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A51

英寸和毫米的换算

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英寸和毫米的换算

本标准适用于外贸、引进英制设备的维修、零配件制造、以及技术文件中英制尺寸及公差的换算。
本标准参照采用国际标准ISO 370-1975《公差尺寸—英寸与毫米的相互换算》。

1 换算的基础和精度

1.1 采用换算系数:

$$1 \text{ in} = 25.4 \text{ mm}$$

1.2 经换算得到的数值的小数位数可能多于设计精度所要求的小数位数。表1、表2中依据原公差的小数位数给出了换算值所要修约的小数位数。

1.3 修约方法

1.3.1 一般修约。按GB 1.1-81《标准化工作导则编写标准的一般规定》中附录C“数字修约规则”的规定将换算值修约到表1、表2所推荐的小数位。

1.3.2 特殊修约。向公差带内修约到表1、表2所推荐的小数位。就是对于尺寸的最大极限值修约到相邻较小值，对于尺寸的最小极限值修约到相邻较大值。

表 1

原 公 差, in		换算值修约精度 mm
>	<	
0.000 01	0.000 1	0.000 01
0.000 1	0.001	0.000 1
0.001	0.01	0.001
0.01	0.1	0.01
0.1	1	0.1

表 2

原 公 差, mm		换算值修约精度 in
>	<	
0.000 5	0.005	0.000 001
0.005	0.05	0.000 01
0.05	0.5	0.000 1
0.5	5	0.001
5	50	0.01

1.4 两种修约方法的适用范围

1.4.1 一般情况下采用一般修约方法。

1.4.2 在要求换算值不可超出原极限尺寸时或有以下情况之一者采用特殊修约方法。

- 有公差尺寸和基本尺寸有关时；

- b. 检验零件的量规尺寸和用原量规检验的零件尺寸；
- c. 当有公差尺寸在排列上有累积误差时，或有形位公差时。

2 换算程序

2.1 有极限值的换算

2.1.1 根据尺寸的公差值按照表1或表2确定换算值的修约精度和保留的小数位数。

2.1.2 用换算系数把原单位制的两个极限尺寸换算成为另一种单位制对应的当量极限值。并暂时保留比按第2.1.1款确定的最终小数位多两个小数位。如果没有直接给出尺寸的两个极限值，应将它们推导出来。

例：1.600^{+0.001}_{-0.002} in 其极限值是1.599in和1.598in。

2.1.3 把按2.1.2得出的换算尺寸极限值修约到所确定的精度。见附录B（参考件）B.1例。

注：在不影响零件实际使用效能的前提下允许基本尺寸和偏差分别换算。

2.2 有形状和位置公差的尺寸换算

2.2.1 对于有形位公差的尺寸按照第2.1.1、2.1.2款分别确定尺寸和形位公差的未修约换算值。

2.2.2 理论正确尺寸为英寸换算成毫米时，应换算到第5位小数。理论正确尺寸为毫米换算成英寸时应换算到第6位小数。

2.2.3 按照第2.2.1款确定的换算值用特殊修约方法进行修约。

2.2.4 理论正确尺寸换算值用一般修约方法进行修约。换算成毫米修约到第三位小数；换算成英寸，修约到第四位小数。见附录B.2例。

2.3 未注公差尺寸的换算

2.3.1 未注公差尺寸从英寸换算到毫米时，修约到比原英制尺寸少一位小数。当原英寸值为整数时，换算成毫米值也可以修约成整数。

2.3.2 未注公差尺寸从毫米换算到英寸，换算值修约后比原毫米值多一位小数。

2.3.3 在换算未注公差尺寸时要谨慎对待每一个特殊情况，考虑换算后对加工工艺的影响。

2.4 基本尺寸和与其有关的尺寸及公差的换算

2.4.1 计算基本尺寸的换算值并修约，计算修约前后的差值。

2.4.2 根据基本尺寸换算前后的差值计算有关的尺寸极限值的变量（参看附录B.3例）。

2.4.3 有关尺寸极限值的换算按2.1.1款和2.1.2款，然后用求得的变量，调整有关尺寸极限值的换算值，并按特殊修约方法进行修约。

2.5 标志尺寸（如2英寸水管；9.00-20轮胎等）不进行换算。

附录 A
推荐换算表
(参考件)

表 A1 1 ~ 99 μin 的换算表
1 μin = 0.0254 μm

μin μm μin	0	1	2	3	4	5	6	7	8	9
0	0	0.025 4	0.050 8	0.076 2	0.101 6	0.127 0	0.152 4	0.177 8	0.203 2	0.228 6
10	0.254	0.279	0.305	0.330	0.356	0.381	0.406	0.432	0.457	0.483
20	0.508	0.533	0.559	0.584	0.610	0.635	0.660	0.686	0.711	0.737
30	0.762	0.787	0.813	0.838	0.864	0.889	0.914	0.940	0.965	0.991
40	1.016	1.041	1.067	1.092	1.118	1.143	1.168	1.194	1.219	1.245
50	1.270	1.295	1.321	1.346	1.372	1.397	1.422	1.448	1.473	1.499
60	1.524	1.549	1.575	1.600	1.626	1.651	1.676	1.702	1.727	1.753
70	1.778	1.803	1.829	1.854	1.880	1.905	1.930	1.956	1.981	2.007
80	2.032	2.057	2.083	2.108	2.134	2.159	2.184	2.210	2.235	2.261
90	2.286	2.311	2.337	2.362	2.388	2.413	2.438	2.464	2.489	2.515
μin	μm									

