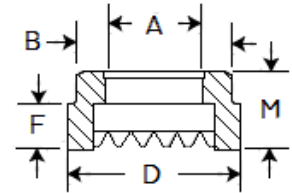


FERRULES

NELSON STUD WELDING SPECIFICATION

Ceramic ferrules are an essential part of the standard drawn arc stud welding process. They are designed to encircle the weld stud to protect the weld arc and limit it to a specific area of the base material. They also contain the molten weld metal and act as a mold to give a uniform shape to this metal, also called the weld flash. The term, weld flash, is used to distinguish the weld metal at the base of a stud from the weld by other arc welding processes, which is called weld fillet.



Standard Ferrules

These ferrules are intended for welding round studs perpendicular to flat surfaces.

Full Base – These ferrules are standard ferrules supplied with the full weld base [NBL](#), [TBL](#), [H4L](#), [S3L](#), and [D2L studs](#).

To determine the ferrule grips, ferrule holders, or ferrule tubes that can be used with specific ferrule types, look at the neck diameter (inside diameter) of the ferrule, then look in the accessories catalog for ferrule grips, holders, or tubes to match that inside diameter.

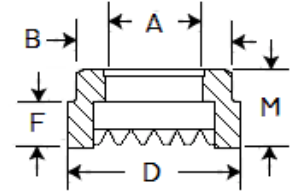
Nominal Stud Size	Inside Diameter A	Neck Diameter B	Major Diameter D	Height to Neck F	Height Overall M	Ferrule Part Number
#6	0.138	0.281	0.375	0.234	0.390	100101001
#8	0.164	0.291	0.375	0.234	0.390	100101002
#10	0.187	0.305	0.390	0.234	0.390	100101003
1/4	0.250	0.505	0.640	0.286	0.437	100101067
5/16	0.312	0.445	0.578	0.234	0.390	100101007
3/8	0.375	0.650	0.795	0.228	0.390	100101099
7/16	0.437	0.585	0.703	0.234	0.422	100101009
1/2	0.500	0.785	0.875	0.228	0.390	100101114
9/16	0.562	0.785	1.030	0.328	0.515	100101011
5/8	0.625	1.030	1.150	0.339	0.526	100101187
3/4	0.750	1.030	1.215	0.469	0.656	100101152
13/16	0.813	1.210	1.735	0.260	0.464	100101178
7/8	0.875	1.210	1.413	0.545	0.732	100101140
1	1.000	1.406	1.610	0.633	0.820	100101045
1-1/8	1.125	1.541	1.765	0.503	0.815	100101143
1-1/4	1.250	2.015	2.015	1.030	1.030	100101146

Full Base – Thin Wall – These special order ferrules are available for full base studs to accommodate special situations or fixturing.

Nominal Stud Size	Inside Diameter A	Neck Diameter B	Major Diameter D	Height to Neck F	Height Overall M	Ferrule Part Number
1/4	0.250	0.380	0.455	0.265	0.390	100101006
3/8	0.375	0.505	0.640	0.234	0.390	100101008
1/2	0.500	0.650	0.795	0.250	0.438	100101010
5/8	0.625	0.785	1.030	0.328	0.515	100101012

FERRULES

To determine the ferrule grips, ferrule holders, or ferrule tubes that can be used with specific ferrule types, look at the neck diameter (inside diameter) of the ferrule, then look in the accessories catalog for ferrule grips, holders, or tubes to match that inside diameter.



Full Base – Low Profile, F-139 – These ferrules are available for **short studs**

Nominal Stud Size	Inside Diameter A	Neck Diameter B	Major Diameter D	Height to Neck F	Height Overall M	Ferrule Part Number	Minimum Stud Length
#10	0.187	0.305	0.390	0.125	0.250	100101063	0.625
1/4	0.250	0.370	0.455	0.125	0.250	100101077	0.640
5/16	0.312	0.505	0.596	0.125	0.250	100101030	0.640
3/8	0.375	0.585	0.675	0.125	0.250	100101031	0.687
7/16	0.437	0.650	0.740	0.125	0.281	100101032	0.687
1/2	0.500	0.785	0.875	0.174	0.281	100101115	0.718
1/2	0.500	0.921	1.030	0.125	0.312	100101119	0.718
5/8	0.625	0.921	1.030	0.187	0.375	100101126	0.813
3/4	0.750	1.210	1.413	0.203	0.390	100101133	0.875
3/8	0.375	0.785	0.875	0.160	0.281	100101101	0.718
1/2	0.500	1.030	1.187	0.125	0.281	100101122	0.718

Threaded Pitch Diameter, F-239 – These ferrules are used with **CPL** type studs.

