



INSTALLATION GUIDE

Personal Panel Door (insulated EPS sandwich-panel personnel door)

A made-to-measure single-leaf pedestrian door whose leaf is cut from the same Chromadek-faced, fire-retarded EPS (FRCel) sandwich panel as the wall it sits in, hung in a lipped steel C-section jamb that either clips over the cut edge of an EPS panel wall or fits inside a brick reveal.

DOCUMENT	ISSUED	PRODUCT	STATUS
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BEFORE YOU START

Before anything is unwrapped, the opening must be right.

PANEL-WALL INSTALL. Cut the opening in the Technopol EPS panel wall to dimension D (door jamb frame opening), square and plumb, cleanly through both skins and the core. The cut edge of the panel is the surface the jamb clips onto: it must be straight, uncrushed and free of loose core. A ragged or crushed edge gives the lipped jamb nothing to grip.

BRICK-REVEAL INSTALL. Build the masonry reveal to dimension E (brick wall opening). It must be dry, plumb both ways, square, with a sound lintel already carrying the load above, and flat enough to take the jamb without packing it into a twist. Check the diagonals before you offer the frame up. If the opening is out, fix the opening, not the door.

In both cases, confirm on site that the wall panel thickness matches the jamb size supplied (44, 50, 60, 75 or 100 mm). The jamb is chosen to grip that specific thickness and cannot be adjusted afterwards.

TOOLS

- Tape, folding rule and a long straight-edge
- Long spirit level or a laser level
- Builder's square, and a rod or tape for checking diagonals
- Fine-tooth handsaw or panel saw, or a hot-wire cutter, for the EPS core
- Steel nibbler, aviation snips or a slitting saw for the steel skins. Not an angle grinder: the sparks land on exposed EPS, which is combustible, and the heat glazes the coating at the cut
- Pop-rivet gun (stainless rivets) and a cordless driver
- Hammer-drill and masonry bits for the brick-reveal install
- Sealant gun with an EPS-compatible PU sealant. Solvent-based products dissolve the EPS core
- Clamps or wedges to hold the frame while it is checked and fixed
- Touch-up paint for cut Chromadek edges
- PPE: gloves (cut steel edges), eye protection, dust mask

SEQUENCE

1. Check the delivery against the order and the opening

Lay the set out and check it against the A-G schedule the door was ordered to: leaf width A, leaf height B, panel thickness C, jamb frame opening D, brick opening E (if applicable), handle offsets F and G. Confirm the handedness, and whether the handle, backplate and lock were factory-fitted or supplied loose. Confirm the jamb size matches the panel thickness it has to grip. Then measure the actual opening in the wall and compare it to D (or E). This is the last moment at which a mistake is cheap.

On a double door, check the lockset is on site: the priced double-door template is supplied without handle, lock, keyhole or backing plates.

CHECK BEFORE MOVING ON

- $A \text{ (leaf)} < D \text{ (jamb frame opening)} < E \text{ (brick opening)}$. If that is not true, stop.
- Jamb size matches the wall panel thickness (panel install) or suits the reveal (brick install).
- Handedness and handle offsets F and G are as ordered, and the hinges are on the side you expect.
- Count the set: leaf, jambs (left, right, top, and bottom if ordered), U-channel/capping, hinges (2 single / 6 double), lever handle, backplate, lock and keys, seal, rivets.
- Double door: lockset present, and the 50 mm jamb section for the catch is on site.
- Glazed leaf: glass, 40 mm capping and retaining angle present.

2. Prepare the opening

PANEL WALL: cut the opening to D, square and clean, through both skins and the core. Cut the steel with a nibbler or snips, not a grinder. Dress the cut edge so it is straight and the core is not crushed or torn - the lipped jamb has to slide over it and grip both faces.

BRICK REVEAL: check the reveal is plumb, square and dry, and that the lintel is in and bearing. Rake out anything proud. Do not force a square frame into an out-of-square hole.

CHECK BEFORE MOVING ON

- Diagonals of the opening equal, measured corner to corner both ways.
- Both sides of the opening plumb; head level.
- Panel wall: cut edge straight, core not crushed, no loose EPS.
- Brick: reveal dry and sound; lintel in place and bearing.

3. Dry-offer the jamb before you fix anything

Assemble the jamb loosely and offer it into the opening with no fixings. Panel install: the lipped C-section clips over the cut edge of the panel and grips it from both faces - it should go on with hand pressure and light tapping, not hammer blows. Brick install: the jamb sits inside the reveal.

Left and right jambs are supplied 50 mm longer; the top jamb is supplied cut to length; the bottom jamb is optional and may not have been ordered; jambs may have arrived precut or in full 6 m lengths for site cutting.

