



Round Bar Size Conversion

Imperial to metric equivalents for round bar diameters, 1/32" to 20"

Imperial (inches)	Exact metric (mm)	Nominal metric (mm)
1/32"	0.794	0.8
1/16"	1.588	1.5
3/32"	2.381	2.5
1/8"	3.175	3
5/32"	3.969	4
3/16"	4.763	5
7/32"	5.556	5.5
1/4"	6.350	6
9/32"	7.144	7
5/16"	7.938	8
11/32"	8.731	9
3/8"	9.525	10
13/32"	10.319	10
7/16"	11.113	11
15/32"	11.906	12
1/2"	12.700	12
9/16"	14.288	14
5/8"	15.875	16
11/16"	17.463	17
3/4"	19.050	20
13/16"	20.638	21
7/8"	22.225	22
15/16"	23.813	24
1"	25.400	25
1 1/8"	28.575	28
1 1/4"	31.750	32
1 3/8"	34.925	35
1 1/2"	38.100	38
1 5/8"	41.275	42
1 3/4"	44.450	45
1 7/8"	47.625	48
2"	50.800	50
2 1/8"	53.975	55
2 1/4"	57.150	55
2 3/8"	60.325	60
2 1/2"	63.500	65
2 5/8"	66.675	65
2 3/4"	69.850	70
2 7/8"	73.025	75
3"	76.200	75
3 1/8"	79.375	80
3 1/4"	82.550	85
3 3/8"	85.725	85
3 1/2"	88.900	90

Imperial (inches)	Exact metric (mm)	Nominal metric (mm)
3 5/8"	92.075	90
3 3/4"	95.250	95
3 7/8"	98.425	100
4"	101.600	100
4 1/4"	107.950	110
4 1/2"	114.300	115
4 3/4"	120.650	120
5"	127.000	125
5 1/4"	133.350	130
5 1/2"	139.700	140
5 3/4"	146.050	150
6"	152.400	150
6 1/4"	158.750	160
6 1/2"	165.100	170
6 3/4"	171.450	170
7"	177.800	180
7 1/4"	184.150	180
7 1/2"	190.500	190
7 3/4"	196.850	200
8"	203.200	200
8 1/2"	215.900	220
9"	228.600	230
9 1/2"	241.300	240
10"	254.000	250
10 1/2"	266.700	270
11"	279.400	280
11 1/2"	292.100	290
12"	304.800	300
12 1/2"	317.500	320
13"	330.200	330
13 1/2"	342.900	340
14"	355.600	360
14 1/2"	368.300	370
15"	381.000	380
15 1/2"	393.700	390
16"	406.400	410
16 1/2"	419.100	420
17"	431.800	430
17 1/2"	444.500	440
18"	457.200	460
18 1/2"	469.900	470
19"	482.600	480
19 1/2"	495.300	500
20"	508.000	510

Notes

The nominal metric column shows the nearest commonly stocked metric bar size, which is usually slightly smaller than the imperial size and is not an exact equivalent. Please confirm the exact diameter and tolerance you require when placing an enquiry, and our sales team will advise on availability and the closest match.



Pipe Size Conversion

Nominal bore (DN / NB) to nominal pipe size (NPS) and outside diameter, 1/8" to 80"

Nominal Bore (DN/NB, mm)	Nominal Bore (imperial/NPS)	Pipe Outside ø (mm)
6	1/8"	10.2
8	1/4"	13.5
10	3/8"	17.2
15	1/2"	21.3
20	3/4"	26.9
25	1"	33.7
32	1 1/4"	42.4
40	1 1/2"	48.3
50	2"	60.3
65	2 1/2"	76.1
80	3"	88.9
90	3 1/2"	101.6
100	4"	114.3
125	5"	139.7
150	6"	168.3
175	7"	193.7
200	8"	219.1
225	9"	244.5
250	10"	273.0
300	12"	323.9
350	14"	355.6
400	16"	406.4
450	18"	457.0

Nominal Bore (DN/NB, mm)	Nominal Bore (imperial/NPS)	Pipe Outside ø (mm)
500	20"	508.0
550	22"	559.0
600	24"	610.0
650	26"	660.0
700	28"	711.0
750	30"	762.0
800	32"	813.0
850	34"	864.0
900	36"	914.0
950	38"	965.0
1000	40"	1016.0
1050	42"	1067.0
1100	44"	1118.0
1150	46"	1168.0
1200	48"	1219.0
1300	52"	1321.0
1400	56"	1422.0
1500	60"	1524.0
1600	64"	1626.0
1700	68"	1727.0
1800	72"	1829.0
1900	76"	1930.0
2000	80"	2032.0

Notes

Outside diameters shown follow the European series (EN 10220 / EN 10255 / ISO 1127). A small number of sizes differ under the American standard (ASME B36.10): 3/4" = 26.7mm, 1" = 33.4mm, 1 1/4" = 42.2mm, 2 1/2" = 73.0mm and 5" = 141.3mm. Please let us know which standard applies to your project and we will confirm the correct dimensions.

ISO 286-2 Round Bar Tolerances (h = minus; k = plus)

Nominal Size Dia mm	8	9	10	11	12
>10 - 18	0.027 (0.00106")	0.043 (0.00169")	0.07 (0.00276")	0.11 (0.00433")	0.18 (0.00709")
>18 - 30	0.033 (0.00130")	0.052 (0.00205")	0.084 (0.00331")	0.13 (0.00512")	0.21 (0.00827")
>30 - 50	0.039 (0.00154")	0.062 (0.00244")	0.1 (0.00394")	0.16 (0.00630")	0.25 (0.00984")
>50 - 80	0.046 (0.00181")	0.074 (0.00291")	0.12 (0.00472")	0.19 (0.00748")	0.3 (0.01181")
>80 - 120	0.054 (0.00213")	0.087 (0.00343")	0.14 (0.00551")	0.22 (0.00866")	0.35 (0.01378")
>120 - 180	0.063 (0.00248")	0.1 (0.00394")	0.16 (0.00630")	0.25 (0.00984")	0.4 (0.01575")
>180 - 250	0.072 (0.00283")	0.115 (0.00453")	0.185 (0.00728")	0.29 (0.01142")	0.46 (0.01811")
>250 - 315	0.081 (0.00319")	0.13 (0.00512")	0.21 (0.00827")	0.32 (0.01260")	0.52 (0.02047")
>315 - 400	0.089 (0.00350")	0.14 (0.00551")	0.23 (0.00906")	0.36 (0.01417")	0.57 (0.02244")

Notes

Values are the full tolerance band for each ISO 286-2 standard tolerance grade (IT8 to IT12), shown in millimetres with the inch equivalent in brackets. For an h tolerance the band is applied minus from the nominal size, and for a k tolerance it is applied plus. Please confirm the grade and nominal size you require when placing an enquiry.