RIGANA MANUFACTURING

RIGANA DIGITAL TEMPERATURE READER

TRAINING MANUAL

United Kingdom - Contact Details

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RIGANA DIGITAL TEMPERATURE READER

The RIGANA TEMPERATURE READER (RTR) is an intrinsically safe temperature measuring instrument for use in liquids stored in bulk storage tanks. It has the capacity to take temperatures and store recordings at thirty levels in 50 tanks, numbered from 1 to 50. When more than one temperature is taken in a tank, the average temperature is calculated if required. After using the tank recordings, they can be either individually deleted or over written.

The temperatures recorded are automatically saved and can either be viewed manually or transferred to a computer programme using a USB cable provided. The RTR software is held in the data stick for downloading to a computer. The frame, reel and components are all manufactured from nylon 66 material.

"RTR" KIT CONTENTS

The unit consists of the following items:

RTR

- 1 x Frame with winding spool and earth / bonding cable with clamp.
- 1 x Temperature probe and cable (with standard weight attached to the probe)
- 1 x Blue box.
- 1 x Shoulder carrying strap.
- 1 x 8 Pin charging cable.
- 1 x USB cable with male 8 pin plug (used for transferring data from the RTR to a computer)

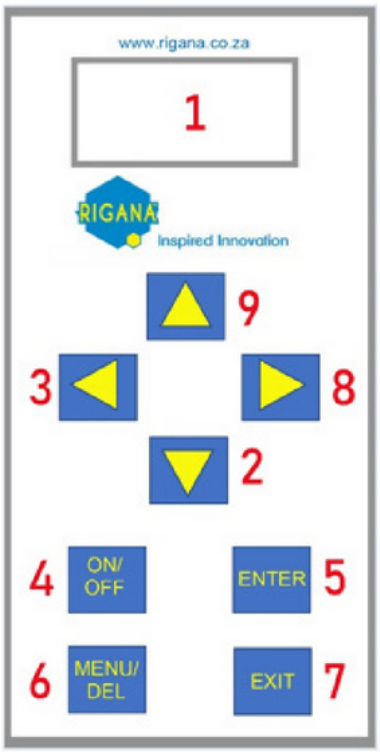
OPTIONAL EXTRA

- A heavy probe weight for taking the temperature of viscous products.

DOCUMENTATION

- 1 x Calibration Certificate
- 1 X Explolab IA certificate
- 1 x TÜV certificate
- 1 x Data stick loaded with RTR software and the operating manual

RTR GENERAL LAYOUT



1.Display Screen

2.Down Arrow

3.Left Arrow

4.Power on/off Button

5.Enter Button

6.Menu/Delete Button

7.Exit Button

8.Right Arrow

9.Up Arrow

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COMMISSIONING THE “RTR”

RTR BLUE BOX

- The blue box which clips into the frame / reel is divided into two compartments
- The larger compartment which contains the electronics is sealed and may only be opened by a Rigana Service Centre in terms of the certifications and warranty.
- The smaller compartment contains a plug-in encapsulated battery and resister unit, and the cover can be unscrewed to change the battery unit. The plug-in encapsulated battery unit is designed to power the RTR for a minimum of one year of operation and is then replaced with a fresh battery unit when serviced and recalibrated by a Rigana Service Centre.
- Should the workload of the RTR be excessive then the customer can replace the plug-in encapsulated battery unit which is available from a Rigana Service Centre.
- Under no circumstance is a standard 9v battery to be used.
- For optimal performance, the unit must be charged for 6 hours before initial use. To maintain peak functionality, it is recommended to charge the unit regularly for at least 2 hours.

WHEN, IN A SAFE AREA

- ·The blue box can be unplugged and removed from the RTR reel
- ·Data held in the RTR box can be transferred to a computer by using the USB cable.
- The battery is charged by using the 8 Pin charging cable from the blue box to the main power. The power from a computer is not sufficient to successfully charge the RTR. When charging the battery, a red light on the blue box will show to indicate the unit is charging.

