



● HOSPITAL

Hospital Hot-Water Scale Control – Five-Year Results Trois-Épis, France

Twelve *HydroFLOW*® units replaced six softeners, eliminating limescale maintenance and pipe blockages over five years while delivering major projected CAPEX and OPEX savings.

5 years

Scale-Free Operation

Zero

Pipe-Blockage

95%

OPEX Saving

50%

CAPEX Saving

**BEFORE & AFTER**

● BEFORE

- Six ageing softeners required replacement
- Regeneration consumed salt and water
- A few Legionella alerts occurred annually

● AFTER

- ✓ No limescale maintenance for five years
- ✓ Zero scale-related pipe blockages
- ✓ Energy performance remained stable

**OVERVIEW**

The 206-bed MGEN Trois-Épis rehabilitation centre produces domestic hot water from very hard Colmar water at approximately 330 ppm. Six ageing softeners consumed significant salt and regeneration water and required resin replacement. *HydroFLOW*® was evaluated as a more economical and ecological alternative.

**CHALLENGE**

Very hard water required extensive softening to protect the site's domestic hot-water systems.

- Softeners consumed significant salt and water
- Ageing resins required replacement
- Scale control critical at ~330 ppm hardness

**SOLUTION**

HydroFLOW® units replaced six softeners across the site's domestic hot-water system. The 12 units were installed in one day without interrupting water service.

UNITS INSTALLED

12× *HydroFLOW*® units

SYSTEM CAPACITY

2,550 kW total DHW production



SITE

MGEN Trois-Épis rehabilitation centre



SITE

Existing softener before replacement



SYSTEM

The 3 DHW production exchangers



RESULTS



Limescale Maintenance Ended

No limescale-related maintenance was required over five years.



Zero Pipe-Blockage Callouts

DALKIA recorded no interventions for scale-blocked DHW pipes in five years.



No Legionella Alerts

No Legionella alert was detected on the DHW network after installation.



Energy Performance Maintained

No exchanger delta-T variation or decline in energy performance was detected.



% 95% Calculated OPEX Saving

The source comparison estimates annual OPEX at €50 versus €1,250 for softening.



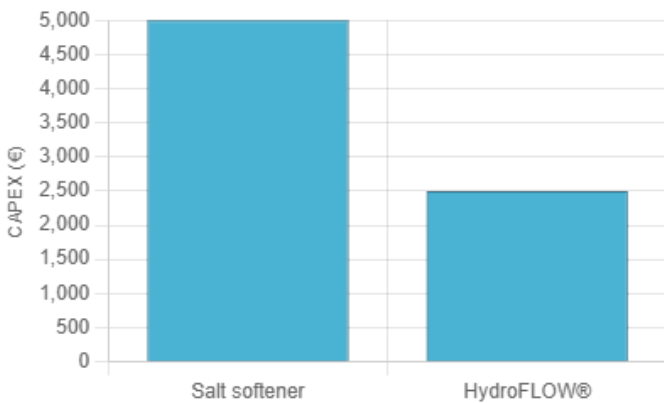
Exchanger Free of Limescale

Five-year inspection found no trace of limescale on the dismantled plate exchanger.



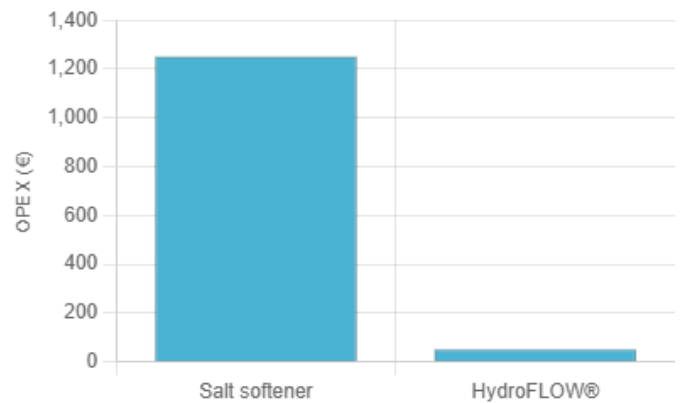
GRAPHS

Initial Investment Comparison



Upfront equipment investment was approximately €5,000 for the salt softener compared with €2,500 for HydroFLOW®

Annual Operating Cost Comparison



For every 1,000 m³ of water produced, annual operating costs were calculated at €1,250 for the salt softener versus €50 for HydroFLOW®

KEY TAKEAWAY

Summary

MGEN replaced six ageing softeners with 12 *HydroFLOW®* units across its domestic hot-water systems. Over five years, reliable scale control was maintained with no limescale-related maintenance or pipe blockages, while energy performance remained stable and operating costs were reduced.



ADDITIONAL PHOTO EVIDENCE



INSPECTION

No limescale found after five years of operation



INSTALLATION

Main substation equipped



INSTALLATION

200kW Leisure Exchanger



INSTALLATION

Roseaie 300kW exchanger



INSTALLATION

200kW Balneo exchanger



INSTALLATION

Villa PFLEGER boiler



INSTALLATION

Villa OLRy domestic hot-water tank



INSTALLATION

Villa des CHENES domestic hot-water tank



INSTALLATION

Villa EXCELSIOR domestic hot-water tank

HYDROPATH

Need lower-maintenance hospital hot-water systems?

Ask Hydropath about scale control for healthcare water systems.

✉ sales@hydropath.com

☎ +44 (0)115 986 9966

🌐 hydropath.com

✓ ISO 14001:2015

✓ ISO 9001:2015

✓ GREENPRO

✓ SOLAR IMPULSE