshire NHS Trust							
9	Hospital	Sheffield Hospital							
2	Department	CSSD							
	Date of Report	05/06/2007	Dates of Tests	09/05/2007	1				
	Machin <del>e</del>	Manufactur <del>e</del> r	Gelinge						
2		Serial Number	92059023						
		Reference number	None						
INF		Model	BACS2000						
RTS.		Usable Chamber Space	800	litres	]				
EPO		Date of Manufacture	2000		]				
140.	Service Provider	ISL			1				

- NB. Please note that you can click on the PDF/Print button if you wish just to print off this template only.
- Now Press Save and Close to complete the template.





• Also notice now that as you have completed (saved) the template the colour in the list goes green, indicating you have completed the template. The red ones are obviously unsaved templates that need to be completed.

Report Folders							
🔄 🗖 🔚 CancelledPrint:	lob.pdf						
Isopharm Sentry Hospital							
🖻 — 🔲 🤤 Autoclave No. 1							
	port-2007-05-09.92059023						
	Porous Load_PageHeader_Y						
	Autoclave_Machine Details						
	Autoclave_Calibration Test Instruments						
	Autoclave_Safety Checks_Y						
	Porous Load_Steam Non-Condensable Gas Test						
	Porous Load_Steam Superheat Test						
	Porous Load_Steam Dryness Test						
	Porous Load_Vacuum Leak Rate Test_QYC						
	Porous Load_Automatic Control Test_QYC						
	Porous Load_Verification of Calibration						
	Porous Load_Air Detector_Performance Test Small Load						
	Porous Load_Air Detector_Performance Test Full Load						
	Porous Load_Thermometric Test for Full Load_QYC						
	Porous Load_Thermometric Test for Small Load_QYC						
	PQ_Performance Re-Qualification						
	Porous Load_Air Detector_Function Test						
	Porous Load_Bowie-Dick Test_QYC						
	Autoclave_Comments						
	Summary_Porous Load_Yearly						
	Summary_Verification of Calibration						
	Summary_Porous Load_Thermometric Test						

- Now repeat the Process for the Autoclave Calibration of Test Instruments
- Double click on the template, then click import and select the test.
- Now watch the details import which comes from your Test Equipment selected in TQSoft.
- Now Save and Close as before.

L TQRe	ports								
File Edit	View Help	🔺 Re	eady						
• Import	PDF/Print S	E 5ave	Close						
ŝ	Rev. 11.0002 Test Equipment								
- <b>T</b>				Manufacturer	Model	Serial No.	Test House	Cert No.	Renew
0	Data Logge	r	F	Fluke	NetDAQ	MY44005786	Calmet	57045	22/06/07
<b></b>	Millivolt Sou	irce							
	Temp Ref S	ource	ŀ	sotech	Fastcal	25351-1	Calmet	57044	22/06/07
	Temp Ref P	robe	ł	(aye	KL25/60	90417			
2	Press Ref U	Init	[	Druck Text-4	DPI603	60305142	LTE	6665656	22/06/07

• Again the template now goes Green as it has been saved and completed.





- Double Click on the Autoclave Safety Checks template.
- From the drop downs you can select N/A, Yes or No. (or you can TAB through and make the changes with the keyboard)
- Also as all templates are in yellow, you can change or even add to the descriptions of the safety checks performed.

PDF/Print Save Close	
Rev. 110002 Yearly Sa	nfety Checks
Safety Check	Completed Comments
Safety valve(s) operation	Yes
Condition of door seal	Yes 👻
Door interlocking mechanism	Yes
Door interlock pressure operation	No.
Door steam generation / admission interlock	No
Housekeeping	Yes N/A
Daily record check	
Weekly record check	No
Quarterly record check	
Yearly maintenance	No
Results	Page -

• Also note that the results section has Green text for Pass and Red text for Fail. The fail will be printed out in RED when this is printed out on a colour printer.

	NewReport 2007-05-09.92059023		Page 1 of 1
S	Rev. 11.0002 Yearly Safe	ety Checks	
쑵	Safety Check	Completed	Comments
0	Safety valve(s) operation	Yes	
믔	Condition of door seal	Yes	
2	Door interlocking mechanism	Yes	
炴	Door interlock pressure operation	Yes	
2	Door steam generation / admission interlock	Yes	
-	Housekeeping	N/A	Λ.
1	Daily record check	No	not required
1	Weekly record check	N/A	
2	Quarterly record check	Yes	6
- 8	Yearly maintenance	Yes	
10		N/A	
10		NIA	
	Results	Fail	





- Now go to the Porous Load Steam Dryness Test Template
- What you will see here is an example of how TQReports can calculate the Dryness Value for you.

1 TQRe	ports	
File Edit	View Help 📐 Ready	
) Import	PDF/Print Save Close	
Ś	Rev. Steam Dryn	ness Test
τ.	Cycle No. 00001	
9	Weight of flask assembly when empty	M1 = 669.9 g
*	Weight of flask assembly + cold water	M2 = <mark>1294.5</mark> g
	Initial weight of water in flask	Mw = M2 - M1 = 624.60 <sup>g</sup>
	Initial temperature of water in flask	To = 16.45 C 🖵
2	Average temperature of steam delivered to Sterilizer	Ts = 150.20 °C
	Final temperature of water and condensate in flask	<b>T1 = 79.9</b> °C
INF	Weight of flask assembly + condensate collected	M3 = 1371.5 <sup>g</sup>
RTS	Weight of condensate collected	Mc = M3 - M2 = 77.00 g
EPO	Latent heat of dry saturated steam at temperature Ts	L = 2116.16 kJ/kg
TQR1	Dryness value (T1 - To) (4.18Mw + 0.24) / (LMc) - 4.18(Ts - T1) / L	D = 0.97 Validation N/A
L'MMA	Result	Pass 🗸 🗸
IM		HTM 2010 - 9.30

- You can see that if you put in the values shown in the yellow boxes for example, the calculation fields in white are then calculated for you. These are known as function calculations.
- You can repeat these processes for templates such as Vacuum Leak Rate Test, Steam Superheat and Non Condensable Gasses.

