

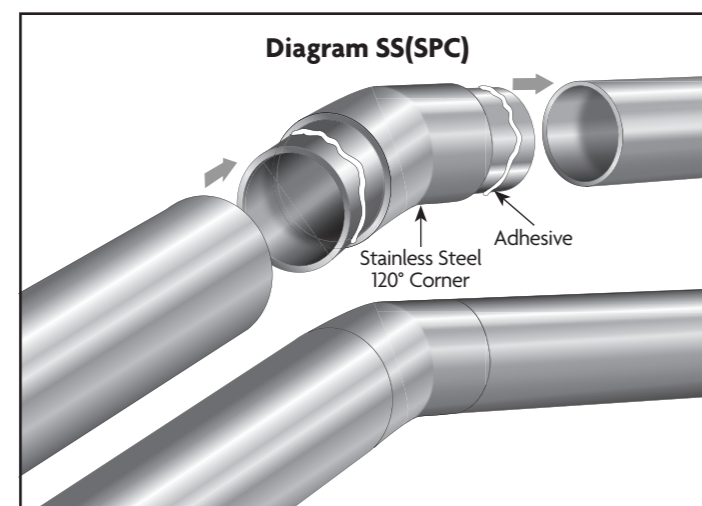
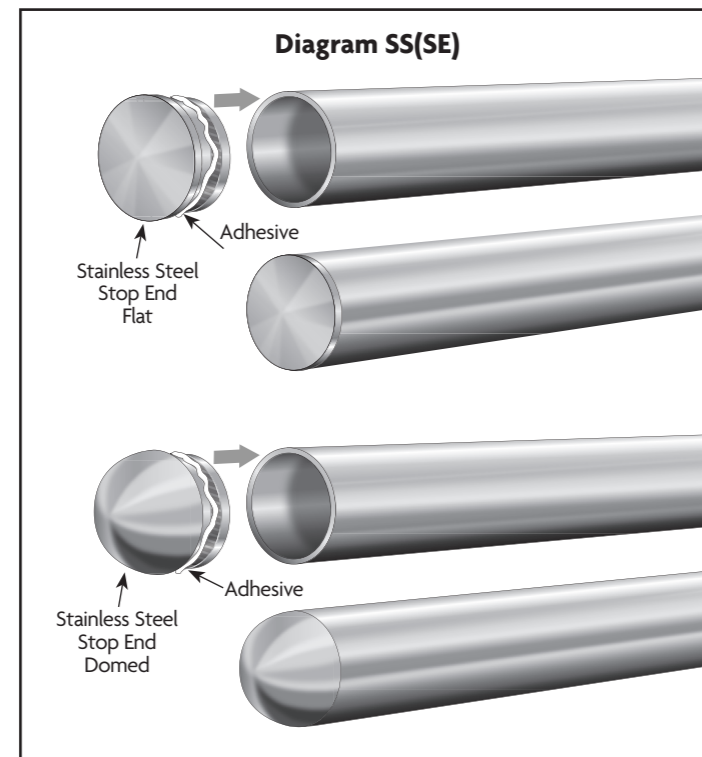
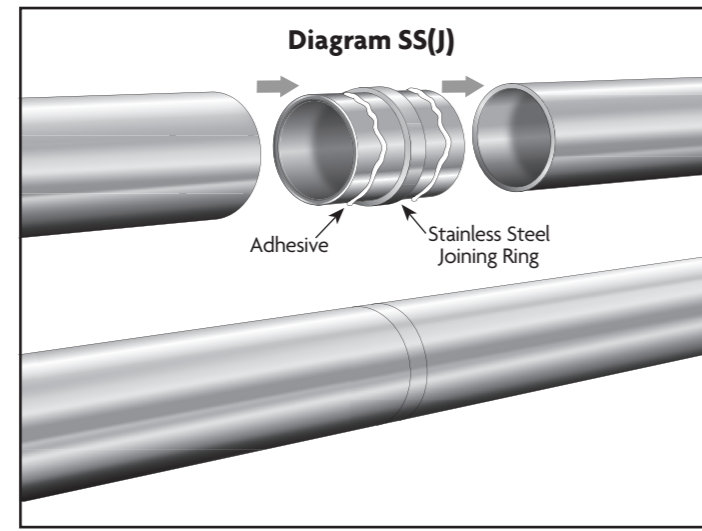
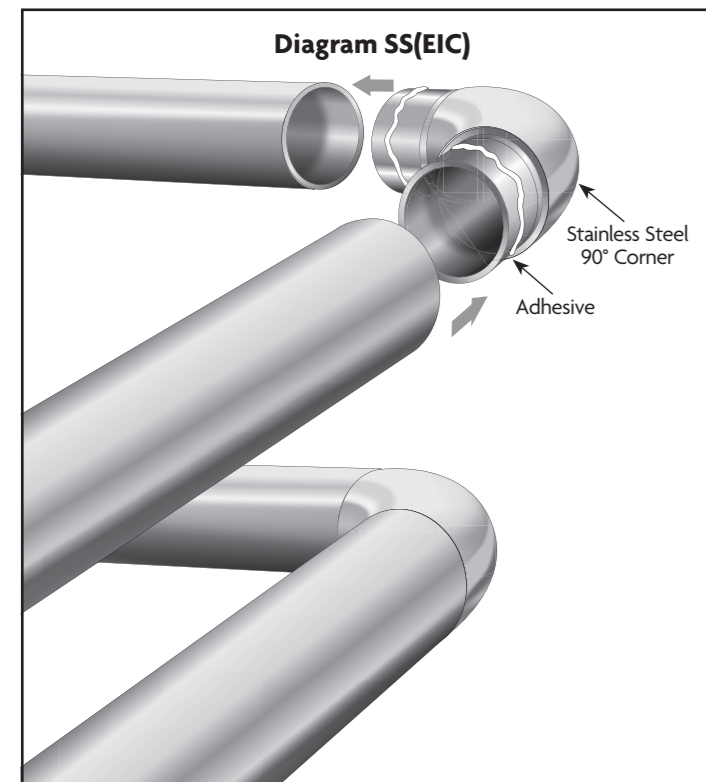
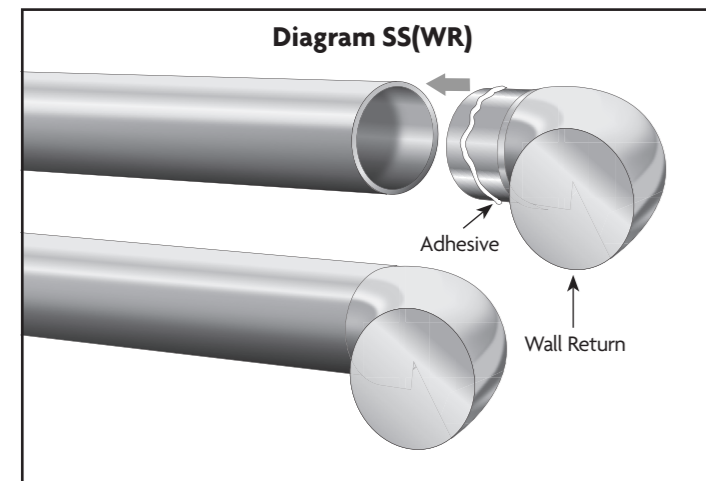
Alternative Fixing Instructions for Stainless Steel 50mm Dia. Handrails.

