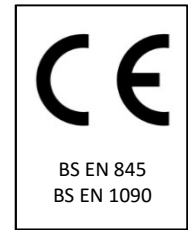


ACS Windposts



- ✓ Posts designed to Eurocodes 3 & 6
- ✓ Ties designed to BS EN 845
- ✓ Stainless or Mild Steel
- ✓ Specialist Design Team
- ✓ Value Engineered Solutions
- ✓ Standard or Bespoke Designs



Introduction

ACS has designed and developed an extensive range of windposts that span vertically between floors to provide lateral support and restraint to a variety of brick, block and stonework applications. They often eliminate the need for additional steel or reinforced concrete columns, thus reducing time and costs involved in this method of construction. Windposts provide greater strength and stability in large areas of cladding or where there are two or more window apertures in a masonry panel.

Standards Windpost Sections

ACS produces a range of standard windposts that can be selected from a design table depending on the length, section and required service load. C Type windposts are installed within the cavity leaving the blockwork coursing and stretcher bonding undisturbed. They are commonly used in masonry panels that are subject to lower wind loadings. L Type windposts are a cost effective structural solution designed for use where high wind loadings may occur and in some cases where cavity widths restrict the use of C Type windposts.

Box section posts are typically built into a blockwork wall; however they can also be concealed within the cavity in high load applications due to their greater sectional properties.

ACS also supplies a range of posts to support and restrain spandrel and parapet panels. They are generally designed as a cantilever beam so often require larger base connection to resist the applied bending movements.

Special Windpost Sections

ACS can also design and manufacture windposts, parapet posts and spandrel posts and rails to suit bespoke applications. These can be produced from either Stainless Steel (304 or 316) complying with BS EN 10088 or Mild Steel painted or galvanized posts complying with BS EN 10025.

Installation

All ACS windposts are supplied complete with site-specific layout and section details for the post, head and base fixings and ties to assist the installation team.

For further information or technical assistance please contact the ACS Technical Department on 0844 850 0860 or email technical@acsstainless.co.uk

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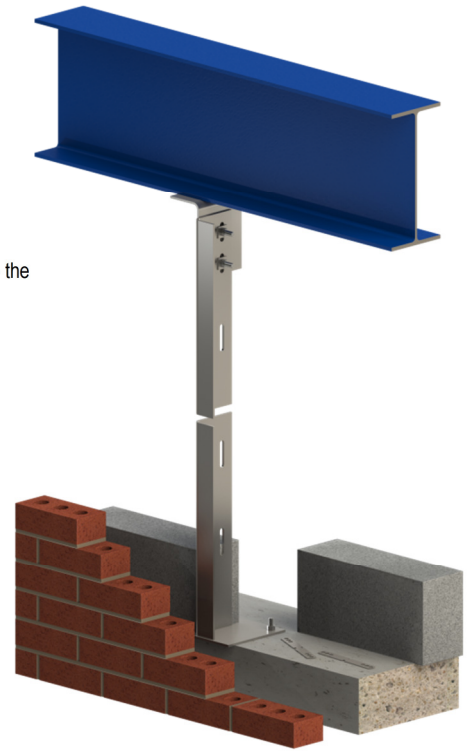
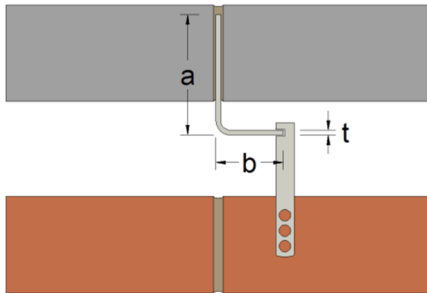
L Section Windposts

L Type windposts are a cost effective structural system designed to suit each and every individual project.

The posts are built into the internal skin of blockwork and bolted to the structure via suitable fixings.

The use of WPT1 clip on ties to the external leaf & WPT2 clip in ties to the inner leaf transfer the loadings applied to the cladding back to the structure.

The following tables illustrate the typical sizes available, however almost any size can be designed / manufactured.



