



ANCHOR WATER SOLUTIONS

By

ANCHOR CONTAINER SERVICES PVT. LTD.

An ISO 9001:2015, 14001:2015, 45001:2018
OHSAS 18001:2007 Certificated Company



TRANSFORMING WATERS FOR A BETTER FUTURE



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ANCHOR CONTAINER SERVICES PVT. LTD.

WHY ?

Prefabricated, Decentralized, Relocatable & Duel Technology based – STP & CESTP

Key Features & Advantages

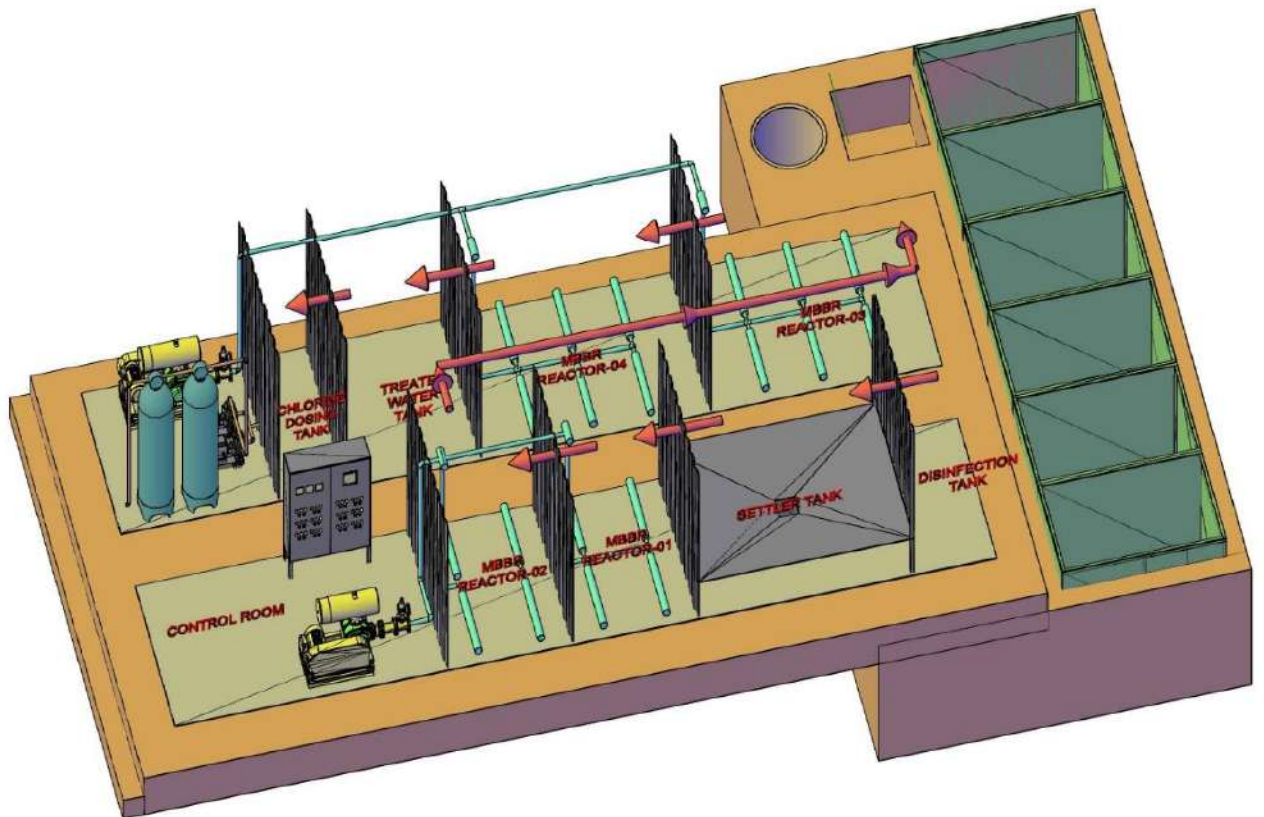
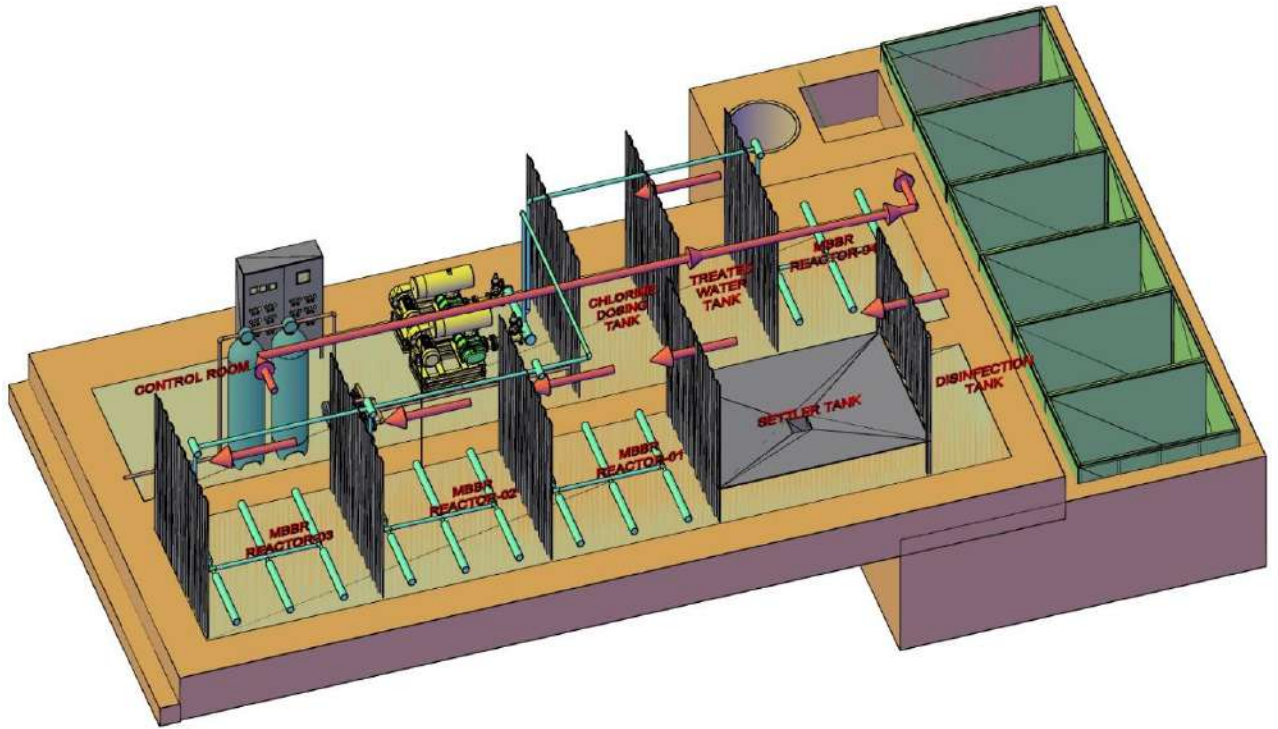
- **COST** – 15% – 20% less cost than civil/ semi modular conventional plants.
- **SPACE** – AJJAL takes 50% to 60% less space than conventional plants. saving initial cost incurred on land.
- **RELOCATABLE UNIT** – It is a permanent structure but can be relocated if required.
- **DESIGN** – 100% Compact single unit, all the components are housed inside.
- **TECHNOLOGY** – Duel method - Moving Bed Bio Reactor (MBBR) + Multi Stage Reactor (MSR).
- **CONSTRUCTION/ MANUFACTURE TIME** – Takes 50% less time (saving cost in man hours)
- **CESTP** – Can also treat both Effluent and Sewage in the same unit.
- **SMELL** – No odor.
- **SAFETY AND SECURITY** – MS 3-5 mm sheet container, Locked and secured from all sides. Secure from theft, vandalism and misshaping.
- **MATERIALS** – MS + FRP lining. Use of non-corrosive & recyclable materials in fabrication making the plant cost effective, modification & retrofitting friendly.
- **Fulfilling All Environmental and Pollution Norms – NGT, CPHEEO**



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X-RAY PICTUREES OF THE PLANT

