Riasa

RIASA WATER TECHNOLOGIES PVT. LTD.

We have SOLUTION, Stop water POLLUTION...

Riasa

Riasa at a Glance

Riasa Water Technologies Pvt. Ltd. is started by experienced environmental technocrats, with a clear vision to provide the best solutions in the field of Water & Waste Water Treatment. Today Riasa are leading company in India to provide water & waste water solutions for different Industrial & Commercial Sector with the help of excellent environmental management system & Team.

Water Sustainability is a key to our economic and environmental future, we are one of India's leading company provides water treatment and recycling solutions which is committed to building a sustainable future.

We are well equipped to handle all types of water and waste water treatment solutions for the Industrial, Residential, municipal & Commercial sector. Riasa group has completed more than 90 projects in India.

We would like to acknowledge our deep sense of gratitude to our renowned customers who have shown their continuous trust on our skill & capability and awarded us repeat business.

We believe in providing the best suited solutions to our customers and to ensure the same we adopt latest technology & detailed engineering, that is why our each & every plant gives long lasting optimize performance as well as cost benefit.

Water & Waste Water treatment involves physical, chemical and biological Treatment that transforms raw water into potable water. The treatment process used in any specific instance depends on the quality and nature of raw water.

Our vision is to be the preferred Water and Waste Water Solution provider by providing latest technologies and excellent project execution.

We also undertake Operation and Maintenance of Water & Waste Water Treatment Plants.

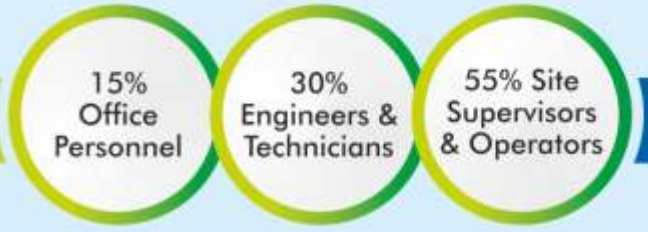
RIASA STRENGTHS

STRONG CUSTOMER BASE	Riasa Water have a strong and established customer base consisting some of the most reputed names in a large number of industries like Automobile, Steel & Consumer goods manufacturer.
CONSULTANT RELATIONSHIP	Riasa Water have strong relationship with large MEP & Project Management Consultant in India.
TURNKEY BASIS SOLUTIONS	Riasa Water have in-house capabilities to design, engineering, manufacturing, erection, testing, commissioning with strong technical backup for Handling the complete project requirement like civil, mechanical, electrical on turnkey basis.
DIVERSE SOLUTIONS OFFERING	Riasa Water have capabilities to provide a wide range of Water & Waste Water solutions and services with the help of new technologies like MBR, SBR, UF & RO.
STRONG MANAGEMENT TEAM	Strong Experienced management team of environmental technocrats is the backbone of Riasa Water.

Our Business Module

- Arrive at the inlet design parameters & treated water parameters
- Discuss with the prospective client on the degree of treatment preferred
- Design a competitive treatment methodology, attractive to the client
- Submit the proposal
- Upon confirmation, a Bar chart is prepared outlining the time frame
- Submit detailed engineering drawing for client approval
- Order the critical components, both locally and internationally
- Assembling of the units as the components arrive
- Inspection by our project team for site readiness
- Installation and commissioning of the Waste water treatment plant at site
- Operation & Maintenance
- After Sales Service

Manpower Resource



Riasa

PRODUCT & SERVICES

WASTE WATER TREATMENT PLANT

- Sewage Treatment Plant (STP)
- Effluent Treatment Plant (ETP)
- Grey Water Treatment Plant
- Zero Liquid Discharge Plant

WATER TREATMENT PLANT

MEDIA FILTRATION SYSTEMS

- Pressure Sand Filter
- Activated Carbon Filter

MEMBRANE FILTRATION SYSTEMS

- Reverse Osmosis Plant (RO Plant)
- Ultra Filtration Plant (UF Plant)
- Nano Filtration (NF Plant)

ION EXCHANGE SYSTEMS

- Water Softener Plant
- Demineralization Plant (DM Plant)

DISINFECTION SYSTEMS

- Ultra Violet System
- Ozonation System
- Chlorine Dosing System

SERVICES WE OFFER

- Operation & Maintenance of Water & Waste Water Treatment Plants
- Consultancy Services for Water & Water Treatment Plants

