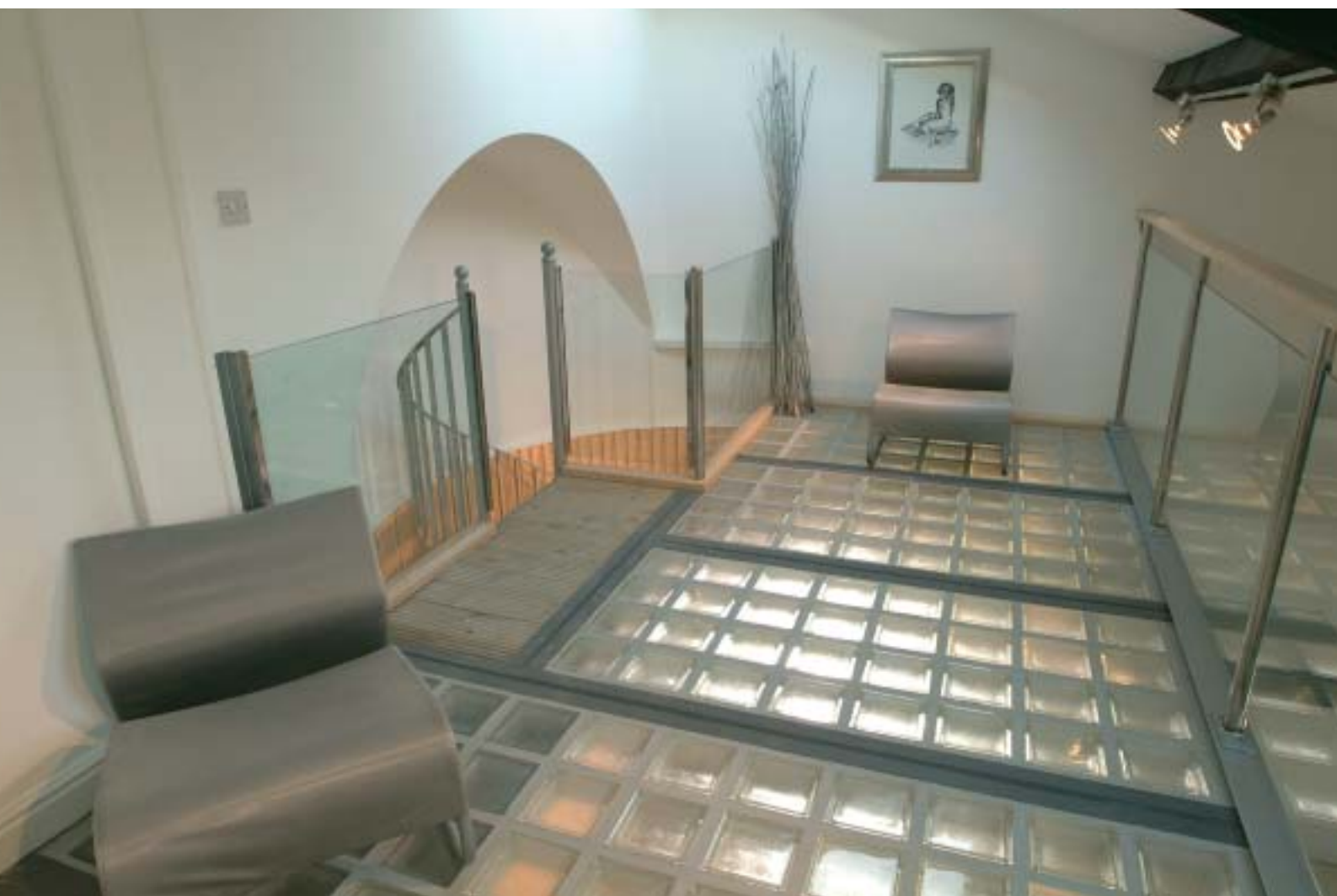


LA ROCHERE  
**PRECAST FLOOR**  
PANELS



# PRECAST GLASS BLOCK FLOOR PANELS (ROOF LIGHTS)

Precast floor panels are also known as roof lights. La Rochere manufacture a range of glass blocks and glass shells suitable for use in precast floor panels.

## CHARACTERISTICS OF FLOOR BLOCKS

La Rochere manufacture their shells and pavers by compression of a glass drop at about 1050°C. These shells are annealed at 560°C to eliminate internal tensions. Insulating pavers are obtained by heat fusion at more than 800°C of two hollow shells and are also annealed at 560°C.

