

Treated water quality

The treated water quality shall comply with the domestic wastewater discharge standards stated in the "Water Pollution Control Regulations" publicized in Official Gazette dated 4th September 1988 and numbered 199919.

Tablo 21: Domestic wastewater discharge standards into receiving waters

Sector Domestic wastewater
Class 1 Loading less than 60 kg/day as raw wastewater BOD
Population <1000

Parameter	Unit	Composite sample 2 hours	Composite sample 24 hours
Biochemical Oxygen Demand (BOD ₅)	mg / l	50	45
Chemical Oxygen Demand (COD)	mg / l	180	120
Suspended Solids (SS)	mg / l	70	45
pH		6-9	6-9

Sector Domestic wastewater
Class 1 Loading between 60-600 kg/day as raw wastewater BOD
Population 1000 - 10000

Parameter	Unit	Composite sample 2 hours	Composite sample 24 hours
Biochemical Oxygen Demand (BOD ₅)	mg / l	50	45
Chemical Oxygen Demand (COD)	mg / l	160	110
Suspended Solids (SS)	mg / l	60	30
pH		6-9	6-9

- › With over 32 years of engineering & manufacturing expertise,
- › Proven design and quality-control,
- › Process guarantees and full customer support,
- › ARTAŞ is your enduring partner.



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Packaged Domestic Wastewater Treatment Units

arpak®
by ARTAŞ



arpak

PASSION FOR THE ENVIRONMENT. ENERGY FOR THE FUTURE.

Fields of application



- Holiday / Summer resorts
- Hotels
- Hospitals
- Building yards
- Rural settlements
- Industrial sites
- Housing estates
- Requiring pre-discharge treatment or lacking in or not connected to central collection and discharge systems

Superior specs of arpak®



- The quality of treated water meets national and international water (treated) standards.
- It has a Turkish Standards Institute Quality certificate.
- It is compact and functional as well as aesthetic.
- It is mobile and modular, therefore easy to install and transport.
- Having sludge digestion section, frequent sludge removal isn't needed.
- It is automatic and works constantly without intervals.
- It is easy to maintain and operate.
- The start-up period is very short.
- Takes up very little space and can be placed underground.
- The body is steel and both inner and outer surfaces are epoxy-coated against corrosion.
- Energy consumption is minimum.
- No clogging, odour and fly problems.
- Warranty against design, manufacturing and workmanship defects.

Standrat arpak® package unit

Epoxy painted steel housing /body



- Aeration section
- Clarification section
- Aerobic sludge digestion section
- Air diffusion nozzles
- Parallel plate separators

Roots type blower complete with

- Inlet-outlet silencer
- Air filter
- Vibration compensator

Sludge circulation system

- Airlift pump

Elektrik control panel

- Etage, electrical accessories with TSE (Turkish Standardization Institute) certification

Principles of operation arpak®

Functioning in line with the principles of biological contact stabilization, Arpak compact units consist of mainly aeration, clarification (parallel plated) and aerobic sludge digestion sections.

A root type blower is used to provide oxygen which in return is released through the tiny-sized pores of nozzles forming small bubbles for aeration.

Presence of oxygen makes the development of the microorganisms that act on the activated sludge possible. As a result the sludge is flocculated and then settled down in the clarification section under stable hydraulic conditions.

Treated water is then weired out from the upper level and can be safely discharged into any receiving media or used for irrigation and other purposes that don't need further hygienization.



Transfer and recycling of the sludge is realized by air lift pumps.

Remaining sludge is stabilized and re-aerated to avoid frequent removal of large amounts of slurry waste.

In case a group of units is in concern each unit can function independent of each other and can be commissioned according to the amount of the effluent produced paving the way for economy.

Optional supplements and accessories



- Waste water transfer pump
- Spare blower
- Chlorine storage tank and dosage pump
- Surface protection variations
- Cathodic protection variations
- Water filtration unit
- Thermoinsulation for cold climates
- Sludge presses
- Polishing unit to reach better treated water quality



Reference table

Assumed parameters for incoming waste water:

Flow rate: 200 lt / cap / d BOD 5: 60 g / cap / d Oil: None Capacity range: 100 - 2400 persons



Type	arpak (1)	arpak (2)	arpak (3)	arpak (4)	arpak (5)	arpak (6)	arpak (8)	arpak (10)	arpak (12)	arpak (15)	arpak (18)	arpak (20)	arpak (24)
Equivalent Population (capita)	100	200	300	400	500	600	800	1000	1200	1500	1800	2000	2400
Treatment Capacity (m ³ /gün)	20	40	60	80	100	120	160	200	240	300	360	400	480
Width (mm)	2000	2000	2200	2200	2200	2200	2200	2200	2200	2200	2200	2200	2200
Length (mm)	3200	4500	5700	6750	8200	9500	6750	8200	9500	8200	9500	8200	9500
Height (mm)	2450	2550	2650	2750	2850	2850	2750	2850	2850	2850	2850	2850	2850
Number	1	1	1	1	1	1	2	2	2	3	3	4	4
Total Weight (kg)	13000	22000	31000	42000	51000	62000	83500	101500	123500	152000	185000	202500	246500

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