

Quick Start Guide

MultiFlo™ Configurator for Programming Thermal Mass Flow Controllers

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INSTRUMENT

Beyond Measure

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1-1 Purpose

Brooks® Instrument MultiFlo™ Configurator Quick Start Guide provides specific installation instructions for the easy programming of mass flow devices across a wide variety of gases and ranges without sacrificing accuracy and reliability.

Thermal Mass Flow model families supported by the Brooks MultiFlo Configurator include:

GF1XX Series
 GF40/GF80 Series
 IFC125 Series
 UNIT 856X Series
 UNIT 816X Series
 UNIT 810X Series
 UNIT 730X Series
 UNIT 166X Series
 IntelliFlow II Series
 IntelliFlow 3XP Series

1-2 System and Hardware Requirements

The Brooks® MultiFlo™ Configurator can be installed on a Windows PC under the following requirements:

- Microsoft® WindowsXP™ or Windows 7™ 32 or 64 bit operating systems
- Serial COM Port

- MultiFlo™ Configurator Accessory Kits:

<u>778Z010ZZZ</u>	Basic MultiFlo Configurator Kit *Software, MultiFlo Configurator
A331710003	Cable Assembly 2.5mm
214F027AAA	USB-RS485 Converter with DB-9 female
<u>778Z011ZZZ</u>	Basic MultiFlo Configurator Kit <u>w/Power Supply and Adapter Cables</u> *Software, MultiFlo Configurator
A331710003	Cable Assembly 2.5mm
214F027AAA	USB-RS485 Converter with DB-9 female
A332295001	Power Supply MFC
A332297002	Cable, Power, 9-Pin
A332297001	Cable, Power, DeviceNet

* MultiFlo Configurator Software is available on the Brooks Instrument website at:

www.brooksinstrument.com/MultiFlo

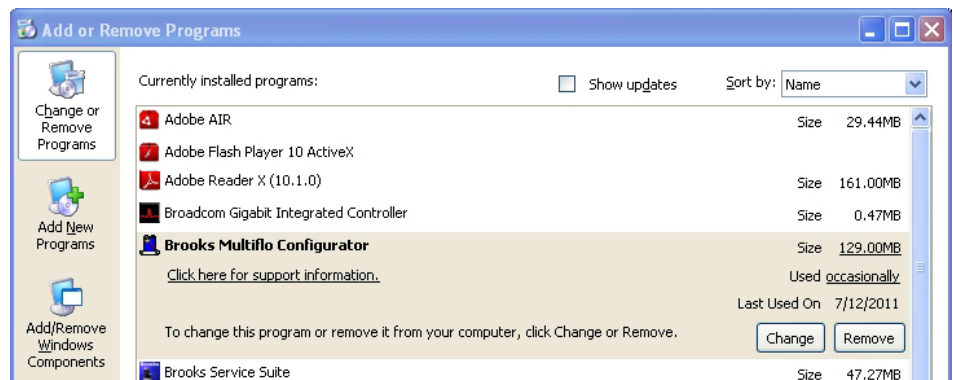
- Estimated time required for installation: 10-15 minutes

1-3 Uninstall Previous MultiFlo Configurator

⚠ IMPORTANT NOTICE

Ensure the previous version of MultiFlo Configurator is completely UNINSTALLED before proceeding to the new installation process. For any issues with this uninstall process please contact technical support or your regional support contact

1. If necessary, go to the Control Panel - Add/Remove Programs and remove any previous version of the MultiFlo Configurator. Click on Click here for support information to check version number. Click Remove and follow the remove instructions. Ignore any error message about failing to unregister a file.