表 A2 100 ~ 1000 μin 的换算表
1 μin = 0.0254 μm

μin	0	100	200	300	400	500	600	700	800	900	1 000
μm	0	2.54	5.08	7.62	10.16	12.70	15.24	17.78	20.32	22.86	25.40

表 A3 分数英寸的换算表
1 in = 25.4 mm

in		mm	in		mm
1/64	0.015 625	0.396 875	1/8	0.125 000	3.175 000
1/32	0.031 250	0.793 750	9/64	0.140 625	3.571 875
3/64	0.046 875	1.190 625	5/32	0.156 250	3.968 750
1/16	0.062 500	1.587 500	11/64	0.171 875	4.365 625
5/64	0.078 125	1.984 375	3/16	0.187 500	4.762 500
3/32	0.093 750	2.381 250	13/64	0.203 125	5.159 375
7/64	0.109 375	2.778 125	7/32	0.218 750	5.556 250

续表 A3

in		mm	in		mm
15/64	0.234 375	5.953 125	5/8	0.625 000	15.875 000
1/4	0.250 000	6.350 000	41/64	0.640 625	16.271 875
17/64	0.265 625	6.746 875	21/32	0.656 250	16.668 750
9/32	0.281 250	7.143 750	43/64	0.671 875	17.065 625
19/64	0.296 875	7.540 625	11/16	0.687 500	17.462 500
5/16	0.312 500	7.937 500	45/64	0.703 125	17.859 375
21/64	0.328 125	8.334 375	23/32	0.718 750	18.256 250
11/32	0.343 750	8.731 250	47/64	0.734 375	18.653 125
23/64	0.359 375	9.128 125	3/4	0.750 000	19.050 000
3/8	0.375 000	9.525 000	49/64	0.765 625	19.446 875
25/64	0.390 625	9.921 875	25/32	0.781 250	19.843 750
13/32	0.406 250	10.318 750	51/64	0.796 875	20.240 625
27/64	0.421 875	10.715 625	13/16	0.812 500	20.637 500
7/16	0.437 500	11.112 500	53/64	0.828 125	21.034 375
29/64	0.453 125	11.509 375	27/32	0.843 750	21.431 250
15/32	0.468 750	11.906 250	55/64	0.859 375	21.828 125
31/64	0.484 375	12.303 125	7/8	0.875 000	22.225 000
1/2	0.500 000	12.700 000	57/64	0.890 625	22.621 875
33/64	0.515 625	13.096 875	29/32	0.906 250	23.018 750
17/32	0.531 250	13.493 750	59/64	0.921 875	23.415 625
35/64	0.546 875	13.890 625	15/16	0.937 500	23.812 500
9/16	0.562 500	14.287 500	61/64	0.953 125	24.209 375
37/64	0.578 125	14.684 375	31/32	0.968 750	24.606 250
19/32	0.593 750	15.081 250	63/64	0.984 375	25.003 125
39/64	0.609 375	15.478 125	1	1.000 000	25.400 000

表 A4 0.000 1~0.000 9in换算表
1 in = 25.4 mm

in	mm	in	mm
0.000 1	0.002 54	0.000 6	0.015 24
0.000 2	0.005 08	0.000 7	0.017 78
0.000 3	0.007 62	0.000 8	0.020 32
0.000 4	0.010 16	0.000 9	0.022 86
0.000 5	0.012 70		

