

Irrigation Controller App User Guide



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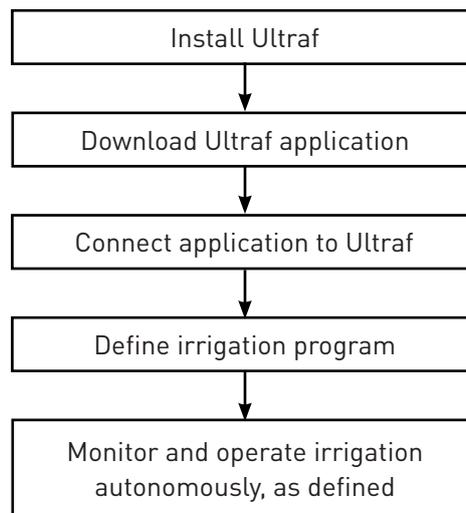
1 Introduction

This document reviews the tasks associated with programming and using the Ultraf irrigation application.

	<p style="text-align: center;">TIP</p> <p><i>For complete information about installing and operating Ultraf, see Ultraf Installation and Operation Manual.</i></p>
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Typical Workflow

The following diagram shows the basic steps of using the Ultraf irrigation app.



Terminology

- **Weekly irrigation program** – Ultraf irrigates during specified days and start times.
- **Cyclic irrigation program** – Ultraf irrigates every repeating number of days/hours.
- **Irrigation cycle** – irrigation period defined by a quantity of water, using a weekly or cyclic irrigation program.
- **Pulse resolution** – specifies the volumetric quantity selected to emit a pulse output.
- **Burst flow** – optional setup that will stop the irrigation cycle in progress when there is an unexpected change in the flow of water through Ultraf.

2 Getting Started

Prerequisite

Before operating Ultraf irrigation controller, make sure the following were completed:

1. Ultraf was mechanically installed and wired.
2. Ultraf application was installed on a mobile device.
3. Ultraf application connected successfully with Ultraf.

	<p style="text-align: center;">NOTE</p> <p><i>For more details, guidelines, maintenance and troubleshooting, refer to the Ultraf Installation and Operation manual.</i></p>
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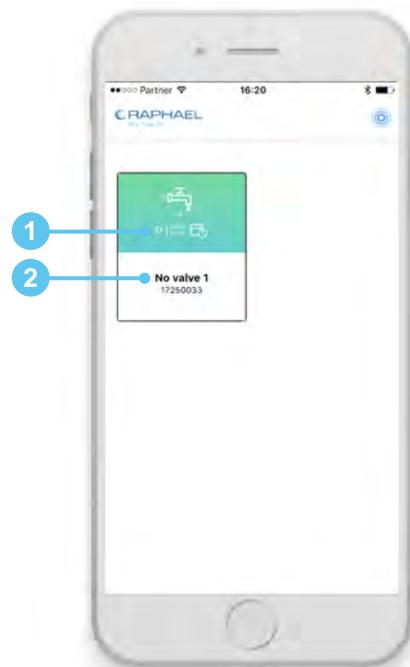
Starting the App Main Screen

When started, the application displays all connected Ultraf devices.

The device icon displays the following information:

- **Extension Card Used (1)**
- **Name of Device (2)** – the default name is the serial number of the Ultraf unit. The default name can be changed to a descriptive name in later stage (see [Measurement Units Setup on page 5](#)).

Tap the Ultraf device icon (1). The main screen opens (see [Initial Main Screen on page 4](#)).

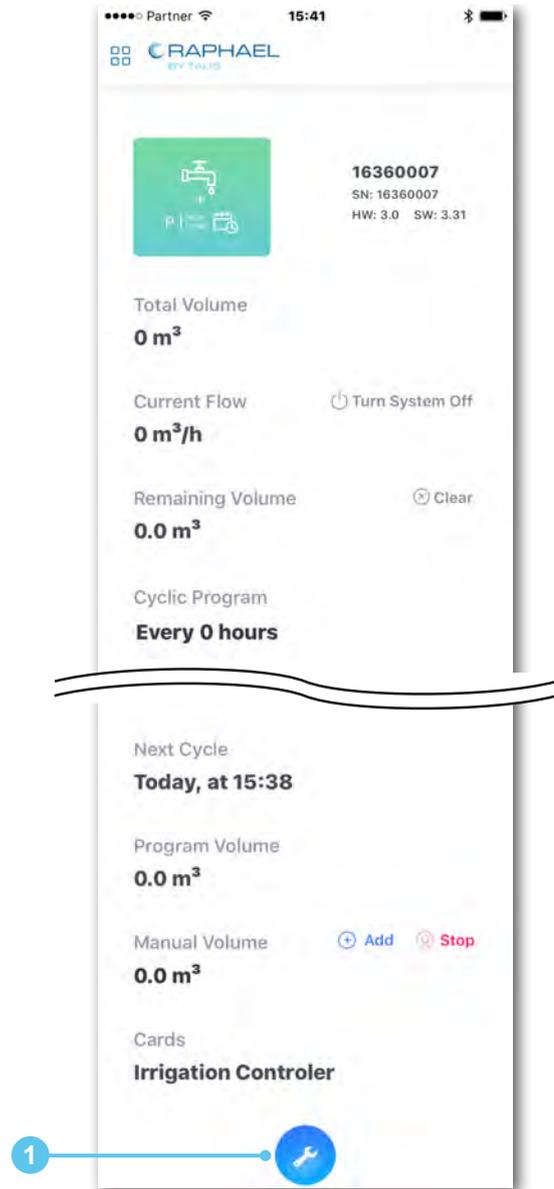


Initial Main Screen

The following default screen is displayed before any irrigation program is defined.