TQRe	ports					
Edit	View Help 🔺 Ready					
• mport	PDF/Print Save Incomplete Close					
Ś	at					
to		Before ins Instr	ertion of test uments.	After insertion of test Instruments.	After removal of test Instruments.	
8	Cycle Number	5020				
	Absolute Gauge Reading (Pump stopped)	20	mbar 👻	mbar	mbar	
	Absolute Gauge Reading after 5 minutes	25	mbar	mbar	mbar	
2	Absolute Gauge after further 10 minutes	35	mbar	mbar	mbar	
	Rise in Pressure between Readings	10.0	mbar	mbar	mbar	
INF	Vacuum Leak Rate	1.0	mbar'ının	mbar\min	mbar'ımin	
TS.	State PASS/FAIL	Pass	-	N/A 👻	N/A 👻	
0		·,			HTM 2010 - 11.2	

- This is a good example of a template that is partially complete. Here we can save the template by pressing Incomplete.
- This will save the template, but the template in the list is Amber showing it needs to be returned to later, to complete the template.





- Double Click on Porous Load Automatic Control Test.
- Press the import button and select a TQSoft cycle known to have the following stages in. (If you don't have a porous load cycle pick one you do have and make sure it has the correct stages in (See page 1)).
- Porous Load for example has
- Negative Pulsing
- Positive Pulsing
- Heat Up
- Machine Sterilisation Start
- Sterilisation Start
- Machine Sterilisation End (Drying)
- Sterilisation End
- Air Admission

Rev. 1.10005 Porous Load Automatic Control Test											
1.1.0005 Cycle No. 000349	Sterilisation Temp	Commissio	ning 👻	Validation							
		Minimum Vacuum	-0.0743	Har -	N/A						
	Negative Pulsing 👻	Maximum Vacuum	-0.7563	Bar	N/A						
		Number	5		N/A						
Air Removal		Duration	00:02:39	hh:mm:ss	N/A hh:mm:ss						
	·	Minimum Pressure	0.4067	Bar	N/A						
	Positive Pulsing	Maximum Pressure	1.4815	Bar	N/A						
		Number	3		N/A						
		Duration	00:01:29	hh:mm:ss	N/A hh:mm:ss						
		00:08:10	hh:mm:ss	N/A hhimmiss							
		00:00:46	hh:mm:ss	N/A hhimmiss							
	Indicated Pressure	Start	2.2	Bar 👻	N/A						
		Mid	2.3	Bar	N/A						
		Max	2.4	Bar	N/A						
		End	2.35	Bar	N/A						
		Start	134.5	°C 🗸	N/A						
	Indicated Temperature	Mid	134.6	°C	N/A						
	~ .	Max	135.6	°C	N/A						
		End	134.2	°C	N/A						
Steam Admission and		Start	2.23	Bar 👻	N/A						
Sterilizing	Recorded Pressure	Mid	2.35	Bar	N/A						
		Max	2.43	Bar	N/A						
		End	2.22	Bar	N/A						
	S 2	Constant of the second s	and a start of the start of the								

- You notice that all the time durations and the max and min pressures and vacuums for the air removal stage and the measured temperature and pressure for the sterilising stages have been automatically filled in for you.
- To complete the template all you have to fill in are the recorded and indicated temperatures and pressure saving time completing the template.
- Press Save and then Close.
- Complete the templates Verification of Calibration, Air Detector Performance Test full load and Air Detector Performance Test small load.
- NB for Air Detector Performance Test full load and Air Detector Performance Test small load templates you can you the import button to calculate the temperature depression.





- Now double click on the Thermometric Test for Full Load.
- Press Import Data and pick the correct cycle.

port PDF/Print Save Close			
D Bev Then	mometric Test for Full	Load	
Cycle No. 000349 Sterilisation Temp	134.0 °C		Validation
0	Drain	133.90 🔽 👻	N/A
Start of Plateau Period	Load	133.90 °C	N/A
	Top Sheet	134.10 °C	N/A
	Pressure	1.9968 Bar 🗸	N/A
2	Drain	134.10 °C	N/A
Start of Holding Time	Load	134.10 °C	N/A
- INF	Top Sheet	134.30 °C	N/A
518	Pressure	2.0149 Bar	N/A
EDO	Drain	135.90 °C	N/A
Mid of Holding Time	Load	136.00 °C	N/A
E 781/	Top Sheet	136.10 °C	N/A
1/1	Pressure	2.1982 Bar	N/A
	Drain	136.00 °C	N/A
Max Values During Holding Time	Load	136.20 °C	N/A
	Top Sheet	136.30 °C	N/A
	Pressure	2.2119 Bar	N/A
	Drain	134.00 °C	N/A
End of Holding Time	Load	134.30 °C	N/A
	Top Sheet	134.40 °C	N/A
	Pressure	2.2102 Bar	N/A
	Equilibration time	0:01 mm:ss	N/A mm:ss
	Top Sheet Fluctuation	0.15 °C	N/A
	Drain Fluctuation	0.15 °C	N/A
	Load Fluctuation	0.20 °C	N/A
Max differen	ice between all Load Probes	0.30 °C	N/A

- Again as you can see all the fields are calculated.
- Repeat the process for a Thermometric Test Small Load.
- Just to repeat. For these templates to work correctly you must have the correct name in the location area under Probes in the Test Specification. If these are not correctly entered you can go to TQSoft, and select the correct cycle using Historical Tests. Then click on the Test Details Tab, go to Probes and edit the locations from there.
- For example The Full load has to have a Top Sheet probe and the Small load must have a free space probe. Obviously both tests have to have a drain and centre of pack probe.
- Use these Locations listed below, and TQReports does the rest.

•	Chamber Pressure Sensor	PRESSURE
•	Drain/Vent Sensor	DRAIN or VENT or DISCHARGE
•	Chamber Free Space Sensor	FREESPACE
•	Test Pack Sensor	PACK or LOAD
•	Top Pack Sensor (Top Sheet)	TOPSHEET
•	Bottom Pack Sensor	BOTTOM
•	Water Reservoir Sensor	RESERVOIR

- Repeat the process for the Performance Re-Qualification Template
- Complete the Air Detection Function Test and the Bowie Dick Test and fill in any comments in the Autoclave Comments template.





