Installation & Operation Instructions
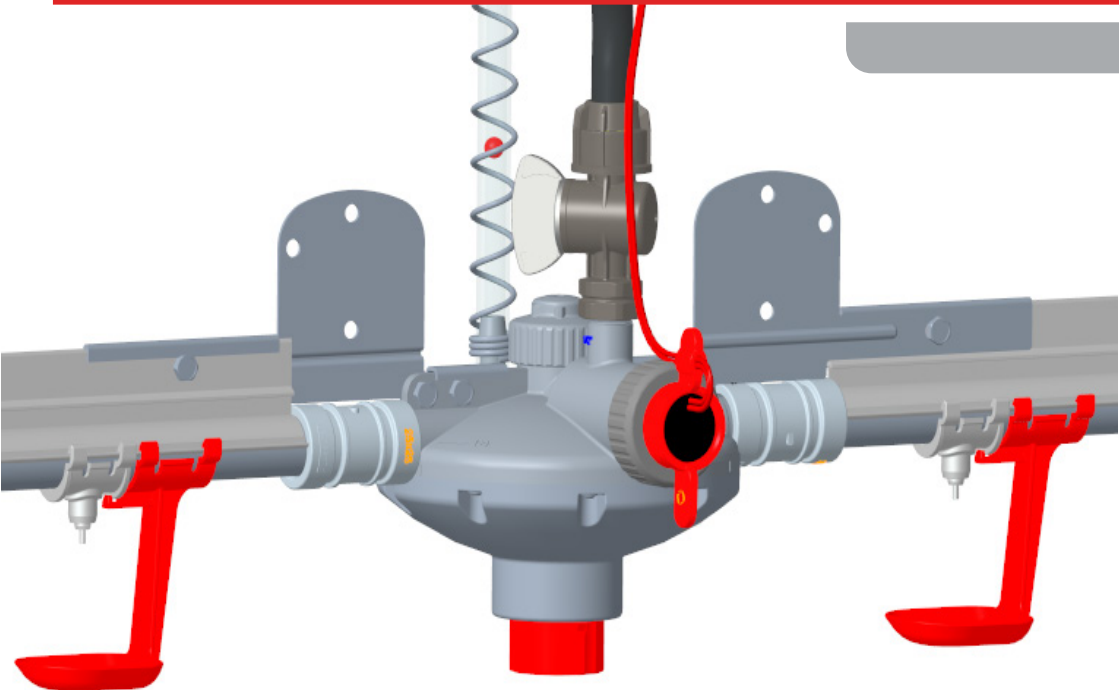## for Plasson MK2 Regulators / Reducers

Feeding Drinking Climate Housing

Mechanical Installation

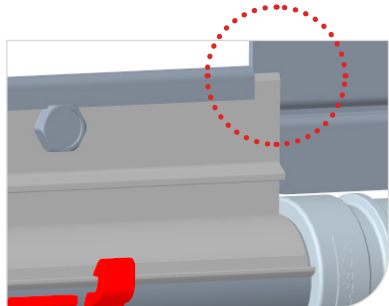Please follow the same instructions for both Regulators and WOD Reducers.

Connecting the regulator to the nipple line:

4) Suspension of the regulator to be connected to the lower hole.
* Mid line is suspended from one point, similar to the **line head**.

