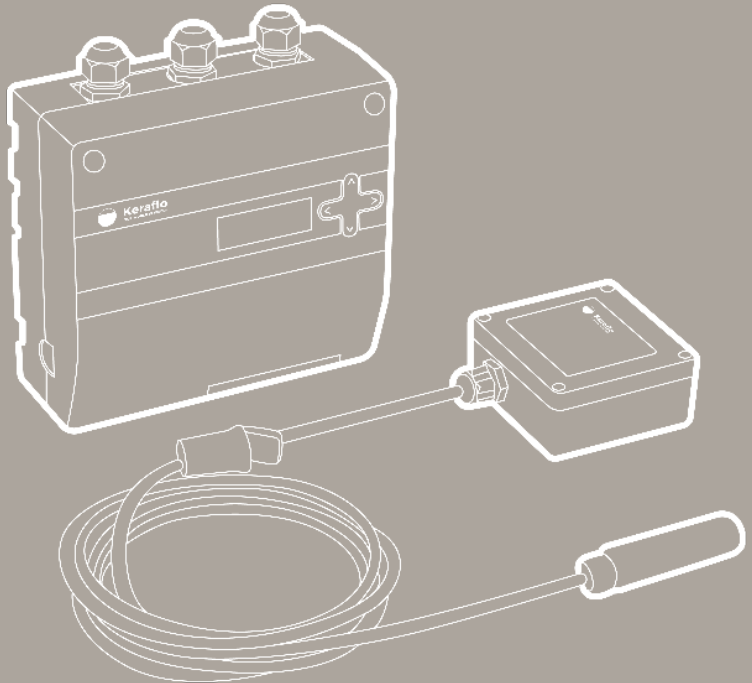




Keraflo
OUR WORLD IS WATER

Tanktronic Installation Guide



Notes

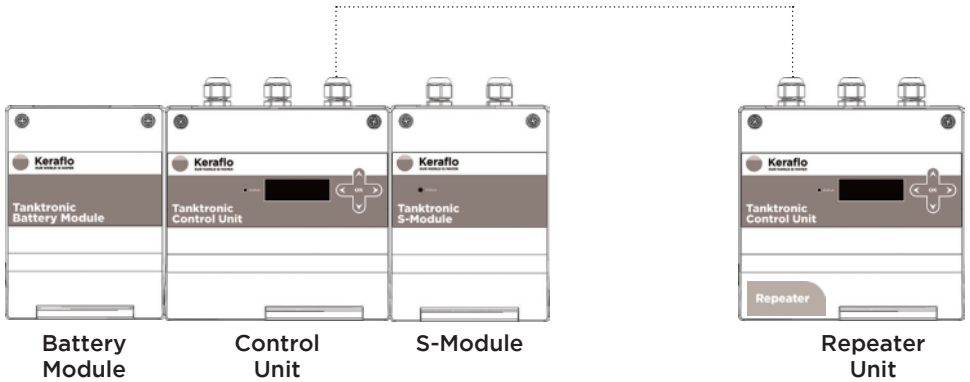
A series of horizontal dotted lines for writing notes.

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Introduction

Tanktronic system comprises 4 modules, sold separately:



Control Unit (TT/41, TT/42, TT/43 and TT/44)

The primary monitoring and control hardware for the Tanktronic system. The unit can manage up to 4 x individual tank sensors, 8 x Tanktronic Servo Ceramic Valves, and 2 x Tanktronic Control Valves plus additional third party devices.

S-Module (TT/2)

An optional expansion module that increases Tanktronic's operational capacity. Each S-Module provides 2 more VFCOs, 2 more VFCIs, 2 more SOLs, and will allow 2 x Control Valves to be added, plus additional third party devices. Up to two S-Modules can be joined to a single Control Unit.

Battery Module (TT/3)

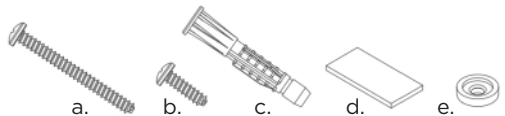
An optional back-up power source to the mains supply, providing up to two days of normal operation before power is expended (Depending on system and usage).

Repeater Unit (TT/100)

An optional interface extension to the Control Unit, allowing you to monitor and control the Tanktronic system from another location. The Repeater Unit can be located up to 100m from the Control Unit and does not require a separate power supply.

Fixings

- a. 4 x #6 Screws for mounting Control Unit
- b. 4 x #4 Screws for mounting Connection Box
- c. 4 x Wall fixing plugs
- d. 4 x Self-adhesive pads
- e. 4 x Floating washers

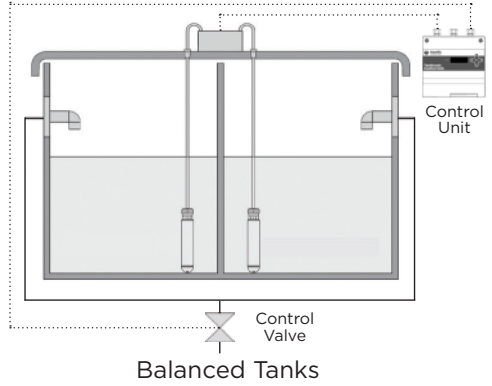
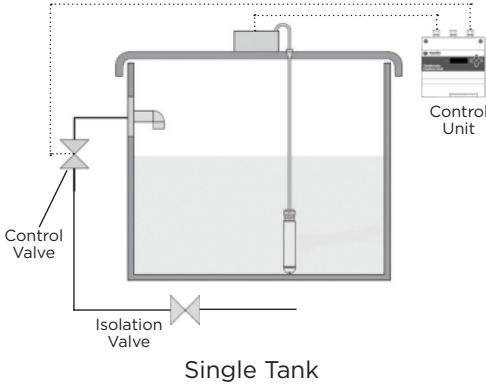


Quick Start

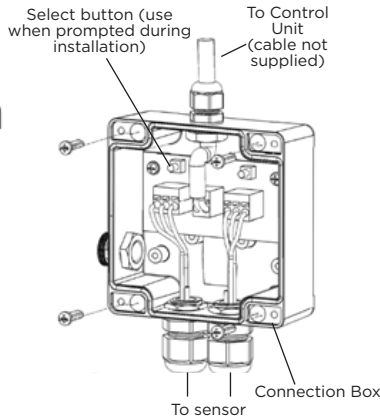
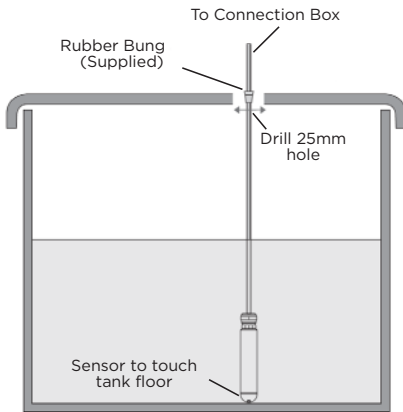


Before commencing installation, isolate main power supply and water supply

Tank configuration:



Installing the sensor:



NOTES:

Humidity controlled Connection Box.

Do not get wet.

Do not remove silica gel.

