# OEM ELECTRONIC WATER MIXING SYSTEMS

Featuring touchpads, capacitive sensors and infrared technologies, our smart systems are at the heart of your product.
Create unique connected products and let your customers enjoy an App controlled device.







The world is changing faster than ever and our needs are evolving into a new reality. We are aware of these new challenges and, as a result, we have created SEDAL CONNECT, the new division of OEM electronic water mixing systems.

SEDAL CONNECT design and develop smart electronic valves and systems to make life easier and to contribute to building this new world, where the people and the Earth are the most important.

## ELECTRONIC WATER CONTROL SYSTEMS

### SMART THERMOSTATIC SHOWER SYSTEMS

Premium thermostatic water systems for showers based on a range of electronic mixers and touchpads to manage the water.

# digital faucet systems

Thermostatic digital faucet systems controlled by multiple interfaces.

## HYDRON

## electronic commercial water systems

Range of electronic systems including infrared and capacitive technology for commercial and hospitality applications.

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## ADVANTAGES

#### FULLY ELECTRONIC SYSTEM

Our system consists of an electronic mixer CPU and a touchpad to control it. Summum has no cartridges, pulleys, gears, small electric motors or other similar wearing parts that need to be recalibrated or replaced, lengthening the product life.

#### HIGH FLEXIBILITY

SEDAL system is able to operate under several conditions, even with differential pressures of up to 4,5 bar. There is no need of stabilizers to compensate pressure changes between cold and hot water inlets.





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### **EFFICIENCY & HIGH-PERFORMANCE**

Our system offers the maximum precision in the reading and control of consumption parameters.

Precision sensors perform high-frequency water flow rate and temperature readings.



#### **ROBUSTNESS & DURABILITY**

The main components of our technology are used by the leading European appliance brands. The absence of friction ensures great durability in daily use.



### CONNECTIVITY

SEDAL system offers intelligent communication features between device and user.

The system has different warning alarms. It also integrates digital flow rate and temperature control, allowing the user to monitor and customize user profiles and smart functions, providing an app to control the device, adding value to the user experience.

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## PERFORMANCE & FUNCTIONS

## THERMOSTATIC & PRESSURE BALANCE SYSTEM\*

The user can enjoy stable water flow and temperature without sudden variations thanks to an intelligent auto-calibration mode that corrects and stabilizes both flow rate and temperature in response to unexpected changes in water supply pressure.

#### \*EN1111 or ASSE-1016.





Showers that reduce the water flow up to 70% setting the shower to 6 litres per minute regardless of the water supply pressure and hydraulic resistance\*.

From 6 to 28 l/min

\*If it is more than 6l/min

#### WARM UP MODE

Preheats the shower by flushing out cold water from the pipes until the desired preset temperature is reached.

## SMART THERMOSTATIC SHOWER SYSTEMS

#### PAUSE MODE

Summum remembers the outlet, water temperature and flow rate that the user was using before soaping or shampooing. This way, the user can continue with its shower without introducing the parameters again.



USER

### SETTINGS The user profile

**USER MEMORY** 

allows to store the used preferred settings of temperature, flow rate and default outlet.

### CHILD SAFETY SHOWER MODE

Set up water temperature, flow rate, water outlet and the usage time desired for child daily shower. The child will not be able to change the parameters set by parents.



#### INTELLIGENT BATH FILL

Fill up your bathtub at the desired temperature using the cold water of hot pipes at the beginning to avoid waste of water during the fill. It automatically stops when the water volume reaches the pre-set volume. CHILD CAN ONLY TURN ON AND OFF THE SHOWER AVOIDING SCALDING

## $\cdot$ sm $\cdot$

## PERFORMANCE & FUNCTIONS

SUPERATION



Set up and run water sequences combining temperatures, flow rates, alternative water outlets and time via app.

> ANTI-SCALDING SAFETY MODE

Temperature limitation of the system to avoid scalding.



## SMART THERMOSTATIC SHOWER SYSTEMS



#### AUTOMATIC INSTALLATION (START-UP)

After piping installation, initializing the system is as simple as pushing a button, without the need of a PC. The Summum learns the enviromental conditions and adapts the valves for each outlet independently.

#### THERMAL DISINFECTIONS

The system performs thermal disinfection in all shower outlets. OEM thermal disinfection programs can be set by the manufacturer.

#### AUTOMATIC CLEAN-UP

Hot water is flushed through the outlets at the maximum temperature available in the boiler.