5) Anti-perch system to be connected to the hole far from the regulator (As shown) (to connect Anti-perch system use the Anti-perch kit Cat**.** No. 02205992)
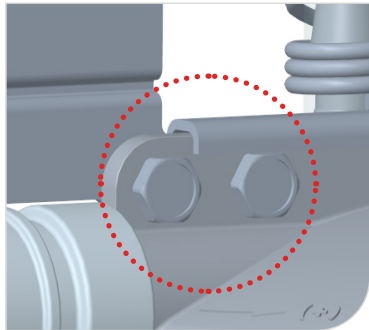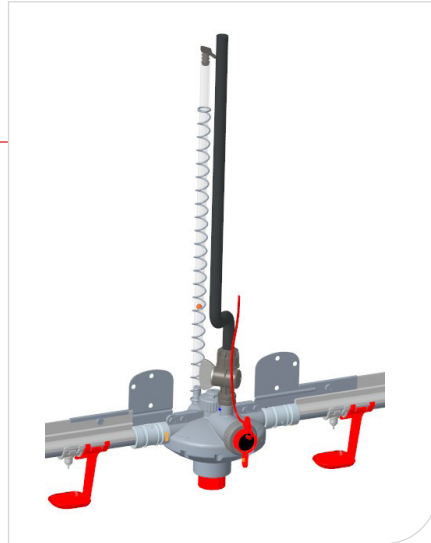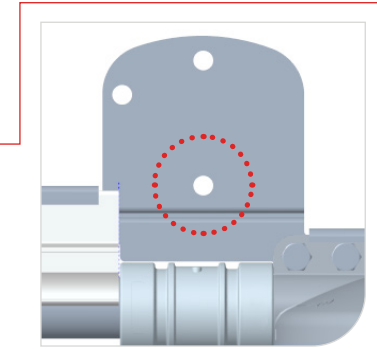
1) Mount the SS connector (02205479) to the regulator using 2 screws & bolts (02209018, 02205721). Ensure screws and nuts are firmly tightened.
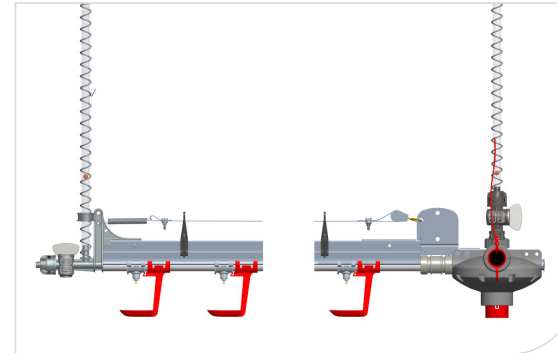
2) Mount the external connector (02205035) to the regulator.

3) Connect the regulator to the nipple line by inserting the 30mm (1.2 inch) PVC pipe end into the external connector. Then slide the aluminum profile into the SS connector slot and tighten firmly using the screws & nuts (02209018, 02205721).
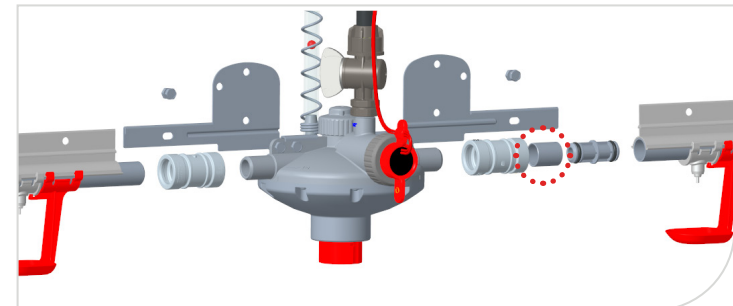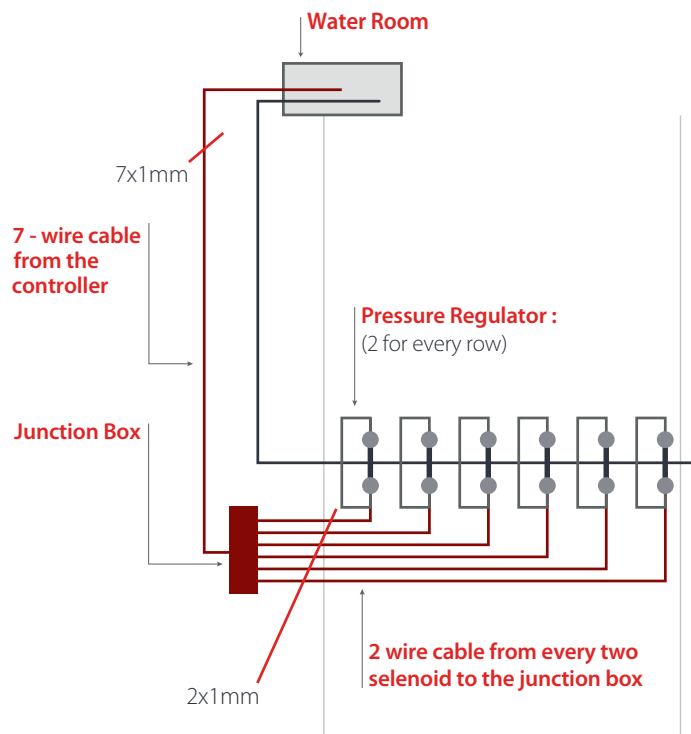
6) Connecting the MK2 to existing Plasson nipple line use a 25 mm PVC pipe as an adaptor (Cat. No. 02205984).
The photo shows the difference while connecting to new system (on the left) and an existing system (on the right).

Wired - Auto Flushing System

The wired auto flushing system is connected and managed through the house controller or Plasson stand-alone flushing controller (Cat. 02205686) . Required voltage is 24V.
Electric valves should be wired using 2x1mm cross section cables. Smaller cross section cables will cause voltage loss and failures in system operation. To ensure good flushing pressure and no voltage loss, it is recommended to wire each electric valve or max. 2 valves to each relay in the controller.