SECTOR COVERED

RESIDENTIAL AND MUNICIPAL

High Rise Building, Residential Colonies, Bungalows, Municipals Sewers, Farm Houses, Individual Houses

COMMERCIAL SECTOR

Hotels, Hospitals IT Parks, Offices, Malls, Educational Institutes, Amusement Parks, SEZ Area, Resorts, Clubs, Corporate Parks

INDUSTRIAL SECTOR

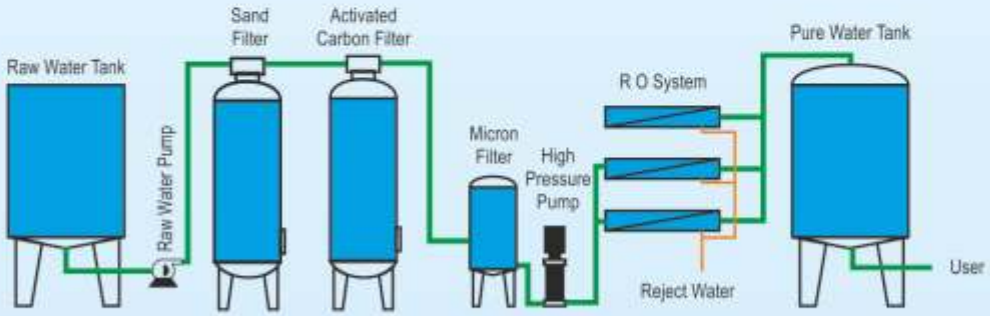
Auto Mobile Industry, Pharmaceutical, Plastic Industry, Oils & Gas, Food & Beverages, Textile, Pulp & Paper Mills, Sugar Mills, Breweries, Vegetable Oil Processing Industry, Dairy, Paint, Fertilizer, Coal Mine, Power & Energy, Tanneries, Chemicals, Slaughter Houses etc.

Technologies We Offer for Waste Water

- Extended Aeration
- Submerged Aerobic Fixed Film (SAFF)
- Moving Bed Bio Reactor (MBBR)
- Sequencing Batch Reactor (SBR)
- Membrane Bio Reactor (MBR)
- Zero Liquid Discharge (ZLD)

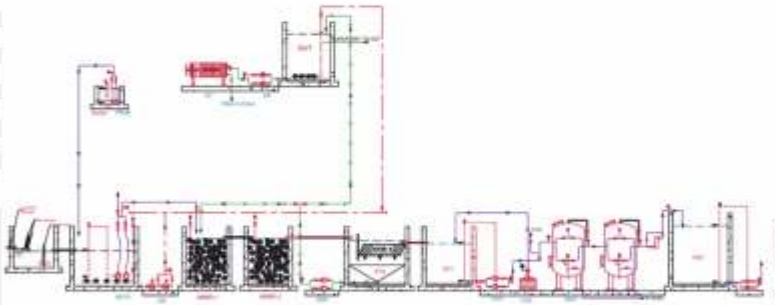
Technologies We Offer for Water

- Media Filtration (MGF, ACF,DMF)
- Reverse Osmosis (RO)
- Micron Filtration (MF)
- Ultra filtration (UF)
- Nano filtration (NF)
- Ion Exchange
- Ultra Violet (UV)
- Ozonation
- Chlorination



MOVING BED BIO REACTOR - MBBR

Moving = Continuous motion of bio-media
Bed = Floating carrier media providing surface area
Bio = Biological microorganisms
Reactor = Reactor for biological wastewater treatment


PROCERSS FLOW DIAGRAM OF SEWAGE TREATMENT PLANT MBBR

The **Moving Bed Biofilm Reactor (MBBR)** is an advanced biological wastewater treatment process that uses specially designed plastic carrier media suspended and moving freely within an aeration tank. These carriers provide a large protected surface area for the growth of biofilm, where microorganisms degrade organic matter and nutrients.

In the MBBR process, wastewater flows continuously through the reactor while the bio-media remain in constant motion due to aeration or mechanical mixing. Unlike conventional activated sludge systems, MBBR does not require sludge recycling, as the biomass grows attached to the media rather than remaining suspended in the water.