#### DETECTS AND DISPLAYS SYSTEM WARNINGS

Summum provides error detection and maintenance alarms, which remain stored in memory for report generation.

#### AUTOMATIC SHUT OFF

The system will pause and then stop automatically after a determined period of time.



## SUMMUM ONE



#### **iSCU TECHNOLOGY**

Summum One system consists of a digital touchpad and an iSCU\_TH\_S valve, which is a smart electronic device with digital reading and an accurate, stable and thermostatic regulation of water temperature and flow rate.

#### WIFI

An additional Wifi module enables the connectivity to the cloud and direct communication to and from the iSCU\_TH\_S.

#### DIFFERENT VERSIONS & APPLICATIONS

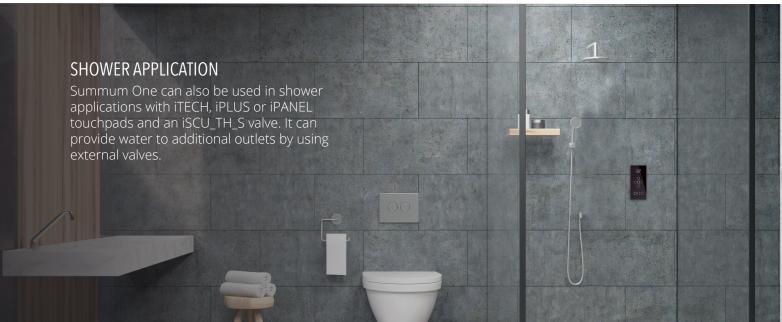
Summum one is recommended for:

- Showers from one to three outlets, combined with iPLUS or iTECH touchpads.
- Shower columns combined with an iPANEL to create a Summum column.

#### FEATURES

As part of the Summum range, the iSCU\_TH\_S valve features all of its advantages.

SHOWER FEATURES					
Warm up					
Pause mode					
User memory settings					
Child safety shower mode					
Intelligent bath fill					
Customizing water sequences					
Anti-scalding safety mode					
System warning detection					
Automatic shut-off					
Automatic initial start-up					
Thermal disinfection					
Wifi communication					



## SMART THERMOSTATIC SHOWER SYSTEMS



# digitap

## ADVANTAGES



#### DIGITAP SYSTEM

Our system consists of a iSCU\_TH\_F valve combined with one of our touchpads: iSQUARE or iPLUG. These systems are specially designed to make it easier for the manufacturer to adopt new technologies into its products.

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#### FULLY ELECTRONIC SYSTEM

Digitap has no mechanical parts, small electric motors or other similar pieces that need to be recalibrated or replaced, lengthening the product life.



## DIGITAL FAUCET SYSTEMS



### **ROBUSTNESS & DURABILITY**

The main components of our technology are used by the leading European appliance brands. The absence of friction ensures great durability in daily use.



#### **DIFFERENT TOUCHPADS**

Digitap range includes wall-mounted and counter-top touchpads, capacitive interfaces and customized solutions to fulfill manufacturers requirements.



### CONNECTIVITY

SEDAL system offers intelligent communication features between device and user. The system allows the user to monitor data via cloud and configuration of smart functions via app.



## PERFORMANCE & FUNCTIONS

## THERMOSTATIC & PRESSURE BALANCE

The first tap with thermostatic control and pressure balance.





#### SMART AUTO-DISPENSING FUNCTION

- Teeth brushing water dispensing in bathroom applications
- Glass auto-filling function for
- kitchens

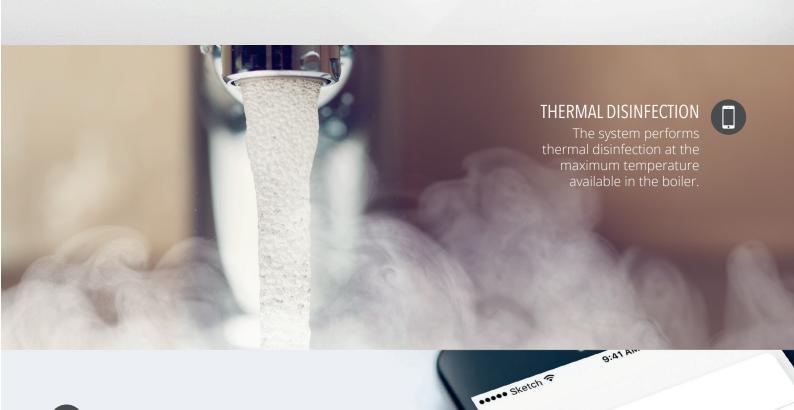
#### FLOW RATE DIRECT QUICK ACCESS

Mixed water memory at high flow and low flow only by pushing a button.

