



NIBA—The Belting Association
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Tech Note

Technical Notes from the Technical Committee, NIBA – The Belting Association

#19 Metric Specifications for Conveyor Beltings

Although the English system of measurement is still prevalent in the United States, metrification has been adopted in virtually all other industrial nations.

But, until there are stronger directives from federal authorities for the U.S. to convert to metrics, it appears that we will be handling most belting in inches and feet for some time to come.

Even without formal regulations, metric designations are becoming more common due to imports, exports, and commerce with our closest neighbors, Canada and Mexico.

People dealing with both systems either grow into metrics or painstakingly make frequent conversion calculations.

For quick reference, the following common belting-related specifications are given.

Width

1 millimeter = 0.03937"	1 inch = 25.4 mm
300 mm = 11.8"	1400 mm = 55.1"
450 mm = 17.7"	1500 mm = 59.1"
600 mm = 23.6"	1800 mm = 70.9"
750 mm = 29.5"	2100 mm = 82.7"
900 mm = 35.4"	2400 mm = 94.5"
1050 mm = 41.3"	2800 mm = 110.2"
1200 mm = 47.2"	3000 mm = 118.1"

Cover Thickness

1 mm = .03937 inch	1 inch = 25.4 mm
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1 mm = .0394" (approx. 1/32")
2 mm = .0787" (approx. 5/64")
3 mm = .1181" (approx. 1/8")
4 mm = .1575" (approx. 5/32")
5 mm = .1969" (approx. 3/16")
6 mm = .2362" (approx. 1/4")
8 mm = .3150" (approx. 5/16")
10 mm = .3937" (approx. 3/8")
12 mm = .4724" (approx. 1/2")
25 mm = .9843" (approx. 1")

Length

1 Meter = 3.2808'	1 inch = 25.4 mm
1 Meter = 39.37"	1 foot = 0.305 Meter

Belt Speed

1 meter per second = 196.85 feet per minute (fpm)
1 foot per minute = .00508 meters / second

.6 m/s = 118.1 FPM	3.5 m/s = 689.0 FPM
1.0 m/s = 196.9 FPM	4.0 m/s = 787.4 FPM
1.5 m/s = 295.3 FPM	4.5 m/s = 886.8 FPM
2.0 m/s = 393.7 FPM	5.0 m/s = 984.3 FPM
2.5 m/s = 492.1 FPM	5.5 m/s = 1082.7 FPM
3.0 m/s = 590.5 FPM	6.0 m/s = 1181.1 FPM

Material Density

1 kilogram / cubic meter = .0624 pounds / cu.ft.
1 pound / cubic foot = 16.0184 kg / cubic meter

500 kg/m; = 31.2 PCF
800 kg/m; = 49.9 PCF
1200 kg/m; = 74.9 PCF
1600 kg/m; = 99.9 PCF
2400 kg/m; = 149.8 PCF
4800 kg/m; = 299.7 PCF



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Tension Rating

1 Kilonewton per meter = 5.714 PIW
1 Newton per millimeter = 5.714 pounds / inch of width
1 PIW = .175 N/mm

5 N/mm = 28.6 PIW 80 N/mm = 457.1 PIW
8 N/mm = 45.7 PIW 100 N/mm = 571.4 PIW
12 N/mm = 68.6 PIW 105 N/mm = 600.0 PIW
18 N/mm = 102.9 PIW 140 N/mm = 800.0 PIW
25 N/mm = 142.9 PIW 175 N/mm = 1000.0 PIW
40 N/mm = 228.6 Pw 210 N/mm = 1199.9 PIW
60 N/mm = 342.8 PIW

Conveyor Capacity

1 metric ton per hour = 1.102 short tons / hour
1 short ton per hour = 0.9072 metric tons / hour

50 mtph = 55.1 TPH
100 mtph = 110.2 TPH
250 mtph = 275.6 TPH
500 mtph = 551.1 TPH
600 mtph = 661.4 TPH
800 mtph = 881.8 TPH
1000 mtph = 1102.3 TPH

Note: The above could be applied for other conversions, for example a 25mm high cleat is approx 1" high, or 100 meter roll is roughly 328.08 feet long.