

THE
WECK

G120/F30 FIRE GLASS BLOCK





WECK G120/F30 FIRE GLASS BLOCK

The Weck 190x190x100 SHS glass block achieved a **G120/F30** rating based on the four test criteria of a fire test at the 'Deutsches Institut Fur Bautechnik' under DIN standards.

- Fire resistance is concerned with four criteria :**
- (a) Mechanical Resistance - the glass block wall must stay upright without too much damage following testing**
 - (b) Thermal isolation**
 - (c) Imperviousness against blaze**
 - (d) No flammable emission during testing.**

These tests are recorded in 15 minute increments.



Thermal Insulation (F-category glazing) : 30 minutes.
DIN Standard Certificate No : Z-19.14-1257



Fire Integrity (G-category glazing) : 120 minutes.
DIN Standard Certificate No : Z-19.14-1258

DEFINITION :

FIRE INTEGRITY (G-CATEGORY GLAZING)

The glass block wall must pass Test (a) above.

THERMAL ISOLATION (F-CATEGORY GLAZING)

The glass block wall must pass all four of the criteria above.



Glass blocks under test conditions

PERFORMANCE

When installed in accordance with Weck fitting recommendations the SHS block achieves a certificated **120 minutes** fire integrity and a **full 30 minutes** thermal isolation.

F30 classification is a requirement for compartmentalised areas. For example, fire escape routes, apartment entrances, separation of kitchen to living areas in accommodation.



Before installation



After installation

G120/F30 Fire blocks separating a communal corridor to two apartments from the main staircase.

GENERAL NOTES

In the cases of both F & G category glazing, tests are measured in increments of 15 minutes, therefore to achieve a 30 minute thermal isolation under test conditions the result must be in excess of 30 minutes.

WECK G120/F30 FIRE GLASS BLOCK

The Weck 190x190x100 SHS are available in four patterns.



Clear Nubio
F 1910 (N)



Clear Arctic
F 1910 (S)

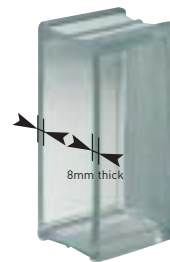


Clear Clarity
F 1910 (T)

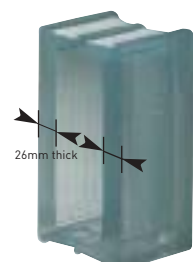


Super Fine Cross Reeded
F 1910 (ST)

The SHS glass block differs from the normal structure of a 190x190x8mm glass block as these images show. The 100mm thick SHS has two 26mm thick walls.



STANDARD GLASS BLOCK
190 x 190 x 80mm



F-30 GLASS FIRE BLOCK
190 x 190 x 100mm

HOW THE PANEL WAS TESTED

The panel was tested by Weck at the 'Deutsches Institut Für Bautechnik' under DIN standards. The panel size was 14 blocks square.

MAXIMUM PANEL SIZES

Weck state the overall maximum panel size that should be constructed is 9m². It was tested at 3m x 3m, however a glass block panel can be constructed up to 6 metres in height and 1.5 metres wide or visa versa.

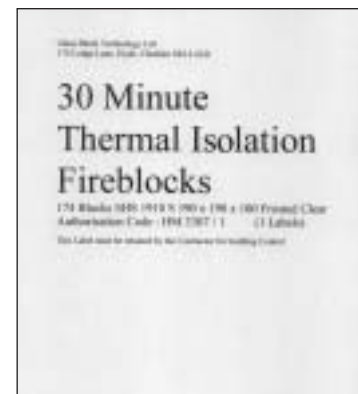
If the area to be built exceeds 9m², intermediate supports have to be incorporated and the panels divided up.

HOW TO ATTAIN CERTIFICATION

For a fire glass block wall to be warranted and receive a fire certificate it must be installed in strict accordance with the original test conditions.

When the glass blocks are ordered from Glass Block Technology, the pallets will be clearly labelled with the following details.

Once the panel has been installed, the person or contractor responsible must contact Glass Block Technology and complete an application form, which will be lodged in the project file at the Hyde offices. Glass Block Technology will then issue the F30 certification which must be kept safe at all times. This is a requirement of DIN Standards.



