

FLUIDRA



SMART POOLS:

Automation, Connectivity
and Internet of Things
for Commercial Pools

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INTRODUCTION

In today's increasingly interconnected world, the ability to control devices remotely and to receive and analyse real-time data have made countless processes and activities faster, more efficient and less onerous on those carrying them out. Connectivity and the Internet of Things (IoT) combine to create an efficient, safer and more enjoyable experience for operators and users of commercial pools.

When it comes to pools, innovative, smart set-ups allow us to provide enhanced experiences for all those concerned in their installation, maintenance and repair. Starting with energy savings, less water renewals and more responsive dosage of chemical components, and ending with real-time information on all that's happening in the pool, we can consider that the IoT has provided operators with endless opportunities for enhancing the way they work.

Moreover, IoT applications such as [Fluidra Connect](#) take this automation one step further, allowing operators to control their pools even offline, without an internet connection.

This e-book will cover:

- **The definitions of connectivity and IoT as they apply to commercial pools;**
- **What can be controlled and automated through the Internet of Pools;**
- **How connectivity and IoT contribute to an eco-conscious pool management approach;**
- **Who these tools and applications are best suited for;**
- **How to turn your pool into an automated smart pool with Fluidra's applications and tools.**

02

WHAT IS THE INTERNET OF THINGS FOR POOLS?

In an increasingly online and interconnected world, the **Internet of Things (IoT)** describes physical objects that are embedded with sensors, software, and any other technology, with the purpose of connecting and exchanging information with other devices over the internet. When we talk about IoT, we refer to a range of devices, from household appliances to large industrial tools.

Applying the concept of IoT to pools, we can talk about an **Internet of Pools (IoP)**, which uses Big Data to help manage systems, monitor and collect information about how these systems work, and analyse and manage the data based on various parameters.

This connected ecosystem enables us to collect a great amount of information and learn behaviours and patterns through these devices. Thus we can analyse and provide precise control and recommendations for efficient management.

IoT

"the Internet of Things (IoT) describes physical objects that are embedded with sensors, software and any other technology"

BENEFITS OF THE INTERNET OF POOLS

Applying the concept of IoT to pools, we arrive at the current generation of **smart pools** - i.e. connected and automated commercial pools that can be managed remotely and which transmit data that enables operators to understand how they behave in real time.

Smart pools use the IoT in two ways. On the one hand, each device connected to the pool sends information to the operator, enabling them to make decisions and act on the pool remotely. On the other hand, there is also a level of M2M communication (machine-to-machine), which increases productivity and efficiency.

Having a smart pool enhances the experience of both end users and operators, through the **benefits** they provide.



Peace of mind

Thanks to connected products that make the pool more autonomous, operators need to spend less time and energy acting on the water composition, temperature etc. Additionally, the ability to control pools remotely and connect to the systems controlling the pools at any point in time gives operators extreme flexibility and freedom.



Efficiency and sustainability

As the pool uses built-in connectivity and remote control through an app, products and equipment can connect to it and act on it as required. This leads to quick response times, enabling the pool to work more efficiently. For example, a quick change in temperature is observed immediately and can be remedied through subtle **heating or cooling**, as opposed to waiting for a physical person to come and check it, then work on the temperature much later on. The pool adapts to its own environment quicker and easier, while an operator can also intervene if they wish to do so.



Value-added services

Smart pools allow their operators not just to manage them better, but also to access more services and advice. In-app services include advice for easier pool maintenance or forecasts that allow better settings adjustment for the pool. Pool control can also be transferred to **Pool Pros** to allow maintenance contracting to optimise workload.



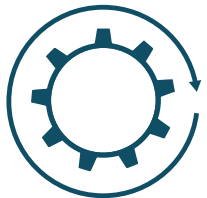
24/7 water quality

Thanks to ongoing monitoring and control of water quality, this never has to lapse in a smart pool. An alarm system can be used to offer real-time corrective maintenance, as well.



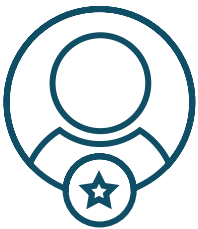
Energy savings and reduced costs

Smart pools are more reactive and their connected products and equipment allow them to act upon changes such as temperature, evaporation, and more, leading to less energy and water waste. Moreover, monitoring the energy consumption allows pool operators more control over where this is used, helping them save more. Consequently, costs are also reduced or better controlled to the real needs of the pool.