表 A5 0.001~999in的换算表

1 in = 25.4 mm

in	0.000	0.001	0.002	0.003	0.004	0.005	0.006	0.007	0.008	0.009	in
0.00		0.025 4	0.050 8	0.076 2	0.101 6	0.127 0	0.152 4	0.177 8	0.203 2	0.228 6	0.00
0.01	0.254 0	0.279 4	0.304 8	0.330 2	0.355 6	0.381 0	0.406 4	0.431 8	0.457 2	0.482 6	0.01
0.02	0.508 0	0.533 4	0.558 8	0.584 2	0.609 6	0.635 0	0.660 4	0.685 8	0.711 2	0.736 6	0.02
0.03	0.762 0	0.787 4	0.812 8	0.838 2	0.863 6	0.889 0	0.914 4	0.939 8	0.965 2	0.990 6	0.03
0.04	1.016 0	1.041 4	1.066 8	1.092 2	1.117 6	1.143 0	1.168 4	1.193 8	1.219 2	1.244 6	0.04
0.05	1.270 0	1.295 4	1.320 8	1.346 2	1.371 6	1.397 0	1.422 4	1.447 8	1.473 2	1.498 6	0.05
0.06	1.524 0	1.549 4	1.574 8	1.600 2	1.625 6	1.651 0	1.676 4	1.701 8	1.727 2	1.752 6	0.06
0.07	1.778 0	1.803 4	1.828 8	1.854 2	1.879 6	1.905 0	1.930 4	1.955 8	1.981 2	2.006 6	0.07
0.08	2.032 0	2.057 4	2.082 8	2.108 2	2.133 6	2.159 0	2.184 4	2.209 8	2.235 2	2.260 6	0.08
0.09	2.286 0	2.311 4	2.336 8	2.362 2	2.387 6	2.413 0	2.438 4	2.463 8	2.489 2	2.514 6	0.09
0.10	2.540 0	2.565 4	2.590 8	2.616 2	2.641 6	2.667 0	2.692 4	2.717 8	2.743 2	2.768 6	0.10
0.11	2.794 0	2.819 4	2.844 8	2.870 2	2.895 6	2.921 0	2.946 4	2.971 8	2.997 2	3.022 6	0.11
0.12	3.048 0	3.073 4	3.098 8	3.124 2	3.149 6	3.175 0	3.200 4	3.225 8	3.251 2	3.276 6	0.12
0.13	3.302 0	3.327 4	3.352 8	3.378 2	3.403 6	3.429 0	3.454 4	3.479 8	3.505 2	3.530 6	0.13
0.14	3.556 0	3.581 4	3.606 8	3.632 2	3.657 6	3.683 0	3.708 4	3.733 8	3.759 2	3.784 6	0.14
0.15	3.810 0	3.835 4	3.860 8	3.886 2	3.911 6	3.937 0	3.962 4	3.987 8	4.013 2	4.038 6	0.15
0.16	4.064 0	4.089 4	4.114 8	4.140 2	4.165 6	4.191 0	4.216 4	4.241 8	4.267 2	4.292 6	0.16
0.17	4.318 0	4.343 4	4.368 8	4.394 2	4.419 6	4.445 0	4.470 4	4.495 8	4.521 2	4.546 6	0.17
0.18	4.572 0	4.597 4	4.622 8	4.648 2	4.673 6	4.699 0	4.724 4	4.749 8	4.775 2	4.800 6	0.18
0.19	4.826 0	4.851 4	4.876 8	4.902 2	4.927 6	4.953 0	4.978 4	5.003 8	5.029 2	5.054 6	0.19
0.20	5.080 0	5.105 4	5.130 8	5.156 2	5.181 6	5.207 0	5.232 4	5.257 8	5.283 2	5.308 6	0.20
0.21	5.334 0	5.359 4	5.384 8	5.410 2	5.435 6	5.461 0	5.486 4	5.511 8	5.537 2	5.562 6	0.21
0.22	5.590 0	5.615 4	5.640 8	5.666 2	5.691 6	5.717 0	5.742 4	5.767 8	5.793 2	5.818 6	0.22
0.23	5.842 0	5.867 4	5.892 8	5.918 2	5.943 6	5.969 0	5.994 4	6.019 8	6.045 2	6.070 6	0.23
0.24	6.096 0	6.121 4	6.146 8	6.172 2	6.197 6	6.223 0	6.248 4	6.273 8	6.299 2	6.324 6	0.24
0.25	6.350 0	6.375 4	6.400 8	6.426 2	6.451 6	6.477 0	6.502 4	6.527 8	6.553 2	6.578 6	0.25
0.26	6.604 0	6.629 4	6.654 8	6.680 2	6.705 6	6.731 0	6.756 4	6.781 8	6.807 2	6.832 6	0.26
0.27	6.858 0	6.883 4	6.908 8	6.934 2	6.959 6	6.985 0	7.010 4	7.035 8	7.061 2	7.086 6	0.27
0.28	7.112 0	7.137 4	7.162 8	7.188 2	7.213 6	7.239 0	7.264 4	7.289 8	7.315 2	7.340 6	0.28
0.29	7.366 0	7.391 4	7.416 8	7.442 2	7.467 6	7.493 0	7.518 4	7.543 8	7.569 2	7.594 6	0.29
0.30	7.620 0	7.645 4	7.670 8	7.696 2	7.721 6	7.747 0	7.772 4	7.797 8	7.823 2	7.848 6	0.30
0.31	7.874 0	7.899 4	7.924 8	7.950 2	7.975 6	8.001 0	8.026 4	8.051 8	8.077 2	8.102 6	0.31
0.32	8.128 0	8.153 4	8.178 8	8.204 2	8.229 6	8.255 0	8.280 4	8.305 8	8.331 2	8.356 6	0.32
0.33	8.382 0	8.407 4	8.432 8	8.458 2	8.483 6	8.509 0	8.534 4	8.559 8	8.585 2	8.610 6	0.33
0.34	8.636 0	8.661 4	8.686 8	8.712 2	8.737 6	8.763 0	8.788 4	8.813 8	8.839 2	8.864 6	0.34
0.35	8.890 0	8.915 4	8.940 8	8.966 2	8.991 6	9.017 0	9.042 4	9.067 8	9.093 2	9.118 6	0.35
0.36	9.144 0	9.169 4	9.194 8	9.220 2	9.245 6	9.271 0	9.296 4	9.321 8	9.347 2	9.372 6	0.36
0.37	9.398 0	9.423 4	9.448 8	9.474 2	9.499 6	9.525 0	9.550 4	9.575 8	9.601 2	9.626 6	0.37
0.38	9.652 0	9.677 4	9.702 8	9.728 2	9.753 6	9.779 0	9.804 4	9.829 8	9.855 2	9.880 6	0.38
0.39	9.906 0	9.931 4	9.956 8	9.982 2	10.007 6	10.033 0	10.058 4	10.083 8	10.109 2	10.134 6	0.39
0.40	10.160 0	10.185 4	10.210 8	10.236 2	10.261 6	10.287 0	10.312 4	10.337 8	10.363 2	10.388 6	0.40
0.41	10.414 0	10.439 4	10.464 8	10.490 2	10.515 6	10.541 0	10.566 4	10.591 8	10.617 2	10.642 6	0.41
0.42	10.668 0	10.693 4	10.718 8	10.744 2	10.769 6	10.795 0	10.820 4	10.845 8	10.871 2	10.896 6	0.42
0.43	10.922 0	10.947 4	10.972 8	10.998 2	11.023 6	11.049 0	11.074 4	11.099 8	11.125 2	11.150 6	0.43
in	mm										in

