

X-306 Oven Monitor

Monitoring Program to for X-REFLOW306 Series Ovens to display and store temperatures of the oven thermocouples and additional two thermocouples connected to TCT and TCB sockets located on the oven's back panel.

Version 2.0

Revision 2.0

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Bokar International

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www.BestBatchOven.com

Introduction

The X-306 Oven Monitor program allows for:

- Monitoring in real time air or N2 temperatures inside the oven and the two temperatures of the object to which TCT and TCB thermocouples are connected
- Storage on the PC of the four monitored temperatures
- Printing the stored time / temperature graphs
- Export to Excel stored information of the time / temperature graphs



GLOSARY of TERMS

- Profile Actual Time / Temperature characteristics achieved during Rework Process
- License Key The file needed to make a connection between X-REFLOW306 and a PC. This file identifies the individual X-REFLOW306 serial Number and allows for communication between the oven and the X-306 OvenMonitor Program. The License Key can be purchased from your local Bokar International Distributor.

X485-USB - A converter allowing for connection of the oven via X-REFLOW306 DATA STORE port with USB Port of a PC.

I. Installation instructions

1. Unpack zip file: Oven-Monitor 2.0.10.zip on a Hard Disc of Your PC:

All unpacked files must be together in the same folder.

The files are listed below:

DocumentFormat.OpenXml.dll FTD2XX_NET.dll

OvenMonitor.exe

- 2. Save the file Key_xxx.lic on the Hard Disc Your PC
- 3. Run the file: OvenMonitor.exe

and start Oven Monitor program from start menu on your PC



4. Go to *Tools* and *Options*

🔨 X-306 Oven Monitor	
File Tools About	
Connect desus	6
✓ Front heat Axis range: ✓ Rear heat Time [sec] Temp. [*C] ✓ TCT 600 380 ✓	
	(B)
Device × A Setup	3
License key	
300°C — Front heater	
34U°C — TCT	
320°C	
300°C	
280°C	0
260°C	-
240°C	-
220°C	
200°C	8)
180°C	- -
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	18:06

Choose *Edit* button and find the location of the file:

Key_xxx.lic (You have saved this file earlier on Your Hard Disk);

Press OK button.

 Connect X-REFLOW306 to a PC using X485-USB Converter. Press Connect (Top/Left corner on the Menu for X-306 Oven Monitor. This will connect the oven with your pc.

Note:

If your computer will not connect to the oven via X485-USB Converter,

unzip the file "X485-USB converter_driver.zip" and run file "CDM20600.exe".

II. MAIN WINDOW



III. Saving profiles

When you already have a profile on the screen and you want to save it, select from the Menu:

"File", and then "Save "



Select where you want to save it on your computer, enter the file name and save by clicking the Save button

🛪 X-306 Oven Monitor				_ 7 X
File Tools About				
Sconnect I Profile info				
Temperature Temp.[*C]: dT[*C/s	/s]: Axis range	Min/Max min.T.[°C]: max.T.[°C]:	min.dT.: max.dT.: 30	above temp. 0,0 Time:
Front heater 27,0	Time from 1 Town (PC)	Front heater 27,0 279,8	-5,3 16,4 Fro	nt heater 00:00:00
Rear heater 27,1	600 🖌 360 🗸	Rear heater 27,1 278,0	-5,6 15,7 Re	ar heater 00:00:00
	As	101 020 1200		-T 00:00:00
₩ 10-8 27,2	Save in: Profiles	V 0 🕸 🛤 🕶	0,8 10	00:00:00
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260°C				- Rear heater - TC-T
240°C	Desktop			— тсв
220°C	Documents			
200°C	-			
180°C	iy Computer			
160°C				
140°C	Ay Network			
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80°C				
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40°C				
20°C -				
0	00:02:00 00:04:00 0	00:06:00 00:08:00 0	0:10:00	
		Time [hr:min:sec]		

