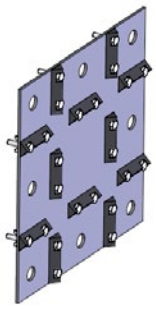
PPS Profiling Plates

General Properties

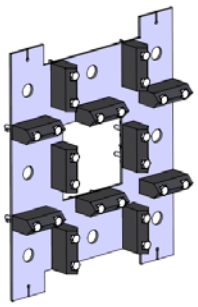
PPS Profiling Plate for Seismic applications is available for both column and foundation. Column PPS is placed at the bottom of the mould when concreting the column while foundation PPS serves also as a template for positioning of the anchor bolts.

In both cases PPS Profiling Plates consist of:

- a support steel plate with holes for bolt positioning (bigger ones) and holes for fixing the recess formers to the plate (smaller ones)
- plastic (ABS) triangular recess formers with length depending on column shoe size
- M10 bolts and wing nuts to secure the recess formers to the plate

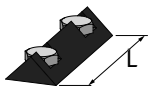
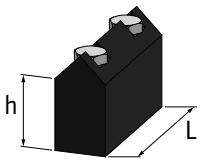


Column PPS



Foundation PPS

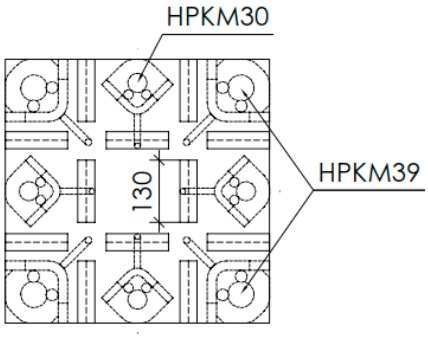
Triangular recess formers for column plate and foundation plate have width in plan equal to 35mm and the following properties:

	Column plate	Foundation plate
		
For HPKM24	L = 105mm	L = 105mm ; h = 50mm
For HPKM30	L = 105mm	L = 105mm ; h = 50mm
For HPKM39	L = 130mm	L = 130mm ; h = 60mm

How To Select PPS Recess Formers

Recess formers selection depends on column shoe size of the cross-section. In case of middle shoes different from corner shoes, corner shoes prevail.

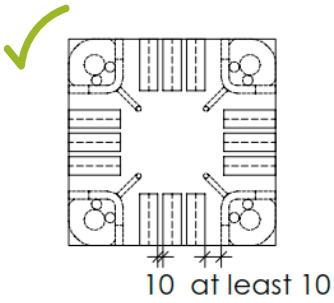
Example:
Cross-section with 4HPKM39 (corners) and 4HPKM30 (middle) → select recess formers for HPKM39

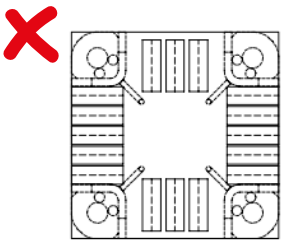


How to Design PPS Recess Formers Layout

Correct design of the profiling plates has to follow the following rules:

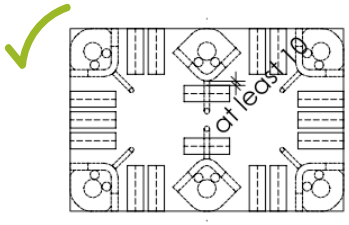
- Recess formers have to be placed in between the column shoes in both directions (X and Y axes of the cross-section) and parallel to the edges
- Placing of recess formers starts from the edges of the cross-section
- Free space between column shoes should be filled by as many as possible recess formers
- At least 10mm should be left from column shoe side plate, from the back of middle column shoe and between each recess former, if possible
- In any case, one recess former has to be placed between column shoes and behind middle column shoes
- Column and foundation profiling plates have to be symmetrical

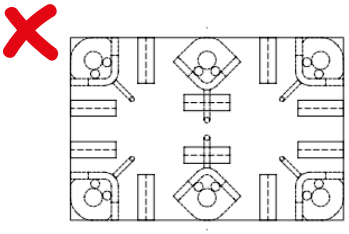




Not symmetrical! Too many!

Space from the edge!





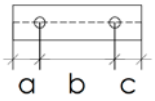
Too few!

How to Design Support Steel Plate

The design of the support steel plate is possible once the layout of the recess formers is defined. The plate is 6mm thick. However, different thickness might be needed in case of big column cross-sections to avoid plate twisting / torsion. Support steel plate for column and foundation differ in shape. Column plate is rectangular (or square) with dimensions equal to column cross-section height and width to fit into column mould. Foundation plate has nailing recesses at the sides, alignment marks for accurate positioning of the anchor bolt group to the module line, and a middle hole to do the casting of foundation. Edge of middle hole should be at least 20mm away from centre of the holes for fixing the recess formers.

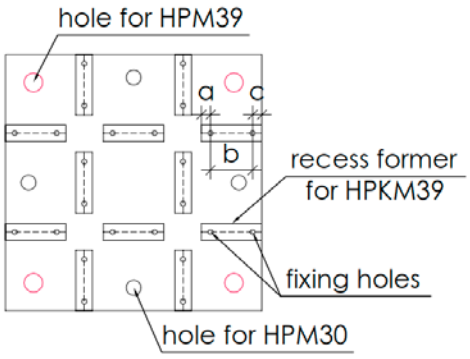
Please define position and diameter of all the holes properly:

- Holes for the bolts have diameter M thread size + 2mm
- Fixing holes have diameter M11
- The position of the fixing holes can be determined according to recess formers layout and considering the following table:

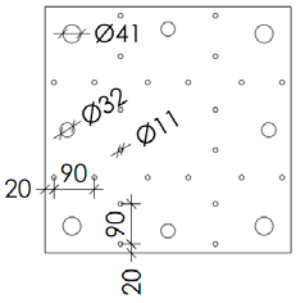
	Column plate	Foundation plate
		 a + b + c = L
For HPKM24		20 + 65 + 20 = 105mm
For HPKM30		20 + 65 + 20 = 105mm
For HPKM39		20 + 90 + 20 = 130mm

Details in geometry of nailing recesses and alignment marks are on production.

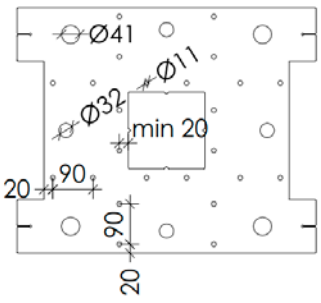
Below is an example of column PPS and foundation PPS support plate design for a cross-section with 4HPKM39 at the corners and 4HPKM30 along the sides.



PPS layout



Support plate for column



Support plate for foundation