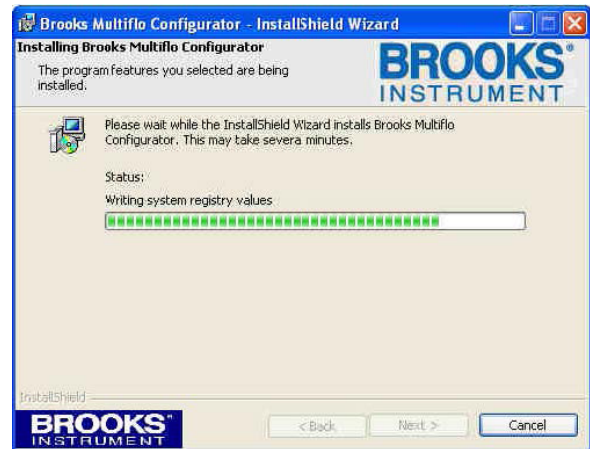
1-4 Install the Brooks MultiFlo Configurator

1. Go to www.BrooksInstrument.com/MultiFlo complete the registration form and download the current version of MultiFlo Configurator.
2. Download the latest version of MultiFlo Configurator software and **Save** it to a new folder on your computer, e.g., desktop\Brooks.
3. Download latest **FloCom Databases** and save to the same location.

4. Admin privileges required. Open the folder and run the installation file:

Multiflo Configurator_X_XX_setup.exe.

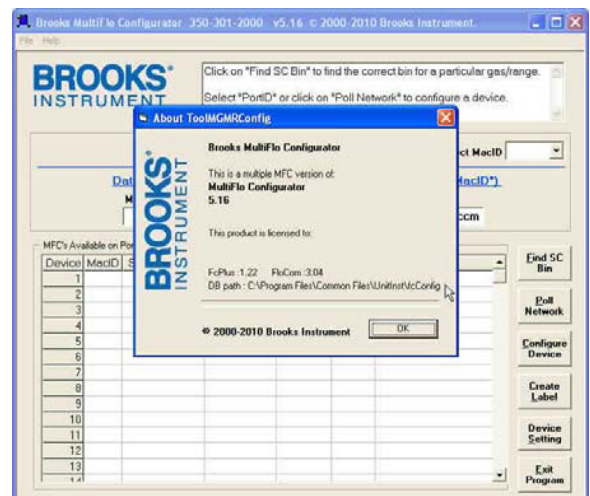
Where X_XX is the version number. Click **Run** when prompted. Accept the terms of the license agreement and accept all other defaults. This package will also install the latest FloCom, FloComPlus (FCPlus), and gas databases. The software will take up to 5 minutes to install (depending on the speed of the computer). Once the installation is complete the program will create a shortcut on the desktop and a program file menu.



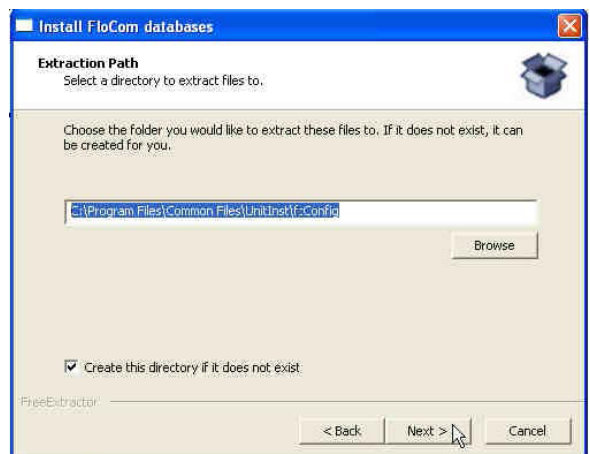
5. To update the databases open MultiFlo Configurator software from the shortcut on the desktop or the menu **Start All Programs → Brooks Instrument**. Click **Help → About**. Note the location of the database files:

C:\Program Files\Common Files\UnitInst\FcConfig.