Once the spacers have all been fixed into position measure and cut to length the Stainless Steel handrail, allowing for any accessories such as wall return ends, external/internal corners, standard or special, joints and stop ends.

Then lay the Stainless Steel handrail in position on the spacers and mark the central hole of the spacer, remove, lay carefully on the floor and pilot drill the fixing holes.

Lift the Stainless Steel handrail back into position on the spacers and fix into place by means of an appropriate pan head screw, ensuring that the timber is secured tightly to each spacer as shown in **Diagram 4** of the PVCu installation information.

Wall return ends, external/internal corners, standard or special, joint units and stop ends should then be located into position, and bonded into position using the Stainless Steel glue as shown in **Diagrams SS(J), SS(WR), SS(SE), SS(EIC) & SS(SPC)**.



If there is an issue with the alignment of the handrail due to the poor quality of finish to the wall surface/substrate, then packers may be used to correct this. Please refer to our Sales Office for advice.

N.B. Having checked the finished installation for alignment, level, etc., clean down all surfaces on completion.

GENERAL INFORMATION



Yeoman Shield products are manufactured using Vinylac, a specially formulated PVCu material that is resistant to impact and abrasion, which is exclusive to Harrison Thompson & Co. Ltd.

Fire Test Information PVCu Protection Products

Fire tested in accordance with and achieved the following:

BS 476: Part 7: 1997 - The Surface Spread of Flame of Products - **Class 1Y (Class 1 is the best classification in this test)**.

BS 476: Part 6: 1989 + A1: 2009 - Fire Propagation for Products - **Class O** - As defined in the latest Building Regulations, Approved Document B (Fire Safety).

BS EN 13823: 2010 + A1: 2014.

BS EN ISO 11925 - 2: 2010.

EN 13501 - 1: 2007 + A1: 2009.

Door Edge Protectors - Patented Product

Fire tested in accordance with and achieved the following:

BS 476: Part 22: 1987 - For ½ hour or 1 hour fire integrity on full door assemblies.

BS 476: Part 31.1: 1983 - To meet requirements of **BS 5588**.

PVCu Clad Glazing Bead

Fire tested in accordance with and achieved the following:

BS EN 1634 - 1: 2008 - For ½ hour or 1 hour fire doors.