On pressing the "ON/OFF" button the display will illuminate and "RTR 2.02" will flash on followed by the "battery %", "date" and the "next tank number". Remove the plastic film on the blue box display panel on first use.

OPERATING PREFERENCES

>Config Time	Press “menu/del” & select with “arrow” and “enter” buttons. Configuration.
>Fahr Metre	The temperature which has been set to Celsius can be changed to Fahrenheit by using the “menu/del”, “arrow” and “enter” buttons.
Cent >Feet	The lineal measurement has been set to metre and can be changed to feet using the “menu/del”, “arrow” and “enter” buttons.
00/00/00 Date	The date will be displayed in the format dd/mm/yy. The cursor will blink on Number to be changed. Date can be changed by using the “menu/del”, “arrow” and “enter” buttons.
00:00:00 Time	The current time will be displayed in a 24-hour format (hh:mm:ss). The cursor will blink on the selected digit. Date can be changed by using the “menu/del”, “arrow” and “enter” buttons.

TANK TEMPERATURE MEASUREMENTS.

TANK TEMPERATURE MEASUREMENTS.

Ensure that the RTR is grounded by attaching the earth clamp to a bare metal railing or tank earth tab.
Rotate clockwise to unwind the cable and probe.
Rotate counter clockwise to wind up the cable and probe.

- The unit will switch off automatically after a short period of non-action or on using the "ON/OFF" button.
- The tanks indicated on the RTR are numbered from 1 to 50. These numbers must be related to your actual tank descriptions in the downloaded RTR app in the computer. e.g.” Tank 1" on the RTR can be described as "Tank TG5 Diesel" in the App. It is recommended that such information is marked at the tanks' dipping points to ensure that an actual temperature taken by an operator is downloaded to the correct tank on the computer App.
- The previous tank temperature data for any tank on the RTR is automatically over written when taking a temperature at a later time or date.
- The RTR is able to record and store up-to 30 Temperatures of 50 tanks at any one time.
- The metre/feet readings are in interval of 0.4 of a metre and are only approximate depending on reel rotations.

Procedure for Taking Tank Temperatures
Procedures can be adapted to suite operational requirements.
Ensure that the RTR frame is bonded by attaching the earth clamp to a bare metal tank railing or tank earth tab.

- ·On pressing the "ON /OFF" button the display will illuminate and "RTR 2.02" will flash on, followed by the "battery %", "date" and a "tank number".

- Select the tank (1 – 50) required using the “arrow” and “enter” buttons.

- Release the brake to allow the sensor to descend to the bottom of the tank and press “enter” to zero the metres.

- Continue by using one of the three methods below.

- Press “enter” to record a reading the display will show “read busy” until the temperature stabilises.

To record 30 temperature readings of the product in the tank.
- Press “enter” for the bottom reading.
- Wind up the sensor to the middle reading height required and press “enter”.
- Wind up the sensor to the top reading height required and press “enter”.
- Press “off”, wind up the sensor, lock the brake.

To record 2 temperature readings of the product in the tank.
- Wind up the sensor to the first reading height required and press “enter”.
- Wind up the sensor to the second reading height required and press “enter”.
- Press “off” wind up the sensor and lock the brake.

To record 1 temperature reading of the product in the tank.
- Wind up the sensor to the reading height required and press “enter”.
- Press “off” wind up the sensor and lock the brake.

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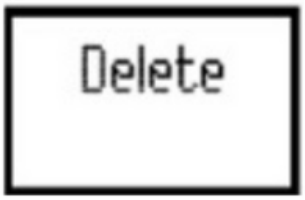
To read the data recorded in the RTR.

- Press “menu” scroll to “rd data” and “enter”.
- Select the tank, “enter” and read 1 valid will appear.
- Press “enter”, “> arrow” and “read 2 valid” will appear.
- Press “enter”, “> arrow” and “read 3 valid” will appear.



