

## TraceCalc® Pro Version 2.9 Readme File

Welcome to TraceCalc® Pro, the industry standard for heat-tracing design. Pentair Thermal Management is devoted to delivering quality software and support to make this the best design tool available in the industry today. Your feedback is very important to us. Please feel free to contact us at [PTM-Info@pentair.com](mailto:PTM-Info@pentair.com) with questions, issues, or suggestions for this program.

**IMPORTANT:** Please check our web site at [www.pentairthermal.com](http://www.pentairthermal.com) periodically to obtain the latest TraceCalc Pro news and updates.

This Readme covers the following topics:

1. **Installing TraceCalc Pro 2.9**
2. **Main New Features of Version 2.9**
3. **Known Issues and Limitations**
4. **System Requirements**
5. **Installation**
6. **Register for a Validation Code**
7. **Technical Support**
8. **Change History** (new features and fixed issues)

### 1) **Installing TraceCalc Pro 2.9**

To prevent installation errors, the installation file compatibility mode should be set to Windows XP (Service Pack 2). If you have not set the compatibility mode for the installation, the installation may fail with an error message that the file SCRRUN.DLL, or some other operating system file, could not be opened.

To set compatibility mode, first download the installation file. Find the file on your system, right-click on the file and select 'Properties'. Click on the Compatibility tab. Click on the button marked 'Change settings for all users.' Check the checkbox labeled 'Run this program in compatibility mode for:' and select Windows XP (Service Pack 2) from the list. Also check the checkbox labeled 'Run this program as an administrator'. Click OK to accept the changes; Click OK to close the Properties dialog; then double-click the file to run the installation.

During installation, Setup will detect if an earlier version has been installed. If you have an earlier version installed, then Setup will uninstall it before continuing. All of your application settings will be retained. Old projects will not be removed and can be used with TraceCalc Pro 2.9.

## 2) Main new features of version 2.9

- A new lighted end seal for self-regulating and power-limiting heating cables has been introduced for the European and Asian (IEC) markets, type Raychem E-100-L-E. The new product is fully compatible with applications using previous versions. For more information on this product, consult our website [www.pentairthermal.com](http://www.pentairthermal.com) or contact your local representative.
- A new electronic line sensing thermostat, the Raychem ETS-05, has been introduced for the North American (NEC, CEC) market. For more information on this product, consult our website [www.pentairthermal.com](http://www.pentairthermal.com) or contact your local representative.
- The nominal sheath temperature algorithm was changed to include the maximum operating temperature as the reference for the sheath temperature calculation, if this is above the maximum controlled temperature, in cases where the circuit is not line-sensed.
- The contact temperature algorithm to validate heaters on plastic pipes was changed to include the maximum operating temperature as the reference for the contact temperature calculation if this is above the maximum controlled temperature, if the circuit is not line-sensed.
- The option to force the trace ratio of a serial connection of single conductor cable sets is now available to users having the option to design with series heating cables.
- The option to override the forced trace ratio on child segments is now available to all users.
- For Raychem mineral insulated (MI) heating units for the North American (NEC, CEC) market, the reverse gland option has been removed.
- TraceCalc Pro has been updated to require control systems using control limited design in Class I Division 1 and Zone 1 to have a high temperature limiter.
- "Multiple circuits created" is now an informational message rather than a warning.

## 3) Known Issues and Limitations

- **Notice for Windows XP users outside of North America:** There is a known Windows issue that causes column totals in the Line List Summary Report to be summed and displayed incorrectly; Microsoft has released a Windows Update that will correct this issue. You may find information on the issue and the downloadable Update by searching for Knowledge Base article 951978 on the Microsoft website.
- For designs with European single conductor, polymer insulated (PI) series heater cables, the connection components selected by TraceCalc Pro have the following limitations:
  - a. For CS-150-xx-PI connection kits, the specific crimp size is not indicated in the bill of material. You will need to manually select the correct crimp based on data presented in the latest Technical Data Book.
  - b. For Power Tee or Power Splice configurations, a JB-EX-20 junction box will be selected by TraceCalc Pro, however you should substitute a JB-EX-21 instead.

