

HYDROS

BY **AUBIN**
ENVIRONMENTAL



**SMART SEWAGE TREATMENT
FOR A CLEANER TOMORROW**

Your Sewage Solution.

Developed over 10 years, HYDROS has evolved to become one of the smartest, most efficient modular sewage treatment plants available on the market, without breaking the bank.



Meets all Government and Council Regulations

At Aubin Environmental, we have spent years perfecting HYDROS to ensure it meets all government regulations concerning your waste management and disposal well into the future.

Our extensive experience can even allow us to help you with any application processes if required.



Automated, Remote Monitoring Laboratory

We often get asked "how do we know if the system is working? Do we need an expert?" The answer is ROBOLAB, our remote access laboratory that both you and us can access 24/7 to check treatment quality and more.



We've always got your back, anywhere.

Our philosophy of "no one gets left behind" means we've got your back, no matter where you are in the world. With the ability to monitor your system remotely using our WATCHDOG System we're always there for you.

HYDROS is an Australian made, smart sewage treatment system designed specifically for commercial-sized organisations that aren't connected to mains sewer. This remote controlled sewage treatment plant doesn't just take away your sewage; it removes all the headaches too.

Who is Aubin Environmental?

Aubin Environmental are a collective of passionate scientists and engineers, dedicated to the field of waste management and treatment.

They are a part of the Global Group of companies, an industry leader in Environmental Protection and Waste Treatment, with an annual turnover of \$25M and over 40 years of history, which means you can feel comfortable knowing our part in a larger organisation means we will be around long into the future.

Our key people.

STEVE PEREIRA

Aubin Environmental's Founder and Managing Director, Steve is an innovative environmental professional with more than 20 years' experience in environmental solutions. Steve is well known for always going above and beyond to look after his customers.

ROBERT WATSON

A successful entrepreneur since the 70's, Rob has a passion manufacturing and supporting good businesses that last. As the head of Global Group, he provides ongoing business guidance and support.

GREG LORIOT

Our workshop manager and fitter, Greg is responsible for the construction of each HYDROS. He is an artisan in his field and has skill on the tools that's rarely found these days. He can build anything, and is responsible for training our elite squad of workshop professionals.

BRADLEY MCCLEAN

Brad was previously head process manager at Werribee Sewage Treatment plant. We are indeed fortunate that he was drawn to our philosophy of innovation, because his depth of understanding of the sewage treatment process is unparalleled.

BEN KNIGHT

The brains behind our software and electronics, Ben has been instrumental in converting our inventive concepts into a reality, and making them accessible from anywhere in the world at the touch of a button.

OUR CLIENTS

Most importantly, our clients become members of our family too. We genuinely enjoy developing these relationships and enthusiastically help all our clients in any way we can, from EPA applications or audits, process engineering, or any other issue that pops up.



Why choose HYDROS.

“The HYDROS System is built inside of a modified shipping container eliminating the headaches of custom installation, transportation or scalability.”



Plug & Play Installation

The intelligence of the HYDROS system allows for a simplistic plug-and-play application, that is capable of bolting on to any existing systems.



Smart Lab Monitoring

RoboLab lets you monitor your HYDROS System 24/7. This means you're in full control, always. It also means you're able to identify problems before they exist!



Government Requirements

The HYDROS system is designed to always meet Government and Council regulations for waste disposal, giving you peace-of-mind for years to come.



Scarce Resource Recovery

HYDROS, in a league of its own, is unique in its ability to recover scarce resources in the waste it treats, making them available for agriculture and remote community restoration applications.



Modular & Out-of-the-Box

HYDROS has been designed to be simple to install, and easy to scale. We have designed it to be completely modular, meaning HYDROS can handle any size application, anywhere in the world.



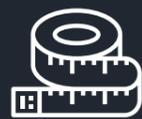
Robust & Built-to-Last

We've stripped away all of the unnecessary, convoluted hardware seen in so many systems around the world and condensed HYDROS into a serious beast when it comes to being robust and built-to-last.