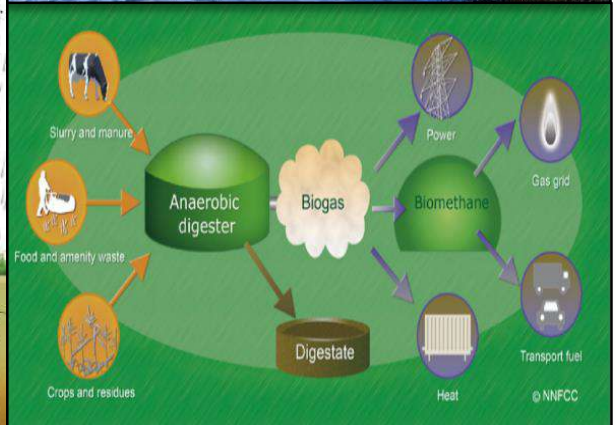
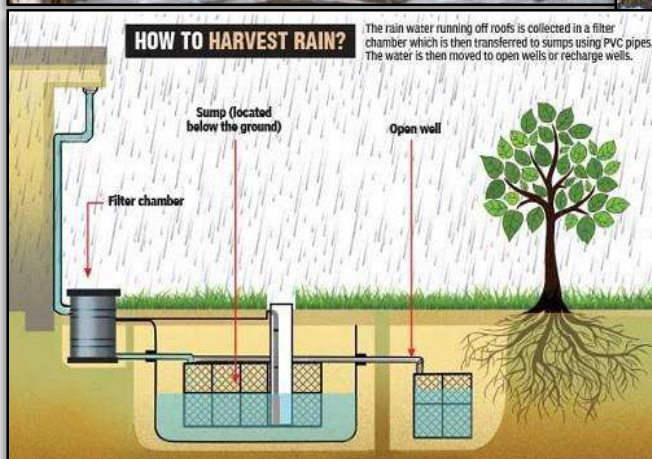


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Product List & Services

- **Sewerage Treatment Plant – STP**
(for toilet discharge: house hold, hotels, offices)
- **Effluent Treatment Plant – ETP**
(for waste water from factories, hospitals, dairy farms etc.)
- **Water Treatment Plant – WTP**
(treatment of water for drinking/potable purpose)
- **Combined Effluent & Sewerage Treatment Plant – CESTP** (for both biological and chemical waste {Hospitals etc.})
- **Rain Water Harvesting Solution**
(recharging of ground water by harnessing rain water and treated water from STP)



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COMPARISON



ISO Container With FRP Lining 100% Compact



Semi-Modular MS+FRP Lining



Conventional – Civil Permanent Structure



AREA REQUIRMENT

S.NO.	CAPACITY	AREA
1.	10KLD TO 50KLD	420SQFT (approx.)
2.	100KLD TO 200KLD	1000SQFT (approx.)
3.	300KLD TO 500KLD	1500 SQFT (approx.)
4.	1 MLD	3500 SQFT (approx.)
5.	2 MLD	5500 SQFT (approx.)
6.	3 MLD	8200 SQFT (approx.)

NOTE- Above mentioned area includes the platform on which the STP will be installed.

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PUFF cabin design for Compact, Re-locatable Sewerage Treatment Plant based on MBBR+MSR Technology.



5KLD STP, Patel Park, Ambala



5KLD STP, CBA Office, Ambala.



ANCHOR WATER SOLUTIONS



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ISO standard Container design for Compact, Re-locatable Sewerage Treatment Plant based on MBBR+MSR Technology.



60KLD STP, CBA Lake, Ambala.



20KLD STP, MAIN ROAD, Ambala.



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ISO standard Container design for Compact, Re-locatable Sewerage Treatment Plant based on MBBR+MSR Technology.



5KLD STP, DICT, Gannur.





ANCHOR WATER SOLUTIONS



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ISO standard Container design for Compact, Re-locatable Sewerage Treatment Plant based on MBBR+MSR Technology.



2.5 KLD CESTP & 2.5KLD STP GDL, Haryana.





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ISO standard Container design for Compact, Re-locatable Sewerage Treatment Plant based on MBBR+MSR Technology.



12 KLD CESTP Gateway Distripark Limited



GATEWAY DISTRI PARKS

स्वच्छता शांत मन का आधार है
Cleanliness is the Basis of a Calm mind

अगजल
 (Anchor Jaivik Jal)

12KLD CESTP, Combined Effluent and Sewerage Treatment Plant
Based on MBBR + MSR Technology



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ISO standard Container design for Compact, Re-locatable Sewerage Treatment Plant based on MBBR+MSR Technology.