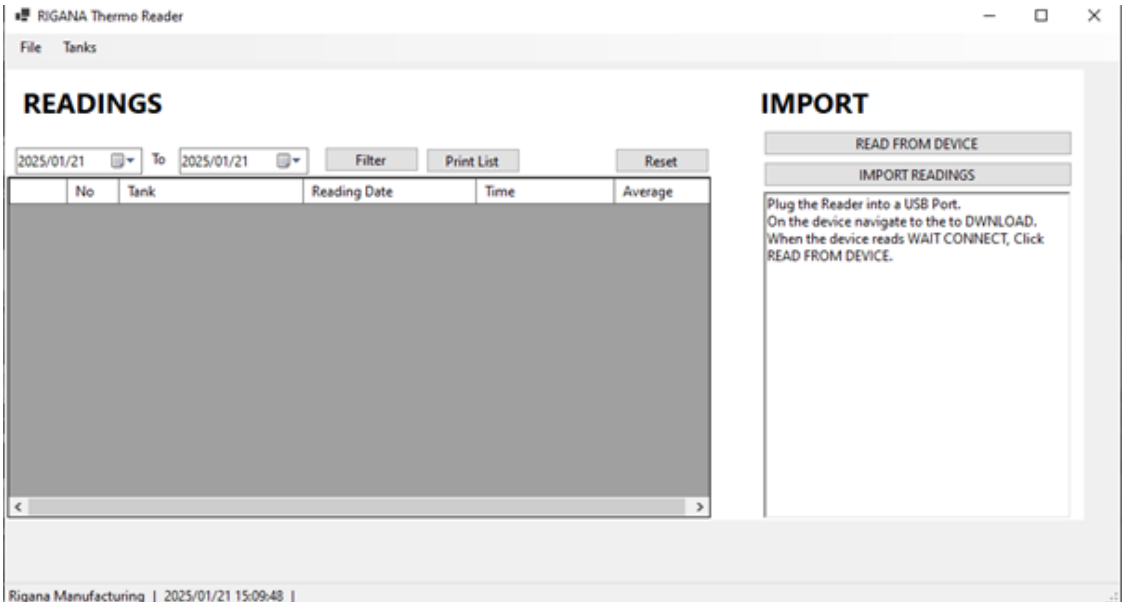
To erase data recorded in the RTR.

- Press “menu” scroll to “rd data” select tank number and “enter”.
- Press the “delete” button.

