

DAIKI AXIS: JAPANESE TECH DRIVING SUSTAINABLE WATER SOLUTIONS FOR A RESILIENT INDIA

As India's cities and towns expand at breakneck speed, the country's wastewater crisis is reaching alarming proportions. Stepping up to this urgent challenge is Daiki Axis India, a company that is redefining how India can tackle sewage by bringing Japan's proven Johkasou Sewage Treatment Plant (STP) technology to thousands of communities nationwide.

Incorporated in 2018, Daiki Axis India is a wholly owned subsidiary of Daiki Axis Co. Ltd., one of Japan's most trusted names in packaged STPs for nearly seven decades. Johkasou, which means 'purification tank' in Japanese, is much more than just a product, it represents an entire concept of decentralised, on-site wastewater treatment, licensed and supported by Japan's Ministry of Environment and Ministry of Land, Infrastructure and Transport.

This innovation has become a standard across Japan and already spread all over the world, more than 80 lakhs Johkasou units have been installed over the years. Today, the same technology is helping India make the crucial shift from letting untreated sewage pollute rivers and groundwater to turning every drop into a resource that communities can reuse responsibly.

A FLEXIBLE, PLUG-AND-PLAY SOLUTION FOR INDIA

What sets Johkasou STPs apart is their practicality. Unlike large, centralised sewage systems that require huge civil works, years of planning and massive infrastructure investments, Johkasou units are factory-manufactured, prefabricated and delivered ready to install. This means communities



0.5 MLD Johkasou installation for NMCO project under IIRCA at Belludi, Udhampur Nagar Uttarakhand



As Rio Waza points out, "Genuine sustainability transcends mere technological advancements; it thrives through the people, the communities stewarding these systems, and the skilled professionals dedicated to their upkeep. By nurturing local talent, we are laying the groundwork for a water-positive future in India."

REAL-WORLD IMPACT ACROSS INDIA

The positive results are already visible on the ground. With over 1,500 Johkasou units installed across states such as Maharashtra, Gujarat, Karnataka, Tamil Nadu and the Delhi-NCR region, Daiki Axis decentralised systems Johkasou are helping urban and rural communities alike.

In public parks managed by agencies like the Delhi Development Authority, Nagpur Municipal Corporation and Pimpri-Chinchwad Municipal Corporation, Johkasou systems are enabling groundwater conservation, pollution reduction and expansion of green spaces. In Itanagar and Udhampur Nagar drain interception projects show how localised treatment can prevent untreated sewage from entering rivers, supporting the broader goals of the Namami Gange Project.

Major companies including TVS, Campa Cola, HP and JSW are adopting Johkasou systems to help meet ESG commitments, achieve Net Zero goals and earn Green Building certifications. The flexibility of the systems makes them just as suitable for commercial hubs and industrial clusters as for housing societies and resorts.



Staff at Daiki Axis Palwal, Haryana factory

LOCAL JOBS AND SKILL BUILDING FOR A CIRCULAR ECONOMY

Daiki Axis India's impact extends well beyond clean water. The company has embedded skill building and job creation into its mission, contributing to India's growing green workforce. Fresh graduates from IITs, engineering colleges and MBA programs are being trained by Japanese and Indian experts in the manufacture, installation and servicing of Johkasou units. This upskilling generates long-term employment opportunities and builds the human capital needed for India's environmental transition.

Working closely with respected institutions like IITs, Daiki Axis India collaborates on performance testing and best practice guidelines. Partnerships with the Bureau of Indian Standards, CPHEEO, NMCO, FICCI and ASSOCHAM are helping raise industry standards and establish clear frameworks for the decentralised wastewater sector. New initiatives like the IS code 18797:2024 for decentralised STPs and skill development programs with Shri Vishwakarma Skill University ensure that the ecosystem for on-site treatment remains robust and credible.



The Commitment of Daiki Axis to Indian market is remarkable.