#### ABSOLUTE FLOW RATE

Digitap ensures the same flow rate in l/min independently on the pipeline conditions.

## DIGITAL FAUCET SYSTEMS





### CONFIGURATION VIA APP

Configure the tap parameters and personalize the tap with your smartphone.



#### DATA CLOUD

Connect the device to the cloud and check your data statistics.



Detects water leakage from very little quantities.



### AUTO-SHUT OFF

Digitap can be configured to auto shut off for security at 1 min time.



L

Volume

Last month

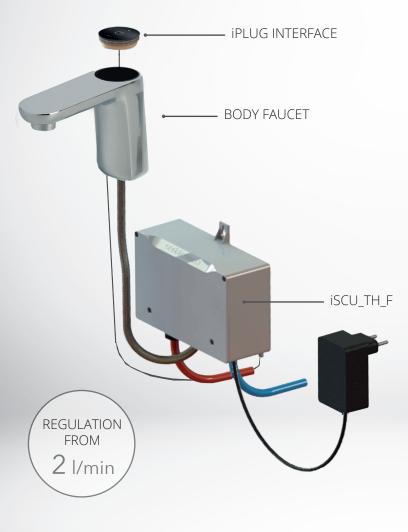
Total volum

## digitap

## iPLUG

#### Digitap iPLUG

iPLUG is a touchpad that allows the user to control water flow, temperature and special functions activation.



#### FEATURES

Digitap provides the most important features of our showering range adapted to taps, adding water regulation at low flow rate capability.

FAUCET FEATURES						
Smart auto-dispensing function						
Flow rate direct quick-access						
Leakage detection						
Automatic shut-off						
Thermal disinfection						

Pause

- Anti-scalding safety function
- Automatic installation (start-up)

Wifi communication

#### **DIGITAP SYSTEMS**

Digitap is a thermostatic mixer for faucets that combine iSCU\_TH\_F valve with iPLUG touchpad.

#### WIFI

Digitap iPlug system can be upgraded with an additional Wifi module that enables connectivity.

## DIGITAL FAUCET SYSTEMS

## STANDARD OPERATION



## SMART FUNCTIONALITIES



## digitap

## i S Q U A R E



#### FEATURES

Digitap provides the most important features of our showering range adapted to taps, adding water regulation at low flow rate capability.

#### FAUCET FEATURES

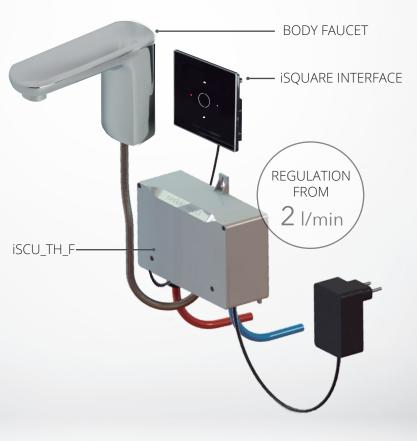
- Smart auto-dispensing function
- Flow rate direct quick-access
- Leakage detection
- Automatic shut-off
- Thermal disinfection
- Pause
- Anti-scalding safety function
- Automatic installation (start-up)
- Wifi communication

#### DIGITAP SYSTEMS

Digitap is a thermostatic mixer for faucets that combine iSCU\_TH\_F valve with iSQUARE or iPLUG touchpads.

#### WIFI

Both Digitap iSquare and iPlug systems can be upgraded with an additional Wifi module that enables connectivity.



#### **iSCU TECHNOLOGY**

iSCU\_TH\_F is the smart electronic valve controlling Digitap. It has digital reading and an accurate, stable and thermostatic regulation of water temperature and flow rate.