Wiring Example:

Water Room

7x1mm

7 - wire cable from the controller

Pressure Regulator :
(2 for every row)

Junction Box

2 wire cable from every two selenoid to the junction box

2x1mm

Wireless - Auto Flushing System

- General -

System description

Plasson Flush Control is an independent wireless system, not connected to the house controller. The system is designed for automatic high pressure flushing of nipple lines via a smart phone application.
Each line head regulator includes a wireless unit operated by a battery. The unit is communicating via Bluetooth connection with a central wall unit which is connected to power supply 110-220V.
Programing of the flushing plan is done through a smart phone using a simple user friendly application. The flushing plan is made in advance for the entire growth cycle and can be updated at any time. Manual operation is also available. There is no need for cellular signal.
Flushing of lines should be executed one line at a time to guarantee high pressure and efficient cleaning.
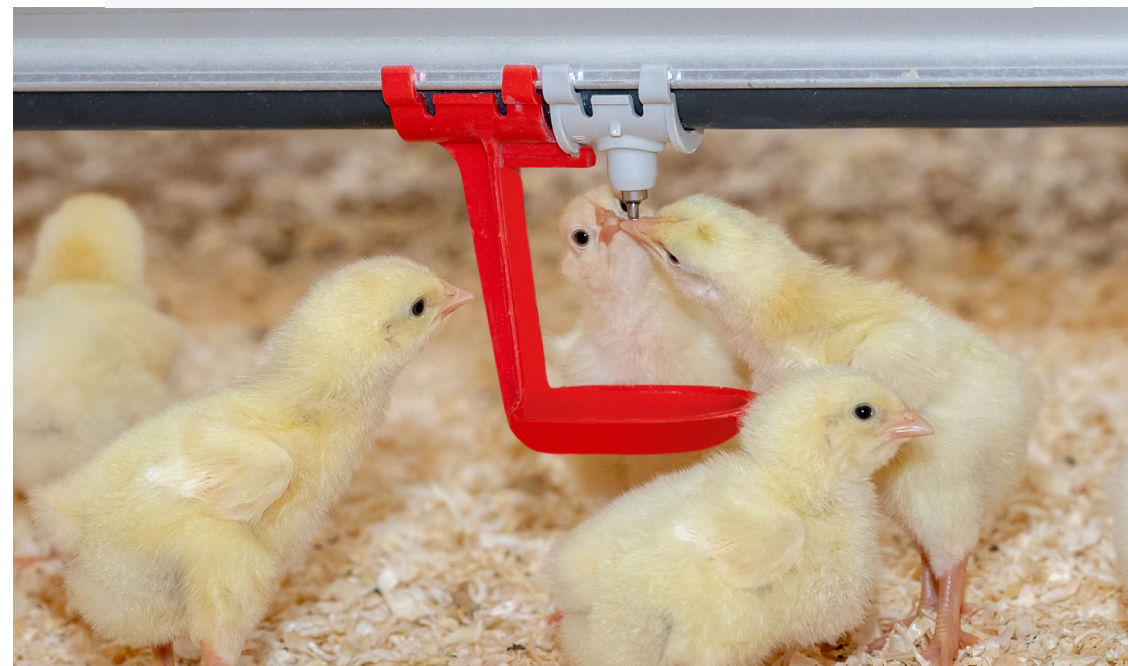
Wireless - Auto Flushing System

- Installations -

1) 02205957 Flush Control Wall Unit Set

Install the Wall Unit on the wall or ceiling as close as possible to the line head regulators. Electric components, such as frequency converters, with electric discharge can interrupt the signal, thus should be installed as far as possible from the unit.

Max. distance of wall unit from line head regulators – 20m.

In cases of very wide houses or where the nipple system design creates a larger distance between the wall unit and the regulators – 2 wall units should be applied. Should the smart phone detect 2 wall units within its range the user will be asked to choose the one to be programmed each time.

Wiring:
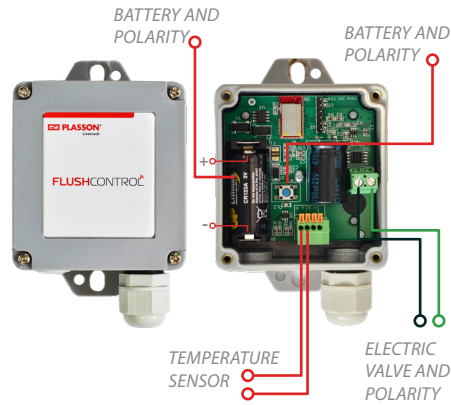Power supply: 110-220V, safety switch 4-6amp.

