LAMY RHEOLOGY

11 A, rue des Aulnes

69410 Champagne au Mont d'Or (France)

Tel : 33 (0)4 78 08 54 06

Fax : 33 (0)4 78 08 69 44

contact@lamyrheology.com

USING MANUAL

RM100 TOUCH

CONTENTS

6 TECHNICAL SPECIFICATION

|	
TYPE OF INSTRUMENT Rotating viscometer	
ROTATION SPEEDS Unlimited number of speeds between 0.3 and 1500 rpm	
TORQUE RANGE From 0.05 to 30 mNm / From 0.005 to 0.8 mNm (LR VERSION)	
TEMPERATURE The RM 100 TOUCH has a PT100 sensor which indicates temperatures between -50 °C to + 300 °C.	
ACCURACY +/- 1 % of the full scale	**REPEATABILITY** +/- 0.2 %
VISCOSITY RANGE 1 - 540,000,000 mPa·s depending on the measuring geometry used.	
DISPLAY 7" Touch screen	
DISPLAY SETTINGS: Viscosity – Speed – Torque – Temperature - Time – Measuring geometry Level of sensitivity – Date/hour - Choice of viscosity units: cP or mPa·s Language: French/English	
SECURITY AND CONFIDENTIALITY An "operator" function allows you to enter a username for you instrument. This user must then be identified using a 4-digit code. There is also a protected mode that locks your measurement conditions.	
SUPPLY VOLTAGE 90-240 VAC 50/60 Hz	**ANALOG OUTPUT** 4 – 20 mA Torque range to be defined by user
PC CONNECTIONS RS232 Port and USB	**PRINTER CONNECTION** USB Host Port
WHAT BENEFITS ARE THERE FOR YOU? Connect your RM 100 TOUCH to our temperature control systems (i.e.: EVA MS-R or DIN – PAGES 46 to 51). Memorise your measurement protocols directly on your viscometer. The RM 100 TOUCH lets you set measuring times for thixotropic products. You can connect a USB printer. External control thanks to the optional VISCO RM software. .	
CARRY CASE Optional	
DIMENSIONS AND WEIGHT Head: L180 x W135 x H250 mm Hardened steel stand: L280 x W200 x H30 mm Stainless steel rod: Length 500 mm / Weight: 6.7 kg	

1. GENERAL VIEW OF YOUR INSTRUMENT

7'' color touch screen

Aluminum Arm

Stainless steel Rod

Hardened steel Stand

On/Off Light switch

2. FEATURES OF YOUR INSTRUMENT

- **Touch Screen**

The New RM TOUCH line is entirely equipped with one 7''
color touch screen. It offer to you a bigger comfort to work
and a more clear view of your data and results of analysis

- **On / Off Light Switch**

Always to improve your experiment, LAMY RHEOLOGY
decided to install on all of its RM TOUCH range one light and
design switch. It is in the middle of front face of instrument
for a better intuitive using.

- **Aluminum Arm**

Arms of our instruments are in Aluminum with 2 ease of use
clamp knobs in order to enable to adjust the height of
measuring head.

- **Stainless steel Rod**

Rods of our RM lines are in stainless steel for a strong
maintenance of measuring head. Their life time is very long
without risk of wear.

- **Hardened steel Stand**

Our stands are totally designed in hardened steel. They give
thus one foolproof stability to our instruments.

5.7.12 Service

Reserved to LAMY RHEOLOGY engineers.
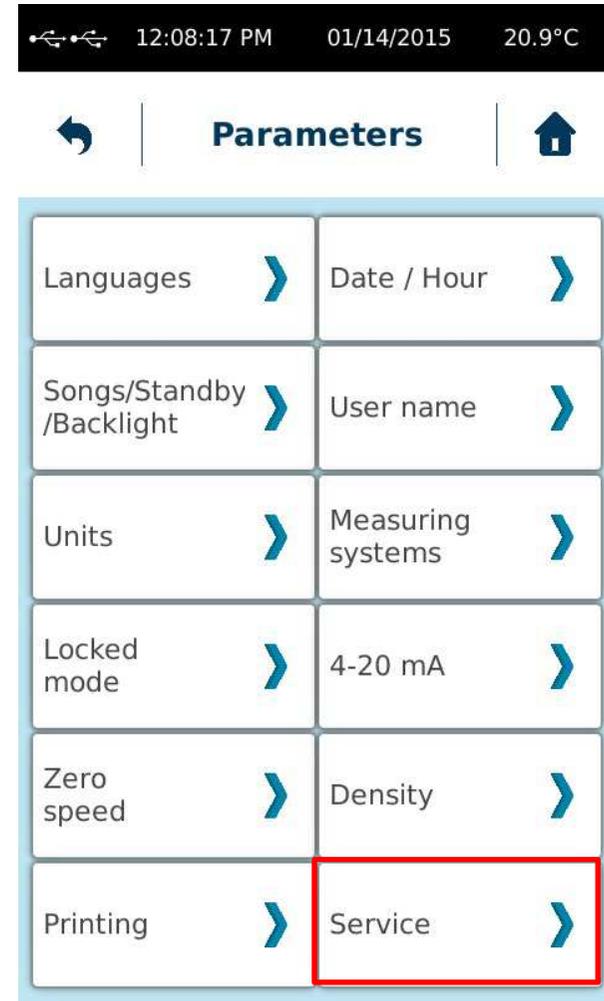
Enable to define time interval you want to print your measurement results if a printer is connected to RM100 TOUCH during measurement
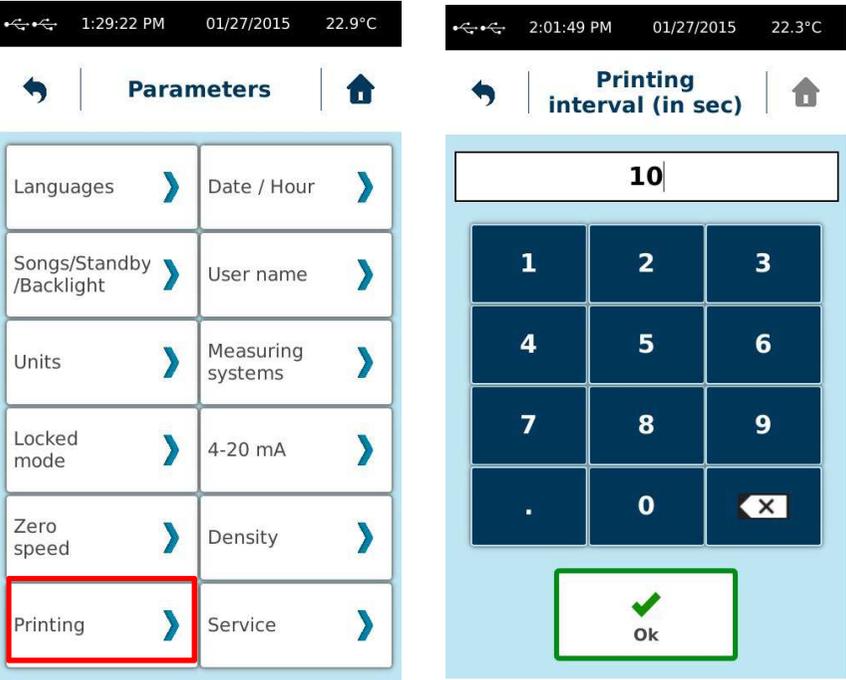
3. STATE ICONS

