

RAYCHEM TraceCalc® Pro Version 2.11
Readme File

Welcome to RAYCHEM TraceCalc® Pro, the industry standard for heat-tracing design. nVent 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 thermal.info@nVent.com with questions, issues, or suggestions for this program.

IMPORTANT: Please check our web site periodically to obtain the latest TraceCalc Pro news and updates.

This Readme covers the following topics:

- 1. Main New Features of Version 2.11**
- 2. Known Issues and Limitations**
- 3. System Requirements**
- 4. Installation**
- 5. Register for a Validation Code**
- 6. Technical Support**
- 7. Change History** (new features and fixed issues)

1) Main new features of version 2.11

- New default Alloy 825 mineral-insulated cold leads providing superior corrosion resistance with standardized nickel-plated M25 glands are available (EUR only).
- New junction boxes introduced with integral earth plates and standardized M25 entries for mineral-insulated heaters (EUR only): JB-EX-40-EP, JB-EX-41-EP, JB-EX-42-EP.
- Due to certification updates to latest standards, the sheath temperature data for HDF/HDC, HSQ, HIQ and HAX mineral-insulated heating cables for (IECEX/ATEX/EAC) have been revised and brought in line with the latest requirements and test methods. This can result in lower sheath temperatures for applications and/or reduce the number of passes required for certain applications. Contact your local sales representative in case you have questions or need further assistance.
- Mineral-insulated heaters will now be designed using brazed cold leads by default (EUR only).
- Mineral-insulated Cupro-nickel sheathed heaters will now be made-to-stock (EUR only).
- An above-insulation end seal kit with green LED signal light, the E-100-L-E, is now available in North America. This 100-277 V end seal kit is for use with our BTV, QTV, XTV, VPL and KTV heaters.
- Circuit lengths and CB current calculations for parallel cables have been revised per IEC EN 60898 to allow the use of B type breakers instead of C type breakers. The selection of the desired breaker type can be made on a project level under Set up → Project settings → Design. (EUR only)
- The maximum current rating for the MIJB-1086-A, MIJB-1086-B and MIJB-864-A junction boxes have been increased to 65 amps (Americas only).
- Wieland quick connectors for Mineral Insulated cables may now be used in hazardous areas in the USA.

- The algorithm to determine the max contact temperature between heating cable and pipe or vessel when made of plastic, has been revised. It now also considers the instance the heater can be powered at the max operating temperature if the selected control method would not switch of the heater when this potentially higher fluid temperature occurs. (eg uncontrolled, ambient sensing or PASC) This can result in a warning to revert to line sensing if this is the reason the max allowed contact temperature may be exceeded.

2) Known Issues and Limitations

- 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; a JB-EX-21 should be substituted 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. If the user plans to select the kit, it is important to verify the maximum allowed wattages for higher temperatures as detailed in our installation instructions (ref. Install-064). In case of doubt, please contact nVent 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.

3) System Requirements

The TraceCalc Pro installation package no longer supports installation on Windows XP. Contact nVent for more information.

Minimum Requirements:

- Microsoft Windows 7 or later, Server 2008 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

4) Installation

The program can be downloaded from our website. After downloading, just start the TraceCalc Pro 2.11 Setup.exe program and follow the instructions.

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 2.11.

5) 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. Register online through our public website. 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.

6) Technical Support

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

- To contact your local nVent representative, visit our website, click on the 'Support' menu, then choose 'Where to Buy'
- To view Frequently Asked Questions, visit our website, click on the 'Support' menu, then choose 'Frequently Asked Questions (FAQ)'
- To contact Technical Support, send email to thermal.info@nVent.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.

Thanks for reporting any issues to us.

7) Change history

Version 2.11

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| New | New default Alloy 825 mineral-insulated cold leads providing superior corrosion resistance with standardized nickel-plated M25 glands are available (EUR only). |
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New	Brazed cold leads will be specified for mineral-insulated heaters by default. Laser-welded cold leads will only be specified if forced or for very high-temperature applications (EUR only).
New	An above-insulation end seal kit with green LED signal light, the E-100-L-E, is now available in the Americas. This 100-277 V end seal kit is for use with our BTV, QTV, XTV, VPL and KTV heaters.
New	Circuit lengths and CB current calculations for parallel cables have been revised per IEC EN 60898 to allow the use of B type breakers instead of C type breakers. The selection of the desired breaker type can be made on a project level under Set up → Project settings → Design. (EUR only).
New	The maximum current rating for the MIJB-1086-A, MIJB-1086-B and MIJB-864-A junction boxes have been increased to 65 amps (Americas only).
New	Wieland quick connectors may now be used in hazardous areas in the USA.
New	If a non-default gland is used, or a custom cold lead length is specified, the user will be alerted that the item is made-to-order.
New	Mineral-insulated Cupro-nickel sheathed heaters will now be stock items.
New	Mineral-insulated Cupro-nickel sheathed heaters will come with Alloy 825 cold leads. Cupro-nickel cold leads will no longer be available.
New	The maximum exposure temperature for brazed parts used in conjunction with mineral-insulated steel cold leads and steel heating cable has revised to 550 °C.
New	Power output and circuit length data of Raychem LBTV have been updated (Americas only).
New	The algorithm to determine the max contact temperature on plastic pipes or vessels has been revised to include the max operating temperature if the selected control method does not ensure the heating cable is switched off at this potentially higher fluid temperature. (eg uncontrolled, ambient sensing or PASC)
Fixed	In rare cases an informational message 'Multiple circuits created' was mistakenly shown, when in fact the design resulted in a single circuit.
Fixed	RAYSTAT-CONTROL-10 data have been corrected to allow only one heater entry when connecting the heater directly to the controller.
Fixed	Some allowed minimum temperature inputs were too low, causing application errors. All minimum temperature inputs are now at least -160 °C (-256 °F).
Fixed	An incorrect circuit length was being reported for three phase wye circuits when heater sets were connected in parallel.

- Fixed Splice or termination components with too few heater entries were sometimes selected for three phase circuits.
- Fixed ETS-05-H1-A and ETS-05-H2-A allow direct connection of the heater into the controller.
- Fixed ETS-05-L1-A and ETS-05-H1-A do not require a 2-pole breaker.

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