This dry fit is where you find out that the opening is 8 mm out, while there is still time to do something about it.

CHECK BEFORE MOVING ON

- Jamb seats fully on the panel edge along its whole length, with no gaps and no forcing.
- Head jamb length correct; side jambs long enough (they are supplied 50 mm over).
- Nothing is being sprung or twisted into place.

4. Plumb, square and level the frame - then fix it

Set the frame plumb in both planes, level at the head, and square on the diagonals. Wedge or clamp it and re-check all three before a single fixing goes in. A frame that is fixed first and checked afterwards is a door that binds for the rest of its life.

Fix the jamb where the load actually goes: alongside every hinge, alongside the lock keep, and at the head. In the panel install the jamb is pop-riveted through into the panel skins. In the brick install it is anchored into the masonry - the anchor type, size and edge distance for that substrate is the project engineer's call, so have it on site before you drill. Seal every fixing that penetrates an outer skin, and write down what you used.

CHECK BEFORE MOVING ON

- Diagonals equal within 3 mm; head level; both jambs plumb in both planes.
- Frame not twisted - sight down it, or lay a straight-edge across the two jambs.
- Fixings alongside every hinge, at the lock keep, and at the head.
- Fixing type and centres recorded on the site record.
- Every fixing through an outer skin is sealed. No unsealed hole left in a Chromadek face.

5. Hang the leaf and set the margins

Hang the leaf on its hinges - a set of two on a single leaf, three per leaf on a double. A bare 2000 x 800 x 50 mm leaf is roughly 15-16 kg and hangs easily. A 3000 x 1500 mm double-door leaf is roughly 42-44 kg bare, three times the mass; satisfy yourself that the hinge duty has been checked against that weight before the leaf goes up.

Set the margins even all round and check the leaf sits flush in the jamb along its whole height. A leaf this light has almost no inertia and will be caught and slammed by a gust, so fit a stay or hold-open where the door is exposed.

On a double door, hang the passive leaf first, set it against the catch (a 50 mm jamb section), then hang and adjust the active leaf to it.

CHECK BEFORE MOVING ON

- Margin even at top, bottom, hinge side and lock side, along the full height.
- Leaf face flush with the jamb; no proud corner and no twist.
- Door swings freely, does not rub, and does not spring back off the seal.
- Leaf does not drop or bind when opened to 90 degrees.
- Double door: hinge duty checked against the leaf mass before hanging; catch section fitted.

6. Fit the ironmongery (if it was supplied loose)

If the handle, backplate and lock were not factory-fitted, fit them now to the ordered offsets: F is the handle height up the leaf, G is the distance in from the leaf edge. Use the backing plates that came with the set.

The leaf skin is 0.3-0.5 mm steel over foam. It will not hold a screw on its own. Anything that applies a point load - the lock case, the handle, a kick plate, and above all a door closer - must bear on a backing plate that spreads the load, ideally through both skins. Do not over-tighten: a dimpled or pierced skin exposes the core and starts corrosion. No door closer is supplied or rated with this leaf; if the project needs one, the backing detail is the installer's or the engineer's to design.

CHECK BEFORE MOVING ON

- Handle and lock at the ordered F and G offsets, on the ordered hand.
- Backing plates fitted; no fixing bearing directly on unbacked skin.
- Latch engages the keep cleanly with the door closing under its own weight, without being pulled to.
- Key turns freely from both sides; leave the keys with the site agent, not in the door.

7. Seal the perimeter and cap every cut edge

Fit the perimeter seal so it compresses evenly along the full closing line, and seal the joint between the jamb and the wall on both faces with an EPS-compatible PU sealant. Solvent-based sealants and adhesives dissolve EPS - if the tube does not say it is EPS-compatible, do not put it near this door.

Walk the whole opening and find every place where EPS core is still visible: the cut panel edge, the head, the reveal, the window aperture on a glazed leaf, any service penetration nearby. Close all of it with the capping / U-channel section supplied (40, 44, 50 or 54 mm; the window aperture uses the 40 mm capping with its retaining angle). Exposed core takes up water, gives vermin a start, and is a direct ignition path into a combustible core.

CHECK BEFORE MOVING ON

- Seal compresses evenly along the whole closing line - close the door on a strip of paper at top, middle and bottom and check the drag is similar.
- Jamb-to-wall joint sealed on BOTH faces.
- No bare EPS visible anywhere around the opening, including around a window aperture.
- All cut Chromadek edges capped and touched up.

8. Commission and hand over

Open and close the door twenty times. It should swing freely, latch under its own weight, and return to a fully compressed seal every time. Check the margins again - a frame that has been fixed under stress will have moved.

