EYE User Manual



iRaptor Hardware and Software User Manual

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EYE CHARACTERISTICS

Welcome!

Welcome to a new generation of profilers. The EYE was developed by expert engineers after realizing that the existing solutions in the market were not responding to the needs of today's technology.

The iRaptor solution will help you optimize your production and the efficiency of your processes. The main product specs are described below.

Spec Requirements:

-OC till 75C internal operating temperature -Accuracy +/- 0.5C -Resolution 0.1C -Sample Rate 0.1 to 50 readings per second - Temperature range -250C to 1200C -Wi-Fi 2.4 GHz -Thermocouple compatibility 6 channel K type, Standard -XYZ Accelerometer -2x Pyrometer -4 x Led's for battery level -4 x Led's Unit Status -Dimensions L x W x H mm Profiler dimensions 120 x 65.5 x 14.5 mm Shield dimensions Stainless Steel 281 x 78 x 24 mm Shield dimensions With Insulation 281 x 80.5 x 27.5 mm -Power internal 2x batteries AAA Ni-MH rechargeable through USB-C

EYE Profiler Kit contents:

- 1) 6 channel profiler
- 2) USB Wi-Fi Dock station
- 3) Thermal Shield
- 4) Carrying Case
- 5) Profiler Carrier
- 6) USB-C to USB-C cable or USBA to USB-C cable
- 7) Profiling Protective Gloves
- 8) 6 Thermocouples Type K
- 9) Scissors
- 10) 6x Aluminum tape strips
- 11) Quick Reference Manual
- 12) 2 Year Warranty (excluding batteries)



Installing the EYE Software

Minimum PC Requirements

- 1 Ghz or faster with 2 or more cores, 4GB RAM.
- 64 GB or larger storage device.
- 1 or more available USB type A ports
- Operating system: Microsoft® Windows® 10 or upwards

Languages

EYE currently only supports the English language. More languages will be added soon.

Software Installation

The software is provided on the webpage https://www.btu.com, from which you should download the file SETUP.EXE to start the installation process. Follow the instructions for the installation program as the screens are updated.

If prompted by the OS to allow this app from an unknown publisher to make changes to your device", please choose "Yes".

You may need to click on icon **N** on the taskbar before the above dialog box appears.

😵 Profile Tracer Setup 🛛 🗙		
The following components will be installed on your machine:		
Visual C++ "14" Runtime Libraries (x64)	😵 Profile	e Tracer Setup X
	-0-	Installing Visual C++ "14" Runtime Libraries (x64)
Do you wish to install these components?		
If you choose Cancel, setup will exit.		
•		
Install Cancel		Cancel
Profile Tracer —	×	👌 Profile Tracer — 🗆 🗙
Welcome to the Profile Tracer Setup Wizard	5	Select Installation Folder
The installer will guide you through the steps required to install Profile Tracer on your compu	iter.	The installer will install Profile Tracer to the following folder.
		To install in this folder, click "Next". To install to a different folder, enter it below or click "Browse".
		Folder
		C:\Program Files\Profile Tracer\ Browse
		Disk Cost
WARNING: This computer program is protected by convint law and international treaties		lastall Brofile Tracer for usured or for anyone who uses this server tor
Unauthorized duplication or distribution of this program, or any portion of it, may result in sev- or criminal penalties, and will be prosecuted to the maximum extent possible under the law.	ere civil	
		Ust me
V		
<pre></pre>	ncel	< Back Next > Cancel
💿 Profile Tracer - 🗆	×	🐻 Profile Tracer — 🗆 🗙
Confirm Installation	5	Installation Complete
The installer is ready to install Profile Tracer on your computer.		Profile Tracer has been successfully installed.
Click "Next" to start the installation.		Click "Close" to exit.
Ŷ		л
< Back Next > Car	ncel	< Back Close Cancel

EYE Hardware

The EYE comes standard with 6 functional Type K thermocouple channels and performs as a wireless or datalogger unit. It uses a dongle to enable functionalities on the EYE Software and it is also a Wi-fi base station for the data transmitted.



Figure 1

How to install or change the battery on your EYE unit

This battery replacement procedure should only be performed after warranty on the unit expires to prevent the warranty to be voided (these batteries are considered a consumable not being covered by warranty).

You must contact EYE or an authorized distributor to be provided with genuine batteries with correct specifications. Installing the wrong type of battery can reduce usage time, incompatible charging voltage, and even damage the device.

Use a screwdriver to remove the screws on the battery cover, on the bottom side of the EYE unit. Remove the old pair of batteries with the new pair of batteries in right polarity direction. Reposition the cover and tighten the screws again.



Battery Life

A single battery charge on the EYE should last for around 2.5 hours with wifi mode and 7.5 hours of dataloger mode, however this can change due to operating temperatures and/or the amount of variables selected for data collection.

The profiler is designed to operate in temperatures between 0°C and 75°C. After exiting the oven, it is expected for the device to take a while to cool down, therefore handle the device with the necessary care and appropriate tools, such as heat-resistant gloves.

PLEASE NOTE: If during operation the battery becomes heat damaged or corrosive, replace it immediately. Failing to do so can lead to damage to the profiler and/or the user itself.

Hardware Configuration

How to connect your Profiler to the Computer

Please start by installing the EYE software on your computer.

The unit may need to be charged using the supplied USB cable.

After installing the EYE software, please connect the Dongle to the computer's USB port.

Turn on the EYE unit using the ON/OFF switch. The battery indicators should light up, all 4 initially and then only the ones closest to the current battery capacity (0, 25%, 50%, 75%, Full).



The EYE software should connect automatically to the EYE unit.

Operating the Profiler

Prior to any test inside a heated oven, the EYE unit must be placed inside the provided heat shield, in which it should remain at all times during operation. Failure to do so will result in incorrect measurements and in severe damage to the unit itself.

Loading the EYE unit into the Thermal Shield



Place the EYE unit on the bottom half of the provided thermal shield, taking care that:

- The unit should rest flat on the insulation bed inside the shield.
- The unit should sit with the battery indicators and pyrometer openings facing up;
- The thermocouple wires should exit from the front and the back of the thermal shield;
- The TC's wires must be routed over the top of the unit and never below the unit. This will prevent the unit to be tilted affecting the pyrometers alignment with the lenses.

- The pyrometers should be visible through the lenses on the thermal shield. Take care not to cover the pyrometers when routing TC wires over the profiler.
- Before closing the shield, do not forget to turn the EYE unit ON. The Power ON led indicator should turn red;
- Close the top half of the Thermal Shield and secure it in place with the latching mechanism. Take care to avoid damage to the thermocouple wires.

