

# Structure and performance of FujiClean system

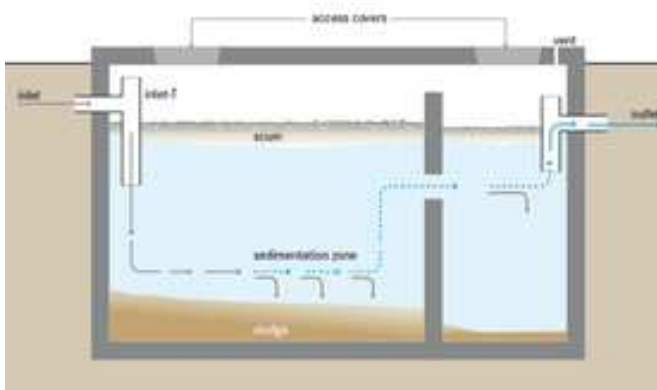
2023.12.19

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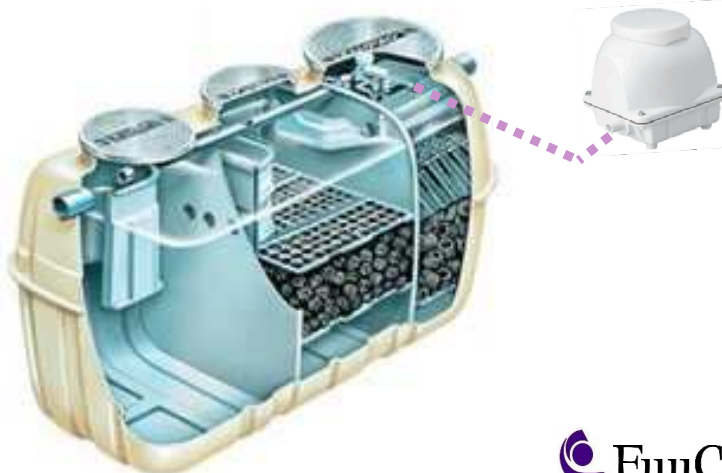
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## Septic tanks or FujiClean systems



Septic tanks only have sedimentation chamber to remove some parts of organic matter.

