

## NELSON STUD WELDING

SPECIFICATION: NBL Unthreaded Studs



**NBL** 

Nelson NBL studs are designed to be welded to heavy base materials and are used for a variety of applications. In the power generation market, they are used to anchor refractory to water walls and to facilitate heat transfer in coal burning furnaces. In forging applications, NBL studs are used as the tong hold on the ends of billets. They are also commonly used as locator pins, axles, pivot points, spacers, and stops.

Studs with diameters up to 1/2", and lengths up to 1-1/4" can be specially designed for use in automatic fed stud welding equipment.

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Special secondary operations, such as cross-drilling, grooving, heat treating, and pointing, can expand the application possibilities of Nelson NBL studs.

For similar function studs, see Nelson NBA Aluminum Unthreaded studs and NJL Reduced Base Unthreaded studs.

When ordering, specify <u>Type</u>, <u>Diameter</u>, <u>Before Weld Length</u>, <u>Material</u>, <u>Quantity</u>, and <u>Part Number</u> *Example*: NBL 3/8 x 1-1/8": Stainless Steel: 10.000 pieces: #101064458

| Stud<br>Diameter<br>D | Minimum<br>Stud Length<br>L | Burn<br>Off | Weld Flash Size |       | Flash     | Ferrule   | Required Standard Accessories |           |           |
|-----------------------|-----------------------------|-------------|-----------------|-------|-----------|-----------|-------------------------------|-----------|-----------|
|                       |                             |             | E               | F     | Clearance | . c.ruie  | Grip                          | Grip      | Foot      |
| 1/4                   | 0.780                       | 0.125       | 0.359           | 0.109 | 0.437     | 100101067 | 501001007                     | 500001007 | 502001137 |
| 5/16                  | 0.780                       | 0.125       | 0.437           | 0.109 | 0.500     | 100101007 | 501001006                     | 500001009 | 502001137 |
| 3/8                   | 0.780                       | 0.125       | 0.500           | 0.125 | 0.593     | 100101099 | 501001009                     | 500001011 | 502001137 |
| 7/16                  | 0.813                       | 0.125       | 0.593           | 0.140 | 0.656     | 100101009 | 501001008                     | 500001012 | 502001137 |
| 1/2                   | 0.813                       | 0.125       | 0.687           | 0.156 | 0.750     | 100101114 | 501001011                     | 500001014 | 501001138 |
| 5/8                   | 0.968                       | 0.187       | 0.875           | 0.187 | 0.937     | 100101187 | 501001014                     | 500001016 | 502001002 |
| 0.680                 | 1.000                       | 0.187       | 0.921           | 0.250 | 1.125     | 100101040 | 501001014                     | 500001245 | 502001002 |
| 3/4                   | 1.250                       | 0.187       | 1.063           | 0.250 | 1.125     | 100101152 | 501001014                     | 500001018 | 502001002 |
| 7/8                   | 1.500                       | 0.187       | 1.125           | 0.312 | 1.250     | 100101140 | 501001015                     | 500001019 | 502001003 |
| 1                     | 1.647                       | 0.250       | 1.375           | 0.375 | 1.437     | 100101045 | 501001016                     | 500001085 | 502001003 |

**MATERIALS:** Studs are available in Low Carbon Mild Steel and 18-8 Stainless Steel. Other materials are available by special order. For specific grade information and physical and chemical properties, conforming standards, and information on stud plating and heat treating, please see General Material Specifications.

FLUX: All Nelson no thread studs have a solid flux load.

Visit our website www.NelsonStudWelding.com for a list of our standard stock products.