For increased slip resistance, the glass surface can be sandblasted.



P12.60



P15.55



P15.80



PR12.60



P19.100

### PAVER SHELLS AND HOLLOW BLOCK

Ref	P12.60	P15.55	P15.80	PR12.60	P19.100
Dim in mm	120x120x60	150x150x55	150x150x80	∅120x60	190x190x100
Weight/paver	1.2kg	1.6kg	2kg	1.1kg	3.5kg
Quantity/m <sup>2</sup>	33-40	23-28	23-28	33-40	15-18
Surface	Clear	Clear	Clear	Clear	Clear
Appearance	Ribbed	Ribbed	Ribbed	Clear	Frosted

### Mechanical Strength (Tested by public laboratory)

Type	Average Load	Surface	Result
P12.60	194KN	144cm <sup>2</sup>	13.5MPA
P15.80	309KN	225cm <sup>2</sup>	13.8MPA
P19.100	535KN	361cm <sup>2</sup>	14.8MPA

## FIRE RATING

Specialist fire resistant block pavers for F30, F60 and F90 thermal isolation classification can be manufactured upon request, certain rules apply regarding panel sizes, joint and perimeter border widths.

Contact Glass Block Technology Precast Department.

### INSULATING PAVERS

Ref	BGF1930	BGF1960	BGF1990
Dim in mm	190x190x80	190x190x160	190x190x160
Weight/paver	4.15kg	8kg	8.3kg
Q/m <sup>2</sup>	15-18	15-18	15-18
Surface	Clear	Clear	Clear
Appearance	Clear	Clear	Clear

# PRECAST GLASS BLOCK FLOOR PANELS (ROOF LIGHTS)

## PRECAST FLOOR PANELS

La Rochere can produce numerous combinations of precast floor panels :  
As single panels, connecting panels, circular panels or curved panels for archways.

By making precast floor panels under factory controlled conditions it ensures regularity of joints and accurate positioning of stainless steel reinforcement rods.

Having panels precast is simpler and as a result quicker to install, in comparison to constructing floor panels insitu.



Precast Panel with glass pavers

When designs are submitted to the Glass Block Technology Precast Department, they are checked and forwarded to La Rochere who will produce drawings of the panels stating the best way of installation i.e : one or two piece, the minimum joint and border width and where the lifting sockets will be positioned.

## CHARACTERISTICS OF PRECAST FLOOR PANELS

Average figures with 30mm joints and 70mm borders.

	P12.60	P15.80	P19.100
Weight per sq.m	105kg/m <sup>2</sup>	108kg/m <sup>2</sup>	140kg/m <sup>2</sup>
Light transmission factor	max 63%	max 70%	max 75%
Heat transmission factor	+7 W/m <sup>2</sup> /°C	+6 W/m <sup>2</sup> /°C	+3.5 W/m <sup>2</sup> /°C
Acoustic insulation index	R=30 to 53db*	R=29 to 55db*	R=28 to 51db*
Thermal resistance 1/2 hour	PV 19.100 (190x190x100) PV CSTB No RS 98050 dated 26/10/98		

\* for 125 to 4000 Hz

## PRECAST FLOOR PANEL SPECIFICATION

### Joints and borders

Pavers are assembled with mortar joints and borders :

- 30mm joints minimum
- 70mm minimum perimeter border to allow minimum 40mm bearing.

### Mortar

Resistance of at least 300 bars (pressure unit)

Composition : 400kg/m<sup>3</sup> of CPA 55 Portland Cement (white cement allows a better light transmission), 560 litres of washed sand with a 0 - 3 mm particle size and 740 litres stone particles from 5 - 7mm and 90 litres of water and water repellent additive.

Note : HRI Cements should not be used, the same for all retractable types of cement.

### Reinforcement Rods

Steel Rods : ribbed bars

Section : 6, 8 10 or 12mm depending on length and supported weight of the panels

Laying : 1 rod in each row, 2 rods in the borders. Prefabricated panels include small additional rods on upper side.

Rods must at no time, come into contact with the pavers.

### Calculating opening sizes for panel

Allow 30mm for the joints and 70mm for the borders.

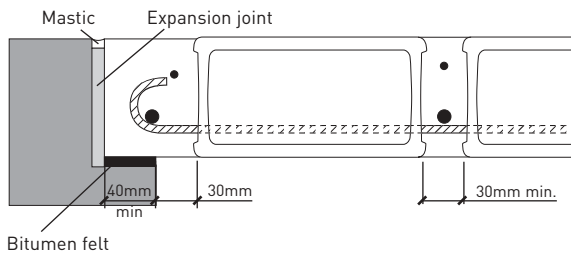
Allow an additional 10mm all around the panel for expansion joint.