RTR APP

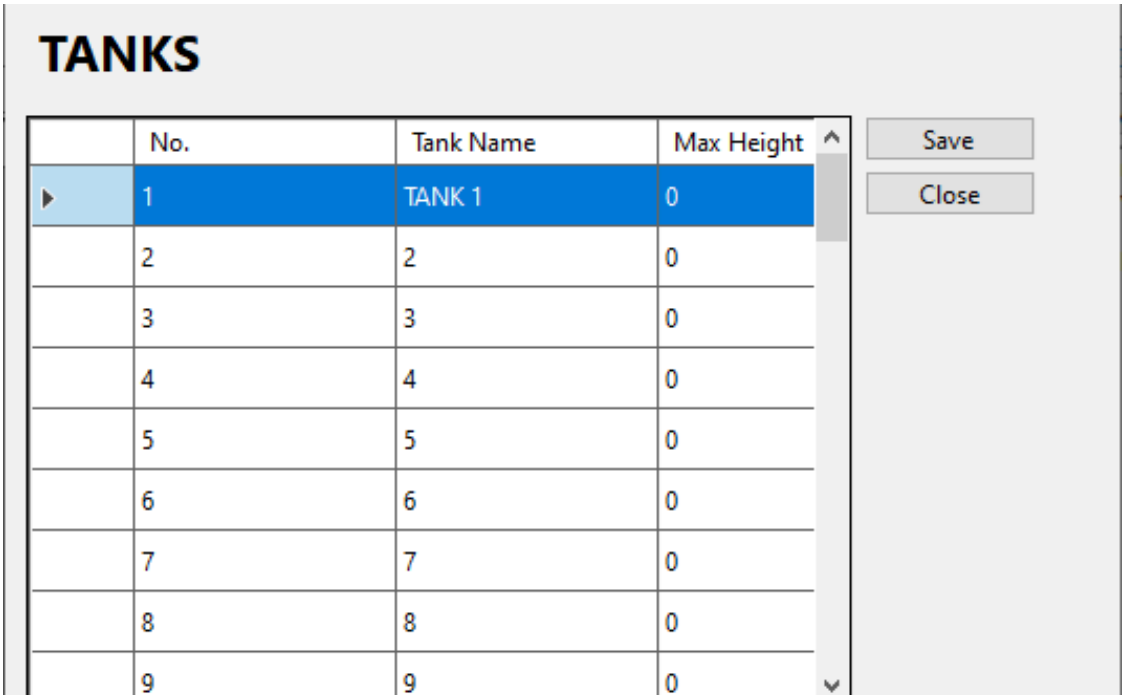
1.Downloading the software and manual

- The USB Data stick loaded with computer software and operating manual is loaded into a computer.
- Open the RTR App.



2.Personalise the app

- Click on tanks.
- Create all tanks under the “No” column.
- Personalise the tank names under “Tank name” column.
- - The column “Tank No.” is numbered 1 to 50 which corresponds to the numbering on the RTR. In the column “tank name”, you can enter the known tank details e.g. “TD5 diesel”



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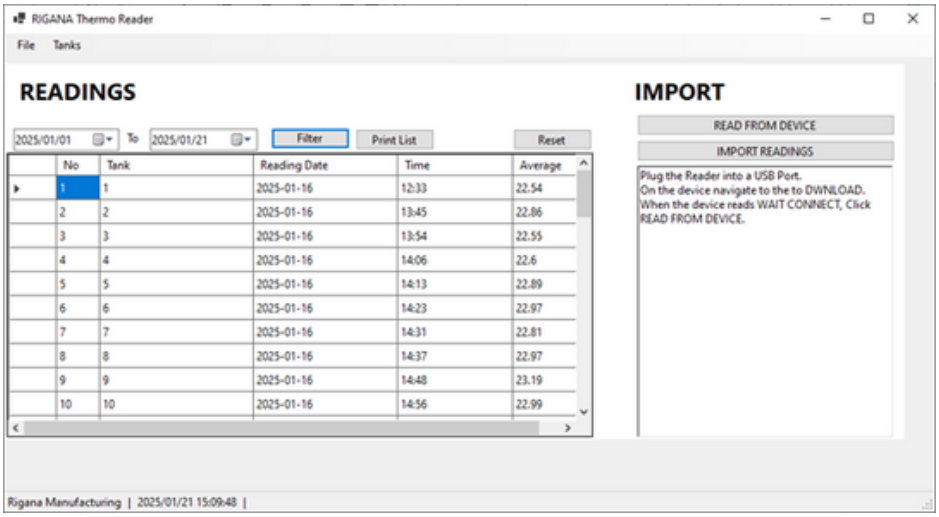
Transferring temperature readings from the RTR to a computer

Note : Ensure all tanks are set up before downloading.

- Plug the Reader into a USB Port.
- ON the device, press MENU and navigate to DWNLOAD.
- When the device reads WAIT CONNECT, Click READ FROM DEVICE
- Downloading Data…
- Please wait until device reads: DWN COMP
- Once device reads DWN COMP, click on IMPORT READINGS

- Import Complete.
- Click on import readings thereafter click on reset to display readings.



- To view details of readings double click on Tank No.

DURATION

7-day failure: in the event that your device has a manufacturing defect, and this is identified and communicated to Rigana within the first 7 days from the date of purchase, the complete unit (with packaging, all accessories and manual as invoiced) can be returned for a possible exchange on the same model, subject to the device being assessed at a Rigana Service Centre.

