

## Information about the Fuji Clean Aerated Treatment Unit (ATU) Install

### The System

The Fuji Clean ATU is a small wastewater treatment plant. It takes all wastewater from the household and processes this to a secondary standard. The resulting effluent is basically clear water which has also been disinfected so that it can be used on gardens. Under lawn is also possible provided a tech filter is installed that slowly releases a mild herbicide to prevent root intrusion. Without this, lawn roots would block the dripline within a few years.

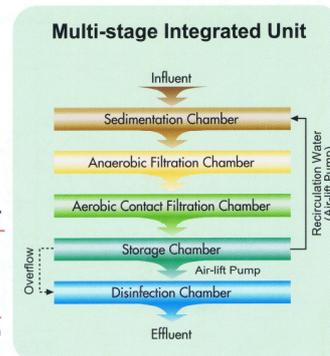
# CE-1500EX

**Fuji Clean Australia**  
 Domestic Wastewater Treatment Systems

Keeping Australia clean

### Advanced Secondary Wastewater Treatment System

Hydraulic loading - 1500L / day (10ep)



### FEATURES

#### Reliable High Performance

Although the **CE-1500EX** is one of our standard models and is small and compact, its performance is extremely efficient and reliable

**CE-1500EX** has a Peak-cut System which can effectively cope with shock loadings. The water level in the system varies according to the presence of any inflow or not.

#### Proven Design

With 45 years experience, Fuji Clean Co. Ltd. is the leading manufacturer of high efficiency wastewater systems in Japan, manufacturing and installing in excess of 40,000 units per annum.

#### Easy Maintenance

The "Contact Filter bed process" is the unique treatment method developed by Fuji Clean.

The aeration pipes can be cleaned by inserting a brush under air or water flow. This makes for easy maintenance of the unit.

#### Lower Operational Costs

The Air Blower used in the **CE-1500EX** is the most energy efficient in its class. It uses just 54 watts compared to 80 watts of other blowers. This results in much lower ongoing operational costs and makes the unit more environmentally friendly.

#### Manufacturers Warranty

15 years for tank, 2 years for electrical components.

## **Obligations**

Many Councils in Western Australia are phasing out septic tank systems, typically in areas that have heavy soils, are close to waterways or have a high seasonal water table. You may be required to install an aerated treatment system or an amended soil system (nutrient retention) to deal with all wastewater generated by the household. Water Installations is the authorized installation and service provider for Fuji Clean systems in WA.

### **Maintenance and service agreement**

Every ATU has to have a signed service contract as part of the Department of Health approval. This means every 3 months a service agent comes to your property and performs a number of specialised tasks to ensure everything is checked and working well. Water samples are taken and tested, and reports filled in and sent to your local Council, who monitor servicing of these units. You also get a copy of the report, along with an invoice. At present this is \$130 for each service. This includes travel and some time on site, topping up the chlorine tablets for disinfection, checking irrigation lines and cleaning the pump filter, backwashing and sludge return tasks, purging the media with air, water testing and completing the report for Council.

## **Installation**

### **Earthworks**

Blocks that comprise of sand do not usually cause any issues about installation. However, some properties are hilly with either granite or laterite, or both, rock outcrops and sheet present. This causes problems with excavation to install the Fuji tank. The hole needs to be about 3 m long, 2 m wide and 2.3 m deep - at the minimum. A larger hole enables clean backfill which can be compacted. Alternatively, a smaller hole can be filled with cracker dust (fine granite dust) which sets hard with a little water and machine compaction. You need about 10m<sup>3</sup> for backfill. Sand is not the best in heavier, clayey soils where the excavation hole can fill in winter and may cause the tank to 'pop' out of the ground. No-one wants this to happen.

A rockbreaker can usually slowly break up laterite (gravel rock), but would struggle to make any impact with the harder granite rock. Rather than trying to break granite, the easiest thing is to dig elsewhere and try to find a hole free of large granite. Either way, it can become expensive just to dig a hole.

Every block and builder is different. Some builders will undertake all earthworks including the ATU hole as part of their contract, others rely on the client/homeowner or subcontractors for this work.

Water Installations can perform this work (we use subcontractors), but quoting for earthworks may not be realistic. This is why we put a clause in our quote contract that deals with unexpected delays during excavation.

### **Services to Unit**

The builder's plumber terminates at the tank, and signs off all plumbing works for Council. The builder's electrician supplies a power line to the terminal block at the controller interface (on top of tank system) and also fits the alarm panel to an internal wall (such as laundry or pantry). Two cables are thus required – one for power supply and the other two-wire cable to run a signal to the alarm panel. The alarm panel is activated if there is a fault with either the pump or the air blower. If this is activated call Water Installations and one of our service personnel will attend.

### **Commissioning**

Once the unit is installed and power supply available, it can be tested and commissioned. This includes activating the pump, checking that all irrigation is functional, inserting chlorine tables, checking alarms and arranging for Council inspection. Our quote covers this task – to ensure everything is installed and operational according to the ATU Code of Practice.



## How much does a Fuji Clean system cost?

The Fuji Clean system will cost \$9,850 (inc GST) plus installation. Other estimated costs for installation usually includes;

• Prepare and submit Application and plans to shire for approval,	\$275
• Council Fees,	\$236
• Delivery to site (Depending on location and distance from Perth metro),	\$100-\$400
• Excavation (Average cost not including rockbreaker@ \$150hr),	\$600-700
• Electrical connection, (10amp RCD at mains board and low level alarm pad installed in house)	\$500-750
• Plumbing connection, (Builder should allow up to 20m sewer run and connection from house)	\$600-\$1000
• Supply and install Irrigation system (On a Prepared irrigation area) (Sized Between 100m2 and 150m2 depending on soil type), and	\$1200 -\$1700
• General labour and other materials; tank install, pump install, main line and irrigation field, compactor hire, pump filter	\$1000-1500
• KRain or other valve to change to 2 zones, additional pipework	\$250
• Supervision and co-ordination of project, admin charges	\$200-300
• Commissioning and testing, chlorine tablets, Present for council inspection, handover to client, manuals	\$200-300
• Servicing (Every 3 months or 4 times per year)	\$130 per service

**If you have any further questions please call our office and we can help you.**