**Effluent BOD: 60-150 mg/L**



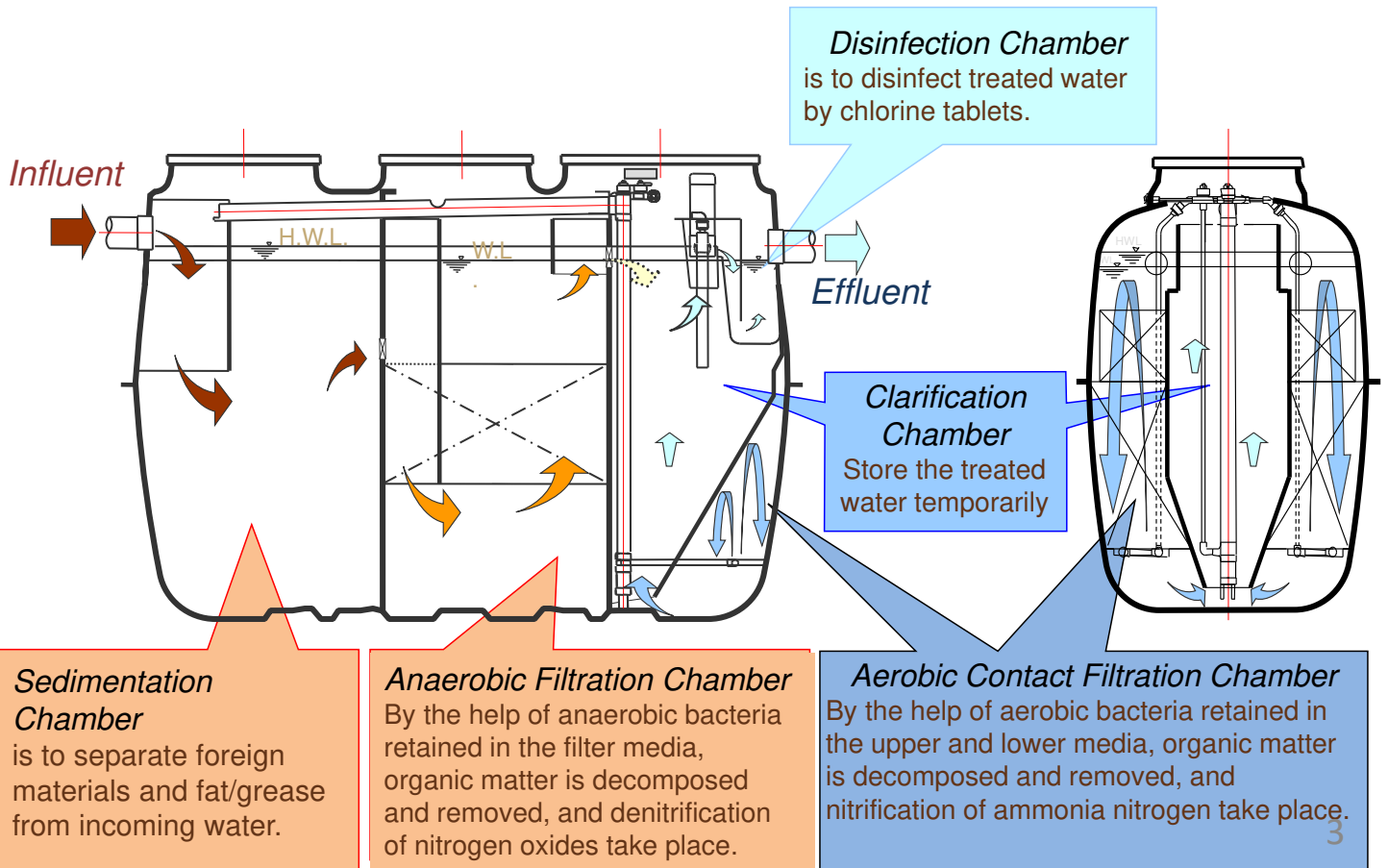
FujiClean systems have anaerobic and aerobic biological treatment processes.

**Effluent BOD: 10-20 mg/L**



