

nVent RAYCHEM TraceCalc® Pro Version 2.12
Readme File

Welcome to nVent 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 2.12**
- 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 2.12

- When designing Mineral Insulated (MI) heating units as per European standards (Cenelec) with a Cupronickel sheath (HDF/HDC), the proposed units will always have cold leads with an Alloy 825 sheath and a bending protection on the joint. This results in a unique and very competitively priced heating unit whilst providing the highest corrosion resistance to the most exposed part outside of the insulation: the cold lead. In general, Cupronickel heating units are a very competitive alternative if the main corrosion concern is a saline environment.
- Due to unavailability of the 180 Ohm/km conductor, the Raychem polymer insulated heating cables types XPI-180, XPI-S-180 and XPI-F-180 are unfortunately no longer available. Designs where this conductor material was preferred, should be redesigned with a 150 Ohm/km or 200 Ohm/km heating cable.
- nVent RAYCHEM Elexant: The new Elexant 4010i and 4020i have been added to TraceCalc Pro. These controllers have Zone 2 ATEX and IEC Ex approvals and Class I Div. 2 and Zone 2 for North America. For more information on these controllers see <http://www.elexant.com>

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 2.12 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 2.12.

5) Register for a Validation Code

When you install the TraceCalc Pro software, you are getting a trial version that will only function for 30 days, unless it is registered and a valid registration code 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 2.12

New	Cupronickel sheathed heating units (HDF/HDC) will always be equipped with Alloy 825 sheathed cold leads.
New	nVent RAYCHEM Elexant 4010i and 4020i controllers were added.
New	Raychem XPI-180, XPI-F-80 and XPI-S-180 heating cables are no longer available.
Fixed	Upon forcing a cold lead for mineral insulated heating cables equipped with a gland size not in the preferred gland size list of the project settings, the warning indicating the gland does not have one of the preferred gland sizes disappeared. Now the warning will remain to ensure the user remains aware of the discrepancy.
Fixed	Heat loss from the insulated bottom of a vessel with a closed skirt was slightly over-estimated.
Fixed	The bottom area of a truncated pyramid vessel, and the resulting heat loss, were under-estimated.
Fixed	The bill of material quantities of MIJB-864-A, MIJB-1086-A and MIJB-1086-B junction boxes were being under-estimated in some cases.
Fixed	The film coefficient at the surface of un-insulated vessel areas were calculated using the cladding emissivity rather than vessel emissivity.