- The Summary Reports are optional.
- The Machine Details can be imported from the machine details information in TQSoft by using the Import button as before.
- The rest is filled in manually giving a pass or fail criteria and a summary of the results.

Rev. 1.1.0002		Poro	us Loa	d Ye	early Sumn	nary						
Authority	South Yorksh	ire NHS Trust										
Hospital	Sheffield Hos	pital										
Department	CSSD											
Date of Report	05/06/2007 1	5:24:22			Dates o	of Tests	09/05/2007					
Steriliser	Manufacture	er			Getinge							
	Serial Numb	er			92059023							
	Reference n	umber			None							
	Model				BACS2000							
	Usable Char	nber Space			800		litres					
	Date of Man	ufacture			2000							
Service Provider		ISL										
Results of Yearly Test	s											
Tests as Specified in	hHT2010	Ref	Pass/F	ail	Cycle No.		Res	ult				
Safety checks		5.8	Pass	-	N/A							
Steam non-condensable gas	s test	9.4	Pass	-	0001/02/03	Concentration	of NCG	3.2	%			
Steam superheat test		9.20	Pass	-	0004	Superheat	22	-				
Steam dryness test		9.30	Pass	-	0005	Dryness Valu	e	0.97				
Vacuum leak test (before se	nsors)	11.2	Pass	-	0006	Leak rate		2	ibar'min 👻			
Vacuum leak test (sensors i	nserted)	11.2	Pass	-	0007	Leak rate		3	mbar'ımin			
Automatic control test		12.1	Pass	-	0008	ST selected	134 🛛 👻	ST hold time	00:03:00			
Verification of calibration		12.2	Pass	-	0008	See below						
Air detector performance te	st small load	11.45	Pass	-	0009	Leak rate		5	mbar'ının			
Air detector performance te	st full load	11.53	Pass	-	0010	Leak rate		4	mbar'min			
Thermometric test full load		13.15	Pass	•	0011	See below						
Thermometric test small load		13.7	Pass	-	0012	See below						
Performance Re-Qualificatio	n	8.64	Pass	-	0013	See Performa	nce Re-Qualifi	ication Test (if	applicable).			
Vacuum leak test (sensors i	removed)	11.2	Pass	-	0015	Leak rate		4	mbar'ının			
Air detector function test		11.60	N/A	-	0016	Air Detector S	Setting		mbar 👻			
Bowie-Dick test for steam p	enetration	13.39	Pass	-	0017	Type of Test I	Pack	Brownes				

- You can repeat this process for the Summary Thermometric Test and the Summary of the Verification of Calibration.
- Now double click Declarations Steriliser Yearly.
- Click in the box were it has a Test Person Signature

🛂 TQRe	ports		
File Edit	View Help 🔺 Ready		
) Import	DF/Print Save Close		
<b>r</b> OReports	<ul> <li>DECLARATION OF TEST PERSON (STERILIZERS)</li> <li>1. All test instruments have current calibration certificates.</li> <li>2. Calibration of the temperature test instruments has been checked before and</li> <li>3. The yearly/revalidation checks and tests have been completed and confirm th commissioning and performance qualification data collected during validation to Test Person Signature</li> </ul>	after the thermometric tests. at the sterilizer is safe to use and that remain valid. Print Name Date	Rev. 11.0002
REPORTS.INFO	DECLARATION OF USER I have reviewed the records with the Test Person and declare the Autoclave is User Signature	fit for use. Print Name Date	

• You have just click on an image Box so the images window opens.





Browse for File				? 🔀
Browse for File Look in: My Recent Documents Desktop My Documents My Documents	Images ChartPlacehol EschmannLog EschmannLog Example_Loge Example_Loge TotothermPro Signature.SB	↓ der.jpg o02.gif o03.jpg o_Image.bmp o_Image.jpg duct.jpg p p	← € <sup>*</sup> <sup>*</sup> <sup>*</sup> <sup>*</sup>	
My Network Places	File <u>n</u> ame: Files of <u>type</u> :	signatureRSB.jpg Supported Image files (*.bmp;*.jpg;*.	gif)	<u>O</u> pen Cancel

- So for example you can bring in a jpeg of your signature, so you will not even have to print out your report when you make the Report into a PDF.
- This process can be done if you wish to import any images into your report, for example maybe a digital picture of a schematic diagram of the thermocouple layout in your autoclave or for the cleaning efficacy test of your washer disinfector
- To create templates of your own like this you can purchase TQReports Designer package, so you can design your own template to allow importing your own images.
- The Signature will appear in a signature box as shown.

ort PDF/Print Save	L Close		
DECLARATION OF T 1. All test instruments 2. Calibration of the te 3. The yearly/revalids	TEST PERSON (STERILIZERS) s have current calibration certificates. emperature test instruments has been checked bef ation checks and tests have been completed and c	iore and after the thermom onfirm that the sterilizer is	Rev. 11.000; etric tests. safe to use and that
🖤 丨 commissioning and	I performance qualification data collected during values	alidation remain valid.	
Commissioning and Test Person Signatur	e	ilidation remain valid. Print Name Date	John Doe 01./06/2007

If you do not wish to do this and wish to create a blank box, right click in the box and click on Blank, and then add in a comments box if you wish.

	ports						
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Reports	DECLARATIO 1. All test instr 2. Calibration o 3. The yearly/r commissioni	N OF TEST uments hav of the tempe revalidation ing and perf	PERSON (ST e current cal rature test in checks and t formance qua	ERILIZERS) ibration certific struments has ests have beer alification data o	ates. been checked before n completed and conf collected during valide	e and after the thermometric tes irm that the sterilizer is safe to r ation remain valid.	Rev. 1.2.0006 ts. use and that
Ż	Test Person Si	ignature	Starts		Paste	Print Name Date	
EPORTS.INFO	DECLARATIO I have reviewe User Signature	N OF USER ed the recor	ds with the T	est Person and	declare the Autocla	ve is fit for use. Print Name Date	



- Now we are going to import TQSoft information into our report
- In the Template section double click on Add TQSoft





• Now double click on all the Sub Folder such as Calibration Check, Calibration and TQSoft.