续表 A5

in	0.000	0.001	0.002	0.003	0.004	0.005	0.006	0.007	0.008	0.009	in
0.44	11.176 0	11.201 4	11.226 8	11.252 2	11.277 6	11.303 0	11.328 4	11.353 8	11.379 2	11.404 6	0.44
0.45	11.430 0	11.455 4	11.480 8	11.506 2	11.531 6	11.557 0	11.582 4	11.607 8	11.633 2	11.658 6	0.45
0.46	11.684 0	11.709 4	11.734 8	11.760 2	11.785 6	11.811 0	11.836 4	11.861 8	11.887 2	11.912 6	0.46
0.47	11.938 0	11.963 4	11.988 8	12.014 2	12.039 6	12.065 0	12.090 4	12.115 8	12.141 2	12.166 6	0.47
0.48	12.192 0	12.217 4	12.242 8	12.268 2	12.293 6	12.319 0	12.344 4	12.369 8	12.395 2	12.420 6	0.48
0.49	12.446 0	12.471 4	12.496 8	12.522 2	12.547 6	12.573 0	12.598 4	12.623 8	12.649 2	12.674 6	0.49
0.50	12.700 0	12.725 4	12.750 8	12.776 2	12.801 6	12.827 0	12.852 4	12.877 8	12.903 2	12.928 6	0.50
0.51	12.954 0	12.979 4	13.004 8	13.030 2	13.055 6	13.081 0	13.106 4	13.131 8	13.157 2	12.182 6	0.51
0.52	13.208 0	13.233 4	13.258 8	13.284 2	13.309 6	13.335 0	13.360 4	13.385 8	13.411 2	13.436 6	0.52
0.53	13.462 0	13.487 4	13.512 8	13.538 2	13.563 6	13.589 0	13.614 4	13.639 8	13.665 2	13.690 6	0.53
0.54	13.716 0	13.741 4	13.766 8	13.792 2	13.817 6	13.843 0	13.868 4	13.893 8	13.919 2	13.944 6	0.54
0.55	13.970 0	13.995 4	14.020 8	14.046 2	14.071 6	14.097 0	14.122 4	14.147 8	14.173 2	14.198 6	0.55
0.56	14.224 0	14.249 4	14.274 8	14.300 2	14.325 6	14.351 0	14.376 4	14.401 8	14.427 2	14.452 6	0.56
0.57	14.478 0	14.503 4	14.528 8	14.554 2	14.579 6	14.605 0	14.630 4	14.655 8	14.681 2	14.706 6	0.57
0.58	14.732 0	14.757 4	14.782 8	14.808 2	14.833 6	14.859 0	14.884 4	14.909 8	14.935 2	14.960 6	0.58
0.59	14.986 0	15.011 4	15.036 8	15.062 2	15.087 6	15.113 0	15.138 4	15.163 8	15.189 2	15.214 6	0.59
0.60	15.240 0	15.265 4	15.290 8	15.316 2	15.341 6	15.367 0	15.392 4	15.417 8	15.443 2	15.468 6	0.60
0.61	15.494 0	15.519 4	15.544 8	15.570 2	15.595 6	15.621 0	15.646 4	15.671 8	15.697 2	15.722 6	0.61
0.62	15.748 0	15.773 4	15.798 8	15.824 2	15.849 6	15.875 0	15.900 4	15.925 8	15.951 2	15.976 6	0.62
0.63	16.002 0	16.027 4	16.052 8	16.078 2	16.103 6	16.129 0	16.154 4	16.179 8	16.205 2	16.230 6	0.63
0.64	16.256 0	16.281 4	16.306 8	16.332 2	16.357 6	16.383 0	16.408 4	16.433 8	16.459 2	16.484 6	0.64
0.65	16.510 0	16.535 4	16.560 8	16.586 2	16.611 6	16.637 0	16.662 4	16.687 8	16.713 2	16.738 6	0.65
0.66	16.764 0	16.789 4	16.814 8	16.840 2	16.865 6	16.891 0	16.916 4	16.941 8	16.967 2	16.992 6	0.66
0.67	17.018 0	17.043 4	17.068 8	17.094 2	17.119 6	17.145 0	17.170 4	17.195 8	17.221 2	17.246 6	0.67
0.68	17.272 0	17.297 4	17.322 8	17.348 2	17.373 6	17.399 0	17.424 4	17.449 8	17.475 2	17.500 6	0.68
0.69	17.526 0	17.551 4	17.576 8	17.602 2	17.627 6	17.653 0	17.678 4	17.703 8	17.729 2	17.754 6	0.69
0.70	17.780 0	17.805 4	17.830 8	17.856 2	17.881 6	17.907 0	17.932 4	17.957 8	17.983 2	18.008 6	0.70
0.71	18.034 0	18.059 4	18.084 8	18.110 2	18.135 6	18.161 0	18.186 4	18.211 8	18.237 2	18.262 6	0.71
0.72	18.288 0	18.313 4	18.338 8	18.364 2	18.389 6	18.415 0	18.440 4	18.465 8	18.491 2	18.516 6	0.72
0.73	18.542 0	18.567 4	18.592 8	18.618 2	18.643 6	18.669 0	18.694 4	18.719 8	18.745 2	18.770 6	0.73
0.74	18.796 0	18.821 4	18.846 8	18.872 2	18.897 6	18.923 0	18.948 4	18.973 8	18.999 2	19.024 6	0.74
0.75	19.050 0	19.075 4	19.100 8	19.126 2	19.151 6	19.177 0	19.202 4	19.227 8	19.253 2	19.278 6	0.75
0.76	19.304 0	19.329 4	19.354 8	19.380 2	19.405 6	19.431 0	19.456 4	19.481 8	19.507 2	19.532 6	0.76
0.77	19.558 0	19.583 4	19.608 8	19.634 2	19.659 6	19.685 0	19.710 4	19.735 8	19.761 2	19.786 6	0.77
0.78	19.812 0	19.837 4	19.862 8	19.888 2	19.913 6	19.939 0	19.964 4	19.989 8	20.015 2	20.040 6	0.78
0.79	20.066 0	20.091 4	20.116 8	20.142 2	20.167 6	20.193 0	20.218 4	20.243 8	20.269 2	20.294 6	0.79
0.80	20.320 0	20.345 4	20.370 8	20.396 2	20.421 6	20.447 0	20.472 4	20.497 8	20.523 2	20.548 6	0.80
0.81	20.574 0	20.599 4	20.624 8	20.650 2	20.675 6	20.701 0	20.726 4	20.751 8	20.777 2	20.802 6	0.81
0.82	20.828 0	20.853 4	20.878 8	20.904 2	20.929 6	20.955 0	20.980 4	21.005 8	21.031 2	21.056 6	0.82
0.83	21.082 0	21.107 4	21.132 8	21.158 2	21.183 6	21.209 0	21.234 4	21.259 8	21.285 2	21.310 6	0.83
0.84	21.336 0	21.361 4	21.386 8	21.412 2	21.437 6	21.463 0	21.488 4	21.513 8	21.539 2	21.564 6	0.84
0.85	21.590 0	21.615 4	21.640 8	21.666 2	21.691 6	21.717 0	21.742 4	21.767 8	21.793 2	21.818 6	0.85
0.86	21.844 0	21.869 4	21.894 8	21.920 2	21.945 6	21.971 0	21.996 4	22.021 8	22.047 2	22.072 6	0.86
0.87	22.098 0	22.123 4	22.148 8	22.174 2	22.199 6	22.225 0	22.250 4	22.275 8	22.301 2	22.326 6	0.87
0.88	22.352 0	22.377 4	22.402 8	22.428 2	22.453 6	22.479 0	22.504 4	22.529 8	22.555 2	22.580 6	0.88
in	mm										in

