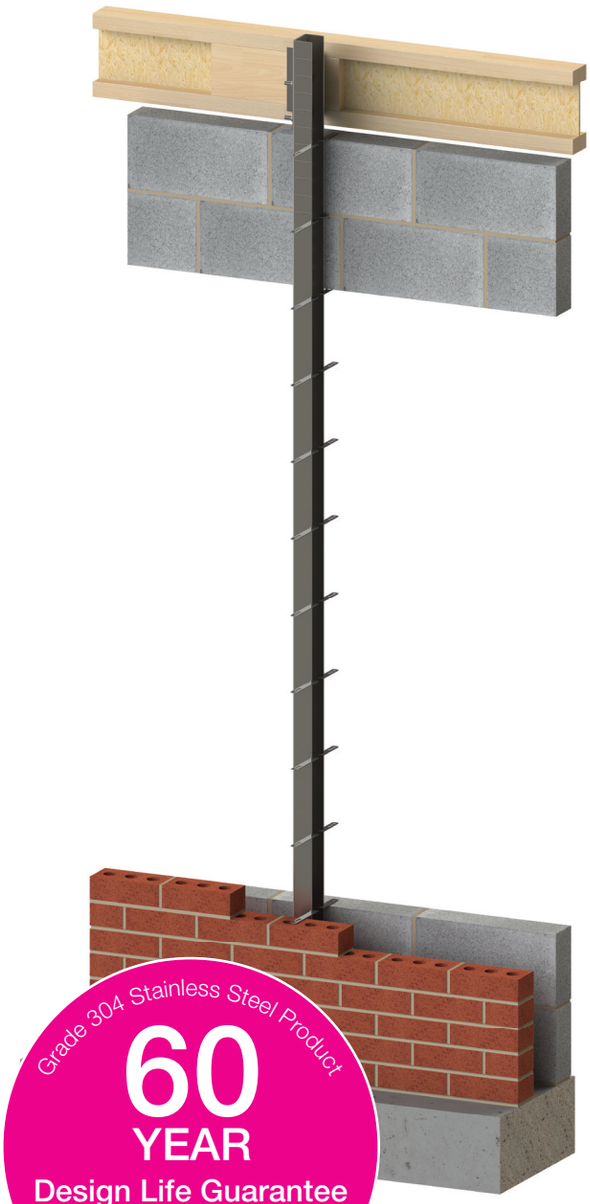
ACS
inner strength in construction

LONDON LINTELS LTD

Technical Data Sheet



Windpost PLUS

The new Windpost PLUS brings together years of experience in the field from both ACS and London Lintels to give a product suitable for use by the house building market.

Backed up by industry leading engineering expertise, the post is designed to suit varying lengths all within the same product. Comprising a simple base fix allowing connection straight to a concrete foundation, as well a number of top cleat options based on structure.

Holes down the length of the post allow for differing height requirements, ensuring that the post is suitable for multiple circumstances.

Adjustment

By utilising the large number of holes in the face of the post, the top connection can be positioned to suit the exact site requirement. Two setscrews are to be used between the cleat and the post, ensuring that a washer is used each side and a nut placed onto the screw.

Two setscrews are required into the post, ensuring that there is one per slot. Bolts must be in separate slots. Once the correct size has been set, the post can either be cut down to suit above the cleat or can continue up the cavity if allowable.

- Adjustable post length
- Multiple fixing positions
- Clear length markers
- Austenitic Stainless Steel
- Complete with ties and fixings
- Full technical backing from ACS
- 60 year design life guarantee
- Available from stock immediately