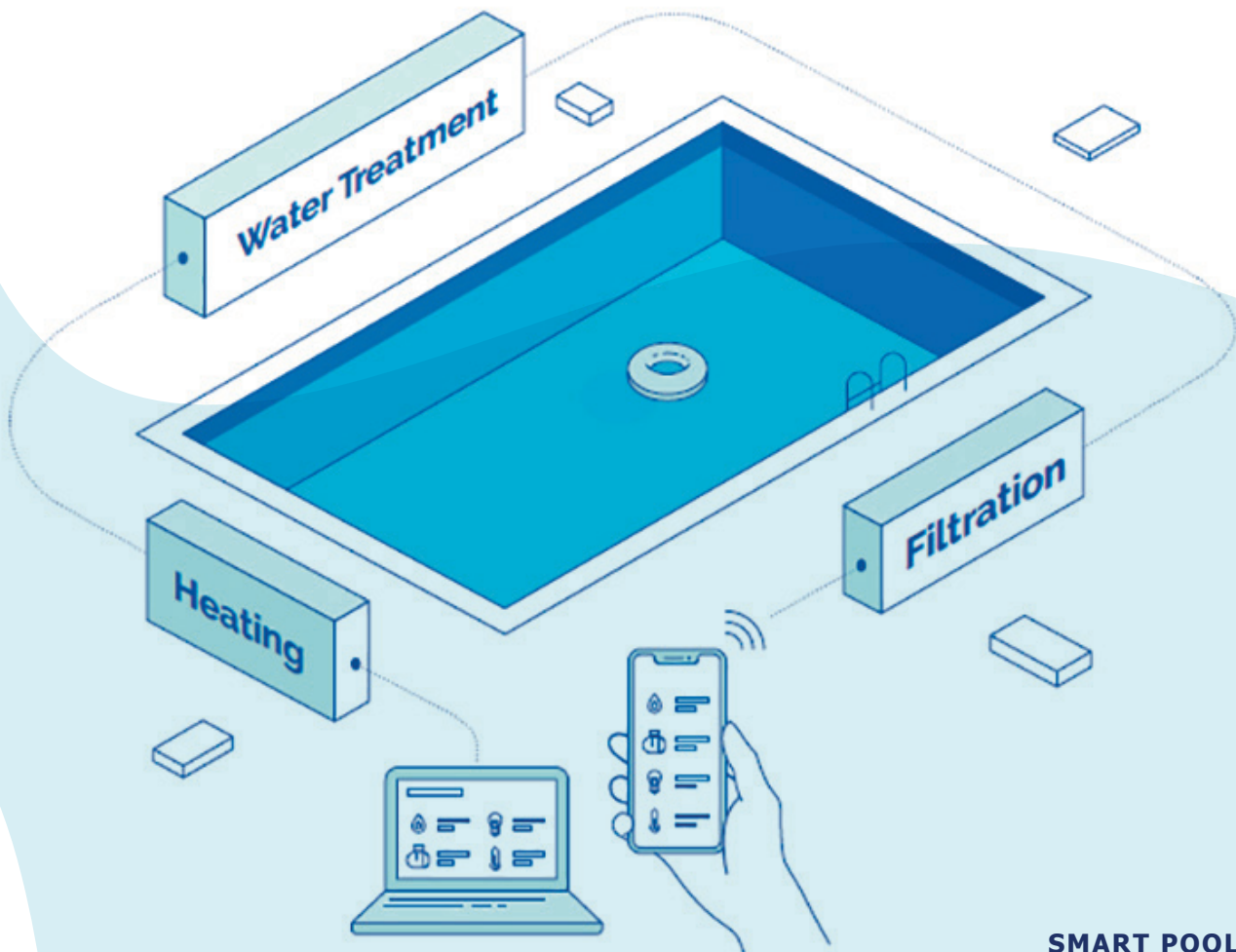
Improved lifecycle

A smart pool has maintenance work done automatically and more efficiently. Given that most tasks are performed remotely and via connected devices, all equipment is put under less strain and will perform better for longer, as will the whole installation.



Overall better operator and user experience

Smart pools that are managed easier, quicker and better reduce strain on the operators, freeing up time for potentially commercial activities or creative pursuits linked to the facility. They also offer better experiences to the end users, who can enjoy a high-quality, clean pool with optimally adjusted water at all times.



03

HOW DOES THE INTERNET OF THINGS WORK FOR POOLS?

While the benefits of interconnected, smart pools are evident, the question is how the IoT or the Internet of Pools manifests itself in practice. What are the tasks or processes that can be automated or controlled remotely, and how does connectivity work on site?

Thanks to constantly advancing technologies and software, a large part of the elements that go into operating a commercial pool can be controlled through the IoT.