Login
User Name
userID
Password
······
Remember user ID
<u>ل</u>
Please log on to continue to the page you requested
Create the New User

Using & Understanding the Software

If you are a new user, please proceed as follows:

- Start by inserting your chosen/defined user name and password¹.
- Click on "Creating a New User".
- The "Confirm Password" text box will appear, so that your login information can be stored.
- Choose your preferred language (more language will be added later).
- Choose if you wish the software to remember your ID information. Not clicking this option will require the user to insert the password in every new usage of the app.
- Click on the Power button to proceed 👜;
- Regular users are only required to insert the user name and then pressing the Power icon;

¹ - Please check with your Systems Administrator for any policies on defining user names to internal software.

HOME (MAIN SCREEN)



The HOME screen is the main screen from where you can manage all operations. It presents you with 6 main options:



While in any of these sections, if you wish to return to the main screen, simply press the "HOME" button.

We will now guide you through each one of these options individually:



In this screen you can adjust your preferences regarding the software itself as well as the main operating characteristics, such as oven properties.

Version: 1.1.4				0	0			×
X			номе	GENERAL SETTINGS SETUP & RUN A	SOLDER PASTE PROCESS WINDOWS PROFILE EX	PLORER		user
2	+ 🕙 🔁							
OVEN			My Oven				BTU at EX	l i
THE	Brand	Electrovert	Oven Model	OMNIMAX 10	Brand		Oven Model	Pyramax 100N
UNIT	Total Zones				Total Zones			
MEASUREMENT	Number of Heating Zones		Number of Cooling Zones		Number of Heating Zones		Number of Cooling Zones	1
	Oven Length				Oven Length	464.1 (cm)		
USER CONTROL	Total Length of Heating Zones		Total Length of Cooling Zones	s 126.2 (cm)	Total Length of Heating Zones	s 254.4 (cm)	Total Length of Cooling Zones	77.7 (cm)
	Date Created				Date Created			
GRAPHIC	Last Updated				Last Updated			
REPORT			BTU 100A RICH				hoho	
	Brand		Oven Model	Pyramax 100A	Brand		Oven Model	Pyramax 100A
	Total Zones				Total Zones			
	Number of Heating Zones		Number of Cooling Zones		Number of Heating Zones		Number of Cooling Zones	1
	Oven Length				Oven Length			
	Total Length of Heating Zones	264.0 (cm)	Total Length of Cooling Zones		Total Length of Heating Zones	s 264.0 (cm)	Total Length of Cooling Zones	91.5 (cm)
	Date Created				Date Created			
	Last Updated				Last Updated			
						_		
			Toan					
	Brand	BTU	Oven Model	Pyramax 75A				

General Settings - Oven Configuration

The initial screen will show you the oven setup you have created. If blank you will need to define a new oven setup.

- Click on the PLUS sign 📕 to enter the Oven Settings screen.



Here you can define the oven characteristics. The software has a database with the main make & models on the market, so the heating zones characteristics will update automatically according to your selection of "Brand" and "Oven Model". (Please verify with your oven manual that the settings are correct).

If your oven brand and model are not visible, you can define your oven's settings either by selecting the Brand option "--" or selecting the plus sign at the top right corner, next to the "OVEN MODEL" drop down option. Please be aware of the importance of properly defining key aspects of the oven's operating properties, such as the number of Heating and Cooling Zones, Length of each Heating/cooling zones, also the Length of the Oven Entrance and Oven Exit. As all of these dimensions will have a direct impact on the outcome of the profiling operation.



General Settings - Unit Measurement

On this screen you can set the preferred different types of units, as well as the decimal characters on each displayed unit.

X			HOM	E GENERAL SETTINGS SETUP	A RUN A SOLDER PASTE			user
	CONVEYOR SPEED	Cm/minute 🗾 🔻						
	WEIGHT	Grams 🔻	GRAM	1	-			
1	DISTANCE	cm 💌	OUNCE	2	-			
OVEN	TEMPERATURE	Degree Celsius 🛛 🔻						
CONFIGURATION								
	CONVEYOR SPE	EED DECIMAL DISPLAY	INCH	1	T			
UNIT MEASUREMENT			см	1	-			
	UNITS		мм	0	-			
USER CONTROL	FEET/MINUTE	2 🔻						
	CM/MINUTE	1 💌			_			
GRAPHIC	METERS/MITUTE	2 🔻	DEGREE CELSIUS	2	—			
SETTINGS	MM/MINUTE	0	DEGREE FAHRENHEIT	1	T			
				CIMAL PLACE ON THE GR	АРН			
REPORT			DEGREE CELSIUS	2	—			
			DEGREE FAHRENHEIT	2	-			
				6				

General Settings - User Control

Version: 1.1.4				^ ×
		HOME GENERAL SETTINGS SETUR & RUN A		
Users	User Name wer user Last Name Pione Email User Type Operator	Line and an and a second and a	User Access PROCESS WINDOW CREATE A NEW PROCESS WINDOW ENT/SAVE CHANGES DIFLET CHANGE SPICS NAME RUN A PROFILE RUN A PROFILE RUN A PROFILE PROFILE EXPLORER OVTIMUZITION TAB GRAPH CONTROLLER DIFLETE APROFILE ENT/SAVE CHANGES EXIT THIS CUBRENT APPLICATION DAT THIS CUBRENT APPLICATION	
		2 •		

On this screen the administrator can create new users and define what type of access each one will have.

General Settings - Graphic Settings

On this screen you can change the appearance of the graphics created by running a profile. You can assign a different color to each Thermocouple, and customize the lines' appearance on the chart.

Version: 1.1.4			
	ROME GENERAL GETTINGS. LETTING & ROMA & COLORE FAIL	PICCESS WINDOWS PEOFILE EXPLORER	user
CONTROL CONTRO	LINE SIZESolid PAAMINE LINE STYLEAH TC COLOR GRID VIETICALHORIZONTAL STYLEAHCOLOR ZONES DISPLAYAHCOLOR AUTO SCALE AUTO SCALE SHOW POPUP "ULT PROFILER INTO THE OVEN" SHOW POPUP "ULT PROFILER SCALL"	PREDICTION LINE All Contract SPECS Exit Temperature Ramp up Rate-Liquid to Peak Ramp-Down Rate - Peak to Liquidous Stope between 2 temperatures - Ramp up Max Falling Stope Max Falling Stope Peak Preheat Reflow Stok (fime Between) Time Above Liquidous Time Above Liquidous	All V All V All V All V All V All V Dashdot V Dashdot V All

General Settings - Report Setting

Here you can customize how the profile report will appear, specifically by inserting your company logo, and enable other elements present on the report.