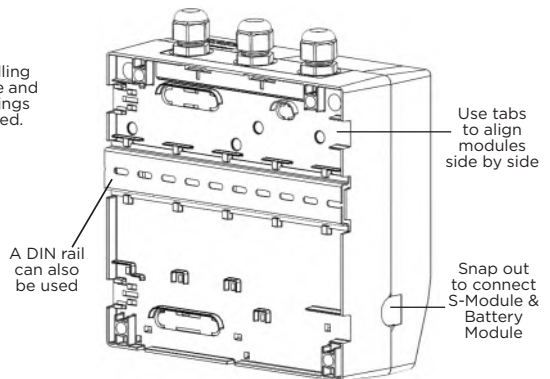
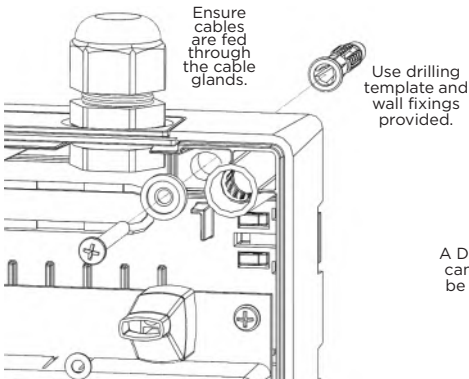
Do not modify this box in any way.

Always refit the lid.

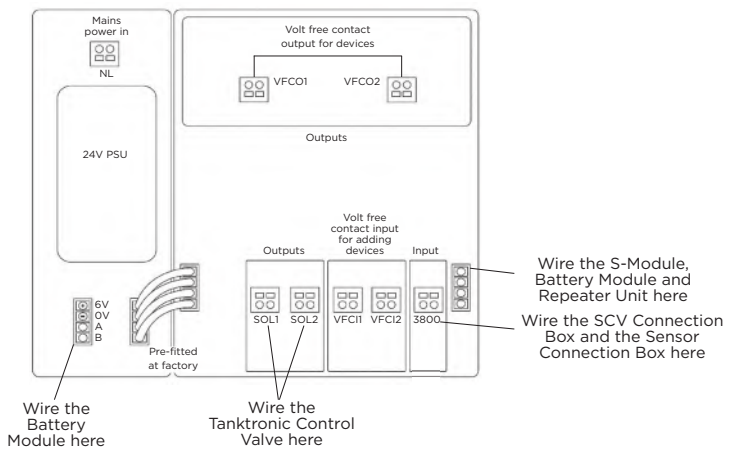
Do not cut the cable.

Do not pinch or compress the sensor cable to prevent damage to vent tube.





Installing the Control Unit:



Wiring:
Control Unit



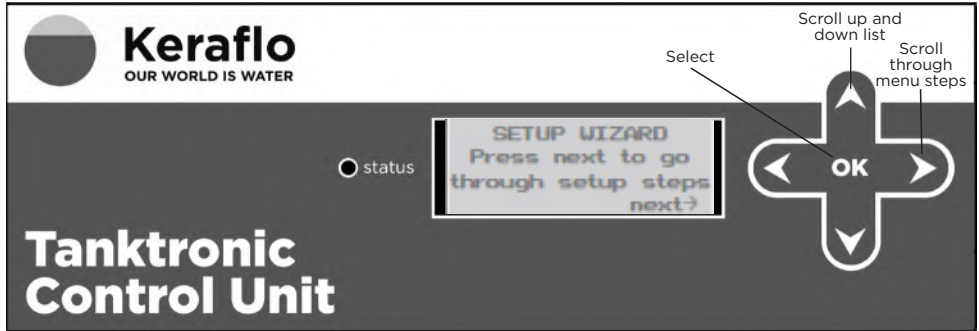
Tanktronic requires a 230v/50Hz single phase supply from a switched fused 3A supply. Connect with a suitable spec power cable. First slide the cable through the safety sleeve, then attach it to the socket.

-  Use the rubber safety sleeves provided.
-  For wiring specifications refer to back cover.
-  Do not power unit until installation is complete and wiring carried out to BS7671 IEE regulations.
-  Isolate water supply before powering up.

Setup Wizard:

The Setup Wizard will start when the Control Unit is first powered up. It can also be accessed from:

Main Menu > System > Config > Setup Wizard



The Setup Wizard will go through simple installation:

1. Enable/disable pin
2. Define type and number of tanks (1 Single Tank, 2 Single Tanks, Balanced Tanks)
3. Define tank area
4. Define level settings (see diagram and notes on the next page)
5. Define temperature alarms

Note: If sensors have previously been setup, you will get the option to reselect all sensors. This is recommended to avoid confusion between sensors with multiple tanks.

For more advanced set up complete the wizard and use **Main Menu > System > Config** (see Page 15).

Setting Date and Time:

To set the date and time (which is not included in the Setup Wizard) use:

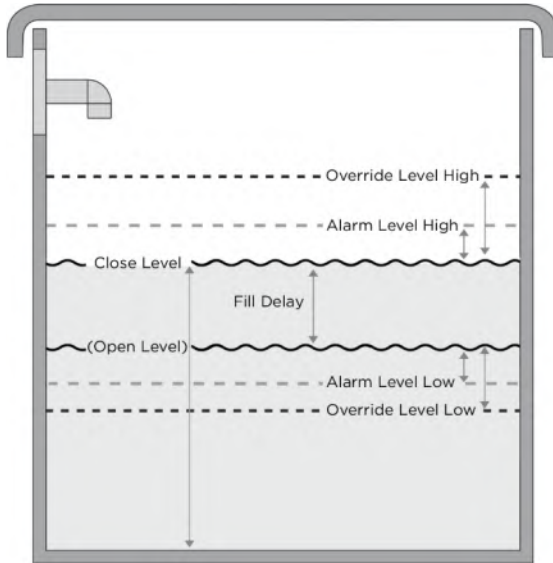
Main Menu > System > Config > Set Clock

Setting Levels

When setting tank levels, firstly define your valve Close Level depth measured from the bottom of the tank.

Then, confirm your Fill Delay depth (from the valve Close Level), which will define your valve Open Level.

Finally, set your levels for Alarm Level High and Override Level High (measured from the Close Level), then Alarm Level Low and Override Level Low (measured from the Open Level).



Note: $\text{Fill Delay} = \text{Close Level} - \text{Open Level}$.

Note: Override is optional and found in Manual Config not the Setup Wizard (See Page 15).

Prior to commissioning Tanktronic, it is recommended to list the settings you require by using the Settings Log checklist on Page 24.

Monitoring Only:

When using Tanktronic for monitoring purposes only, the Fill Delay and Open Level is used for setting Alarm Levels.

Filling Valves

Three types of filling valves are supported. All valves operate from the tank's specified Close Level and Fill Delay settings, as illustrated on Page 8.

- Tanktronic Servo Ceramic Valve (SCV) - See Page 10
- Tanktronic Control Valve - See Page 13
- Generic Non-Latching Valve - See Page 14

Tanktronic Servo Ceramic Valve (SCV):

5 models are available, ranging from ¾" to 2" fittings.

Up to 8 Servo Ceramic Valves in total per system.

- Installed inside the tank
- Motorised operation
- Uses the Keraflo Aylesbury valve body and ceramic discs
- Manual override control knob (Close/Open)

Tanktronic Control Valve:

Available from 2" fittings to 6" fittings.

Up to 6 Control Valves in total per system, with 2 x S-Modules.