"... a large part of the elements that go into operating a commercial pool can be controlled through the IoT"

Water filtration and recirculation

One of the essential activities linked to pool maintenance, pool filtration and recirculation can be controlled through systems such as [Fluidra Connect](#). By linking up the filtration and recirculation system to the app, water filtering and recirculation can be started remotely or scheduled throughout the day and at the best times to reach the levels set with the desired water turnover times and filters backwashing schedule, for both energy savings and ensuring a good user experience.

Water treatment

Any chemical treatment required, such as balancing pH levels, can also be done through IoT. Smart pools treat the water in real time, reacting immediately to unusual levels that need to be corrected. Moreover, the system measures all indicators constantly, so there is enhanced security and peace of mind for operators and end users.

Water levels

To maintain the same water level while the pool is in use, a smart pool will be aware of when some of the water has evaporated or when large numbers of users cause water to be lost. It will then fill up automatically, but only to a preset level, so there is no waste either.

Water temperature

Just like with water levels, controlling the temperature in real time and remotely is a huge benefit for pool operators. Adjustments can be made to heat or cool the pool as and when needed, without the need for stopping activity or putting in place onerous processes. This option is particularly useful for indoor pools.

Lighting

Through Fluidra Connect, the pool's lighting system can be scheduled, as well as surrounding lights. This allows you to adapt the lights to the time of day, while also providing significant energy savings.

Water features

In addition to the simple pool, using an array of water features like fountains and waterfalls enhances the user experience and gives the commercial facility additional selling points. Thanks to smart pool programming, these can be controlled remotely, turning on and off as needed. Hydromassage jets can be programmed as well, working on a regular basis to offer pool users an extra moment of relaxation.

04

SMART POOLS AND SUSTAINABILITY

One of the major benefits of adapting your pool to the IoT and using more automatics, pre-scheduled and efficient processes is the significant reduction in waste and energy consumption overall. This falls in line with Fluidra's commitment with sustainability and environmental, social and governance (ESG) issues.

For commercial pools, sustainability doesn't just mean reducing consumption. It also involves using the water more strategically and adopting environmentally conscious approaches to all operating processes linked to running the pool. Moreover, this needs to be done with the greatest respect to safety, cleanliness, and the enjoyment of the end users.

So, how does a smart pool support ESG goals for commercial operators? Its key benefits and objectives are:

- **Water conservation.** Pools are more efficient and waste less water, while also using less water overall.
- **Energy efficiency.** The remote and smart management of cooling and heating leads to less energy consumption.
- **Reduction in chemical use.** Thanks to smarter measurement and dosage of chemical products, smaller quantities are used overall and their environmental impact is also reduced.
- **Low carbon emissions.** Resorting to pools and pool features that have been produced in a sustainable manner and with reduced emissions contributes to a lower carbon footprint for all those involved. Fluidra's commitment to optimising resources and using renewable energy contributes to this as well (in 2020, 35% of energy used by Fluidra group came from renewable sources, while the company has committed to becoming carbon neutral by 2027).
- **Circular economy.** To meet its "Zero Waste" goal, Fluidra is working to improve its product packaging, supporting the use of renewable materials as much as possible and aiming to improve the lifetime of all products, which can be repaired and used for longer. Therefore, the smart pool range by Fluidra contributes to the circular economy by reusing as many materials as is practical, while also supporting easy to repair solutions for commercial pools and machinery.

Eco-conscious solutions for smart pool operators

At Fluidra, developing sustainable products and facilitating the maintenance of existing systems are two main goals which align with eco-consciousness and ESG. The range of equipment we propose aims to enable all pool operators to offer a more sustainable and responsible experience that, in turn, supports their own goals.

These solutions include:

- Filter systems that use less energy and reduce water consumption thanks to variable speed pumps;
- Low-energy heating systems and that have high ecological performance;
- Highly automated water treatment solutions to help reduce both water and chemical consumption;
- Sustainable, low-energy lighting solutions with long-lasting and aesthetically pleasing LED options

Together, all these products can connect to a smart pool system thanks to the Internet of Pools technology, enhancing their efficiency and sustainability. Moreover, Fluidra's solutions can connect and interact offline as well, without the need for a working internet connection.