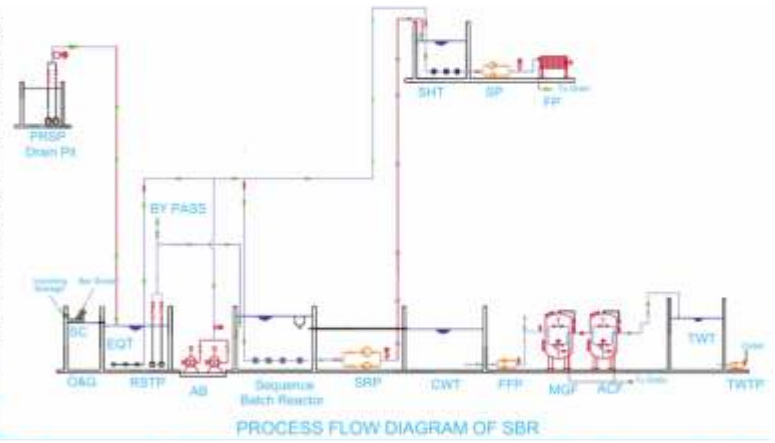
An appropriately designed MBBR system is a robust combination of **tank design, bio-media, aeration system, and process control**. The attached growth mechanism ensures higher biomass concentration, improved treatment efficiency, and stable performance even under variable or shock load conditions. Operation is simple and requires minimal operator attention.

The treatment process mainly involves the following stages:
Influent Entry > Biofilm Contact & Degradation > Biomass Sloughing > Clarification > Treated Effluent
MBBR systems are widely used in **municipal and industrial wastewater treatment applications,** particularly where **space constraints, fluctuating loads, retrofitting of existing plants, and high organic loading** conditions exist.

SEQUENTIAL BATCH REACTOR - SBR

Sequential = following in a logical order or sequence.
Batch = arrange in sets or group
Reactor = Reactors for Biological treatment

The Sequencing Batch Reactor (SBR) is an activated sludge process designed to operate in a batch mode with aeration and sludge settlement both occurring in the same tank. Difference between SBR and activated sludge system is that the SBR tank carries out the functions of equalization, aeration and sedimentation in a time sequence.



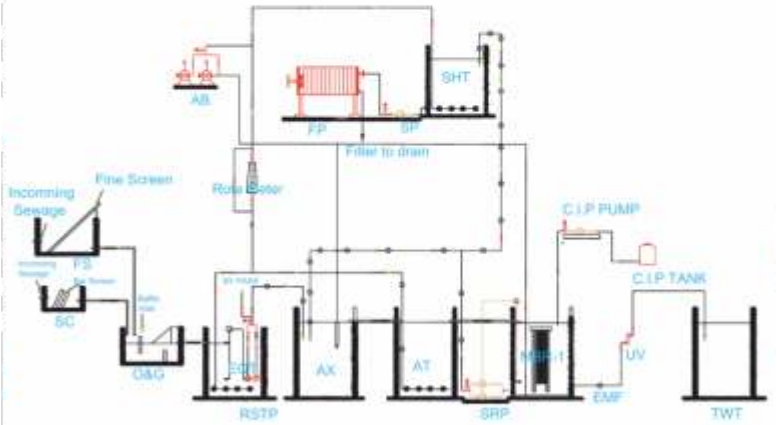
PROCESS FLOW DIAGRAM OF SBR

An appropriately designed SBR process is a unique combination of equipment and software. Working with automated control reduces the number of operator skill and attention requirement. There are basically five stages to treatment:
Static Fill > Aerated Fill > React > Settle > Decant
SBRs are broadly used in both industrial and municipal applications and especially where low or intermitted flow conditions apply.

MEMBRANE BIO REACTOR - MBR

MEMBRANE BIO REACTOR - MBR
Membrane = A thin sheet of natural or synthetic material that is permeable to sludge

Bio Reactor= Reactors for Biological treatment
Membrane bioreactor (MBR) is the combination of a membrane filtration process wi suspended growth bioreactor. It is a very advanced technology and is now widely us for municipal and industrial wastewater treatment.



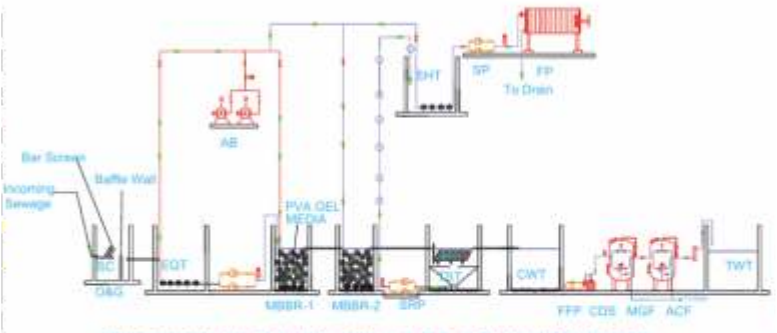
PROCESS FLOW DIAGRAM OF MBR

As its name tells, the process makes use of membranes. The nominal pore size of membranes is small (up to 0.15µm), by which not only activated sludge but coliform bacteria and virus can be shut out. The mixed liquor from the biological treatment can be separated clearly into solid and liquid. It assures almost 100% rem of SS and no carryover of SS into the effluent. This process, therefore, assures stable treated water quality, which enables the trea water to be reused as reclamation water.