BS 476: Part 22: 1987 - For ½ hour or 1 hour fire integrity on full door assemblies.

All testing has been carried out at Exova Warrington or Exova Chiltern Test Houses and the full fire test reports are available on request.

Surfaces & Cleaning

Yeoman Shield products are inherently hygienic if they are properly cleaned and maintained on a regular basis.

Our PVCu materials are 'rigid' and they do not support the growth of bacteria or mould. When cleaning, we recommend using a solvent cleaner or products such as Dettol, Johnsons Clear, etc. Stubborn marks may need an industrial strength solvent cleaner to remove them, such as TRADESOLVE 1 (UN 1294). **N.B.** This type of cleaner should be used strictly in accordance with the manufacturers recommendations.

Smooth surfaces are more likely to show all marks, scuffs and scratches. The textured surfaces of Yeoman Shield products helps to hide the everyday knocks, bumps, scrapes and marks caused by vehicular traffic.

Maintenance

None required other than normal cleaning in accordance with details shown above.

Chemical Resistance

Vinylac is unaffected by commercial solvents and cleaners.

DDA

(Disability Discrimination Act)

Yeoman Shield products do not contravene the DDA requirements, and meet the principals of **HTM69**. (Further details available if required).

Installation

Manufacturers recommended fixing instructions are shown overleaf. However, if additional information or clarification of any points is required then please contact our Sales Office **0113 279 5854**.

We are **CHAS (Contractor, Health & Safety Assessment Scheme)**, accredited contractors. All our operatives hold relevant **CSCS** cards with Site Foremen having the **SSSTS** Certificates.

Expansion & Contraction

Yeoman Shield products will expand and contract according to temperature fluctuations:

Generally, PVCu materials expand or contract 0.07mm/m for every 1° Celsius rise or fall.

Please ensure that our materials are acclimatised to the environment into which they are being installed, they should be stored at normal working temperature for at least **24 hours** prior to fitting. We recommend the optimum temperature being **23°**, which is in line with the temperature during manufacture and this should limit the amount of expansion and contraction.

It is not advisable to take materials that have been stored in a cold environment, i.e. an unheated site, cold storage container/van, etc. and install these without allowing them to acclimatise, **as this may lead to unnecessary movement of material in the future.**

N.B. Greater movement may occur in glazed corridors. In extreme cases of temperature variation it may be necessary to use an alternative fixing method, please speak to our Sales Office for advice.

Colour Fastness

All Vinylac products are UV stabilised, therefore reducing the fading effect when exposed to direct sunlight. It should be recognised, however, that excessive expansion will occur in these conditions.

Further information regarding this and other colour issues can be found in our brochure or colour card, both of which are available from our Sales Office, or on our website.

Impact/Abrasion

Vinylac results: Abrasion **BS2782; Part 3:1990**
Scratch **ASTM D3363 - 74.**

Bonding

Although Yeoman Shield supplied adhesives will perform in difficult environmental conditions they will activate more readily if applied at normal room temperature.

The bond strength will then continue to increase after the initial application.

Warranty

Yeoman Shield products are guaranteed free from defects. If they are installed correctly and in accordance with the manufacturers recommendations, they will protect surfaces from damage for many years.

Environmental

Yeoman Shield operates an Environmental policy and ensures the recycling of all materials and packaging wherever possible, a copy of our policy can be requested from our Sales Office.

All our materials/products are sourced and manufactured in the United Kingdom and can therefore contribute to achieving the requirement of the **BREEAM 2011 Technical Construction Manual** for building sustainability and life cycle, **as well as reducing our carbon footprint.**

Health & Safety

Full **COSHH (Control of Substances Hazardous to Health)** details on all Yeoman Shield products are available from our Sales Office.

In accordance with **REACH** Regulations, our products do not contain any chemicals that are on the **SVHC (Substances of Very High Concern)** list dated June 2012.

Technical Support & Advice

Data sheets on the various Yeoman Shield materials are available from our Sales Office.