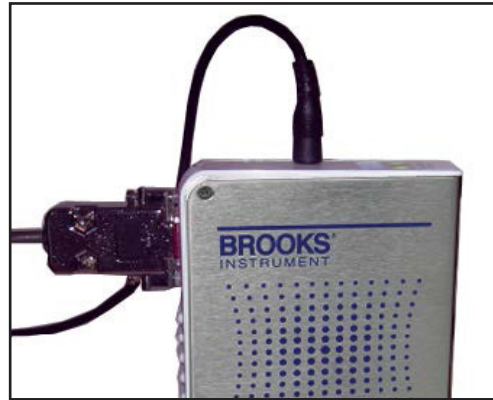
For non-English Operating system the location may be different from the example.



6. Run the **dbYYMMDD.release.all.exe** file downloaded to the folder in step 2 where YY=Year, MM=Month and DD=Date of the update. Click **Next**. During the update change the location for the database files if different than that in Step 5.



7. To configure a mass flow device first make all electrical connections to the device. For **DeviceNet** devices use a standard DeviceNet +24Vdc power supply. DeviceNet power supply is part of kit 778Z011ZZZ. The Net LED may indicate red if there is no terminator on the network. If there is more than one device connected then the NET LED may blink. **RS485/9 pin** devices use a $\pm 15\text{Vdc}$ power supply. Pins required to be connected are pins 3 \rightarrow +15Vdc, 5 \rightarrow -15Vdc, 4 \rightarrow Power Common and 7 \rightarrow Signal Common. URS-20 (now obsolete) is part of kit 778Z010ZZZ. Shown to the right is the basic RS485 connections.



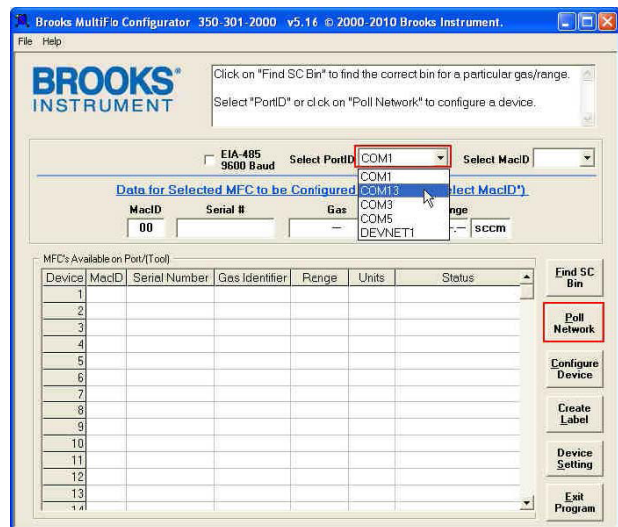
8. Connect communication cable. There are various ways to connect the device regardless of device configuration. Devices may be connected through the diagnostic port using cables in the Basic MultiFlo Configurator Kit (P/N 778Z010ZZZ) for RS485 communications.



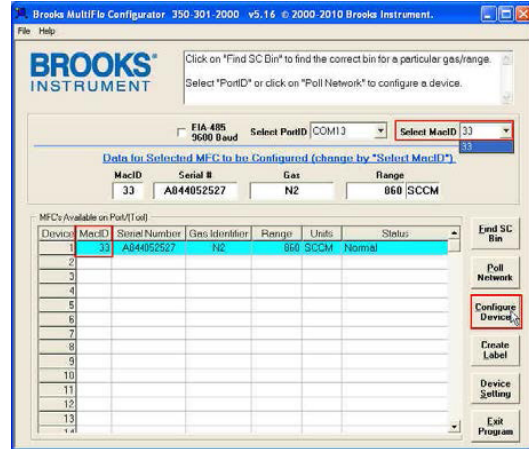
Devices with DeviceNet™ communications may be connected using the cables in the Basic MultiFlo Configurator Kit with Power Supply and Adapter Cables (P/N 778Z014ZZZ). DeviceNet devices can alternatively be connected using a National Instruments or SST DeviceNet Scanner Card. Shown to the right, is the DeviceNet configuration connected using the external power and diagnostic port.