The height should equal the thickness of the panel, plus the expansion joint it rests on.

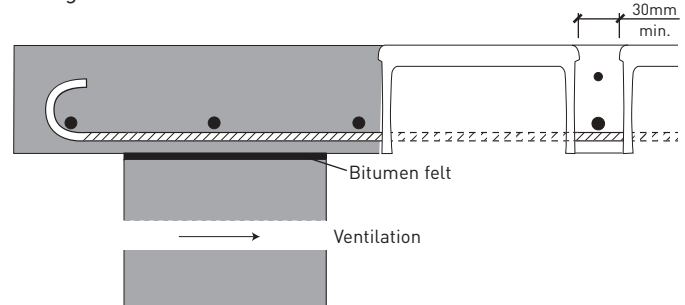
# PRECAST GLASS BLOCK FLOOR PANELS (ROOF LIGHTS)

## FIXING PRINCIPLES (Drawings not to scale and for information purposes only)

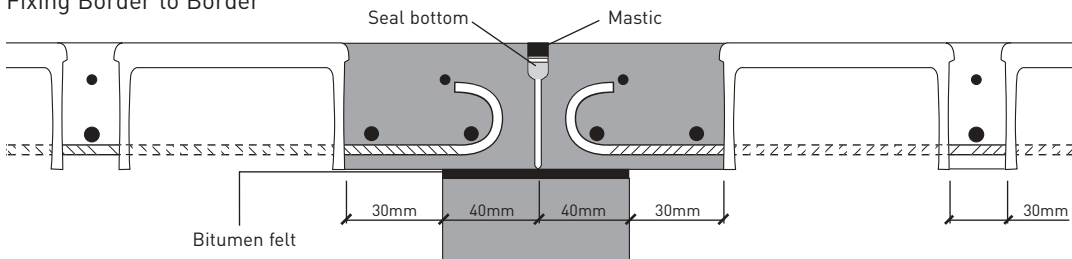
### Fixing to Rebate



### Fixing on Vertical Wall



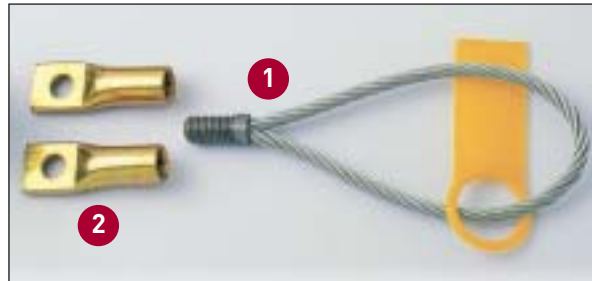
### Fixing Border to Border



## INSTALLATION



Floor panel being craned into position.



1. Lifting ring 2. Lifting sockets



Panel showing location of lifting socket

## INDEPENDENCE REGARDING MAIN WORKS

Paver panels ought to be independent in relation with main works to allow them to cope with expansion and contraction.

Provide for expansion and contraction :

- on piers with 2 coats of emulsion or 8mm bitumen expansion foam.

Around the perimeter border 10mm expansion foam should be incorporated, then weatherproofed by caulking with silicon.

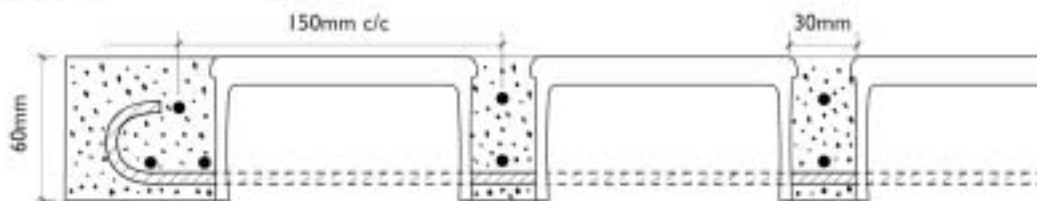
**Note : Expansion joints must not be bridged.**

## RECOMMENDATIONS FOR IMPLEMENTATION

The minimum slope is 2-3% to allow for water escape. Always provide for a good ventilation of the underside of the paver panels.

