



Template (3) - Marking the core for drilling spacer position at a Wall Return End: Mark the hole 134mm along the 'guide' groove on the core



Template ③ - Marking the core for drilling spacer position at an External Corner: Mark the hole 213mm along the 'guide' groove on the core.



Template (\mathfrak{Z}) - Marking the core for drilling spacer position at an Internal Corner: Mark the hole 74mm along the 'guide' groove on the core.







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GENERAL INFORMATION

and cleaners.

if required).

Certificates

fluctuations:

and contraction.

or fall.

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 Safetv).

BS EN 13823: 2010 + A1: 2014. BS EN ISO 11925 - 2: 2010.

EN 13501 - 1: 2007 + A1: 2009.

Door Edge Protectors -(P) 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 1/2 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 Dettox, 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.

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Maintenance

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

Chemical Resistance

Vinylac is unaffected by commercial solvents

DDA (Disability Discrimination Act)

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

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**

Expansion & Contraction

Yeoman Shield products will expand and contract according to temperature

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

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

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.

MAKING BUSINESS A PLEASURE

Registered Office as above. Registered in England No. 2669275 VAT Reg No. GB 169 3105 61 Directors:, S.L.Russell, G.C.Brumwell, P.Christopher, A.C.Brumwell, R.Good. FI Mar 17

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 Vinvlac 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.

Warrantv

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





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





External Corner



Wall Return End







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

Determine the 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 85mm lower than the agreed finished fixing height, which is the centre line of the horizontally fixed PVCu Spacers.

All spacers are supplied with a Hexagonal nut located in the back of the centre hole, along with an **M6 x 75mm*** machine screw, allowing the spacer to be fixed to the wall substrate through the two outer holes using the appropriate fixings as listed in the table below.

Use **Template No.** (1) as shown on fold out page 4 to:

Align and position the "end" spacers for each handrail section, which are **200mm to the centre** from the wall return ends, and then mark the 2 No. outer fixing holes on the wall. Also, mark the location of the fixing plates for the wall return ends.

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

Spacers should be positioned 300mm back from joints in the solid core, which is the maximum overhang that we recommend, to tie in with the spacing centres of 600mm. (Maximum 4 spacers per 2.44m length of core).

Alternatively, you can join on a spacer if you prefer and then set out all/any remaining spacers to the maximum recommended spacing centres of 600mm. In such circumstances, you should put a hexagonal nut in the two outer holes and secure the spacer to the substrate through the centre hole using the appropriate fixing. Then pre-drill each length of core to the corresponding hole in the spacer and fix into position.

When the positions of all spacers and fixing plates are marked on the substrate, drill and secure these into place using the correct fixings. Ensuring that these finish level once secured to the substrate.

Spacer Positions

Wall Return at Door Frame

Wall Return End Fixing Plate Back Plate (Not to scale) 200mm





Wall Return at Corner or Door Reveal

Wall Return End

Plug

6mm Rubber Rawlnut

No. 12 Plastic plug

Fischer GB10 Plastic plug

Back Plate

(Not to scale)

200mm

Fixing Plate

Wall Structure	Screw	Plug	Wall Structure	Screw
Plasterboard	Appropriate length 5mm machine screw	5mm Rubber Rawlnut	Plasterboard	Appropriate length 6mm machine screw
Brickwork, Breeze Blockwork, Concrete	Appropriate length No. 10 woodscrew	No. 10 Plastic plug	Brickwork, Breeze Blockwork, Concrete	Appropriate length No. 12 woodscrew
Lightweight Blockwork e.g. Thermalite, Siporex	Appropriate length No. 10 woodscrew	Fischer S8 Plastic plug	Lightweight Blockwork e.g. Thermalite, Siporex	Appropriate length No. 12 woodscrew
Steel	Self-tapper	-	Steel	Self-tapper

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Once the spacers and fixing plates have all been fixed into position the solid core needs measuring, marking and cutting to length, using **Template No.** (2) as shown on the fold out page:

Stop ends - End of core finishes 66mm from stop/start position of handrail. **External corners** - End of core finishes 13mm past end of external corner of wall substrate. **Internal corners** - End of core finishes 126mm from the internal corner of wall substrate.

the 'guide' groove on the face of the core, then mark the drill holes as follows:

Stop ends - Drill the hole 134mm from the end of the solid core section. **External corners** - Drill the hole 213mm from the end of the solid core section. **Internal corners** - Drill the hole 74mm from the end of the solid core section.

The measuring Template can be reversed for measuring right to left, as well as left to right.

Measure and mark the centre of each intermediary spacer on the solid core from the first hole position, using a set square where it dissects the 'guide' groove on the face of the core.

Once the centre of each spacer is marked on the core, drill and countersink the holes using a **7mm** drill bit. **N.B. We recommend using** a depth gauge to avoid countersinking too deep into the core. Should the centre hole of the spacer move either slightly up or down from the laser line, adjust the hole position in the core accordingly.

Offer the core to the spacers and fix using the **M6 x 75mm*** fixing bolts supplied. Only fully tighten all bolts once they have been located within the hexagon nut in the central hole of the spacer, and the handrail is aligned both level and straight. N.B. Please ensure that you do not over tighten the fixing bolt so that it "sinks" too deeply into the solid core.

If there is an issue with the alignment of the handrail due to the guality of finish to the wall surface/substrate, then packers may be used to correct this. Please speak to our Sales Office regarding this.

Square the ends of any factory 3.5m lengths of the protection cover and fit wherever possible, gluing all wall return ends, external/ internal corners into position, and then cut any necessary short lengths or make-up pieces of the cover and fix 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 two appropriate points in order to determine the correct length required. **N.B. Keep all core and PVCu cover joints a minimum of 300mm apart.**

N.B. To fit the protection cover, position it over the core with the face at 90° to the wall ensuring the 'clip-on' locates under the quadrant (see diag. 1). 'Fold' down the cover, (see diag. 2), and, starting from one end, exerting pressure in the middle of the profile, progressively clip-on the lower edge (see diag. 3).



At external/internal corners, standard or irregular, clip on one section of rail, fit the corner piece into position using contact adhesive, then clip on the adjacent section of rail, again using the adhesive to glue the external corner to the rail section. The Wall Return End, complete with the 42mm PVCu cover, should be fixed into position in a similar manner.

Once all sections of the PVCu cover have been completed, fit and secure the back plates into position at all wall return ends and external corners, using the appropriate adhesive/tape.

Where Guardian Contra Handrail is supplied adhere the pre-taped insert strip into place, but position joints in insert away from rail joints for aesthetic reasons.

Having checked the finished installation for alignment and level, clean down all surfaces and accessories on completion.

*M6 x 60mm fixing bolt to be used with the Aluminium core when used in lieu of the solid core.

Shield Guardian Handrail FI 2017 indd 2

- Once the sections of solid core have been cut to the required length they need marking and drilling to align with the PVCu spacers as follows, using **Template No.** (3) as shown on the inside of the fold out page. Position the relevant 'V' groove in the template in line with





External Corner.



Template (2) - Measuring for the core at an External Corner:

End of core finishes 13mm past the end of the wall external

corner

MALL RETURN



Template (1) - Marking the position of the Tear Drop and PVCu Spacer at a Wall Return End.



Template ① - Marking the position of the PVCu Spacer at an Template ① - Marking the position of the PVCu Spacer at an Internal Corner.



Template ② - Measuring for the core at a Wall Return End: End of core finishes 66mm away from stop/start position of the handrail.



Template (2) - Measuring for the core at an Internal Corner: End of core finishes 126mm away from the wall internal corner.