



STANDARD SPECIFICATION
ALUMINUM L-FOOT FINNED TUBES
(SOLID & PERFORATED FIN)

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1.0 SCOPE

- 1.1 This specification governs materials, fabrication and tolerances (where required) applicable to aluminum L-foot finned tubes fabricated by Vulcan Finned Tubes, L.P. ("Vulcan").
- 1.2 Tube material may be carbon, stainless, ferritic alloy or non-ferrous metals such as aluminum, brass or copper. The fin material shall be aluminum 1100-0 or aluminum 5005 aluminum.

2.0 ORDERING INFORMATION

- 2.1 The purchaser is responsible for specifying all information necessary for ordering the required materials.
- 2.2 Tube material information will include quantity, tube specification, OD and wall thickness and over-all tube length.
- 2.3 Fin material information will include fin specification, fin height, number of fins per inch, length of finned length and length of tube bare ends. Fins may be perforated or solid.
- 2.4 If tube supports are required, type and location must be specified.

3.0 TUBE SPECIFICATIONS

- 3.1 The tube may be supplied by the purchaser or by Vulcan, as agreed between the two parties. If purchaser supplies tubes, Vulcan will specify the lengths of tubes supplied and the number of spares required.
- 3.2 If purchaser supplies the tubes, they must send mill test reports with the tube material. Mill test reports or other acceptable manufacturer's certification shall be provided to the purchaser for all tubes supplied by Vulcan.
- 3.3 The tube's chemical and physical characteristics shall be per the specification chosen by the purchaser unless otherwise specified.
- 3.4 Standard OD's for aluminum L-foot finned tubes shall be 5/8", 3/4", 1", 1-1/4" or 1-1/2" as specified (+/- .003"). Tube ID and OD must be concentric and ovality shall be within .002 in.

3.5 To be suitable for finning, tubes must be straight, the OD must be free from any pitting, dents, surface defects or excessive grease or oil that would interfere with the application of the fin.

3.6 Length tolerance for tubes cut to length by Vulcan shall be as follows:

Tube Length	Plus Tolerance	Minus Tolerance
Less than 24 ft.	.125 in.	.125 in.
Greater than 24 ft.	.25 in.	.125 in.

3.7 Tube end preparation shall be square-cut and deburred on ID and OD.

4.0 FIN STRIP SPECIFICATIONS

4.1 Vulcan shall supply fin strip material.

4.2 The fin strip material shall be aluminum 1100-0 or aluminum 5005 as specified by purchaser.

4.3 If requested by customer at time of order, Vulcan shall furnish mill test reports or other acceptable manufacturer's certification for fin strip materials.

4.4 Standard fin heights shall be 3/8", 7/16", 1/2" or 5/8" as specified by purchaser.

4.5 Fin strip thickness shall be .015 in. (+/- .001 in.) thick before being formed tension wound around tube.

4.6 Standard fin pitch is 8 to 12 fins per inch with 10 fins per inch being most commonly purchased.

5.0 FABRICATION

5.1 Tubes are not required to be cleaned prior to finning unless otherwise specified.

5.2 The base of the fin is formed into a L-foot shape and wound helically around the OD of the tube forming a mechanical bond between tube and fin. Two galvanized staples shall secure each finned end.

5.3 Fins shall be solid or perforated as specified by purchaser.

5.4 Fin attachment shall be secure over the entire tube length.

5.5 The cup of the fin shall be uniform throughout the entire tube length.

5.6 Fin splices are permissible, providing there are no splices within 10 ft. of another and tubes with splices do not account for more than 10 percent of the total order.

5.7 Fin OD dimensions shall be as specified +0, -.015".

- 5.8 Length of bare ends shall be +/- 1/4".
- 5.9 The number of fins per inch shall be as specified +/- 5 percent as determined on not less than 12 in. of finned length.
- 5.10 Finished finned tubes shall be straight with a maximum deviation of 1/4" in any 10 ft. section of tube.

6.0 INSPECTION

- 6.1 Upon receipt at Vulcan's shop, tubes shall be visually inspected to verify dimensions and material specification and to ensure no obvious defects. Tube material having any defects that may effect weld quality will be separated, returned to vendor or scrapped. After inspection, conforming tube materials will be separated by shop order and placed in their proper location.
- 6.2 Prior to production, fin material shall be visually inspected to verify dimensions and material specification and to ensure no obvious defects. Fin material having any defects that may affect weld quality will be separated, returned to vendor or scrapped.
- 6.3 All finned tubes are visually inspected at machine setup and randomly throughout the finning process to ensure they meet Standard Specifications. A final inspection is provided before the product is packaged. All finned tubes shall meet Standard Specifications and have a workmanlike finish and be free from obvious defects.

7.0 PRODUCT MARKING

- 7.1 Due to the nature of this product, individual adhesive trace labels cannot be used. However, Vulcan will supply mill test reports on all orders.

8.0 PRODUCT PACKAGING

- 8.1 Standard packaging options are fully enclosed steel-banded wooden crates. Other options such as export quality crating and fumigation can be provided upon request.