From Developing Johkasou Technology suited for Indian environmental requirements and regulations, to establishing 2 Make In India Factories, 4 Offices, a local R&D centre, and an experience of installing over 1000 projects - Daiki Axis is looking to scale up and serve Indian customers looking for reliable STP solutions for ESG, Net Zero, Swachh Bharat and Water Positive movement.

- Kamal Tiwari, CEO and Indian Director, Daiki Axis

can avoid the long delays often linked with traditional sewage systems and instead act now to tackle untreated waste.

These units are compact, require minimal civil construction and can be up and running quickly, a critical advantage in a country where more than 60 percent of sewage is discharged untreated every day. Johkasou systems come in flexible sizes, ranging from as little as 1 kilolitre per day to more than 500 kilolitres per day. This modular design means they are equally effective for an individual villa, a housing society, a commercial building or an entire institutional campus.

Treated water from Johkasou systems consistently meets the discharge norms set by the Central Pollution Control Board and is reused for safe, non-drinking purposes such as toilet flushing, landscaping, gardening and road cleaning. This not only eases the pressure on freshwater supplies but also supports India's broader goal of building water-positive cities and towns.

ALIGNED WITH MAKE IN INDIA

Daiki Axis India has deeply committed itself to the Make in India initiative, ensuring that advanced Japanese expertise is adapted to local needs and produced locally to world-class standards. Its state-of-the-art manufacturing plants in Palwal, Haryana and Vadodra, Gujarat, produce high-quality Johkasou units for deployment across the country. A third facility, now under construction in Tumkur, Karnataka, will soon expand the company's annual production capacity to more than 2,000 units.

This local manufacturing push means communities benefit from fast supply times, assured quality and reliable service support. More than 30 local partner companies now

work closely with Daiki Axis India to deliver installation and maintenance services, ensuring that each unit runs efficiently year after year. This unique partnership model makes it efficient and scalable to provide services even to smaller cities and towns or to villages in future to meet ambitious sanitation targets of the country.

RETHINKING WASTEWATER: MAKING EVERY DROP COUNT

At its core, Daiki Axis India's vision is about transforming the way people think about wastewater, shifting the mindset from disposal to reuse. Rather than seeing sewage as an inconvenience to be pumped away through costly central networks, communities can now see it as a renewable resource. This decentralised approach empowers housing societies, schools, hotels, factories and even remote townships to treat water right where it is generated, reuse it productively and dramatically reduce pollution of local water bodies.

Such local treatment systems also cut the burden on already strained municipal networks. With untreated sewage remaining one of India's biggest contributors to water contamination, decentralisation is a practical solution that keeps pace with rapid urban expansion and protects groundwater for future generations.

This model fits perfectly with India's vision for Viksit Bharat by 2047, where cities and villages alike have safe sanitation, clean water and resilient infrastructure. By treating wastewater at the source and putting it back to good use, Johkasou helps communities and businesses conserve groundwater, reduce energy costs related to transporting water and tackle water scarcity head-on.



India generates vast volumes of wastewater daily, yet much of it still goes untreated. Johkasou makes it possible for communities to treat their sewage at the source, reuse treated water and protect our rivers, lakes and aquifers. It's an immediate, scalable and sustainable alternative to waiting for big infrastructure projects.

- Rio Waza, Managing Director, Daiki Axis India

Importantly, Johkasou units are also helping remote and semi-urban communities and logistics centers where sewer networks do not exist or are impractical. By treating sewage on-site and reusing water locally, these areas avoid the health hazards of open drains and soak pits and reduce dependence on expensive water tankers.

A FUTURE-READY SOLUTION FOR VIKSIT BHARAT

As India aims to become a \$5 trillion economy and build climate-resilient cities, scalable, decentralised wastewater solutions will play a pivotal role. From supporting flagship missions like Housing for All, Gati Shakti projects under Indian Railways, national highways, industrial clusters or power Airport, the Smart Cities Mission, Jal Jeevan Mission and Amrit Sarovar, to helping communities tackle water scarcity, urban flooding and pollution, Johkasou is proving that every drop can count.