• Now for example drag over the TQSoft Calibration Report and position it just above the Automatic Control Test and drag over TQSoft Chart A5 under the thermometric test for small load **twice** and also move over the TQSoft DataList and Test Notes underneath the charts. Also put the Calibration Check underneath the Performance Re-Qualification so it looks something like this.







- Double click on the TQSoft Calibration (if you have done one).Click Import and select the test.
- You will find a Temperature Calibration and a Pressure Calibration

Rev. 1.2.0006					Calibration Report									
Job Reference: Data file Refer Thermocouple	: l ence: d Set: (	Hudders c:\logsy Calibrati	field Ro s\45656 on Set 1	yal Infir 5553\da I	mary ta\6538	BA.clb					Test Date: 30/07/2007 Start Time: 08:07:38			
Equipment	Logger	/ Record	ler	Temp	o. Ref. So	ource	Pr	essure Re	ef. Unit					
Manufacturer Model Serial Number Test House Cert. Number Renewal Date	Agilent 349704 MY410 Agilent 349704 10/03/	4 106717 Technold 4MY4401 '07	ogies 3243	Isote Calisi 2425 CMS T365 14/1	ch to 2140B 2/3 L 185 1/07		Fli 71 91 CN 50 23	ike 8 100G 31056 4SL 847 //03/08						
Setpoints	Program	mmed		Refe	rence									
Low High 1st Check	50 °C 140 °C 124 °C			50.11 140.1 124.1	7 °C 16 °C 12 °C									
Stability Set-up	)													
Allowed deviation Reference stability Report after Calibr Report maximum o	from refer y criteria : ration even deviation a	ence : ry : allowed :	_	2 De .02 D 15 S .5 De	grees )egrees fi econds fo egrees	or 1 Minu or 2 Minul								
Low Point	50.17 °	°C Stability	Report											
Start at : 08:07:59 Reference Chang	) e:0.02 °C	2		Stabi Maxi	Stability requirements met at : 08:17:49 Maximum sensor change over last minute :					Elapsed Time : 00:09:51 : 0.09 °C				
Channel Change (°C)	<b>1</b> 0.05	<b>2</b> 0.06	<b>3</b> 0.05	<b>4</b> 0.06	<b>5</b> 0.04	<b>6</b> 0.09	<b>7</b> 0.04	<b>8</b> 0.06	<b>9</b> 0.05	<b>10</b> 0.05	<b>11</b> 0.04	<b>12</b> 0.04		
Lo <del>w</del> Point	50.17 °	'C Qualific	ation Re	port										
Time 08:17:49 Ref. 50.17 °C Deviation (°C)	1 50.59 0.42	<b>2</b> 50.81 0.64	<b>3</b> 50.97 0.80	<b>4</b> 50.97 0.80	<b>5</b> 51.00 0.83	<b>6</b> 51.19 1.02	<b>7</b> 50.98 0.81	<b>8</b> 51.04 0.87	<b>9</b> 50.92 0.75	<b>10</b> 50.92 0.75	11 50.85 0.68	<b>12</b> 50.89 0.72		
Low Point	50.17 °	'C Post C	alibration	Report										
Time 08:18:04 Ref. 50.18 *C Deviation (*C)	50.18 0.00	50.20 0.02	50.20 0.02	50.19 0.01	50.18 0.00	50.18 0.00	50.19 0.01	50.18 0.00	50.19 0.01	50.19 0.01	50.16 - 0.02	50.18 0.00		
Time 08:18:19 Ref. 50.16 °C Deviation (°C)	50.15 - 0.01	50.16 0.00	50.16 0.00	50.18 0.02	50.16 0.00	50.16 0.00	50.17 0.01	50.15 - 0.01	50.17 0.01	50.16 0.00	50.14 - 0.02	50.16 0.00		
Time 08:18:34 Ref. 50.17 °C Deviation (°C)	50.18 0.01	50.20 0.03	50.19 0.02	50.19 0.02	50.19 0.02	50.18 0.01	50.19 0.02	50.17 0.00	50.19 0.02	50.18 0.01	50.16 - 0.01	50.18 0.01		

## 📙 TQReports

PDF/Print	Save	Incomplete	Close				
Job Refer	ence:	Huddersfi	eld Roval Infirm	arv		Test	Date: 30/07/2007
Data file F Thermoco	leference: uple Set:	c:\logsys\ Calibration	45656553\data n Set 1	1\6538B.clb		Start	Time: 09:47:06
Setpoints	Prog	rammed	Refere	nce			
Low High 1st Check	400 350( 230)	mBA ) mBA ) mBA	400 3500 2300	mBA mBA mBA			
Low Point	400	mBA Quali	fication Report				
Time 09:48: Ref. 400 m Deviation (m	39 <b>16</b> BA 1.42 iBA)	21					
High Poin	t 350	0 mBA Qual	ification Report				
Time 09:50: Ref. 3500 Deviation (m	04 <b>16</b> mBA 4.52 iBA)	36					
Calibration	n Factor an	d Offset Re	sults				
Ch. Num.	High F	leference	High Measured	Low Reference	Low Measured	Status	
16	3500		4.5236	400	1.4221	Within Specification	
First Calib	ration Che	sk Point	2300 mBA Qua	lification Report			
Time 09:50: Ref. 2300	54 mBA 230( mBA) 0	)					





- Double Click on TQSoft Chart A5
- Import a recent test by using the import button.



- By clicking on the Probe Icons in the Top Left you can toggle On or Off the Probes.
- You can also Todgle On or Off the Grid, Legends, Stages and Limit Lines by clicking these buttons here.
- You notice that Stages times are staggered so they do not overwrite each other.
- Also you can move the Stage Descriptions up and down the Stage Line to eliminate the stage descriptions overlapping.
- Save and Close the Chart.





- Double click on the next TQSoft Chart A5
- Import the same chart as before.
- With the left mouse button, draw a zoom box over the area of the chart you wish to zoom into.



• Then click the left mouse button to zoom in.







- Miniuiouu
- Click on Miniview Button Miniview
- This brings up a Miniview of the graph but most importantly shows you the area of the chart you are zoomed into.



• You can reposition the Miniview and also move the zoom box within the Miniview to move the zoom box around the chart.