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# Structure & Function



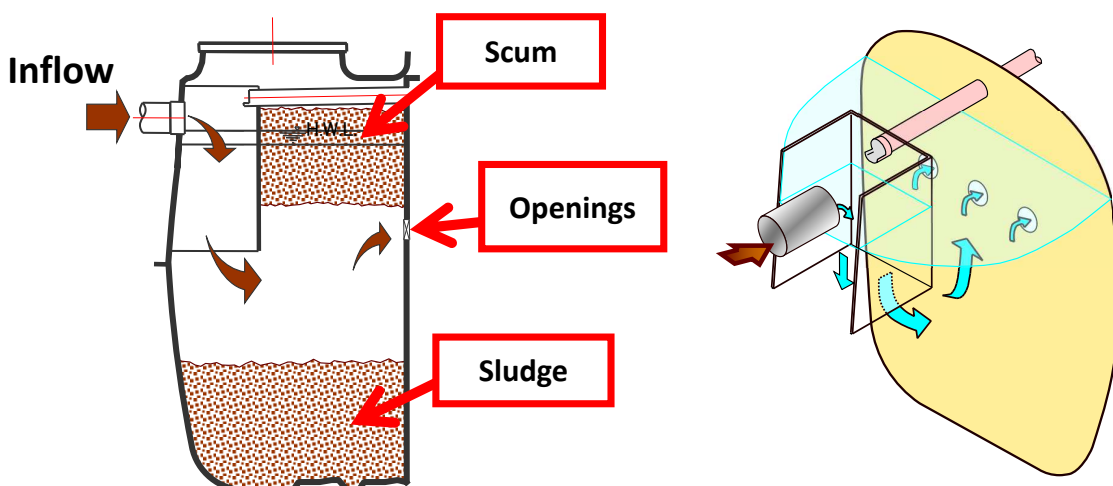
## Sedimentation Chamber

### Function

Separate and accumulate foreign materials, solids and oil/grease.