Easy Maintenance

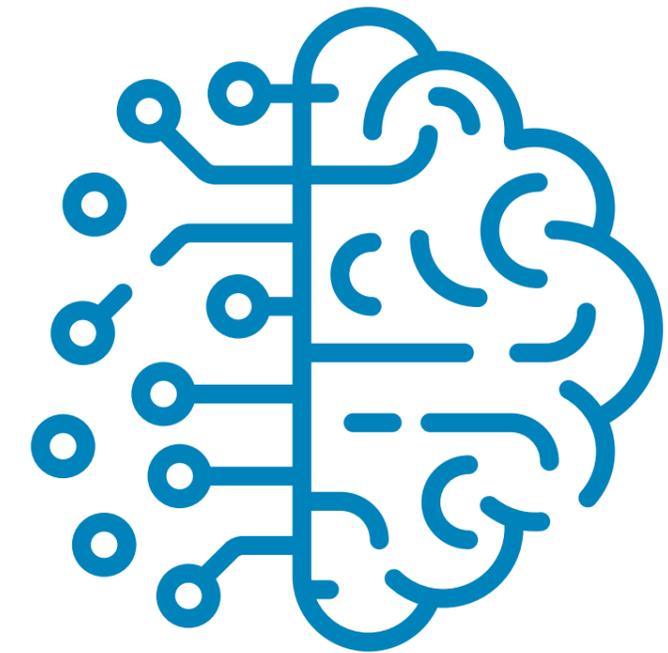
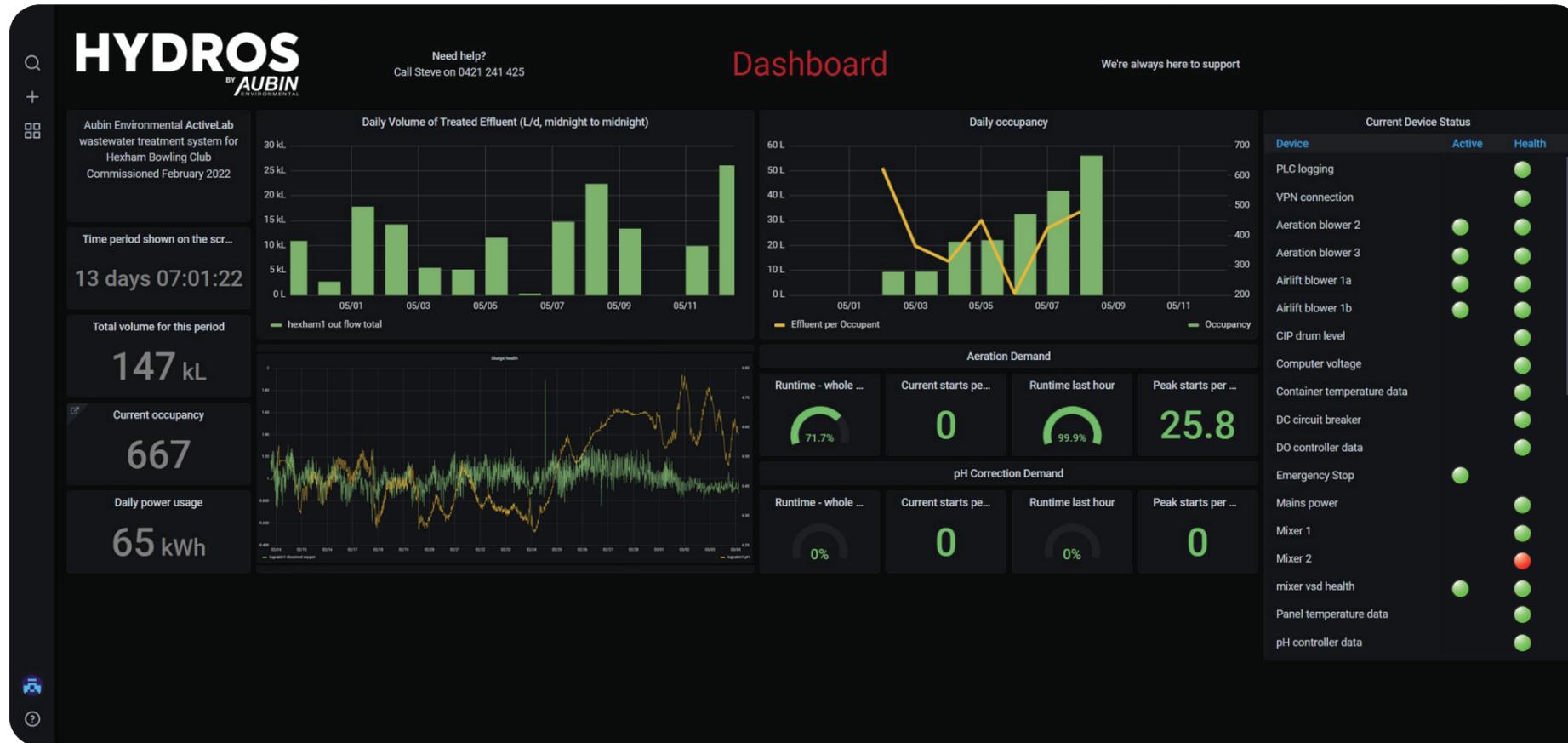
Any member of your maintenance team can operate and look after your system, and like we mentioned before, you're never alone. That means if you need help, we're right here when you need us.