No Device is connected to the instrument.
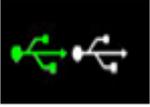
Only one Device is connected to the instrument.

Two Devices are connected to the instrument.

Give to you the temperature of probe in the sample.

Enable to go to parameters of instrument.


Enable to come back to Main Menu.

Enable to come back to previous menu.

Installation of RM100 TOUCH is very easy. Indeed, Only
screw is enough to put up your device.
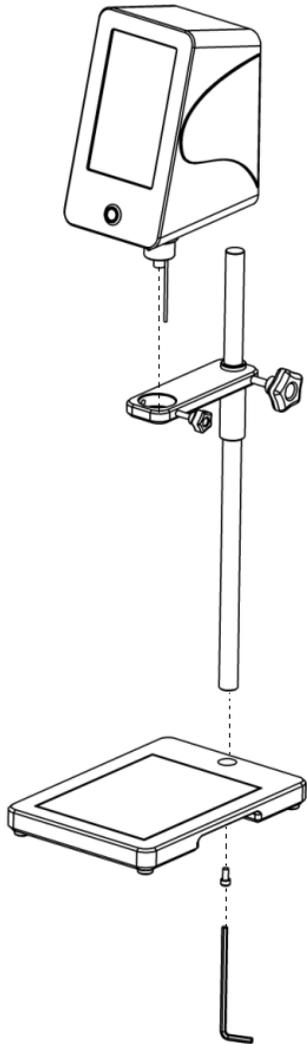
Your RM100 TOUCH consist of:

- One measuring Head
- One Aluminum Arm
- One Stainless steel Rod
- One Hardened steel stand
- One Supply voltage

To assemble parts like on opposite diagram.

Use the screw and key supplied in order to put up the Rod on the Stand.

Place your RM100 TOUCH inside the arm and fix it with the screw knock.

6

Enable toi you to adjust the rpm value for the zero adjustment.
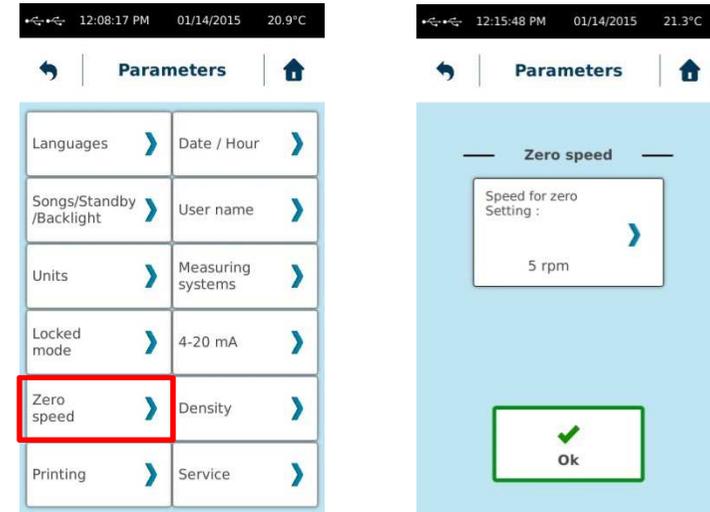
5.7.10   Density

Enable to you to enter density value of your product to measure in order to calculate his kinematic viscosity.