L TYPE Windposts

Windposts are designed as simply supported beams. Maximum deflection is height/360 and maximum stress is 191N/mm²

Section	Ixx	Zxx	2.5m	3.0m	3.5m	4.0m	4.5m	5.0m	5.5m	6.0m
a x b x t	cm ⁴	cm ³	Maximum factored load for height of windpost (UDL) kN							
125 x 70 x 4	128.38	15.39	9.4	7.8	6.7	5.1	4.1	3.3	2.7	2.3
140 x 70 x 4	174.46	19.01	11.6	9.7	8.3	7.0	5.5	4.5	3.7	3.1
130 x 70 x 6	208.89	24.44	14.9	12.4	10.7	8.4	6.6	5.3	4.4	3.7
155 x 70 x 4	229.71	22.96	14.0	11.7	10.0	8.8	7.3	5.9	4.9	4.1
170 x 70 x 4	294.81	27.24	16.6	13.9	11.9	10.4	9.2	7.5	6.2	5.2
150 x 70 x 6	308.40	31.95	19.5	16.3	13.9	12.2	9.7	7.9	6.5	5.5
160 x 70 x 6	367.54	36.03	22.0	18.3	15.7	13.8	11.6	9.4	7.8	6.5
185 x 70 x 4	370.46	31.85	19.5	16.2	13.9	12.2	10.8	9.5	7.8	6.6
150 x 80 x 8	421.50	43.00	24.8	21.9	18.8	16.4	13.3	10.8	8.9	7.5
185 x 70 x 5	458.69	39.58	24.2	20.1	17.3	15.1	13.4	11.7	9.7	8.2
160 x 80 x 8	502.82	48.54	24.8	24.7	21.2	18.5	15.9	12.9	10.6	8.9
200 x 70 x 5	566.57	45.72	24.8	23.3	20.0	17.5	15.5	14.0	12.0	10.1

L TYPE Parapet posts

Parapet and spandrel posts are designed as fixed base cantilevers. Maximum deflection is height/180 and maximum stress is 191N/mm²

Section	Ixx	Zxx	0.8m	1.0m	1.2m	1.4m	1.6m	1.8m	2.0m
a x b x t	cm ⁴	cm ³	Maximum factored load for height of windpost (UDL) kN						
125 x 70 x 4	128.38	15.39	6.75	5.9	4.9	4.2	3.7	3.3	2.9
140 x 70 x 4	174.46	19.01	6.75	7.3	6.0	5.2	4.5	4.0	3.6
130 x 70 x 6	208.89	24.44	6.75	9.0	7.8	6.7	5.8	5.2	4.7
155 x 70 x 4	229.71	22.96	6.75	8.8	7.3	6.3	5.5	4.9	4.4
170 x 70 x 4	294.81	27.24	6.75	9.0	8.7	7.4	6.5	5.8	5.2
150 x 70 x 6	308.40	31.95	6.75	9.0	10.2	8.7	7.6	6.8	6.1
160 x 70 x 6	367.54	36.03	6.75	9.0	11.3	9.8	8.6	7.6	6.9
185 x 70 x 4	370.46	31.85	6.75	9.0	10.1	8.7	7.6	6.8	6.1
150 x 80 x 8	421.50	43.00	6.75	9.0	11.3	11.7	10.3	9.1	8.2
185 x 70 x 5	458.69	39.58	6.75	9.0	11.3	10.8	9.4	8.4	7.6
160 x 80 x 8	502.82	48.54	6.75	9.0	11.3	13.2	11.6	10.3	9.3
200 x 70 x 5	566.57	45.72	6.75	9.0	11.3	12.5	10.9	9.7	8.7

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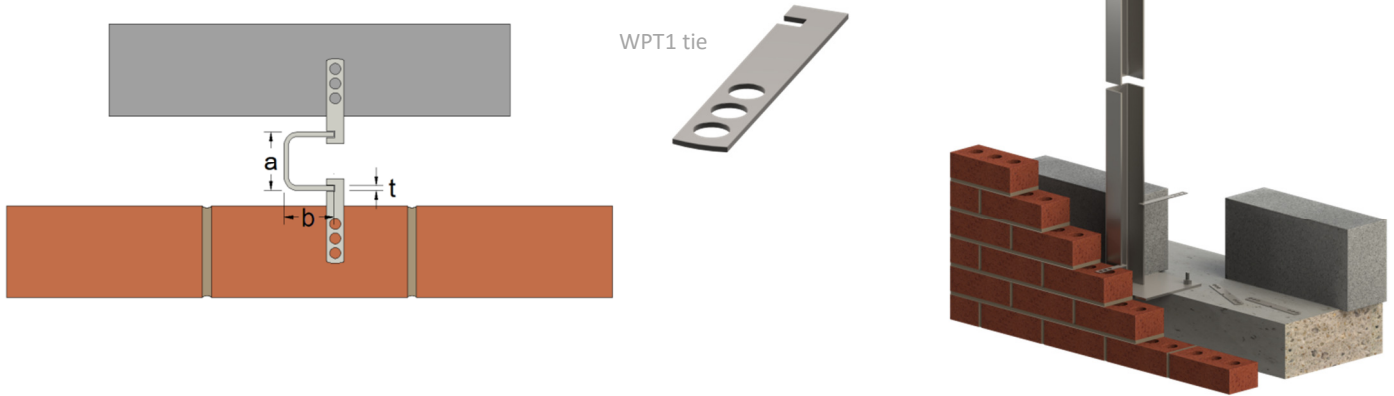
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Technical Data Sheet