Nominal Stud Size	Inside Diameter A	Neck Diameter B	Major Diameter D	Height to Neck F	Height Overall M	Ferrule Part Number
1/4-20	0.215	0.380	0.455	0.125	0.250	100101034
5/16-18	0.275	0.445	0.535	0.125	0.250	100101035
3/8-16	0.330	0.505	0.595	0.139	0.264	100101036
7/16-14	0.388	0.585	0.675	0.173	0.329	100101037
1/2-13	0.448	0.650	0.740	0.206	0.362	100101038
5/8-11	0.562	0.785	0.905	0.277	0.433	100101039
3/4-10	0.680	1.030	1.150	0.339	0.526	100101040
7/8-9	0.797	1.210	1.330	0.406	0.593	100101041
1-8	0.915	1.406	1.526	1.474	0.661	100101042

Full Threaded, F-107 – These ferrules are used with **CFL** type studs.

Nominal Stud Size	Inside Diameter A	Neck Diameter B	Major Diameter D	Height to Neck F	Height Overall M	Ferrule Part Number
5/16-18	0.312	0.445	0.578	0.281	0.437	100101024
3/8-16	0.375	0.505	0.640	0.281	0.437	100101025
7/16-14	0.437	0.585	0.703	0.281	0.469	100101026
1/2-13	0.500	0.650	0.795	0.281	0.469	100101027
5/8-11	0.625	0.785	1.030	0.390	0.579	100101028
3/4-10	0.750	1.030	1.180	0.390	0.595	100101029

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1-800-635-9353

Email: Nelson.Sales@NelsonStud.com

FERRULES

Collar Studs, F-172 – These ferrules are used with [CKL](#) type studs.

Nominal Stud Size	Inside Diameter A	Neck Diameter B	Major Diameter D	Height to Neck F	Height Overall M	Ferrule Part Number
#10-24, 32	0.187	0.650	0.740	0.090	0.195	100101060
1/4-20	0.215	0.785	0.875	0.095	0.235	100101066
5/16-18	0.275	0.785	0.875	0.095	0.235	100101073
3/8-16	0.330	0.785	0.875	0.095	0.250	100101083
1/2-13	0.448	0.921	1.030	0.125	0.250	100101118

Reduced Base, F-106 – These ferrules are used with [CJL](#) and [NJL](#) type studs.

Nominal Stud Size	Inside Diameter A	Neck Diameter B	Major Diameter D	Height to Neck F	Height Overall M	Ferrule Part Number
#10	0.187	0.305	0.305	0.234	0.390	100101015
1/4	0.250	0.380	0.455	0.175	0.390	100101016
5/16	0.312	0.445	0.578	0.281	0.437	100101017
3/8	0.375	0.505	0.640	0.281	0.437	100101018
1/2	0.500	0.650	0.795	0.327	0.515	100101020
5/8	0.625	0.785	1.030	0.391	0.579	100101021
3/4	0.750	0.921	1.100	0.391	0.595	100101022

Aluminum Ferrules

These aluminum ferrules are intended for welding round studs perpendicular to flat surfaces.

Aluminum Studs, F-250 – These ferrules are used with [HBA](#), [CKA](#), [TBA](#) and [NBA](#) type studs.

Nominal Stud Size	Inside Diameter A	Neck Diameter B	Major Diameter D	Height Overall M	Ferrule Part Number
3/16	0.187	0.750	0.750	0.250	100101046
1/4	0.250	0.750	0.750	0.250	100101047
5/16	0.312	0.750	0.750	0.250	100101048
3/8	0.375	1.000	1.000	0.385	100101049
7/16	0.437	1.000	1.000	0.385	100101050
1/2	0.500	1.000	1.000	0.385	100101051

To determine the ferrule grips, ferrule holders, or ferrule tubes that can be used with specific ferrule types, look at the neck diameter (inside diameter) of the ferrule, then look in the accessories catalog for ferrule grips, holders, or tubes to match that inside diameter.

NOTE: If there is no F dimension within the chart, disregard it within the drawing.