23
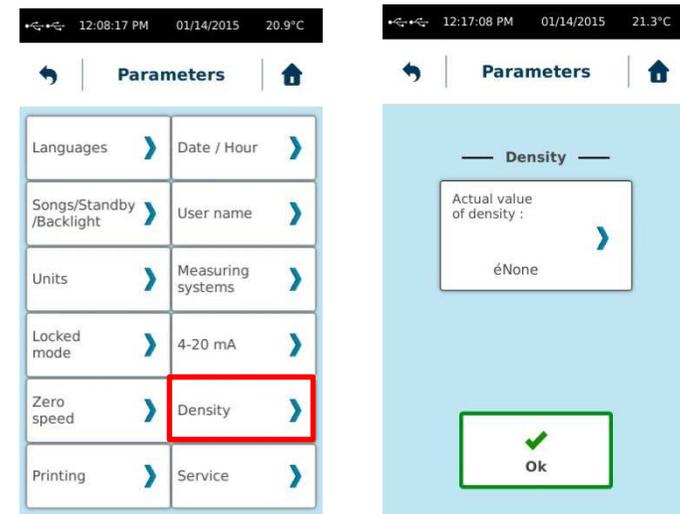
Enable to you to lock the condition of measurement to those
defined just before in Measure tab.
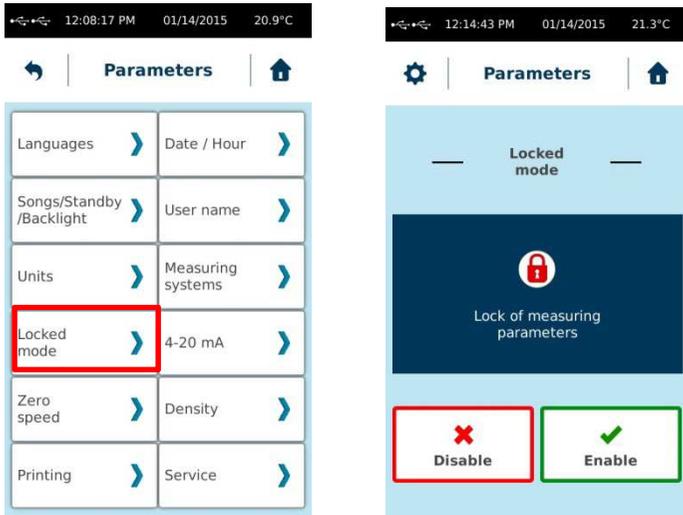
5.7.8   4-20mA

Enable to define the Maximum Torque value for 20 mA signal
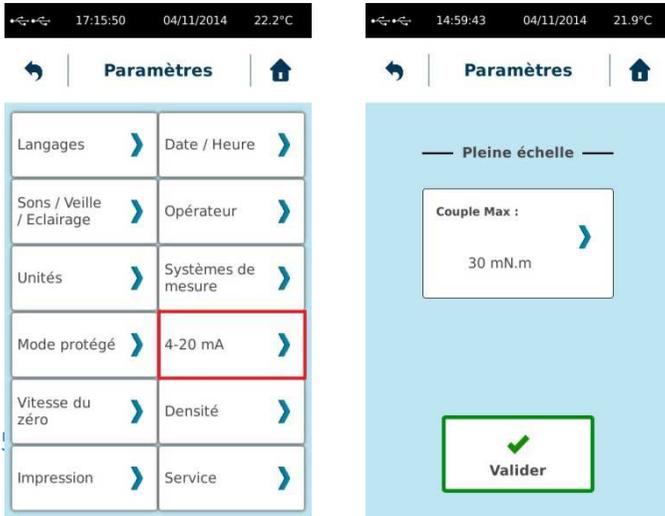
4. PRIMARY CONCEPTS

4.1. Main Menu

Main menu enable to you to browse between different tabs
of your RM100 TOUCH.
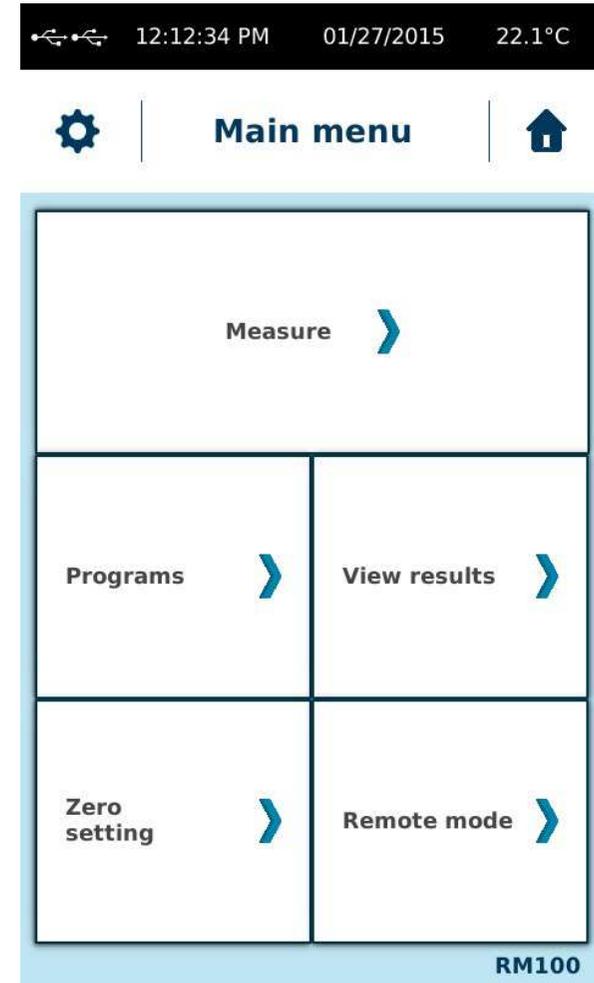
4.2. Measure

