## Installation Instructions

## SHR40P - PVC-u option, SHR40W - Wood effect option, SHR40S - Silver anodised option

1. The wood effect and silver anodised handrails are aluminium extrusions with a thin surface coating. The PVC-u version has a PVC-u sleeve which is already fitted to the handrail.
2. Measure the desired length for the handrail, making allowances for any accessories to be added to the straight lengths. Reduce the length by 22 mm for each end cap and an additional 30 mm so that the end caps can be fitted and removed when placed near an architrave or wall. Allow 82 mm for any wall return being fitted and a further 30 mm so that it can be fitted and removed. For any 'right-angle' internal corner pieces allow 132mm from the corner's vertex. For an external 'right-angle' corner it is necessary to extend the straight section 8 mm beyond the apex of the wall. For the fitting of custom angles consider fitting the 'Rapid-angle' part described in the section 'SHR408P Handrail Rapid-angle'
3. SHR40P handrails are delivered with the PVC-u cover and 'closer' already snapfixed into the aluminium profile. Remove the 'closer', by carefully lifting it from the aluminium with a screw driver. For a better appearance, cut the aluminium and PVC profiles to length while they are snap-fixed together using a chop saw fitted with a fine-toothed blade. Wood effect and Silver anodised handrail retainers should be cut in the same way.
4. With the closer removed, the brackets can be slid along the slot of the aluminium profile. For end and corner brackets use a spacing of 60 mm from the end of the retainer to the centreline of the bracket. For short handrail lengths, use at least two brackets set at even intervals. Clamp the brackets to the aluminium profile by
 tightening their grub screws using a 2.5 mm Allen key. Likewise for the returns and corner pieces, always ensuring that the reveals are in place, fasten them to the retainer using the grub screws.
5. For lengths longer than 4 m it will be necessary to connect 2 sections and this can be done in one of two ways (i) over a bracket or (ii) using a jointing block. When the desired length has been determined allow 60 mm for each end bracket then divide the remaining length by the number of available brackets minus one. The spacing should never exceed 720 mm . If the spacing is calculated to be less than 600 mm reduce the number of brackets. Wherever possible try and even out the lengths of the handrail sections (i.e. for a 4.5 metre length consider using a 2 m and a 2.5 m length instead of a $4 \mathrm{~m} \& 0.5 \mathrm{~m}$ length). A bracket must not be placed within 80 mm of a jointing block due to interference.
6. Whenever possible insert the 'closer' sections before mounting the handrail onto the wall. For all jointing blocks, brackets, returns and corner pieces ensure the grub screws are tightened into position (but not over-tightened) before inserting the 'closer' sections as the grub screws will be inaccessible after the closers have been inserted. Take care that the reveals are not being pinched. The closer sections all need to be cut to their bespoke length before fitting. To minimise dirt traps, all closer sections should leave a gap of no more than 2 mm than the sections they are required to fill. Closer sections will not span a jointing block.
7. Use a laser level to mark a height of 70 mm below the prescribed upper handrail surface height, as the guide for the hole centres of the bracket screws. Hold the assembled handrail up to the wall, ensuring that the handrail is correctly spaced relative to sections of wall and corners, align the holes in the brackets with the laser line and make marks on the wall for a hole at both ends of the handrail. Drill holes at both marks using a drill bit appropriate for the wall construction and fittings (wall plugs and screws, not supplied).
8. Once these 2 holes have been drilled and plugged, loosely mount the handrail brackets to the wall. Use the assembled handrail brackets as templates for marking the other hole positions. Remove the handrail to allow drilling and plugging of all remaining holes.
9. Refit the handrail loosely to the wall with a screw in each hole before tightening any of the screws hard down. Once it is established that all holes in the brackets are aligned with all holes in the wall, only then should the handrail bracket screws be fastened firmly.
10. For the wall return end cap, ensure it is screwed to the wall before fitting into the return. Fit carefully all remaining closer sections ensuring there are gaps of no more than 2 mm .

## Fitters Tips:

- For the cleanest cut ensure the touched face of the closer is cut first. A fine-tooth aluminium/plastic blade is also preferred.


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SHR40 Handrail
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SHR40P - PVC-u option, SHR40W - Wood effect option, SHR40S - Silver anodised option


XXX - represents colour finish

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## SHR408P Handrail 'Variable Angle' - SHR40

1. The 'Rapid Angle' can be used to make any length of handrail continuous around walls angled at between $80^{\circ}$ and $179^{\circ}$ to each other but only in the horizontal plane. Make a template according to the sketch below. This will be used to position the start and end of each section of handrail.

2. Set up a laser level to ensure that the brackets will be mounted horizontally. Align the template with a mark on the wall which has been set for the prescribed handrail height. Draw a line at the end of each bracket as in the sketch below and mark the hole centres for the outer brackets.

3. Use the line marked on the wall plus 200 mm as the end-point for measuring the section of handrail retainer required. For multiple 'rapid angles' repeat this for each section of wall then measure the distances between each pair of marks. Add 400 mm to the measured distance to define the length of handrail required for that section of wall.
4. The end brackets must be as close to the corner as possible without interfering with the 'rapid-angle fitting and there must be at least 2 brackets per section of handrail.


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