

July 2024

## **MEDIA INFORMATION**

**Pulse, Delft University of Technology, NL**

### **New centrepiece for excellence**

**The Technical University (TU) in Delft attaches great importance to offering students and staff a modern and inspiring environment. This is another reason why this university is one of the best in the world. "Pulse", the latest university building, creates new connections on campus and the university is once again setting new standards.**

The TU Delft campus aims to provide the basis for outstanding research and teaching as well as innovative collaboration with external partners. Buildings and facilities provide the framework for a pleasant and challenging learning and living environment. In order to be able to fulfil this requirement given the growing number of students, the university is constantly renovating and expanding its campus. The new "Pulse" building (short for practice, unite, learn, share, explore) was constructed in the centre of the educational landscape. The architects from Ector Hoogstad Architecten in Rotterdam were responsible for its design, working closely with education, sustainability and construction experts as well as students from Delft University of Technology.

The challenge facing the architects was, in their words, "to develop an educational building that encourages creative and critical thinking and helps students to become socially responsible engineers". Their approach was to create a building that encourages active learning, interaction and collaboration. As modern forms of learning emphasise interactivity, guided learning and skills development, the building was designed for interactive seminars and video conferencing. Ten modern lecture theatres and three large areas for informal learning as well as a food court have been created.

### **Unite - creating connections**

Pulse is open to all faculties and provides an opportunity to experience the sense of close community and informality that the university strives for. An important keyword is "connection", also in the formal sense. The building is based on an unusual steel construction, whose cantilevered upper storeys technically consist of two elements that brace apart and support each other. Here, steel crossbeams were used, some of which were visible. The building was also designed as a hub in the campus's network of pathways, linking the various educational areas. Covered walkways on the ground floor and first floor lead to the neighbouring faculties. They also offer space for chance encounters and interaction.

Large glass surfaces on all sides of the building create an open and connecting character with the surroundings. The incidence and orientation of daylight largely determines the layout of the building and the arrangement of the various rooms

inside. This orientation was developed in co-operation with the consulting and engineering firm DGMR. Every room should receive an appropriate amount of natural light. However, to avoid glare in the classrooms in a natural way, they were orientated to the north-east. In contrast, the south-western part of the building is flooded with sunlight through floor-to-ceiling windows and skylights, which only fades as the day progresses. This area is intended for learning, meetings and discussions.

### **Innovative window and door solutions**

When designing the interior, the concept was to combine high-tech and warm materials. Surfaces with sophisticated finishes meet visible installations. Aluminium, steel, glass and concrete were combined with wood and textiles. This gives the building a robust and energetic as well as a cosy and friendly atmosphere. Overall, the building appears light and transparent, thanks in part to the glass façades and skylights. For the façade, the architects opted for the VISS SG all-glass façade in structural glazing construction. The stability of the steel profiles allows particularly filigree interior views. At the same time, large-format glass surfaces are possible. They measure up to 3.5 x 2.4 metres and thus visibly increase the transparency of the building envelope. Variable glass anchors allowed the installation of double insulating glass.

The façade can be partially opened up so that the cafeteria on the ground floor merges with the square. This is where the VISS system solution, on which the VISS SG pivot doors used are also based, proves its worth. The doors, which also measure 3.5 x 2.4 metres, can be opened either manually or via the intelligent building management system using a touchscreen. The reversible doors rotate around a slightly offset vertical axis. This means that the massive weight of these floor-to-ceiling actual façade elements of 475 kilograms can be optimally supported statically and a particularly inviting gesture can be created. On the upper floors, natural ventilation of the rooms is ensured by VISS parallel vent windows. In this way, the effect of the pure all-glass look can be perfectly maintained.

With the VISS SG, Jansen is once again offering an architecturally high-quality solution for the construction of an aesthetically pleasing all-glass façade in an energy-efficient design.

## **PROJECT DETAILS**

### **Area of application:**

All-glass façade, doors, windows

### **Products:**

VISS SG, VISS SG Pivot, VISS parallel opening window

### **Date of completion:**

2018

### **Architecture:**

Ector Hoogstad Architecten, Rotterdam

### **Metalwork:**

JM van Delft & zn, Drunen

### **Building owner:**

Delft University of Technology

### **Text:**

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**PICTURE OVERVIEW:**

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Picture 1: For the façade of the new "Pulse" university building at TU Delft, the architects opted for the VISS SG all-glass façade in structural glazing construction.



Picture 2: The façade of the "Pulse" university building can be partially opened up so that the cafeteria on the ground floor merges with the square. This is where the VISS system solution, on which the VISS SG pivot doors used are also based, proves its worth.



Picture 3: On the upper floors, natural ventilation of the rooms is ensured by VISS parallel vent windows. In this way, the effect of the pure all-glass look can be perfectly maintained.