20 KLD STP at Municipal Corporation Faridabad.



100 KLD STP Nawanshahr, SBS Nagar, Punjab.



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Completely Integrated, Compact, Re-Locatable
Sewerage Treatment Plant based on MBBR+MSR
Technology.



**200 KLD Sewerage Treatment Plan at 550th,
Guru Parv, Sultanpur Lodhi, Punjab.**



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Our Valuable Clients & Projects in Motions

Project Name and Address	Photo
<p>Water Supply & Sanitation Circle Jalandhar(WSSD) - 200 KLD, STP at 550th, Guru Parv, Sultanpur Lodhi, Punjab</p>	
<p>Punjab Technical University (PTU) - 200 KLD, STP at I.K Gujaral Punjab Technical University, Kapurthala</p>	
<p>Cantonment Board, Ambala - 60 KLD, STP at CBA Lake, Cantonment Area, Ambala</p>	
<p>Cantonment Board, Ambala - 20 + 5 + 5 KLD at Top Khana Bazar + Cantt. Board Office + Patel Park Ambala Cantonment Area, Ambala.</p>	
<p>Delhi Jal Board(DJB) - 200 KLD, STP on Demo. & Testing at Staff Quarters, Wazirabad Water Works.</p>	
<p>Water Supply & Sanitation Circle SBS Nagar(WSSD) - 100 KLD, STP at Judicial Court Complex, Nawanshahar, SBS Nagar, Punjab. (In Progress)</p>	
<p>Municipal Corporation Faridabad (MCF) - 20 KLD STP, Municipal Corporation Faridabad head office.</p>	

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Our Valuable Clients & Projects in Motions

Project Name and Address	Photo
<p>Gateway Distripark Limited (GDL) – 2.5KLD Combine Effluent and Sewage Treatment Plant(CESTP).</p>	
<p>Gateway Distripark Limited (GDL) – 2.5KLD Sewage Treatment Plant(STP).</p>	
<p>Gateway Distripark Limited (GDL) – 12KLD Combine Effluent and Sewage Treatment Plant(CESTP).</p>	
<p>Delhi International Cargo Terminal Limited - 5KLD Sewage Treatment Plant (STP). (In Progress)</p>	
<p>Public Works Department, Sangrur Division (PWD) - 100 KLD, STP at C-PYTE Building at Kheri Village Sangrur, Punjab. (In Progress)</p>	<p style="text-align: center; font-size: 2em;">Under Progress</p>



फरीदाबाद 09-01-2023

फरीदाबाद

निगम का शहर से निकलने वाले गंदे पानी को ट्रीट करने पर जोर पायलट प्रोजेक्ट के तौर पर 20 केएलडी का एसटीपी शुरू, तीन और लगाए जाएंगे

भास्कर न्यूज़ | फरीदाबाद

नेशनल ग्रीन ट्रिब्यूनल की सख्ती के बाद नगर निगम शहर से निकलने वाले गंदे पानी को ट्रीट करने पर जोर दे रहा है। पायलट प्रोजेक्ट के तौर पर निगम द्वारा मुख्यालय में लगाया जा रहा 20 केएलडी क्षमता का एसटीपी बनकर तैयार हो गया है। जल्द ही शहर के अलग-अलग हिस्से में 50-50 केएलडी क्षमता के तीन एसटीपी और लगाने की योजना है। इन तीनों का टेंडर जल्द ही जारी कर दिया जाएगा। खास बात यह है कि निगम मुख्यालय में लगाए गए एसटीपी का रिजल्ट बेहद शानदार आया है। पानी ट्रीट होने के बाद वायोकैमिकल ऑक्सीजन डिमांड (बीओडी) 5 मिलीग्राम प्रति लीटर आंकी गई है। यहाँ नहीं पानी को ट्रीट करने में किसी प्रकार के केमिकल का भी उपयोग नहीं किया जा रहा। प्राकृतिक बैक्टीरिया से ही पानी को साफ किया जा रहा है। अब इस पानी का प्रयोग नगर निगम पार्कों व सड़कों पर छिड़काव के लिए भी कर सकता है।