- If you click on Z Mode Z Mode You can move the zoom area to a position of your choice within the main window by keeping the left mouse button down. (You know when this is selected as you will see a hand appear as your cursor position).
- Position the chart via the Z mode back onto the sterilisation area of your chart.

82)



• NB Please note that if you now turn off the Z mode you can now zoom into the chart even further. Also note the cursor has a number on it telling you how many times you have zoomed in.

	205	8	-	1	##	腰	RN-	E	(4)		<b>a</b>			
PDF	/Print	Save	Close		Grid	Legend	Stages	Limits	Z Mode	Miniview	Comment			
Joi	Ref:				\$	Service Provi	idər:		ISL		Operator:	Russo	ll Baker	
Cy	cle No.: rial No.:	000349 920590	23		4	Site Name:		She	ffield Hospi	ital	Test Date: Test Name:	09/05. Demo	/2007 EN554 <	800 litres
0	Drain (1	mp 1)	Rese	rvoir (T	mp11)	i.			C: \ Logs	ys \ 9205	59023 \ Da	ta \ 00034		
•	Test pa	:k (Tmp 4)	12 Free	space (	Tmp12	9								
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• Press the right mouse button to zoom back out.





• Again make sure you are now zoomed in the sterilisation area of the chart and hit the

Comment button Comment

• A comment box appears on the chart.



• Grab the comment box and by using the left mouse button, re-position the box and you can also resize the box by stretching it out.







- Now type a message in the box.
- Then by clicking to the top left hand corner of the box, you can position or point to the area of the chart you are commenting on.



Now Save and Close

•

- Please Note that when you come to print off your report the Charts are A5 size . Therefore you will have the full blown chart and the Zoom in Chart on one A4 size page.
  - However if you wish to use the Chart A4 size you can do this by going here.







• Now Double Click on the TQSoft DataList.

HOW HOP	- Hoody		V										
ficia													
PDF/Print	Save In	complete Close	Full List Su	mmary Goto									
Rev. 1.2,0006	ev. Data List												
Job Ref: Cycle No.: 1	000359	Servic Site N	e Provider: ame: Example I	Test Name: Test Date: Stert Time:	Test Name: Demo Porous Load Test Date: 14/09/2007								
Seriar NO 1	Tmp 1	Tmp 4	Tmp 7	Tmp11	Tmp12	Press							
	*C	°C	*0	*	*	Bar							
	"C "C		tonsheet	bottomsheet	freespace	Dressure							
00.00.00	Cycle Started	1 toot poort	(openeet	Dottomericot	1100000000	Diosedito							
00:00:10	49.4	24.0	24.1	24.6	65.0	0.0091							
00:02:10	31.9	23.7	23.9	24.1	62.0	-0.9729							
00:03:16	Negative Puls	sina											
00:03:16	28.8	24.1	23.9	24.1	67.0	-0.9801							
00:04:16	85.1	25.1	25.8	40.3	84.8	-0.3661							
00:05:16	86.0	32.3	50.0	85.5	93.0	-0.3354							
00:05:55	Positive Pulsi	ng											
00:05:55	65.3	66.2	70.1	73.9	79.1	-0.7111							
00:06:55	125.4	125.5	125.7	125.4	130.7	1.2493							
00:07:24	Heat Up												
00:07:24	111.3	112.2	112.7	112.1	120.6	0.8057							
00:07:54	133.3	133.3	133.5	133.3	135.8	1.9328							
00:07:58	Sterilisation S	tart											
00:07:58	134.1	134.1	134.3	134.1	136.3	2.0149							
00:08:00	Machine Ster	ilisation Start											
00:08:00	134.4	134.4	134.5	134.3	136.5	2.0448							
00:08:10	135.1	135.1	135.3	135.1	136.7	2.1305							
00:08:20	135.3	135.4	135.5	135.3	136.4	2.1474							
00:08:30	135.5	135.5	135.7	135.4	136.2	2.1626							
00:08:40	135.6	135.6	135.8	135.6	136.1	2.1728							
00:08:50	135.7	135.7	135.8	135.6	136.1	2.1788							
00:09:00	135.7	135.8	136.0	135.7	136.1	2.1854							
00:09:10	135.8	135.9	136.0	135.8	136.1	2.1890							
00:09:20	135.8	135.9	136.0	135.8	136.1	2 1 9 3 1							

- The default Data List shown is the one with the Intervals Showing. You can click on full list if you wish to print that or you can press Intervals button again to revert back to the default listing.
- You can also click on the "Goto" button and select which stage you wish do go to if you wish to take a close look and the full listing.

Edit	View Help	🕨 Ready									
port	PDF/Print	Save Incom	<b>)</b> plete	Close	Full List	Summary	Goto	×			
							Cycle 9	Started			
R.	Rev 1.2.0006					Data List	Negati	ve Pulsing			
	Job Ref:			Service Provi	ider:		Positiv	e Pulsing	Demo Porous Load		
5	Cycle No.: 0	00359		Site Name:	Exan	nple Hospital	Heat U	P	14/09/2007 11:09:48		
5	Serial No.: N	lo. 01 /014567 1995	i	Operator:	Russ	ell Baker	Sterilis	ation Start			
1		Tmp 1	Tmp	4	Tmp 7	T	Machin	e Sterilisation Start	Press		
		°C	°C	-	°C	*(	Machin	e Sterilisation End	Bar		
		drain	test p	ack	topsheet	Ь	Sterilis	ation End	pressure		
	00:00:00	Cycle Started					Air Adr	nission			
	00:00:10	49.4	24.0		24.1	2	Cycle (	Iomplete	0.0091		
9	00:00:11	49.6	24.0		24.1	2	1.6	65.6	0.0104		
INI	00:00:12	49.8	24.0		24.1	2.	4.6	66.2	0.0115		
T5.	00:00:13	49.6	23.9		24.1	2.	4.6	66.4	0.0034		
OR OR	00:00:14	49.2	24.0		24.1	2	4.6	66.1	-0.0255		
3EP	00:00:15	49.0	23.9		24.1	2	4.6	65.7	-0.0649		
Lai	00:00:16	48.8	23.9		24.1	2.	4.6	65.3	-0.1025		
W.	00:00:17	48.6	23.9		24.1	2.	4.6	64.7	-0.1385		
N.M	00:00:18	48.5	23.9		24.1	2	4.6	64.0	-0.1723		
-	00:00:19	48.3	23.9		24.1	2	4.6	63.3	-0.2035		
	00:00:20	48.3	23.9		24.1	2	4.5	62.7	-0.2331		
	00:00:21	48.2	23.9		24.1	2	1.5	62.1	-0.2601		
	00:00:22	48.1	23.9		24.1	2.	1.5	61.4	-0.2862		
	00:00:23	48.1	23.9		24.0	2	1.5	60.7	-0.3116		
	00:00:24	48.0	23.9		24.U	2	ł.5	60.0	-0.3358		

Click on Summary

Save and Close





- Double click on TQSoft Test Notes
- Press the import button and select the correct Test.
- It brings in any Test Notes you made during the test.