### Feature

Horizontal water flow prevents flowing up of accumulated sludge.



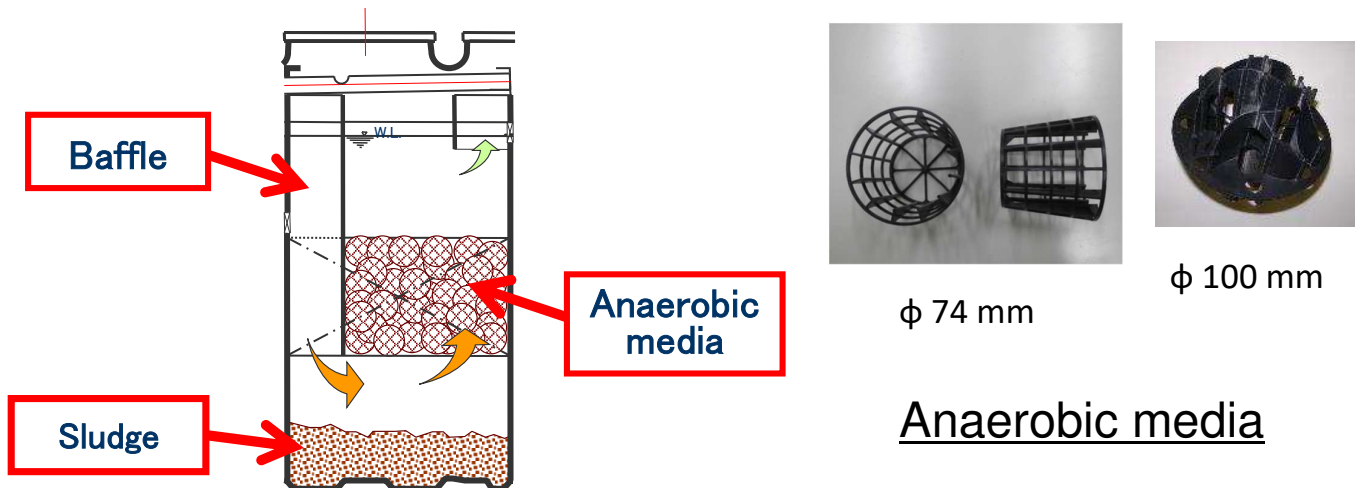
# Anaerobic Filtration Chamber

## Function

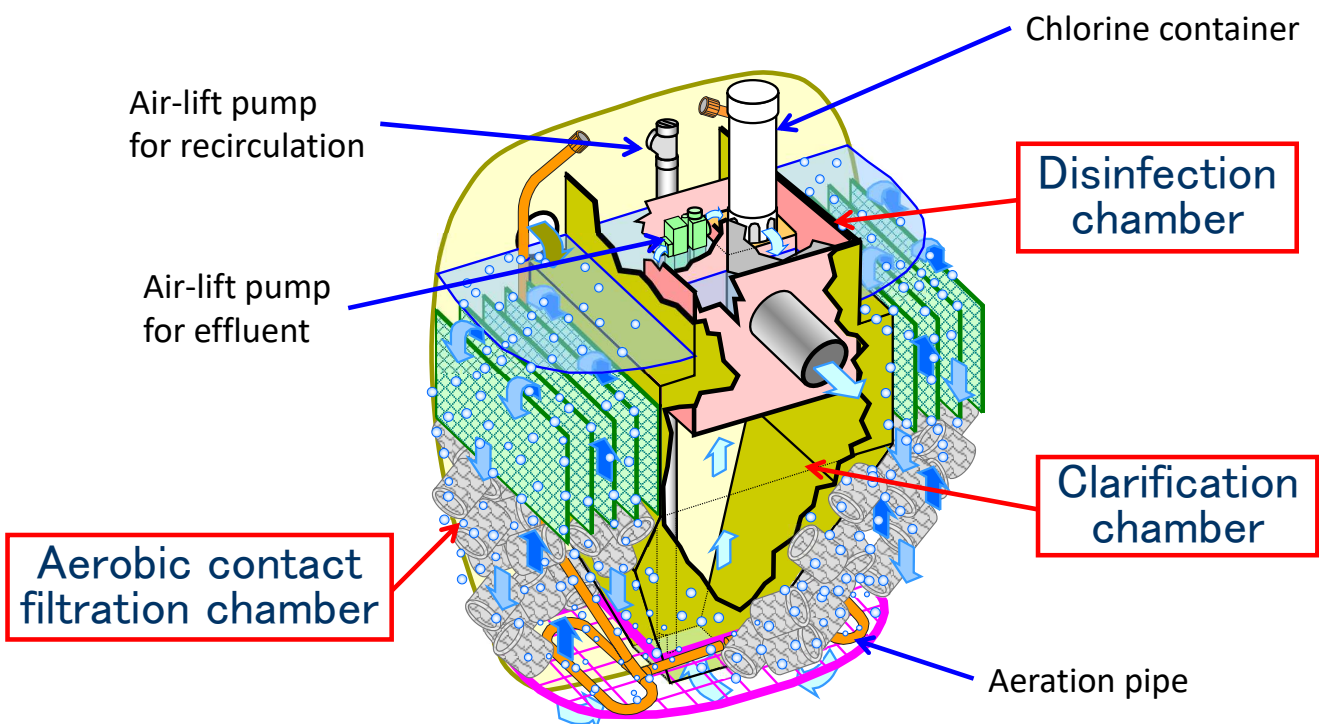
Separation and accumulation of solids, decompose of organic matter and denitrification take place.