शहर के गंदे पानी को ट्रीट कर दोबारा प्रयोग में लाने पर हो रहा काम



फरीदाबाद | नगर निगम मुख्यालय में बनाया गया 20 केएलडी का एसटीपी।

निगम मुख्यालय में लगाया एसटीपी

नगर निगम के कार्यकारी चीफ इंजीनियर ओमवीर सिंह के अनुसार, पायलट प्रोजेक्ट के तौर पर नगर निगम मुख्यालय में 20 केएलडी यानी 20 हजार किलोलीटर की क्षमता का एसटीपी लगाया गया है। इसने काम भी करना शुरू कर दिया है। नोएडा वेस्ट एंकर वॉटर साल्यूशन कंपनी ने एसटीपी को लगाया है। इसे लगाने में करीब एक करोड़ रु. का खर्च आया है।

सिर्फ 50 गज जगह में ही लग गया एसटीपी

एंकर वाटर साल्यूशन कंपनी के एमडी सुजॉय कुमार ने बताया कि नगर निगम मुख्यालय में लगाए गए एसटीपी के लिए महज 50 गज जगह की जरूरत पड़ी है। एसटीपी में एमबीबीआर व एमएसआर तकनीक का प्रयोग किया गया है। पानी को साफ करने के लिए किसी प्रकार के केमिकल का प्रयोग नहीं किया जा रहा।

2030 तक 80 प्रतिशत तक पानी होगा ट्रीट

एनजीटी के आदेश पर राज्य सरकार ने 2030 तक पूरे प्रदेश में करीब 80% गंदे पानी को ट्रीट कर रियूज के कबिल बनाने का लक्ष्य रखा है। आने वाले समय में औद्योगिक इकाइयों को ट्रीटेड पानी की सप्लाई की जाएगी। राज्य सरकार 1000 लीटर पानी की जरूरत वाली औद्योगिक इकाइयों को ट्रीट पानी देने की व्यवस्था करने जा रही है।

इस तरह के तीन और लगाए जाएंगे एसटीपी

चीफ इंजीनियर ने बताया कि इसके अलावा कल्पना चावला पार्क बल्लभगढ़, सेक्टर 22-23 पार्क व संत मूरदास पार्क में 50-50 केएलडी के एसटीपी लगाए जाएंगे। इन्हें लगाने के लिए टेंडर की प्रक्रिया जारी है। सरकार के आदेश पर शहर के अलग-अलग हिस्सों में छोटे-छोटे एसटीपी लगाया जाएगा।

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TREATED WATER PARAMETERS

Table 2: Effluent Discharge standards for treated effluent of Sewage Treatment Plants

S. No.	Parameters	Norms as per NGT direction dated 30/04/2019 in the matter of OA No 1069 of 2018	MoEF&CC Notification dated October, 2017	
			Cities (more than 10 lakh population)	Areas / regions other than mentioned above
1	pH	5.5-9.0	6.5-9.0	
2	BOD, mg/L	10	20	30
3	COD, mg/L	50	-	-
4	TSS, mg/L	20	50	100
5	NH ₄ -N, mg/L	-	-	-
6	N-Total, mg/L	10	-	-
7	Faecal Coliforms, MPN/100 mL	100 Desirable 230 Permissible	1000	

Note:

Metro Cities*, all State Capitals except in the State of Arunachal Pradesh, Assam, Manipur, Meghalaya Mizoram, Nagaland, Tripura Sikkim, Himachal Pradesh, Uttarakhand, Jammu and Kashmir and Union territory of Andaman and Nicobar Islands, Dadar and Nagar Haveli Daman and Diu and Lakshadweep

*Metro Cities are Mumbai, Delhi, Kolkata, Chennai, Bengaluru, Hyderabad, Ahmedabad and Pune.



INLET WATER



TREATED/OUTLET WATER



Treatment Process/Stages

Preliminary Treatment

1. **Screening** – SS perforated plates. (non-biodegradable waste for incinerator)
2. **Settling tank** with Oil & Grease Chamber.
3. **Aeration Tank** with Air Diffusers.