Measure tab is central part of your RM100 TOUCH. Indeed, it enables to select a manual measure to define or choose one of stored method by "Auto" (see page 13).
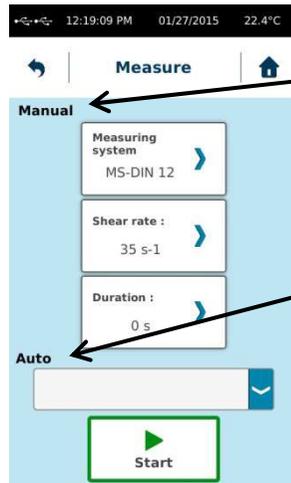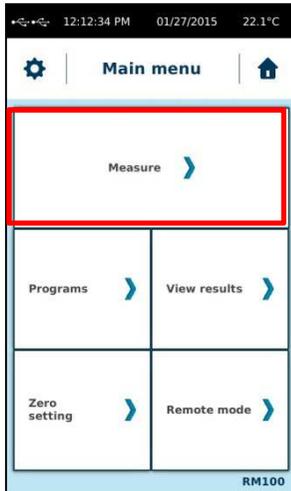

Manual Mode enables to you to personalize a program when you want to start the measurement

**Auto Mode** enables to you to select a predefined method saved on your RM100 TOUCH memory.

5.7.5 Units

Enable to you to change unit of viscosity values.
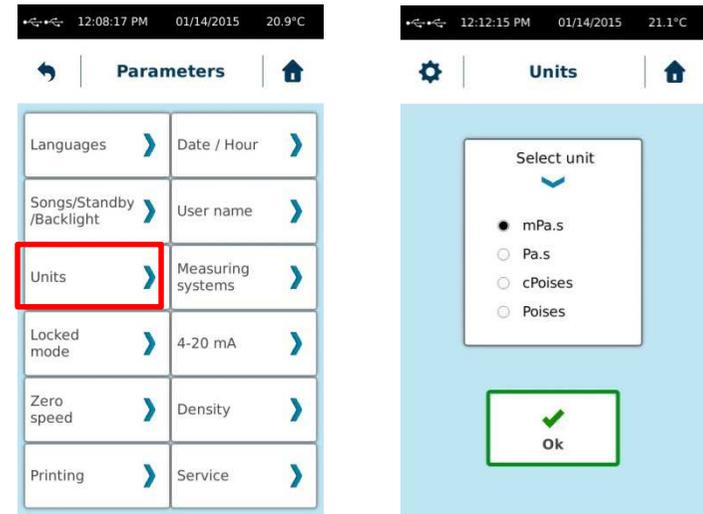

5.7.6 Measuring System

Enable to add or delete a new measuring system.

Enter THE PASSWORD YOU WANT

Confirm THE PASSWORD

User Name is created
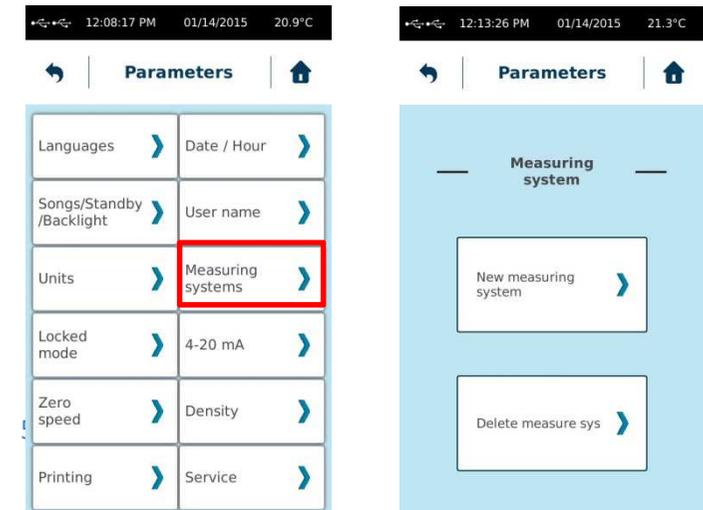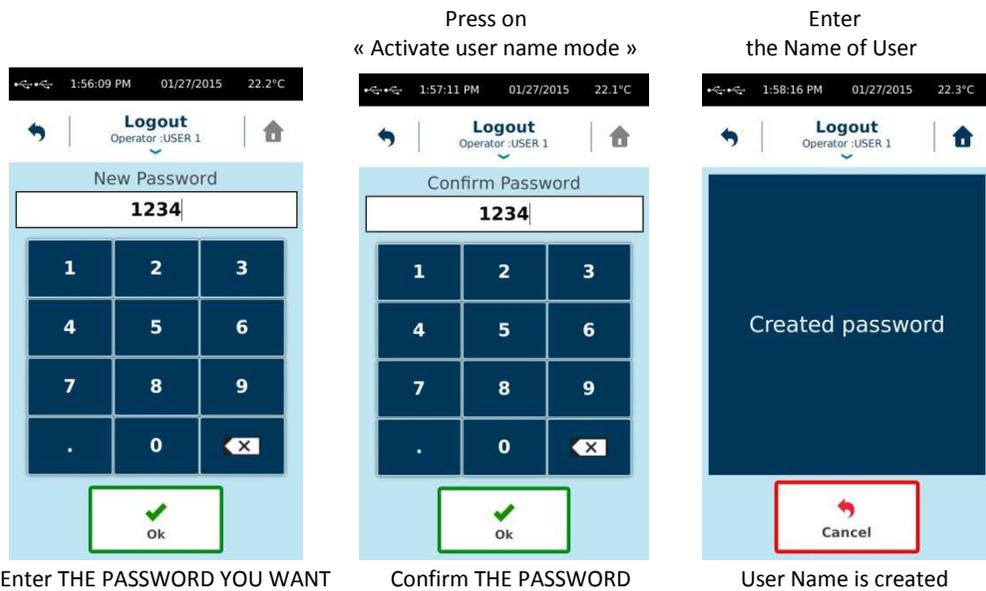
When User Name is created, you could select one User. On Main Menu, you could see this User Name during working.
By a click on arrow below this name, you could modify its password or to logout.
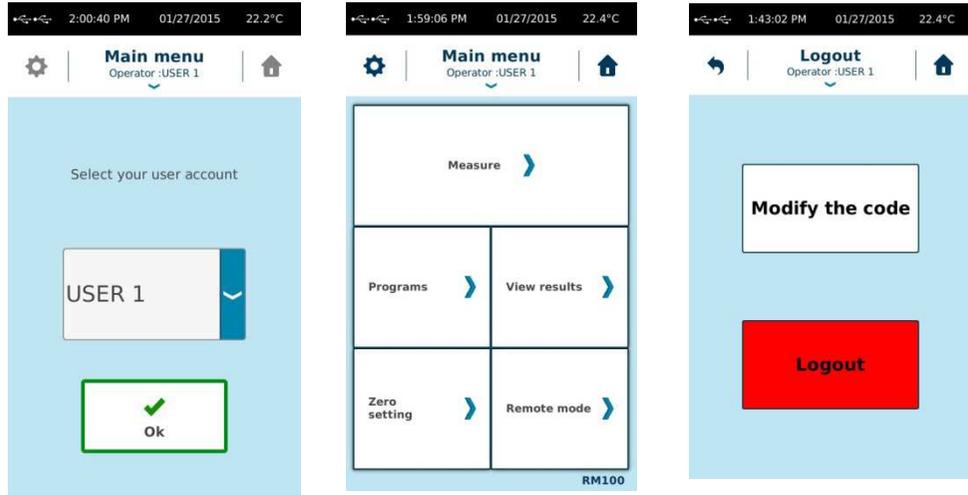
Manual Mode enables to choose your measurement parameters like «Measuring System », « Speed or shear rate» then « Time of measurement ».