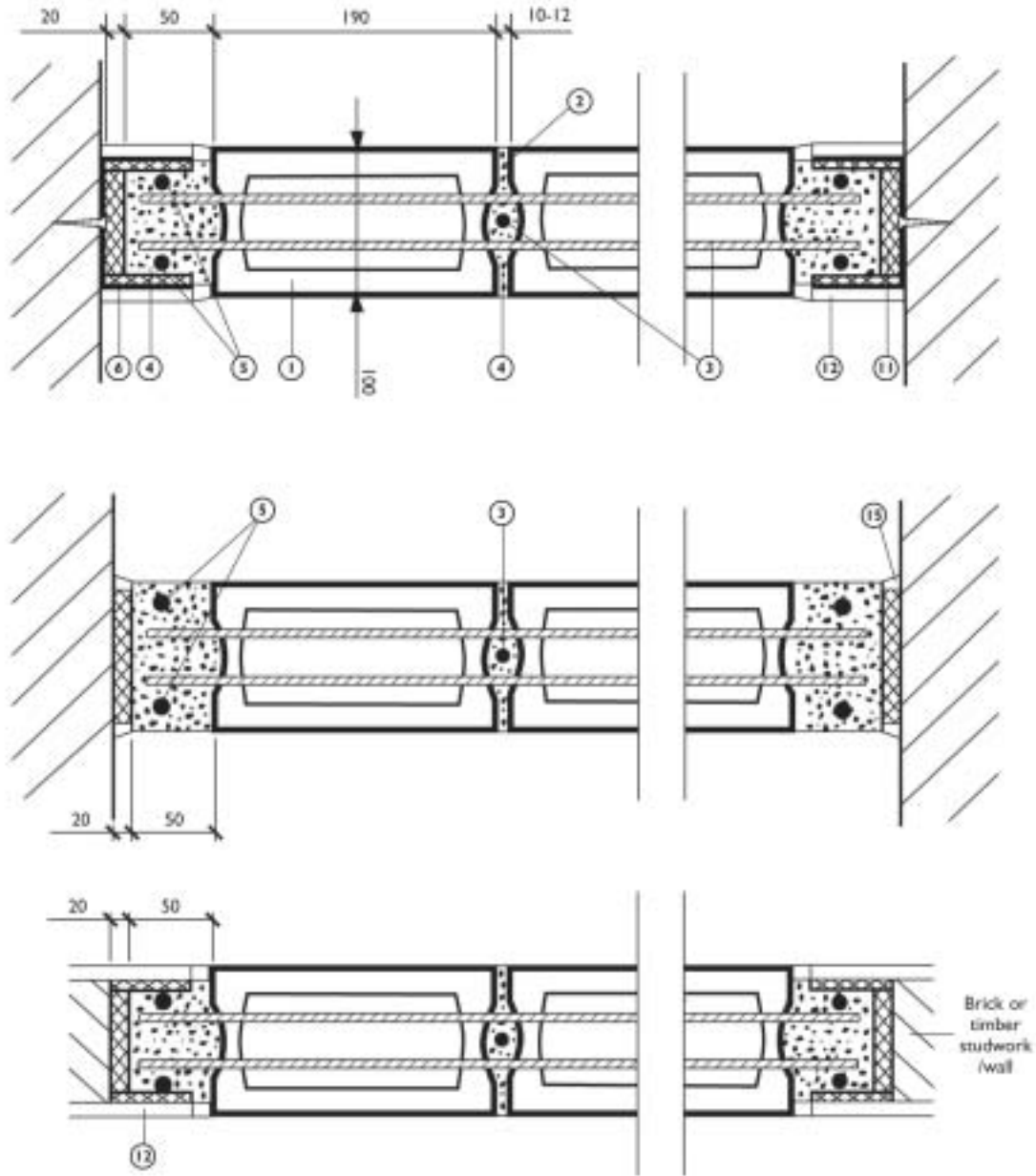
F30 fireblock pallet label

FULL TEST DATA AVAILABLE ON APPLICATION

F30 FIRE GLASS BLOCK WALL CONSTRUCTION

DATASHEET GBT/0020A

THE OVERALL MAXIMUM PANEL SIZE THAT SHOULD EVER BE CONSTRUCTED IS 9M².