Scroll to the bottom of the screen and tap the **Settings** button (1) to start irrigation programming (see [Irrigation Programming on page 5](#)).

	TIP
	<p>After defining irrigation program, one of the following screens is displayed when starting the app main screen:</p> <ul style="list-style-type: none">▪ Weekly Program screen (see Weekly Irrigation Program Monitoring on page 10).▪ Cyclic Program screen (see Cyclic Irrigation Program Monitoring on page 12).

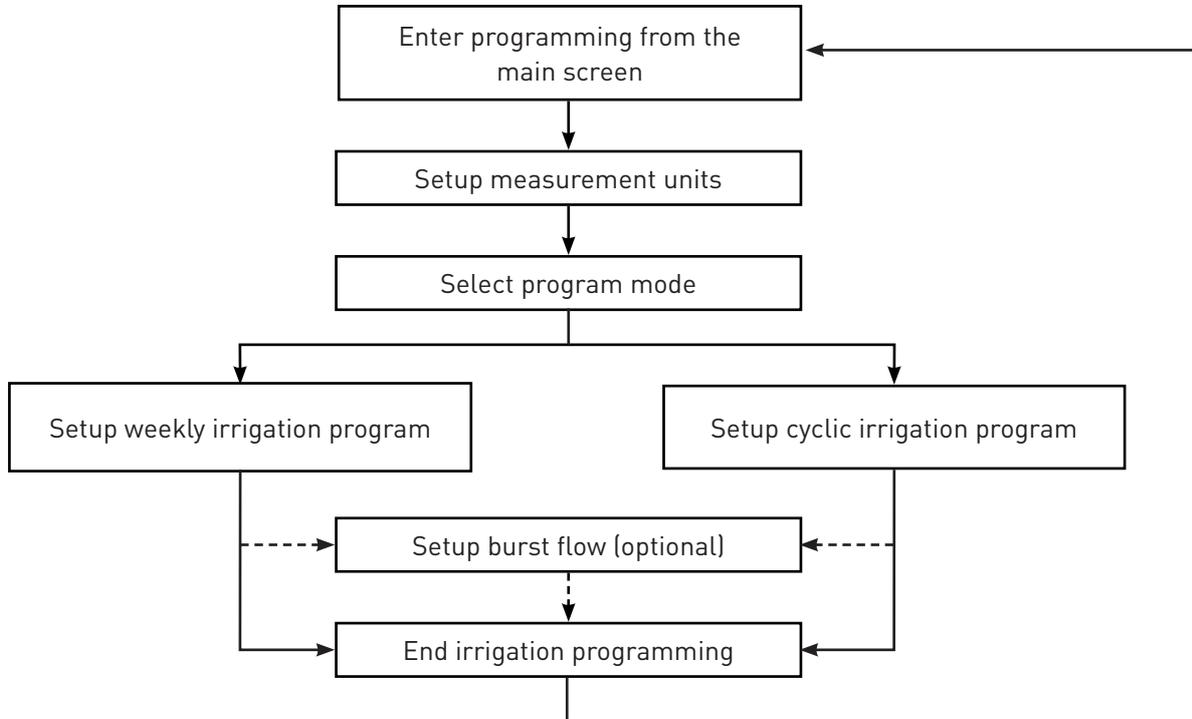


3 Irrigation Programming

This chapter describes the tasks associated with programming the two irrigation modes in Ultraf. Irrigation programming is enabled after [Starting the App Main Screen \(see page 3\)](#).

Programming Workflow

The programming process is based on the following major steps:



Measurement Units Setup

The first screen in the programming process enables defining the Ultraf units of measurement using the following steps:

1. Type a descriptive Ultraf name (1) up to 12 characters. This name is used as the Ultraf identification.
2. Tap the relevant volume unit of measurement (2). The selected unit is marked in blue.
3. Tap the relevant flow unit of measurement (3).
4. Tap the relevant pulse resolution unit of measurement (4).

Tap the **Arrow** button (5) continue programming. The [Program Mode Selection \(see page 6\)](#) is displayed.



Program Mode Selection

Select one of the irrigation program modes:

- **Weekly Program (1)** – Ultraf irrigates during specified days and start times (see [Weekly Program Setup on page 6](#)).
- **Cyclic Program (2)** – Ultraf irrigates every repeating number of days or hours (see [Cyclic Program Setup on page 7](#)).



Weekly Program Setup

This section describes the tasks associated with configuration of Ultraf when the weekly irrigation program is selected (see [Program Mode Selection on page 6](#)).