9. From the MultiFlo Configurator main page select the communication port used to connect between the device and PC (**Select PortID**). If using a USB-COM port adapter or USB-RS485 adapter, these must be connected before starting the MultiFlo Configurator software. Click **Poll Network**. The following status messages will be displayed:

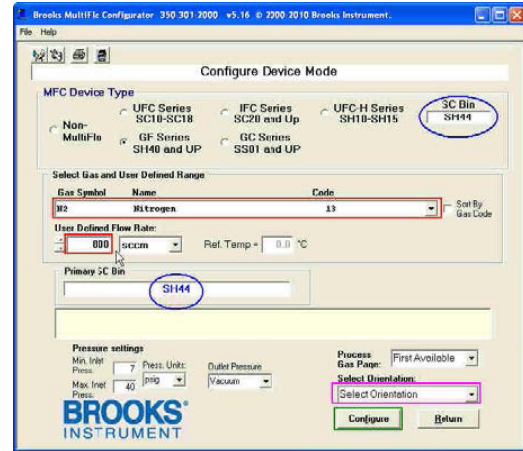
```
Opening Port, Please Stand by
Searching for available MFCs...
Found 1 MFCs Connected to this Port.
Please stand by while data is being read.
MFC: 33 On-line:
```



10. If there are multiple devices connected to the bus a short summary will appear in the **MFCs Available on Port(Tool)** section listed in MacID order. **Select MacID** drop down list box will automatically display the first available device but can be changed to any desired device on the connected bus. Click on **Configure Device** to proceed to the configuration page.



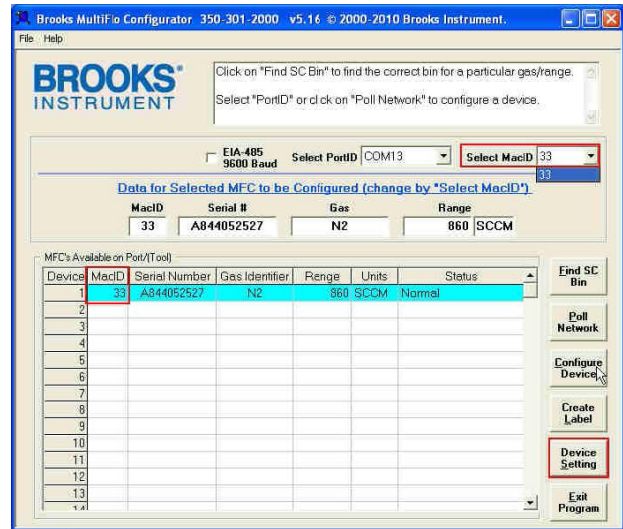
11. The MFC Device Type section gives information about the connected device. In the example the connected device is a **GF series** and SC Bin **SH44** (860 SCCM N2). In the **Select Gas and User Defined Range** section select the required gas type from the drop down list. Enter the required Full Scale flow for the gas in **User Defined Flow Rate**. As you type the User Defined Flow Rate the **Primary SC Bin** value may change. Only when the **Primary SC Bin** matches the **SC Bin** will the **Configure** button be enabled. To configure a GF125 you must select the mounting attitude in the tool from the **Select Orientation** box. Most common attitudes are Vertical Inlet Up (VIU) or Horizontal Label Up (HLU). Consult the GF Series Installation and Operation Manual X-TMF-GF Series-MFC-eng (PN 541B137AAG) for full description of mounting attitudes. Press **Configure** to update the unit with the selected gas details.



12. As the software reads the device calibration and writes a new process gas page to the device the status will show progress. When complete the **Configuration Completed** screen will appear. A new **Customer Part Number** can be entered into the unit. **Top Labels** can be printed for the new configuration or you can view **Details** of some older configurations in the device. When completed click **Return** to go back to the Main screen. The network will be rescanned to update the scan list.