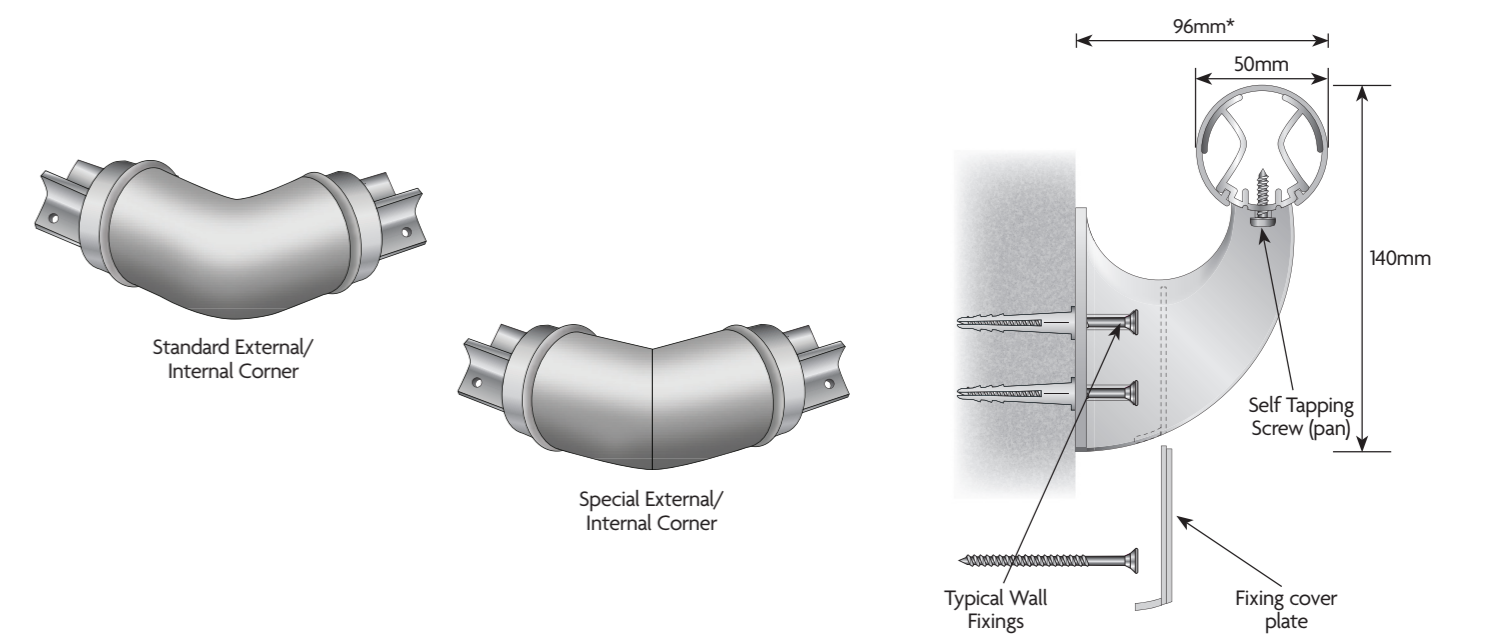
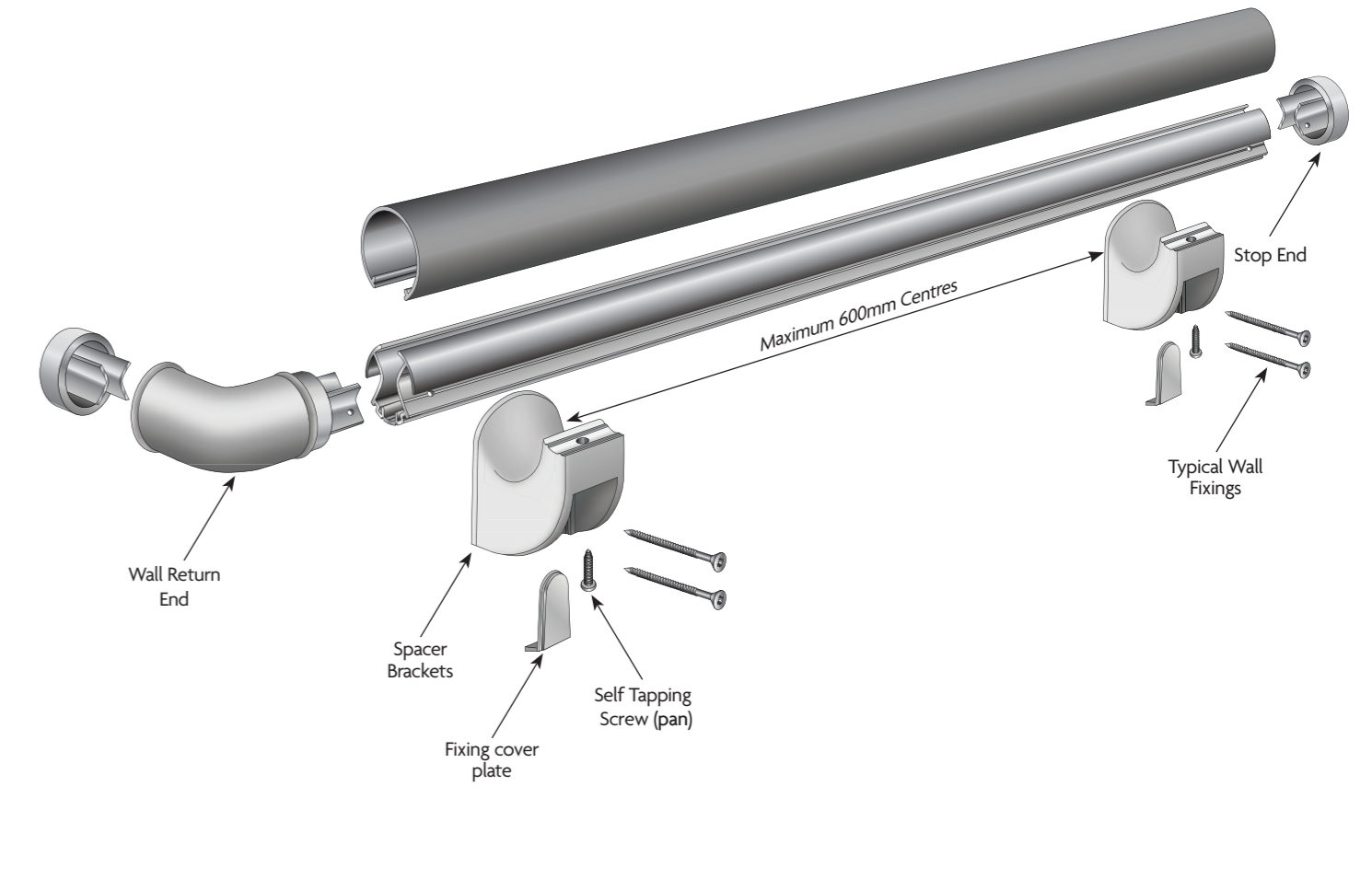
Timber Products