Optional wiring:
2 Dry contact for other systems -
• N.O. contact will shut once flushing is operated. Can be used for stopping the water counter during flushing.
• Dry contact for Errors – N.O. contact will shut once system is in error mode (communication error / battery error or any other error defined in the system error list).

POWER SUPPLY 220V   PAIR BUTTON

DRY CONTACT CLOSE

ALARM RELAY N.O.   NOT USED

2) 02205956 Flush Control Regulator Unit Set

This unit is not wired to a power supply but running by a battery – type CR123A only (02206748). Life expectancy 2-3 years.

BATTERY AND POLARITY

BATTERY AND POLARITY

TEMPERATURE SENSOR

ELECTRIC VALVE AND POLARITY

Wiring:
The regulator is supplied with the electric valve integrated inside it. Two wires are exposed – Green & Black. Polarity will affect the system, therefore - Green wire should connect to the binding close to the box wall and the Black wire to the other (see drawing).

The battery should be mounted as per the signs in the battery bed (+/-).

Optional wiring:
Temperature sensor should be wired as per the drawing above. Polarity will not affect the system, therefore wiring is random.
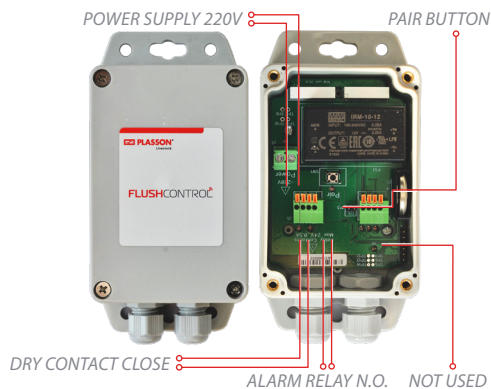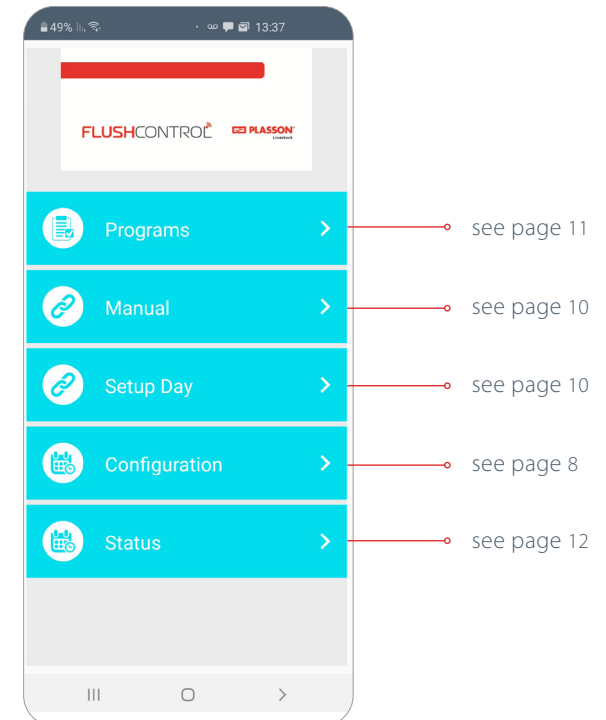
First time operation:

LETS GET STARTED !

For first time operation please follow these instructions:

a. Confirm the central wall unit is connected to power supply.
b. Confirm batteries (CR123A model only) are properly mounted in all line head regulator units.
c. Download the Flush Control App to your smart phone from google play \ APP store "Plasson Flush Control".
d. Activate Bluetooth in your smart phone.
e. Open the App and confirm it is active.
- All system functions are available from the main screen. Choosing a function will open its menu and further options.

The home screen includes 5 menus:

Programs	>	see page 11
Manual	>	see page 10
Setup Day	>	see page 10
Configuration	>	see page 8
Status	>	see page 12

• Configuration

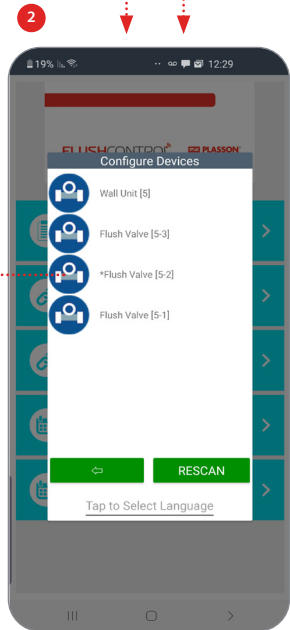**Use this menu for initial setting of the system.**

1. To change the APP **language** go to the Configuration menu.
2. At the bottom tap on "Tap to Select Language", - select the language from the list.
3. Close the Application and open it again, it will open with the selected language.