## DIGITAL FAUCET SYSTEMS

## FUNCTIONS IN ON MODE

MORE TEMPERATURE (HOT) Simple Push

CONTINUED TEMPERATURE INCREASE Continuous Push

> PAUSE Simple push

MEMORY SETTING Continuous push



MORE FLOW RATE Simple Push

CONTINUED FLOW INCREASE Continuous Push

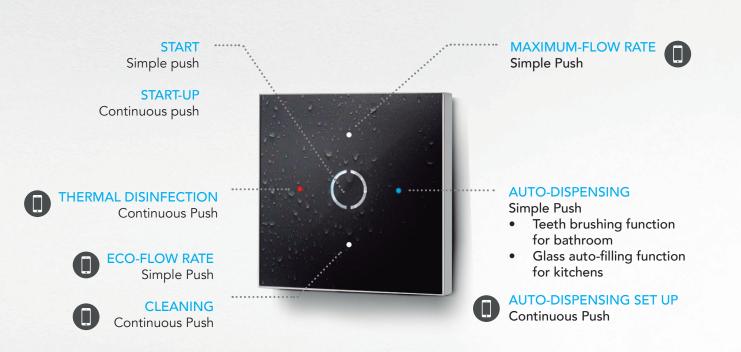
· LESS TEMPERATURE (COLD) Simple Push

CONTINUED TEMPERATURE DECREASE Continuous Push

LESS FLOW RATE Simple Push

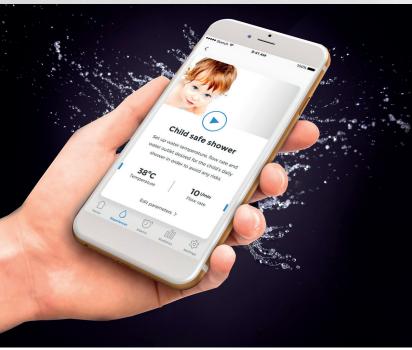
CONTINUED FLOW DECREASE Continuous Push

## FUNCTIONS IN OFF MODE



## CONNECTIVITY · smmm. digitap

## APP



### USER CUSTOMIZATION

The user will be able to customize its Summum or Digitap device with the desired functions thanks to the app.

- Warm-up function linked to wake-up alarm
- Smart bath fill
- Children safety shower
- Set up and store up to 4 user profiles
- Spa programs
- Historical of alarms and data
- Special functions activation (legionella and selfcleaning)

#### **OEM CUSTOMIZATION**

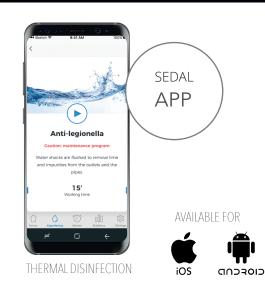
- Pre-defined settings available under customer requirements
- Tailor made APP layout according to OEM specifications



WARM-UP & ALARM FUNCTION



#### CONSUMPTION STATISTICS





The user can see consumption of water and energy statistics via app.



## CLOUD

#### CONNECTED TO THE WORLD

Connectivity enables our devices for our customers iOT (Internet of things) strategies. Summum and Digitap are connected to the cloud and BMS. This allows easier maintenance in public venues, spas, hotels or airports.

The building manager will be able to connect to all summum systems at once and carry on:

- Thermal disinfection
- Troubleshooting
- Alarm detection
- Consumption statistics
- Preventive maintenance



### **REMOTE DIAGNOSIS**

Easy and quick maintenance due to possibility of remote trouble shooting through cloud governance.

#### MULTIPLE CONNECTIVITY

Our systems offer different kinds of connectivity to adapt to every application and installation environment:

- WIFI
- Bluethooth
- Zigbee
- Mesh

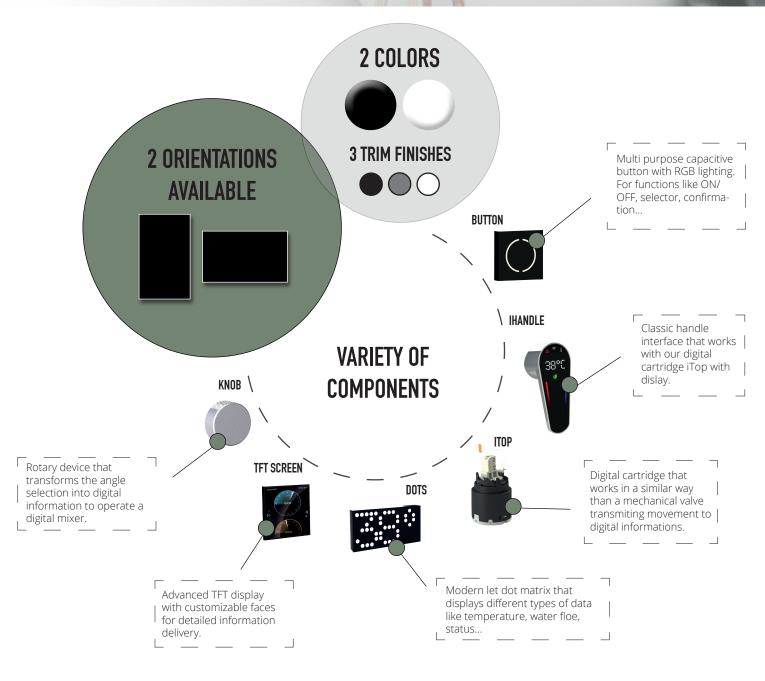
## DIGITAL SHOWER INTERFACE

## CUSTOMIZED INTERFACES

1



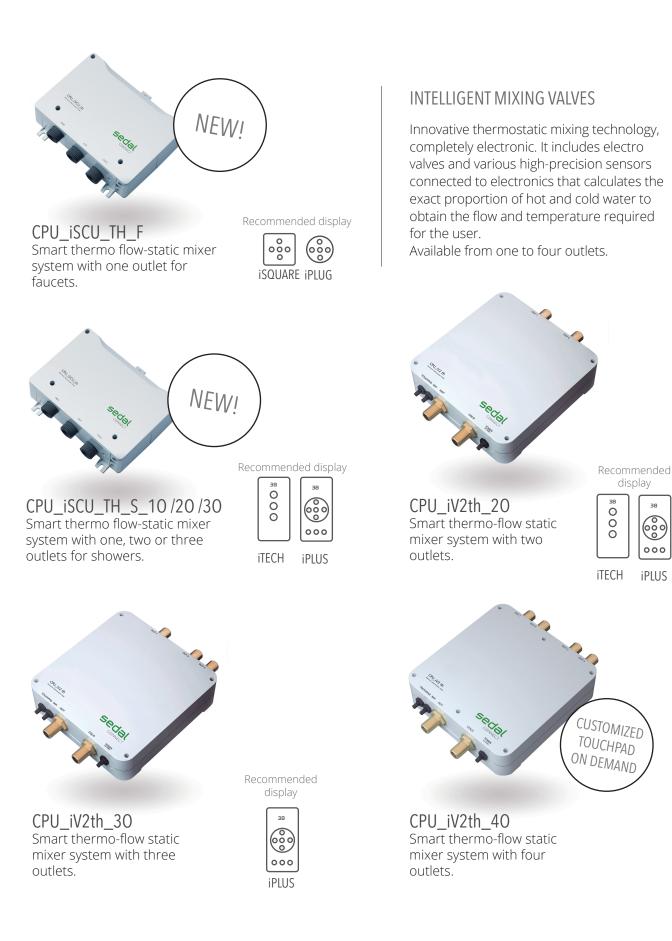
free canvas, it is possible to virtually design any combination and have a customized interface for new projects.