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Ś	Rev. 1.1.0002					Tes	t Notes					1
or 1	Job Ref: Cycle No.: Serial No.:	000349		Ser Site	vice Provider: Name:		ISL Sheffield Ho	spital	Operator: Test Date: Test Name:	Russell Bake 09/05/2007 Demo EN55/	er 1 < 200 litree	]
WWW. TAREPORTS.INFO	This is a o	erro cycle.							<u>Pest name</u>	Demo ENSS4	< duu iitres	-

- You can also add to the text if you want, in case you saw any further observation while compiling the report as the text box is yellow.
- Save and close.
- You will repeat this process of importing Charts, Data Listings and Test Notes (if applicable) for every cycle that you have logged.





- Double click on TQSoft Calibration Check
- Press the import button and select the correct Test.

PDE/Print Save	) Close							
Setpoints	Program	med		Heter	ence			
1st Check	134 °C			134.0	10 °C			
Stability Set-up								
Thermocouple Stat Allowed deviation fr Reference stability Report after Calibra Report maximum de	pility : rom refere criteria : tion every eviation al	nce: : lowed:	0.12 Degrees per Minute for 3 Minute(s) 1.0 Degrees 0.05 Degrees for 2 Minute(s) 15 Seconds for 2 Minute(s) 0.5 Degrees					
First Calibration	Check F	oint	134.00 °C	C Stability	Report A	fter Adjus	stment	
Start at : 13:36:35 Reference Change	: 0.00 °C			Stabil Maxin	ity require num sens	ments me or change	et at : 13:45:11 Elapsed Time : 00:08:36 e overlast minute : 0.10 °C	
Channel Change (°C)	<b>1</b> 0.05	<b>2</b> 0.09	<b>3</b> 0.07	<b>4</b> 0.10	<b>5</b> 0.10	<b>6</b> 0.09		
First Calibration	Check F	oint	134.00 °C	C Qualific	ation Rep	ort		
Time 13:45:11 Ref. 134.00 °C Deviation (°C)	134.11 0.11	134.15 0.15	134.11 0.11	134.10 0.10	134.12 0.12	134.08 0.08		
First Calibration	Check F	oint	134.00 °C	Report				
Time 13:45:26 Ref. 134.00 °C Deviation (°C)	134.14	134.11	134.09	134.08	134.11	134.09		
Time 13:45:41 Ref. 134.00 °C Deviation (°C)	134.09	134.08	134.05	134.04	134.08	134.02		
Time 13:45:56 Ref. 134.00 °C Deviation (°C)	134.10	134.04	134.07	134.06	134.06	134.05		
Time 13:46:11 Ref. 134.00 °C Deviation (°C)	134.14	134.12	134.14	134.08	134.13	134.11		
Time 13:46:26 Ref. 134.00 °C Deviation (°C)	134.15	134.13	134.12	134.11	134.13	134.10		
Time 13:46:41 Ref. 134.00 °C Deviation (°C)	134.13	134.12	134.11	134.08	134.09	134.10		
Time 13:46:56 Ref. 134.00 °C Deviation (°C)	134.14	134.11	134.08	134.09	134.11	134.06		
Max Deviation (°C)	<b>1</b> 0.15	<b>2</b> 0.13	<b>3</b> 0.14	<b>4</b> 0.11	<b>5</b> 0.13	<b>6</b> 0.11		

- It brings in Calibration Check(s) for the tests you have done so far. If you have done more than one calibration Check, don't forget to bring in more reports.
- Save and Close the template.





- We can also import any Word or Excel documents, Text Files or PDF's and images into your reports. For example these could be your calibration certificates.
- These could be your own spreadsheets, or a Cover Sheet Word Document with a Company Logo on it or a Digital Picture of the layout of the positions of the thermocouples, or PDF documents of your Calibration Certificates.
- These documents should be saved in the C:\TQ Reports\Templates\!Sections\Documents
- The images folder is C:\TQ Reports\TQTemplates\!Sections\Images
- However, you can search you're your file by using the Browse for file option.
- Click to Browse for file



• It then bring up a window to find the file you are looking for

Browse for File	1				20
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• The it finds the document for you and imports it in your documents. (The prcess is identical for images).







• To import the document in the Template side double click on !Sections and select the document you wish to adds to your report.



• Then drag it over into your Report and position the document

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• It then brings up a question.

Copy 'Ex	xample_Report_Cover_Document.doc' to Report Folder 🛛 🛛 🕅
?	Would you like to create a copy of 'Example_Report_Cover_Document.doc' in the report folder? Click 'Yes' if the document is to be edited independently of other reports that use the same source document or click 'No' if the document is to be the same for each report. <u>Yes</u> <u>No</u>

- If Yes is selected you can then edit the document independently in your report, but the original document is not changed.
- If No is selected then any changes that are made to the word document in your report changes the original document you have just imported
- Again we can position the document to where you wish to put it.





- Now we have completed our report, we have also positioned our templates and other documents in the right order, and we have also imported and positioned our TQSoft Charts, Data Lists, Calibration Reports and Test Notes in the correct order. We may have even added templates or deleted templates from the list. For example we may not require to do a Performance Re-Qualification.
- However next time we compile a report we don't have to add in the templates, documents and Charts, Calibration Reports etc and position them every time.
- If we are happy that the way the report is compiled and is going to be a Standard we can make that so.
- Click on the title of your report in the Action area of your report and drag and drop it over to !My Groups in the Template Section.



