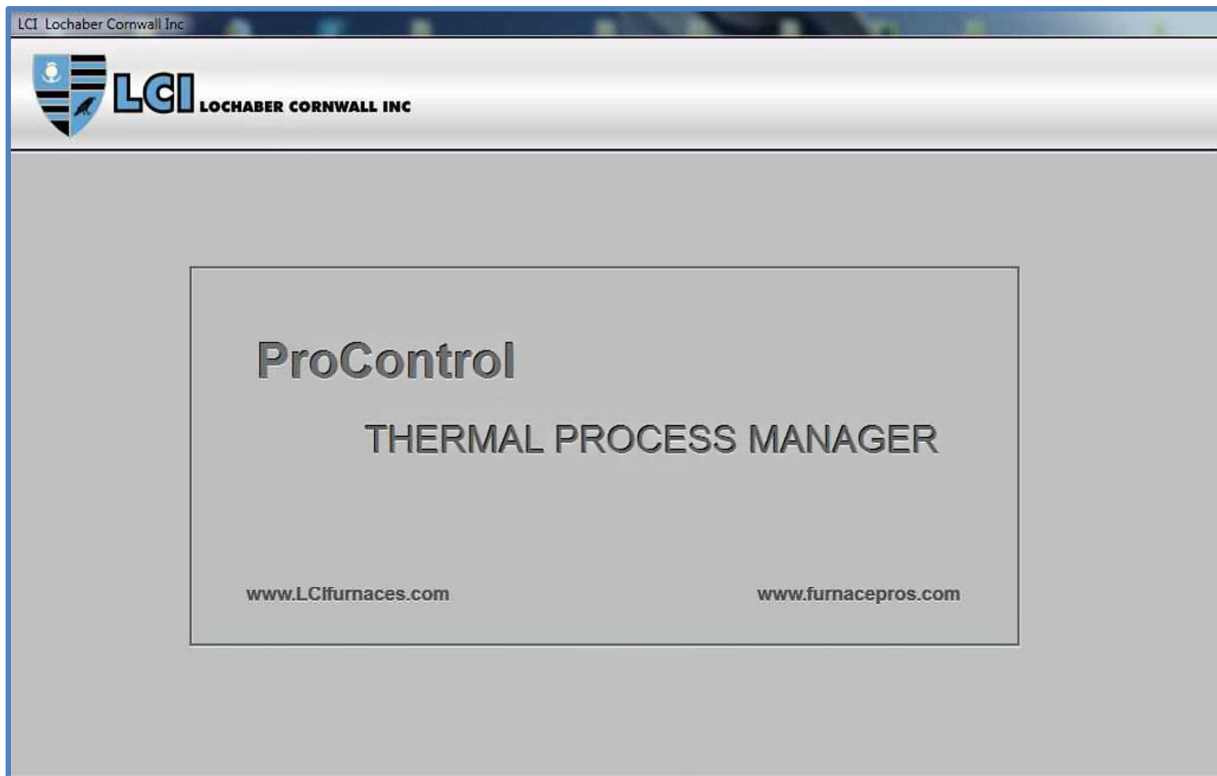




ProControl Furnace Software

Owner's Manual

Revision 1



Setup, Operation, Theory & Troubleshooting Guide

This Owner's Manual contains product information specific to the newly installed equipment and software. In addition, this manual contains information regarding features and options which may or may not be included in your furnace system.

Continuous Belt IR Furnace Software

Owner's Manual

Rev. 1

Model: ProControl

Build: 13.1218

Part No. 676-110000-01 CD

Part No. 676-110000-02 Loose Leaf

Edited by: JClark

Published by:

Lochaber Cornwall, Inc., 30025 Alicia Pkwy, Laguna Niguel CA 92677 US

949.218.4996

www.LCIfurnaces.com

www.FurnacePros.com

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TABLE OF REVISIONS

Rev	Sections	Description	Date
0	All	Initial Release	12/08/2017
1	All	LTSC Update	11/15/2021

WHAT IS IN THIS MANUAL

This manual covers upgrade software for computer-controlled models manufactured by RTC and controlled with a programmable logic controller (PLC). This Owner's Manual contains your product information and warranty as well as installation, startup, operating instructions specific to the equipment purchased. In addition, this manual may contain information regarding features and options which may or may not be included in your furnace system. The Owner's Manual is to be used in conjunction with the RTC Owner's Manual, RTC Continuous Belt IR Furnace Reference Manual and Dell Computer Product Information Guide to assure the equipment is installed and operated according to manufacturer's instructions.