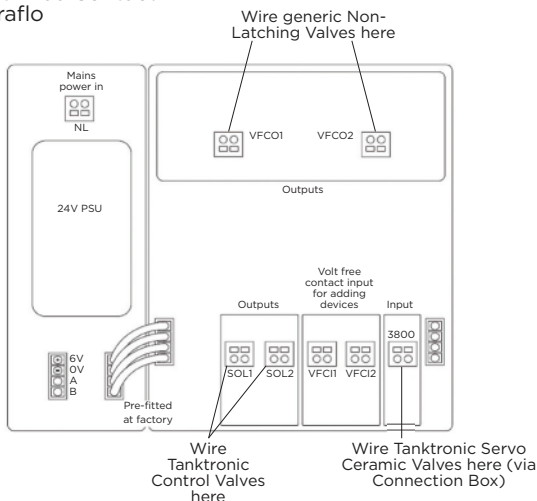
- Installed outside of tank
- Can be used as a shared valve on a pair of Balanced Tanks or individual Tank Control
- For high flow rate applications

Generic Non-Latching Valve:

3rd party valves can also be used, controlled via Volt-Free Contact Output.

Up to 6 Generic non-latching valves in total per system, with 2 x S-Modules.

- Must be a non-latching type valve
- Controlled via a Volt-Free Contact
- Not supplied by Keraflo



Valves are Devices that are attached to the tanks.

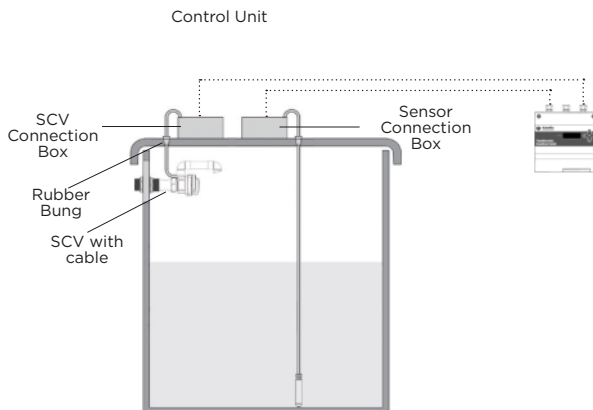
Main Menu > Tank X > Config > Devices > Add Device >

For more information on Devices see Page 17.

Tanktronic Servo Ceramic Valve (SCV)

SCV Box Contents:

- Valve (fitted with 3m cable and rubber bung)
- Connection Box to connect to the Tanktronic Control Unit
- Connection Box fixings
- Tanktronic Installation Guide



Note: Tanktronic Control Unit and sensors are sold separately from SCV.

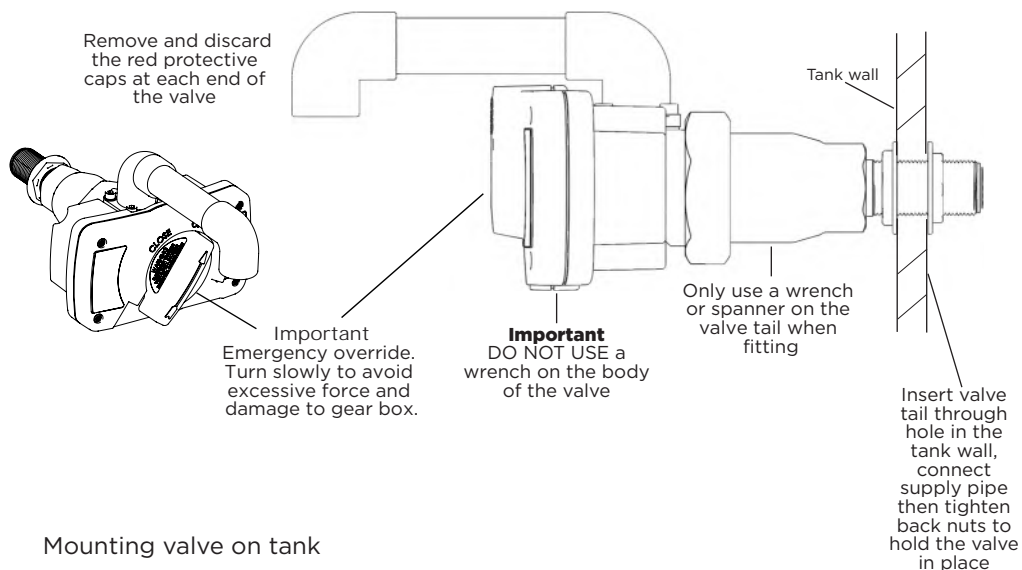
Maximum of 8 SCVs per system.



Control Unit software version must be Issue 2 or later to work with SCV.

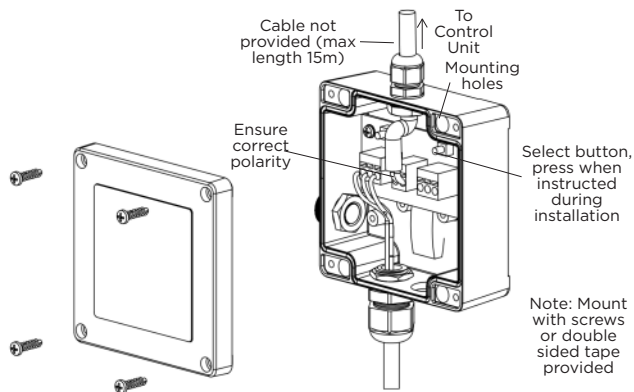
The software issue can be checked through the menu: **Main Menu > System > Status > About**

SCV Installation:



Mounting valve on tank

Wiring the SCV Connection Box:



IMPORTANT NOTES:

Humidity controlled Connection Box.

Do not get wet.

Do not remove silica gel.

Do not modify this box in any way.

Always refit the lid.

Do not cut the cable.

Note: Only use the Connection Box provided to connect the SCV to the Control Unit.



Do not tamper with or modify the Connection Box in any way, when fitting the cable to the Control Unit.

SCV Configuration:

How to add device:

Main Menu > Tank X > Config > Devices > Add Device > select **TT SCV**

Select SCV valve to add this device. Press select button in connection box and hold until valve is selected. This may take up to 10 seconds.

Once the SCV is selected, it is ready to operate at the tank open and close levels.

Advanced SCV features:

Auto Clean: Tanktronic can detect valve resistance caused by debris or scale. The SCV will automatically run an Open/Close cycle to clean the valve. If valve resistance cannot be cleared automatically, then an alarm is recorded as a "Cleaning" fault.

Auto Retry: Tanktronic can detect if the valve cannot complete a cycle due to debris. The SCV will automatically release the valve by retrying the Open/Close action. If cycle cannot be completed, then an alarm is sent as a "Valve Jammed" fault.

Fault messages:

- "S-Module Down" - The valve is connected to an S-Module which is not responding.
- "WF3800NET Down" - Wiring issues, e.g. short circuit.
- "No Response" - The master Control Unit cannot communicate with the SCV.
- "Under-current" fault - The motor or gear train is faulty and the valve may not be moving (and could be stuck open).
- "Over-current" fault - If the SCV draws too much current this implies it is jammed or there is a wiring fault. The open/close action is stopped immediately.
- "Cleaning" fault - See Auto Clean details above.
- "Valve jammed" fault - See Auto Retry details above.
- "Low supply" fault - Implies a wiring or panel fault. The action is completed.

