

The principle of welding of threaded studs makes use of any arc welding processes, obtaining the fusion of the bottom part of the stud on the receiving material. The threaded studs, made of weldable material, are manufactured with a specific profile at the bottom suitable for welding.

The bottom flange is especially oversized compared to the threaded body to avoid any damages to the thread from the welding, moreover increases the stud contact surface reducing the welding voltage and improving the sealing properties. The use of threaded studs without oversized flange is not recommended.

The pin on the bottom flange of the studs has the function to start the welding process, is therefore not a residue of manufacturing, but a crucial detail of fundamental importance for a perfect welding.

Capacitor discharge welding:

Process suitable for welding of thin sheets with cleaned or polished surfaces. The welding is obtained by melting the pin at the bottom of the treaded stud.

The transfer of energy from the generator to the threaded stud, brought into contact with the receiving material allows an instant welding.

Arc welding:

Process suitable for high resistant welding.

The welding is performed by electric/voltaic arc between the threaded stud and the receiving material. Once the time of welding has been determined, the bottom of the pin and the surface of the receiving material are dipped and melted together. Arc welding process requires the aid of a proper ceramic grill to prevent spillage of the fusion bath, to protect it from the weather elements and protect the operator from sparks, welding craps and UV radiation. The arc welding process requires longer time in relation to the diameter of the part to be welded, approximately 1 second.



The table below gives some indicative values for welding applications of PF sald-stud series.

Stud material	Pull out force min (N/mm2)	Welding performance on receiving material					
		steel 0,20% C	steel 0,35% C	steel galvanized	CrNi	CuZn 37 (Ms 63)	Al
steel	420	1	2	2	1	2	-
stainless steel	500	1	1	2	1	2	-

1 = Good welding performance; 2 = Average welding performance; - = Not suitable material.