



Q-SEP[®] Q-Connect
Compact Ultrafiltration Solution
for an Indian Mega-City



Client: Municipal Corporation in India

Plant Capacity: Multiple Locations: 208 m³/hr (5 MLD), 500 m³/hr (12 MLD), 625 m³/hr (15 MLD)

This metropolitan city, with a population of over 7 million, places immense pressure on its limited freshwater sources and generates nearly 800 million liters of wastewater daily. With a per capita demand of about 135 liters per day, the gap between supply and availability is substantial. To ensure long-term water security, the municipal corporation had to prioritize wastewater recycling for non-potable uses such as landscaping, construction, and industrial applications. The municipal corporation was searching for a compact, reliable, and cost-effective solution that can be easily integrated into urban infrastructure.

Challenges:

A leading water technology solution provider faced tight space constraints while delivering a project for a major municipal corporation in India, requiring ultrafiltration to meet the city's growing water demands. As water scarcity is becoming a major challenge in the region, solving this problem required not just engineering excellence but also timely execution to improve water supply in the region without delay. The project grappled with space as well as cost constraints, which especially demanded a solution that could help them address both challenges.

QUA's Solution:

QUA delivered its Q-Connect-6.0 and Q-Connect-4.0 ultrafiltration rack solutions, installing a total of 214 Q-SEP 10012 modules across three municipal locations of capacity 208 m³/hr (5 MLD), 500 m³/hr (12 MLD) and 625 m³/hr (15 MLD). Each Q-SEP 10012 module is a PVDF-based membrane with a 100 m² area, providing reliable and efficient water treatment within the limited footprint available.

The pre-engineered racks were selected to meet the client's flow and quality requirements within a limited footprint, optimizing space, simplifying installation, and ensuring reliable, high-performance water treatment.

This large-scale deployment showcases QUA's ability to execute complex projects seamlessly, delivering sustainable and efficient solutions within a couple of months.



Scheme Offered



Results

QUA's pre-engineered Q-SEP Q-Connect significantly reduced engineering and installation manhours by minimizing on-site pipe and skid fabrication work. This compact ultrafiltration (UF) system enhanced water purification while fitting seamlessly into a constrained space, demonstrating QUA's ability to deliver result-driven solutions for real-world conditions.

The project was completed on time and within budget, while successfully achieving all water treatment objectives. This outcome reflects QUA's commitment to delivering innovative, reliable, and high-performance solutions in space-constrained and complex environments.