Diagnostics:

A "Diagnostics" menu can be accessed under **Main Menu > Tank > Status > Devices >** select valve from list **> Diag**, which displays the following items:

I = "Motor Current" - The average motor current drawn during the last action. This gives an indication of how free the valve is moving.

U = "Usage Count" - The total number of Open & Close actions.

R = "Retry Count" - The total number of action retries it has done.

C = "Clean Cycle Count" - The number of times it has run a clean cycle on the Valve.

To reset these counts select **Main menu > Tank > Status > Devices >** select valve from list **> Diag > Read Diag > Start >** scroll down the list **> Reset**

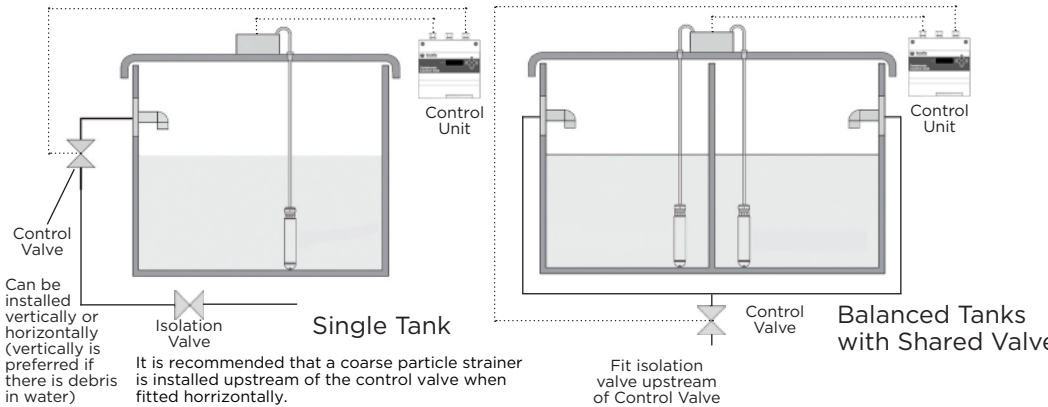
Tanktronic Control Valve

A range of metal-bodied Tanktronic Control Valves is available, in 2", 2½", 3", 4" and 6" sizes. These valves should be specified when high flow rates are required.

Included: Control Valve with solenoid, Discharge Pipe Flanged Assembly, Stub Flange and Backing Ring. For balanced tanks, Tanktronic Control Valves are also supplied with 2 Discharge Assemblies (reduced by one size from the inlet size), 2 Isolating Valves and 1 Stub Flange (reduced by one size).

How to add device:

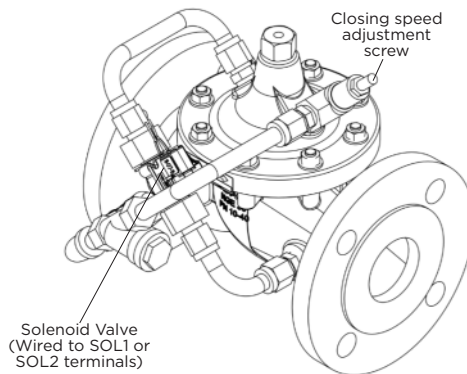
Main Menu > Tank X > Config > Devices > Add Device > select TT Control Valve



Closing Speed Adjustment:

The closing speed of the valve can be adjusted to avoid water hammer developing in the supply pipe, as the Control Valve closes. If the closing speed is too short, hydraulic shock can occur.

Turning the screw clockwise will increase the closing time. If the control valve fails to close or does not close quickly enough, turn the screw anti-clockwise to shorten the closure time.



Servicing And Maintenance:

No routine maintenance should be necessary. If debris has entered the water supply, isolate the supply to the Control Valve assembly and inspect/clean.

Balanced Tanks Installations:

If installed on a pair of Balanced Tanks you will be asked if the valve is shared or separate. i.e. common fill or individual control.

Generic Non-Latching Valve

A non-latching 3rd party inlet valve may be controlled from the Tanktronic.

The live feed to the valve should be connected through the Volt-Free Contact Outputs on the Tanktronic Control Unit, as illustrated in the drawing on Page 9 (for VFCO spec please see Back Page).

How to add device:

Main Menu > Tank X > Config > Devices > Add Device > select Gen Inlet Valve

You will be asked to specify if the valve Volt-Free Contact polarity is normally open or normally closed.

The valve will close at the specified Close Level for the selected tank and open at the specified Fill Delay (below the Close Level).

Balanced Tanks Installations:

If installed on Balanced Tanks you will be asked if the valve is shared or separate. i.e. common fill or individual control.

Commissioning Valves

Once a valve has been installed and the correct Device type added to the system, the valve can be tested using the Control menu:

Main Menu > Tank X > Control > Devices > select valve to test from device list > Override

Follow the prompt and you can Open/Close the valve for 10 seconds. After 10 seconds the valve will revert to its previous state.

The state of the valve can be viewed via the Status menu:

Main Menu > Tank X > Status > Devices > select valve to view from device list

This will show the Device name, Device type, Open/Close state and Address.

Balanced Tanks:

Balanced Tanks interlink the level banding for setting the water demand flag for each tank. If Tank 1 is above the Close Level threshold, then Tank 2 will never demand water (and vice versa).

If Tank 1 is in the band between Close Level and Open Level thresholds and Tank 2 is below the Open Level threshold, then Tank 1 will flip to open (turning demand water on).

Configuration

The Setup Wizard will configure basic settings. Manual Config is used to set up further parameters.

Tank Layout:

For multiple tanks options beyond those covered in the Setup Wizard, the tank layout can be selected from the System Config menu:

Main Menu > System > Config > Tank Layout >

Each tank option will now be listed in the menu:

- 1-4 Single Tanks
- 1-2 Pairs of Balanced Tanks
- Or a combination of the two

Note: The Control Unit can manage up to 4 sensors and each tank requires a sensor. When modifying tanks the config and devices may be deleted.

Tank Setup:

For options beyond those covered in the Setup Wizard, select the tank to be configured in the main menu:

Main Menu > Tank X > Config >

- Auto Setup
- Manual Setup
- Devices (see Page 17)

Auto Setup – Allows you to set your water level based on the actual level in the tank.

Manual Setup covers all parameters covered in the Setup Wizard plus Override Levels, Tank Shape and Holiday Levels (see Page 21).

Override Level:

The Override Level is additional to the Alarm level and available for water level and temperature. For example you could set a warning alarm at the Alarm level and then install a shut of valve at the Override Level. (See Devices Page 17)

Tank Shape:

Tanktronic assumes your tank is a uniform shape and the water volume is a function of the cross sectional area x water depth. If your tank is a Horizontal Cylinder and the area changes with depth, then you must change the default shape:

Main Menu > Tank X > Config > Manual Setup > Tank Shape > Shape > select HORIZONTAL CYLINDER

Enter the cylinder diameter and length.

Alarms:

Tanktronic will raise an alarm in the following circumstances, which will cause the LED to flash red and an alarm log created:

- Alarm level High or Alarm Level Low is exceeded
- Alarm Temp High or alarm Temp Low is exceeded
- Sensor Fault
- System fault

The Alarms are logged and can be viewed in the Alarm menu:

Main Menu > Alarms > Scroll through list of Alarms

The Alarm can be interrogated by selecting an individual alarm and it will display:

- Device
- Fault
- Date and time raised

To use the Alarm to signal or control a 3rd party device, a Device must be added (see Page 17).