Version: 1.1.4				A X
X		HOME	GENERAL SETTINGS SETUP & RUN A	
	REPORT SETTINGS	OVEN ZONE SODER PASTE GRAPH		user



Before you run a profile, you need to set the main product characteristics, so that information is recorded properly. This involves a series of different fields.

Product Information

Here you can set information regarding the product you're profiling:

- Its name,
- The type of process you're analyzing (Reflow, Cure, Semiconductor, Time vs Temperature, Wave On or Wave Off),
- Dimensions Length, Width and Weight of the product itself.

Once that information is inserted don't forget to Save the information by clicking on the save icon in the bottom left corner.



Set Up And Run A Profile

On this screen you can upload a picture of the product and define where the Thermocouples are attached. You can also define the Sample Rate (between 0.25 and 4 per second) and the expected profile length.

Version: 1.1.4										
					HOME GEN	SETUP & RUN A	SOLDER PASTE P			
	DRAG AND PIN-F		ENTIFY THE TC ATTACHMENT	tc list C						
				🖌 📃 TC 01					4	*
				🖌 📕 TC 02				USE START TRIGGER		
				V 📕 TC 03				START TRIGGER (°C)	34.00	
E .				TC 04						
		•								
INFORMATION				тс от					3	
				тс ов					RealTime	~
				тс оя						
				тс 10						
				TC 11						
				TC 12						
PROCESS		Select	Images							
	•									

Oven Application

Version: 1.1.4																^ ×
X									коме	SETUP & RUN A	SOLDER PASTE					
	OVEN NAME	BTU at E	x								• +					
	HEATING ZO	NE'S INFO	ORMATIO									NUMBER ZONES	8		NUMBER ZONES	1
PRODUCT	Zone Length (cm)	1 31.8	2 31.8	3 31.8	4 31.8	5 31.8	6 31.8 215.00	7 31.8	8 31.8 260.00					Zone C1 Length (cm) 77.7 Tree (C) 500		
	Bottom (*C)	110.00	130.00	150.00	170.00	190.00	215.00	240.00	260.00					Bottom (*C) 5.00		
	TOP AND BU	ITTON SET	TPOINTS	ARE THE	SAME	~					ONVEYOR SPEE	d (cm/minute)	55.00			
PROCESS																
WINDOWS																
	K															

Select one of the Ovens from the drop-down menu, where it lists all the ovens in the factory (previously defined at General Settings/Oven configuration tab)

Input the Oven recipe setpoint temperatures for every heating/cooling zone and input the conveyor speed setpoint.

In case the top and bottom setpoint temperatures are different, use the available field to input different temperatures per zone.

Process Windows

Version: 1.1.4				
		HOME GENERAL SETTINGS	SETUP & RUN A SOLDER PASTE PROCESS WINDOWS PROFILE EXPLORER	user
	PROCESS WINDOWS BTU UNITS VAL	LIDATION PW		
	SAME SPECS FOR ALL TCS			DETAIL OF THE SELECTED PROCESS SPECS
	TC 01	BTU units validation SP	Max Falling Slope	PROCESS SPEC NAME
PRODUCT			Max Rising Slope	Max Falling Slope
INFORMATION	TC 03		Peak	SLOPE (DEGREE SECOND)
	TC 04		Reflow	MIN TARGET MAX
	TC 05			-6 -4 -0.1
RUN NEW	TC 06			
PROFILE				10
				END TEMP
APPLICATION				50
÷				
	1			

You can assign a Process Window to the product to be profiled. This action isn't mandatory. You can also assign a Process Window once the profile is downloaded. The drop-down menu will display all the process windows previously saved by the user. Once selected it is "ONLY FOR VISUALIZATION". Changing values can be done once the profile is downloaded.

The option "Same Specs for all" in this menu is only to check if the Process Window selected has that option enabled or disabled, no changes can be made at this time.



Pushing the button of the" Running Man" will initiate the profiling procedure







Click the 🗡 button





The picture below shows an example of a live profile being made, where Vibration X Y Z, Pyrometers and TC's data are visible live on the screen.







After Profile download the first thing to check is the In-Spec CPI value between 0% and 99% Green or Outof-Spec CPI value more than 100% Red. The table below explains the CPI calculations and logic.

The CPI value displayed in the bottom left corner is always the worst value achieved under the different specs part of the Process Window selected by the user. That value represents the product under the oven profiling conditions for that specific Process Window.



While passing the mouse over the graph, TC and Pyrometer data are displayed automatically.