Click on « Start » to run to your measurement.

Select your measuring system

Choose the speed or shear rate

Choose the duration of measurement
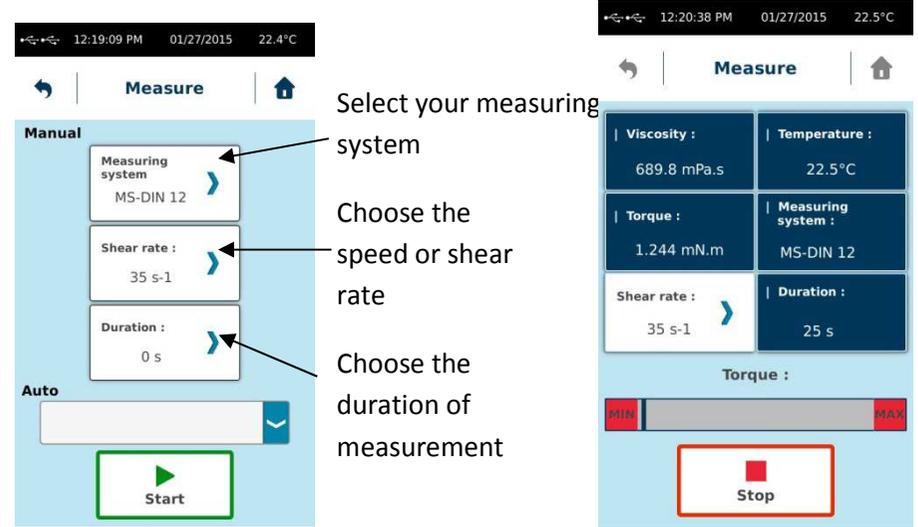
Rq : If « Time » = 0, you could modify « Measuring system » or « speed » <u>during</u> the measurement. This could help you to define the best conditions to work on your sample.