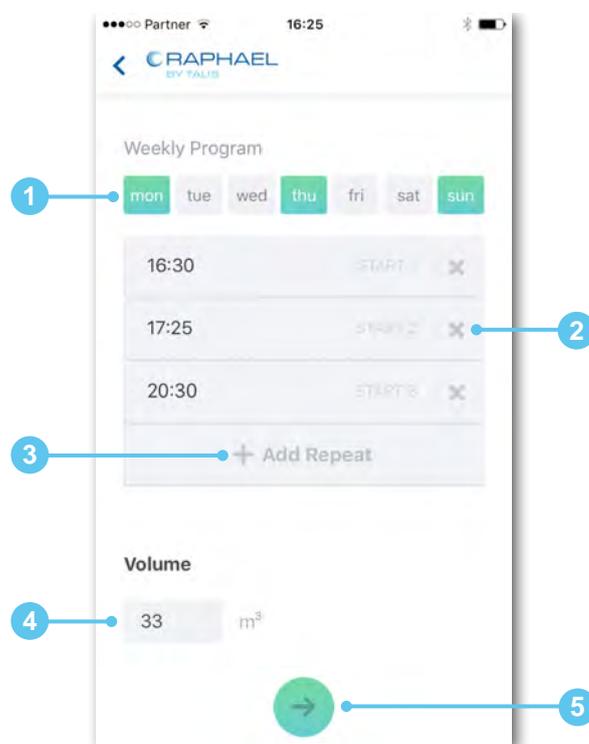
Configure the weekly program as follows:

1. Tap the days (1) the irrigation system will turn on. The selected days are marked.
2. Tap **+ ADD REPEAT** (3) to set the times when the irrigation cycle will start during each of the selected irrigation days.

	TIP Tap X (2) to remove irrigation cycle time.
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3. Set the volume of water (4) to be used per irrigation cycle.

Tap the **Arrow** button (5) to continue to the [Burst Flow Setup](#) (see [page 8](#)).



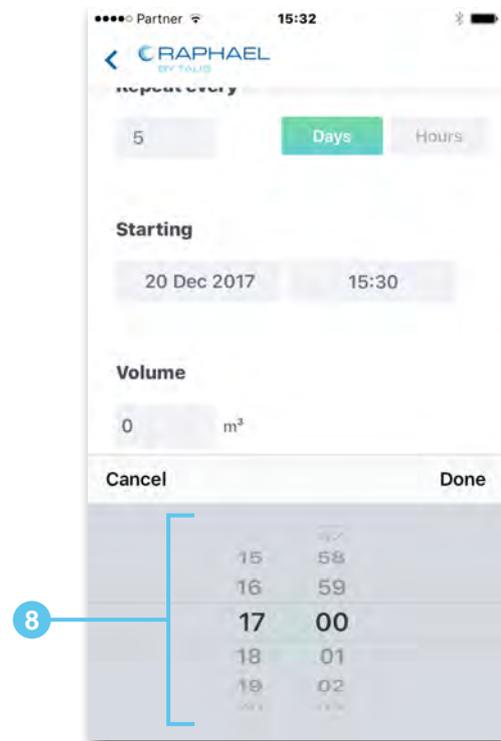
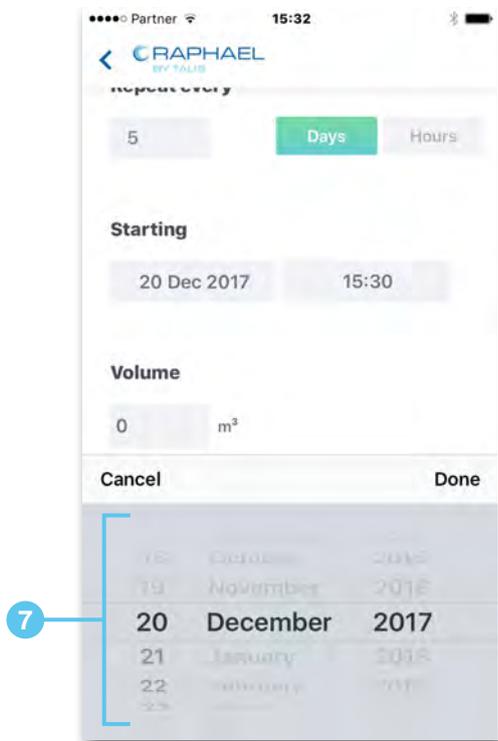
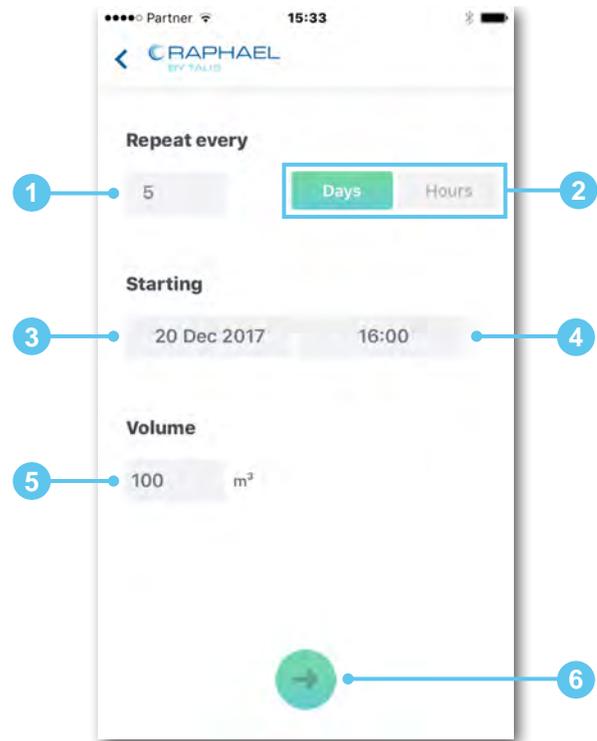
Cyclic Program Setup

This section describes the tasks associated with configuration of Ultraf when the cyclic irrigation program is selected (see [Program Mode Selection on page 6](#)).

