

Need Help?

For technical issues please visit rigelmedical.com and view the Application Notes in the Downloads tab. Application Notes are regularly updated and will most likely cover any common issues.

For further assistance please contact your Rigel Medical supplier or use the following contact details to speak to a member of the Rigel Medical team:

Sales and Delivery enquiries

Tel: +44 (0) 191 587 8730 **Fax:** +44 (0) 191 586 0227
Email: sales@rigelmedical.com

Technical enquiries

Tel: +44 (0) 191 587 8701
Email: support@rigelmedical.com

Service, Calibration and Repair

Tel: +44 (0) 191 587 8739 **Fax:** +44 (0) 191 518 4666
Email: service@calibrationhouse.com

**Remember to activate your 2 year warranty*
by registering your Multi-Flo with Rigel Medical**

Go to rigelmedical.com/registerproduct



*Terms and Conditions apply

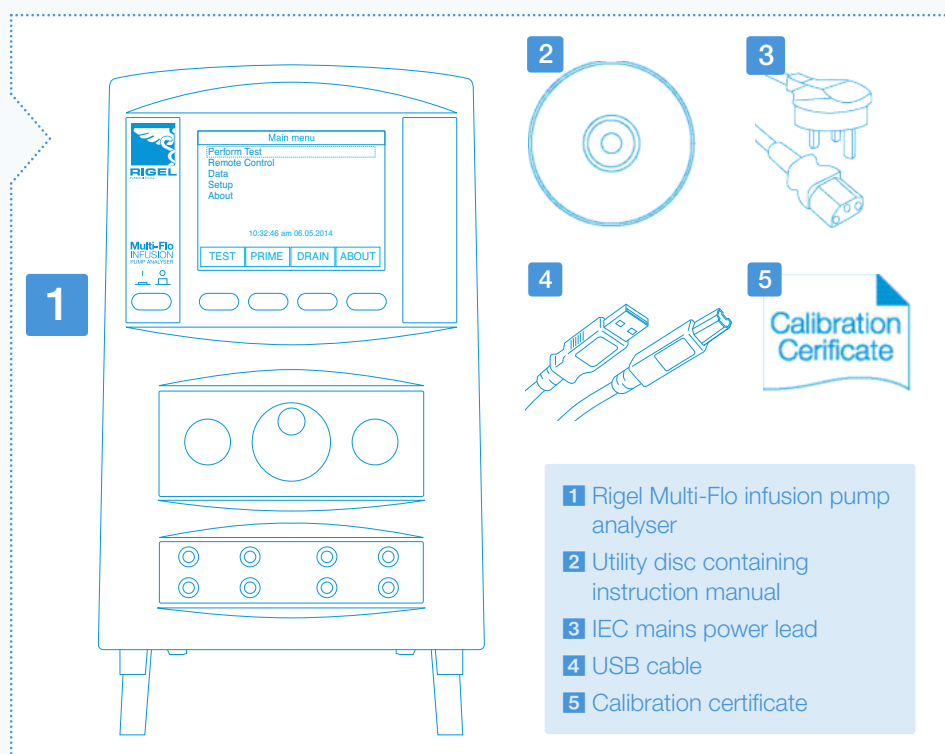
Rev 1.2
Part No. 385A558

Rigel Multi-Flo Infusion Pump Analyser Quick Start Guide

Introduction

The Rigel Multi-Flo infusion pump analyser provides accurate and fast analysis of the performance of all common infusion devices. Measuring flow rates, volume and pressure, the Multi-Flo is available in 1, 2 and 4 channel configuration which can be upgraded in the future to include additional channels up to a maximum of 4 channels. The Multi-Flo will ensure it meets your current and future requirements.

What's in the box?



NOTICE

If any items are found to be missing or damaged on receipt of your new unit, please contact your equipment supplier immediately.

User notes

The following symbols are used throughout this Rigel Quick Start Guide.

Important, follow the documentation! This symbol indicates that the operating instructions must be adhered to in order to avoid danger.