With **Auto** Mode, you select in the list provided by a click on Auto, the method you want to do. After its selection, parameters appears on right cases, and you could press start to run it.
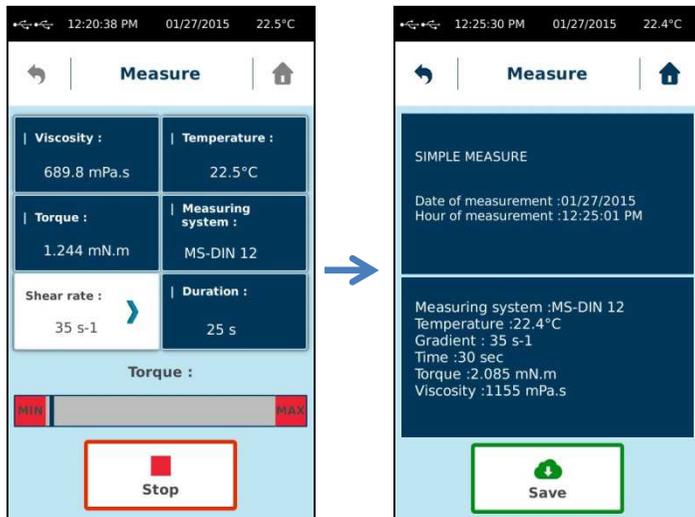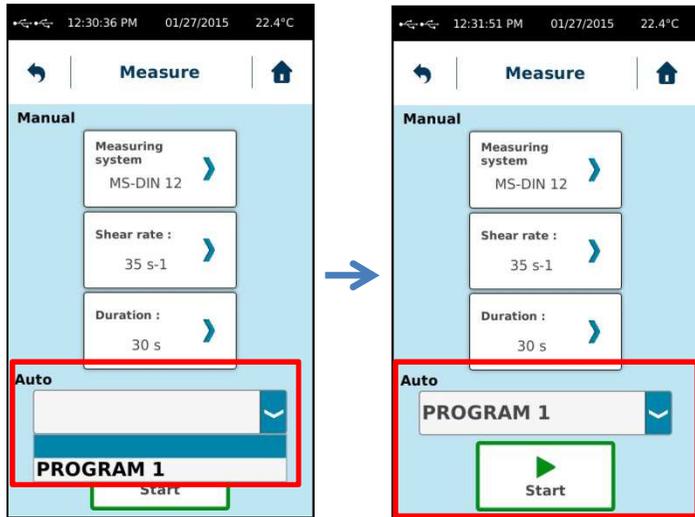
5.7.3 Sounds/Standby/Lighting

Enable to you to modify sounds, lighting and activate or not the Standby mode of your RM100 TOUCH.
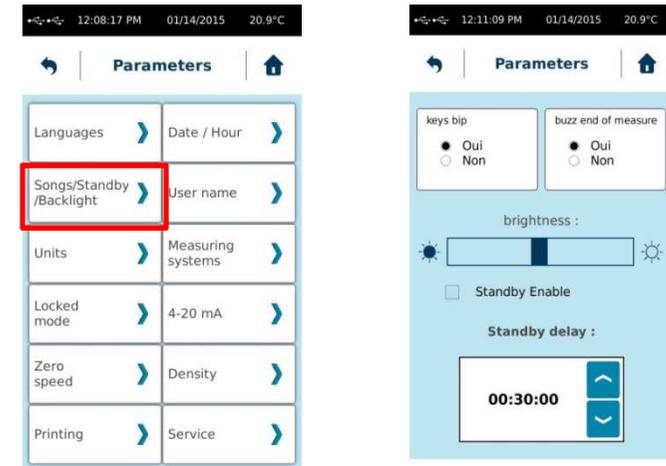
5.7.4 User Name

User Name enables to identify User of your RM100 TOUCH by creating different user name with PASSWORD or not.
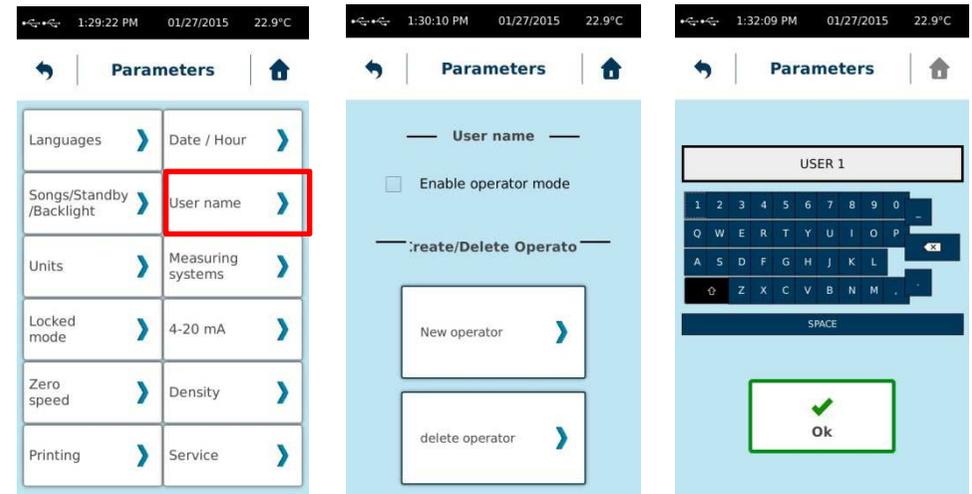
5.7 Parameters

5.7.1 Languages

Enable to you to select language of your RM100 TOUCH.

5.7.2 Date / Hour

Enable to you to adjust hour and date of your RM100 TOUCH.

When measurement is finished, you will see results and you could decide to save it and print it (if a printer is connected).

A file name will be requested to save your data in RM100 TOUCH memory.
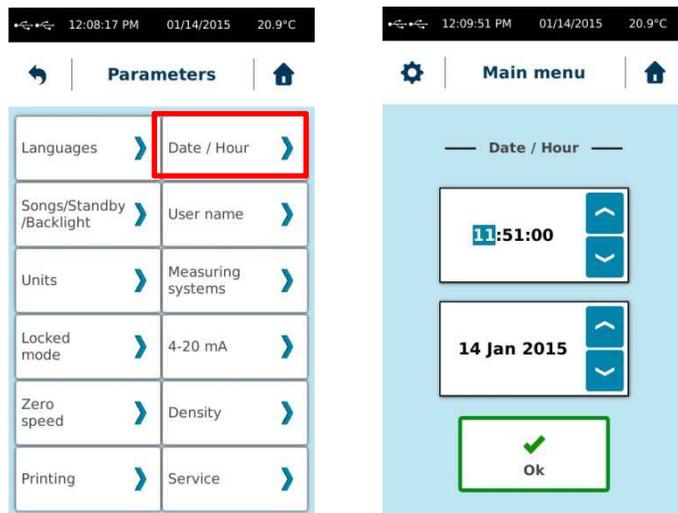
4.3. Programs

With **Programs** tab, you could define parameters for your standard measuring methods and also delete it.