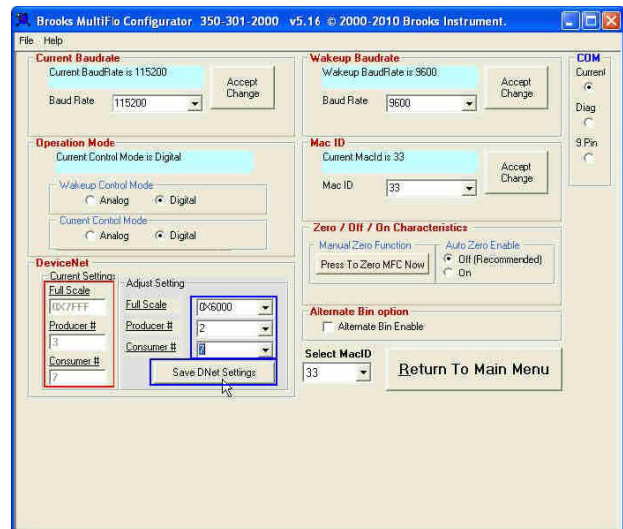


13 To adjust the DeviceNet or RS485 settings select **Device Setting** from the Main screen. A Password is required. Enter **cel123** as the password.

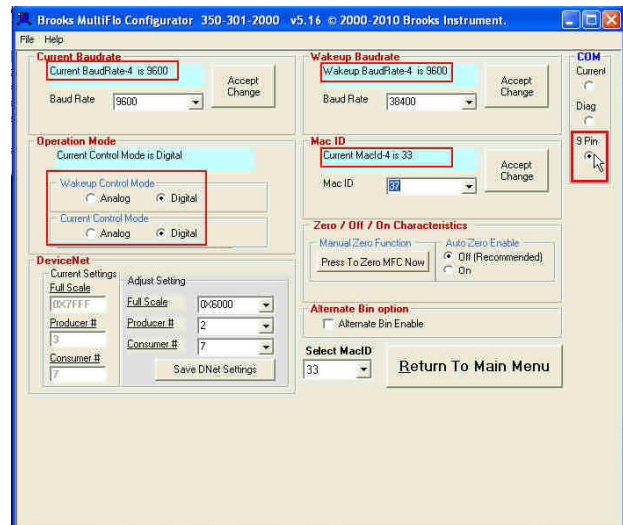


14. To view the current DeviceNet configuration note the **Full Scale, Producer #** and **Consumer #** settings of the DeviceNet – Current Settings section. To adjust the DeviceNet settings to match the tool configuration select **DeviceNet – Adjust Settings – Full Scale, Producer#** and **Consumer#** Common configurations are:

CSR#	Full Scale	Producer	Consumer
0923	0x7FFF	3	7
0924	0x6000	2	7
0925	0x7FFF	6	8



15. To view the current RS485 configuration for the 9 pin connector select **9 Pin** and note **Current BaudRate, Wakeup BaudRate, Control Mode** and **Mac ID**.