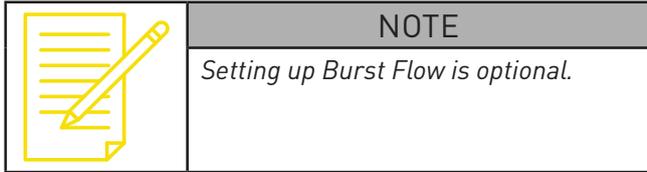
Configure the cyclic program as follows:

1. Choose the frequency of operation (2) as days or hours.
2. Set the number of days or hours the cycle will repeat (1).
3. Tap the date (3), then scroll through the dates (7) to select a starting date for the first irrigation cycle.
4. Tap the time (4), then scroll through the times (8) to select the starting hour.
5. Set the volume of water (5) to be used per irrigation cycle.

Tap the **Arrow** button (6) to continue to the optional Burst Flow Setup (see [Burst Flow Setup on page 8](#)).

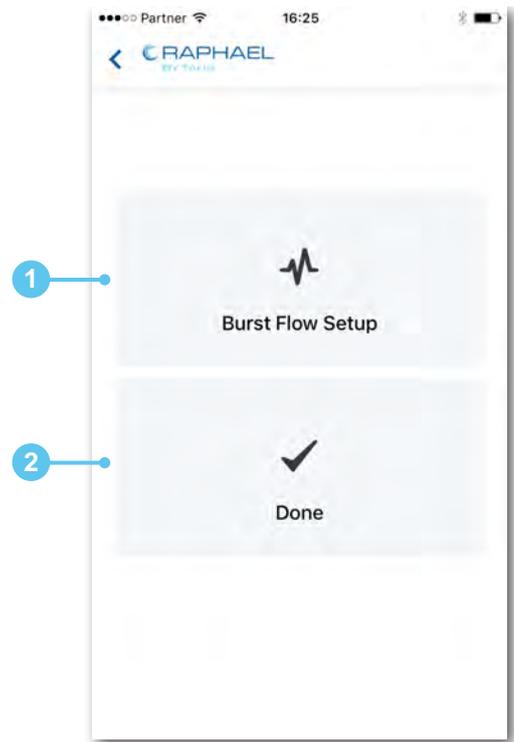


Burst Flow Setup



This screen is displayed after completing configuration of either weekly or cyclic irrigation program and enables selecting one of the following options:

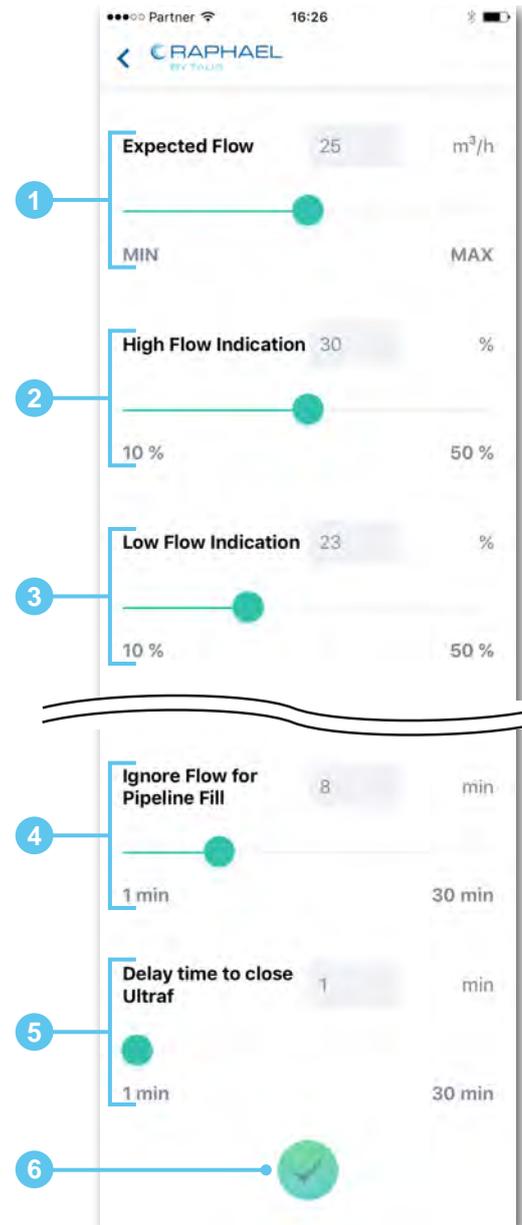
- To open the Burst Flow settings screen, tap **BURST FLOW SETUP** (1).
- To return to the main screen, tap **DONE** (2).