C Section Windposts

C Type windposts are designed within the cavity and eliminate the need for cutting blockwork. The posts are bolted to the structure with suitable fixings. The use of WPT1 clip on ties to both the external & internal leaf transfer the loadings applied to the cladding back to the structure. The following tables illustrate the typical sizes available; however, almost any size can be designed / manufactured.



C TYPE Windposts

Windposts are designed as simply supported beams. Maximum deflection is height/360 and maximum stress is 191N/mm²

Section	I _{xx}	Z _{xx}	2.5m	3.0m	3.5m	4.0m	4.5m	5.0m	5.5m	6.0m
a x b x t	cm ⁴	cm ³	Maximum factored load for height of windpost (UDL) kN							
55 x 60 x 4	32.05	11.66	3.3	2.3	1.7	1.3	1.0			
55 x 60 x 5	37.37	13.59	3.8	2.7	2.0	1.5	1.2	1.0		
65 x 60 x 4	47.18	14.52	4.8	3.4	2.5	1.9	1.5	1.2	1.0	
65 x 60 x 5	55.43	17.06	5.7	3.9	2.9	2.2	1.8	1.4	1.2	1.0
75 x 60 x 4	65.71	17.52	6.7	4.7	3.4	2.6	2.1	1.7	1.4	1.2
75 x 60 x 5	77.65	20.71	8.0	5.5	4.1	3.1	2.5	2.0	1.6	1.4
85 x 60 x 4	87.86	20.67	9.0	6.2	4.6	3.5	2.8	2.2	1.9	1.6
85 x 60 x 5	104.30	24.54	10.7	7.4	5.4	4.2	3.3	2.7	2.2	1.9
95 x 60 x 5	135.63	28.56	13.9	9.6	7.1	5.4	4.3	3.5	2.9	2.4
105 x 60 x 5	171.91	32.75	16.5	12.2	9.0	6.9	5.4	4.4	3.6	3.1
115 x 60 x 5	213.39	37.11	16.5	15.2	11.1	8.5	6.7	5.5	4.5	3.8
115 x 60 x 6	245.40	42.68	16.5	17.5	12.8	9.8	7.8	6.3	5.2	4.4

C TYPE Parapet posts

Parapet and spandrel posts are designed as fixed base cantilevers. Maximum deflection is height/180 and maximum stress is 191N/mm²

Section	I _{xx}	Z _{xx}	0.8m	1.0m	1.2m	1.4m	1.6m	1.8m	2.0m
a x b x t	cm ⁴	cm ³	Maximum factored load for height of windpost (UDL) kN						
55 x 60 x 4	32.05	11.66	4.5	4.3	3.0	2.2	1.7	1.3	1.1
55 x 60 x 5	37.37	13.59	4.5	5.0	3.5	2.5	1.9	1.5	1.2
65 x 60 x 4	47.18	14.52	4.5	5.5	4.4	3.2	2.5	1.9	1.6
65 x 60 x 5	55.43	17.06	4.5	6.0	5.1	3.8	2.9	2.3	1.8
75 x 60 x 4	65.71	17.52	4.5	6.0	5.6	4.5	3.4	2.7	2.2
75 x 60 x 5	77.65	20.71	4.5	6.0	6.6	5.3	4.0	3.2	2.6
85 x 60 x 4	87.86	20.67	4.5	6.0	6.6	5.6	4.6	3.6	2.9
85 x 60 x 5	104.30	24.54	4.5	6.0	7.5	6.7	5.4	4.3	3.5
95 x 60 x 5	135.63	28.56	4.5	6.0	7.5	7.8	6.8	5.6	4.5
105 x 60 x 5	171.91	32.75	4.5	6.0	7.5	8.9	7.8	6.9	5.7
115 x 60 x 5	213.39	37.11	4.5	6.0	7.5	9.0	8.9	7.9	7.1
115 x 60 x 6	245.40	42.68	4.5	6.0	7.5	9.0	10.2	9.1	8.1