## SMART THERMOSTATIC SYSTEMS

## ELECTRONIC WATER MIXERS



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iPLUS

## COMPARISON TABLE

	ISCU FAUCET		ISCU SHOWER			iV2 SHOWER	
DETAILS	CPU_iSCU_TH_F	CPU_iSCU_ TH_S_10	CPU_iSCU_ TH_S_20	CPU_iSCU_ TH_S_30	CPU_iV2_TH_2O	CPU_iV2_TH_3O	CPU_iV2_TH_40
Behavior	Thermo&Flow static						
No. of outlets	1	1	2	3	2	3	4
2 simultaneous outlets	-	_	_	_	•	•	•
Min. Flow rate <sup>1</sup>	2 l/min	2 l/min	2 l/min	2 l/min	6 l/min	6 l/min	6 l/min
Max. Flow rate 1 outlet <sup>1</sup>	22 l/min <sup>2</sup>	24 l/min	22.3 l/min	22.3 l/min	22,1 l/min	22,1 l/min	22,1 l/min
Max. Flow rate 2 simultaneous outlet <sup>1</sup>	_	_	_	_	28,2 l/min	28,2 l/min	28,2 l/min
Max. Pressure Differential	4,5 bar						
Min. Pressure	1 bar	1 bar	1 bar	1 bar	1,5 bar	1,5 bar	1,5 bar
Max. Pressure	6 bar						
Power supply - DC	12v						
SPECIAL FUNCTIONS	CPU_iSCU_TH_F	CPU_iSCU_TH_S	CPU_iSCU_TH_S	CPU_iSCU_TH_S	CPU_iV2_TH_2O	CPU_iV2_TH_30	CPU_iV2_TH_40
No. User settings	1	3	3	3	3	3	3
Smart auto-dispensing function	•	_	_	_	_	_	_
Anti-scalding safety	•	•	•	•	•	•	•
Automatic installation (start-up)	•	•	•	•	•	•	•
Auto shut-off	•	•	•	•	•	•	•
Warm up	-	•	•	•	•	•	•
Pause	•	•	•	•	•	•	•
Eco flow-rate	•	•	•	•	•	•	•
Child Shower	-	•	•	•	•	•	•
Spa program	-	•	•	•	•	•	•
Bath Fill	-	•	•	•	•	•	•
MAINTENANCE	CPU_iSCU_TH_F	CPU_iSCU_TH_S	CPU_iSCU_TH_S	CPU_iSCU_TH_S	CPU_iV2_TH_2O	CPU_iV2_TH_30	CPU_iV2_TH_40
Thermal disinfection	•	•	•	•	•	•	•
Automatic clean up	•	•	•	•	•	•	•
Alarms	•	•	•	•	•	•	•
RECOMMENDED DISPLAY <sup>3</sup>	CPU_iSCU_TH_F	CPU_iSCU_TH_S	CPU_iSCU_TH_S	CPU_iSCU_TH_S	CPU_iV2_TH_2O	CPU_iV2_TH_30	CPU_iV2_TH_40
iPlus	-	•	•	•	•	•	_
iTech	_	•	•	•	•	_	_
iSquare	•	•	_	_	_	_	_
iPlug	•	_	_	_	_	_	_
iPanel / Custom	On OEM demand						
CONNECTIVITY	CPU_iSCU_TH_F	CPU_iSCU_TH_S	CPU_iSCU_TH_S	CPU_iSCU_TH_S	CPU_iV2_TH_20	CPU_iV2_TH_30	CPU_iV2_TH_40
Interface Com	•	•	•	•	•	•	•
Communications port/WIFI	•	•	•	•	•	•	•

<sup>1</sup> Free flow at 3 bars <sup>2</sup> Can be limited on factory <sup>3</sup> All displays are compatible. These are recommendations.

## HYDRON

## ADVANTAGES

#### WATER SAVING

Infrared sensing and capacitive technologies with customizable automatic shut-off time help reducing water consumption in intensive use applications.



## electronic commercial water systems

# 2

### **CLEAN & HYGIENIC**

Touchless operation with infrared sensors or activate a touch sensitive faucet with a slight touch of an arm help reduce germs and bacteria contamination.

#### EASY MAINTENANCE

Built-in filters to avoid impurities that could affect water flow and performance. Valves are protected by an IP65 casing to resist thorough facility cleaning.

4

#### RELIABILITY

Hydron electronic systems have been designed to work in harsh environments. Packed into a rugged case, our valves and sensors have a service life of over 500.000 cycles.

sedal

## HYDRON

## INFRARED SYSTEMS

## i-red core i-red i-red<sup>+</sup> i-red LP



#### **MIXING HEART INSIDE**

i-red core systems for integration into faucet bodies for robust and durable designs.

With a built-in mixing valve and handle, the i-red core delivers pre-mixed water automatically in a compact body design, allowing easy installation where under-the-sink access is compromised.

The endurance of both the on-off and the mixing valve have been tested beyond standards to provide years of safe and reliable operation in public spaces.

#### STRAIGHT FORWARD OPERATION

Sedal's i-red for faucets are designed to work flawlessly with several off-the-shelf sensors and AC, DC and AC/DC power sources.

The range is comprised of 3 main versions: i-RED (fixed distance), i-RED+ (adjustable distance) and i-RED LP (low pressure).

With over 500.000 cycles, our valves and sensors endure under the most demanding commercial applications for your customers' peace of mind.

## electronic commercial water systems

## INFRARED SYSTEMS

## i-red flush

## dual sense





#### **URINAL FOSTERING SAVING**

i-red flush for urinals safely and reliably delivers the right amount of water at every use condition.

Packed with UFD Technology that adjusts water flushes depending on the frequency of use, it helps your customers manage water consumption in buildings with high or low volume of users.

i-red flush line can be fully customized to your needs in regards to functionality and front plate design.