续表 A5

in	0.000	0.001	0.002	0.003	0.004	0.005	0.006	0.007	0.008	0.009	in
0.89	22.606 0	22.631 4	22.656 8	22.682 2	22.707 6	22.733 0	22.758 4	22.783 8	22.809 2	22.834 6	0.89
0.90	22.860 0	22.885 4	22.910 8	22.936 2	22.961 6	22.987 0	23.012 4	23.037 8	23.063 2	23.088 6	0.90
0.91	23.114 0	23.139 4	23.164 8	23.190 2	23.215 6	23.241 0	23.266 4	23.291 8	23.317 2	23.342 6	0.91
0.92	23.368 0	23.393 4	23.418 8	23.444 2	23.469 6	23.495 0	23.520 4	23.545 8	23.571 2	23.596 6	0.92
0.93	23.622 0	23.647 4	23.672 8	23.698 2	23.723 6	23.749 0	23.774 4	23.799 8	23.825 2	23.850 6	0.93
0.94	23.876 0	23.901 4	23.926 8	23.952 2	23.977 6	24.003 0	24.028 4	24.053 8	24.079 2	24.104 6	0.94
0.95	24.130 0	24.155 4	24.180 8	24.206 2	24.231 6	24.257 0	24.282 4	24.307 8	24.333 2	24.358 6	0.95
0.96	24.384 0	24.409 4	24.434 8	24.460 2	24.485 6	24.511 0	24.536 4	24.561 8	24.587 2	24.612 6	0.96
0.97	24.638 0	24.663 4	24.688 8	24.714 2	24.739 6	24.765 0	24.790 4	24.815 8	24.841 2	24.866 6	0.97
0.98	24.892 0	24.917 4	24.942 8	24.968 2	24.993 6	25.019 0	25.044 4	25.069 8	25.095 2	25.120 6	0.98
0.99	25.146 0	25.171 4	25.196 8	25.222 2	25.247 6	25.273 0	25.298 4	25.323 8	25.349 2	25.374 6	0.99
in	mm										in

