

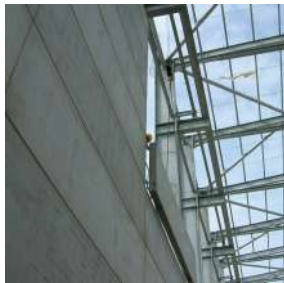


HEAVY DUTY HORIZONTAL PRESTRESSED PRECAST CONCRETE WALL PANELS

Heavy Duty Applications

ACP Heavy Duty Horizontal Prestressed Precast Concrete Wall panels are designed to fit between vertical steel support columns (stub posts/kingposts) or to the building frame to produce a foundation free wall.

With a fire rating of up to 4 hours, depending on section size, they can also be used to construct fire separation walls. All our prestressed wall panels are designed and manufactured to Eurocode 2, BS8110 and BS5502 (Agriculture) industry standards and are all CE marked.



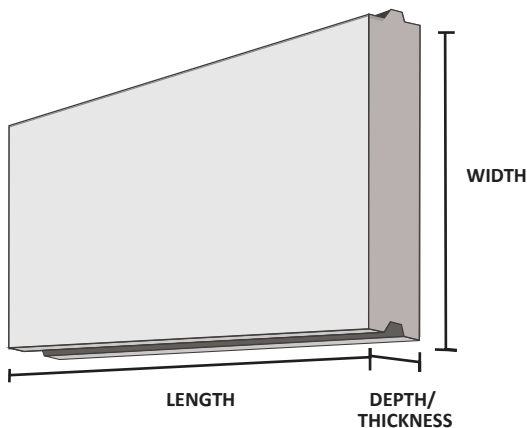
APPLICATIONS

ACP prestressed, precast concrete walls panels are designed to provide structural walls across various applications.

- Perimeter Walls
- Bulk Division Walls
- Recycling and Renewables - structural walls for Waste, Bunkers, AD Silage, Biomass.
- Ground Retaining Walls - provide soil retaining in temporary or permanent applications including Bulk Stores, Bunkers, Push Walls, Car Parks, Goods Yards and Landscaping Projects.
- Kingpost Retaining Walls
- Warehouse and Security - provide non-structural walls to warehouses, offices, workshops and retail buildings.
- Firewalls - provide fire containment walls to warehouses, storage buildings, offices workshops and retail buildings.
- Agriculture - provide structural walls to bulk grain stores, silos, livestock buildings and waste stores such as silage, slurry.



STANDARD WALL PANELS SIZES



WALL PANEL THICKNESS	CODE	STANDARD WIDTHS		LENGTHS*	FIRE RATING
		HALF	FULL		
145mm	H145	500mm	1000mm	up to 7.0m	up to 1.5 hrs
			1100mm		
		600mm	1200mm		
180mm	H180	On request	1000mm	up to 7.0m	up to 2 hrs
			1100mm		
			1200mm		
280mm	H280	On request	1200mm	up to 8.0m	up to 4 hrs

* Stock lengths are designed to suit bay sizes of 4.572m (15') and 6.096m (20')

Materials

All materials are sourced in accordance with the appropriate British Standard and in accordance with the ACP performance specifications.

- Concrete typical 28 days strengths are 60 N/mm²
- Concrete strength at transfer 30 N/mm²
- Water cement ratio 0.45 Maximum
- Reinforcement typically 9.3mm dia prestressing strand

Manufacture

ACP wall panels are manufactured in the long line prestressed method. Units are wet cast into steel moulds with under plate heating to assist in accelerated curing.

Design

All units are CE Marked and designed in accordance with Euro Code 2, and BS8110.

Unit design is typically to Class 2 or Class 3 in non-aggressive environments with a limiting crack width of 0.1mm unless otherwise stated.

It is the client’s responsibility to provide the anticipated loading data including bulk material density, angle of internal shear resistance and load condition including any surcharge or impact loadings so that the correct panel type can be advised.

FOR AGRICULTURE ONLY - All units are CE Marked and designed in accordance with Euro Code 2, BS 8110 and BS 5502 part 22. Unit design is typically to Class 3 with a limiting crack width of 0.1mm unless otherwise stated. It is the client’s responsibility to provide loading data including bulk material density, angle of internal shear resistance and load condition and any surcharge, grain stirring or impact loadings must also be provided.

Tolerances

Cross-sectional tolerances are within limits set out in clause 6.2.8.3 of BS8110:1997. ACP acceptable tolerances for standard prestressed units are as follows below:

PROPERTY	ACCEPTABLE TOLERANCES FOR STANDARD PRESTRESSED UNITS
LENGTH	-5mm to +10mm
WIDTH	-0mm to +6mm
THICKNESS	-2mm to +6mm
SQUARENESS	12mm difference between diagonals
SOCKET POSITIONS	-/+ 10mm
LIFTER POSITION	-/+ 100mm

Special cast units will be to tolerances laid down in BS8110 where casting techniques permit.

Mould Finishes

- All faces with the exception of the trowel face will be cast from steel shutter moulds. Surface finish is listed in BS8110 6.2.7.3 and is to conform to Type A.
- Small blemishes caused by entrapped air, excess mould release agent, marks on the casting surface and mould release agent staining can be expected.
- The surface will be free from voids and honeycombing.
- Surface marks from stacking timbers, strand runs and fork truck tine marks can be expected.
- Surface marks of stacking timber, strand run and mould release agent will fade out over time and use.
- Where a blemish free surface is required, masonry paint application is recommended.

Trowel Finishes

- The trowel face of units will comply with a U1 type finish.
- Finish will be uniform and provide full grout cover to aggregates.
- Some trowel marks will be visible.
- Some colour and texture variation may be expected.
- Stacking timber marks and cement blooming may be expected.
- Colour variation, trowel pattern and cement blooming will fade over time and weathering.
- Where uniform colour is required, masonry paint or mineral staining is recommended.

Camber

Units will have a prestressing camber. Camber variation between adjacent units will not exceed 6mm to units up to 4.5m and 9mm for units up to 6m in length.

Sound Attenuation

145mm Wall Thickness	Frequency (Hz)								
	Mean	63	125	250	500	1000	2000	4000	8000
	48	35	39	43	47	51	55	59	63

180mm Wall Thickness	Frequency (Hz)								
	Mean	63	125	250	500	1000	2000	4000	8000
	51	38	42	46	50	54	58	62	66

280mm Wall Thickness	Frequency (Hz)								
	Mean	63	125	250	500	1000	2000	4000	8000
	56	43	47	51	55	59	63	67	71

Contact Us

For all Precast Wall Panels enquiries please contact us on 01889 598 660

DISCLAIMER: Please note that any information provided is to be used as a guide only. Any lifting/handling operations should be carried out by trained and competent personnel only. ACP (Concrete) Limited will not be held responsible for any damage or injuries in connection with handling or installation not carried out by ACP (Concrete) Limited.