



PRECAST CONCRETE STAIRS AND LANDINGS

Residential, Industrial and Commercial Applications

Precast concrete is the process where concrete is placed in moulds off-site under controlled conditions. The concrete is cast around steel reinforcement bars which add strength to the product. It offers significant benefits over in-situ cast concrete due to the additional control over the mix used, casting conditions and performance. Therefore, precast concrete stairs and landings make the ideal solution for fast track high quality concrete staircase construction.

High quality concrete stair construction requires specialist equipment and technique. At ACP (Concrete) Ltd our precast stairs and landings are designed in accordance with EC2 and are available in various configurations from a single straight stair flight to a complete precast concrete stairwell with landings.

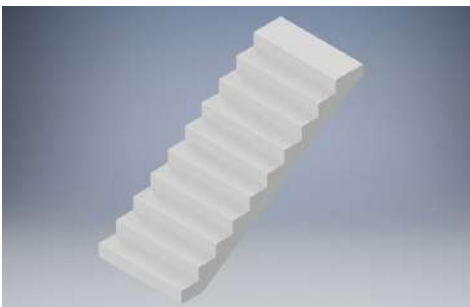
APPLICATIONS

Precast concrete stairs are designed provide pedestrian access to residential, commercial and domestic buildings for both internal and external construction.

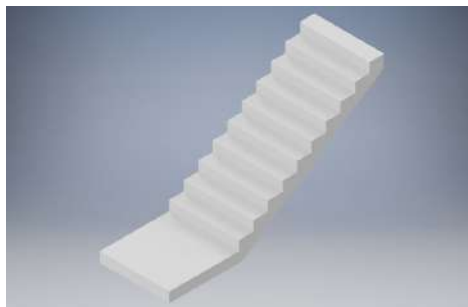
- High traffic stairwells such as commercial and industrial developments
- Fire escape stairs
- Suitable for Indoor and Outdoor use



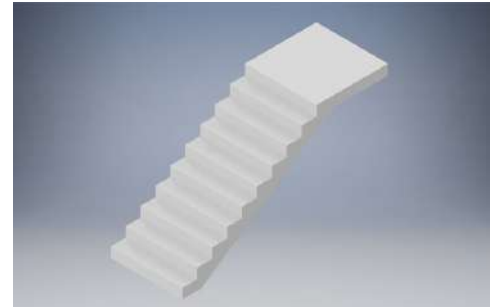
TYPES OF STAIRS AND LANDINGS



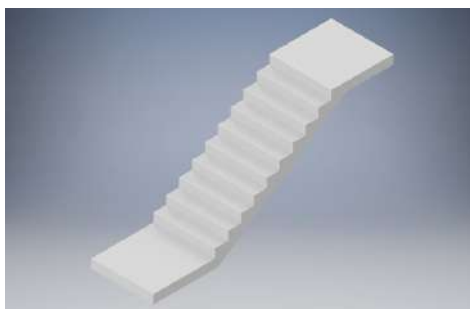
Straight Flight



Straight Flight with Attached Bottom Landing



Straight Flight with Attached Top Landing



Straight Flight with Attached Top and Bottom Landings



Bespoke Solutions



Materials

All materials are sourced in accordance with the appropriate British Standard and in accordance with the ACP (Concrete) Ltd 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 bend bar and mesh

Manufacture

ACP (Concrete) Ltd precast stairs are manufactured in a steel mold either on edge or on a ramp system. Units are wet cast using self-compacting concrete. Standard unit sizes are as follows:

RISERS RANGE	GOING RANGE	WIDTHS	MAX RISERS
152mm to 210mm	223mm to 320mm	850mm to 1720mm	17

Design

All units are CE Marked and designed in accordance.

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 anticipated traffic, floor to ceiling heights and any applied finishes.

Tolerances

Cross-sectional tolerances are within limits set out in clause 6.2.8.3 of BS8110:1997.EC2 ACP (Concrete) Ltd acceptable tolerances for standard prestressed units are as follows below:

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

Special cast units will be to tolerances laid down in 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 can be expected.
- Surface marks of stacking timber 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 have little or no camber.

Contact Us

For all Precast Concrete Stairs enquiries please contact us on 01900 814 659.

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.