



# FujiClean

## CEN Series Packaged Sewage Treatment Systems

*From 1 to 100  
“population  
equivalent”*

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*With over 2 million installations worldwide, the CEN range of packaged treatment equipment is now available in the UK. FujiClean delivers market leading effluent quality including Nitrate Removal, exceeding European and British standards with minimal operational costs and a compact footprint.*

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## Efficient

FujiClean systems have been tested to BS EN 12566-3 standards, complying with EU and Environment Agency standards. Real world testing has shown BOD, SS and Ammonia reduction to 90% below the required thresholds!

**Environment Agency Standard Compliance Limit:**  
20mg/L BOD | 30mg/L SS | 20mg/L N

**Achieved FujiClean Performance:**  
2mg/L BOD | 3mg/L SS | 2 mg/L N

## Compact

As one of the smallest tanks available in the world, this allows excellent flexibility when it comes to your installation and the project as a whole

- ✓ Shallow dig
- ✓ Most flexible on location configuration
- ✓ Lower buoyancy forces

FujiClean units also come with our very small compressor unit that is suitable for installation in the widest range of locations to suit the site.

**Two Air Lift Pumps.** One Recirculating Air Lift pump sending process water and solids back to Chamber 1, and one Effluent Air Lift Pump for measured discharge of treated effluent.

**Chamber 3B. Disinfection Chamber** (final zone before discharge – option for chlorination tablet disinfection)

**Chamber 3A. Clarification Chamber** (settling zone)

**Sludge Transfer**  
(Recirculating air lift pump back)

Inlet

Outlet

**Powered by the FujiMAC "R11" Series State-of-the-art linear diaphragm air blowers** manufactured by Fuji Clean Co sized to provide about 2.8 cubic feet per minute to most residential systems.

**Chamber 3. Aerobic Contact Filtration Chamber**  
(both board and cylindrical hollow mesh media) oxygen rich zone for aerobic microbe digestion activity, solids filtration and nitrification of ammoniac nitrogens to nitrates

**Chamber 1. Sedimentation Chamber**  
(separates solids and greases)

**Chamber 2. Anaerobic Contact Filtration Chamber** (spherical-skeleton filter media) organic matter decomposition by micro-organisms, suspended solids captured and nitrates are denitrified

## High Performance

Fuji Clean's "contact filtration" treatment is a simple, well-engineered process that consists of a controlled, circuitous flow train through anaerobic and aerobic chambers and in direct contact with assorted proprietary fixed film media on which biological digestion of organic matter occurs. Media is also designed and positioned to provide mechanical filtration of process wastewater.

The system includes two air lift pumps (see diagram) The Recirculating Airlift Pump returns process water and sludge from the aerobic zone to the sedimentation chamber, recirculating 2-4 times inflow per day for CE models and 4-6 times inflow for CEN (enhanced denitrification) models. The Effluent Airlift Pump is designed to help equalize flow and discharge treated effluent.

\*Model and comparisons shown are for CEN5 compared with most common competitor 6-pop equivalent



# FujiMAC RII Compressor

## RELIABLE, QUIET, EFFICIENT



A FujiMAC 80, pictured, delivers 80 litres per minute (1055 gallons per hour) of air to the treatment process using only 47W of electricity, at 36dBA, 10dBA quieter than alternatives and saves more than £50 on electricity per year on a typical 6-population installation.

### FujiMAC Compressor

Aerobic packaged sewage treatment systems will only ever be as quiet, reliable and efficient as the compressor that delivers the air to the bacteria, driving the biological processes.

FujiClean uses the FujiMAC RII range of air compressors delivering Reliability alongside Efficiency

- ✓ Reliable
- ✓ Quiet
- ✓ Efficient

Modern rare earth magnets and excellent Japanese production engineering support the generous warranty available on the compressor units.

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### FujiClean System

FujiClean systems are the ideal modern solution for domestic waste treatment, including seasonal or holiday homes, camping / glamping sites.