Burst Flow Settings Screen

To define conditions for irrigation shut off due to a problem with the water flow, perform the following steps:

1. Under **Expected Flow** (1), set the expected nominal water flow during normal operation.
2. Under **High Flow Indication** (2), set the high flow limit as a percentage above the expected flow.
Example: If normal flow is 25 m³/hr and you wish the system to stop irrigation when the flow exceeds 33 m³/hr, set this value to 30%.
3. Under **Low Flow Indication** (3), set the low flow limit as a percentage below expected flow.
Example: If normal flow is 25 m³/hr and you wish the system to stop irrigation when the flow drops below 19 m³/hr, set this value to 23%.
4. Under **Ignore Flow for Pipeline Fill** (4), set the number of minutes the system will ignore the high flow limit indication while the pipe is filling.
5. Under **Delay time to close Ultraf** (5), set how long (in minutes) high or low flow conditions should last before Ultraf shuts off irrigation.
Example: When this value is set to 1, the water flow must exceed the low or high flow limit for one minute before irrigation is shut off.



Tap the **Checkmark** button (6) to save the settings and complete irrigation programming. The *Initial Main Screen* (see [page 4](#)) appears.

4 Irrigation Monitoring and Operation

This chapter reviews the tasks associated with monitoring and operating Ultraf irrigation controller. This chapter includes:

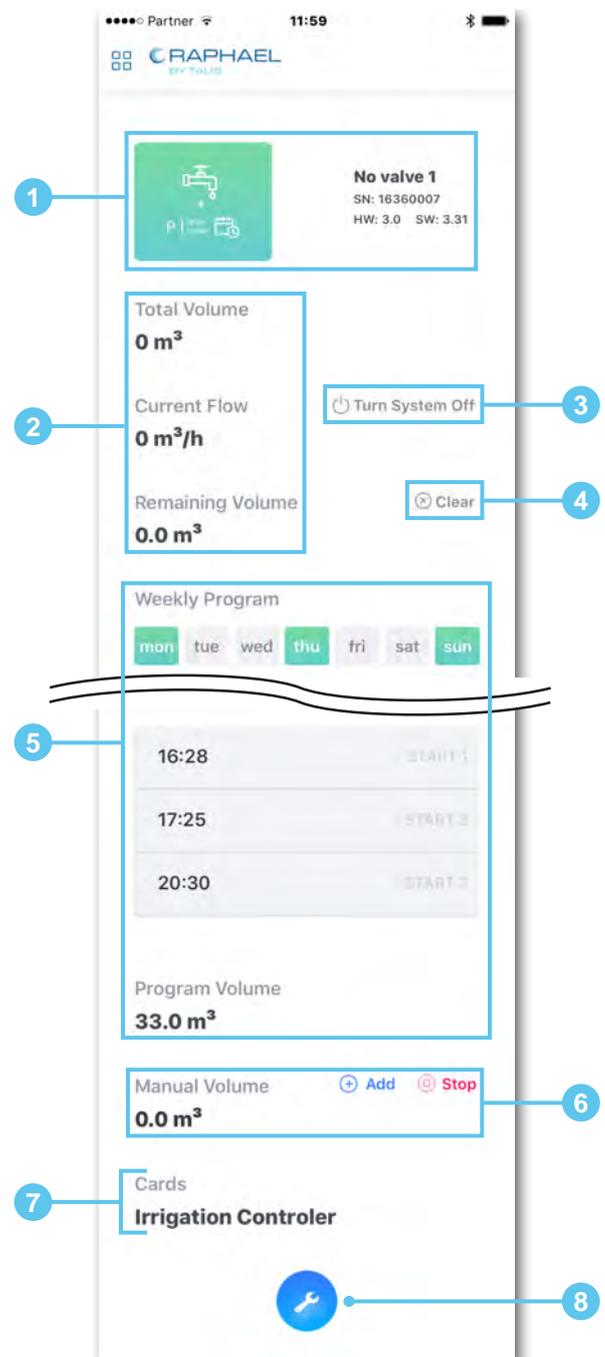
- [Weekly Irrigation Program Monitoring on page 10](#)
- [Cyclic Irrigation Program Monitoring on page 12](#)
- [Adding Irrigation Manually on page 14](#)
- [Turning Irrigation Off on page 15](#)

Weekly Irrigation Program Monitoring

The following screen is displayed when a weekly irrigation cycle is used.

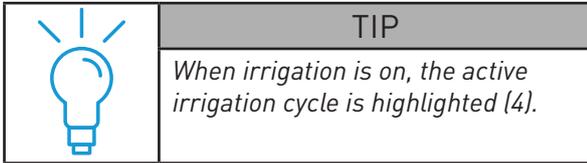
This screen includes the following types of information (described in detail later):

- **Ultraf Information (1)** – the following information is displayed:
 - Ultraf assigned name (up to 12 characters)
 - Ultraf serial number
 - Controller hardware version (HW) and software version (SW)
- **Current Irrigation Cycle Information (2)** – see [page 11](#).
- **Turn System Off (3)** – stops all irrigation activity until a designated date and time (see [Stopping Irrigation Program on page 15](#)).
- **Clear (4)** – terminates the active irrigation cycle that is in progress (see [Terminating Irrigation Cycle on page 15](#)). This does not affect future cycles.
- **Weekly Program Information (5)** – see [page 11](#).
- **Manual Volume (6)** – initiates a one-time manual addition of water volume (see [Adding Irrigation Manually on page 14](#)).
- **Cards (7)** – specifies that Ultraf is fitted with an irrigation controller card.
- **Settings Button (8)** – opens the irrigation programming screen (see [Irrigation Programming on page 5](#)).