London Lintels
The Corn Drier, Alresford Road, Winchester, Hampshire, SO21 1HL

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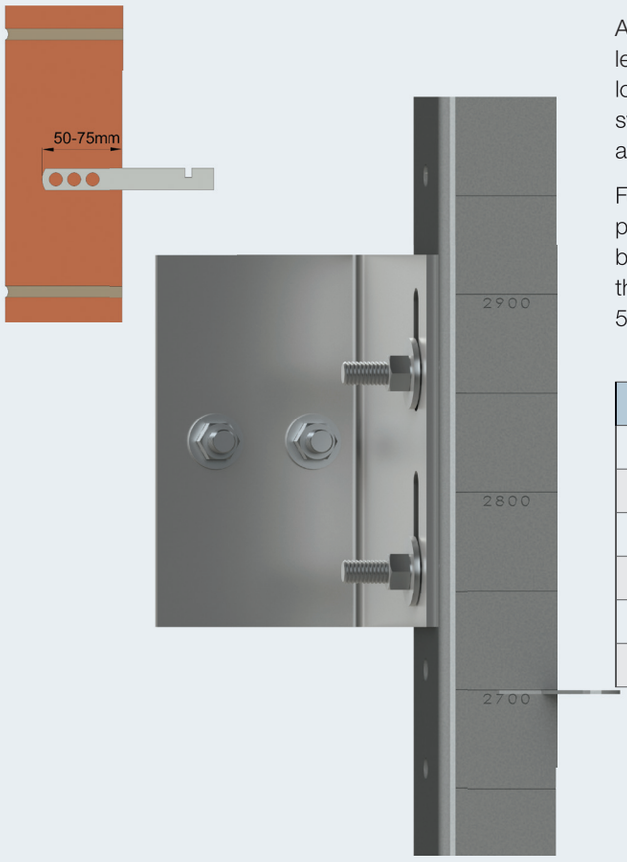
Clear length markers along both sides of the post assist with site installation, ensuring that your post is fit for purpose. Dependant on length, the post capacity is shown below. This should be provided to your structural engineer for confirmation of suitability.

Post Length (mm)	Maximum factored load for height of windpost (UDL) kN
3000	7.4
2900	7.9
2800	8.5
2700	9.1
2600	9.8
2500	10.6



Wall Ties

ACS WPT1 clip on ties to both the external leaf and internal leaf are used to transfer the loadings applied to the brickwork, back to the structure. To the blockwork inner, 75mm ties are to be used.

For the ties used for the blockwork outer, please refer to the table below for tie lengths based on cavity. Ties should be placed into the brick / block ensuring that you have 50-75mm embedment length.

Tie Reference	Tie Length	Cavity Range (mm)
ACS WPT1 / 5 / 75	75	95-120
ACS WPT1 / 5 / 100	100	121-145
ACS WPT1 / 5 / 125	125	146-170
ACS WPT1 / 5 /150	150	171-195
ACS WPT1 / 5 / 175	175	196-220
ACS WPT1 / 5 / 200	200	221-245

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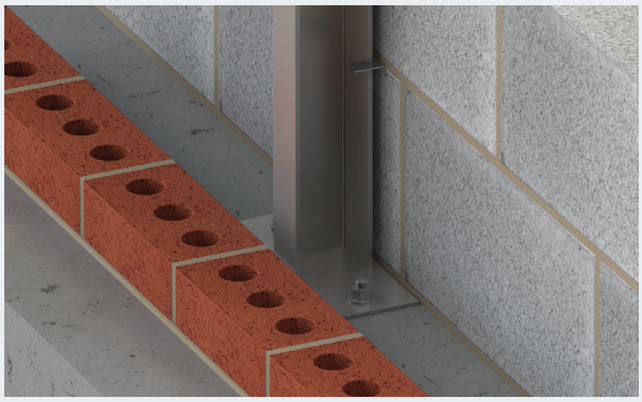
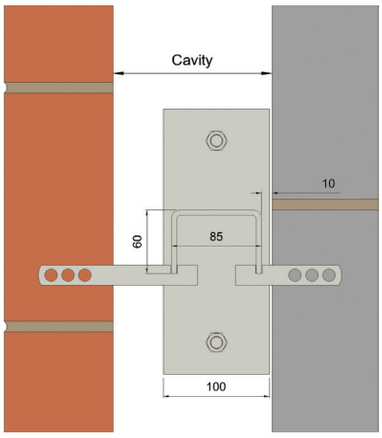
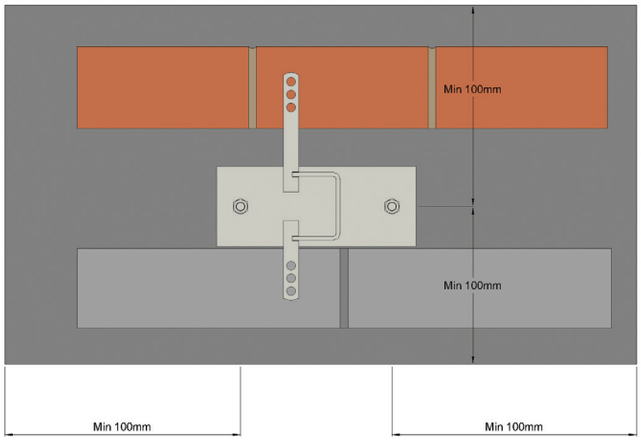
Base Connection