Version: 1.1.4					
× 1	HOME GENERAL SETTINGS	SETUP & RUN A SOLDER PASTE PROCESS WINDOW			user
CREATOR USER DATE 3/26/2024 10:34 PM PRODUCT NAME BTU UNITS	profiling validation PROFILE NAME BTU UN	NITS profiling validation_2024-03-26 2242	PROCESS WINDOW BTU UNITS VA	LIDATION PW 🛛 🖉 DESI	GN 🖪 MORE PROFILES
CREATOR user OATE 3/26/2024 1034 PM PRODUCT NAME BTU UNITS CONTROL 1 PC 02 PC 03 PC 04 PC 05 PA 18 PC 285/502 043/79 243/10 242/7 24439 2443/2 44451 24417 172.0 286/502 043/5 242/3 24235 24419 24439 24450 PC 14 286/502 043/5 242/3 4423 24419 24439 24450 PC 14 286/502 043/5 242/3 4423 24437 24419 24439 24450 PC 14 286/502 043/5 242/3 4423 24437 24419 24439 24450 PC 14 286/502 043/5 242/6 342/1 243/7 24419 24439 2450 PC 14 286/502 043/5 242/6 242/1 24437 24419 24439 2450 PC 14 286/502 043/5 242/6 242/2 43/7 149/1 34/8 1441 24460 PT 10 287/502 042/3 242/5 242/5 245/5 244/5 24419 24450 PC 14 288/502 043/5 242/6 342/1 2441 24448 2441 24460 PT 10 288/502 043/5 242/6 342/1 245/5 244/5 245/5 244/5 245/8 171/6 288/502 043/5 242/6 243/4 245/5 244/5 245/8 124/8 144/1 244/6 PT 10 288/502 043/5 243/6 243/1 245/5 244/5 245/8 19/6 16 288/502 043/5 243/6 243/1 245/5 244/5 245/8 19/6 16 288/502 043/5 243/6 243/1 245/5 244/6 245/8 10/6 16/9 10 288/502 043/5 243/6 243/1 245/6 245/8 126/8 10/6 16/9 10 288/502 043/5 243/6 243/1 245/8 244/8 244/8 144/6 1700 288/502 043/5 243/6 243/1 245/8 245/8 10/6 16/9 10 288/502 043/5 243/6 243/1 245/8 245/8 10/6 16/9 10 288/502 043/5 243/6 243/1 245/8 245/8 10/6 16/9 10 288/502 043/5 243/6 243/1 245/8 049 24/508 16/9 6 288/502 043/5 243/6 243/1 245/8 049 24/508 16/9 6 288/502 043/5 243/6 243/1 245/8 049 24/508 16/9 6 288/502 043/5 243/6 243/1 245/8 043/8 12/6 141/6 17 2000 14/6 10 10 10 10 10 10 10 10 10 10 10 10 10	profile validation PROFILE NAME BTU UN rometer Z1 Z2 Z3 KCe	IITS profiling validation 2024-03-26 2242 24 25 26	27 2027 28 CI		Control Contro Control Control Control Control Control Control Control Control Co
289.000 244.30 244.02 243.79 245.70 2425.28 245.171 169.9 289.250 242.92 4468 243.72 2455 62 2453.72 2422 2170.7 289.550 244.92 4468 243.72 2455 62 2454 2452 2170.7 289.550 244.32 244.68 243.74 2455 62 2454 245518 171.5 289.750 244.22 244.13 243.59 24547 24548 245.101 171.8 290.000 244.37 244.08 243.40 24542 24541 245.01 172.8 290.000 244.37 244.08 243.40 24542 24541 245.01 172.8 290.000 244.37 244.08 243.40 24542 24542 24541 245.01 172.8	salao nadao selao nadao	Nãão sobao stãão Time (sec Nãão stãão stãão Prediction time	ondis) sobio	40000 40000 40000 40000	200.0 soboo
Click he button 📴 to maximiz	ze and minimize the	e graph or all othe	r widgets.		
Click the button 📥 to switch b	between Time and I	Distance at X axis	s of the graph.		
Click the button 🔯 to select v	which data will be d	lisplayed.			
Click these buttons Q Q	D to zoom in, zoo	om out and reset z	zoom the graph.		

Oven temperatures and conveyor speed setpoints recipe (Original):

🖶 Original	Prediction									
Zone	Z1	Z2	Z3	Z4	Z5	Z6	Z7	Z8	C1	
Top (°C)	110	130	150	170	190	215	240	260	5	
Bottom (°C)	110	130	150	170	190	215	240	260	5	
Conveyor Speed	55.0									

Oven temperatures and conveyor speed setpoints Optimized recipe (Prediction):

🖶 Original 🛛 🏼 🏼 🎙	ediction (liction 🗹								
Zone	Z1 🗹	Z2 🗹	Z3 🗹	Z4 🗹	Z5 🗹	Z6 🗹	Z7 🗹	Z8 🗹	C1 🖻	
Top (°C)	110	130	150	170	190	210	236	262	5	
Bottom (°C)	110	130	150	170	190	210	236	262	5	
Conveyor Speed	54.9 🛙	2								

Click the pencil icon icon icon to use the Manual prediction, where the user can force a setpoint (temperature and conveyor speed) and view the resulting prediction.



This table displays Process Window values for each TC during the profile:

🛃 Origina	Criginal Prediction									
TCs	EXIT TEM		MAX FALL		MAX RISI		PE		REF	
🖌 TC 01	56.19	-6.4 %	-4.44	-22.2 %	1.86	8.9 %	244.42		66.25	
🖌 TC 02	57.69	-3.8 %	-3.92	2.2 %	1.78		244.13		63.75	
🗸 TC 03	54.56	-9.1 %	-4.24	-11.9 %	1.89		243.80		63.25	
🖌 TC 04	55.93	-6.8 %	-4.26	-12.8 %	1.85	7.7 %	245.70	67.4 %	67.00	
🖌 TC 05	57.40	-4.3 %	-4.35	-17.5 %	1.85		245.44		66.75	
V TC 06	56.08	-6.5 %	-4.37	-18.7 %	1.86		245.22		66.75	
Delta	3.13		0.53		0.11		1.89		3.75	
Average	56.31		-4.26		1.85		244.78		65.62	
CPI	67.	4 %								

This table displays Process Window OPTIMIZED values for each TC, using the predicted oven setpoints:

🔡 Origina	Criginal Prediction										
TCs	EXIT TEM	PERATURE	MAX FALL		MAX RISI	NG SLOPE	PE	AK	REF		
TC 01	73.21	33.0 %	-4.02	-1.2 %	1.84	6.8 %	241.94	-13.3 %	60.00		
TC 02	76.88	42.2 %	-3.79	5.3 %	1.79	3.1 %	241.66	-16.8 %	59.75		
TC 03	71.96	29.9 %	-4.16	-7.9 %	1.86	9.1 %	240.90	-26.2 %	58.50	-29.2 %	
TC 04	73.56	33.9 %	-4.02	-0.8 %	1.85	7.8 %	242.71	-3.6 %	63.00		
TC 05	74.21	35.5 %	-4.01	-0.7 %	1.84	7.3 %	242.68	-4.0 %	63.00		
TC 06	73.29	33.2 %	-4.03	-1.7 %	1.86	8.9 %	242.46	-6.7 %	63.00		
Delta	4.93		0.37		0.08		1.81		4.50		
Average	73.85		-4.01		1.84		242.06		61.21		
CPI	-29	.2 %									

In this field the user is able to add notes to the profile in a SMS type of format:





Re-Run a profile using the settings from the existing profile.



Run the Profile Optimization routine.

Pyrometer Analysis Tool, Using the statistical mathematical model we can compute the area of plotted data set, then we can apply the result and its limit. So we can determine the user see the issues that their ovens would have.

Optimization Tool where the user can define setpoints the optimization should keep as the original recipe.

