1. Safety Instructions

1.1 General Safety Warnings

- Pinching Hazard: Never place your hands or other body parts between the frame and the sash when closing, as this may cause serious injury or crushing.
- Wind and Draft Effects: In strong winds or drafts, sashes must be closed and latched. Open sashes can slam shut or swing open suddenly, potentially damaging hardware, causing property damage, or injuring people and animals nearby.
- Sash Loading: Do not load sashes with additional weight (e.g., do not use them as hangers or ladders).
- 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 Entrance Doors

- Supervision: Children and persons who cannot assess dangers must not be near the doors without supervision.
- Electrical Connections: Installation and connection of motorized locks may only be performed by qualified professional personnel.
- Emergencies: Always keep a physical key with you for emergencies (e.g., in case of power failure with motorized locks).
- Limitations: The handle must not be loaded with more than 15 kg.

2. User Instructions

2.1 Entrance Doors

- Manual Locking: Lock the door with a full turn of the key in the locking direction. For multiple-point locking, a double turn may sometimes be required.
- Automatic Locking: With self-locking locks, the door automatically latches at multiple points when closing. For full security (RC2 burglar protection), additional locking with a key is often required.
- Motorized Opening: The door can be opened with a remote control, fingerprint, or app. The motor automatically retracts the latches and bolt.
- Day Mode: This function allows the door not to lock automatically and can only be opened by pushing/pulling (suitable for high-traffic periods).

3. Installation Instructions for Aluminum Entrance Doors

3.1 Safety and Responsibility

Installation should be performed by professionally qualified personnel. Elements are heavy and may cause product or personal injury, so ensure at least two people for handling the sash and use personal protective equipment.

3.2 Required Tools and Materials (Examples)

- measuring tape, square, pencil
- spirit level (or laser level), plumb bob
- wedges/blocks for temporary fixing
- permanent spacers/shim material, resistant to pressure (e.g., hardwood or hard plastic)
- clamps (as needed for straightening bent elements)
- drill and drill bits appropriate for the substrate (brick, concrete, aerated concrete, etc.)
- mounting anchors or screws with adequate load capacity (min. diameter 6 mm) and appropriate inserts
- sealing system for frame-wall joint (external weather-resistant seal and internal airtight seal, according to selected system)
- mounting PU foam (be aware of expansion) and/or other material for thermal/acoustic gap filling
- protective tape for surface protection, knife for trimming foam

3.3 Receiving, Transport, and Product Preparation

- Carefully transfer the element to the installation site (use a trolley, straps, or other appropriate assistance).
- Do not use handles or grips for lifting doors or sashes.
- Unlock the door and verify it is ready for installation.
- Remove the protective packaging from the frame. Be careful that screws or staples from packaging do not damage surfaces.
- Remove additional packaging with accessories and spare keys and store them safely.
- Remove protective film carefully. Do not allow prolonged contact with sensitive/painted surfaces.
- If decorative protective caps are present on hardware, remove them (if installed as transport protection).

3.4 Removing the Sash (If Required for Easier Installation)

If the sash is already hung, installation is often easier and safer if you first remove the sash.

- Before removing the sash, disconnect any cable connections between the sash and frame (e.g., electric receiver, motorized lock, contacts).
- Open the sash approximately 90° and stabilize it.
- If necessary, remove pins/bolts from hinges. With certain hardware types, pins are not removed – proceed according to the hardware design on the door.
- Remove the sash and lean it upright against a stable surface. Insert protective foam or soft padding between the sash and floor/wall to prevent damage.

3.5 Preparing the Wall Opening

- The wall opening must be clean, load-bearing, and free of crumbling. Remove dust and poorly bonded parts.
- Check the dimensions of the opening, door axis position, and intended installation depth according to the construction plan.
- If the finished floor is not yet installed, determine the installation height according to the projected finished floor height (reference mark on wall or measurement).

3.6 Positioning and Temporary Fixing of the Frame

- Place the frame in the wall opening and shim on left/right sides to the appropriate height.
- Using a spirit level, check the horizontal alignment of the header and vertical alignment of both jambs in all directions.
- Temporarily fix the frame with wedges/blocks at multiple points: approximately 20 cm from corners, then evenly spaced at approximately 50–60 cm intervals along the height.
- If needed, straighten bent frame elements with clamps to achieve correct geometry.
- If using mounting foam, temporarily insert spacer battens inside the frame (in the clear opening) to prevent the frame from being squeezed inward during foam expansion.