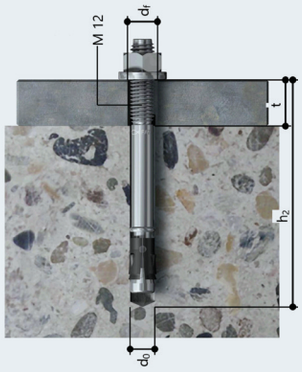
The post is designed to be fixed directly into the concrete foundation using the supplied expansion anchors. Details are shown below for installation parameters, including a drill hole depth of 109mm and minimum edge distances all round of 100mm. The post is to be positioned 10mm away from the edge of the blockwork and holes drilled accordingly. Small slots in the base allow for site drill tolerances.







Installation Details



Thread Diameter	M12	Installation Type	Push-through Installation
Drill Hole Diameter	d_0 = 12mm	Annular Gap	Not Filled
Drill Hole Depth	h_2 = 109mm	Installation Torque	T_{inst} = 60.0 Nm
Calculated Anchorage Depth	h_{ef} = 50mm	Socket Size	19mm
Installation Depth	h_{nom} = 64mm	Base Plate Thickness	t = 5mm
Drilling Method	Hammer Drilling	Total Fixing Thickness	t_{fix} = 5mm
Drill Hole Cleaning	Only blow out by hand. No borehole cleaning required in case of using a hollow drill bit, e.g fischer FHD.	Tfix, max	$t_{fix,\ max}$ = 40mm

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Top Cleat Connection

With its innovative design, the Windpost PLUS allows for a number of different connections dependant on structure. When fixing to a timber wall plate or steel beam directly above the blockwork, cleat A can be utilised. When fixing to a joist, a timber noggin should be inserted allowing for cleat B to be utilised.

Cleat A to Wall Plate

When fixing to a timber wall plate on top of the blockwork leaf, threaded bars are fixed through the timber with washers and nuts utilised each side.

At its highest capacity requirement, the fixings will impose a load onto the timber of 6.45kN in tension and 2.65kN in shear per fixing. Timber should be capable of taking these imposed loads

See Drawing LL-WD1-B for more details.

Cleat A to Steel Beam

When fixing to a steel beam above the blockwork leaf, threaded bars are fixed through the steel with washers and nuts utilised each side.

At its highest capacity requirement, the fixings will impose a load onto the steel of 6.45kN in tension and 2.65kN in shear per fixing. Isolation should be used between stainless components and carbon steel including fixings.

See Drawing LL-WD1-C for more details.

Cleat B to Floor Joist

When fixing to a floor joist additional packing/bracing will be required for the cleat connection. Shown indicative here (orientation may vary).

At its highest capacity requirement, the fixings will impose a load onto the timber of 4.86kN in tension per fixing. Timber should be capable of taking these imposed loads

See Drawing LL-WD1-A for more details.

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