1a

"Pair Button"

1b

"Pair Button"
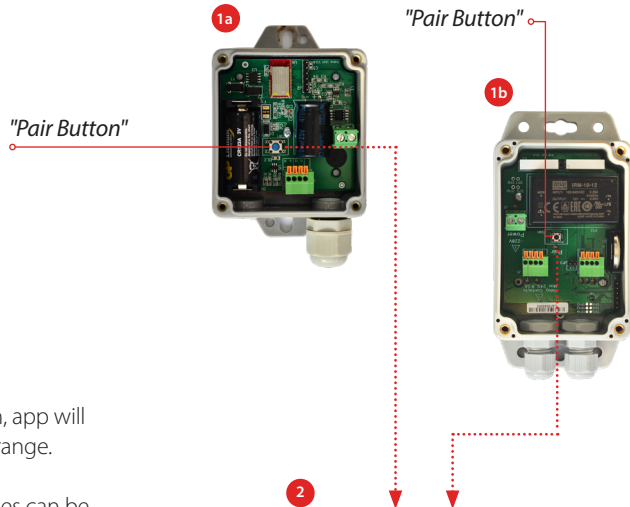
"Pair Button"

1

- When choosing configuration, app will show all active units within its range.

- Wall and regulators units names can be edited so they are paired together to work as one system.

- To identify which unit is being programmed, press the *"Pair Button"* (either in the wall unit or regulator unit).

A * will appear next to the unit name being programmed and green LED light in the unit itself.
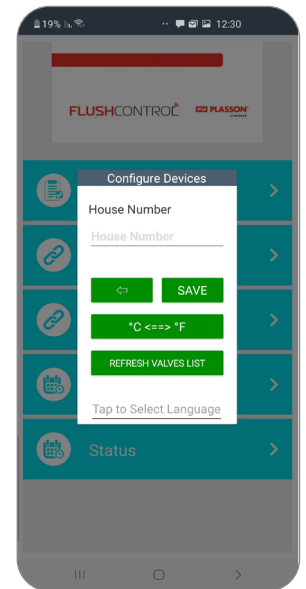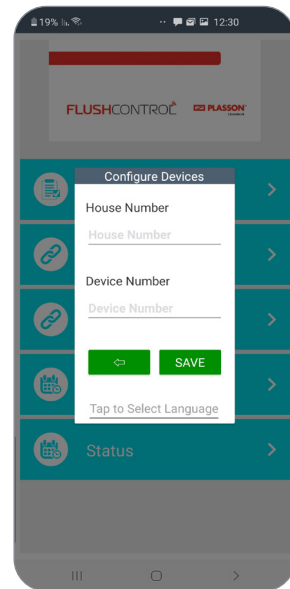
- Press any unit and a new screen for renaming will open:

2

Configure Devices

Wall Unit [5]

Flush Valve [5-3]

*Flush Valve [5-2]

Flush Valve [5-1]

RESCAN

Tap to Select Language

3

Regulator units:

Type the house number (the Wall unit that controls it).
Type the Regulator number.
Type **SAVE**

Configure Devices

House Number

House Number

Device Number

Device Number

SAVE

Tap to Select Language

Status

4

Wall Unit:

Type the number of the house (In multiple houses farm it is recommended to name the Wall as per the house number).
To change temperature Units press "ºC<==>ºF".
To reset the valve list related to the wall unit press "Refresh Valve List"
Type **SAVE.**

Example:

"Wall unit [1]" will activate Regulator units
"Flush Valve [1-1]",
"Flush Valve [1-2]",
"Flush Valve [1-3]" and so on.

Configure Devices

House Number

House Number

SAVE

ºC <==> ºF

REFRESH VALVES LIST
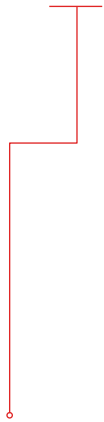
Tap to Select Language

Status

• Setup Day

Use this menu to set the growth day.

- The system has a real time clock so growth day and time are always updated. This date is updated each time your update the growth day (set day)
- To update the growth day at the beginning of the cycle or for any other reason, press the "Setup Day" menu – enter the day – then press "save" .

• Manual

**Use this menu to initiate flushing manually for a desired duration.**

- Press "Manual".
- enter the duration required (Min : Sec)
- press "Start". The system will start flushing line by line in sequence as per their No. given.
- After flushing of the last line the system will go back to its active automatic plan.
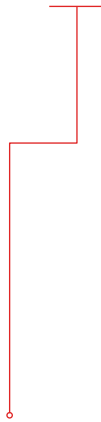
• Programs

This is where programming the automatic flushing plans is done. Up to 5 different plans can be applied for the same cycle.