表 A6 1 in~999in的换算表

1 in = 25.4 mm

in	0	1	2	3	4	5	6	7	8	9	in
0		25.4	50.8	76.2	101.6	127.0	152.4	177.8	203.2	228.6	0
10	254.0	279.4	304.8	330.2	355.6	381.0	406.4	431.8	457.2	482.6	10
20	508.0	533.4	558.8	584.2	609.6	635.0	660.4	685.8	711.2	736.6	20
30	762.0	787.4	812.8	838.2	863.6	889.0	914.4	939.8	965.2	990.6	30
40	1 016.0	1 041.4	1 066.8	1 092.2	1 117.6	1 143.0	1 168.4	1 193.8	1 219.2	1 244.6	40
50	1 270.0	1 295.4	1 320.8	1 346.2	1 371.6	1 397.0	1 422.4	1 447.8	1 473.2	1 498.6	50
60	1 524.0	1 549.4	1 574.8	1 600.2	1 625.6	1 651.0	1 676.4	1 701.8	1 727.2	1 752.6	60
70	1 778.0	1 803.4	1 828.8	1 854.2	1 879.6	1 905.0	1 930.4	1 955.8	1 981.2	2 006.6	70
80	2 032.0	2 057.4	2 082.8	2 108.2	2 133.6	2 159.0	2 184.4	2 209.8	2 235.2	2 260.6	80
90	2 286.0	2 311.4	2 336.8	2 362.2	2 387.6	2 413.0	2 438.4	2 463.8	2 489.2	2 514.6	90
100	2 540.0	2 565.4	2 590.8	2 616.2	2 641.6	2 667.0	2 692.4	2 717.8	2 743.2	2 768.6	100
110	2 794.0	2 819.4	2 844.8	2 870.2	2 895.6	2 921.0	2 946.4	2 971.8	2 997.2	3 022.6	110
120	3 048.0	3 073.4	3 098.8	3 124.2	3 149.6	3 175.0	3 200.4	3 225.8	3 251.2	3 276.6	120
130	3 302.0	3 327.4	3 352.8	3 378.2	3 403.6	3 429.0	3 454.4	3 479.8	3 505.2	3 530.6	130
140	3 556.0	3 581.4	3 606.8	3 632.2	3 657.6	3 683.0	3 708.4	3 733.8	3 759.2	3 784.6	140
150	3 810.0	3 835.4	3 860.8	3 886.2	3 911.6	3 937.0	3 962.4	3 987.8	4 013.2	4 038.6	150
160	4 064.0	4 089.4	4 114.8	4 140.2	4 165.6	4 191.0	4 216.4	4 241.8	4 267.2	4 292.6	160
170	4 318.0	4 343.4	4 368.8	4 394.2	4 419.6	4 445.0	4 470.4	4 495.8	4 521.2	4 546.6	170
180	4 572.0	4 597.4	4 622.8	4 648.2	4 673.6	4 699.0	4 724.4	4 749.8	4 775.2	4 800.6	180
190	4 826.0	4 851.4	4 876.8	4 902.2	4 927.6	4 953.0	4 978.4	5 003.8	5 029.2	5 054.6	190
200	5 080.0	5 105.4	5 130.8	5 156.2	5 181.6	5 207.0	5 232.4	5 257.8	5 283.2	5 308.6	200
210	5 334.0	5 359.4	5 384.8	5 410.2	5 435.6	5 461.0	5 486.4	5 511.8	5 537.2	5 562.6	210
220	5 588.0	5 613.4	5 638.8	5 664.2	5 689.6	5 715.0	5 740.4	5 765.8	5 791.2	5 816.6	220
230	5 842.0	5 867.4	5 892.8	5 918.2	5 943.6	5 969.0	5 994.4	6 019.8	6 045.2	6 070.6	230
240	6 096.0	6 121.4	6 146.8	6 172.2	6 197.6	6 223.0	6 248.4	6 273.8	6 299.2	6 324.6	240
250	6 350.0	6 375.4	6 400.8	6 426.2	6 451.6	6 477.0	6 502.4	6 527.8	6 553.2	6 578.6	250
in	mm										in