Alarms can be cleared by selecting Clear Alarms at the bottom of the list:

Main Menu > Alarms > Clear Alarms

Secondary Tanks:

It is possible to create a second tank profile. This means a second set of levels for a single sensor – for example: TANK1A using sensor data from TANK1, but controlling its own valves with its own level and temperature thresholds.

To add a secondary Tank:

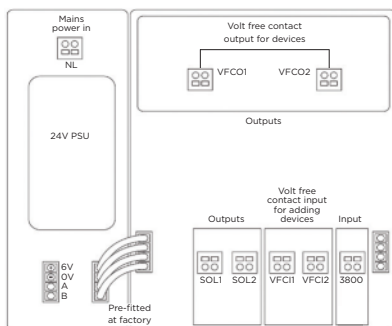
Main Menu > System > Config > Secondary Tanks > Add Secondary

For each primary tank in the system, a secondary will be available with the suffix 'A'. The secondary tank will appear in the Main Menu below the primary tank with the suffix 'A'.

Devices

Tanktronic can take actions based on temperature and level readings. To take an action a Device must be added.

Devices are controlled using Volt-Free Contact Outputs (VFCO), Volt-Free Contact Inputs (VFCI), 3800 and SOL output. These can be set up as normally Open or normally Closed and Auto Reset or Manual Reset, where appropriate.



Note: The Tanktronic Control Unit can take a maximum of 2 VFCOs, 2 VFCIs and 2 SOLs. Add an S-Module to provide 2 more VFCOs, VFCIs and SOLs, if required.

Devices can be configured at System Level (they will look at readings from all tanks), or at a Tank Level (and only respond to readings from an individual tank):

Main Menu > System > Config > Devices > Add Device

Main Menu > Tank X > Config > Devices > Add Device

If the Device is to be installed on an S-Module, then the S-Module will be specified.

Commissioning Devices:

Once a device has been added to the system it can be tested using the Control menu:

Main Menu > Tank X or System > Control > Devices > Select Device to test from device list > Override

Follow the prompt and you can activate or deactivate the device. The Device will activate/deactivate for 10 seconds. After 10 seconds the Device will revert to its previous state.

The state of the Device can be viewed via the Status menu:

Main Menu > Tank X or System > Status > Devices > Select Device to view from device list:

- Device name
- Device type
- Active/Inactive state
- Address

Connecting to Building Management Systems (BMS):

Tanktronic can be connected to proprietary BMS systems via the VFC available on the Control Unit or S-Module.

Reset Latched Devices:

If manual reset is selected the device will require manual intervention to reset the VFC.

To reset all devices:

Main Menu > Alarms > Man Reset All Devs

To reset individually:

Main Menu > Tank X or System > Control > Device > select Device from list > Manual Reset

The following devices can be added to the system, the table below describes their function and setup parameters:

Device name	Description and functionality
Tanktronic SCV	Normal inlet valve, as in default config. Opens when level drops to the fill delay level threshold, and closes when level reaches close level threshold, or sensor not responding. (For balanced tank shared inlet valves, both tanks are controlled together)
Tanktronic Control Valve	Normal inlet valve, as in default config. Opens when level drops below fill delay level threshold, and closes when level reaches close level threshold, or sensor not responding. (For balanced tank shared inlet valves, both tanks are controlled together)
Generic Inlet	Non-latching inlet valve, same as above except on VFCO
Log Alarm Out	Active if any alarms are in the log
System Alarm Out	Active if any system alarms (mains off, sensor not responding, S-Module not responding etc).
Tank Alarm Out	Active if the relevant tank alarm threshold (level high/low or temperature high/ low) is reached. If shared, then checks both tanks, if system device then checks all tanks.
Override Out	For controlling safety override inlet valve, dump valve, pump set, etc. Similar functionality to tank alarm output, it becomes active if the relevant tank override threshold (level high/low or temperature high/low) is reached. If shared, then checks both tanks, if system device then checks all tanks
Override SOL	For controlling safety override inlet valve. Similar functionality to tank alarm output, it becomes active if the relevant tank override threshold (level high/low or temperature high/low) is reached. If shared, then checks both tanks, if system device then checks all tanks (6V latching valve).
Independent Level VFC	Create a level independent from filling levels to trigger the VFCO.
Independent Level SOL	Create a level independent from filling levels to trigger a solenoid (6V latching valve).
Lockout In	Used for leak detectors, BMS override etc. If active, close inlet valves (but not safety override valves). If shared, and tank is a pair of balanced tanks, also close inlet valves on balanced tanks. If alarmed, creates entry in alarm log.
Lockout Out	Indicates lock-out state of tank (i.e. if lock-out input or manual lock is active). If system device, then active if any tank locked out.

	Operation	Interface	Config parameters (default value)
	Tank	3800	
	Tank	SOL	Shared (separate)
	Tank	VFCO	Shared (separate) polarity (normally open)
	System	VFCO	Polarity (normally closed)
	System	VFCO	Mains off alarm (disabled), battery alarm (disabled), auto/manual reset (man), polarity (normally closed)
	Tank or System	VFCO	Threshold type (hi level), shared (separate), auto/manual reset (man), fail-safe state (active), polarity (normally closed)
	Tank or System	VFCO	Threshold type (hi level), shared (separate), auto/manual reset (man,) fail-safe state (active), polarity (normally closed)
	Tank or System	SOL	Threshold type (hi level), shared (separate), auto/manual reset (man,) fail-safe state (active), polarity (normally closed)
	Tank	VFCO	Level from bottom of tank (0m), polarity (close high, open low), fail-safe state (high), alarm (no)
	Tank	SOL	Level from bottom of tank (0m), polarity (close high, open low), fail-safe state (high), alarm (no)
	Tank or System	VFCI	Shared (separate), alarmed (disabled), auto/manual reset (man), fail-safe state (active), polarity (normally closed)
	Tank or System	VFCO	Polarity (normally closed)

Modules

S-Module:

Modules are connected to the Control Unit, as illustrated here:

An S-Module can be added to provide 2 more VFCOs, 2 more VFCIs and 2 more SOLs, if required, in addition to the Tanktronic Control Unit's maximum of 2 VFCOs, 2 VFCIs and 2 SOLs.

Up to two S-Modules can be joined to a single Tanktronic Control Unit.



The S-module and Control Unit must have the same version of software. When the additional S-Module is installed and selected the Control Unit will update the S-Module to sync software versions.

How to connect:

Main Menu > System > Config > S-Modules > Number of S-Modules > select 1 or 2 S-Modules > Select S-Module

Press the select button and hold until S-Module is selected. This may take up to 10 seconds.

When an S-Module is connected to the Control Unit, there will be an option to select the S-Module when adding devices (valves, sensors etc).

Battery Module:

Provides a back-up power source to the mains supply, providing up to 2 days of normal operation before power is expended.