MOVING BED BIO REACTOR - MBBR - PVA GEL

Moving Bed = Mobile surface
Bio Reactor = Bio reactor for biological treatment

MBBR is an improved version of Fixed Film Bio Reactor like SAFF (Surface Area Fixed Filmed Technology (SAFF) or Rotating Bio Reactor (RBC), with a difference of MBBR carrier media is free floating in the Sewage/Effluent. MBBR technology employs thousands of polyethylene biofilm carriers operating in mixed motion within an aerated wastewater treatment basin.



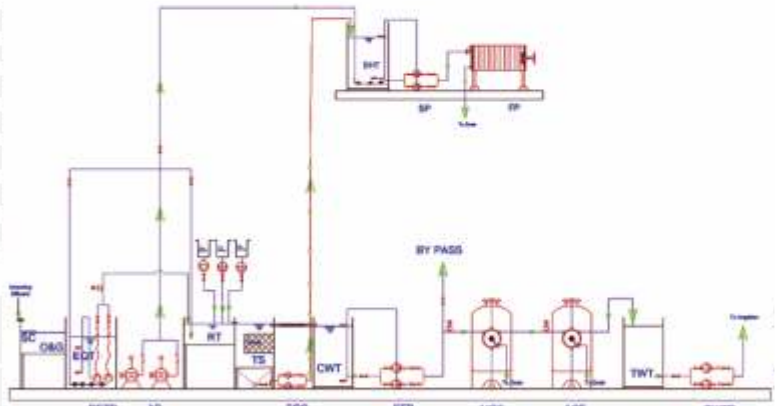
PROCESS FLOW DIAGRAM OF ADVANCE MBBR

A Moving Bed Biofilm MBBR reactor consists of a tank with submerged but floating plastic (usually HDPE, polyethylene or polypropylene) media having specific gravity less than 1.0. The large surface area of the plastics provide abundant surface for bacterial growth.

Advance MBBR: For high BOD Degradation (Usually less than 5-6mg/ltr) Brisanzia provides special Porous spherical beads Media made-up of Poly Vinyl Alcohol (PVA GEL) which provides high surface area for Microbial growth.

EFFLUENT TREATMENT PLANT (ETP)

Effluent Treatment is the process of removing contaminants from industrial wastewater to make it safe for discharge or reuse. The objective of an ETP is to reduce pollutants such as suspended solids, organic matter, oils, grease, heavy metals, and toxic substances in compliance with environmental regulations.



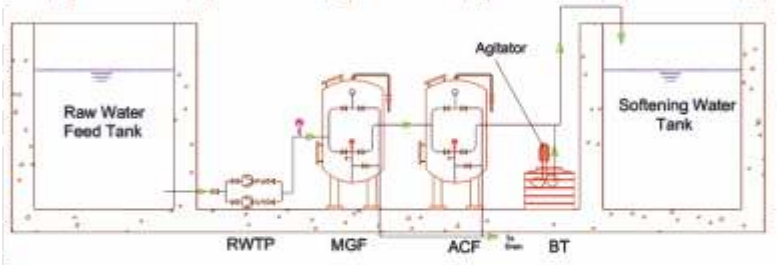
PROCESS FLOW DIAGRAM OF EFFLUENT TREATMENT PLANT

The treatment process generally consists of **primary, secondary, and tertiary stages.** In the primary stage, large solids and suspended particles are removed through screening, grit removal, and sedimentation. In the secondary stage, biological treatment is carried out using aerobic or anaerobic microorganisms that decompose organic matter present in the effluent. The tertiary treatment involves advanced processes such as filtration, chemical dosing, adsorption, or disinfection to further improve water quality.