Tailored to your Operation

So many systems in the world are "one size fits all". This concept doesn't work for us, because we know that every site has different requirements. That means we tailor your system to suit exactly what you need.





Remote System Monitoring.

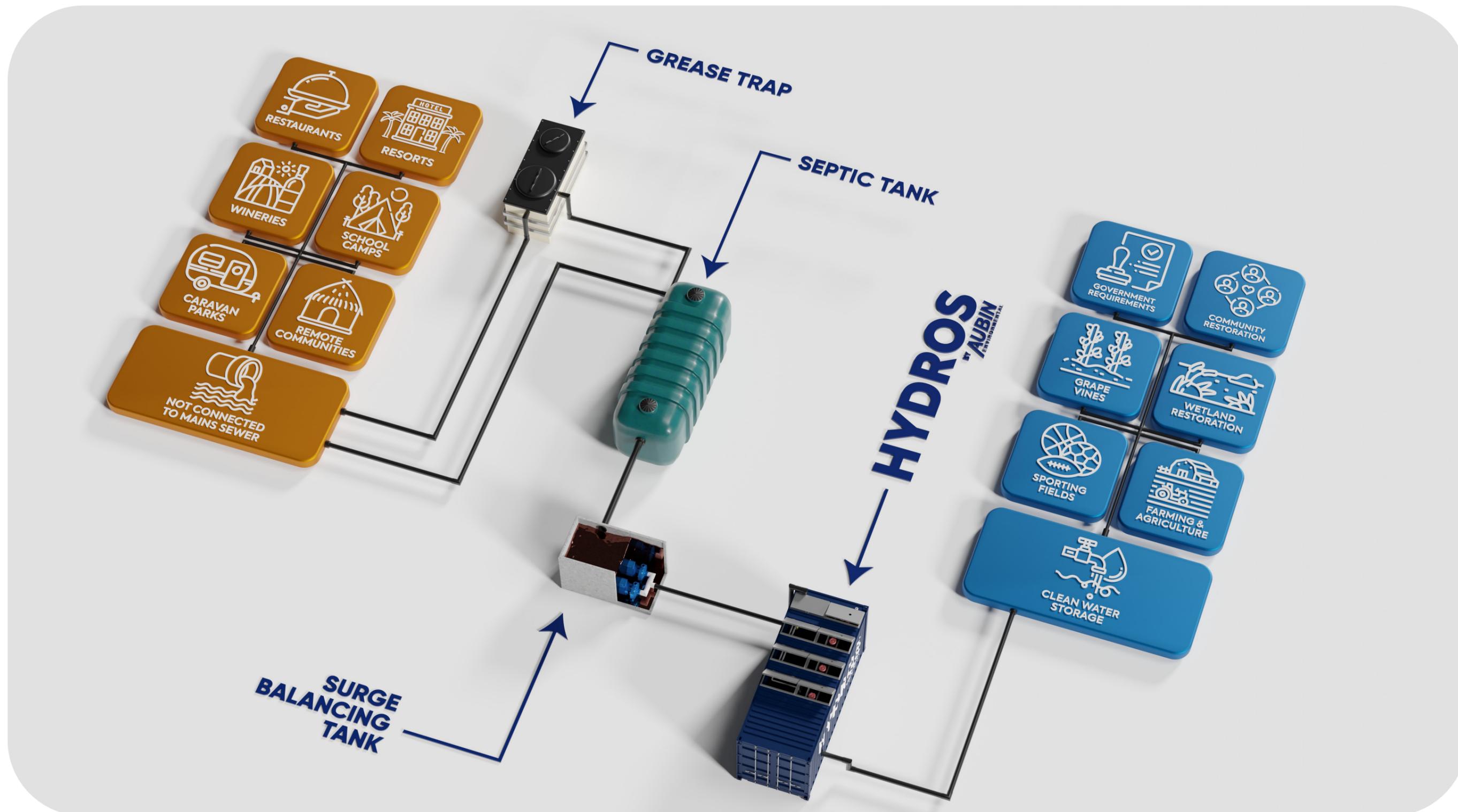
Every HYDROS Smart Sewage Treatment Plant features our proprietary ROBOLAB and WATCHDOG systems, allowing for remote laboratory monitoring and maintenance. Using a combination of WATCHDOG sensors and CCTV we're able to monitor everything that is happening inside of your plant. This means we can see potential problems before they can occur, resulting in lower maintenance costs and downtime.