## Feature

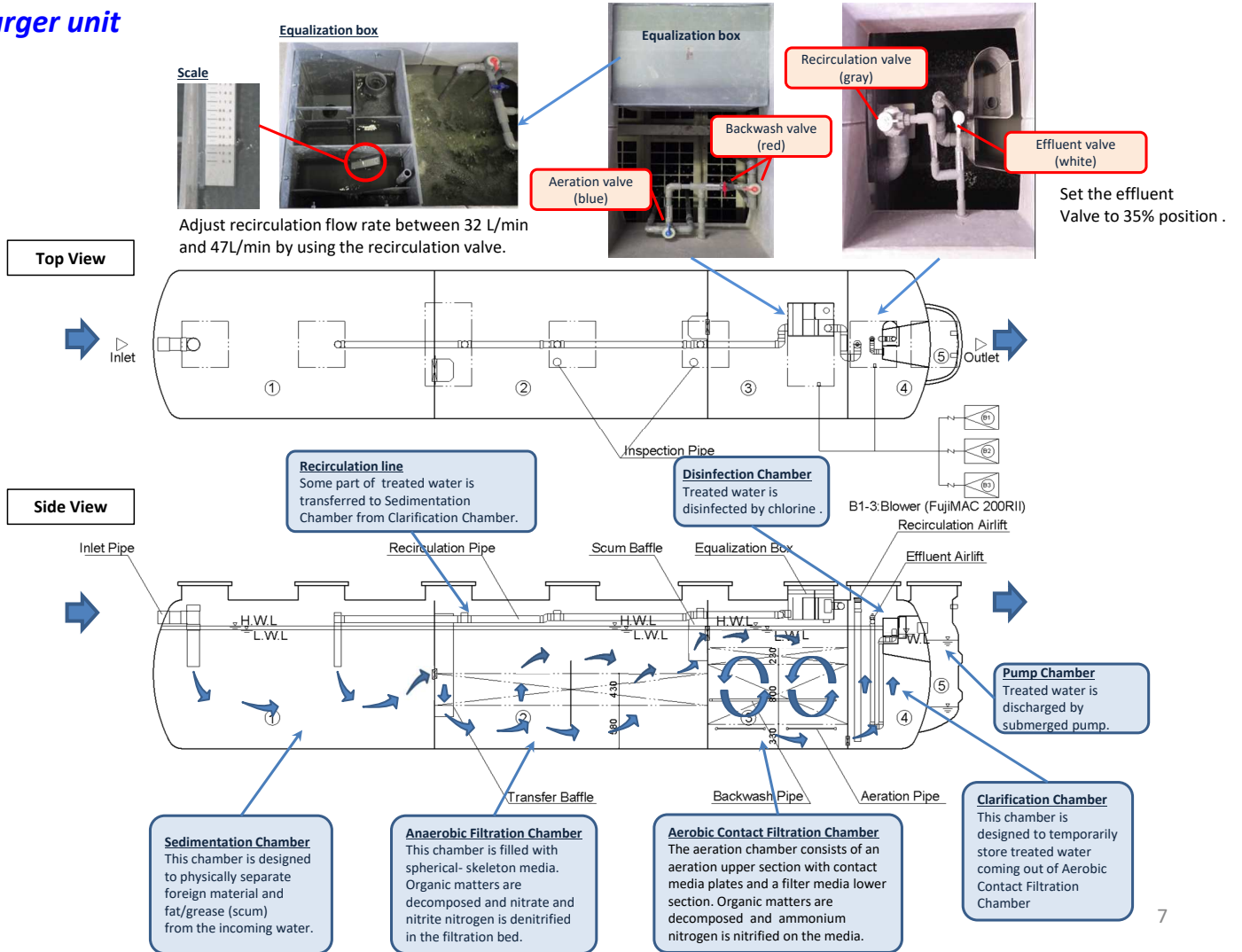
Anaerobic media is used to enhance and stabilize anaerobic treatment performance.



# Secondary Treatment Process



# Larger unit



## How to secure treatment performance at fields

# Which system do you want to buy?

Cheaper one is better.  
But... can meet discharge standard??



## Conditions for performance testing

		Japan	Australia	The U.S.	EU (Germany)
Testing Conditions	Number of sites	6 (indoor)	(outdoor)	10 (outdoor)	50 (outdoor)
	Wastewater	Actual + Artificial	Actual	Actual	Actual
	Temp. control	20°C, 13°C	No	No	No
	Start-up duration	Max. 8 weeks	Max. 8 weeks	Max. 3 weeks	Decide by
	Testing duration	Min. 8 weeks	34 weeks	26 weeks	38 weeks
	Peak inflow	Every day	Yes (as stress testing)	No	Every week @ Normal Testing
	Stress testing	Yes	Yes	Yes	Yes

# Influent and effluent criteria for the testing

		Japan	Australia	The U.S.	EU (Germany)
Inflow quantity (L/day)		1,000 for 5 PE ~ (Person Equivalent)	1,200 for 8 PE ~	Decide by manufacturer	Decide by manufacturer
Inflow (mg/L)	BOD	180~220	150~750	100~300	Ave. 350
	SS	145~175	150~750	100~350	Ave. 420
	T-N	40~50	20~150	35~70	Ave. 70
Effluent Criteria (mg/L)	BOD	20、15、10、5	20、10	<C-BOD> Monthly Ave : 25 Weekly Ave : 40	The effluent quality resulted in the testing is certified.
	SS	20、15、10、5	30、10	Monthly Ave : 30 Weekly Ave : 45	
	T-N	20、15、10、5	15 (Nutrient Removal Type)	Removal rate $\geq$ 50%	

Thank you!