续表 A6

in	0	1	2	3	4	5	6	7	8	9	in
260	6 604.0	6 629.4	6 654.8	6 680.2	6 705.6	6 731.0	6 756.4	6 781.8	6 807.2	6 832.6	260
270	6 858.0	6 883.4	6 908.8	6 934.2	6 959.6	6 985.0	7 010.4	7 035.8	7 061.2	7 086.6	270
280	7 112.0	7 137.4	7 162.8	7 188.2	7 213.6	7 239.0	7 264.4	7 289.8	7 315.2	7 340.6	280
290	7 366.0	7 391.4	7 416.8	7 442.2	7 467.6	7 493.0	7 518.4	7 543.8	7 569.2	7 594.6	290
300	7 620.0	7 645.4	7 670.8	7 696.2	7 721.6	7 747.0	7 772.4	7 797.8	7 823.2	7 848.6	300
310	7 874.0	7 899.4	7 924.8	7 950.2	7 975.6	8 001.0	8 026.4	8 051.8	8 077.2	8 102.6	310
320	8 128.0	8 153.4	8 178.8	8 204.2	8 229.6	8 255.0	8 280.4	8 305.8	8 331.2	8 356.6	320
330	8 382.0	8 407.4	8 432.8	8 458.2	8 483.6	8 509.0	8 534.4	8 559.8	8 585.2	8 610.6	330
340	8 636.0	8 661.4	8 686.8	8 712.2	8 737.6	8 763.0	8 788.4	8 813.8	8 839.2	8 864.6	340
350	8 890.0	8 915.4	8 940.8	8 966.2	8 991.6	9 017.0	9 042.4	9 067.8	9 093.2	9 118.6	350
360	9 144.0	9 169.4	9 194.8	9 220.2	9 245.6	9 271.0	9 296.4	9 321.8	9 347.2	9 372.6	360
370	9 398.0	9 423.4	9 448.8	9 474.2	9 499.6	9 525.0	9 550.4	9 575.8	9 601.2	9 626.6	370
380	9 652.0	9 677.4	9 702.8	9 728.2	9 753.6	9 779.0	9 804.4	9 829.8	9 855.2	9 880.6	380
390	9 906.0	9 931.4	9 956.8	9 982.2	10 007.6	10 033.0	10 058.4	10 083.8	10 109.2	10 134.6	390
400	10 160.0	10 185.4	10 210.8	10 236.2	10 261.6	10 287.0	10 312.4	10 337.8	10 363.2	10 388.6	400
410	10 414.0	10 439.4	10 464.8	10 490.2	10 515.6	10 541.0	10 566.4	10 591.8	10 617.2	10 642.6	410
420	10 668.0	10 693.4	10 718.8	10 744.2	10 769.6	10 795.0	10 820.4	10 845.8	10 871.2	10 896.6	420
430	10 922.0	10 947.4	10 972.8	10 998.2	11 023.6	11 049.0	11 074.4	11 099.8	11 125.2	11 150.6	430
440	11 176.0	11 201.4	11 226.8	11 252.2	11 277.6	11 303.0	11 328.4	11 353.8	11 379.2	11 404.6	440
450	11 430.0	11 455.4	11 480.8	11 506.2	11 531.6	11 557.0	11 582.4	11 607.8	11 633.2	11 658.6	450
460	11 684.0	11 709.4	11 734.8	11 760.2	11 785.6	11 811.0	11 836.4	11 861.8	11 887.2	11 912.6	460
470	11 938.0	11 963.4	11 988.8	12 014.2	12 039.6	12 065.0	12 090.4	12 115.8	12 141.2	12 166.6	470
480	12 192.0	12 217.4	12 242.8	12 268.2	12 293.6	12 319.0	12 344.4	12 369.8	12 395.2	12 420.6	480
490	12 446.0	12 471.4	12 496.8	12 522.2	12 547.6	12 573.0	12 598.4	12 623.8	12 649.2	12 674.6	490
500	12 700.0	12 725.4	12 750.8	12 776.2	12 801.6	12 827.0	12 852.4	12 877.8	12 903.2	12 928.6	500
510	12 954.0	12 979.4	13 004.8	13 030.2	13 055.6	13 081.0	13 106.4	13 131.8	13 157.2	13 182.6	510
520	13 208.0	13 233.4	13 258.8	13 284.2	13 309.6	13 335.0	13 360.4	13 385.8	13 411.2	13 436.6	520
530	13 462.0	13 487.4	13 512.8	13 538.2	13 563.6	13 589.0	13 614.4	13 639.8	13 665.2	13 690.6	530
540	13 716.0	13 741.4	13 766.8	13 792.2	13 817.6	13 843.0	13 868.4	13 893.8	13 919.2	13 944.6	540
550	13 970.0	13 995.4	14 020.8	14 046.2	14 071.6	14 097.0	14 122.4	14 147.8	14 173.2	14 198.6	550
560	14 224.0	14 249.4	14 274.8	14 300.2	14 325.6	14 351.0	14 376.4	14 401.8	14 427.2	14 452.6	560
570	14 478.0	14 503.4	14 528.8	14 554.2	14 579.6	14 605.0	14 630.4	14 655.8	14 681.2	14 706.6	570
580	14 732.0	14 757.4	14 782.8	14 808.2	14 833.6	14 859.0	14 884.4	14 909.8	14 935.2	14 960.6	580
590	14 986.0	15 011.4	15 036.8	15 062.2	15 087.6	15 113.0	15 138.4	15 163.8	15 189.2	15 214.6	590
600	15 240.0	15 265.4	15 290.8	15 316.2	15 341.6	15 367.0	15 392.4	15 417.8	15 443.2	15 468.6	600
610	15 494.0	15 519.4	15 544.8	15 570.2	15 595.6	15 621.0	15 646.4	15 671.8	15 697.2	15 722.6	610
620	15 748.0	15 773.4	15 798.8	15 824.2	15 849.6	15 875.0	15 900.4	15 925.8	15 951.2	15 976.6	620
630	16 002.0	16 027.4	16 052.8	16 078.2	16 103.6	16 129.0	16 154.4	16 179.8	16 205.2	16 230.6	630
640	16 256.0	16 281.4	16 306.8	16 332.2	16 357.6	16 383.0	16 408.4	16 433.8	16 459.2	16 484.6	640
650	16 510.0	16 535.4	16 560.8	16 586.2	16 611.6	16 637.0	16 662.4	16 687.8	16 713.2	16 738.6	650
660	16 764.0	16 789.4	16 814.8	16 840.2	16 865.6	16 891.0	16 916.4	16 941.8	16 967.2	16 992.6	660
670	17 018.0	17 043.4	17 068.8	17 094.2	17 119.6	17 145.0	17 170.4	17 195.8	17 221.2	17 246.6	670
680	17 272.0	17 297.4	17 322.8	17 348.2	17 373.6	17 399.0	17 424.4	17 449.8	17 475.2	17 500.6	680
690	17 526.0	17 551.4	17 576.8	17 602.2	17 627.6	17 653.0	17 678.4	17 703.8	17 729.2	17 754.6	690
700	17 780.0	17 805.4	17 830.8	17 856.2	17 881.6	17 907.0	17 932.4	17 957.8	17 983.2	18 008.6	700
in	mm										in