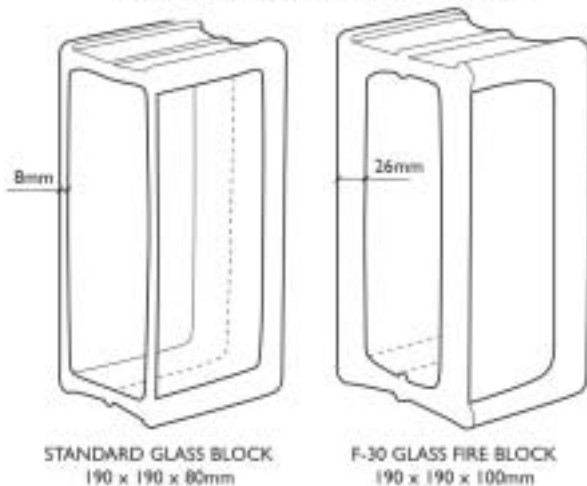
KEY :

① 190x190x100 F30 Fire block	④ Colmef Vetromix Mortar	⑪ Rockwool mineral fibre
② 10-12mm joint - horizontal and vertical	⑤ ∅ 8mm reinforcement rods	⑫ 30 minute fire resistant plasterboard
③ ∅ 6mm stainless steel reinforcement rods	⑥ Steel profile U 120	⑬ Dow Corning fire stop silicon

Glass Block Technology data sheets can be downloaded as pdf files from www.glassblocks.co.uk/datasheets
 If you require either faxed or posted versions, contact Glass Block Technology Sales.

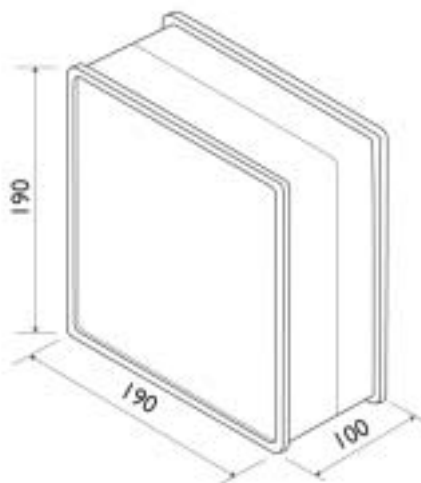


HOW DOES THE F-30 FIRE BLOCK DIFFER FROM STANDARD GLASS BLOCKS ?



STANDARD GLASS BLOCK
190 x 190 x 80mm

F-30 GLASS FIRE BLOCK
190 x 190 x 100mm



FITTING THE F-30 FIRE BLOCK

Re: F30 (190x190x100mm) Fire Block. To build a wall conforming to regulations as per fire test.

1. Lay out blocks dry, and pre-mark where horizontal & vertical rods are to go in between each horizontal & vertical glass block course. Make sure that you allow 20mm for Rockwool mineral fibre and 50mm for border around the perimeter. (2 no. Ø 6mm rods are to be laid each row horizontally and 1 no Ø 6mm rod vertically every row).
2. Into perimeter mortar of 50mm 2 No Ø 8mm rods must be inserted.
3. Lay Rockwool mineral fibre to sill.
4. Drill through pre-marked holes, insert rods and fill with fire proof silicone.
5. Position Rockwool to jambs as work proceeds.
6. On to sill, place mortar (50mm) incorporating 2 no Ø 8mm stainless steel rods fixed into jambs as above.
7. Lay blocks ensuring the joints are 10-12mm and uniform. Filling all joints with mortar. Tapping blocks into position using a rubber mallet. Check wall is level & plumb.
8. On top of first row, place 1/2 layer of mortar, inserting 2 no Ø 6mm stainless steel rods fixed into jambs either side and lay remaining 1/2 mortar and tap down as before. (NB Rods must not be in direct contact with glass).
9. Repeat steps 7 & 8 till wall complete. Only build a maximum of 4 courses in one day to prevent mortar squeeze.
10. Rake back joints approx. 5 - 10mm and when wall is completely dry, grout in using Colmef/Vetromix glass block mortar mixed wet.
11. When wall is finished, point perimeter with DC 700 fire-stop silicon to cover Rockwool and weatherproof.

TIPS

- ✓ Use back shuttering around concrete frame. Build frame around head and jambs as work proceeds.
- ✓ Mix mortar to slump of 1 (just enough water to form a mortar) as dry as possible.
- ✗ Do not use metal tools.
- ✓ 45 minute fire rated spacer pegs are available to allow 7-8 rows to be built per day.
- ✓ Steel U channel may be used as an option.

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Entrance to second storey
apartments - shared hallway
190x190x100 F30 Clear Clarity,





School
190x190x100 F30 Clear Clarity



School
190x190x100 F30 Clear Clarity



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