

SPECIFICATION SHEET NO	DESCRIPTION	DATE
IG80	GRADUS CHR160 COMBINATION RAIL	FEB 2026

INSTALLATION GUIDE

Preambles:

A mock-up room is recommended prior to commencement of the project to ensure profiles are installed according to Polysales installation guidelines.

Material must be installed in environmentally controlled conditions.

Identify your substrate (cement, brick, drywall as there are different installation methods and materials for each.

Identify the paint applied to your substrate as this may impact on the adhesive to be used.

1. Measure the desired length for the handrail, making allowances for any corners or returns to be added to the straight lengths. Reduce the length by 98mm for all returns and an additional 30mm so that they can be fitted and removed when placed near an architrave or wall. For any internal corner pieces allow 148mm from the corner's vertex. For an external corner cut the aluminium retainer to a length 10mm short of the apex.
2. Use a Ø6.0mm drill bit to drill 2 holes in the retainer along the central v-notch of the retainer at a distance of 150mm from each end. For a full 4m length of retainer, the bracket spacings will be 740mm, with 6 brackets per length. For lengths shorter than 4m, space the brackets evenly between the holes at either end, reducing the number of brackets if the calculated spacing is less than 600mm. Drill additional Ø6.0mm holes on the v-notch spaced evenly between the end holes.
3. Where there is to be a corner or return, drill additional Ø6.0mm holes along the v-notch 10mm from the end of the retainer. It is also necessary to drill a Ø3mm pilot hole on the horizontal part of the upper handrail section 10mm from the end of the retainer.
4. Use a laser level to mark a height of 100mm below the prescribed upper handrail surface height, as the guide for the hole centres of the bracket screws. Position the retainer against the wall at the desired height, aligning the holes in the retainer with the laser level. When positioning horizontally, allow for all accessories which must be the prescribed distance away from any hindering wall. With the retainer in the desired position mark the locations of the mounting holes on the wall.
5. Drill all marked holes, ensuring that the appropriate plugs and/or fasteners are used and that there is at least 30mm of threaded fastening length available for the fixing screws (not supplied).
6. Loosely attach the retainer to the wall using one screw at either end of the retainer. Check alignment of all remaining holes in the retainer with the holes in the wall while maintaining alignment with the laser level. Correct any misaligned hole positions if needed. Thread the long screws through the retainer and then through the CHR1603 bracket and fasten the retainer very loosely.
7. With the reveals sitting flush over the corners and returns, use the supplied nut, washer and bolt to secure through the retainer. Use the drilled Ø3mm pilot hole to fit the supplied 8mm x 5/16" screw and M6 washer to hold the top section of the return/corner in place.
8. Once the corners and returns are fixed firmly in place then screw the retainer hard down.
9. Measure the distance between reveals as the cut length for each vinyl profile. For long sections of handrail, joints in the vinyl should not coincide with joints in the retainer and should be staggered so that they are at least 300mm apart.



10. Cut the vinyl cover, taking care to ensure that the cuts are both square and clean. Loosely position the vinyl against the retainer to check the fit. Place the cylindrical section of the PVC-u profile against the corresponding section of the retainer while butting one end of the PVC-u profile up against the reveal. Stretch the opening by pulling the bottom section out horizontally and gently pushing down vertically until it snaps around the upper section of the retainer. Leave the PVC-u profile in the horizontal position until the entire top section has been stretched into place. Once the entire length of the handrail section of the PVC-u profile has been positioned then the final section can be snapped into place by rotating the bumper section into the vertical orientation.

Fitters Tips:

- When cutting CHR160 on site, the PVC-u cover may try and compress under the pressure of the saw blade while cutting. This can be reduced by cutting slowly. A fine-tooth aluminium/plastic blade is also preferred.
- When doing long runs of over 4m, start with a full 4m length of PVC-u cover starting from the cut end of the retainer; This usually ensures that joints of PVC-u and retainer never coincide.

MAINTENANCE:

A regular scheduled maintenance programme should be employed to prevent the build-up of dirt and grease, which will detract from the overall appearance of the product and can lead to the spread of germs and bacteria.

Apply a neutral cleaner to a micro fibre cloth and wipe the surface of the profile. When cleaning handrails, particular attention should be paid to the underside of the handrail as this is where dirt and grease can build up.

The cleaned surface should then be 'rinse wiped' using clean water and then thoroughly dried using a soft cloth. This ensures all cleaning residue is removed.

Abrasive cleaners, solvents, or cleaning pads (e.g., Thinners, Turpentine, Handy Andy) should NOT be used as they will damage the profile surface