3.7 Permanent Frame Fastening

Fastening must be selected according to wall material and anticipated loads. Fasteners must ensure permanent load capacity even under increased loads (e.g., impacts, loads during forced entry attempts).

- Mark fastening points on the frame (according to required statics and element design). Distance between fastening points should be uniform; the same applies to any fixed additions (e.g., sidelight or transom elements).
- At fastening points, always shim the gap between frame and wall along the entire frame depth with durable, pressure-resistant shim material (so the frame does not deform when tightening screws).
- Ensure the shim material cannot move.
- Drill and install anchors/screws (min. diameter 6 mm) with appropriate inserts for the given substrate. Tighten screws gradually and evenly while continuously checking horizontal/vertical alignment of the frame.

3.8 Sealing and Filling the Frame-Wall Gap

- Execute the external joint weather-tight (to prevent precipitation ingress) – use the selected external sealing system.
- Execute the internal joint airtight (to prevent warm, moist air from passing into the structure) – use the selected internal sealing system.
- Fill the gap space thermally/acoustically (e.g., with PU foam or other suitable material). When using PU foam, account for significant expansion and protect surfaces from contamination.
- After curing, trim excess material and remove protective tape within the prescribed time of the materials used (usually within 24 hours at the latest).

3.9 Threshold Installation and Level Control

- The threshold profile must be perfectly level. If necessary, adjust with shims/spacers before final fixing.
- The gap between sash and threshold must be uniform across the entire width.

3.10 Hanging the Sash, Connections, and Adjustment

- If cable conductors are provided, route them through prepared conduits and reconnect connectors (secure mechanically if needed).
- Carefully hang the sash on the frame and assemble hardware according to design (insert pins/bolts if necessary).
- Verify the sash sits evenly on seals around the entire perimeter and that opening/closing is smooth.
- Check lock operation (closing, locking, multi-point locking if present).
- If needed, perform fine hardware adjustment to achieve: even gaps, proper sealing, effortless opening, and correct latch/closing operation.

3.11 Final Inspection (Checklist)

- Frame is level and plumb; fasteners are tightened without deformations.
- Pressure-resistant spacers/shims are installed at all fastening points.
- Threshold is level; sash-to-threshold gap is uniform.
- Frame-wall joint is executed: weather-tight outside, airtight inside, filled in between.
- Sash opens/closes without rubbing; locking works in all positions.
- Surfaces are cleaned, protective films/tape remnants removed, accessories and keys handed over.

3.12 Quality Installation Notes

- Choice of fasteners (anchors/screws/inserts) depends on wall type and loads; when in doubt, verify requirements with the designer or structural engineer.
- Do not fill the gap without prior proper shimming and fixing of the frame – foam is not a load-bearing element.
- Throughout the entire installation, repeatedly check frame geometry (horizontal/vertical) and uniform gaps.

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

Clean aluminum surfaces with water and a mild, pH-neutral cleaner (pH approximately 5–8). Do not clean in direct sunlight or on heated surfaces; recommended surface temperature is 25°C maximum. Remove dust and dry particles before wiping, then rinse the surface and gently wipe dry with a soft cloth to prevent micro-scratches. Always wipe stainless steel surfaces (handles, decorative elements) in the direction of the grain.

4.3 Hardware and Locking

Maintain moving hardware parts at least once a year with appropriate lubricant (acid-free oil or grease), according to the hardware manufacturer's instructions. Apply lubricant sparingly – excessive use can attract dust. Dry lubricants (PTFE sprays) are also recommended as they do not attract dust. For the lock cylinder, always follow the manufacturer's instructions: some recommend synthetic lubricant, others a dedicated maintenance product. Never use universal oil sprays as they attract dust and impair function.

4.4 Seals and Fasteners

Clean seals with a mild cleaner and treat them with a seal care product if needed. Once a year, it is advisable to protect the seals with appropriate lubricant (silicone spray) to keep them flexible and tight. Also check the tightness of the handle and visible screws and carefully tighten them if necessary.

4.5 Troubleshooting

- **Door does not close properly or sticks:** Check the hinges and lubricate them with acid-free oil. If the door sags or rubs against the frame, hinge adjustment is required, which should be done by a professional.
- **Key turns hard in the lock:** Use a dedicated cylinder care spray or synthetic lubricant according to the manufacturer's instructions. Never use universal oil sprays as they attract dust and impair operation.
- **Rust spots on the stainless steel handle:** This is 'flash rust' (fine metal particles from the air). Remove with a dedicated stainless steel cleaner and soft cloth. Always wipe in the direction of the grain (in the brushing direction), not across it.