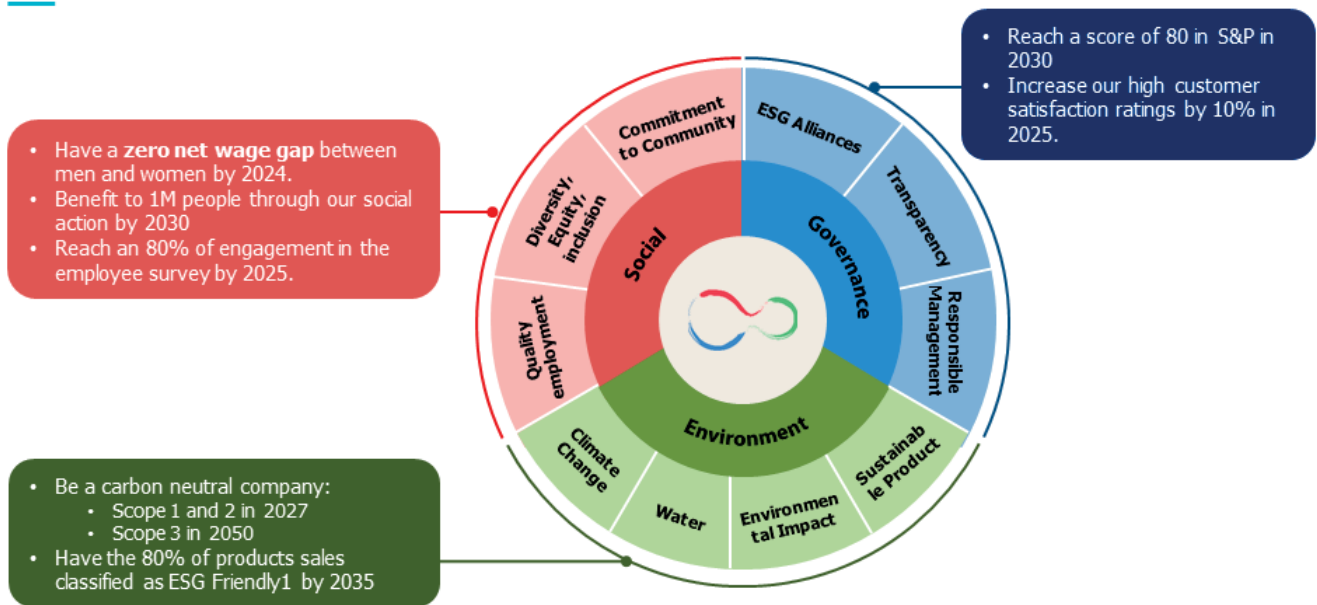
Fluidra's 2020-2026 ESG Plan

It is worth mentioning that Fluidra's smart pool and IoT solutions are conceived as part of our Responsibility Blueprint - a 2020-2026 ESG Plan aiming to embed sustainability in all areas of the business.

Fluidra's ESG policy covers our commitments to different sustainability matters across the business, developing action plans to ensure we all work together to achieve our ambitious carbon neutrality goals.

You can find out more about our goals below:

MEDIUM AND LONG-TERM GOALS



05

WHO ARE SMART POOLS BEST SUITED FOR?

With their enhanced connectivity, reduced consumption and support for ESG initiatives, smart pools offer great alternatives for commercial pool operators in a multitude of spaces. From sport activities to leisure, therapy and relaxation, pools powered by Fluidra Connect optimise the experience of end users and pool operators alike.



Competition pools

Fluidra Connect can ensure optimal conditions for competition pools, thanks to its approach to water treatment, filtration, lighting, heating, and dehumidifying systems. Smart pool technology can also be beneficial after events, supporting efficient clean-up and disinfection.



Sports clubs

Pools in sports clubs are used by lots of swimmers and also tend to be in use for a large part of the day into the night. This means they need reactive, automated systems to manage their heating and cooling, lighting, water volume control, and chemical levels. Thanks to the Internet of Pools, operators can save time and budget through more efficient pool maintenance.



Hospitality pools

Hotels and resorts also have demanding clientele, with pools that offer a lot of added elements like water features, spa pools etc. In these situations, Fluidra Connect can control all the various elements required for smooth running of the pool - water treatment, filtering, temperature, etc. With streamlined efficiency and sustainability, smart pools are a great added feature for hospitality settings as they are always in perfect conditions, thus attracting more users and increasing the space's economic performance. They also save time and money and make the maintenance and operation of complex spaces easier and less manual.



Public pools

Fluidra Connect makes the management of all aspects of public pools quicker, easier and more efficient. This covers filters, lighting, water temperature and volume, as well as additional elements like hydromassage jets. Hygiene and maintenance are significantly facilitated by having a connected, smart pool.



Private, wellness and other pools

As you'll have realised, since all aspects of pool maintenance and operation can be linked to Fluidra Connect and made faster and more efficient, this sort of approach can also benefit private pools with great added value and those in smaller settings, like a spa. Pool operators will see significant savings from an energy consumption and maintenance cost perspective, while the pool's essential parameters are constantly kept at optimal levels. For wellness centre pools, Fluidra Connect can help with controlling, scheduling and maintaining lots of personalised relaxation elements, like hydromassage water jets, water games and more.