- It now adds your compiled report to this Section
- Right click and rename 'New Report' to what you want to identify it to.



- You can also (by right clicking) Protect your new Folder of templates so you don't accidently delete it.
- Now move the Report in !My Groups in the Templates section and drag and drop it over to the Machine on the Action side.

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• Now as you can see we have created a new Report BUT this time it has all the templates, documents, charts, data lists, test notes and calibration reports all in the correct positions.





• For small reports such as Quarterly Reports, where we may only have one cycle as we use the same one for the Automatic Control Test and the Thermometric Tests for a small Load we can mark the report as Auto Import by right clicking on the report in !My Groups

Template Folders	
🖃 🤤 !My Groups	
My Yearly Rep     Sections     Sections     Documents     Documents     Documents	Protect Rename Group Delete Group
⊕	Mark as Auto Import
🕂 🕞 🕞 Declarations	

- Now move the Report in !My Groups in the Templates section and drag and drop it over to the Machine on the Action side.
- It then asks to pick a cycle from our Historical Tests.

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ΙF	/:>🔁				Time	Date	Machine	Cycle	JobRef	Test Name	File Name
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L L	i 🔁 🔁	7543			11:21:57	06/09/2007	AA89/359	000357		4 mins	c:\logsys\ac000001\data\000357.mbf
Ш	43 📃	43344			10:36:09	06/09/2007	7 AA89/359	000356		4 mins	c:\logsys\ac000001\data\000356.mbf
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L L	54	53465			10:24:47	06/09/2007	7 AA89/359	000354		4 mins	c:\logsys\ac000001\data\000354.mbf
L L	54	654765			10:16:10	06/09/2007	7 AA89/359	000353		4 mins	c:\logsys\ac000001\data\000353.mbf
L L	56	6577			10:02:50	06/09/2007	7 AA89/359	000352		4 mins	c:\logsys\ac000001\data\000352.mbf
L L	<u> </u>	65/656			11:02:17	27/08/2007	7 AA89/359	000351		Demo Porous L	c:\logsys\ac000001\data\000351.mbf
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 It now imports the analytical data to all the templates that can be automatically filled in from the cycle selected, so therefore we only have to fill in the manual information required in the templates.







- Now the Report has been completed we can if we wish, make this Report a Source of Validation Data for all future Reports. So we can compare all future Reports data to the data in this report.
- Right click on the title of the report and click Mark as Validation Source.

Site Machine Report PDF/Print Designer	
IPDF     Isopharm Sentry Hospital     Autoclave No.1     My Yearly Report     My Yearly Report-01     Autoclave No.2	eport New Site New Machine New Report Rename
	Delete Report
	Delete All Selected Items Filters

• A Purple box then appears behind the folder of the report.

- 92059023.2007-05-09.NewReport

• Now create on a new report and go to the Thermometric Test for a Small Load

٠	Press	the Imp	oort Button
		Contractor Daublication	

Select Data Source File
Test Data C 🔀 000349 13:05:08 09/05/2007 C:\logsys\92059023\data\000349.mbf
C() Report CUTO Report/TOR-port/Torobarg Sector Haspital/Autoclaya No. 1/02050022.2007-05-00 NewReport to
TQReports
Isopharm Sentry Hospital
Locate most recent test A Show all reports A Close

- Click on the Validation Data icon
- Now you can see the Reports that have been selected as a source of Validation Data.
- If you cannot see your Report click on the show all reports button





• Select a report and you will see the name of the report appear next to the validation data icon.

Select Data Source File	×
Test Data 000349 13:05:08 09/05/2007 C:\logsys\92059023\data\000349.mbf Validation Data C:\TQ Reports\TQReports\Isopharm Sentry Hospital\Autoclave No.1\92059023.2007-05-09.NewReport.tq	-
C:\ TQReports TQReports Isopharm Sentry Hospital C:\TQ Reports\TQReports\Isopharm Sentry Hospital\Autoclave No.1\92059023.2007-05-09.NewReport.tq	
Locate most recent test A Show all reports A Close	

• This report will stay in there until you click on the X button, so you don't have to keep on selecting the Source of the Validation Data for every template.

Rev. 1.1.0002	Thermo	Load		
Cycle No.	Sterilisation Temp	۳C	Commissioning 🗾 💌	Validation
		Drain	· •	126.01 °C
Start of Plateau Period		Load	°C	99.99 °C
		Free Space	°C	129.38 °C
		Pressure	Bar	1943 Bar
		Drain	•c	135.42 °C
Start of Holding Time		Load	"C	134.58 °C
		Free Space	"C	135.37 °C
		Bar	3113 Bar	
		°C	135.68 °C	
Mic	l of Holding Time	Load	°C	135.36 °C
		Free Space	°C	135.63 °C
		Bar	3142 Bar	
		°C	135.79 °C	
Max Values During Holding Time		Load	°C	135.44 °C
		Free Space	°C	135.73 °C
		Bar	3151 Bar	
		Drain	۳C	126.12 °C
End of Holding Time		Load	°C	127.21 °C
		Free Space	°C	126.01 °C
	Pressure		Bar	2366 Bar
	Equilibration time			18:03 mm:ss
Max diff Drain / Free space 1 minute into Plateau Period			°C	3.37 °C
Max diff Drain / Free space for remainder of Plateau Period			°C	1.18 °C
	Drain Fluctuation			4.64 °C
		Load Fluctuation	°C	3.93 °C
	Max differenc	e between Drain and Load	~c	1.32 °C
		Post vacuum stage time	hh:mm:ss	01:06:33 hh:mm:ss
	Press	sure at end of vacuum hold	Bar	471.0000 Bar

• Also note we can still at the same time import the Current Test Data so you can fill in the Current Data and the Validation Data at the same time.