Our ROBOLAB system is capable of remote testing and giving real-time results, meaning at any point in time, you can see how stressed your system might be, the quality of water it's producing and the health of each treatment tank.



Flow Schematic.

Capable of **plugging into practically any existing system**, HYDROS sits downstream from your **grease trap & septic tank or septic tank only** set-up. We ensure a **surge-balancing-tank** is installed to manage over-flow, and finally **HYDROS is connected** to process all of the waste, leaving your with beautiful, **clean water to use in a variety of applications**.



Specifications.

Treatment Capacity	Single units: 5, 10 or 20kL per day Combinations can cater for up to 500kL per day.
Treatment phases included in the shipping container	<ul style="list-style-type: none"> » Aerated digestion of raw contaminants (BOD and NH3) » Anoxic digestion of aerobic by-products (aka nutrient removal or de-nitrification) » Gravity clarification for solids removal » Disinfection (multi-pass UV, or chlorine)
Treatment phases not included	<p>It's designed to be modular to reduce cost by reusing equipment already on site or standard equipment that is already available locally.</p> <p>These include:</p> <ul style="list-style-type: none"> » Grease trap » Primary treatment tank (septic tank, anaerobic digester) » Surge buffer tank and raw water pumps » Treated effluent storage and disposal <p>In all cases AUBIN engineers design this part of the system. We can help find it locally or include it in our scope of supply if that ends up being the cheapest and easiest option for you.</p>
ROBOLAB	<p>The automated water quality laboratory automatically uploads results to AUBIN's cloud server. These are directly available to you at all times, letting you see:</p> <ul style="list-style-type: none"> » Ammonia, nitrate and nitrite (batch samples) » Beneficial bacteria volume and health (batch samples) » Dissolved oxygen (continuous) » Turbidity/clarity/suspended solids (batch samples) » Daily flow profile and total daily effluent volume
Alarms	Automated alarms can be emailed or SMS'd to any nominated personnel, including AUBIN engineers. Standard alarms include water quality and pump or air blower failure. Other alarms required for your site can be added to the onboard computerised system.
Typical target effluent quality	The standard units achieve better than Class C, which is the most common set of effluent quality parameters. BOD <20 mg/L Suspended solids < 30 mg/L Coliforms 1000 cfu/100ml
Custom effluent quality targets	Some sites are required to achieve better than Class C effluent quality when located in sensitive environments or with little to no buffer distances. We have variations available that can meet any of these circumstances.
Power	240V AC, 10A domestic supply (no 3-phase power is required).
Maintenance requirements	All systems have been designed to be easily repaired or maintained by domestic plumbers, maintenance contractors or your local handyman.

Flow Guide.