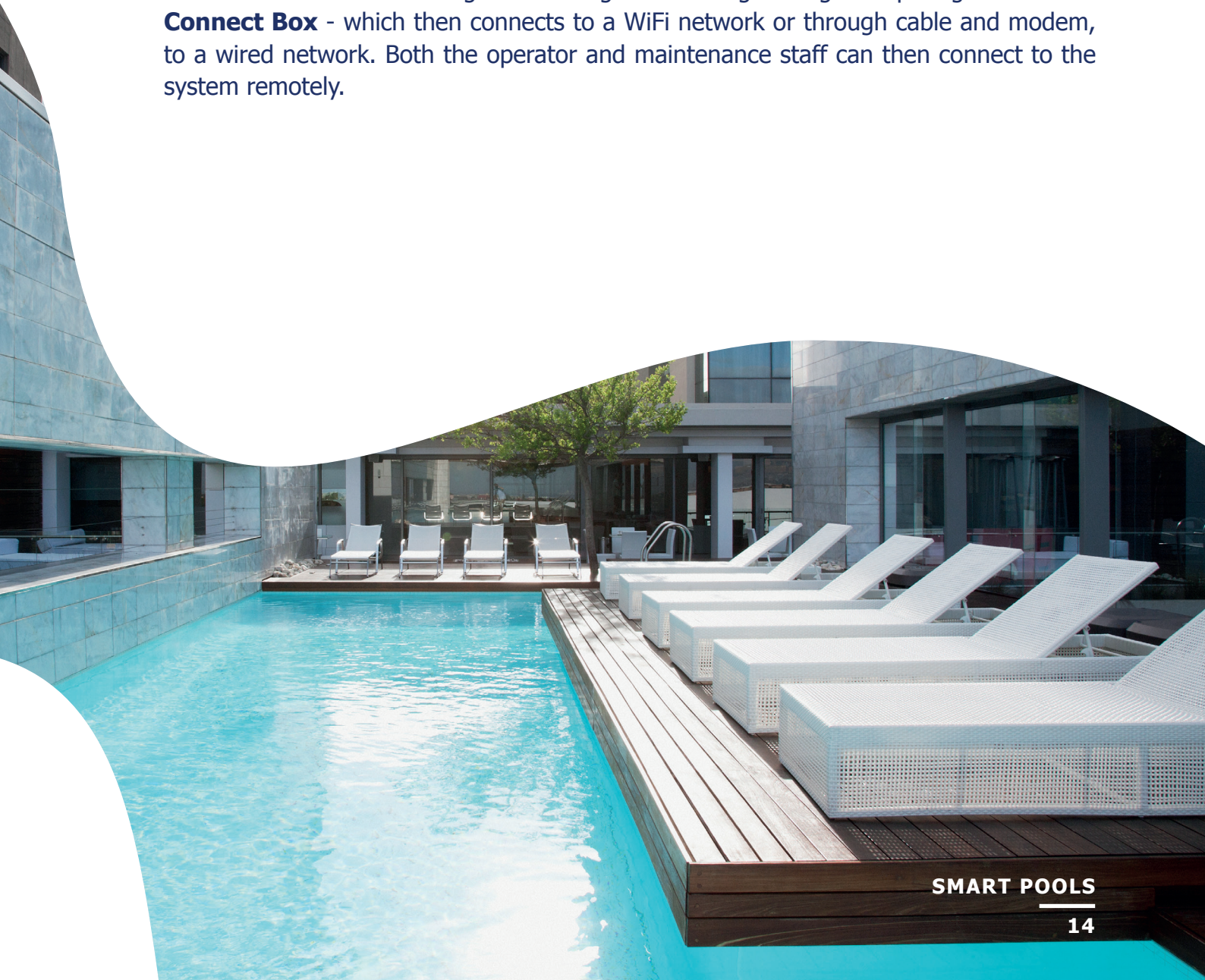


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HOW TO TURN YOUR POOL INTO A SMART POOL WITH FLUIDRA'S APPLICATIONS AND TOOLS

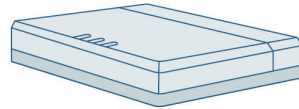
With Fluidra Connect, any type of pool can become a smart pool through using the application, connecting to any tools and processes so that the pool is always in optimal condition for use. Through Fluidra Connect, the pool can also be remotely managed and diagnosed (in case of any issues).

Fluidra Connect works through connecting to an intelligent edge computing device - the **Connect Box** - which then connects to a WiFi network or through cable and modem, to a wired network. Both the operator and maintenance staff can then connect to the system remotely.