Create one Measuring Method
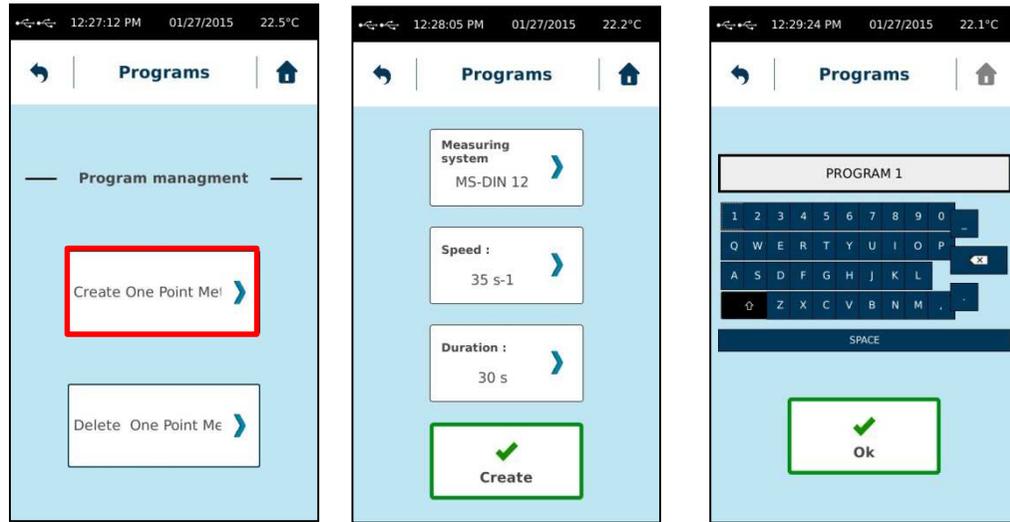
When your Program is created, you will find it in **AUTO** list of **Measure** tab.

5.6 Remote Mode

This mode enables to drive RM100 TOUCH by external VISCO-RM software, supplied on otpion.

You must select the type of connection: USB or RS232 and connect the appropriate cable (delivered with software) to the computer, open the software, select the right COM port you're using on "SYSTEM" "CONFIGURATION" menu of software and press "Start" to establish connection with external software.
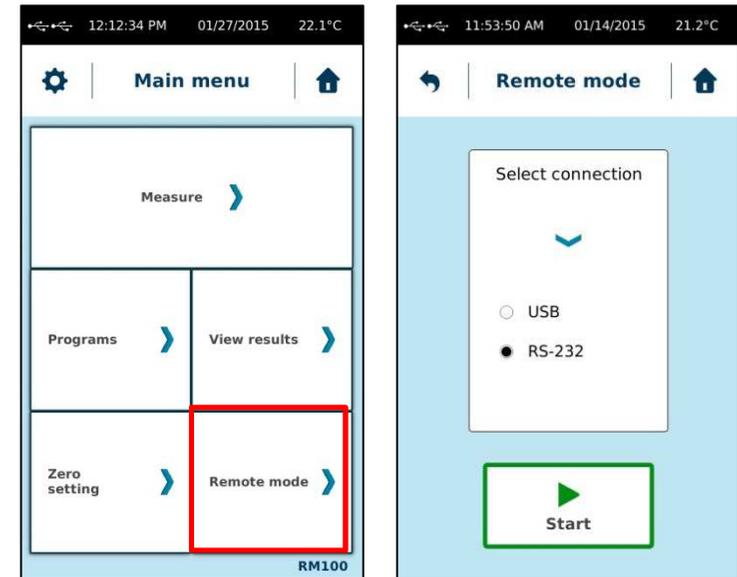
Rq : With mini USB connection, respect strictly the order to start, and if any communication is possible re-connect the USB cable on computer and wait it is recognized before start the communicaiton

4.5. Zero Adjustment

The setting of zero enables to adjust the motor frictions of your RM100 TOUCH, if you change significantly the usual speed of rotation to measure. This helps you to obtain more accurate measurement.
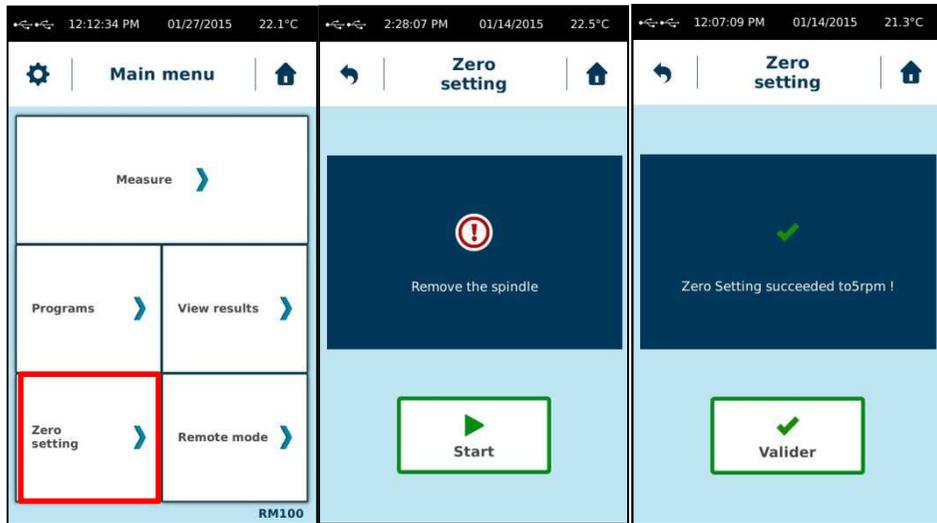
Rq : To change the speed of rotation for the zero setting (see p 28)