All wood incorporated in Yeoman Shield products is purchased from an **FSC** supplier.

GUARDIAN 50mm DIA HANDRAIL FIXING INSTRUCTIONS



Yeoman Shield products should be installed in accordance with the following manufacturers recommended instructions.



*Nominal Dimension

N.B. Details on Expansion and Contraction, Glazed Areas, Cleaning, etc., are shown on the reverse of this document.

MAKING BUSINESS A PLEASURE

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Determine the chosen height to the top of the handrail from the finished floor level, preferably using a laser level, and mark a datum point on the wall 140mm lower than the agreed finished fixing height, which is the bottom edge of the PVCu Spacers.

Align and position the "end" spacers for each handrail section, which are **150mm to the centre** from any wall return ends, and then mark the 2 No. fixing holes on the wall. - **We recommend leaving a 20mm gap between any wall return ends and architraves.**

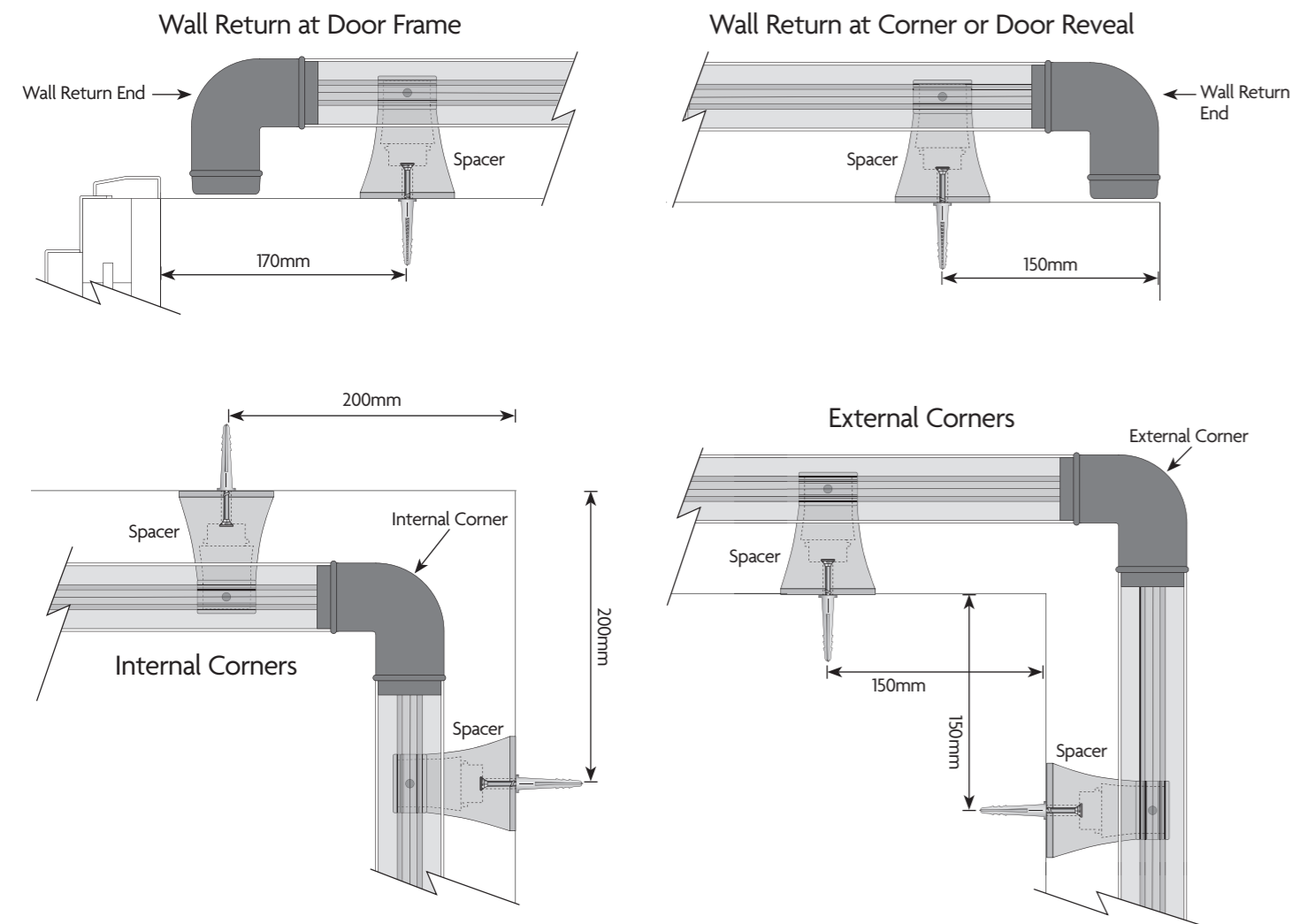
Position the spacers for external/internal corners, standard or irregular, which are **150mm to the centre** from the external corner and **200mm to the centre** from the internal corner, and mark the 2 No. fixing holes on the wall.