Specification:

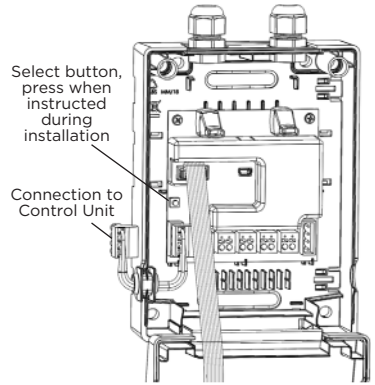
Lead acid battery 6 volt - 4 Ah

Repeater Unit:

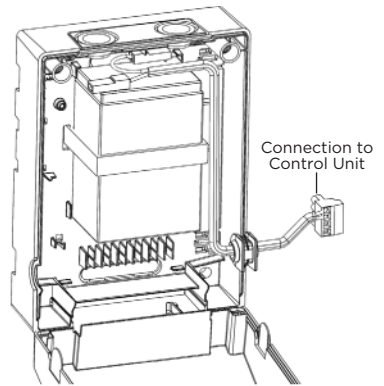
Works as an interface extension to the Control Unit, allowing the user to monitor and control the Tanktronic system from another location. The Repeater Unit can be located up to 100m from the Control Unit and does not require a separate power supply.

Connecting a Repeater Unit to the master Control Unit requires installation of 4-core 1mm² cable, up to a maximum of 100m in length.

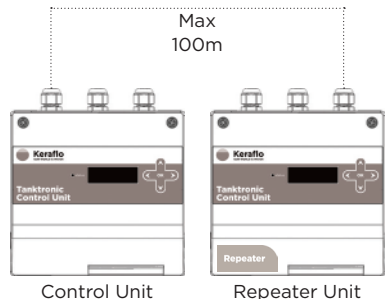
Note: If you require a greater cabling length, this may be possible by upgrading the wiring specification. Contact Keraflo to discuss.



S-Module



Battery Module



Holiday Mode

Tanktronic allows the user to set a schedule of operation of the tanks at alternative levels – typically during ‘holiday’ periods of reduced activity.

Holiday Levels are set in the tank menu and are specific to individual tanks. Each tank can be set with its own holiday level for:

- Close Level
- Fill Delay
- Alarm Level High
- Override Level High
- Alarm Level Low
- Override Level Low

To set up holiday levels for each tank, select from the home screen:

Main Menu > Tank X > Config > Manual Setup > Holiday Levels

Levels can now be set for the range of settings listed above. Refer to diagram on Page 8.

NOTE: The alarm and Override levels have “crossover” behaviour to avoid false triggers when Tanktronic switches between “normal” and “holiday” modes. When switching modes, Tanktronic uses the normal Alarm High and Override Levels and the holiday Alarm Low and Override Levels until the water level reaches the new target band (i.e. between Close Level and Fill Delay). This assumes the holiday levels are always set lower than normal levels.

Holiday Times are set at the system level and apply to all tanks.

Tanktronic can run up to 10 separate holiday schedules. Each schedule has a Type and a specified Start Time and Stop Time. The Type can be:

- Unused
- One-off (specific start and stop dates/times)
- Yearly
- Monthly
- Weekly
- Daily

For all types you can set the time of day, as well as the day or date. To set up holiday times, select from the System menu:

Main Menu > System > Config > Holiday Times

Select a schedule and then specify the type, start time, and stop time.

Override:

The Holiday Mode override can be configured at any time:

Main Menu > System > Control > Holiday Override

You can choose from:

- Auto – Overall system schedule, switching automatically between “normal” and “holiday” levels. This is the default setting.
- Normal – Override setting to adhere to regular tank levels only.
- Holiday – Override setting to adhere to reduced holiday levels only.

Override modes are temporary and are cleared automatically by the next scheduled change of mode. The Holiday mode status will be displayed on the Main Menu.

Sensor Setup

If additional tanks have been added, the system must be configured so it recognises the sensor of each tank.

Main Menu > Tank X > Config > Devices > Add device > KERAFLO SENSOR

Name the sensor and select the next free input address.
The sensor must be linked to the Control Unit or an S-Module, if used.

The screen will prompt you to push the "Select" button located in the Connection Box assembly – see diagram on Page 5.

On completion the display will update to "Success Device Address Set". Press to exit.
The sensor has now been set up on the system.

Sensor Calibration:

Note: Sensor calibration is only necessary if level readings appear to be incorrect.
The Sensor is calibrated with the sensor out of the water.

Main Menu > Tank X > Config > Devices > SENSOR > Calibrate Device

When complete, the following message will appear: "Sensor Calibration Complete". Select OK. This will take about a second.

As the sensor is lowered into the water, the Main Menu screen level reading will update.

Note: There is a slight delay to allow the sensor to settle at a particular depth before that level is displayed on the screen. This is to prevent nuisance readings caused by turbulent water.



Ensure the sensor is out of the water before calibration commences.

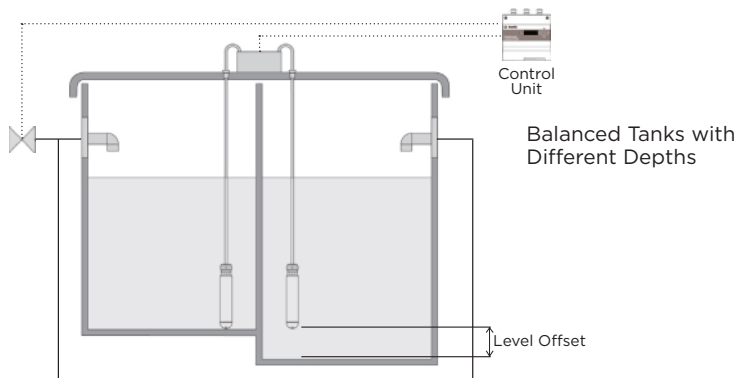
Level Offset:

If the tank is deeper than the sensor can reach or balanced tanks are different depths, level offset can be used. Level Offset can be set with the sensor in position in the tank. Select from the menu:

Main Menu > Tank X > Config > Devices > SENSOR > Edit Device > scroll to Set Sensor Offset from bottom of tank

The water level will now read the entered offset when the sensor is out of water. If the initial water reading was 1.56m and an offset of 0.44m was entered, then the resultant water level reading will be 2m.

Note: There is a slight delay to allow the sensor to settle at a particular depth before that level is displayed on the screen. This is to prevent nuisance readings caused by turbulent water.



Menus

Status Menu:

The status of Tanktronic sensors, valves and devices can be reviewed via the “Status” menu option. This is useful for fault finding and checking the state of valves in multiple tanks. You can view water level and temperature, devices (for example, is a valve open or closed), software version and more.

Main Menu > Tank X > Status

- Lock State (Auto or Lock mode)
- Water Temp
- Water Level
- Water Volume
- Devices (lists system devices by Device, Title, Status and Address)

Main Menu > System > Status

- About (software version)
- Tank Layout (set the number of Single and Balanced tanks)
- Devices (lists system devices by Device, Title, Status and Address)
- Devices by Address (view what device is assigned to a physical address)
- Advanced (power supply status)

Control Menu:

The “Control” menu allows you to test, commission and override devices.

Main Menu > Tank X > Control

- Lock State (isolate tank - if you need to drain the a tank for maintenance, the tank can be isolated by locking the inlet valve. This will prevent nuisance alarms)
- Devices (test and activate devices, see Page 17)

Main Menu > System > Control

- Holiday Override (see Page 21)
- Devices (test and activate devices, see Page 17)
- By Address (search device by address)

Config Menu:

The “Config” menu allows you to set all parameters for Tank, System and Devices.