Delete one Measuring Method
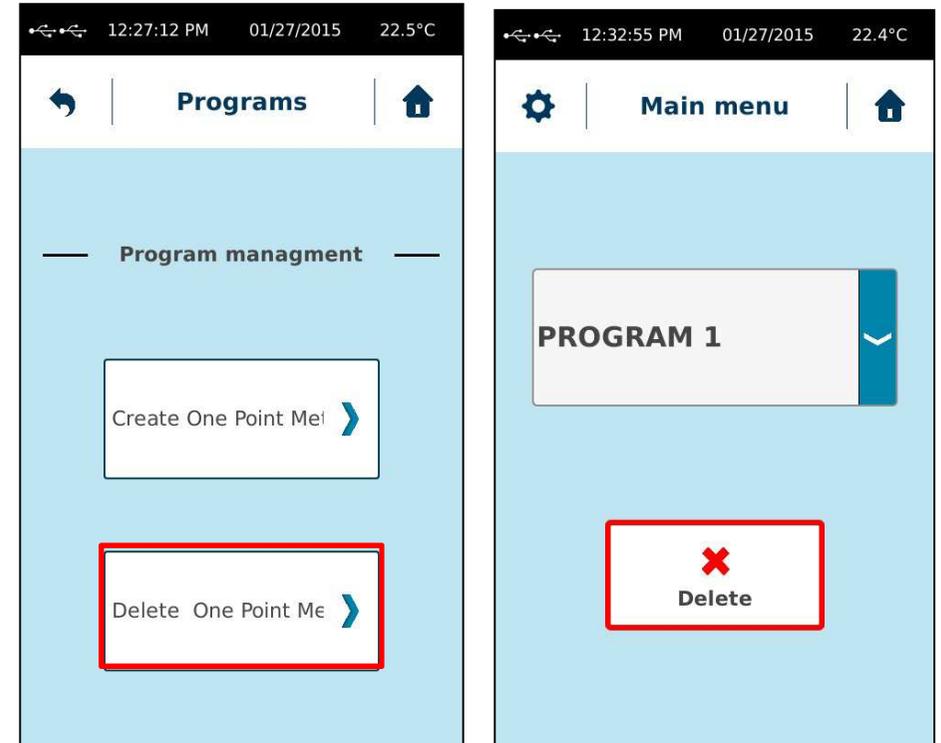
In **Programs** tab, press on « Delete one method ». Choose the Program you want to cancel then press « Delete »

4.4. View Results

To read the results of your measurement after saving, press on « View results » tab in Main menu.

List of measure

By click on this tab you could see all saved measurement made with your RM100 TOUCH. You could select which one you want to read.
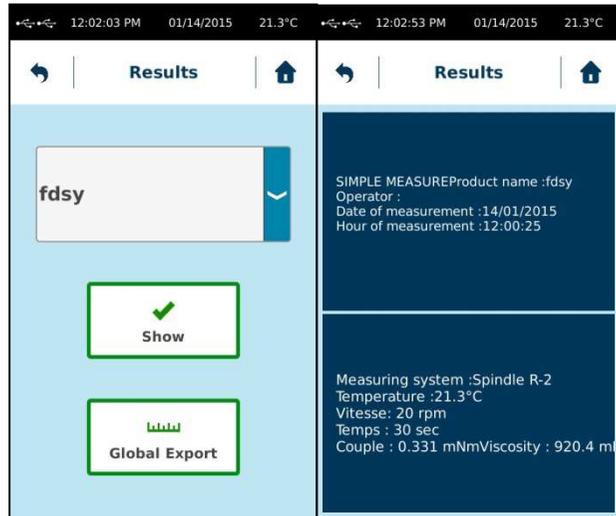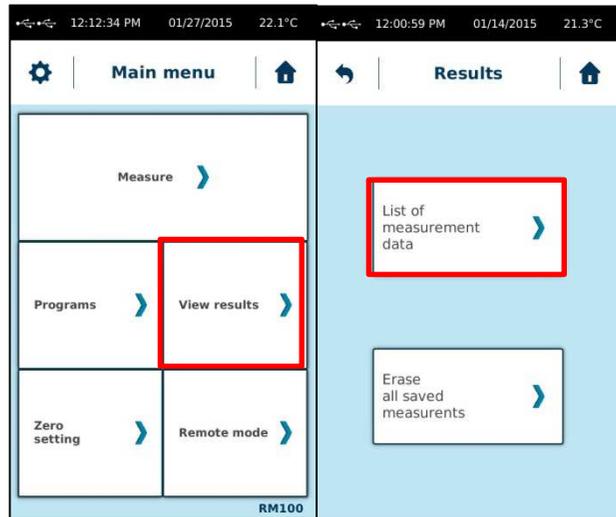
By click on "Export all" tab, you could send all of those saved data to a USB key, placed in "USB" plug at the rear side of RM100 TOUCH.

Delete Measure

By click on this tab you could delete all saved measure one by one as you want from your RM100 TOUCH memory.

14

15