Hand over the keys, the A-G ordering schedule for the door as built, and the written record of the jamb fixing type and centres actually used, so the next person to touch this door knows what is holding it in.

CHECK BEFORE MOVING ON

- Twenty cycles: free swing, clean latch, seal compressing.
- Margins unchanged from step 5.
- No fixing has pulled, dimpled or pierced a skin.
- Written record of jamb fixing type and centres handed over with the keys.
- Occupier told, in writing, that this is not a fire door, not a security door, and not for sub-zero (freezer) rooms.

FIXINGS AND FASTENERS

Jamb to EPS panel wall	Stainless pop rivets through the jamb into the panel skins, every rivet sealed. Record the rivet spacing used.
Jamb to brick / masonry reveal	Masonry anchors into sound brickwork. The anchor type, size, centres and edge distances for the substrate are the project engineer's call - have them on site before the first hole is drilled, and record what was used.
Anchor positions	Fix where the load goes: alongside every hinge, alongside the lock keep, and at the head. Those are the three places a door tears out of a wall.
Hinges	A set of 2 per single leaf; 6 on a double door (3 per leaf). Check the duty against the leaf mass: approx. 15-16 kg bare for a 2000 x 800 leaf, approx. 42-44 kg bare for a 3000 x 1500 double-door leaf.
Handle, backplate and lock	Lever handle on a backplate, keyed mortice/cylinder lock with keyhole, plus backing plates. Factory-fitted if the order says so; otherwise fitted on site to offsets F (vertical) and G (horizontal). Every fixing must bear on a backing plate - a 0.3-0.5 mm skin over foam holds no screw. The priced double-door template is supplied without a lockset: order it separately.
Perimeter seal	Supplied with the set; fit it so it compresses evenly along the full closing line.
Sealant / adhesive	EPS-compatible PU only. Solvent-based products dissolve the EPS core.
Capping / U-channel	Steel U-channel in 40, 44, 50 or 54 mm, 6 m lengths, to close every cut edge; the window aperture on a glazed leaf uses 40 mm capping plus a retaining angle.
Jamb stock	Lipped steel C-section, 44 / 50 / 60 / 75 / 100 mm, 6 m lengths, sized to grip the WALL panel thickness. Left and right jambs are supplied 50 mm longer; the top jamb is supplied cut to length; the bottom jamb is optional; jambs may be precut or supplied full length.

WHAT ACTUALLY GOES WRONG ON SITE

- Cutting the wall opening oversize. The lipped jamb grips the cut edge of the panel - if the opening is loose, there is nothing to grip and the whole frame hangs on its fixings alone. Cut to D, not 'about D'.
- Fixing the frame before checking the diagonals. Every binding, dropping, rubbing panel door on site was fixed square-ish and checked afterwards. Wedge it, check plumb, level and square, THEN fix.
- Cutting the steel skins with an angle grinder. The sparks land on exposed combustible EPS and the heat wrecks the Chromadek coating at the cut. Use a nibbler, snips or a slitting saw.
- Using a solvent-based sealant or adhesive anywhere near a cut edge. It dissolves the EPS core from the inside and you will not see it happen. EPS-compatible PU only.
- Leaving cut EPS core exposed - at the panel edge, at the head, around a window aperture, or at a service penetration next to the door. It absorbs water, vermin get into it, and it is a direct ignition path into a combustible core.
- Screwing a door closer, panic bar or kick plate straight into the leaf. The 0.3-0.5 mm skin tears and the foam holds nothing. Every point load needs a spread backing plate through both skins - and no closer is supplied or rated with this leaf.
- Over-driving rivets and screws so they dimple or pierce the Chromadek face. Every pierced skin is a corrosion start and an open route into the core. Seal every penetration you make.
- Ordering the jamb to the leaf thickness when the jamb has to grip the WALL panel. On a 100 mm wall with a 50 mm leaf those are two different numbers, and only one of them fits. Put both on the order.

- Hanging a 3000 x 1500 double-door leaf on the standard hinge assumption. That leaf is roughly 42-44 kg bare, three times a 2000 x 800 leaf. Check the hinge duty first.
- Turning up to a double door without a lockset. The priced double-door template carries no handle, lock, keyhole or backing plates - they are ordered separately.
- Drilling before the anchor schedule is on site. The anchor type, centres and edge distances for the masonry come from the project engineer. Get them first, use them, and record what you used.
- Treating this as a fire door because the panel is B-s1,d0. That is a reaction-to-fire class, not a fire-resistance rating, and it never becomes one. If the fire engineer scheduled a rated door, this is the wrong product, and no amount of good installation changes that.
- Putting one into a freezer. The steel jamb has no heater and no thermal break: it will condense, ice up, and eventually freeze the door shut. Chill rooms yes, sub-zero no.

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