Press "Programs" and follow these actions to setup an automatic plan:
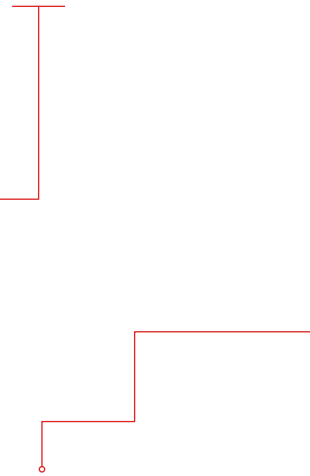
1. The Wall unit programmed and the program No. are shown in the screen title.
2. Enter "**Start Day**" – the growth day this plan will start.
3. Enter "**End Day**" – the growth day this plan will end. In the following plan the start day will appear automatically.
4. Week Days (**DOW**)
Or
5. **Cycle Day.**
Set the flushing schedule either by week days or cycle days.
Week days – choose the days of the week for the system to flush.
Cycle Day – mark the tick box and enter your desired cycle days (0-99) – the system will flush every so many days entered.
Example: Cycle day =3 – system will flush every 3 days.
6. Enter the **water temperature** (°C) required to initiate flushing. This function requires at least one Temperature sensor installed in the nipple lines. The system will flush once the water temp. exceeds the mentioned value.
7. Enter the "Minimal Time Between Flush (HH:MM)". This value will determine the minimal time gaps between flushes. During this time no flushing will take place – not by time and nor by temperature. This is to avoid multiple flushing initiated by the temp. sensor in hot days.
8. Enter the flush "**Duration**" for the plan. This will be the flush duration of one line. The value will apply for all flushing in the plan set by either time or Temp.
9. Enter the desired "**Times**" for flushing to be executed (HH:MM). 6 flushing per day are available. If "Times" value 00:00 (24 hours clock) or 12:00 AM (AM/PM clock) is entered no flushing will be executed .
To finish the programming scroll down and press "Save". Now the plan is saved in the Wall unit.
It is recommended to program a plan / plans from day 1 until the end of the cycle. You can always edit and change all parameters.
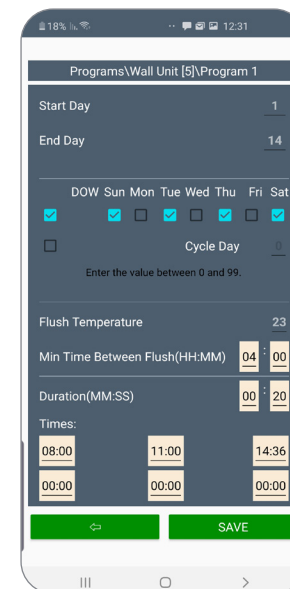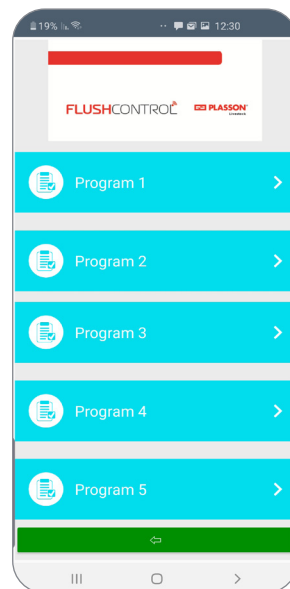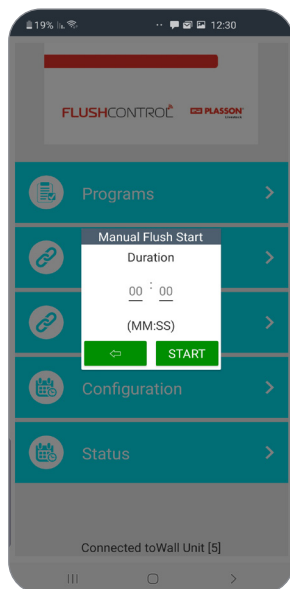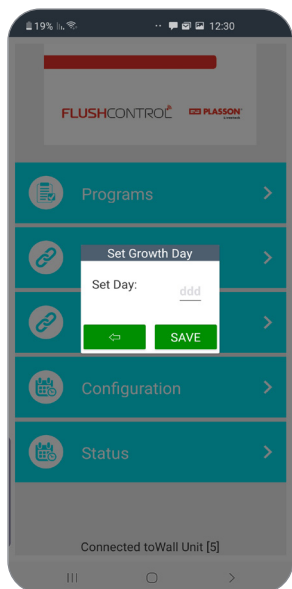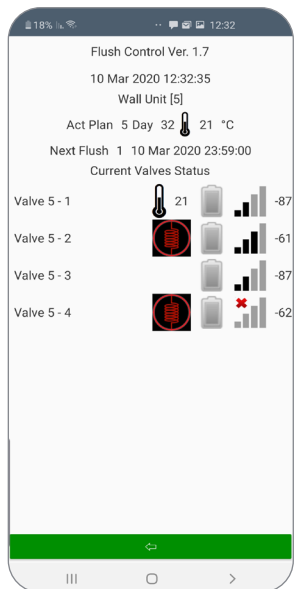
• Status