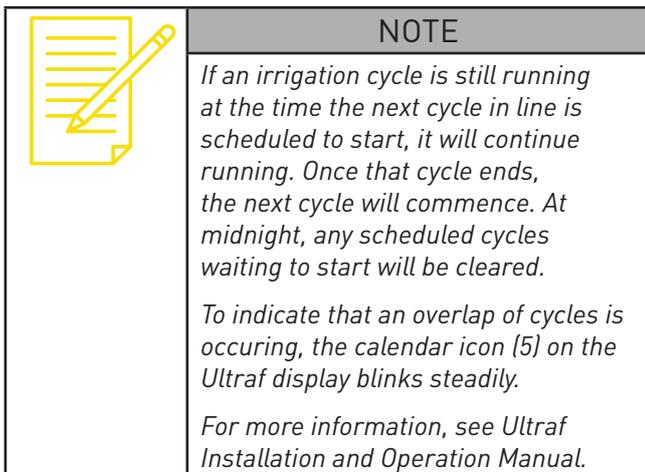
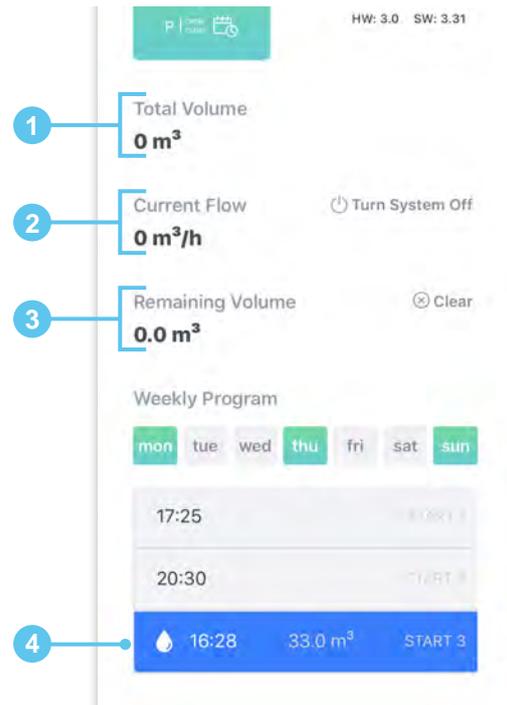


Current Irrigation Cycle Information

- **Total Volume (1)** – displays the total amount of water already irrigated.
- **Current Flow (2)** – displays the current water flow rate.

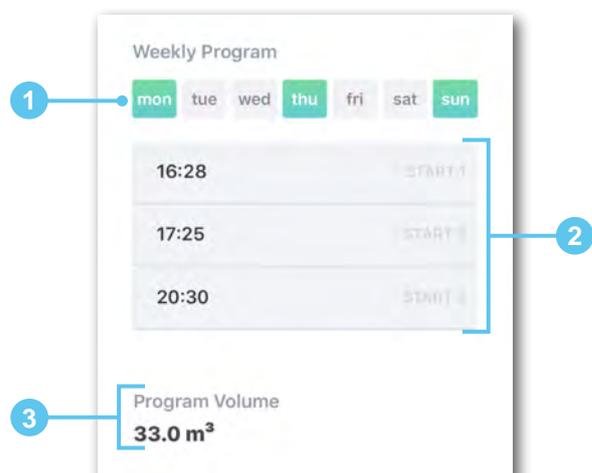


- **Remaining Volume (3)** – displays the amount of water that is left to irrigate during the current irrigation cycle.
- **Current Cycle (4)** – the active irrigation cycle is highlighted when watering.



Weekly Program Information

- **Programmed Days (1)** – the programmed irrigation days of the week are highlighted.
- **Programmed Times (2)** – the daily irrigation cycle starting times are listed.
- **Program Volume (3)** – the volume of water per each irrigation cycle is displayed.

