

## 1. Safety Instructions

### 1.1 General Safety Warnings

- **Glass Breakage:** Glass may break due to strong impacts or thermal stress (e.g., radiators too close to glass, partial shading). Sharp edges of broken glass pose a cutting hazard.
- **Maintenance:** At least once a year, check the stability of safety-critical hardware components and lubricate or tighten them as needed.

### 1.2 Glass Facades

- **Work at Height:** Cleaning, servicing, or repairs on the exterior side of the facade at height may only be performed by qualified personnel with appropriate safety equipment.
- **Leaning and Impacts:** Do not lean against glass surfaces or press on glass with pointed or heavy objects; prevent impacts (e.g., when moving furniture).
- **Fastening Elements:** If you notice loose cover strips, seals, or other fastening elements, stop using the area and immediately contact authorized service.
- **Openable Elements:** If the facade contains openable elements (e.g., facade windows or ventilation louvers), be careful of fingers when closing; do not leave elements open in strong wind.
- **Drainage:** Drainage openings and channels must remain clear. Blockage can cause water ingress and damage.
- **Loading:** Do not hang loads on profiles, transoms, or glass (e.g., decorative lights, blinds without designated brackets) and do not lean on them as you would on a railing.

## 2. User Instructions

### 2.1 Usage and Regular Inspections

- **Visual Inspection:** Regularly check that glass, profiles, and seals are undamaged. If glass is damaged, secure the area and contact service.
- **Seals:** Do not remove or paint over seals. If needed, clean them with a damp cloth.
- **Drainage:** Periodically check drainage openings and gently clean them if necessary (do not use sharp objects).
- **Openable Elements:** If openable elements are installed in the facade, operate them according to instructions for the corresponding window/door type and always close them securely after use.

## 2.2 Cleaning

- Glass: Use a soft sponge or cloth and mild glass cleaner. Avoid abrasive cleaners, coarse sponges, and steel wool.
- Profiles: Clean profiles with a damp cloth and mild detergent. Do not use aggressive solvents or strongly alkaline/acidic cleaners.
- Rinsing: After cleaning, rinse surfaces with clean water and wipe dry to reduce water marks.
- Cleaning Safety: When cleaning the exterior at height, use appropriate safety measures or leave cleaning to a qualified contractor.

## 3. Glass Facades Installation Instructions

This document is intended exclusively for qualified installation teams.

**IMPORTANT: Glass facade installation may only be performed by a qualified specialist – never by an end user. Installation is carried out in accordance with execution drawings, manufacturer/system instructions, and the occupational health and safety plan (OHS).**

### 3.1 Purpose and Scope

These brief instructions provide general steps for glass facade (curtain wall) installation. They do not replace project documentation or system manufacturer instructions. In case of discrepancies, the project and manufacturer/system instructions always take precedence.

### 3.2 Competence and Responsibilities

- Installation is performed by a competent (qualified) team with appropriate proof of qualifications and authorizations.
- Before starting work, a risk assessment must be prepared and followed, and (where required) an OHS plan for the construction site.
- The installation supervisor ensures coordination with other contractors, site security, and supervision of control points.

### **3.3 Workplace Safety (Basic Requirements)**

- Use personal protective equipment (PPE): helmet, safety glasses, cut-resistant gloves, safety footwear; when working at height, also fall protection.
- Minimize manual handling of loads; where possible, use mechanical means (crane, manipulator, vacuum lifters).
- The lifting and installation area must be secured (exclusion zone) and marked; do not stay in the load zone.
- Before each lift, check the load capacity of accessories (straps, chains, vacuum lifters), proper attachment, and equipment condition.

### **3.4 Pre-installation Inspection**

- Review project drawings: axes, elevations, connection details, anchoring, expansion joints, sealing, drainage, fire safety, and other special requirements.
- Inspect the structure: flatness, squareness, load capacity, prepared anchors/inserts; tolerances as per project.
- Inspect delivery: completeness, damage to profiles/seals/hardware, glass damage; reject non-conforming elements.
- Check site conditions (wind, precipitation, temperature) and compliance with conditions for seal/adhesive installation (if used).

### **3.5 Basic Installation Procedure (Summary)**

#### **3.5.1 Mounting Brackets and Substructure**

- Install brackets/supports according to plan (spacing, anchors, shims/insulation, corrosion protection).
- Align and secure vertical profiles (mullions); ensure expansion joints and specified gaps.
- Install horizontal profiles (transoms) and connection elements; check tightening torque according to system instructions.
- Establish planned drainage (channels and openings must remain clear).

#### **3.5.2 Glazing/Panel Installation**

- Store glass on racks; protect edges and prevent point loads.
- Install setting blocks and spacers according to system instructions; do not block drainage paths.
- Perform installation with mechanical aids (e.g., vacuum lifter); prevent impacts, twisting, and bending of elements.
- Install clamping strips/covers or other fastening elements according to system; check tightening torque.

### 3.5.3 Sealing and Finishing

- Install seals (e.g., EPDM) without interruptions; shape joints and connections according to details.
- Clean and prepare surfaces according to seal/primer instructions; observe minimum joint dimensions.
- Apply sealant compounds in prescribed conditions (temperature, humidity) and observe curing time.
- Check continuity of sealing and drainage functionality.

### 3.6 Quality Control and Handover

- Ongoing verification of geometry (axes/elevations), bolt tightening, correct position of seals and shims.
- Visual inspection of glass and profiles (scratches, chips, edge damage, contamination in joints).
- If required, perform agreed tests (e.g., tightness test) and record results.
- Handover documentation: reports, photo documentation of critical details, declaration of performance/CE documentation of system (if relevant), instructions for use and maintenance.

Legal Note: This text is informative and represents minimum general instructions. For specific projects, always follow the project, system/manufacturer instructions, and applicable regulations.

## **4. Care and Maintenance**

### **4.1 General Guidelines**

Before starting maintenance, follow these basic rules:

#### **Recommended:**

- Use mild and pH-neutral cleaners (pH approximately 5–8).
- Clean at surface temperatures up to 25°C maximum, never in direct sunlight.
- Always rinse the surface with water first before wiping (dust acts like sandpaper).
- Use soft microfiber cloths and non-abrasive sponges.
- Maintain hardware with lubricant as recommended by the manufacturer (acid-free oil or grease). Maintain the lock cylinder exclusively according to the cylinder manufacturer's instructions (e.g., synthetic lubricant or dedicated maintenance product).
- Always test a new cleaner on an inconspicuous area of the surface first.

#### **Forbidden:**

- Avoid polishing on matte and textured finishes, as it can permanently alter the surface appearance.
- Do not use abrasive cleaners, wire mesh, or coarse sponges.
- Do not use strongly acidic or strongly alkaline cleaners; stay within the pH range of approximately 5–8.
- Do not clean 'dry' without first rinsing with water.
- Do not use universal oil sprays in the cylinder unless explicitly designed for cylinders. Use lubricant according to the cylinder manufacturer's instructions.

### **4.2 Cleaning**

Always clean glass from top to bottom so dirty water does not run down already cleaned surfaces. Facade sealant joints are made from specialist materials. Do not clean these joints with coarse cloths and avoid aggressive solvents.

### **4.3 Annual Inspection**

Once yearly, visually inspect external drip edges and gaps at the base of the facade, removing any leaves or moss.