16. To configure the mass flow controller or meter for the most common RS485 digital communication settings select:

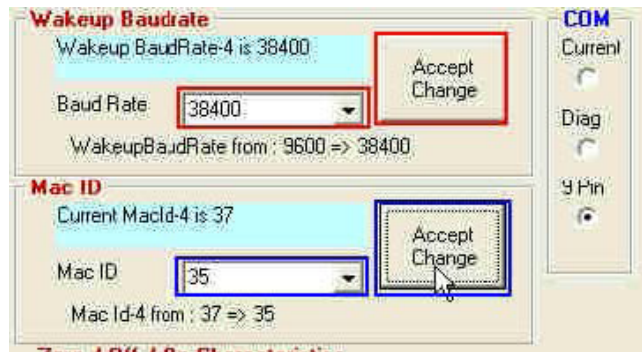
9 Pin,

Wakeup Control Mode = Digital

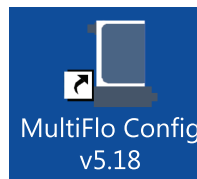
Current Control Mode = Digital

Wakeup Baud Rate-4 = 38400

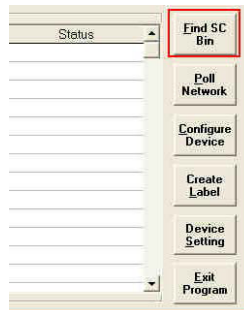
Mac ID as required by the position on the gas panel. Click on the Wakeup BaudRate **Accept Change** button before the Mac ID **Accept Change** Button. If the Wakup Baud Rate is changed the device must be repowered for the new settings to take effect. If the Mac ID of the currently connected communication port is changed the device must be rescanned to re-establish communications.



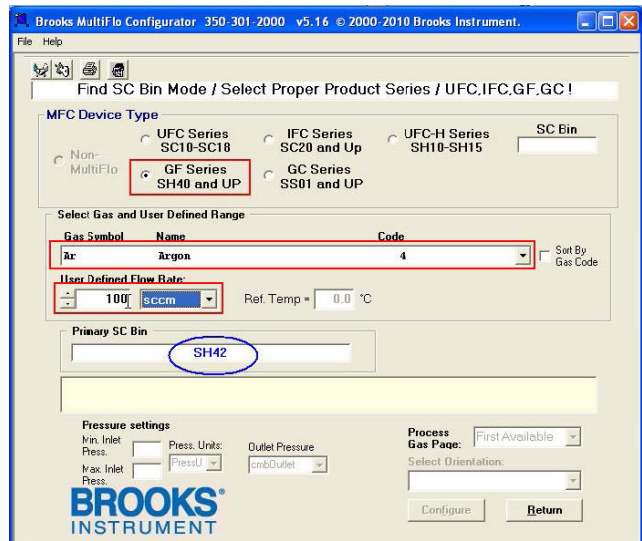
17. MultiFlo Configurator software can be used without any device connected in order to determine the precise MultiFlo bin required for particular range and gas combination. To use this feature open MultiFlo Configurator from the desktop shortcut.



18. Select **Find SC Bin** from the main screen.



19. Select the required model series from the option buttons. If SC10-18 is selected you will receive a dialog box asking to select Metal or Elastomer seals. For GF Series select **SC40 and UP**. Select the required **Gas Symbol** from the drop down list. The gas list is depending on the mass flow controller or meter model selected and the gas databases. It is important to use the most recent databases. Enter the required **device Full Scale** and the corresponding Bin size will be displayed. Example 100 sccm Ar is SH42.



20. If you have any questions please contact Brooks Instrument Technical Support. Local contact numbers can be found at www.BrooksInstrument.com.

LIMITED WARRANTY

Visit www.BrooksInstrument.com for the terms and conditions of our limited warranty.

BROOKS SERVICE AND SUPPORT

Brooks is committed to assuring all of our customers receive the ideal flow solution for their application, along with outstanding service and support to back it up. We operate first class repair facilities located around the world to provide rapid response and support. Each location utilizes primary standard calibration equipment to ensure accuracy and reliability for repairs and recalibration. The primary standard calibration equipment to calibrate our flow products is certified by our local Weights and Measures Authorities and traceable to the relevant International Standards.

Visit www.BrooksInstrument.com to locate the service location nearest to you.

START-UP SERVICE AND IN-SITU CALIBRATION

Brooks Instrument can provide start-up service prior to operation when required.

For some process applications, where ISO-9001 Quality Certification is important, it is mandatory to verify and/or (re)calibrate the products periodically. In many cases this service can be provided under in-situ conditions, and the results will be traceable to the relevant international quality standards.

SEMINARS AND TRAINING

Brooks Instrument can provide seminars and dedicated training to engineers, end users and maintenance persons. Please contact your nearest sales representative for more details.

Due to Brooks Instrument's commitment to continuous improvement of our products, all specifications are subject to change without notice.

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