#### **SMART, REALLY**

Specially designed for kitchen faucets, the dual sense valve range offer a new way to operate by gently touching the faucet surface.

Whereas normal capacitive systems have one sensor for the body, dual sense adds another sensing area in the handle. This makes the system completely intuitive and needless to know it is a touch faucet.

Variants with bypass button and single sensor are also available in the range.

## HYDRON

## INFRARED SYSTEMS

## i-red core

#### SELF-CONTAINED MIXING BODY

i-RED CORE is a complete infrared system in a single body that combines a mixing valve, IR sensor, high grade solenoid on-off valve, battery pack (optional AC adaptor) and a plastic or brass body that acts as the main structural component.

The faucet is built around the body making the design extremely simple and easy to cast and machine.

Installation becomes more simple as there is no external valve box under the sink.

## COMPATIBLE SENSORS



S3 CORE Infrared sensor for cilindric body faucet with round window.



S13 CORE Infrared sensor for cilindric body faucet with round window fixed with metal bracket.



S14 CORE Infrared sensor for cilindric body faucet with long shape window.

## electronic commercial water systems

## COMPONENTS



## HYDRON

## INFRARED SYSTEMS



## i**-**red

Infrared systems have been used for decades in faucets to avoid touching potentially contaminated surfaces at high influx venues, although it is something increasingly common in private homes.

i-RED systems is the Sedal's response to the demand of highly efficient automatic water delivering faucets based on inrared sensors.

With a defined detection area and distance, i-RED is the entry level infrared system that allows easy integration into faucets with detection windows either in the main body, at the spout or wall mounted.

Sedal offers alternative OEM designed sensors for special applications or different sapes.

## electronic commercial water systems

## ${\tt COMPONENTS}$

#### WATER SAVING

Infra-red fixed distance sensor activation with automatic shutoff time which can be customized.

#### **CLEAN & HYGIENIC**

Faucet activation is done by entering the hand into the sensor zone.

#### EASY MAINTENANCE Built-in filter to avoid impurities which could affect the proper water flow.

#### POWER SUPPLY 3 different power options: Battery (DC), mains power supply (AC) and hybrid (AC+DC).



### COMPATIBLE SENSORS



S1 Infrared sensor for curved body faucet.

(1)





S2 Infrared sensor for straight body faucet.



S3 Infrared sensor for wide base faucets.





S5 Infrared sensor for round spout, located after the outlet.



**S6** Infrared sensor for square spout, located after the outlet.



## HYDROI

## INFRARED SYSTEMS

## i-red<sup>+</sup>

Invisible sensor technology that allow for faucet designers to free the body from the restrains of a machined window to place the sensor offering a comfort experience with intuitive gesture.

Classic infrared faucet design are overcome with the Kits by Sedal, which are located at the outlet of the spout making them virtually invisible.

#### SELF-ADJUSTING

In addition to i-RED standard characteristics, HYDRON i-RED+ systems include an adjusting feature to set the activation distance with a simple button push procedure.

This feature is specially useful in highly reflective environments and spout sensor faucets where the risk of reflection in the sink is higher.



## electronic commercial water systems

## COMPATIBLE SENSROS



## HYDRON

## INFRARED SYSTEMS

## i•red LP

#### LOW PRESSURE VALVE

i-RED LP low pressure valve performs outstandingly in pressures ranging 0,2BAR to 4,0BAR. Suitable for head pressure applications or very low pressure mains water systems.

Available in the same range of sensors as i-RED and i-RED+.





### COMPATIBLE SENSORS

i red LP compatible

S1 Infrared sensor for curved body faucet.



S2 Infrared sensor for straight body faucet.



S3 Infrared sensor for wide base faucets.



S5 Infrared sensor for round spout, located after the outlet.

S6 Infrared sensor for round spout, located after the outlet.



S7 SENSOR+ KIT Round Infrared sensor to be placed at the spout outlet.



S8 SENSOR+ KIT Semi-circular Infrared sensor to be placed at the spout outlet.



S9 SENSOR + KIT Rectangular Infrared sensor to be placed at the spout outlet.

## electronic commercial water systems

## TOILET & URINARY SYSTEMS

## i-red flush

Highly efficient and economic solution for urinals packed with advanced technologies to save water with minimal maintenance while using a very low amount of energy.