Each intermediary spacer should then be positioned equally between the "end" and corner spacers at approximately 600mm centres, give or take (+/- 10%), and mark the 2 No. fixing holes on the wall.

N.B. Spacers should be positioned 300mm back from joints in the Aluminium core, which is the maximum overhang that we recommend, to tie in with the spacing centres of 600mm.

When the positions of all spacers are marked on the substrate, drill and secure these into place using the appropriate fixings as listed in the table below and then secure the fixing cover plates which are supplied with each spacer into position. - **Ensuring that all spacers finish level once they are secured to the substrate.**

Spacer Positions



Wall Structure	Screw	Plug
Plasterboard	Appropriate length 6mm machine screw	6mm Rubber Rawlnut
Brickwork, Breeze Blockwork, Concrete	Appropriate length No. 12 woodscrew	No. 12 Plastic plug
Lightweight Blockwork e.g. Thermalite, Siporex	Appropriate length No. 12 woodscrew	Fischer GB10 Plastic plug
Steel	Self-tapper	-

Once the spacers have all been fixed into position measure and cut to length the Aluminium core, allowing for any accessories such as wall return ends, external/internal corners, standard or special*, and stop ends.

Wall return ends, external/internal corners, standard or special*, and stop ends should then be located into position using the location lugs and fixed into place by means of two self-tapping, pan head screws **, ensuring that they are secured tightly to the Aluminium core as shown in **Diagram 1**.



The wall return ends and external/internal corners, standard or special*, are all formed using the injection moulded corner which is universal and are secured into position as detailed above. - However, to produce a wall return end one leg of the corner should be removed and a stop end inserted as shown in **Diagram 2**.



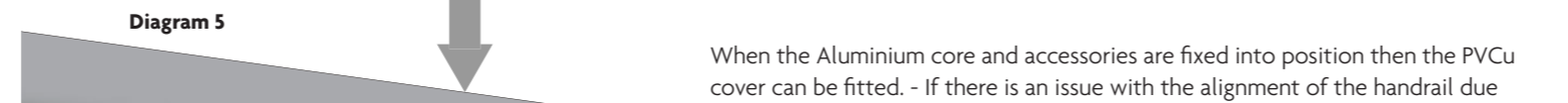
Then lay the Aluminium core in position on the spacers, aligning the grooves and channels on the underside of the core, and mark the central hole of the spacer, remove, lay carefully on the floor and pilot drill the fixing holes.

Any joints in the Aluminium core should be formed by inserting the PVCu joint piece, which should be positioned halfway into each section of the core and fixed to one length only by means of a self-tapping Csk head screw **, ensuring that it is secured tightly to the core as shown in **Diagram 3**.

Lift the finished Aluminium core back into position on the spacer and fix into place by means of a single self-tapping pan head screw **, ensuring that the core is secured tightly to each spacer as shown in **Diagram 4**.

*Made to order, to suit details provided.

Screws supplied. (3/4" 8g pozi pan or csk in all cases except Spacer Bracket which is 3/4" 10g pozi pan.) **We recommend a screw fixing to both insert lugs and either side of a joint, to secure the accessory to the Aluminium core.