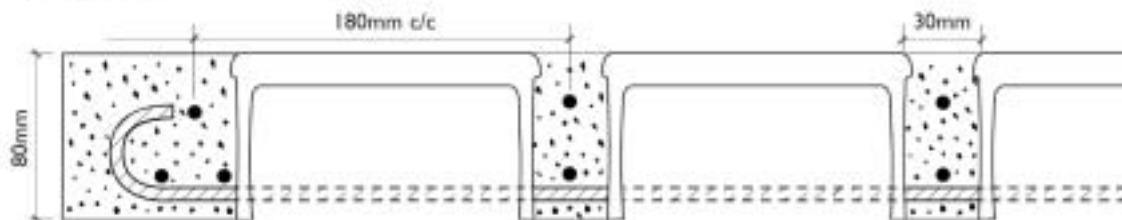
## Type P.12.60 & Pr 12.60 (Circular)

Weight : 105kg/m<sup>2</sup>  
 Dimension of lense : 120x120x60mm & Ø 120mm  
 Thickness of panel : 60mm  
 Cross Centres : 150mm  
 Min. joint width : 30mm  
 Superimposed load : 2.5KN/m<sup>2</sup> over span of 1.10m (Supported on 4 sides - min. of 40mm bearing)  
 Min. border : 70mm



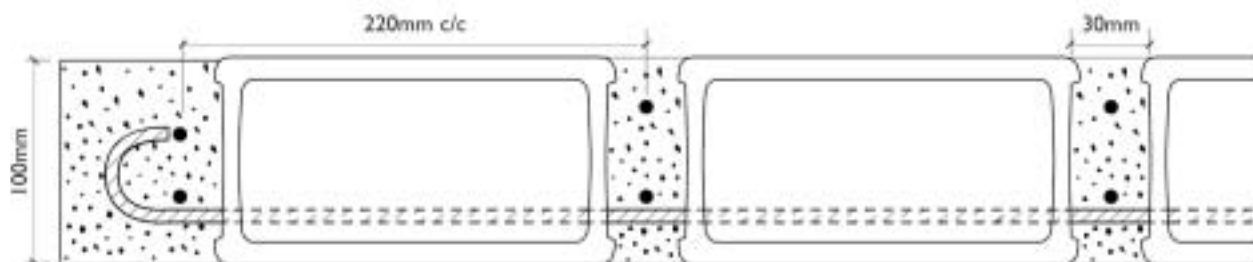
## Type P.15.80

Weight : 108kg/m<sup>2</sup>  
 Dimension of lense : 150x150x80mm  
 Thickness of panel : 80mm  
 Cross Centres : 150mm  
 Min. joint width : 30mm  
 Superimposed load : 3.5KN/m<sup>2</sup> over span of 1.40m (Supported on 4 sides - min. of 40mm bearing)  
 Min. border : 70mm



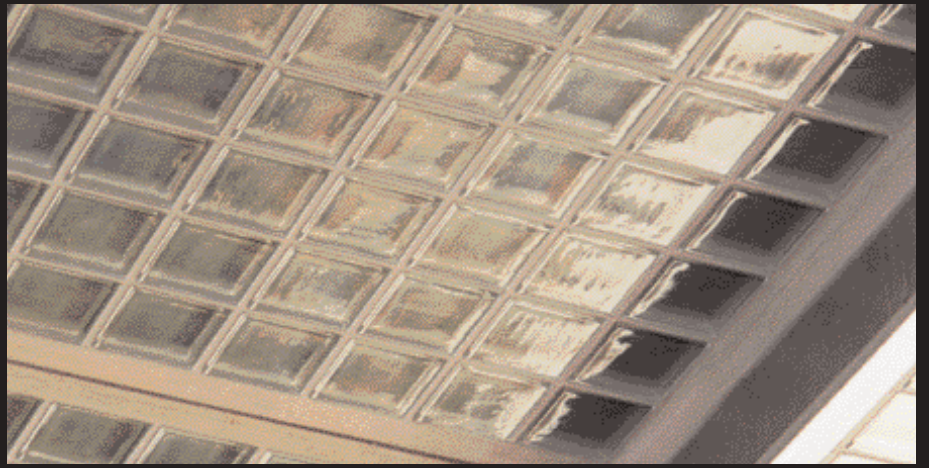
## Type P.19.100 Insulating Paver

Weight : 140kg/m<sup>2</sup>  
 Dimension of lense : 190x190x100mm  
 Thickness of panel : 100mm  
 Cross Centres : 220mm  
 Min. joint width : 30mm  
 Superimposed load : 5.0KN/m<sup>2</sup> over span of 1.60m (Supported on 4 sides - min. of 40mm bearing)  
 Min. border : 70mm



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





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