With more than two million installations worldwide, Daiki Axis Co. Ltd. has shown that decentralised wastewater treatment works on every scale, from small homes to large industrial sites. By localising this proven model, Daiki Axis India gives communities and businesses a tool that is easy to install, cost-effective to run, flexible to expand and straightforward to maintain.

With India experiencing swift urban growth, there is little margin to wait for large-scale wastewater infrastructure projects. The decentralised wastewater treatment systems are now more essential than ever. This

TESTIMONIALS

We Installed and Evaluated performance of small 5 KLD Johkasou unit installed at Decentralised Waste Management Technology Park at Jafrabad, East Delhi, under the Waste to Wealth Mission of the office of Principal Scientific Advisor of Government of India to meet operational and non potable needs of the park. The unit was commissioned in February 2022 and operated for 1 year. The performance was monitored by the waste to wealth mission project unit, it was found satisfactory and consistent.

- Malayaj Varmani, VP, Waste to Wealth Mission Project Management Unit (Office of the Principal Scientific Advisor, Government of India)

It is a very promising supplement to the centralized sewerage system. Very well suited for wastewater treatment in small habitations in eco-sensitive areas of the Himalayas and other similar regions of India. The effluent quality is too good for even non-potable reuse. The maintenance is effortless; a single person can manage 200-300 systems. Energy consumption can be optimized by adding solar panels.

- Absar Ahmad Kazmi, Indian Institute of Technology Roorkee

We have done evaluation of Johkasou system for treatment of domestic wastewater for nutrient removal as per the target of NGT orders and micropollutant removal. The project is part of our JICA funded R&D project with Indian and Japanese experts. We found Johkasou demonstrated high removal rate and consistent performance, the process is robust, operations are simple, noise and odor free. We are excited about the next phase of joint development and application potential for Indian market.

- Prof Debraj Bhattacharya, Dept. of Civil Eng, IIT Hyderabad

We Installed Daiki Axis Johkasou at Kanchanpur, Varanasi, UP under the project for the comprehensive improvement of environmental sanitation in Varanasi (CIESV) which was commissioned in March 2024, it is functioning properly with verified treatment performance through NABL accredited Lab. We are satisfied with the product performance and technical support of Daiki Axis India.

- Er. Katsuyoshi Sudo, JICA Expert on Wastewater Management, The project of CIESV

Sustainability rejuvenates recycling, reuse and recharge. Johkasou, a technology to recycle waste water was deployed and used for watering the gardens. Four gardens in Pune are being maintained using recycled waste water. This was well appreciated by citizens and a very good model of private public partnership besides deploying CSR funds for sustainability project.

- Kiran Acharya, Managing Director & CFO, Sandvik Asia Private Limited

We installed 50 KLD Johkasou unit, project was executed in professional way and the plant is working satisfactorily. The electrical consumption, noise level, maintenance cost is very low.

- Varadharajan, GM, K A S Industries Pvt. Ltd.

The performance of Johkasou STP is satisfactory and the recycle water is used for gardening and other non-potable usage at site, we are happy with the product performance and service support provided by Daiki Axis.

- Kandhari Beverages Pvt. Ltd

We installed 50 KLD Johkasou at our campus in Hinjewadi Pune. The plant is installed in underground position in the front of the campus, we can freely walk over the stp plant with noise and Odor less operation, the treated water from Johkasou unit is used for gardening and flushing.

- Neilsoft Pvt. Ltd.

urgency was underscored when Japanese Prime Minister Mr. Kishida and Indian Prime Minister Mr. Modi signed a Memorandum of Cooperation (MoC) between their nations, emphasizing strengthened collaboration to address these pressing urban challenges.

With every installation, Daiki Axis India reinforces its belief that wastewater is not a burden but a resource waiting to be recovered. By treating every drop responsibly and putting it to good use, communities can move confidently toward a future that is truly water secure, low carbon and resilient.

PROTECT x CHANGE

Daiki

AXIS

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