

# NELSON STUD WELDING

## SPECIFICATION: *TBL Internally Threaded Studs*

Nelson’s internally threaded metric TBL studs are intended to be used on heavy base materials and serve as a means of attaching or anchoring components to a structure. When maximizing the stud diameter to tap ratio, the stud can also serve as a stand off post.

Standard TBL studs have internal UNC-2B coarse series threads. Internally tapped studs can also be supplied with UNF-2B fine threads. Studs with fine threads are called PBL studs, rather than TBL studs.

The “D” dimension on fine threads is approximately 15 – 20 % less than for course threads. The “S” dimension is predicated on stud diameter, not tap size. Secondary bottom tapping or flat bottom drilling is available as a special order with significant price additions.

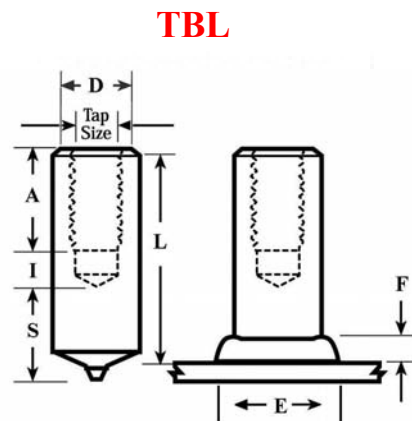
Reduced base studs are available but depth of tap drill point should not pass below shoulder of reduced diameter shoulder so that stud strength is not compromised.

For similar function studs, see Nelson [CKL Collar studs](#), [NBL Unthreaded studs](#), [S6L Sprinkler studs](#), [SBL Shoulder studs](#) and [Metric TBL Internally Threaded Studs](#).

**When ordering, specify Type, Diameter, Before Weld Length, Tap Size, Material, Quantity, and Part Number**

*Example 1: TBL 1/2 x 1-1/8”, with 3/8-16 x 5/8” Deep Tap; Mild Steel; 10,000 pieces; #101102731*

*Example 2: PBL 1/2 x 1”, with 5/16-24 x 1/2” Deep Tap; Mild Steel; 10,000 pieces; #101079024*



Stud Diameter	Maximum Tap Size C	Minimum Values				Burn Off	Weld Flash		Flash Clearance	Required Standard Accessories			
		D	A	I	S		E	F		Ferrule	Grip	Chuck	Foot
1/4	#8-32	0.250	0.250	0.125	0.125	0.125	0.359	0.109	0.437	100101067	501001007	500001007	502001137
5/16	#10-24	0.312	0.281	0.156	0.140	0.125	0.437	0.109	0.500	100101007	501001006	500001009	502001137
3/8	1/4-20	0.375	0.375	0.203	0.140	0.125	0.500	0.125	0.593	100101099	501001009	500001011	502001137
7/16	5/16-18	0.437	0.468	0.234	0.156	0.125	0.596	0.140	0.656	100101009	501001008	500001012	502001137
1/2	3/8-16	0.500	0.562	0.265	0.156	0.125	0.687	0.156	0.750	100101114	501001011	500001014	502001137
9/16	7/16-14	0.562	0.656	0.296	0.187	0.156	0.750	0.187	0.812	100101039	501001011	500001015	502001137
5/8	1/2-13	0.625	0.750	0.319	0.218	0.187	0.875	0.187	0.937	100101187	501001014	500001016	502001137
11/16	9/16-12	0.687	0.843	0.358	0.250	0.187	1.062	0.250	0.984	100101040	501001014	500001098	502001137
3/4	5/8-11	0.750	0.937	0.406	0.250	0.187	1.062	0.250	1.125	100101152	501001014	500001018	502001002
7/8	3/4-10	0.875	1.125	0.453	0.281	0.187	1.125	0.312	1.250	100101140	501001015	500001019	502001003
1	7/8-9	1.000	1.312	0.531	0.280	0.250	1.375	0.375	1.437	100101045	501001016	500001085	502001003

In the table above, E represents the weld diameter; F, the height of the weld; I, the imperfect thread depth; and S, the depth of the solid weld base.

**MATERIALS:** TBL and PBL studs are available in Low Carbon Mild Steel and 18-8 Stainless Steel. For specific grade information and physical and chemical properties, conforming standards, and information on stud plating and heat treating, please see [General Material Specifications](#).

**THREADS:** TBL studs have internal UNC-2B coarse threads. PBL studs have internal UNF-2B fine threads.

**FLUX:** All standard Nelson internally threaded studs have a solid flux load.

Visit our website [www.NelsonStudWelding.com](http://www.NelsonStudWelding.com) for a list of our standard stock products.