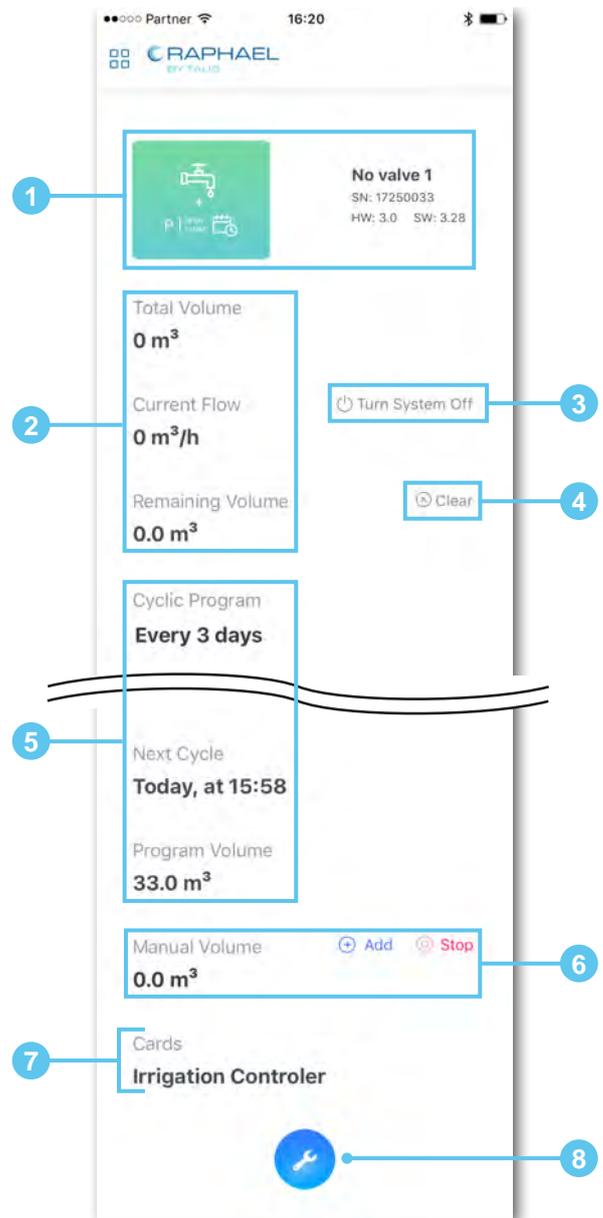


Cyclic Irrigation Program Monitoring

The following screen is displayed when a cyclic irrigation program is used.

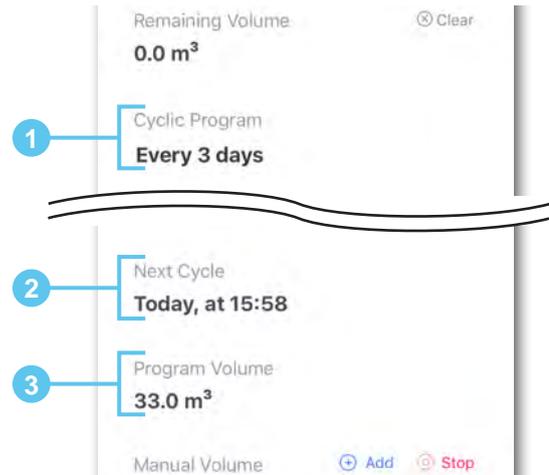
This screen includes the following types of information (described in details later):

- **Ultraf Information (1)** – the following information is displayed:
 - Ultraf assigned name (up to 12 characters)
 - Ultraf serial number
 - Controller hardware version (HW) and software version (SW)
- **Current Irrigation Cycle Information (2)** – see [page 11](#).
- **Turn System Off (3)** – stops all irrigation activity until a designated date and time (see [Stopping Irrigation Program on page 15](#)).
- **Clear (4)** – terminates the active irrigation cycle that is in progress (see [Terminating Irrigation Cycle on page 15](#)). This does not affect future cycles.
- **Cyclic Program Information (5)** – see [page 13](#).
- **Manual Volume (6)** – initiates a one-time manual addition of water volume (see [Adding Irrigation Manually on page 14](#)).
- **Cards (7)** – specifies that Ultraf is fitted with an irrigation controller card.
- **Settings Button (8)** – opens the irrigation programming screen (see [Irrigation Programming on page 5](#)).



Cyclic Program Information

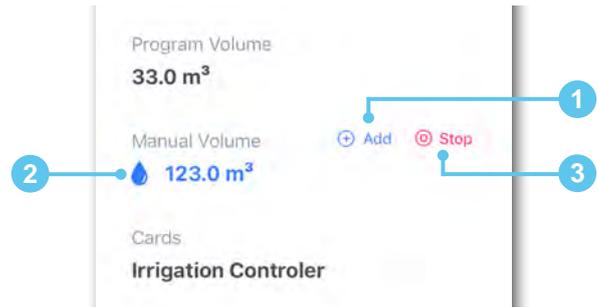
- **Cyclic Program (1)** – displays the time interval between two irrigation cycle start times.
- **Next Cycle (2)** – displays the date and time of the next irrigation cycle.
- **Program Volume (3)** – displays the amount of water per each irrigation cycle.



Adding Irrigation Manually

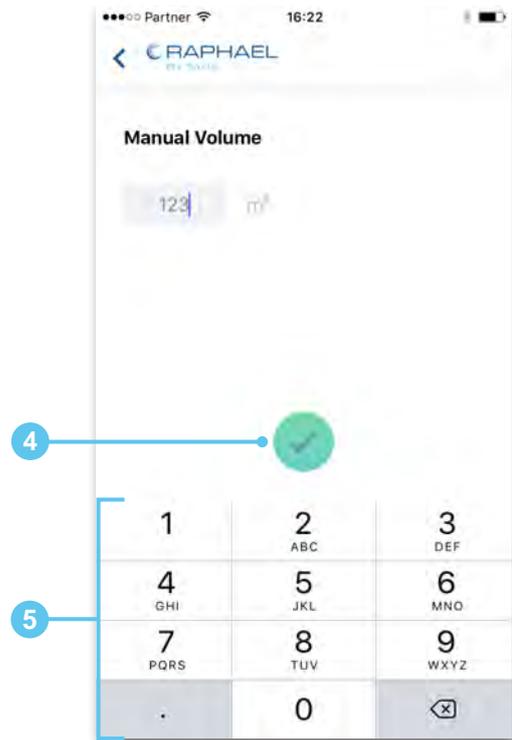
To initiate a one-time manual addition of water volume:

