



Grundfos pump audit reveals hidden savings in a Mumbai residential complex

The Situation

With the raising maintenance costs in an upscale residential building complex in Mumbai, India, the resident owner's association decided to have a relook into the existing hydro pneumatic system installed by the developer. The apartment complex was supplied with hydro pneumatic systems capable of pumping 32 kilo liters of water per hour for 220 number of residential flats. With increasing energy costs, a Grundfos energy audit was planned to see the possibilities of optimizing their water boosting system.

The Solution

Grundfos energy audit of the domestic and flushing hydro systems at S1 service floor of the three towers revealed that apartment hydro pneumatic system was grossly oversized. Actual water consumption was only around 55% of its design capacity. After carefully observing & validating the actual consumption pattern over a month period, a detailed replacement plan was chalked out.

Complete hydraulic and electrical performance of the existing

booster system was recorded and analyzed on the possible ways of optimizing the water boosting system to deliver the best energy performance. With Grundfos CRE pumps pitched for replacing the existing booster system, a payback period of 21 months was arrived at.

“Grundfos IE5 solutions typically save around 10-12% of energy more than a similar solution with IE3 class of efficiency motors for a similar load profile”

Dharmendra Singh
Associate Sales Engineer
INDO CBS

GRUNDFOS 

Possibility in every drop



Up to 27%
energy savings

13.4 mT
of CO2 reduction

21 months
payback

To reduce the CAPEX and to optimize the payback period, existing booster system headers and valves were reused. Further, with CRE pumps - a very precise control of set pressure with host of other MPC – Multi Pump Controller features were made possible.

The Outcome

After downsizing the existing booster system with new CRE pumps with optimized capacities, customer could get an energy savings of 27% equivalent to a reduction of 13.4 metric tons of carbon emissions per year.

Downsized CRE pumps to suit the actual water consumption, an energy savings carefully observing & validating the actual consumption pattern over a month period, a detailed replacement plan was chalked out.

Grundfos Supplied

Grundfos upgraded the existing Hydro MPC F system with 3 CR 32 pumps to become Hydro MPC-E with 2 CRE 10-6 system using the existing supply and discharge headers together with associated valves & expansion tank.



Hydro MPC E



CRE