The FujiClean system process is unique combining:

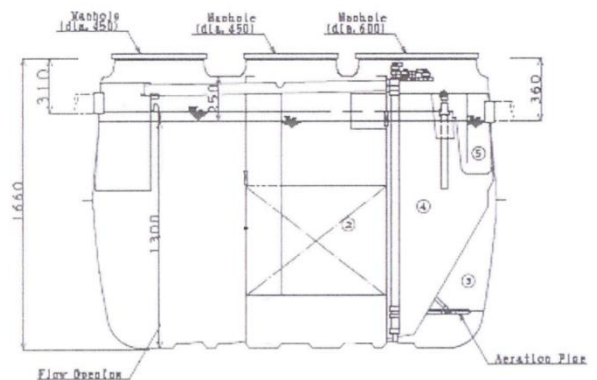
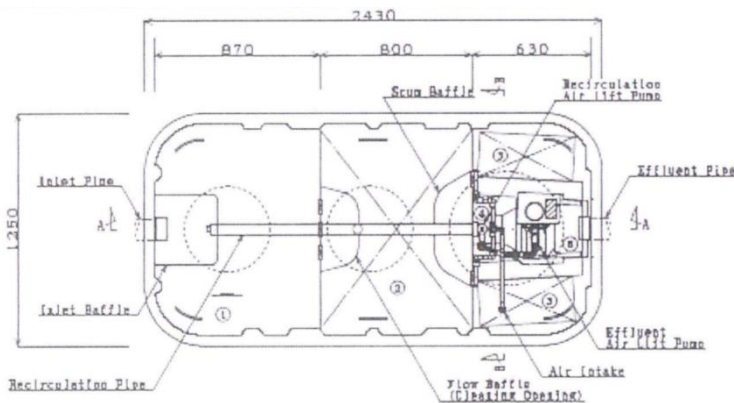
- ✓ Both Anaerobic and Aerobic digestion
- ✓ A high performance, low energy compressor unit
- ✓ No moving/wear parts in the tank
- ✓ 1 tank system
- ✓ Rapid bacteria start-up for seasonal usage
- ✓ Built in equalisation for variable inflows
- ✓ 3-5 year desludge periods
- ✓ Nitrate and Phosphorous removal system available

All FujiClean units come with the peace of mind of a generous warranty on the tank and compressor on the basis of FujiClean approved installation and commissioning.

Maintenance and sludge removal are straightforward as with all aerobic treatment plant, with British Water approved engineers being suitably qualified to undertake these processes in line

		CEN-FB Series/Class C, N, D			
Model		FB4 (CEN5)	FB5 (CEN7)	FB8 (CEN10)	FB17 (CEN21)
Population Equivalent*	"pop"	7	9	14	30
Load Hydraulic	m3/day	1.05	1.35	2.10	4.50
EFFLUENT QUALITY MEASUREMENTS					
COD level and % removal	mg/L, %	75, 98.6%			
BOD level and % removal	mg/L, %	15, 95.7%			
BOD removal in a day	kg/day	0.24	0.30	0.48	1.02
Total Suspended Solids	mg/L, %	50, 98.6%			
Total Nitrogen Level	mg/L, %	25, 88.3%			
TANK DIMENSIONS					
Material	mm	Fiber-Reinforced Plastic			
Height	mm	1660	1860	1965	2215
Length	mm	2430	2510	3020	4665
Width	mm	1250	1440	1750	1990
Weight	kg	210	320	420	700
Inlet Invert	mm	310	310	400	400
Outlet Invert	mm	360	360	450	450
Access Ports:	No.x Dia.	2x450mm, 1x600 mm			
Tank Volume Total	Litre	2834	4047	5672	12237

		COMPRESSOR/BLOWER			
Fujimac Blower Model Used:		80RII	80RII	100RII	200RII
Normal Pressure	mbar	150	150	180	200
Airflow Volume	L/min	80	80	100	200
Power Use	kWh/day	1.18	1.18	1.63	3.36
Noise	dB	36	36	39	43
Weight	kg	5	5	5	9
Outlet Diameter	mm	18	18	18	26



British Water, Natural England & Environment Agency approved.

BS EN 12566-3 Certified.

Exceptional real-world COD / BOD / Suspended Solids / Nitrates / Ammonia performance data.

2-year compressor parts warranty.

25+ year tank integrity.

Self-install or approved 3<sup>rd</sup> party installation choice.

Straightforward service & sludge removal schedules.

Extremely quiet compressor

## SPECIFICATIONS & PERFORMANCE

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