

**Application:**

Weight-saving alternative to traditional heavier-duty secondary steel (angle and channel sections, HSS, I-beams and Wbeams of sizes typically between 3" and 6" depth). High torsion resistance, fully corrosion protected, no hot works requirement, on-site adjustment and modification possible without material waste. May be used for pipe racks, equipment skids pipe support frames, cable tray support-frames, walkways and platform sub-structures, step-over frames and more.

**Beam Section Steel Composition, Structure and Coatings:**

Laser-welded tube steel sections, from fine-grained steel coil of minimum tensile strength S355 (355N/mm<sup>2</sup> – comparable to 50 ksi), with minimum sheet thickness 3.0mm for TP F 80 beams and 4.0mm for TP F 100 beams (closest equivalent 11 gauge and 8 gauge).

EU Steel grade S355 - composition S355 C:0.23 max Mn:1.60 P:0.05 max S:0.05 max S:0.05 max  
Comparable US steel grade ASTM A572 Grade50  
Comparable Canada steel CAN/CSA-G40.21 Grade 350W

Section perforated with 9.1 mm holes beaded in two parallel corrugations per side. 4 no. interfaces per section to enable longitudinal connection of generic strut 41mm or 1 5/8" wide sections centrally to all 4 no. faces.

Surface: hot-dipped galvanised as standard for C1 – C4 class corrosion protection to the ISO 12944-2. cathodic dip-painted by special order for C5 resistance to ISO 12944-6 category industrial corrosivity resistance.

Hot dip galvanising to EN ISO 1461 (comparable to ASTM A123/A123M).

Product : Beam Sections TP F80 and TP F100 in standard commercial lengths of 20 feet, or special lengths up to 38 feet (11.5m) : Manufacturer: SIKLA.

**siFramo Connectors:**

Rectangular endplate of minimum thickness 8mm with elongated holes to receive siFramo FLS screw size M10; directly welded to octagonally shaped coupling piece, from fine-grained steel coil of minimum tensile strength S355, minimum sheet thicknesses 3.0mm.

Products: End connectors STA F80, STA F 80-E, STA F 100, STA F 100-E; manufacturer SIKLA.

Square endplate of minimum thickness 20mm directly welded to octagonally shaped coupling piece, from fine-grained steel coil of minimum tensile strength S355, minimum sheet thickness 3.0 mm.

Product: Welding Adapter ASA F80 and F100; manufacturer SIKLA.

Rectangular endplate of minimum thickness 8mm with elongated holes to receive siFramo screw type FLS; directly welded to laser-welded hollow box section 100 x 100 mm, from fine-grained steel coil of minimum tensile strength S355, minimum sheet thickness 4.0 mm.

Products: Cantilever Bracket AK F80 and AK F100; manufacturer SIKLA.

Square or rectangular endplate of minimum thickness 12mm with elongated holes to receive minimum bolt, clamp or fixing size M12 (or ½"); directly welded to square shaped coupling piece, from fine-grained steel coil of minimum tensile strength S355, minimum sheet thickness 3.0 mm.

Products: End Support WBD F80 and WBD F100; manufacturer: SIKLA.

### Thread Form Fastening:

All connections between beam sections and components e.g. end supports, adapters and couplings by non-cutting and self-forming screws compatible with the 9.1mm preformed holes to the TP F 80 and TP F 100 beam sections.

The non-cutting, cold formed threads of the screw form their own M10 threads to the perforated siFramo 80 and 100 beam sections. The low thread forming torque and resulting high clamping force, provide resistance against vibration in the supporting components. A special stop gearing provides additional safety against over-torquing.

4, 8 or 12 off screws per connecting component;

Product: Self thread-forming screw FLS, manufacturer: SIKLA  
Tested to the US Dept of Defense MIL-STD 810G - Vibration