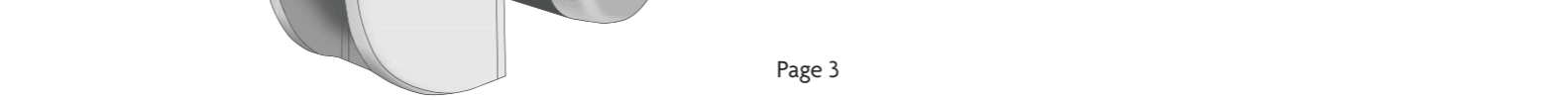


When the Aluminium core and accessories are fixed into position then the PVCu cover can be fitted. - If there is an issue with the alignment of the handrail due to the poor quality of finish to the wall surface/substrate, then packers may be used to correct this. Please refer to our Sales Office for advice.

When fitting the PVCu cover, square the ends of any factory 3.0 m lengths of the protection cover and fit wherever possible, and then cut any necessary short lengths or make up pieces of the cover and fit into position: When cutting the PVCu cover use a fine tooth Tenon saw or electric drop saw with a fine tooth blade.

When measuring the PVCu protection cover, use the relevant accessory and hold the tape in position between the appropriate points in order to determine the correct length required. **N.B. Keep all Aluminium core and PVCu cover joints a minimum of 300mm apart.**

To clip on the PVCu cover open one end and push over the Aluminium core as shown in **Diagram 5** locating the clip over legs into the grooves in the underside, and working along the full length 'push' the PVCu cover into place as shown in **Diagram 6**. - **N.B. Once the PVCu cover has been fitted it may be difficult to remove.**



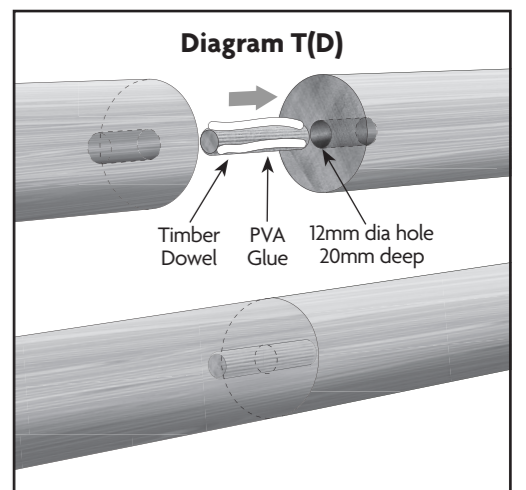
Alternative Fixing Instructions for Timber 50mm Dia. Handrails

Once the spacers have all been fixed into position measure and cut to length the timber handrail, allowing for any accessories such as wall return ends, external/internal corners, standard or special, joints and stop ends.

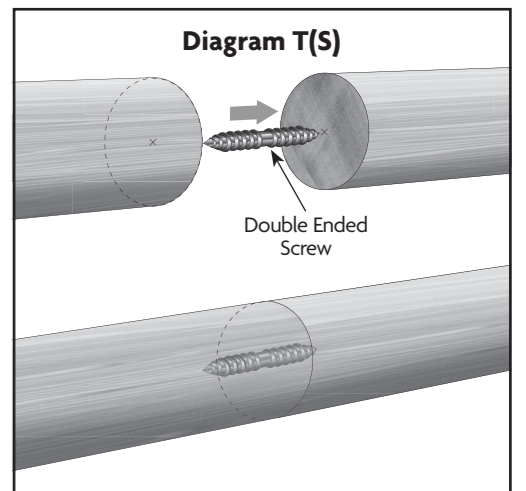
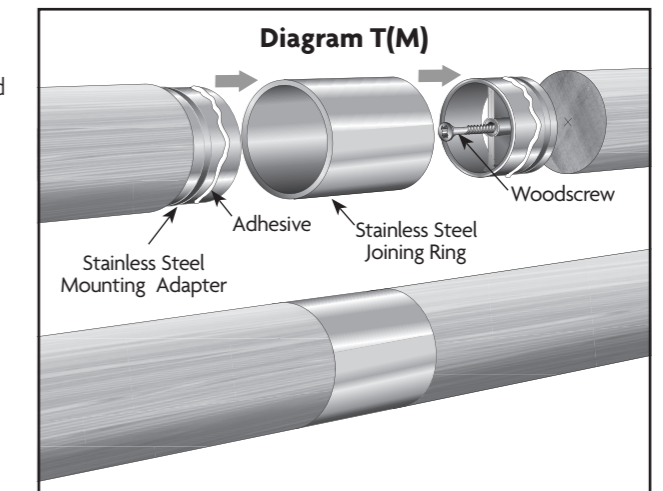
Then lay the Timber handrail in position on the spacers and mark the central hole of the spacer, remove, lay carefully on the floor and pilot drill the fixing holes.

Lift the Timber handrail back into position on the spacers and fix into place by means of an appropriate pan head screw, ensuring that the timber is secured tightly to each spacer as shown in **Diagram 4** of the PVCu installation information.