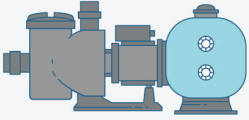
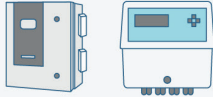



Smart Pool Assistants for all type of pools

Control, diagnose and manage your pool through the fluidraconnect.com platform



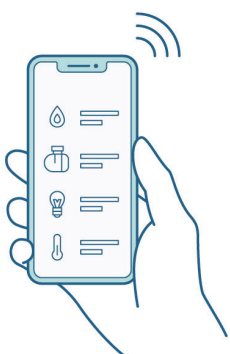
Through the Connect Box from your Connect & Go you will be able to control all types of products, compatible NN as well as the standard ones.



| | | |
|--|---|--|
| <p>Filtration</p>  <p>Set-up and control of pumps for energy-efficient programs and optimum filter cleanliness status.</p> | <p>Water treatment</p>  <p>Integral water treatment strategy between all the pool systems. Recording all the measures as per local legislation requirements.</p> | |
| <p>Lighting</p>  <p>Synchronization with other equipments to generate smart ambient.</p> | <p>Surround & Garden Equipment</p>  <p>Control all the pool and garden accessories easily: Covers, fountains, IP Cams, even irrigation systems.</p> | <p>Heating and Dehumidification</p>  <p>Smart heating strategy for energy optimization together with the filtration and the water treatment equipment.</p> |

Control the pools under your supervision from anyplace, whenever you want with our pool assistants platform Fluidra Connect.

www.fluidraconnect.com



Connect & Go set-ups

Fluidra offers a **Connect & Go** pre-wired cabinet option that makes installation for commercial and public pools easier and quicker. This **Plug & Play** solution will fit most pools and all equipment comes with a monitor for your energy consumption, allowing you to track the sustainability and efficiency of the smart pool once it's all set up.

There are multiple Connect & Go products to suit your requirements:

- **Connect & Go Easy:** To track and control up to 3 pump units with direct start and control devices for the balancing tank. Lighting can also be controlled from the panel. This suits 2 HP to 3 HP power ratings.
- **Connect & Go Direct:** Up to 3 pump units just like the Easy version, but with added analogue inputs, control of motorised valves on the suction coil and lighting control. Suits 1 HP to 3 HP power ratings.
- **Connect & Go Smart:** Adds to the features of the Direct series with a soft starter for power ratings from 3 HP to 12 HP.
- **Connect & GO VS:** These Connect & Go control panels with speed variator for filtration pumps feature a range of 3 HP to 10 HP with two pump control modes (manual with mechanical timer option or automatic with Fluidra Connect), super immunised differential for variator protection, residual current circuit breaker and forced ventilation. The Fluidra Connect mode allows the possibility of changing speeds remotely and time programming with selection of filtration speed.



InnfoPool

InnfoPool is an informative solution that reports on pool water quality in real time. It is ideal for sports clubs, hotels, campsites, and public pools. Users can enhance their enjoyment by checking in advance that the pool they plan to visit is well treated and in top condition, with peace of mind and confidence guaranteed. InnfoPool reports on all the separate pools at a particular facility on a single screen.



InnfoPool is a great marketing tool that allows end users to rate your pool against others, and through which all pool conditions can be reported, depending on the equipment in place (which must be NN compatible) At the moment, water quality is the major focus, but other parameters can be added in the future.

InnfoPool works with multiple digital platforms, including:

- Digital signage systems;
- Facility websites (for example: hotels, sport clubs, municipal pools, etc.);
- Facility apps (for example: hotels, sport clubs, municipal pools, etc.);
- APIs can also be developed for other platforms.

Benefits of using InnfoPool for both pool users and operators include:

- For the pool users:
 - Peace of mind around water quality and treatment;
 - Ability to organise schedule based on when the pool is more or less busy;
- For the pool operators:
 - A great communication tool towards end users;
 - Increased customer satisfaction;
 - Automatic 24/7 pool management all year round;
 - Real-time information on all key parameters affecting the pool;
 - Cloud logging service

FLUIDRA
CONNECT[®]
CONNECT & GO

SMART POOL
Connected hubs

Installation Diagram



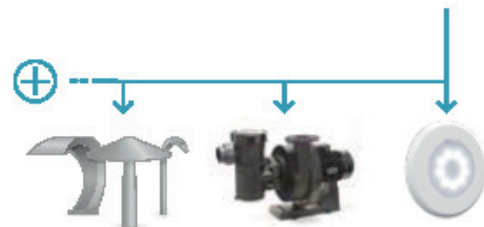
CONNECT & GO
POWER CENTER CABINET



GPIO*

Smart control of "NN Thing" compatible products
(in addition to standard control: bilateral communication, advanced status and messages, operational mode selection...)

Device with inputs & outputs provided with Connect & Go power center cabinet to manage standard products



Standard control of any standard product
(on / off / scheduling / status)



Did you know?