Main Menu > Tank X > Config

- Auto setup (see Page 15)
- Manual Setup (see Page 15)
- Devices (see Page 17)

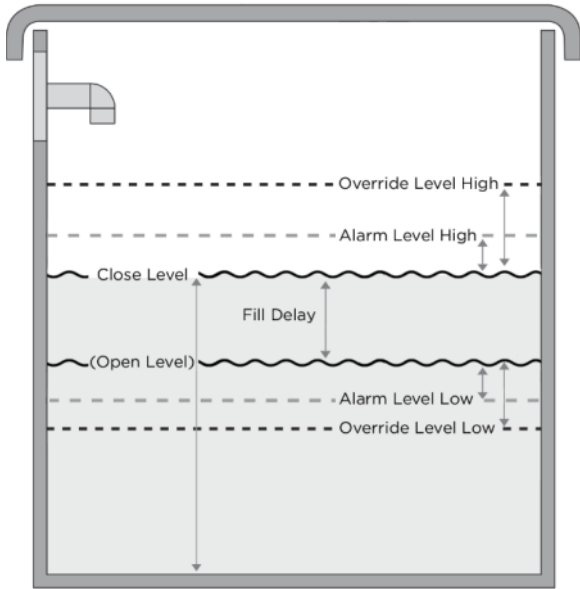
Main Menu > System > Config

- Set Clock (set date and time)
- Setup Wizard (used during first setup, but can be used as a factory reset)
- Tank Layout (change number and type of tanks, see Page 15)
- Secondary Tanks (create a 2nd tank profile from a single sensor, see Page 16)
- Devices (setup 3rd party devices and add alarms to BMS, see Page 17)
- S-Modules (setup an optional S-Module, see Page 20)
- PIN Config (enable, disable or access PIN to edit)
- Menu timeout (set timeout duration in mins)
- Holiday Times (setup schedule and operation, see Page 21)
- System Reboot

Settings log:

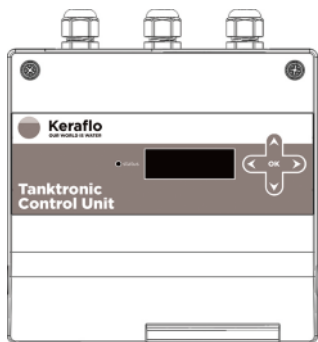
Prior to commissioning Tanktronic, it is recommended to list the settings you require using this quick reference checklist:

		Tank 1	Tank 2
	Default	Enter Required Setting	Enter Required Setting
Area	(10.0m)	.....	.....
Close Level	(1.2m)	.....	.....
Fill Delay	(0.2m)	.....	.....
Alarm Level High	(0.2m)	.....	.....
Override Level High	(0.3m)	.....	.....
Alarm Level Low	(0.2m)	.....	.....
Override Level Low	(0.3m)	.....	.....
Alarm Temp High	(20°C)	.....	.....
Override Temp High	(22°C)	.....	.....
Alarm Temp Low	(5°C)	.....	.....
Override Temp Low	(3°C)	.....	.....



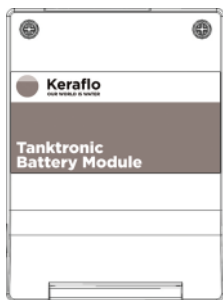
Dimensions

Control Unit/Repeater Unit

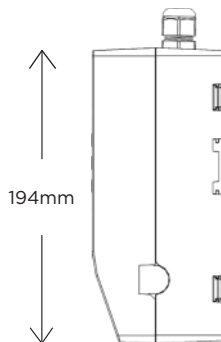


← 204mm →

S-Module/
Battery Module



← 144mm →

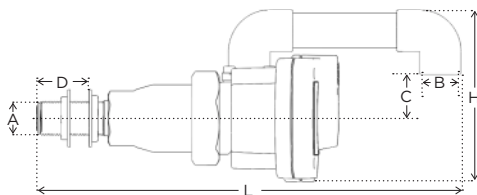


↑ 194mm ↓

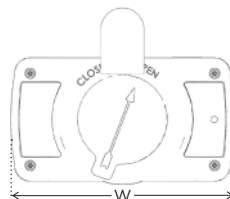
← 85mm →

Tanktronic Servo Ceramic Valve (SCV) available from 3/4" fittings to 2" fittings:

Servo Ceramic Valve (SCV)	A	B	C	D	L	H	W
SCV20	3/4"	19.5	34.5	48	252	134	169
SCV25	1"	26.9	34.5	48	252	134	169
SCV32	1 1/4"	35.4	53	60	244	163	169
SCV40	1 1/2"	35.4	56	90	289	162	169
SCV50	2"	35.4	56	90	293	162	169



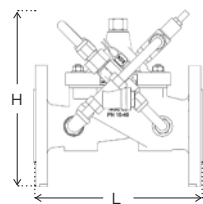
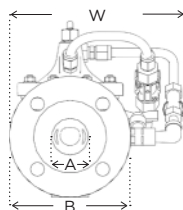
- A = Thread Size (Inches)
- B = Discharge Internal Diameter (mm)
- C = Discharge Above Centre Line (mm)
- D = Inlet Thread Length with Backnut Fitted (mm)
- L = Length (mm)
- H = Height (mm)
- W = Width (mm)