Chemical treatment includes coagulation and flocculation, where chemicals like alum, lime, or polymers are added to destabilize and aggregate suspended particles, which are then removed by settling or filtration. Sludge generated during treatment is collected, thickened, and dewatered for safe disposal.
Sizing of an Effluent Treatment Plant is based on three major factors: **the volume of effluent generated (flow rate), the characteristics of the wastewater (BOD, COD, TSS, pH), and the desired quality of treated water as per discharge standards.**

WATER SOFTENER PLANT

Softening is the process Of removing Calcium and Magnesium ions from water through Cation exchange. This is typically used to reduce scaling tendency of water used for boiler feed, or to increase the lather effect of detergents, particularly in laundries In this process, Calcium and Magnesium ions in solutionare exchanged for sodium ions attached to a cationic resin. When water is passed through this resin, the calcium and magnesium ions in the water displace the Sodium Ions, and adsorb onto the resin. During the regeneration process, a highly concentrated saline solution (15-30% NaCl) is used to "wash" the resin. This causes the Ca or Mq which is adsorbed on the resin to be replaced with Na.

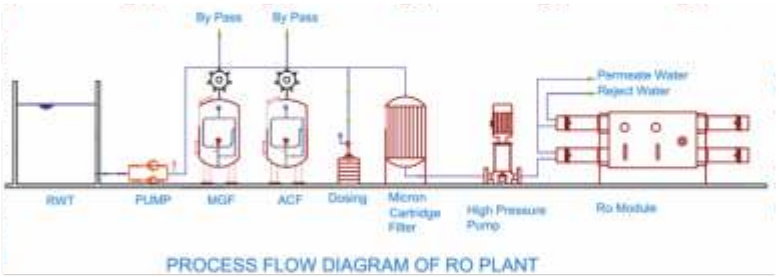


PROCESS FLOW DIAGRAM OF WATER SOFTENING PLANT

Sizing of Softener is based on three factors; the capacity of the softener (flow rate), feed water hardness, and frequency of regeneration required.

REVERSE OSMOSIS - RO

Reverse osmosis (RO): is a separation process that uses pressure to force a solution through a membrane that retains the solute on one side and allows the pure solvent to pass to the other side. More formally, it is the process of forcing a solvent from a region of high solute concentration through a membrane to a region of low solute concentration by applying a pressure in excess of the osmotic pressure. This is the reverse of the normal osmosis process, which is the natural movement of solvent from an area of low solute concentration, through a membrane, to an area of high solute concentration when no external pressure is applied.



PROCESS FLOW DIAGRAM OF RO PLANT

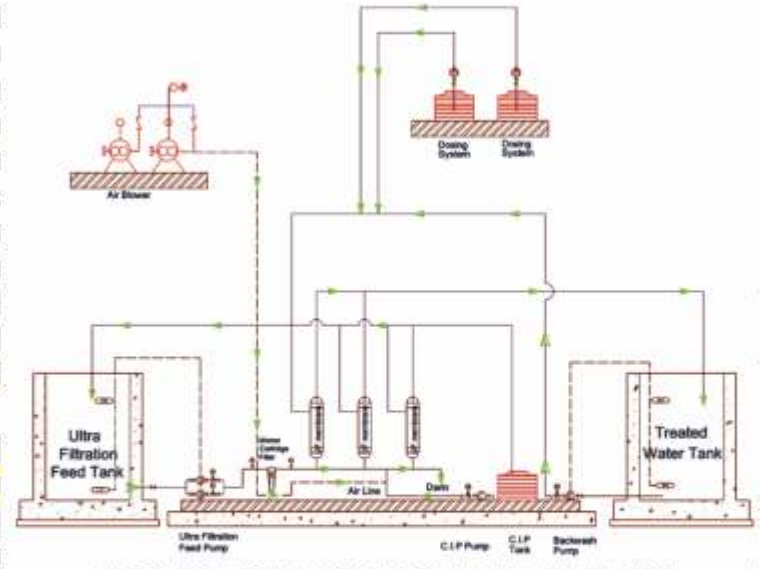
This process is best known for its use in desalination (removing the salt from brackish & sea water to get fresh water), but it has also been used to purify fresh water for medical, industrial and domestic applications since the early 1970s.

Riasa Water Technologies Pvt. Ltd. manufactured & sale customized and standardized skid mounted RO Plant for industrial, commercial and residential Purpose.

ULTRA FILTRATION - UF

Ultrafiltration is a membrane based technology, which is used for separation of higher molecular weight particles from water. It can separate particles of even 0.01 microns from liquid (i.e. Molecular weight 10KD to 100KD). Different membrane configurations and sizes are available for filtration requirements. Hollow fiber and Spiral wound configurations are most commonly used in the industry. Unlike RO membranes, the UF membranes have tolerance for free chlorine also they do not alter minerals compositions.