Fluidra provides more than 100 products able to offer a smart control and exchange with Connect & Go pool automation. Simply look for the "NN Thing" icon in the product pages.

PRODUCTS AND EQUIPMENT COMPATIBLE WITH FLUIDRA CONNECT (NN PRO)

To help turn a pool into a smart pool, there is a wide range of products and commercial pool solutions that are compatible with the Fluidra Connect technology (NN^{PRO} compatible). These allow smart control and exchange of information integrated in the Building Management System (BMS) with an associated smartphone application.

Water treatment range



Freepool2 disinfects the water using the neolysis system, which combines salt electrolysis with ultraviolet radiation, and corrects pH levels by injecting CO₂ through the same reactor. This water disinfection method avoids the use of chemical chlorine thanks to the production of chlorine from the salt in the water, thus providing many health and sustainability benefits.

Salt electrolysis systems and hybrid systems



Easy Salt Next: Next generation of auto-cleaning saline electrolysis system for commercial pool use applications of up to 190g chlorine / hour. Easy Salt Next has a compact and cost-competitive equipment design. To control more than one unit for the same pool, external control AP PR-200 is required. Made with high-pressure (polypropylene) cells equipped with Premium+ grade electrodes (up to 12.000 hours). The device includes a display LED screen to improve the user interface.



Pro-Chlore Salt: This range includes EX electrodes that provide the highest level of durability in self-cleaning systems. With its integrated extension options (EXT-1, EXT-1E, EXT-2) or external control options (AP PR200, Smart Control), this product range includes a control and regulation system for ORP values (Redox) or ppm, as well as pH, allowing improved management of the equipment and an excellent water quality at all times. The Pro-Chlore range can be manufactured, on request, for seawater (Pro Chlore Salt AM Series). To control more than one unit for the same pool you will need an AP PR-200 external control or Smart Control and the TRI multiple control kit (code 70338).



Nature Salt: This equipment has a sustainable cycle through the removal of chloramines, 2 g salt/litre operation and chemical-free treatment. Self-cleaning industrial salt electrolysis system for public pool applications of up to 300 g chlorine/hour. High-pressure twincell system fitted with quality Nature Salt electrodes. To control more than one unit for the same pool you will need an AP PR-200 external control or Smart Control and the TRI multiple control kit (code 70338).

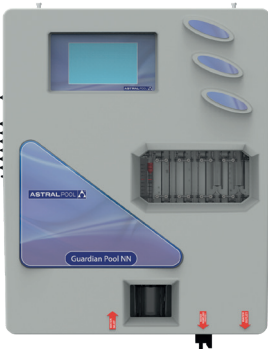


Neolysis: The combination of UV technology with low salinity electrolysis in a single reactor has proven to be an excellent solution for the treatment and disinfection of swimming pool water. The Neolysis system combines the key features and benefits of these technologies and it corrects their drawbacks or limitations. UV technology and electrolysis are well-known and available, but this is the first time that the amazing results of this combination have been brought to market.

Automatic Regulation and Control Equipment



AP PR-200 Compatible Electrolysis: The expert's choice for dosing control. The built-in panels based on Series AP PR controllers provide the best solution for the plug & play devices pre-assembled on the panel. There are several versions for the control of the water's pH, ORP and free chlorine levels. AP PR-200 equipment is compatible with the Easy Salt, ProChlore Salt and Neolysis ranges. This is also the recommended solution for experts whenever several chlorination systems must be controlled at the same time from a single control and regulation panel (multiple control through the TIP kit).



Guardian Pool: A fully automated electronic control unit with potentiometric measurements of pH and Redox potential or an amperometric measurement selective chlorine. The new Guardian Pool unit combines traditional control and dosing elements with a total digital control of its values that facilitates the management of the pool parameters, as well as its history to analyse or detect possible errors. Guardian Pool stands out for its high performance in the control and regulation of chemical products for use in commercial pools. Innovative design 7" high resolution touch screen display, firmware update through its USB port, which is also used for downloading the swimming pool data, and a great feature is the WIFI communication, to control the equipment through any mobile device, tablet or PC, inside its radius of range.



Controller: The panels in the CONTROLLER range are fully equipped and assembled systems. They are therefore ideal for use in water treatment. Their simple, compact design makes installation and start-up extremely easy. They come with all of the components and accessories required for rapid assembly. All assemblies are made of PVC sheets, in various sizes depending on the model.