Copy the profile data to Clipboard and able to paste to Excel

Print the profile report



View/edit the Process Window specifications

Pyrometer Analysis Tool

After clicking SW appears a dialog box for you to choose a profile to compare



The software will compare the pyrometers behavior between the two profiles runs. Differences between 0% and 2% will displayed with Green color, between 2% and 4% will be displayed with Yellow color and differences bigger than 4% will be displayed in Red.



Optimization Tool

Click **W** to start the optimization tool.

Optimization Tool where the user can define setpoints the optimization should keep as the original recipe.

Prediction		E	
Auto Predict			
Zone Optimization	Top (°C)	Bottom (°C)	
🗹 Z1	110.00	110.00	
🗹 Z2	130.00	130.00	
🗹 Z3	150.00	150.00	
🗹 Z4	170.00	170.00	
🗹 Z5	190.00	190.00	
🗹 Z6	215.00	215.00	
🗹 Z7	240.00	240.00	
🗹 Z8	260.00	260.00	
Conveyor Speed 🖌			
55.0			
		× ✓	

Print the profile report

After clicking function, you can see the report as below, including what you have set in the Report Settings section.



Click on the printer icon to print.

	ţ	÷	€) 🔍	4
			+P)	rint (Ctrl	
					l

Edit the Process Window

After running the profile, you can edit the Process Window by clicking (go to Solder paste section and process window section to understand)

PROCESS WINDOWS BTU U		CREATE N	EW PW		5			
SOLDER PASTE CURRENT	lt_pw							
BTU U								
OLIVE	R PW				CREATE NEW SP			
AIR TC	: PW							
SAME SPECS FOR ALL TCS Auton	notive PW							
Automotive spec	Exit Temperature			AIL OF THE SELECTED PROCESS				
Default_sp	Ramp up Rate-Liquid to Peak							
BTU units validation SP	Ramp-Down Rate - Peak to Liquidous		PROCESS SPEC NAME					
OLIVER SP	Slope between 2 temperatures - Ramp down		Exit Temperature					
Indium NC Air/N2 Indium5.1AT	Slope between 2 temperatures - Ramp up		TEMPERATURES (DEGREE)					
Cobar NC N/A 380 VITOR TEST	Max Falling Slope	~		TARGET	мах			
Air TC Spec	Max Rising Slope	~	0	60	100			
	Peak	~						
	Preheat							
	Reflow	~						
	Soak (Time Between)							
	Time Above Liquidous							
	Time within X Degree of Peak							
	Total Time between 2 temperatures							
					XV			

Layout Design

With Function **DESIGN**, you can customize how the software displays profile parameters like graphs and tables, using elements called widgets. These widgets allow for complete customization of their position and size on the screen

Version: 1.1.4		
	HOME GENERAL SETTING SETUP & RUN A SOLDER MATE RECESS WINCOWS PROFILE ERFORCE	
Default		🗲 BACK 🔟 DASHBOARDS 🔒 SAVE
IC01 IC02 IC02 IC03 IC03 <thic03< th=""> IC03 IC03 <th< td=""><td>Z1 Z2 Z3 Z4 Z5 Z6 Z7 Z8 0 1000 1000 2000 1000 2000 1000 2000 1000 2000 1000 2000 <td< td=""><td>1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1</td></td<></td></th<></thic03<>	Z1 Z2 Z3 Z4 Z5 Z6 Z7 Z8 0 1000 1000 2000 1000 2000 1000 2000 1000 2000 1000 2000 <td< td=""><td>1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1</td></td<>	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
Original Prediction Zone Z1 Z2 Z3 Z4 Z5 Z6 Z7 Ip prO 110 130 170 190 215 240 Bottom (*C) 110 130 150 170 190 215 240 Conwyof Speed 150 170 190 215 240	Z8 C1 260 5	• € •
Original Prediction	8	3/26/2024 10:46 PM user 🔴
TC 01 Jone Informa Stope Jone Reame Stope Part ♥ TC 01 -4.44 22.5 1.83 64.15 244.42 1.5 ♥ TC 02 -3.91 1.169 1.51 244.13 1.6 ♥ TC 03 -4.24 1.12 1.74 0.45 243.80 1.7 ♥ TC 04 -4.26 0.75 1.78 1.2.5 245.70 1.7 ♥ TC 05 -4.35 0.75 1.78 2.2.5 245.74 1.7 ♥ TC 06 -4.37 1.79 2.3 245.64 1.7 1.79 2.45 5 ♥ TC 06 -6.33 0.14 1.90 1.78 2.24 5	Inform Control Control <thcontrol< th=""> <thcontrol< th=""> <thco< td=""><td>first comment</td></thco<></thcontrol<></thcontrol<>	first comment
CPI 67.5 %		🚽 😌

More profiles

2

MORE PROFILES When opening a profile, you can immediately open another profile by clicking Additionally, you have the option to filter profiles by product name, process window, or search using text

×				×			
	MORE	PROFILES			MORE I	PROFILES	
PRODUC			× 🔻	PRODUCT			×
PROCESS W		× 💗			PROCES Select ALL		
ТЕХТ	SEARCH			T	BTU UNIT	S profiling	validation
Oven Name	Product Na	Profile Nai		Oven N	Electronic	Control 30)17
BTU at EXATF	BTU UNITS p	UNIT 5		BTU at E	eneida dt	i	
BTU at EXATF	BTU UNITS p	UNIT 55	۲	BTU at E	RJ FLEX		
BTU at EXATF	BTU UNITS p	UNIT 57	۲	BTU at E)	Test 1 SIM	1	
BTU at EXATF	BTU UNITS p	UNIT 55	٢	BTU at E)	test to		
BTU at EXATF	BTU UNITS p	UNIT 54	٢	BTU at EXAIT	во оклар	אכ וואוט	
BTU at EXATF	BTU UNITS p	UNIT 54	۲	BTU at EXATF	BTU UNITS p	UNIT 54	٢
BTU at EXATF	BTU UNITS p		۲	BTU at EXATF	BTU UNITS p		٢
BTU at EXATF	BTU UNITS p	UNIT 56	۲	BTU at EXATF	BTU UNITS p	UNIT 56	٢
BTU at EXATF	BTU UNITS p	UNIT 5	۲	BTU at EXATF	BTU UNITS p	UNIT 5	٢
BTU at EXATF	BTU UNITS p	UNIT 5	٢	BTU at EXATF	BTU UNITS p	UNIT 5	٢

