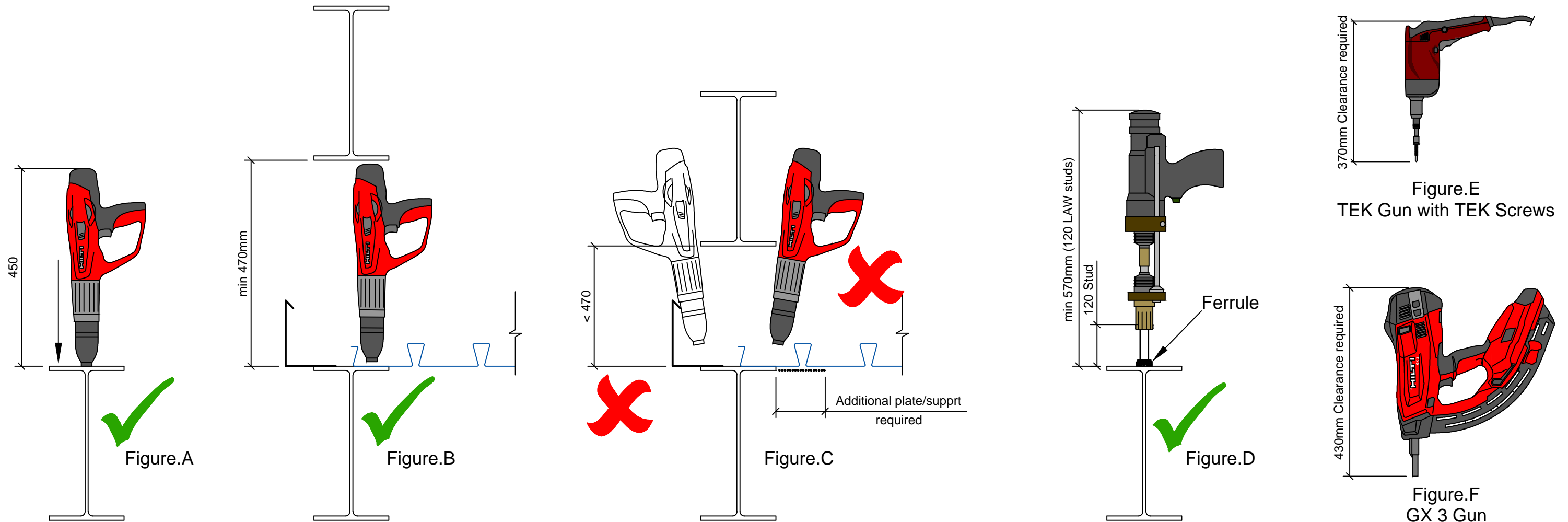


# Fixing tool access restrictions and guidance



**Shot-fired fixing tool (Fig. A, B and C)**

The recommended fixings used to install decking are shot-fired nails, unless requested otherwise by either the client or project specification. Shot-fired nails are installed using a low velocity powder actuated fixing gun (either Hilti DX76 or DX460). This is common practice throughout the composite floor decking industry.

The fixing tool should be used at a 90° angle to the base fixing point (refer Fig. A), the gun must be depressed (forced against the fixing surface) for the gun to fire. It is not possible to install fixings with the gun at any other angle (Refer Fig. C) due to an in-built safety mechanism in the fixing tool to avoid any possible ricochet of the shot-fired nail.

**Fixing to beams with another beam or obstruction above (Fig. C)**

To provide adequate access for the fixing gun and hence enable the decking sheets to be fixed in place, a minimum vertical clearance dimension of 470mm is required between top of beam flange (being fixed to) to underside of beam/obstruction above (Refer Fig. B).

Should this minimum dimension not be available, then it may not be possible to safely fix the decking sheets and edge trim into place. In such instances additional support plates and/or fixing by others may be required, refer SMD Technical Department for further guidance.

**Tek screw fixing to beams**

Where the clearance is less than the minimum requirement of 470mm mentioned above for shot-fired fixings, it may be possible to use screw fixings that are installed using a smaller 'Tek gun' tool. The clearance dimension required for this alternative option is 370mm, however it should be noted that this method takes longer and hence may incur a cost premium. In addition, depending on the thickness of the flange to which the deck is to be fixed, the site operative may not carry the required fixings as standard. Therefore, where this detail is required it MUST be clearly noted on drawings and documentation to ensure this is picked up prior to starting on site.

**Stud Welding Gun (Fig. D)**

In addition to the minimum dimensions required for shot-fired fixings (mentioned above), where beams are to have thru' deck welded shear studs, a minimum vertical clearance dimension of 550mm is required due to the overall gun/stud length (based on 95mm LAW studs). This dimension should be increased to 575mm for 120mm LAW shear studs (with TR80+ profile).

Where shear studs are required and this clearance dimension is not achievable, beams should be pre-studded in the shop or shear studs stick welded on site by others.

This document is for guidance only, should you have any queries related to the content please do not hesitate to contact SMD Technical / Construction Departments.