Study this manual carefully, particularly regarding proper operation and limitations of the furnace equipment for reliable results and long life. Experience has shown that operators who master the contents of this manual can become expert in understanding the process system capabilities of our infrared furnaces. In doing so, many are able to push the initial process performance envelope and thus achieve higher degrees in both process reliability and throughput than previously anticipated.

Note that throughout this manual the equipment is generally referred to as a furnace. A dryer is a furnace with only the top lamp elements installed or operated.

The manual uses LA-309 and LA-310 interchangeably throughout. The LA-309 is an updated version of the LA-310 using the same design furnace chamber and cooling section.

EQUIPMENT LIST

The following equipment was shipped with the furnace.

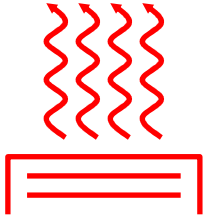
Qty	Unit	Description	Part Number
(1)	ea	ProControl Furnace Software System configured for the specific IR Furnace and consisting of the following equipment:	FO-676-110000
(1)	ea	Furnace Computer, Dell Optiplex or Precision	Required, See Service Tag
(1)	ea	Monitor, Dell Professional 17" LCD Flat Panel Monitor (std 4:3, 1024x768) VGA and/or HDMI	Required
(1)	ea	Keyboard, USB English, Black	Required
(1)	ea	Mouse, USB Optical	Required
(1)	ea	Power Supply, 5 Vdc, 5A	322-094408-103
(1)	ea	Ethernet surge protector (PoE)	Recommended option
(1)	ea	VGA or HDMI cable	Required
(1)	ea	USB A-B cable	Optional
(1)	ea	Ethernet Crossover cable	Required
(1)	ea	Ethernet Standard Cat 5 cable	Recommended option
(1)	ea	CD Media, ProControl™ Furnace software backup disk with manuals	676-110000-01
(1)	ea	Software Manual, Reference, Perfect Bound	676-110000-02 (optional)

GENERAL SAFETY GUIDELINES

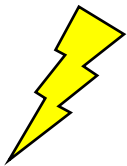
The following set of guidelines is intended to create awareness of potential health and safety hazards.

Normal Good Laboratory Practice

Normal good laboratory practices apply to the operation of IR furnaces. Do not use the space above the furnace as storage. Do not block the cabinet doors preventing the cooling of the electronic equipment inside. Do not operate with side covers off as this will prevent normal cooling of the electronic equipment thus voiding the warranty. Tuck electrical cords out of the way. Do not store flammables in the vicinity of the furnace and especially while operating the furnace with an oxygen atmosphere.



HIGH TEMPERATURES. In general, the operation of any furnace may expose operators or maintenance technicians to the risk of burns. After being processed in an infrared furnace, customer product may still be dangerous to handle. Each owner is responsible for providing a safe work environment and proper training in the handling of material being processed in a furnace.



ELECTRICAL SHOCK HAZARD. IR furnaces operate at high voltages. Operation with side covers off constitutes a safety hazard. Ensure that main power is off while side covers are removed.

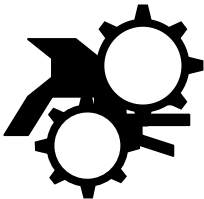
Electrical shock hazards exist for those technicians who service the furnace. High voltages are required to operate the furnace and precautions must be taken to reduce the exposure to these elements. Again, it is the responsibility of the furnace owner to assure that only properly trained service technicians, familiar with high voltage operations be allowed to service the equipment



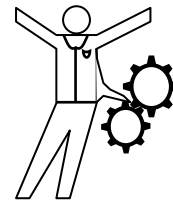
EXPLOSION Explosive dangers may exist in the high temperature process environment of the furnace. If the furnace operates with process gas containing hydrogen, measures must be taken to avoid the dangers of explosion. Furthermore, improper gas flow balance may draw oxygen rich air into the furnace, mixing with effluent gases and material from products, also creating a hazardous environment.



HAZARDOUS MATERIALS. Persons performing maintenance tasks such as replacement of lamps may become exposed to silica fiber compounds. Such tasks should be performed by qualified persons wearing gloves, eye protection and a facemask to prevent inhalation of particulates.



ROTATING EQUIPMENT. Roller dangers exist when working around the conveyor belt of the furnace. Care should be taken not to place hands or garments on or near the belt drive mechanisms when the conveyor system is operating as roller crush may occur. Operators should avoid walking near the open ends of the conveyor belt. Those who must be near the moving parts should wear close fitting clothing.



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