Contributing Source	Daily Flow* (Litres/person)	Organic Load** (g BOD/person/day)	No. of persons (unless noted)
Residential Flats and Units			@ 2.5 persons/unit. ie Toilet 15L, Bathroom 50L, Laundry 45L plus misc. 40L
"A" Rated	125 - 180	45 - 55	
"AA" Rated	100 - 150	45 - 55	
"AAA" Rated	80 - 125	45 - 55	
Established Residential Housing	125 - 180	50 - 60	3.0 persons/house
New Subdivisional Schemes	150 - 200	60 - 75	3.5 persons/allotment
Casual Camping Sites	75 - 125	40 - 60	2.5 residents per site
Hotels, Motels & Guest Houses			
Bar Trade	5 - 8	5 - 10	Per customer
Per Resident Guest	100 - 180	30 - 40	1.5 per room
Per Bar Attendant	750 - 1200	75 - 150	Effective full time
Hospitals - Nursing	200 - 500	90 - 200	per patient bed
Restaurants			
Premises with less than 50 seats	30 - 50	40 - 65	at 100 persons per 100m2
Premises with more than 50 seats	20 - 35	28 - 45	
Eating Houses	12 - 15	18 - 25	
Tea room / Coffee shop	5 - 8	8 - 12	
Shops & Shopping Centres			
Per employee	10 - 15	10 - 15	5 persons per 100m2
Public Access	5 - 8	3 - 10	10 persons per 100m2 retail floor area
Factories, Offices, Childcare Centres	15 - 25	10 - 20	5 persons per 100m2 excluding laundry
Schools & Day Training Centres			
Day Students	10 - 20	10 - 15	50 per 100m2
Student Boarders	100 - 150	45 - 60	Staff included
Conference Facilities & Refreshments	10 - 30	15 - 35	
Public Recreation Areas			
Meeting Halls & Sports Centres	~ 2	~ 1	50 per 100m2
Picnic Areas/Wine Tasting & Theatre	~ 3	~ 1.5	-
Golf Clubs, Private & Social Clubs	~ 10	~ 3	100 per 100m2
Basketball, Squash and Golf Courses	~ 5	~ 2	20 per court / 400 per 18 holes
Miscellaneous			
Laundries - per wash load	85 - 145	40 - 65	8 loads / machine / day
Shower & Bath Facilities	35 - 65	5 - 8	Use per person

SOURCE: EPA Victoria
 Note: Variations of 25% in hydraulic flow are possible for each water reducing stage. The range of values listed above for AAA to A ratings are the best available at this time. Investigate each case at design stage, especially if there is an existing system or if more water efficient appliances and taps are to be used.
 * Daily flow varies according to number and type of water efficient appliances used. Flow figures are per person, per day unless otherwise noted.
 ** Organic Daily Loadings may be averaged over population served per week and/or waste management procedures implemented.

Case Study ●

Log Cabin Camp, Victoria

Log Cabin Camp is an adventure camp in Creswick, Victoria, which caters for up to 160 children and adults. After it was purchased by owners, Grant and Christine, they soon realised that the toilet waste system wasn't up to EPA standards.

"As a camp with kids, we didn't want to risk putting anything harmful into the environment," says Christine. "But we also hadn't expected to face such a big overhaul so early on." So, Grant and Christine contacted Aubin to see could be done.

We saved them money by integrating HYDROS with their existing tanks. Our free, continuous monitoring ensured that their treated water was always clean, and they now store it to keep play areas green in dry months. We also helped them use that water to create a new wetland area, which is attracting birds and wildlife to the camp.

"We're so happy with the help they've given us," says Grant. "The wetlands are a great addition and HYDROS works "brilliantly. I can't recommend them highly enough." "



Testimonials ●



AUBIN thoroughly reviewed ours, the local council's and the EPA's requirements and designed and developed a very efficient custom system tailored to our needs. Stephen's technical understanding and professional approach was invaluable and enabled us to meet our environmental, regulatory and budget requirements.

The team at AUBIN possess a confidence inspiring level of knowledge and engineering abilities. Knowing I can refer to them at any time to work through my installation issues has made the difference between success and failure. Thanks guys.



Our Partners



CropBioLife





**Get in
touch.**

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