×		×			
MORE PROFILES			MORE P	ROFILES	
PRODUCT NAME	× 🔫	PRODUC			× 🔫
PROCESS WINDOW	× 🔺	PROCESS W			× 🔻
TE Select ALL		TEXT	SEARCH ur	nit 55	
Oven Na	Ê	Oven Name	Product Na	Profile Nar	
BTU at EXA 🔄 ; BTU UNITS VALIDAT	ION PW	BTU at EXATR	BTU UNITS pi	UNIT 55	٢
BTU at EXA AIR TC PW		BTU at EXATR	BTU UNITS pi	UNIT 55	٢
BTU at EXA 🔲 Automotive PW		BTU at EXATR	eneida dti	unit 55 test P	٢
BTU at EXA	ON PW	BTU at EXATR	eneida dti	unit 55 pyros	۲
BTU at EXA		,			,
BTU at EXA					
BTU at EXATF BTU UNITS p	O				
BTU at EXATF BTU UNITS p UNIT 56	٢				
BTU at EXATF BTU UNITS p UNIT 5	٢				
BTU at EXATF BTU UNITS p UNIT 5	٢				

SOLDER PASTE MENU

On this menu screen you can create "Solder Paste" specifications or "Components" specifications, i.e. LED specification, Capacitor specification, BGA specification, etc....

Using as starting point an existing Solder Paste library where the major Solder Paste Manufacturers are listed. The software allows each value to be adjusted to the customers' own specification values.

Version: 1.1.4	8	
× I	NOME GENERAL SETTINGS SETUP & RUN A SOLERE MISTE PROCESS WHICHOWS PROFE	USER USER
CREATE THE NEW SOLDER PASTE SOLDER PASTE	p	
SOLDER PASTE LIST	PROCESS SPECS LIST	DETAIL OF THE SELECTED PROCESS SPECS
Default_sp	Exit Temperature	PROCESS SPEC NAME
BTU units validation SP	Ramp up Rate-Liquid to Peak	Max Rising Slope
OLIVER SP	Ramp-Down Rate - Peak to Liquidous	ACTIVE 🗹
Air TC Spec	Slope between 2 temperatures - Ramp down	SLOPE (DEGREE SECOND)
Cobar NC N/A 380 VITOR TEST	Slope between 2 temperatures - Ramp up	MIN TARGET MAX
Indium NC Air/N2 Indium5.1AT	Max Falling Slope	0 2 3
Automotive spec	Max Rising Slope	
	Peak	20
	Preheat	
	Reflow	START TEMP
	Soak (Time Between)	50
	Time Above Liquidous	
	Time within X Degree of Peak	1
	Total Time between 2 temperatures	

Create a new solder paste

Click the 🖶 button

Enter the name for it

SOLDER PASTE	MySolderPaste		
	PROCESS SPECS LIST	-	DETAIL OF THE SELECTED PROCESS SPECS

Choose specs that you want to use and config the parameters, don't forget to enable by checking ACTIVE.

PROCESS SPECS LIST	+	DETAIL	OF THE SELECTED PROCES	S SPECS
Exit Temperature	~	PROCESS SPEC NAME		
Ramp up Rate-Liquid to Peak		Exit Temperature		
Ramp-Down Rate - Peak to Liquidous		ACTIVE		
Slope between 2 temperatures - Ramp down		TEMPERATURES (DEGREE)		
Slope between 2 temperatures - Ramp up		MIN	TARGET	MAX
Max Falling Slope		80	90	100
Max Rising Slope				
Peak				
Preheat				
Reflow				
Soak (Time Between)				
Time Above Liquidous				
Time within X Degree of Peak				
Total Time between 2 temperatures				

Finally click on the **b**utton.

The SW shows the dialog to confirm please click OK to Save.



Create a solder paste by copying from another solder paste

Click the 🛄 button.

Edit the name if needed.

Edit parameters for every specs if needed.

SOLDER PASTE MySolder	Paste Copy				
+ 🖻 面	PROCESS SPECS LIST	÷	DETAIL	OF THE SELECTED PROCES	S SPECS
	Exit Temperature	V	PROCESS SPEC NAME		
	Ramp up Rate-Liquid to Peak		Exit Temperature		
	Ramp-Down Rate - Peak to Liquidous		ACTIVE		
	Slope between 2 temperatures - Ramp down		TEMPERATURES (DEGREE)		
	Slope between 2 temperatures - Ramp up	>	MIN	TARGET	MAX
	Max Falling Slope		80	90	100
	Max Rising Slope				
	Peak	~			
	Preheat	>			
	Reflow				
	Soak (Time Between)				
	Time Above Liquidous				
	Time within X Degree of Peak				
	Total Time between 2 temperatures				

Finally click on the 🔲 button then OK button.

Create a solder paste by selecting from the library.

Click the 🖶 button

Click the 🗾 button

Select the Manufacturer and the Solder paste

				×
МА	N	JFACTURER SOLDER PASTE		
MANUFACTURERS		SOLDER PASTE LIST		
Aim		Amtech NC/WS Air 4300		-
Almit		Amtech NC/WS Air 4300		
Alpha		Amtech NC/WS Air LF-4300		
Amtech		Amtech NC air or N NC 557		
Asahi		Amtech NC Air or N NC 559		<mark>_</mark>
BLT		Amtech NC Air or N NC 559		
Cobar		Amtech NC Air or N NC 559 ASM		
CX 85 NC		Amtech NC Air or N NC 559 ASM		
EFD		Amtech NC Air NC 560 LF		
FCT Assembly		Amtech NC air or N NC557		
Harima		Amtech NC Air or N NC559-AS		
Heraeus		Amtech WS Air NWS-4100		
Indium		Amtech WS Air NWS-4200		
Interflux	-	Amtech WS Air NWS-4200-4		
			X	\checkmark

Click the 🗹 button

Edit the name and parameters for every specs if needed.

Finally click the **b**utton then OK button.

PROCESS WINDOWS MENU



On this screen you are able to select whether you want to apply the same solder paste specifications to all Thermocouples or individually.