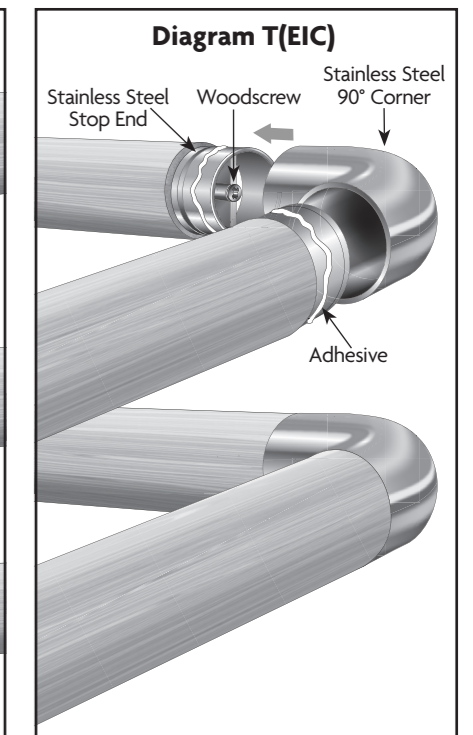
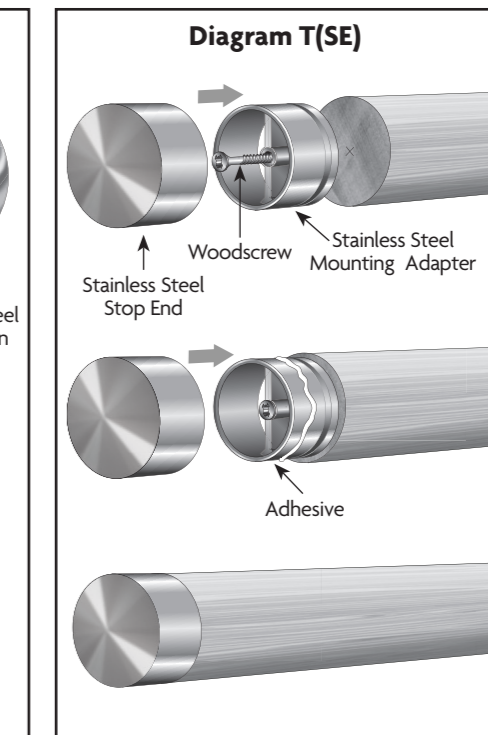
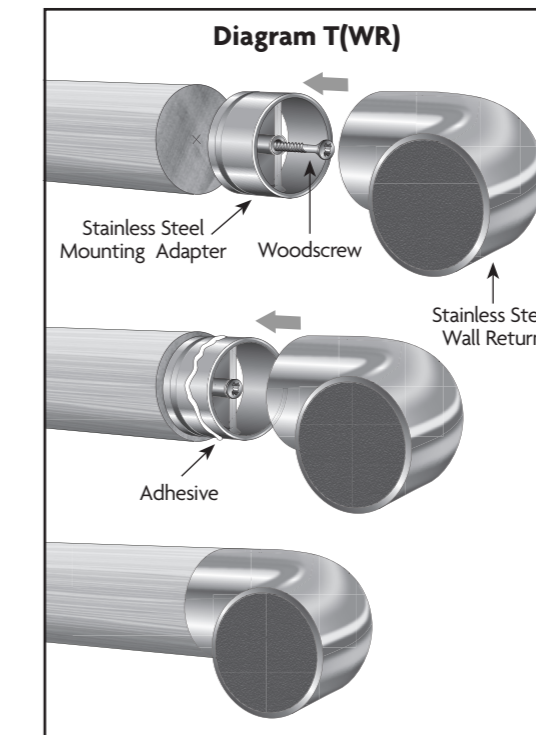
At joints the Timber Dowel insert should be positioned halfway into each section of the timber handrail. A 12mm dia. hole should be drilled into each length approx 20mm and the Dowel secured into position using a PVA glue, ensuring the joint is secured tightly as shown in **Diagram T(D)**.



Alternative joints are available: Metal Screw and Stainless Steel Unit, see **Diagrams T(M) and T(S)** opposite.



Wall return ends, external/internal corners, standard or special, joint units and stop ends should then be located into position - In each case mark and fit the mounting applicator centrally onto the timber handrail through the fixing hole shown in **Diagrams T(WR), T(SE) & T(EIC)**, ensuring that this is secured tightly. Then bond the accessory to the mounting applicator using the Stainless Steel glue as shown in the various diagrams.



If there is an issue with the alignment of the handrail due to the poor quality of finish to the wall surface/substrate, then packers may be used to correct this. Please refer to our Sales Office for advice.

N.B. Having checked the finished installation for alignment, level, etc., clean down all surfaces on completion.