Somfy Case Study – University of Debrecen, Faculty of Pharmacy

1. INTRODUCTION

The new building complex of the Faculty of Pharmaceutical Sciences at the University of Debrecen was established as a state-of-the-art teaching, research, and pharmaceutical manufacturing center that integrates education, research, and pilot manufacturing activities related to drug development in a single location. The building was constructed as part of the development of the Debrecen Innovation Park, with a strong emphasis on modern, energy-efficient, and high-comfort operation.

A major technical challenge during the project was the external shading of the large glass surfaces to ensure long-term interior comfort in the laboratories, educational spaces, and offices.

As part of the project, Realflex Kft. manufactured and installed a total of 114 L-80 type external facade louver systems. The louvers provide external shading for the facade, supporting the building's energy-efficient operation and the maintenance of a stable indoor environment.

The close professional collaboration between Realflex Kft. and Somfy played a decisive role in the selection of Somfy: Somfy took an active role in the project's success not only as a supplier but also as a partner in automation and system commissioning.

2. REQUIREMENTS

The project required not just a simple shading solution, but an intelligent, external facade shading system that:

- is capable of reducing the thermal load on large glass surfaces;
- supports a stable indoor climate in laboratory and educational spaces;
- ensures control of natural light and reduces glare;
- contributes to the building's energy-efficient operation;
- can be integrated into a smart building automation system.

Project objectives:

- Mitigate indoor heating caused by excessive solar radiation;
- providing a comfortable environment for education, research, and work;
- reducing cooling energy demand;
- Designing automated, sun-tracking external shading;
- Creating a system that is reliable in the long term and requires minimal maintenance.

3. THE SOLUTION

As part of a project for the Faculty of Pharmacy at the University of Debrecen, Realflex implemented a complex external facade shading system.

As part of the project, a total of 114 Realflex L-80 exterior shutters were installed. The system's automated operation is ensured by 93 Somfy J4WT shutter motors.

In certain zones of the system, shutter fields connected by mechanical couplings were installed, allowing multiple shading units to operate with a shared motor drive, thereby optimizing the system's cost and operational efficiency.

Construction took place from early November 2023 to mid-December 2023, in close cooperation with the general contractor TÁRS-95 Kft.

The system's main components:
• Somfy J4WT blind motors for precise slat movement;
• Somfy MoCo control units for intelligent motor management;
• 1 Somfy Animeo TouchBuCo central control unit;
• 1 Somfy M13 weather station, which monitors environmental parameters in real time and automatically optimizes the operation of the blinds.

The system operates with automatic sun-tracking logic, which helps maintain indoor comfort and supports energy-efficient operation.

4. BENEFITS

• More effective thermal protection: the external L-80 blinds block solar radiation before it reaches the glass surface, reducing overheating inside.
• Greater comfort: a more stable indoor climate and reduced glare in laboratories, educational spaces, and offices.
• Energy-efficient operation: reduced cooling energy requirements and optimized use of natural light.
• Smart control: automatic sun tracking and weather-dependent operation.
• Long-term reliability: a professionally installed, low-maintenance system.

5. CUSTOMER TESTIMONIAL

"For the new building of the Faculty of Pharmacy at the University of Debrecen, it was of paramount importance that the external facade shading system not only provide shading but also actively contribute to a stable, comfortable indoor environment in the research and teaching spaces. With Somfy's smart control system, an energy-efficient and long-term reliable system was implemented."

— Szabolcs Deák, Managing Owner, Realflex Kft.

6. SUMMARY

The project at the Faculty of Pharmacy at the University of Debrecen is a prime example of how a smart exterior shading system can simultaneously support energy efficiency, user comfort, and high-quality building operations.

The 114 L-80 external shutters manufactured and installed by Realflex, along with Somfy's smart automation system, have resulted in a state-of-the-art external shading solution that contributes to the high-quality operation of the university's educational and research environment in the long term.