This menu presents the system status. Next flush time, system errors, Battery life and communication between units.

1. Flush Control Ver. X.X – the flush control application, the software is updated via the online stores (the software is free to download).

2. Date & Time - The date and time of the system will be the same as the one from which the phone was connected to the system (updated automatically).

3. Wall Unit [X] – the wall unit that connected to the user phone.

4. Act Plan & Day – the actual program plan according to the growth day.

5. Water temperature 🌡 – the temperature sensor reading, the actual temperature of each line will be display near the battery icon and the maximum temperature will be display near icon (if no temperature sensor is connected -128 is displayed).

6. Next Flush - Displays the next flushing time. During flushing cycle, it will display the next line that will be flush.

7. Current Valves Status – list of all valves, which connected to the wall unit.

8. Battery status - there are four battery status display - full, ¾ , ½ , ¼

9. Signal strength – show the signal strength between Wall Unit and End Unit. When signal lost, X is displayed.

10. The electric coil is disconnected (the electric valve wires are not connected to the End Unit card)

Problem	Action	Notes
Configuration mode cannot detect any unit.	Check if Bluetooth is activated in your smart phone. Make sure smart phone is within system range – max. 20m. Press RESCAN for new scan.	
Regulator / Reducer is always in Flush mode	Check if the regulator and the red flushing valve are mechanically Ok. Check if red flushing valve is not in manual flush position. Check if the solenoid supplied is suitable for wireless flushing – should have Green and Black wires. Check if wiring of the regulator Bluetooth unit was done correctly. Replace the battery. Replace the Regulator unit.	Green wire should connect to the binding close to the box wall and the Black wire to the other.
Status screen shows communication error	Confirm the max. distance from wall unit to the regulator Bluetooth units does not exceed max. range - 20m. Replace the battery. Go through pairing instructions	To cancel the alarm go to configuration mode - open the wall unit menu and press "refresh valve list"
Status screen shows coil disconnected.	Open the regulator Bluetooth and check wires connections. Replace the electric valve coil	
Status screen shows coil disconnected	Open the regulator Bluetooth and check wires connections. Replace the electric valve coil	
Status screen shows time to open solenoid is too long	"Refresh valve list" in configuration menu Replace the battery	
System is executing flushing constantly and not stopping	Check if system is programmed for temperature flushing. Check if *Minimal Time Between Flush* is not set to a short time. Set correct temperature for flushing. Set correct *Minimal Time Between Flush*.	If the flushing water temp. is higher than flush temperature value, flushing will not reduce the temp. in the nipple lines. In such case the system will repeat the flushing again. Setting Time Between Flush will resolve the problem.
System is not flushing according to the time programmed	Check if system is set to flush according to temperature, and if the *Minimal Time Between Flush* value is too long.	Possibly the system initiated flushing according to temperature, just before the programmed time for flushing. As result the preset Minimal Time Between Flushes may delay the next flushing.

Line Head - Complete sets

WOD Line Head

Pressure Indicator			
Wireless	60	02209974 - WOD Line Head Wireless Flushing (60) MK2 Com	
	80	02209978 - WOD Line Head Wireless Flushing (80) MK2 Com	
	Detach	02209523 - WOD Line Head Wireless Flush Detachable Sight Tube MK2 Com	
	Threaded	02209524 - WOD Line Head Wireless Flush Threaded Sight Tube MK2 Com	
Auto	60	02205497 - WOD Line Head W/Auto Flush (60) MK2 Com	
	80	02205944 - WOD Line Head W/Auto Flush (80) MK2 Com	
	Detach	02209525 - WOD Line Head W/ Auto Flush Detachable Sight Tube MK2 Com	
	Threaded	02209526 - WOD Line Head W/ Auto Flush Threaded Sight Tube MK2 Com	
Manual	60	02205493 - WOD Line Head (60) MK2 Com	
	80	02205940 - WOD Line Head (80) MK2 Com	
	Detach	02209527 - WOD Line Head Detachable Sight Tube MK2 Com	
	Threaded	02209528 - WOD Line Head Threaded Sight Tube MK2 Com	