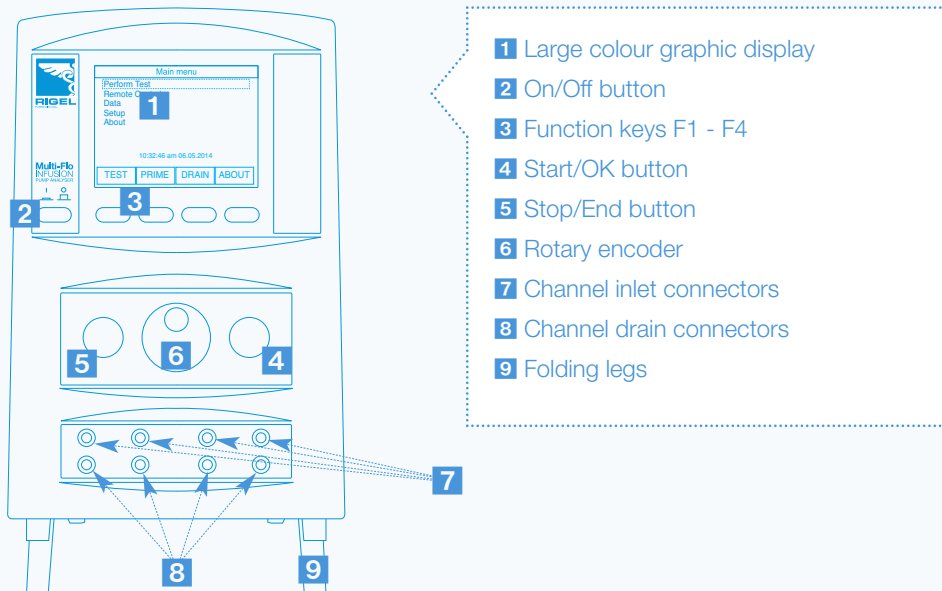
Warnings and Cautions

- Users** - The Rigel Multi-Flo infusion pump analyser is designed for use by adequately trained technical personnel only.
- Operation** - The Rigel Multi-Flo infusion pump analyser is designed for use within the published specifications. Any application outside of these specifications or any unauthorised user modifications may result in hazardous conditions or improper operation.
- Operation** - Refer to the Device Under Test (DUT) manufacturer operating instructions to ensure safe operation whilst analysing the DUT.
- Safety** - Ensure that only accessories supplied by the manufacturer or accessories that meet the manufacturer's specification are used.
- Safety** - Where safe operation of the Multi-Flo is no longer possible it should be immediately shut down and secured to prevent accidental operation.

It must be assumed that safe operation is no longer possible:

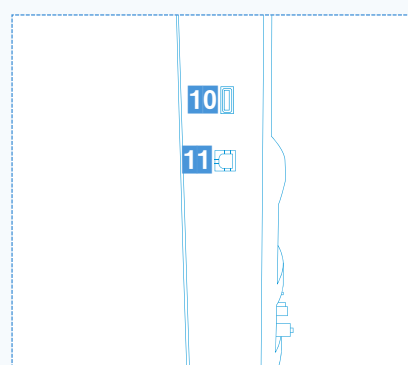
- If the instrument or leads show any sign of damage.
- If the instrument does not function.
- After long periods of storage under adverse environmental conditions.

1 Getting to know your Rigel Multi-Flo



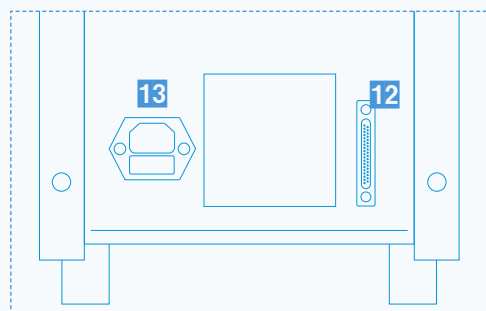
- 1 Large colour graphic display
- 2 On/Off button
- 3 Function keys F1 - F4
- 4 Start/OK button
- 5 Stop/End button
- 6 Rotary encoder
- 7 Channel inlet connectors
- 8 Channel drain connectors
- 9 Folding legs

Side connection panel



- 10 Type A USB connection
- 11 Type B USB connection

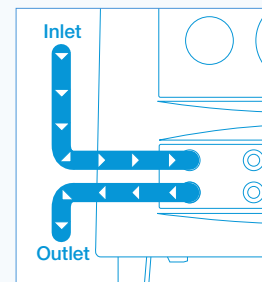
Rear connection panel



- 12 Auxiliary I/O connection
- 13 IEC mains power lead connection

2 Before you switch on!

Ensure the flow direction is as per diagram. The flow inlet is the top connection whilst the flow outlet is positioned below the inlet for each channel.