Version: 1.1.4	0	
> >	NOME GRANISKA STITUSS STUDI & RAMA SOLICIA PART	
PROCESS WINDOWS Default_pw	m NC air or N NC254 SAC305 📃 стелте New 📙 前 🌖	
CHOOSE THE SOLDER PASTE FROM		DETAIL OF THE SELECTED PROCESS SPECS
MANUFACTURERS USER DEFINED SOLDER PASTE	PROCESS SPECS LIST	
Automotive spec	Exit Temperature	
Default_sp	Ramp up Rate-Liquid to Peak	Max Falling Slope
BTU units validation SP	Ramp-Down Rate - Peak to Liquidous	SLOPE (DEGREE SECOND)
OLIVER SP	Slope between 2 temperatures - Ramp down	MIN TARGET MAX
Indium NC Air/N2 Indium5.1AT	Slope between 2 temperatures - Ramp up	-6 -4 -0.1
Cobar NC N/A 380 VITOR TEST	Max Falling Slope	
Air TC Spec	Max Rising Slope	
	Peak 🗸	
	Preheat	END TEMP
	Reflow	50
	Soak (Time Between)	
	Time Above Liquidous	
	Time within X Degree of Peak	
	Total Time between 2 temperatures	
(Treate a new Process Windo	W

Check the CREATE NEW

Enter the name PROCESS WINDOWS MyProcessWindow

Select the solder paste then edit the parameters for specs if needed

PROCESS WINDOWS MyProcessWindow	CURRENT SP Default_sp 🗹 create New 📙 🔟 🍏	
CHOOSE THE SOLDER PASTE FROM MANUFACTURERS USER DEFINED SOLDER PASTE	PROCESS SPECS LIST	
ToanSp	Exit Temperature	~
Kester OA Air/N2 R500	Ramp up Rate-Liquid to Peak	
MySolderPaste	Ramp-Down Rate - Peak to Liquidous	
Default_sp	Slope between 2 temperatures - Ramp down	~
	Slope between 2 temperatures - Ramp up	
	Max Falling Slope	
	Max Rising Slope	
	Peak	
	Preheat	
	Reflow	
	Soak (Time Between)	
	Time Above Liquidous	
	Time within X Degree of Peak	
	Total Time between 2 temperatures	

Finally click the 🕒 button.

Create a process window by copying a existed process window

Select a process window from the dropdown menu

PROCESS WINDOWS	MyProcessWindow	-
	Default_pw	
	TOANPW	
	MyProcessWindow	
ToanSp		
Kester OA Air/N2 R500		
MySolderPaste		
Default_sp		

Click the 📕 button

Edit the name and parameters for every specs if need.

Finally click the 🖻 button

PROFILE EXPLORER

This screen presents a list of all the profiles stored in the software.

Version: 1.1.4						•••				_ ∧ ×
* *			ЮМ		N A SOLDER PASTE PROCES					
Profile Explorer										
RODUCT NAME * PROCESS WINDOW * TEXT SLARCH										
Created by	Oven Name	Product Name	Profile Name	Process Window	CPI	CPI Predict	Start Time	Last Modified		
user	BTU at EX		BTU UNITS profiling validation_20		67.5 %		3/26/2024 10:34 PM	3/26/2024 10:43 PM	👁 🏮	
user	My Oven	Test Time vs temp	Test Time vs temp_2024-03-20 21		0.0 %		3/20/2024 9:03 PM	3/20/2024 9:36 PM		i
user			Test Time vs temp_2024-03-20 20					3/20/2024 8:42 PM		
user	My Oven	Test Time vs temp	Test Time vs temp_2024-03-20 18		0.0 %	0.0 %	3/20/2024 5:37 PM	3/20/2024 6:47 PM		<u> </u>
user	My Oven		Test Time vs temp_2024-03-20 17		0.0 %		3/20/2024 4:09 PM	3/20/2024 5:22 PM		
user	My Oven	Test Time vs temp	Test Time vs temp_2024-03-19 21		0.0 %		3/19/2024 9:56 PM	3/19/2024 9:57 PM		<u> </u>
user		BTU UNITS profiling validation	BTU UNITS profiling validation_20							
user		BTU UNITS profiling validation	BTU UNITS profiling validation_20	BTU UNITS VALIDATION PW	67.5 %		2/20/2024 2:51 PM	2/20/2024 3:18 PM		ii I
user		BTU UNITS profiling validation	BTU UNITS profiling validation_20							
user		BTU UNITS profiling validation	BTU UNITS profiling validation_20		0.0 %		2/20/2024 9:47 AM	2/20/2024 9:47 AM		<u> </u>
user		BTU UNITS profiling validation	BTU UNITS profiling validation_20	BTU UNITS VALIDATION PW	-3,037.5 %			2/20/2024 9:26 AM		
user		BTU UNITS profiling validation	BTU UNITS profiling validation_20				2/20/2024 9:20 AM	2/20/2024 9:20 AM		
user		BTU UNITS profiling validation	BTU UNITS profiling validation_20							
user		BTU UNITS profiling validation	BTU UNITS profiling validation_20	BTU UNITS VALIDATION PW	-3,037.5 %		2/20/2024 9:08 AM	2/20/2024 9:09 AM		ē
user		BTU UNITS profiling validation	BTU UNITS profiling validation_20	BTU UNITS VALIDATION PW						
user		BTU UNITS profiling validation	BTU UNITS profiling validation_20	BTU UNITS VALIDATION PW	-3,037.5 %		2/20/2024 12:28 AM	2/20/2024 12:34 AM		i i
user		BTU UNITS profiling validation	BTU UNITS profiling validation_20							
user		BTU UNITS profiling validation	BTU UNITS profiling validation_20		0.0 %		2/19/2024 1:54 PM	2/19/2024 2:02 PM		<u> </u>
user		BTU UNITS profiling validation	BTU UNITS profiling validation_20							
user		BTU UNITS profiling validation	BTU UNITS profiling validation_20		0.0 %		1/16/2024 5:34 PM	1/16/2024 5:43 PM		
user			RJ FLEX_2024-01-12 1648							<u> </u>
user			RJ FLEX_2024-01-11 0002				1/10/2024 11:52 PM	1/11/2024 12:04 AM		
user										
Vitor Barros		eneida dti	eneida dti_2023-11-15 1042	Automotive PW				12/27/2023 11:49 PM		
Vitor Barros		eneida dti	eneida dti_2023-11-15 1036		-2,986.7 %	-2,986.7 %				
Vitor Barros		BTU UNITS profiling validation	BTU UNITS profiling validation_20	BTU UNITS VALIDATION PW				12/27/2023 11:49 PM		
Vitor Barros		BTU UNITS profiling validation	BTU UNITS profiling validation_20			-2,964.4 %				
Vitor Barros		eneida dti	eneida dti_2023-11-15 1010	Automotive PW	-1,810.0 %	-1,810.0 %	11/15/2023 5:09 PM	12/27/2023 11:49 PM		
Vitor Barros			eneida dti_2023-11-15 0933							
Vitor Barros		eneida dti	eneida dti_2023-11-15 1006	Automotive PW	-1,815.6 %	-1,815.6 %	11/15/2023 5:04 PM	12/27/2023 11:49 PM		
Vitor Barros			eneida dti_2023-11-15 0832		-2,428.8 %		11/15/2023 3:31 PM			
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HARDWARE STATUS

This screen will present the status of operation of the EYE.