#### ENERGY SAVING

Battery powered infra-red sensor activation (over 100.000 flushes on 4x AA battery type).

#### HYGIENIC

Automatic flush before and after use and 24 hour odor trap refill to improve bathroom atmosphere.

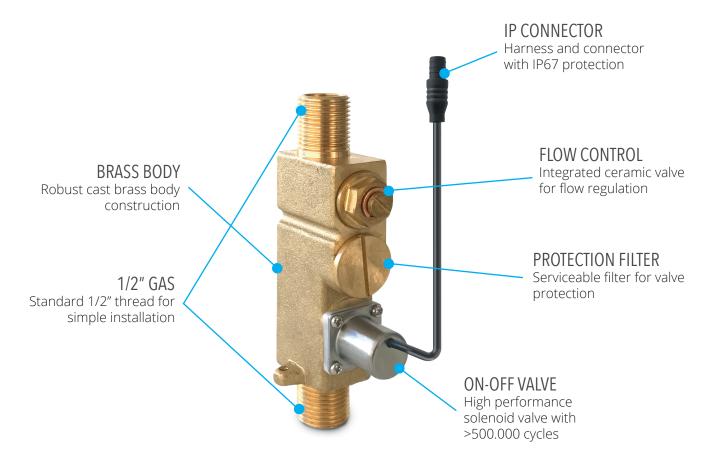
#### HASSEL-FREE

UV light and ghost reflections optimization avoid random activations or defficient detections.

#### UFD TECHNOLOGY

Hydron i-RED Flush features Use Frequency Detection to help saving water in high frequency venues while keeping sanitation in valley times.





## HYDRON

## CAPACITIVE SYSTEMS



### sense

#### Simple touch

A simple touch anywhere on the body faucet activates the flow of water.

Self-adjusting Self-adjusting to its installation environment.

Easy maintenance Built-in filter to avoid impurities which could affect the proper flow of the flow valve.

## dual sense

#### Touch experience

New features without any learning curve. With a simple touch on the spout or the body you will open and close the faucet and dispense water.

Single lever equipped with a second sensor which ensures mechanical cartridge priority.

#### Combination of technologies

Digital technology combined with a mechanical cartridge to allow push and pull movements. In addition, like SENSE model, it adapts itself to the installation environment and has two built-in filters.

#### Manual opening

In case of electric power supply failure, the user can open manually the faucet by pushing the button on the box.

#### Backup battery

In case of electric power supply failure the device will auto shut-off all valves.



## electronic commercial water systems

## COMPARISON TABLE

DETAILS	iRED	iRED+	<b>iRED</b> ·PRO	SENSE	DUAL SENSE
Flow rate*	10,8 l/min	10,8 l/min	10,8 l/min	8 l/min	8 l/min
Max. hot water	75°C	75°C	75°C	55°C	55°C
Min pressure	1 bar	1 bar	1 bar	1 bar	1 bar
Max pressure	7 bar	7 bar	7 bar	7 bar	7 bar
Durability (500.000 cycles)	•	•	•	•	•
Power supply - DC	6V (4xAA)	6V (4xAA)	6V (4xAA)	6V (4xAA)	6V (4xAA)
Power supply - AC	230V (50Hz) / 110-120V (60Hz)	230V (50Hz) / 110-120V (60Hz)	230V (50Hz) / 110-120V (60Hz)	-	-
Power supply - AC + DC	•	•	•	-	-
SPECIAL FUNCTIONS	iRED	iRED+	<b>iRED</b> ·PRO	SENSE	DUAL SENSE
Manual distance adjustment	•	-	•	-	-
Electronic distance adjustment	-	•	-	-	-
Self-adjusting installation	-	-	-	•	•
Maintenance switch-off	-	-	•	-	-
Self-cleaning function	-	-	•	-	-
Auto shut-off	1 min. (ajustable)	1 min. (ajustable)	1 min. (ajustable)	3 min. (ajustable)	3 min. (ajustable)
MAINTENANCE	iRED	iRED+	<b>iRED</b> ·PRO	SENSE	DUAL SENSE
Removable filter	•	•	•	•	•
Low battery indicator	•	•	•	-	-
INTERFACE 3 bars	iRED	iRED+	<b>iRED</b> ·PRO	SENSE	DUAL SENSE
Infrared sensor	•	•	•	-	-
Capacitive sensor	-	-	-	•	•





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SEDAL GROUP

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