Dosing pumps

Optima pH / Redox: Optima membrane dosing pump. The Optima series, featuring all-new power supply technology available from 90 V ac up to 265 V ac and 50-60Hz, guarantees unprecedented dosing precision and adaptability. Many



more functions are now integrated, thanks to the ease of programming, the alpha-numeric display, the multi-language menu programming options and the new technology which allows pool owners to fully control the flow rate and counter-pressure levels, permitting solutions to a wide range of dosing requirements with a single pump, without the need to sacrifice dosing accuracy. Featuring built-in pH/Redox control instruments and automatic calibration by simply pressing a key, and with the possibility of controlling the level of sensor efficiency.



Acqua Dos: The Acqua Dos series digital dosing pump with built-in pH/Redox control meter and electrovalve adds to its functions the ability to interface with a PLC using the Modbus protocol. It provides a constant or proportional dosage according to the measured pH or Redox value. With only 3 sizes, a wide range of performances can be covered, offering a flow range from 4 to 110 l/h and a back pressure of up to 16 bar. The power supply is 100÷240 Vac - 50/60 Hz, so the pump itself can work with different power supply voltages. The pump head is made of PVDF, so it has high chemical compatibility with various liquids.

Water Meters



Woltman type turbine meters: Woltman type axial turbine water meter, with numerical counter readout, and numbered drums. Dry dial with magnetic transmission. Easily removable gearwork and turbine. Pre-set for pulse emission. IP-68 protection level. CYBLE type pulse emission.

Lighting



LED Lighting with RGB lights: LumiPlus lighting was awarded by Reddot Award 2014, which recognizes the superiority in a total of nine aspects that include innovation, functionality, ergonomics, ecology and durability. Available in two finishes (pure white and inox effect), the lens of the LumiPlus RGB projector is oriented 14° to the horizontal plane to better illuminate the background and avoid light pollution on the outside of the pool. The RGB model is compatible with the LumiPlus Eco, LumiPlus Top, LumiPlus WiFi Access Point and LumiPlus Modbus controls (compatible with the Fluidra Connect platform). Power Consumption RGB: 32W (42VA) / Power: 12Vac / Lifespan: L70 – 50,000h.

Dehumidifiers



Airpool: The AIRPOOL dehumidifier is used to dehumidify indoor pools by harnessing the latent heat from vaporisation and the very output of the equipment in heating the basin water and pool ambient air, recovering the energy needed and controlling air temperature and relative humidity.

Heat Pumps



Proheat II: Heat pump for air/water is suitable for outdoor pools. It will allow you to extend the use of the pool in the summer season. There's also the ProHeat II Indoor model for indoor pools. Fluidra Connect-compatible through a Modbus connection to the Fluidra Connect platform.



Zodiac Heat Pumps z950: This new range of high-performance heat pumps are the smart solution to control the temperature of your aquatic installation and use it for longer throughout the year. It offers great energy efficiency performance with silence operation. Affordable and easy to install, they provide great savings as 80% of the energy used to heat the pool comes from the air. Z950 also operates down to -12°C thanks to an optimised cooling circuit and intelligent defrost logic, even in case of frost. Thanks to its 5 specific power levels (up to 110 kW at 15°C ambient temperature), the electricity consumption is adapted to obtain an ideal pool temperature.

OTHER IOT APPLICATIONS

iAquaLink

This user-friendly mobile pool controller manages connected products and provides a complete pool automation from a mobile phone, tablet or web-connected device. With the [iAquaLink](#) app, features such as robotic cleaners, heaters, salt water chlorinators, pumps, lights and water features can be easily accessed and managed anytime, from anywhere.

Cleaning robots VORTRAX (compatible with iAquaLink): This new range of pool cleaning robots is specially designed for commercial pools in hotels, campsites, sport centers and water parks.

They are sturdy, suitable for intensive daily use, and easy to operate. They are ideal for the daily maintenance of communal swimming pools, cleaning the bottoms and walls of small and medium-sized pools up to 25 metres. Using powerful cyclonic suction, they efficiently suck up all types of debris. Two models are available in this series, the TXR 7500 iQ and the TXR 7700 iQ.



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CONCLUSION

Entering the world of IoT and connectivity for pools enables pool operators to reduce their costs and time spent on managing all aspects of their pools, while also boosting consumer satisfaction for end users. Better tracking of all factors that can affect the pool make pool operations more transparent, turning it into a communication or marketing tool with end users.

At the same time, the significant positive impact on sustainability and energy consumption that these connected devices will make mean that the Internet of Pools can only be a great step forward for all commercial pool operators.



"This information contains general recommendations that must be taken into consideration on a case-by-case basis. This information is not an instruction manual and cannot be considered as such for any purpose. Any implementation or installation to be made must be made by a professional and under the appropriate guidelines. In this regard, each user is responsible for the application it makes of the information contained herein. Fluidra will not be responsible for its use. Consequently, under no circumstances will Fluidra be liable or responsible for any claim, damages or loss that may arise as a consequence of the use of this information".



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