IV. Reading saved profiles

Open the file: chose from the Menu "File" and then "Open



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ile Tools About								
Connect 1 Profile info								
Temperature Temp.[°C]: dT[✓ Front heater -,- ✓ Rear heater -,- ✓ TC-T -,-	*C/s): Time [se	c.] Temp. [°C	Front here	min.T.[°C]: max ter -,-	<t.[°c]: min<="" th=""><th>.dT.: max.dT.: ?X</th><th>Time above to 300,0 Front heate Rear heate TC-T</th><th>emp. Time: r 00:00:00 r 00:00:00 00:00:00</th></t.[°c]:>	.dT.: max.dT.: ?X	Time above to 300,0 Front heate Rear heate TC-T	emp. Time: r 00:00:00 r 00:00:00 00:00:00
☑ ТС-В	Look in:	C Profiles		✓ G) 🏂 📂 🛄 🔻		тс-в	00:00:00
	My Recent Documents	⊡)profile_example	e1.pf					
340°C	Desktop							 Front heater Rear heater TC-T TC-B
300°C 280°C	ờ My Documents							
260°C	My Computer							
220°C 200°C								
180°C	Places	File name:	profile_example1.p	•	~	Open		
140°C		Files of type:	Profile		×	Cancel		
120°C								
100°C								
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			Time [hr:min:	ec]				

Chose "profile-example1.pf" or other file and open it:

The profile loads from PC where it was saved.

It shows four thermocuples:

- Two thermocuples: Located above Front and Rear heaters.
- Two thermocuples: connected to the TC-T and TC-B on the back panel and possibly to the PCB heated in the oven.



V. Export the graph to the the Excel file

If You want export the graph to the excel file, chose from the menu: "File" and then "Export to Excel". Enter the file name and chose the place to save excel file.

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File Tools About									
Sconnect 1 Profile info									
Temperature Temp.[°C]: dT[°C/s]:	Axis range		Min/Max	min.T.[°C]:	max.T.[°C]:	min.dT.:	mex.dT.:	Time above temp. 300,0	Time:
Front heater 27,0 Rear heater 27,1	Time [sec.]	Temp. [°C]	Front heater Rear heater	27,0 27,1	279,8 278,0	-5,3 -5,6	16,4 15,7	Front heater Rear heater	00:00:00
🗹 ТС-Т 27,3	600	380	TOT		170.0		100	то-т	00:00:00
I ТС-В 27,2 -,- S	iave As						<u>?</u>	🚽 тс-в	00:00:00
Device ×\profile_example1 ×	Save in:	🗀 Profiles			🔽 G 🦻	▼			
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00102			Time [hr:min:sec]	501001					

Click "Save" button and the excel version of your graph is saved to your specified location.

When you open the excel file it will look as shown below:

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1		_	_	_	-		Date	2016-07-0	6	-		-			-	â	Get Started	
2	Time [s]	Front heater [°C]	Rear heater [°C]	TC-T [°C]	TC-B [°C]												Help and Support	
3	0	27.00	27.10	27.30	27.20													
4	1	27.00	27.10	27.20	27.20												😔 Do More	
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10	7	27.10	27.20	27.30	27.20													
11	8	27.00	27.20	27.30	27.20													
12	9	27.10	27.20	27.30	27.20													
13	10	27.10	27.20	27.30	27.30													
14	11	27.00	27.20	27.30	27.30													
15	12	28.80	28.50	27.30	27.30													
16	13	35.10	34.30	27.50	27.60													
17	14	48.70	47.10	27.80	28.20													
18	15	57.00	55.30	27.90	28.70												Advertisement	
19	16	65.70	63.80	28.30	29.10													
20	17	74.30	72.30	28.50	29.50													
21	18	91.30	88.70	29.20	30.50													<u></u>
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25	22	115.90	113.10	32.50	32.80											¥	Microsoft	
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VI. Printing the graphs:

if you want to print on the graph: select "Print" from the Menu.



And select the printer which you want to use to print your graph. Click "Print"





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