Line Head

Pressure Indicator			
Wireless	60	02209973 - Line Head Wireless Flushing (60) MK2 Com	
	80	02209976 - Line Head Wireless Flushing (80) MK2 Com	
	Detach	02207055 - Line Head Wireless Flush Detachable Sight Tube MK2 Com.	
	Threaded	02207057 - Line Head Wireless Flush Thread Sight Tube MK2 Com.	
Auto	60	02205495 - Line Head W/Auto Flush (60) MK2 Com	
	80	02205942 - Line Head W/Auto Flush (80) MK2 Com	
	Detach	02207051 - Line Head W/Auto Flush Detachable Sight Tube MK2 Com.	
	Threaded	02207053 - Line Head W/Auto Flush Thread Sight Tube MK2 Com.	
Manual	60	02205491 - Line Head (60) MK2 Com	
	80	02205499 - Line Head (80) MK2 Com	
	Detach	02207047 - Line Head With Detachable Sight Tube MK2 Com.	
	Threaded	02207049 - Line Head With Thread Sight Tube MK2 Com.	

Line Head
High Pressure

Wireless	02207034 - Line Head 0-250 Black Wireless Flushing MK2 Com	
Auto	02207032 - Line Head 0-250 Black W/Auto Flush MK2 Com	
Manual	02207030 - Line Head 0-250 Black MK2 Com	

Mid Line - Complete Sets

WOD Mid Line

Pressure Indicator			
Wireless	60	02209975 - WOD Mid Line Wireless Flushing (60) MK2 Com	
	80	02209979 - WOD Mid Line Wireless Flushing (80) MK2 Com	
	Detach	02209529 - WOD Mid Line Wireless Flush Detachable Sight Tube MK2	
	Threaded	02209530 - WOD Mid Line Wireless Flush Threaded Sight Tube MK2	
Auto	60	02205498 - WOD Mid Line W/Auto Flush (60) MK2 Com	
	80	02205945 - WOD Mid Line W/Auto Flush (80) MK2 Com	
	Detach	02209531 - WOD Mid Line W/ Auto Flush Detachable Sight Tube MK2	
	Threaded	02209532 - WOD Mid Line W/ Auto Flush Threaded Sight Tube MK2 Com	
Manual	60	02205494 - WOD Mid Line (60) MK2 Com	
	80	02205941 - WOD Mid Line (80) MK2 Com	
	Detach	02209533 - WOD Mid Line Detachable Sight Tube MK2 Com	
	Threaded	02209534 - WOD Mid Line Threaded Sight Tube MK2 Com	

Mid Line

Pressure Indicator			
Wireless	60	02209982 - Mid Line Wireless Flushing (60) MK2 Com	
	80	02209977 - Mid Line Wireless Flushing (80) MK2 Com	
	Detach	02207056 - Mid Line Wireless Flush Detachable Sight Tube MK2	
	Threaded	02207058 - Mid Line Wireless Flush Thread Sight Tube MK2	
Auto	60	02205496 - Mid Line W/Auto Flush (60) MK2 Com	
	80	02205943 - Mid Line W/Auto Flush (80) MK2 Com	
	Detach	02207052 - Mid Line W/Auto Flush Detachable Sight Tube MK2	
	Threaded	02207054 - Mid Line W/Auto Flush Thread Sight Tube MK2	
Manual	60	02205492 - Mid Line (60) MK2 Com	
	80	02205939 - Mid Line (80) MK2 Com	
	Detach	02207048 - Mid Line With Detachable Sight Tube MK2 Com.	
	Threaded	02207050 - Mid Line With Thread Sight Tube MK2 Com.	

Mid Line
High Pressure

Wireless	02207035 - Mid Line 0-250 Black Wireless Flushing MK2 Com	
Auto	02207033 - Mid Line 0-250 Black W/Auto Flush MK2 Com	
Manual	02207031 - Mid Line 0-250 Black MK2 Com	
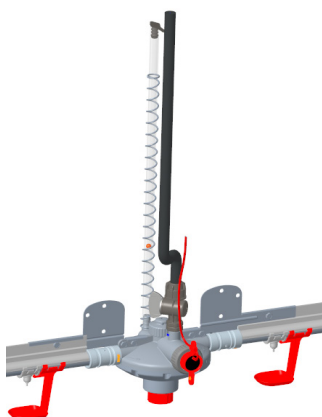
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