

## **Raychem TraceCalc© Pro Version 2.21**

### **Readme File**

Welcome to Raychem TraceCalc Pro, the industry standard for heat tracing design. Chemelex 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 [info@chemelex.com](mailto:info@chemelex.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 2.21**
- 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 2.21**

- A new dual-circuit controller, designed for the NAM region has been added: Raychem Elexant 7300i.  
Designed as a compatible replacement for the Raychem 920 controller family, the Elexant 7300i combines the trusted functionality of the Raychem 920 with a modern graphical local user interface. It supports the control and monitoring of two independent heat-tracing circuits per module and control and monitoring options such as line sensing, PASC, proportional control modes, current monitoring and ground-fault protection.  
The controller also supports Modbus RTU and features a 920 Modbus emulation mode for easy system upgrades.  
Please consult the datasheet of the Raychem Elexant 7300i for more information on what product configurations are available.
- The IEC certified panel mounted controllers, Raychem HTC 915-CONT and HTC 915-LIM have been made obsolete. Complete functional replacement can be realized with Raychem NGC-40 control and limiter modules. In case of questions, reach out to your Chemelex representative or customer service.
- A new property was added to the insulation materials area of the software to identify whether the insulation material is rigid or not. This is intended to help the user better assess the need for oversizing and eventual oversized diameter. To view this property, view the insulation definition through the Customize Insulation Types form (from the main menu select Setup >> Global Lists >> Thermal Insulations, then double-click the insulation name to view its properties).
- NAM controllers - Raychem DT910, ETS-05, JBS-100-ECX-A, and RAYSTAT-EX-03-A have been made obsolete. In case of questions on what replacement product we offer, reach out to your Chemelex representative or customer service.
- The embedded import sheet to allow direct import of an excel line list into a TraceCalc Pro project has been improved to indicate what fields are mandatory and which are optional.
- The header of the static heat-up / cool-down function has been revised to inform the user that the calculation is for static (non-flowing) pipes.

- To further improve standard reports, informative messages are now visible on the 'single line details' reports. Furthermore, the 'Summary line list' report will now show information when line status is OK and if any informational messages exist that users need to know about

## 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 Chemelex 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 Chemelex for more information.

Minimum Requirements:

- Microsoft Windows 10 or later, Server 2012 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 2.21 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 2.21.

Please Note: For a small group of TraceCalc Pro users, Microsoft Edge and Windows SmartScreen is preventing the download of TraceCalc Pro Software. If you experience this issue, please refer to the installation instructions found [here](#) to access the download. If you continue to experience issues, kindly contact Chemelex Tech Support.

## 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 Chemelex 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 [info@chemelex.com](mailto:info@chemelex.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 2.21

|     |                                                                                                                                 |
|-----|---------------------------------------------------------------------------------------------------------------------------------|
| New | Elexant Raychem 7300i advanced multi circuit controller added for NAM region                                                    |
| New | Obsolescence of some versions of the Raychem 920 controller for NAM region due to launch of Elexant Raychem 7300i               |
| New | Obsolescence of some older controllers for the NAM market, more specifically DT910, ETS-05, JBS-100-ECX-A, RAYSTAT-EX-03-A      |
| New | Obsolescence of the panel mounted controllers types Raychem HTC 915-CONT and HTC 915-LIM for regions adhering to IEC standards. |
| New | Information messages visible on Single Line Detail reports                                                                      |

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| New   | Single Line Detail report page 2 now informs the user if the components used do not require cold leads.                             |
| New   | Summary Line list report includes presence of informational messages if the status is ok                                            |
| New   | Rigid property added to insulation definitions                                                                                      |
| New   | Header for Heat-up / cool-down settings revised to better indicate this is for no flow condition designs.                           |
| New   | Headers of import sheet were changed to indicate which fields are mandatory and optional                                            |
| Fixed | Three phase PI direct designs sometimes received an unspecified error during power component validation.                            |
| Fixed | The NAM JBU-100-L-A data were corrected to reflect the fact that it does have a signal light.                                       |
| Fixed | Unusable PYRO-3PH component for NAM market removed                                                                                  |
| Fixed | Three phase Delta configurations sometimes had an unnecessary termination junction box                                              |
| Fixed | In some circumstances the 'Direct connect' attribute for controllers was not respected                                              |
| Fixed | 3SC cables not allowed for three phase Delta configurations, 2SC cables not allowed for any three phase configurations              |
| Fixed | some North American users could not see the SC Direct option                                                                        |
| Fixed | When a user opens a second instance of TraceCalc Pro, a message should inform the user. Instead, an application error was appearing |
| Fixed | The Raychem Elexant 3500i was marked as T4 for NAM region but is allowed in T5 areas                                                |
| Fixed | On the cold lead form, the forced cold lead length for end B was not shown                                                          |
| Fixed | For designs in IEC regions, Laser-welded cold leads were not being selected when using certain HSQ heaters.                         |
| Fixed | The NAM D1297 junction box had not been marked as obsolete                                                                          |
| Fixed | Some junction boxes not allowed for 3 phase design were erroneously marked                                                          |