Version: 1.1.4		0					~ ×
		HOME		ETUP & RUN A SOLDER PASTE			
NAME:	OVEN BTU at EX o	TOTAL:		PRODUCT	PROFILER:	HARDWARE	
NUMBER OF ZONES:	9	TOTAL PROFILES:	223		PROFILER S VERSION:		
				LICENSE			
				2470 days			

STEPS TO CREATE A THERMAL PROFILE

Check list

The EYE app (If not installed, proceed to the Installing the EYE software section.) [reference]

The PCB

The profiler set: Dongle, profiler, type K thermocouple, shield, jig, glove, scissors, aluminum tap [reference]

Setup

Prepare the EYE by ensuring it's properly configured on the software for the intended measurement environment. This includes defining which thermocouples are being used, setting the sampling interval, start point trigger and any other relevant parameters.[reference]

Placement

Position the data logger in the location where temperature measurements are desired. This could be inside a Reflow oven, Wave, Selective, Vapor Phase machines or any equipment with temperatures positive or negative, depending on the specific application. [reference] [reference]

Start Logging

The unit will start collecting data as soon the temperature start point trigger will be reached on any of the thermocouples measuring the components or by user instructions. [reference]

Data Collection

Allow the data logger to run for the desired duration to capture temperature variations over time. This could range from a few minutes to several days, depending on the specific requirements of the thermal profile.

Monitoring

Periodically check the data logger to ensure it's functioning properly, to monitor the ongoing temperature measurements and to be sure the unit is not getting stuck inside the machine if the case of the unit is travelling on a Pin Chain or Mesh Belt.. This helps identify any issues or anomalies that may arise during the logging process. [reference]

End Logging

Once the desired duration of temperature measurement is complete, it will automatically download the profile data to the software. [reference]

Plotting the Thermal Profile

Use the collected temperature data to plot a thermal profile graph, showing how the temperature changed over time and checking if the CPI is inside Process Window Specification using our specialized data analysis tools providing insights into temperature variations and trends. [reference]

Documentation

Document the thermal profile findings, including the measurement conditions, any relevant environmental factors, and interpretations of the temperature data. This documentation helps ensure the reliability and reproducibility of the thermal profile analysis.

EXAMPLE RUNNING A PROFILE



1 Mout the needed TCs to the PCB

2 Plug the Dongle to the PC and switch on the unit.



3 Open the EYE app and login.



4 Open SETUP & RUN A PROFILE menu.



5 Input the product infomation

Version: 1.1.4							^ ×
				SS SETUP & RUN & SOLDER PASTE			user
	PRODUCT NAME	BTU UNITS profiling validation			-		
	APPLICATION	Reflow					
╺┝ॿ	PRODUCT INFOMATION						
PRODUCT V INFORMATION		_		ঙ্গ			
<u></u>		22.00	33.00	200.00			
RUN NEW PROFILE		PRODUCT LENGTH (CM)	PRODUCT WIDTH (CM)	PRODUCT WEIGHT (GRAMS)			
•	PRODUCT DESCRIPTION						
‡							
PROCESS WINDOWS							

6 Config the profile parameters

Version: 1.1.4						
× 1		номі	GENERAL SETTINGS SETUP & RUN A			
	DRAG AND PIN-POINT TO IDENTIFY THE TC ATTACHMENT					
		V 🚺 TC 01			4	*
		V 🔲 TC 02		USE START TRIGGER	R 🜌	
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		🔽 📃 тс 04		START TRIOGER (C)		
		Y TC 05			1 M	
PRODUCT		TC 06			3	
INFORMATION		тс о7			e RealTime	*
SET UP AND		10 10				
RUN NEW		тс 11				
PROFILE		TC 12				
	19-01-1900					
APPLICATION	Contrast Con					
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PROCESS	Select Images					
WINDOWS						
	T					

7 Select the oven and input the oven recipe

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		OVEN NAM	E BTU at	EX								-					
													NUMBER ZONES	8		NUMBER ZONES	
	PRODUCT	Zone	1	2	3	4	5	6	7	8					Zone C1		
		Top (°C)	110.00	130.00	150.00	170.00	190.00	215.00	240.00	260.00					Top (*C) 5.00		
		Bottom (*C)	110.00	130.00	150.00	170.00	190.00	215.00	240.00	260.00					Bottom (*C) 5.00		
	RUN NEW PROFILE	TOP AND B	UTTON S	ETPOINTS	S ARE THE	E SAME					c	ONVEYOR SPEE	d (cm/minute)	55.00			
5																	
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	PROCESS																
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8 Choose the Process Window

Version: 1.1.4				
X		NOME G	INERAL SETTINGS SETUP AR RUM A SOLDER PASTE PROCESS WINDOWS PROFILE EXPLOR	
	PROCESS WINDOWS BTU UNITS V	ALIDATION PW		
	SAME SPECS FOR ALL TCS			
	TC 01	BTU units validation SP	Max Falling Slope	PROCESS SPEC NAME
PRODUCT			Max Rising Slope	Max Falling Slope
INFORMATION	TC 03		Peak	SLOPE (DEGREE SECOND)
	TC 04		Reflow	MIN TARGET MAX
SET UP AND	TC 05			-6 -4 -0.1
RUN NEW	TC 06			SAMPLE SECONDS OVER
(C=10)				10
OVEN				50
· · · · · · · · · · · · · · · · · · ·				
PROCESS VINDOWS				
	\mathcal{F}			

9 Click run button



10 Click OK to follow the instructions



11 Click the run button



12 Follow the instructions



13 Put the unit inside the shield







All the conditions are met. Now you can place the profiler in the shield and put in the oven.



ver 1.0.0 - 26 March, 2024

14 Mount the jig to the conveyor and mount the shield to the jig.





15 Monitoring the real-time data



16 After the board and the profiler pass through the oven, take it out. Please wear thermal gloves as the hardware can be very hot.





17 Bring the profiler next to the PC to get the signal strength 18 Take the profiler out of the shield to cool it down





19 Save the profile.



20 Analyse the profile and re-run if necessary