Ultra filtration system can be used both in pre-treatment and post treatment process. The best Feature of UF Plant is Simple to operate, easy to maintain, Automatic operation, Compact, Adequate safety interlocks, Automatic forward flush and back flush.



PROCESS FLOW DIAGRAM OF ULTRA FILTRATION

Riasa

Our Happy Clients

S. No.	Name of Client	Location of Client
1	M/s All India Medical Science (AIIMS)	Jodhpur (Rajasthan)
2	M/s All India Institute of Medical Science (AIIMS)	New Delhi
3	M/s Central University of Haryana	Mahendragarh, Haryana
4	M/s DLF New Town Heights	Sector-86, Gurgaon
5	M/s DLF New Town Heights	Sector-91, Gurgaon
6	M/s Lady Hardinge Medical College	Delhi
7	M/s Indian Medical Association	Agra Branch
8	M/s Safdarjung Hospital, SSB	Delhi
9	M/s Safdarjung Hospital, NEB	Delhi
10	M/s Venkateshwar Hospital	Dwarka, Delhi
11	M/s Sri Vankateshwar International School	Dwarka, Delhi
12	M/s Omaxe Ltd.	Chandigarh (Punjab)
13	M/s Sikka Group (Sikka Karnam Greens)	Sector-143, Noida
14	M/s Amrapali Princely Estate	Sector-76, Noida
15	M/s Amrapali Corporate Hub	Manaser, Gurgaon
16	M/s Amrapali Zodiac	Sector-120, Noida
17	M/s Norex Flavours Private Limited	Gajraula (UP)
18	M/s Tempesta Luxury Product Private Limited	Manaser, Gurgaon
19	M/s Nalanda Builders and Developers India Limited	Agra (UP)
20	M/s Dwarka Residency	Agra (UP)
21	M/s Atul Hospital	Rudrapur (UK)
22	M/s Aksysco Corp LLP	New Delhi
23	M/s Ginger Hotel	Lucknow (UP)
24	M/s Havells Electrical & Electronics	Greater Noida (UP)
25	M/s Indian Aromatics	Moradabad (UP)
26	M/s B.D. Pathak Hospital	Rudrapur (UK)
27	M/s Being ENT Maternity Hospital	Rampur (UP)
28	M/s Maharshi Vashishtha Vidyapeeth	Deoria (UP)
29	M/s Gautam Neuro and Spine Hospital	Rudrapur (UK)
30	M/s Angel Public School	Gurgaon

LADY HARDINGE MEDICAL COLLEGE 100 YEARS 1916 - 2016

AIIMS

sikka

VENKATESHWAR HOSPITAL

S. No.	Name of Client	Location of Client
31	M/s Scientific Pathology	Agra (UP)
32	M/s Sharma Nursing Home	Agra (UP)
33	M/s Dhawan Orthocare	Agra (UP)
34	M/s Gayatri Hospital	Agra (UP)
35	M/s Vijay Nagar Hospital	Agra (UP)
36	M/s Precision Diagnostic Center	Agra (UP)
37	M/s Jaypee University of Engineering & Technology	Guna (MP)
38	M/s Sanjivani Hospital	Rudrapur (UK)
39	M/s Agarwal Hospital & Trauma Center	Rudrapur (UK)
40	M/s Synergy Steels Ltd.	Alwar (Rajasthan)
41	M/s Agarwal Hospital	Rudrapur (UK)
42	M/s Khaitan Chemicals & Fertilizers Ltd.	Nimrani (MP)
43	M/s Gwalior Sahakari Dugdh Sangh	Gwalior (MP)
44	M/s Insight Softlabz	Kala Amb (HP)
45	M/s Cheema Hospital & Trauma Center	Rudrapur (UK)
46	M/s Aarogyam Hospital	Lucknow (UP)

Operation And Maintenance Services

S. No.	Name of Client	Location of Client
1	M/s All India Institute of Medical Science (AIIMS)	Delhi
2	M/s Venkateshwar Hospital	Dwarka, Delhi
3	M/s Sri Venkateshwar International Hospital	Dwarka, Delhi
4	M/s New Emergency Block, Safdarjung Hospital	New Delhi
5	M/s Super Speciality Block, Safdarjung Hospital	New Delhi
6	M/s Lady Hardinge Medical College	New Delhi
7	M/s Sikka Karmic Green	Noida (UP)

HAVELLS DLF TOSHIBA Leading Innovation JAYPEE GROUP

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