Primary Treatment inside the Container

4. **Equalization Tank** – Agitator Plus Flocculation by Alum and Coagulation by Three different types of chemicals are inorganic electrolytes, natural organic polymers and synthetic poly electrolytes.
5. **MBBR Tanks** – Natural Bacteria (microbial action to decompose suspended and dissolved organic) is induced generating a healthy colony in HDPE carrier balls.
6. **Settler Tank** – FRP plates are used to settle the heavy particles which are drained later to the sludge drying bed.
7. **Treated Water & Filter Feed Tank** – disinfection of treated water With Chlorine Dosing.

Tertiary Treatment inside the Container

8. **MGF (Multi Grade Sand Filter)** – treated water is pumped into the filter containing lairs of gravel & sand.
9. **ACF (Activated Carbon Filter)** – further the water pumped through activated carbon where residual odor and color are removed.
10. **Sludge Drying Bed** – Accumulated sludge in equalization & settler tanks are brought to the bed for drying and used as fertilizer.

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Our Proud Registrations

Our technology has been published in the newest edition of **Swachh Bharat Mission – Urban 2.0** by **Central Public Health and Environment Engineering Organization (Ministry of Housing and Urban Affairs)**.



Ready Reckoner – Municipal Sewage Treatment Technologies – Medium and Smaller Towns in India

5.9 Other Methods

There are other options developed/under development in the country, which can be considered where there is land constraint. Although, these options have high OPEX in comparison to above mentioned options, but many of such methods (some of them are patented as well) are being used independently or in combination with other treatment systems in domestic market which provides desired level of effluent.

Since performance of these technologies varies in handling sewage from medium and small towns, therefore, the States are advised to select one or two suitable technologies on pilot basis and on successful testing the results, can go ahead for replicating in other towns. Cases of a few of such methods are presented below.

5.9.1 Container based or Packaged Treatment Systems

1.	Site & Name of town	Residential quarters, Wazirabad Water Works, Delhi Jal Board
2.	Name of State	Delhi
3.	Population served by STP	700 + 100 = 800 people
4.	Nature & Capacity of STP	200 KLD (MBBR based containerized STP)
5.	Year of commissioning	February 2022
6.	Duration of construction	Prefabricated, Compact STP
7.	Land area required	70 Sqm
8.	Capital cost of the project	₹ 95.00 Lakhs
9.	O&M arrangement (In house/Outsourced)	In house
10.	O&M cost (per KL)	₹ 8 per KL
11.	Recycle & reuse of treated water	Reuse in flushing and horticulture
12.	Reuse of treated sludge	As fertilizer in city parks
13.	Description of technology	Prefabricated, Decentralized, Mobile, Compact & Shipping Containerized wastewater treatment system with Dual technology and customized design and application, delivered at door step for treatment and conservation with Aerobic, Anaerobic and Anoxic method, which can be easily customized according to the availability of space and contaminated discharged water quality.

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ANCHOR CONTAINER SERVICES PVT. LTD.



Ministry of Housing
and Urban Affairs
Government of India



Swachh Bharat Mission – Urban 2.0 Ready Reckoner on Municipal Used Water Treatment Technologies for Medium and Small Towns

Ready Reckoner – Municipal Sewage Treatment Technologies – Medium and Smaller Towns in India

		Advanced Oxidation Process based on Moving Bed Bio-reactors with Multi Stage Reactors. Primary Treatment – Secondary Treatment & Tertiary Treatment
14.	Influent Parameters (BOD, COD, TSS etc)	46mg/l, 168mg/l, 8.8mg/l
15.	Effluent Parameters (BOD, COD, TSS etc)	3mg/l, 12 mg/l, <5 mg/l
16.	Skill requirement for O&M	Semi-Skilled (Plumbing, Electrical)
17.	Mode of collection of Sewage from Household to the Treatment Facility	Sewerage Pipeline to Equalization Tank
18.	Unit Sizing	One Unit 40x8x8.5 – 320 Sq/ft x 2 = 640 Sq/ft



Figure 74 Package sewage treatment plant installed in a residential complex in New Delhi



ANCHOR WATER SOLUTIONS

**THANK YOU
CONTACT US**

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एन एस आई सी
NSIC

National Small Industries Corporation



सत्यमेव जयते
GOVERNMENT OF INDIA

MSME

MINISTRY OF MICRO, SMALL & MEDIUM ENTERPRISES



GeM
Government
e Marketplace

Efficient • Transparent • Inclusive



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