Ensure that the internal diameter of the outlet tubing is 3.2mm or greater.

Ensure that the length of outlet tubing is kept as short as reasonably practical.

NOTICE Use de-ionised water when performing tests on the Rigel Multi-Flo

To help prevent the formation of microscopic air bubbles in the pump chamber, keep the Multi-Flo unit primed unless draining is absolutely necessary.

If the Multi-Flo has been drained, to clear any microscopic air bubbles in the pump and pipework that could affect results, prime with 25ml Isopropyl Alcohol, followed by 50ml de-ionised water to flush the alcohol from the system.

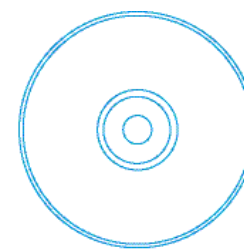
NOTICE To ensure proper functioning, and reduce the chance of malfunction, the Multi-Flo should be drained prior to storage or being transported.

Instruction Manual

This quick start guide is designed to be used in conjunction with the full Rigel Multi-Flo instruction manual.

The Rigel Multi-Flo infusion pump analyser instruction manual is now provided in electronic format only.

The manual is included on the utilities disc that accompanied your device and the latest version is also available to download from rigelmedical.com



3 Getting Started

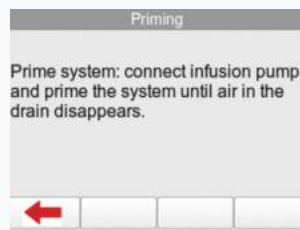
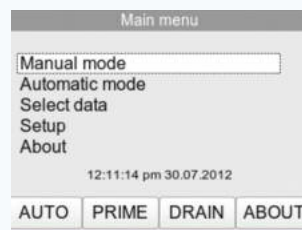
In this section we will identify some of the basic functions of the Rigel Multi-Flo and how to get you started.



Switch on

Turn on your Rigel Multi-Flo by pressing and holding the green ON button until the Rigel splash screen appears.

Priming a channel



Press the PRIME function key.

Prime until the drain is clear of air bubbles.

Draining a channel



From the main menu, select DRAIN.

Select the individual channel to drain or select 'Drain All'.

Press to stop the draining process.

4 Perform an infusion pump test

PCA Test



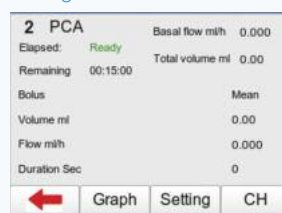
From the main menu, select manual mode and highlight the required channel.

Choose test type PCA test to enter the PCA setup screen.

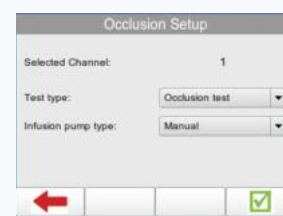
Using the rotary encoder you can set the test parameters for basal flow rate, bolus volume, and total volume to be infused and test duration.

Press to save and advance to the PCA test summary screen.

Press the green START button to begin the measurement



Occlusion Test



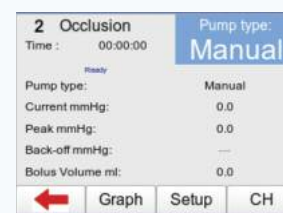
From the main menu, select manual mode and highlight the required channel.

Choose test type Occlusion test to enter the Occlusion test setup screen.

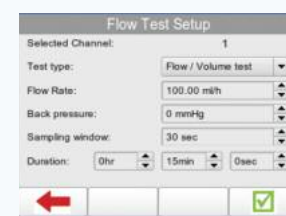
Using the rotary encoder you can set the test parameters for infusion pump type, manual or auto-reverse.

Press to save and advance to the Occlusion test summary screen.

Press the green START button to begin the measurement.



Flow Rate



From the main menu, select manual mode and highlight the required channel.

Choose test type Flow/Volume test to enter the Flow test setup screen.

Using the rotary encoder you can set the test parameters for flow rate, back pressure, sampling rate and test duration.

Press to save and advance to the PCA test summary screen.

Press the green START button to begin the measurement.



Viewing the graph

From the summary screen select Graph to view the graph of instantaneous flow rate against time.