Warranty Assessment: in the event that your device has a manufacturing defect and this is identified and communicated to Rigana within two years from the date of purchase the complete unit (with packaging all accessories and manual as invoiced) can be returned for repairs subject to the device being assessed at a Rigana Service Centre.

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TRANSPORT

The purchaser is responsible for the cost and risk during the shipment of the product.

EXCLUSIVITY

- This warranty is the sole and exclusive warranty. No employee, distributor, agent, service centre or other person is authorised to alter this warranty or make any other warrant on behalf of Rigana.

Consequential Damages

- Rigana shall not be responsible for any incidental or consequential damages.

DISCLAIMER

- This manual is a guide to help the user operate the instrument safely and correctly
- The manufacturer disclaims all responsibility and liability for damage resulting from the miss-use of the equipment regardless of the cause of the damage.
- Rigana makes no warranty, express or implied, that the unit is fit for any purpose whatsoever; or to the absolute sufficiency of the material presented.
- There is a possible hazard if this equipment is used under open tank gauging conditions. The operator may be exposed to vapours and/or liquid splashes making personal protective equipment and clothing mandatory.
- Due to electrostatic charges which may be present in the tank, it is imperative that the instrument is grounded by electrically attaching the earth clamp to the tank before the probe is lowered into the tank, and that the clamp remains attached until after the probe is completely withdrawn from the tank.
- If the sensor probe is to be lowered into the tank via a grounded metal stilling well or sounding pipe that reaches below the liquid surface, or if the tank has a floating roof that is fully floating (and is in electrical continuity with the tank shell, then measuring the temperature is permissible at any time with no restriction
- In any other circumstances where a flammable vapour may be present, the following precautions should be taken:
- If the cargo is non-static or a static accumulator liquid, i.e., its conductivity is more or less than 50 ps/m, then measuring the temperature is permitted provided that the instrument is properly grounded and earthed before the temperature probe is inserted into the tank and remains earthed until the temperature probe has been removed from the tank.
- The apparatus should not be introduced into a tank until at least 30 minutes after completion of any loading or mixing
- For further guidance refer to International Safety Guide for 0il Tankers and Terminals (ISGOTT), ISBN 1 85609 291 7, latest edition 2006, or consult the appropriate Legislative Authority for the installation
- Warning: Only use the approved encapsulated battery unit and battery charger
- This product and its use may be related to international, national, local or company regulations or standards. It is the user's responsibility to ensure that the way to use the device complies with such applicable regulations or standards.

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Measurement Range	-40°C to 163°C (-40°F to 325°F)
Ambient Temperature Range	-10°C to 40°C (14°F to 104°F)
Resolution	0.1 °C or 0.01°C Selectable
Temperature Scale	Centigrade or Fahrenheit
Temperature Accuracy: -40°C to -30°C -30°C to +100°C -40°C to +163°C	 ±0.25°C ±0.1°C ±0.25°C
Repeatability: -40°C to 163°C	 ±0.1°C
Calibration	Digital One Point 0°C
Memory	50 Tanks, each 30 readings
Display	LCD 2 lines x 4 Characters each
Power	Rechargeable encapsulated RS PRO 9v battery
Battery Saving	Auto Shut off
Low Battery indication	By percentage of the battery level
Rechargeable Battery Life	Approx. 50 Hours
Overall Dimension of Reader	90mm x 166mm x 31mm
Weight of RTR blue box	286 gram
Instrument Protection	IP 54
RTR blue box	Dedicated Nylon 66 box
Temperature Sensor	30m PT1000 with Lumberg SV-80-8 Plug
Gross Weight	± 2.7kgs
Reel	Nylon 66
Bearings	Stainless Steel
Hazardous Environment Approval:	
Metrology Approval Portable Electronic Thermometer:	
ATEX:	ExiaIIB T4 Ga
IA Certificate No:	S-XPL/190767 X
ATEX:	(Il 1G Ex ia IIB T4 Ga)
ATEX EU Certificate No:	TÜV 23 ATEX 9044 X

The above information is subject to change without notice.

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