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- If however you have old validation data that is not included in the Report, we can still enter this manually.
- On the right hand side we have the Validation Templates

Template Folders								
🗊 ·········· 🕩 Summary								
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📄 👘 👘 Validat	ion							
<b>b</b>	Validation_Fluid Load_Automatic Control Test_QYC							
· · · · · · · · · · · · · · · · · · ·	Validation_Fluid Load_Automatic Control Test_W							
<b>_</b>	Validation_Fluid Load_Coolant Quality Test_CY							
········ b	Validation_Fluid Load_Simplified thermometric test for performance requalification							
<b>b</b>	Validation_Fluid Load_Thermometric Test for Full Load							
········ B	Validation_Fluid Load_Thermometric Test for Small Load							
<b>b</b>	Validation_Laboratory_Automatic Control Test_Contained Fluid Discard_QYC							
······ B	Validation_Laboratory_Automatic Control Test_Culture Media_QYC							
<b>b</b>	Validation_Laboratory_Automatic Control Test_Fabrics_QYC							
· · · · · · · · · · · · · · · · · · ·	Validation_Laboratory_Automatic Control Test_Free Steaming_QYC							
<b>b</b>	Validation_Laboratory_Automatic Control Test_Glassware and Equipment_QYC							
· · · · · · · · · · · · · · · · · · ·	Validation_Laboratory_Automatic Control Test_Mixed Media_QYC							
········ b	Validation_Laboratory_Automatic Control Test_QYC							
<b>b</b>	Validation_Laboratory_Automatic Control Test_Small Plastic Discard_QYC							
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<b>b</b>	Validation_Laboratory_Simplified thermometric test for performance requalification Contained Flu							
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<b>  b</b>	Validation_Laboratory_Thermometric Test for Full Load Free Steaming							
······ B	Validation_Laboratory_Thermometric Test for Full Load Glassware							
B	Validation_Laboratory_Thermometric Test for Full Load Mixed Media							
<b>B</b>	Validation_Laboratory_Thermometric Test for Full Load Small Plastic Discard							

• If we create a new Report and add in the validation template in the machine we can enter the validation templates manually (as the templates are yellow entry fields) and then mark that as a source of validation data.

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Import



TQReports

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	Pressure		Bar
	Drain		°C
Mid of Holding Time	Load		°C
	Free Space		°C
	Pressure		Bar
	Drain		°C
Max Values During Holding Time	Load		°C
	Free Space		°C
	Pressure		Bar
	Drain		°C
End of Holding Time	Load		°C
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	Pressure		Bar
		mm:ss	
Max diff Drain / Free spac	e 1 minute into Plateau Period		°C
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	Dural Directory		10





- You may have noticed that the title of my report is 92059023.2007-05-09.NewReport
- You can if you wish rename the title on the report by Right clicking on the title name.

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	🗖 📑 Porous Load_Stea		Delete All Selected Items		
	Porous Load_Stea		Filters		
			🗖 📑 Por	ous Load_Stea	Mark as Validation Source
			🗖 📑 Por	ous Load, Vacu	um Leak Rate Test, OYC

- You can also deleted reports and delete selected templates/documents from here as well.
- However to name your report automatically every time you start a new report you can set this up in Preferences.
- Go to Edit and then Preferences.



• It then brings up Preference No.1 window.

Neferences		
1 2		
General Settings	Report Presentation & Output control	Printing
<ul> <li>Position main program buttons at the top</li> <li>Disable automatic filename edit on file lists</li> <li>Disable Explorer view of template folders</li> <li>Disable thumbnail view in lower pane of template list</li> </ul>	<ul> <li>Insert data list column headers on each page</li> <li>Insert section break at end of data list</li> <li>Disable TQReports logo on printed documents</li> <li>MS Word</li> <li>Print first page only</li> <li>Ignore page layout margins</li> </ul>	Default Printer PDFCreator
<ul> <li>Use original template names when copying a report folder to template folders</li> <li>Ask about copying source documents to the report folder</li> <li>Group templates by filename.</li> <li>Use this character as group name delimiter</li> </ul>	MS Excel Print first sheet only Images Centered horizontally Centered vertically	TQSoft Settings Implementation
✓ Disable event logging (System Diagnostics)	Pause before starting to print     Copy output PDF to the report folder	▶ Use robuit chair settings
		Defaults Save Close

- Here you have many options to help configure your report.
- No press on the No.2



- The Use as a Report Reference Option selects how you want to give your Report a name when you start to import test data.
- For example Here I have <UnitSerialNumber>,<TestDate>,<OriginalReportTitle>, So I have the following 92059023,2007-05-09.NewReport named when I start to import data so the report has a unique name. Again you can put what you like here from the list here.
- This will also be put in the top left hand corner of the report.
- In the top right hand corner will be the <PageNumber>
- In the bottom left hand corner will be This Report was completed By Russell Baker
- In the bottom right hand corner will be <DocumentFileName>
- However all these are selectable from the same list.



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• Now we have completed our Report we can print it. To do this make sure the Report title (and all the individual templates) are ticked.

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- Once this has finished a copy of the completed report will be as a PDF document.
- If you have imported your signature as an image and have included information such as your calibration certificates, you can save the PDF and/or email it without the need to even print it out.

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HEN		Machin	e Details				
Authority	South Yorkshire NHS T	rust					
Hospital	Sheffield Hospital	Sheffield Hospital					
Department	CSSD		15.9	200			
Date of Report	07/06/2007		Dates o	Tests 09/	05/2007		
Machine	Manufacturer		Getinge	-11	Δ.		
	Serial Number		92059023				
10	Reference number	Reference number			None		
	Model		BACS2000				
	Usable Chamber Space	e	S	litre	15/())	1	
	Date of Manufacture		2000		V		
Service Provider	ISL						
Rov.	- 20	Tast Fr	minment				
13.000	Manufacturer	Model	Serial No.	Test House	Cert No.	Renew	
Data Logger	Fluke	NetDAQ	MY44005786	Calmet	57045	22/06/07	
MilRvolt Source				C			
						00.00.00	

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Another feature is that as the number of reports rise, you can hide them, so your Action area of TQReports do not get overcrowded with reports and can be retrieved at any time
Right click on a Report and click on Hide Folder

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Report Folders
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- The Reports has now disappeared
- However there is a new icon appeared showing the number of hidden reports

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By clicking on this the template folders change to hidden folders

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- If you wish to make a Hidden Report ACTIVE again just right click on the report and click on the button to put in back into the Action area of the template.
- That completes the training. If you require any further information please contact 00441709811460.