as allowing 3 phase design

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| Fixed | A missing line warning message (circuit not consistent with direct connection of heater to controller) caused an application error 'record not found' to be shown. |
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## **Version 2.20**

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| New   | Raychem 3500i controller added for designs adhering to IEC standards.                                                                                                                 |
| New   | Raychem Polymer Series heaters SC and SC/H cable are now available in the public version by default for NAM users.                                                                    |
| New   | Insulation schedules for ArmaGel XGH and ArmaGel XGC are now included in TraceCalc Pro list of insulations.                                                                           |
| New   | Import LineList functionality added for all users.                                                                                                                                    |
| New   | Static heat up & cool down for pipes made available to the wider public.                                                                                                              |
| New   | The IEC approved XPI-F PI heating cable range has been made obsolete.                                                                                                                 |
| New   | The IEC approved HDC/HDF MI heating cable range has been made obsolete.                                                                                                               |
| New   | The Raychem junction box,RMI-JB3, which is approved to NAM standards, has been made obsolete.                                                                                         |
| Fixed | Upon copying a line group that had trace ratio overrides on its child lines, the software erroneously could dismiss the override.                                                     |
| Fixed | The Raychem junction box range with reference MIJB xxxx, designed for the connection of mineral insulated heating in the NAM region, is suited for use Class I Division 2 Gas group A |
| Fixed | The max. exposure temperature for of pipe-mounted controllers was not always being checked.                                                                                           |
| Fixed | The maximum circuit length calculation for Raychem XTVR and HTV when using metric units could sometimes cause an unspecified error.                                                   |
| Fixed | When GT-66 is disabled by the user and he is designing with Alu tape on a metal pipe in combination with glass tape, there was an error upon attempting to select the glass tape.     |
| Fixed | Obsolete items will not be auto-selected but may still be forced..                                                                                                                    |

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| Fixed | Disallow direct connection of heater to controller for child lines of type: power parallel (parent control)                                                                                                         |
| Fixed | For some designs with the sensor on a child line could generate an error and no solution was found                                                                                                                  |
| Fixed | JB-EX-42-EP mounted on-pipe is now available for MI cable design                                                                                                                                                    |
| Fixed | The CS-20-2.5-PI-NH splice kit for Raychem Polymer Insulated XPI heating systems was mistakenly marked as above insulation                                                                                          |
| Fixed | For design using PI direct that failed validation due to too high temperatures in the Junction box, an 'unknown' error was thrown as opposed to the error message "no component found".                             |
| Fixed | When a user would request an SAPC design and also force a local controller that is not SAPC capable, the forced controller would be on the BOM if it passed convention validations although it is not SAPC capable. |
| Fixed | FxT heaters voltage level in L-N erroneously rejected                                                                                                                                                               |
| Fixed | Informational message for obsolete items implemented for all products                                                                                                                                               |

### **Version 2.19**

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| New   | Default storage locations for user data has changed from Documents\InVent folder to Documents\Chemelex                                                                                               |
| Fixed | When creating a circuit with a power splice in parallel, using parallel heating cables, and forcing the sensor to be located on that line segment, the software would not allow to save the circuit. |
| Fixed | For vessel designs using the North American product database, the software erroneously did not allow to select the sensor type RTD4/7. This has been corrected                                       |
| Fixed | DT 920 controller T-rating has been updated to T3A consistent with the latest Approvals Certificate.                                                                                                 |