- c. The last leg of a multi-segment Parent/Child design will include two single conductor segments and a junction box allowed for series connection of the two segments. At this point, TraceCalc Pro does not support a single looped cable as the last segment.
  - d. TraceCalc Pro will not support the full application range of the universal connection and splice kit for PI heating cables, reference: CS-150-UNI-PI. Its maximum use temperature has been limited to 120 °C for simplification of the selection algorithms. However; if the user plans to use the kit anyway, it is important to verify the maximum allowed wattages for higher temperatures as detailed in our installation instructions for the kit (ref. Install-064). In case of doubt, please contact Pentair Thermal Management or use the kit CS-150-2.5-PI instead.
- For European series cable designs, TraceCalc Pro will propose a bill of materials for which some components have the quantity set to zero. These are small electrical items required to create the desired electrical configuration and are compatible with the proposed junction box. Users should adjust the quantities of these components to ensure that the requested electrical configuration can be realized. Refer to the individual datasheets of the proposed junction boxes for more information on the exact contents and electrical limitations.

#### 4) System Requirements

Minimum Requirements:

- Microsoft Windows 7 or later, Server 2003 or later
- At least 25 MB of free hard disk space
- **Internet Explorer 6.0 or later**
- Adobe Acrobat Reader 5.0 or later
- Recommended: 500 MHZ, 2 GB RAM

#### 5) Installation

The program can be downloaded from our website [www.pentairthermal.com/tracecalcpro](http://www.pentairthermal.com/tracecalcpro), after downloading, just start the TraceCalc Pro 2.9 Setup.exe program and follow the instructions.

#### 6) Register for a Validation Code

When you install the TraceCalc Pro software, you are getting a trial version which will only function for 30 days, unless it is registered and a valid registration code is entered.

The first time you launch TraceCalc Pro, you will be prompted to register. Once you register, we will send you the validation code. To enter the code, launch TraceCalc Pro, click **Register** on the main menu and type the code in the pop-up window.

#### 7) Technical Support

For help using TraceCalc Pro, first check the extensive on-line help in the program.

- To contact your local Pentair Thermal Management representative, visit [www.pentairthermal.com](http://www.pentairthermal.com), click on the 'Support' menu, then choose 'Where to Buy'

- To view Frequently Asked Questions, visit [www.pentairthermal.com](http://www.pentairthermal.com), click on the 'Support' menu, then choose 'Frequently Asked Questions (FAQ)'
- To contact Technical Support, send email to [PTM-Info@pentair.com](mailto:PTM-Info@pentair.com) and indicate your country and preferred language.
- To download the latest version of TraceCalc Pro or the user manual, go to the TraceCalc Pro page at <http://www.pentairthermal.com/tracecalcpro>

Thanks for reporting any issues to us.

## 8) Change history

### Version 2.9

New	A new lighted end seal for self-regulating and power-limiting heating cables has been introduced for the European and Asian (IEC) markets, type Raychem E-100-L-E.
New	Raychem ETS-05 added for the North American (NEC, CEC) market.
New	Reverse gland option removed for Raychem mineral insulated factory terminated heating units for the North American (NEC, CEC) market.
New	The nominal sheath temperature algorithm was changed to include the maximum operating temperature as the reference for the calculations if required.
New	The contact temperature algorithm was changed to include the maximum operating temperature as the reference for the calculations if required.
New	The 'superseded' insulation descriptions have been updated to avoid misinterpretations.
Fixed	Direct heater connection of the heater on the controller type Raychem JBS-100-ECW-A was incorrectly allowed.
Fixed	Direct heater connection of the heater on some controllers was incorrectly allowed when an external contactor was required.
Fixed	JBS-100-ECP-A and –ECW-A allow standard ambient sensing, but were not being allowed for that application.
Fixed	The part numbers of the Panel mounted Raychem electronic controllers; types HTC-915-CONT and HTC-915-LIM have been corrected.
Fixed	Correction of some Russian product descriptions.

- Fixed            Data corrections were required for some controllers (maximum current of the NGC-20-C-E and Raystat-EX-02, number of sensors included with the NGC-20-CL-E).
- Fixed            E-100-L-A now automatically selected for vessels when lighted end seal is desired.
- Fixed            Heat loss of vessel area under closed skirt is now calculated with no wind.
- Fixed            10BTV1-CT should allow T-100 as splice (North America only).