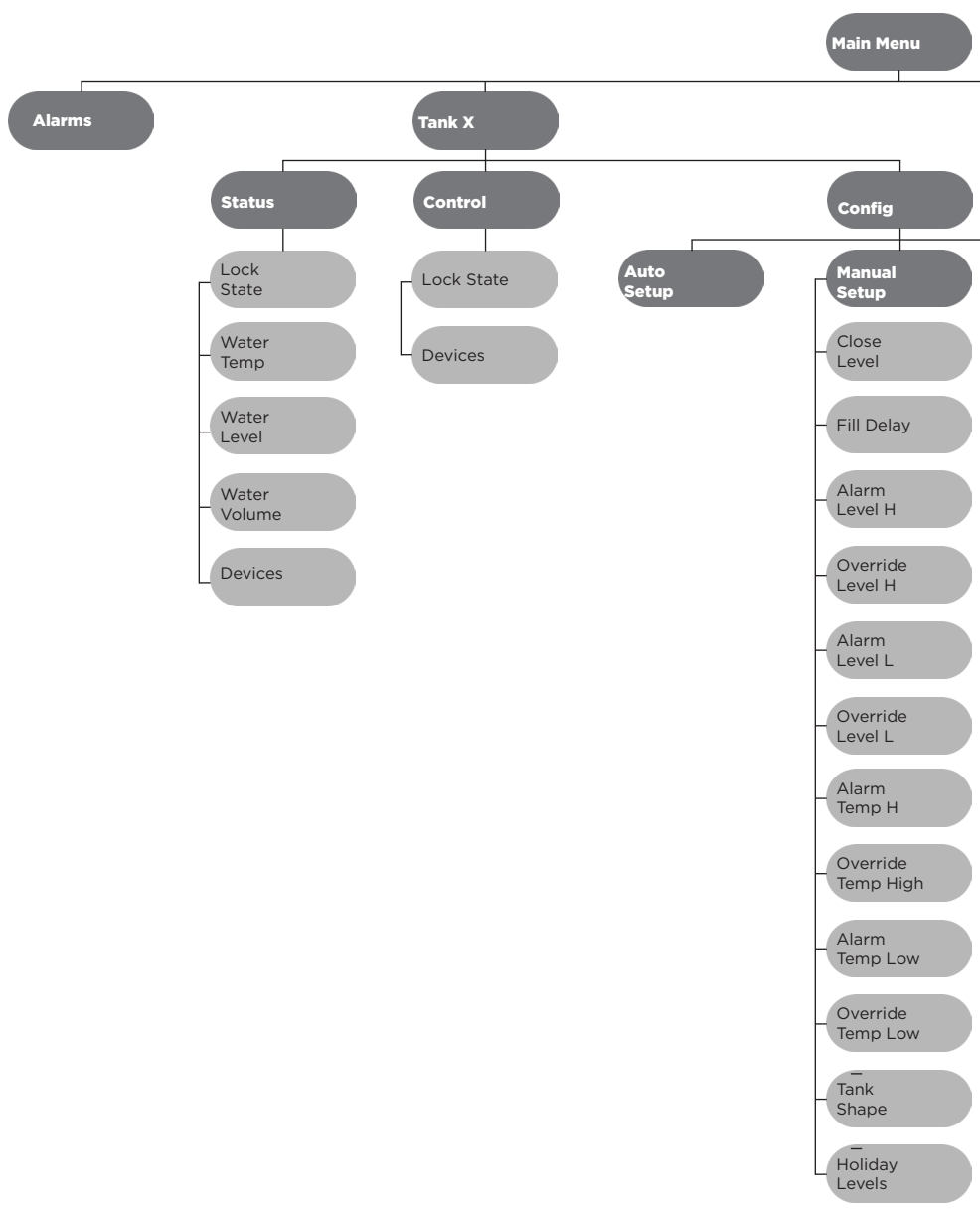


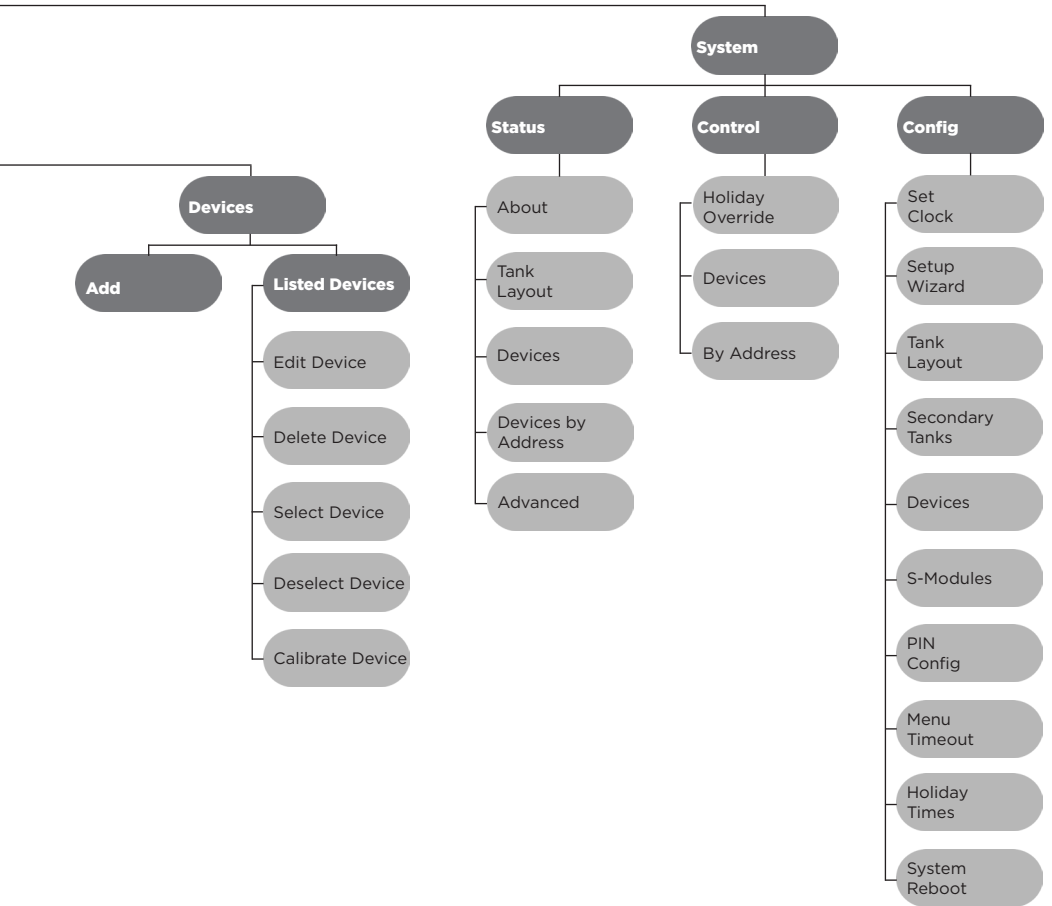
Tanktronic Control Valve available from 2" fittings to 6" fittings:

Tanktronic Control Valve	A	B	L	H	W
TT/15	2"	165	230	218.5	237.5
TT/16	2 1/2"	185	290	263	258
TT/17	3"	200	310	281	268
TT/18	4"	220	350	230	236
TT/19	6"	285	480	437.5	452.5

- A = Bore Diameter (Inches)
- B = Flange Diameter (mm)
- L = Length (mm)
- H = Height (mm)
- W = Width (mm)







System:

Sensors: 4 x sensors max
Sensor Operating Range: 0 to 5m in depth, ± 0.02m
S-Modules: 2 x S-Modules max
Operating temp range: 0 to 40°C

Control Unit:

Control Classification: Multi purpose control
Mains Supply: 230V ± 10%, 50/60Hz, Max load 0.85A
Environmental: 0 to 40°C, Max 85% RHI

Battery Module:

Lead acid battery 6 volt – 4 Ah

Wiring (not supplied):

Mains supply to Control Unit: 2 core up to 2.5mm², switched fused spur
Control Unit to Repeater Unit: 4 core 1mm², 100m max length
Control Unit to Sensor Connection Box: 2 core 1mm², 100m max length
Control Unit to SCV Connection Box: 2 core 2.5mm², 15m max length
Control Unit to Tanktronic Control Valve: 2 core 1mm², 50m max length

Volt Free Contact Outputs (VFCO):

Number: 2 per Control Unit & 2 per S-Module
Maximum AC Resistive Load: 5A @ 250VAC
Maximum DC Resistive Load: 5A @ 30VDC
Wiring size: Up to 2.5mm²

Volt Free Contact Inputs (VFCI):

Wiring size: Up to 2.5mm²
Number: 2 per Control Unit & 2 per S-Module

Ingress Protection:

Control Unit/S-Module/Battery Module/Repeater Unit: IP43
Sensor: IP68
Connection Box: IP66

Dimensions:

Control Unit / Repeater Unit: W 204mm x H 194mm x D 85mm
S-Module / Battery Module: W 144mm x H 194mm x D 85mm
Connection Box: W 100mm x H 100mm x D 46mm

Tanktronic Servo Ceramic Valve (SCV):

Max static pressure: 10 bar
Min operating pressure: 0.05 bar
Sizes: 20mm, 25mm, 32mm, 40mm and 50mm

Tanktronic Control Valve:

Max static pressure: 10 bar
Min operating pressure: 0.5 bar
Sizes: 2", 2.5", 3", 4" and 6"

 Mains Voltage Inside Panel



Keraflo Limited
Unit 1, Woodley Park Estate, 59-69 Reading Road,
Woodley, Reading, Berkshire RG5 3AN
t: +44 (0) 118 921 9920
e: info@keraflo.co.uk www.keraflo.co.uk