1. Tap **Add** (1).



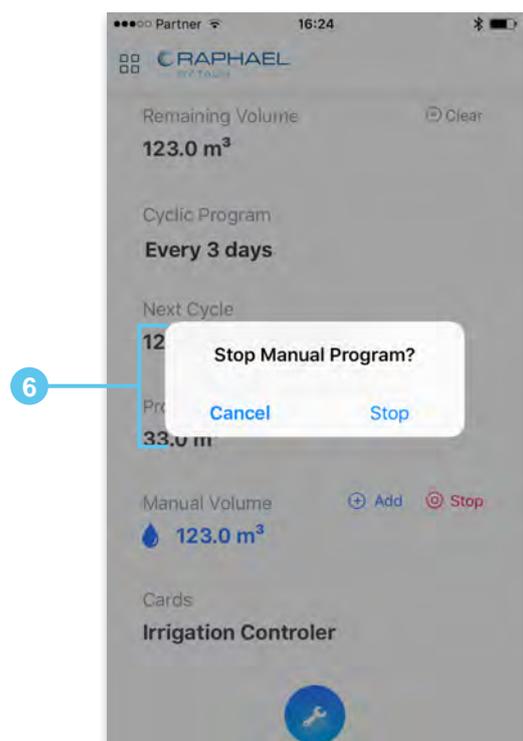
2. Enter volume amount using the dialpad (5). The **Manual Volume** amount is displayed (2).
3. Tap the checkmark (4) to immediately start the extra water cycle.

NOTE
<p><i>If an irrigation cycle is running, the amount of water is added to the total volume of the running cycle.</i></p> <p><i>If an irrigation cycle is not running, irrigation will immediately be initiated with the specified amount of water.</i></p>



4. To stop and clear the extra water volume, tap **STOP** (3).

A message box (6) opens requesting to confirm.



Turning Irrigation Off

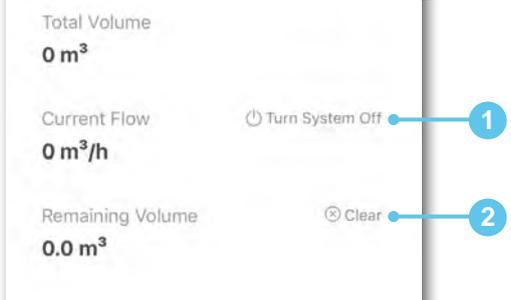
This section reviews the options to pause the irrigation program until a given date.

	TIP
	<i>This option is available on the main screen. See Weekly Program Setup on page 6 and Cyclic Irrigation Program Monitoring on page 12</i>

Terminating Irrigation Cycle

To clear remaining volume of water and terminate the current irrigation cycle, tap **CLEAR** (2).

	TIP
	<i>This option terminates the current irrigation cycle only.</i>



The screenshot shows the irrigation status screen with the following data:

- Total Volume: 0 m³
- Current Flow: 0 m³/h
- Remaining Volume: 0.0 m³

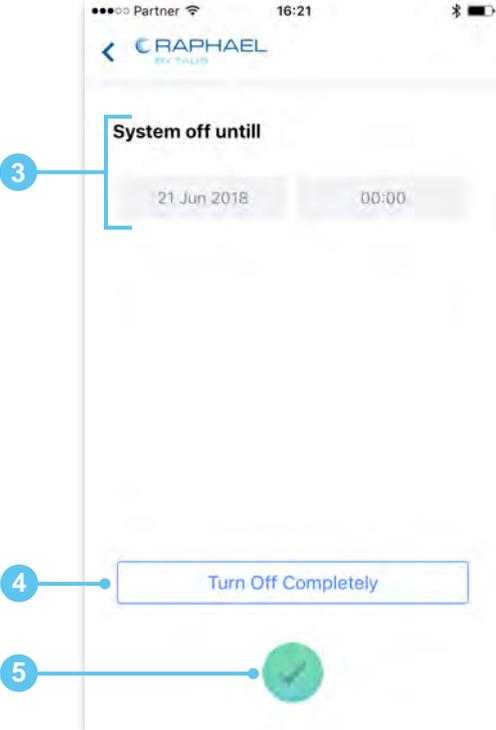
Callout 1 points to the "Turn System Off" button. Callout 2 points to the "Clear" button.

Stopping Irrigation Program

To stop the irrigation program, tap **TURN SYSTEM OFF** (1). A screen appears with the following options:

- Turn off irrigation system until a designated date and time (3).
- Turn off irrigation system completely (4).

Tap the **Checkmark** button (5) to save the settings and confirm stopping the irrigation program.



The screenshot shows the "System off until" dialog with the following options:

- Callout 3 points to the date and time selection area (21 Jun 2018, 00:00).
- Callout 4 points to the "Turn Off Completely" button.
- Callout 5 points to the green checkmark button.



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