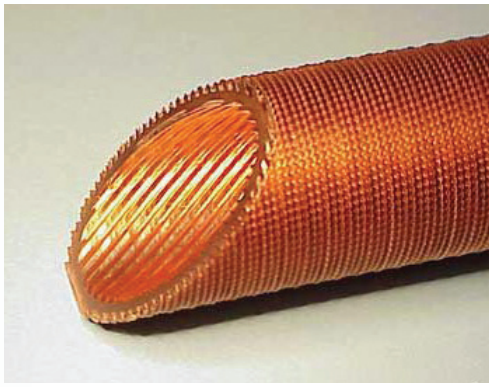
WOLVERINE TUBE, INC.
Engineering Thermal Innovation

TURBO-CDI®

Specialized in Refrigeration and Air Conditioning



Turbo-CDI is designed for light hydrocarbon condensing. The integral helical fins on the outside of the tube are modified to enhance the condensing heat transfer coefficient. The inside heat transfer coefficient is improved because of increased surface area and turbulation induced by integral helical ridges on the inside surface.

The availability of plain ends and intermediate lands makes Turbo-CDI especially suitable for shell and tube condensers.

The increased ID ridge count improves the overall heat transfer efficiency of Turbo-CDI over Turbo-C, while slightly increasing the ID pressure drop.

Alloys Available and Applicable Standards
UNS C12200 (DHP Copper) to ASME SB75 and ASME SB359

Product Formats
Straight Lengths to 20 feet, + 1/8 inch maximum variation

Straight Lengths over 20 feet, + 5/32 inch maximum variation

Ends are supplied either brush deburred or chamfered

Packaging
Packaging options include wooden boxes and shipping frames.

Tempers Available
As fabricated temper

Testing
All tubes are tested per the requirements of ASTM E243.

Contact us at (256) 353-1310 or mkt@wlv.com

TURBO-CDI®

Standard Sizes			Plain End Dimensions		Finned Section Dimensions			
Catalog Number	Outside Diameter inch (mm)	Nominal Wall inch (mm)	Outside Diameter inch (mm)	Wall inch (mm)	Fin Per Inch	Finished Fin OD inch (mm)	Min. Wall Under Fins inch (mm)	Root Diameter inch (mm)
Turbo-CDI - UNS C12200								
30-4050025	3/4 (19.05)	0.025 (0.635)	0.743 (18.87)	0.455 (11.56)	40	0.743 (18.87)	0.025 (0.635)	0.668 (16.97)
30-4053528	3/4 (19.05)	0.028 (0.711)	0.743 (18.87)	0.049 (1.23)	40	0.743 (18.87)	0.025 (0.635)	0.668 (16.97)

Standard Sizes		Inside Dimensions		Areas			
Catalog Number	Weight Per Unit Length lb/ft (kg/m)	Nominal Inside Diameter inch (mm)	Nominal Ridge Height inch (mm)	Nominal Inside Surface Area ft^2/ft (m^2/m)	Actual Inside Surface Area ft^2/ft (m^2/m)	Nominal Outside Surface Area ft^2/ft (m^2/m)	Actual Outside Surface Area ft^2/ft (m^2/m)
Turbo-CDI - UNS C12200							
30-4053528	0.360 (0.536)	0.612 (15.54)	0.019 (0.483)	0.160 (0.049)	0.265 (0.081)	0.196 (0.060)	0.711 (0.217)
30-4053528	0.360 (0.536)	0.612 (15.54)	0.019 (0.483)	0.160 (0.049)	0.265 (0.081)	0.196 (0.060)	0.711 (0.217)

Engineering Data

Catalog Number	Sieder and Tate[2] Constant STC^i	Constants used in Calculating Darcy Friction Factor[1] C	D
Turbo-CDI - UNS C12200			
30-4053528	0.069	1.107	0.289
30-4053528	0.069	1.107	0.289

1. Constants applicable to Reynolds numbers greater than 20,000. [$f_{Darcy} = C(Re)^{-D}$]

2. To calculate inside heat transfer coefficient: $hi = (k/D_{i\ nom.})(STC_i)Re^{0.8}Pr^{1/3}[\mu/\mu_{wall}]^{0.14}$

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