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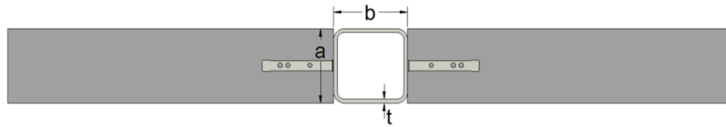
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Box Section Windposts

Box section windposts are predominantly designed for use within the blockwork but can also be used in the cavity. The posts are bolted to the structure with suitable fixings. The use of 3000 range ties to both sides of the post transfers the loadings applied to the blockwork back to the structure. The following tables illustrate the typical sizes available; however, almost any size can be designed / manufactured.



3000 Range Tie



Box SECTION Windposts

Windposts are designed as simply supported beams. Maximum deflection is height/360 and maximum stress is 191N/mm²

Section	I _{xx}	Z _{xx}	2.5m	3.0m	3.5m	4.0m	4.5m	5.0m	5.5m	6.0m
a x b x t	cm ⁴	cm ³	Maximum factored load for height of windpost (UDL) kN							
100 x 100 x 4	226	45.3	23.1	16.1	11.8	9.0	7.1	5.8	4.8	4.0
100 x 100 x 5	271	54.2	27.8	19.3	14.2	10.8	8.6	6.9	5.7	4.8
100 x 100 x 6	311	62.3	30.0	22.1	16.2	12.4	9.8	8.0	6.6	5.5
200 x 100 x 4	411	82.2	30.0	29.2	21.5	16.4	13.0	10.5	8.7	7.3
200 x 100 x 5	497	99.4	30.0	35.3	26.0	19.9	15.7	12.7	10.5	8.8
140 x 140 x 4	652	93.1	30.0	36.0	34.1	26.1	20.6	16.7	13.8	11.6
140 x 140 x 5	791	113.0	30.0	36.0	41.3	31.6	25.0	20.2	16.7	14.1
140 x 140 x 6	920	131.0	30.0	36.0	42.0	36.8	29.1	23.6	19.5	16.4
140 x 140 x 8	1130	161.0	30.0	36.0	42.0	45.2	35.7	28.9	23.9	20.1
200 x 200 x 5	2410	241.0	30.0	36.0	42.0	51.0	57.0	61.7	51.0	42.8

Box SECTION Parapet posts

Parapet and spandrel posts are designed as fixed base cantilevers. Maximum deflection is height/180 and maximum stress is 191N/mm²

Section	I _{xx}	Z _{xx}	0.8m	1.0m	1.2m	1.4m	1.6m	1.8m	2.0m
a x b x t	cm ⁴	cm ³	Maximum factored load for height of windpost (UDL) kN						
100 x 100 x 4	226	45.3	9.0	12.0	14.4	12.4	10.8	9.3	7.5
100 x 100 x 5	271	54.2	9.0	12.0	15.0	14.8	12.9	11.2	9.0
100 x 100 x 6	311	62.3	9.0	12.0	15.0	17.0	14.9	12.8	10.4
200 x 100 x 4	411	82.2	9.0	12.0	15.0	18.0	19.6	16.9	13.7
200 x 100 x 5	497	99.4	9.0	12.0	15.0	18.0	21.0	20.5	16.6
140 x 140 x 4	652	93.1	9.0	12.0	15.0	18.0	21.0	19.7	17.8
140 x 140 x 5	791	113.0	9.0	12.0	15.0	18.0	21.0	24.0	21.6
140 x 140 x 6	920	131.0	9.0	12.0	15.0	18.0	21.0	24.0	24.0
140 x 140 x 8	1130	161.0	9.0	12.0	15.0	18.0	21.0	24.0	24.0
200 x 200 x 5	2410	241.0	9.0	12.0	15.0	18.0	21.0	24.0	24.0

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