

# STEICO MASONRY CONSTRUCTION GUIDE

**M1 Bearing onto blockwork cavity wall**

All joists to have a minimum bearing of 90 mm. Ensure all bearings are flat, level and that the joists are vertical. Minimum 38 \* 38 perimeter noggin skew nailed or fixed to joist using proprietary clip. Noggin to be fixed 25-75 mm from face of wall.

Web stiffeners fitted to end of joists. Junction between wall and joists to be sealed with silicon mastic. Restraint straps may be required for buildings over 2 storeys or where joists have less than 90 mm of bearing. Please consult hanger manufacturers literature for further information

**M2a Bearing onto blockwork cavity wall using proprietary seal**

Minimum 38 \* 38 perimeter noggin skew nailed or fixed to joist using proprietary clip. Noggin to be fixed 25-75 mm from face of wall

Proprietary end seal

Restraint strap where required

Please refer to manufacturers details for full installation details and restraint strap requirements.

**M2b Bearing onto blockwork cavity wall using proprietary end stopper**

Proprietary end stopper system

Minimum 38 \* 38 perimeter noggin skew nailed or fixed to joist using proprietary clip. Noggin to be fixed 25-75 mm from face of wall

Ensure all bearings are flat, level and that the joists are vertical. Please refer to manufacturers details for full installation details and restraint strap requirements.

**M3a Masonry Hanger**

Restraint Straps fitted as manufacturers details

Minimum 38 \* 38 perimeter noggin skew nailed or fixed to joist using proprietary clip. Noggin to be fixed 25-75 mm from face of wall

Cullen® or Simpson Strong-Tie® Masonry hanger

Restraint straps to be fitted at no more than 2m centres or at spacing specified by the building designer.

**M3b Restraint type hanger**

Minimum 38 \* 38 perimeter noggin skew nailed or fixed to joist using proprietary clip. Noggin to be fixed 25-75 mm from face of wall

Refer to Manufacturers Technical Literature for specification and installation details.

**M4 Masonry wall restraint**

Galvanised masonry restraint strap fixed to minimum 3 joists in accordance with manufacturers recommendations. Blocking may be full depth I-joists or solid timber. Where solid timber is used ensure the size is a minimum of 38 mm x half the joist depth. Do not notch the flanges.

**M5 Steel Beam masonry above**

Minimum 38 \* 38 perimeter noggin skew nailed or fixed to joist using proprietary clip. Noggin to be fixed 25-75 mm from face of wall

Masonry Hanger bedded in mortar joint. Refer to manufacturers details.

Timber packer to steel beam designers requirements

**M6 Internal wall built around joists**

Minimum 38 \* 38 perimeter noggin skew nailed or fixed to joist using proprietary clip. Noggin to be fixed 25-75 mm from face of wall

Ensure blockwork does not contact the top of the joists

89 mm minimum bearing for continuous joists. Ensure discontinuous joists have a minimum of 45 mm bearing. Joists may be lapped for full bearing.

**M7 Joists ending on internal wall**

Minimum 38 \* 38 perimeter noggin skew nailed or fixed to joist using proprietary clip. Noggin to be fixed 25-75 mm from face of wall. Noggin not required where I-Joist blocking is used.

Mortar fill may be required

Blockwork may be built up around I-Joists or blocking pieces used to restrain the end of I-Joists

**G1 Non load bearing wall parallel to the joists**

Maximum weight of non load bearing wall 0.8 kN/m. Designers to ensure joist design includes an allowance for the weight of walls above

Minimum 38 \* 75 mm partition noggin fixed to joist using Z-clip

**G2 Non load bearing wall across the joists**

Non load bearing wall max 0.8 kN/m

The designer is responsible for ensuring the I-Joist design is adequate to support the wall. See span tables.

Sole plate of partition wall to be nailed to joists below

**G3 Different hanger applications**

Top Mount

Face Mount

Web stiffener where required. Please refer to hanger manufacturers information.

**G4 STEICOjoist to STEICOjoist connection**

Install Backer blocks on both sides of STEICOjoist. Attach with 10 no. 3.75 \* 75 nails, clenched where possible. Backer block to be a minimum of 250 mm wide.

Install Backer blocks tight to top flange for top mount hangers and tight to bottom flange for face mount hangers. Please refer to hanger manufacturers literature for alternative hanger options.

**G5a 2-ply I-joist connection**

2 ply I-joist connected using Cullen I-Clips or Simpson MJC as hanger manufacturers details

Backer blocks may be required. Backer blocks to be fitted as detail G4 or refer to hanger manufacturers details.

**Access and service holes**

single rectangular hole with max 15 mm x 40 mm.

holes with max 20 mm diameter can be placed anywhere in the web. Distance between hole edges ≥ 40 mm.

holes with max 38 mm diameter can be placed in the centre of the web. Distance between hole edges ≥ 78 mm.

Minimum distance in mm from inside face of any support to nearest edge of hole.

**G5b 2-ply I-joist connection**

Refer to Simpson Strong-Tie technical literature for SDS screw capacities and installation details

Backer blocks may be required. Backer blocks to be fitted as detail G4 or refer to hanger manufacturers details.

**Backer Block & Web Stiffener table**

STEICOjoist			
Depth	SJ45	SJ60	SJ90
200	19 * 115 mm	24 * 115 mm	38 * 115 mm
220	19 * 135 mm	24 * 135 mm	38 * 135 mm
240	19 * 155 mm	24 * 155 mm	38 * 155 mm
300	19 * 215 mm	24 * 215 mm	38 * 215 mm
360	19 * 275 mm	24 * 275 mm	38 * 275 mm
400	19 * 315 mm	24 * 315 mm	38 * 315 mm

**TF11 Cantilever**

Blocking from STEICOjoist or LVL / Glulam accord. to transferred loads

Rim board, min. 38 mm

Web stiffeners may be required

Please make sure that external parts are protected against weather

Type	Depth (mm)	Round Hole Size (mm) / Rectangular Hole Width (mm)*							
		50	75	100	120	140	160	180	200
SJ 45	200	200	200	560					
	220	220	220	420	720				
	240	240	240	260	550	840			
	300	300	300	300	300	320	580	850	1120
SJ 60	200	200	350	740					
	220	220	220	580	880				
	240	240	240	410	700	990			
	300	300	300	300	300	500	760	1020	1290
SJ 90	200	200	400	400	400	400	400	400	500
	220	220	220	580	880				
	240	240	290	640	930	1210			
	300	300	300	300	500	760	1020	1280	1540
SJ 90	360	360	360	360	360	370	620	860	1100
	400	400	400	400	400	400	400	590	830

**DO NOT** Cut the flange  
**DO NOT** Notch the flange  
**DO NOT** Drill the flange

**SECURITY NOTES**

- I-Joists are unstable until fully braced
- Please refer to Temporary Bracing Guidelines
- Do not walk on unbraced joists
- Do not store building materials on unbraced joists
- Please refer to Safe Loading Guidelines
- Temporary bracing to be progressively removed as decking proceeds
- Flooring to be laid in accordance with Decking manufacturers guidelines
- Under no circumstances use damaged joists or attempt to repair them
- STEICOjoists to be stored vertically on level bearers spaced a maximum of 3 m apart