续表 A6

in	0	1	2	3	4	5	6	7	8	9	in
710	18 034.0	18 059.4	18 084.8	18 110.2	18 135.6	18 161.0	18 186.4	18 211.8	18 237.2	18 262.6	710
720	18 288.0	18 313.4	18 338.8	18 364.2	18 389.6	18 415.0	18 440.4	18 465.8	18 491.2	18 516.6	720
730	18 542.0	18 567.4	18 592.8	18 618.2	18 643.6	18 669.0	18 694.4	18 719.8	18 745.2	18 770.6	730
740	18 796.0	18 821.4	18 846.8	18 872.2	18 897.6	18 923.0	18 948.4	18 973.8	18 999.2	19 024.6	740
750	19 050.0	19 075.4	19 100.8	19 126.2	19 151.6	19 177.0	19 202.4	19 227.8	19 253.2	19 278.6	750
760	19 304.0	19 329.4	19 354.8	19 380.2	19 405.6	19 431.0	19 456.4	19 481.8	19 507.2	19 532.6	760
770	19 558.0	19 583.4	19 608.8	19 634.2	19 659.6	19 685.0	19 710.4	19 735.8	19 761.2	19 786.6	770
780	19 812.0	19 837.4	19 862.8	19 888.2	19 913.6	19 939.0	19 964.4	19 989.8	20 015.2	20 040.6	780
790	20 066.0	20 091.4	20 116.8	20 142.2	20 167.6	20 193.0	20 218.4	20 243.8	20 269.2	20 294.6	790
800	20 320.0	20 345.4	20 370.8	20 396.2	20 421.6	20 447.0	20 472.4	20 497.8	20 523.2	20 548.6	800
810	20 574.0	20 599.4	20 624.8	20 650.2	20 675.6	20 701.0	20 726.4	20 751.8	20 777.2	20 802.6	810
820	20 828.0	20 853.4	20 878.8	20 904.2	20 929.6	20 955.0	20 980.4	21 005.8	21 031.2	21 056.6	820
830	21 082.0	21 107.4	21 132.8	21 158.2	21 183.6	21 209.0	21 234.4	21 259.8	21 285.2	21 310.6	830
840	21 336.0	21 361.4	21 386.8	21 412.2	21 437.6	21 463.0	21 488.4	21 513.8	21 539.2	21 564.6	840
850	21 590.0	21 615.4	21 640.8	21 666.2	21 691.6	21 717.0	21 742.4	21 767.8	21 793.2	21 818.6	850
860	21 844.0	21 869.4	21 894.8	21 920.2	21 945.6	21 971.0	21 996.4	22 021.8	22 047.2	22 072.6	860
870	22 098.0	22 123.4	22 148.8	22 174.2	22 199.6	22 225.0	22 250.4	22 275.8	22 301.2	22 326.6	870
880	22 352.0	22 377.4	22 402.8	22 428.2	22 453.6	22 479.0	22 504.4	22 529.8	22 555.2	22 580.6	880
890	22 606.0	22 631.4	22 656.8	22 682.2	22 707.6	22 733.0	22 758.4	22 783.8	22 809.2	22 834.6	890
900	22 860.0	22 885.4	22 910.8	22 936.2	22 961.6	22 987.0	23 012.4	23 037.8	23 063.2	23 088.6	900
910	23 114.0	23 139.4	23 164.8	23 190.2	23 215.6	23 241.0	23 266.4	23 291.8	23 317.2	23 342.6	910
920	23 368.0	23 393.4	23 418.8	23 444.2	23 469.6	23 495.0	23 520.4	23 545.8	23 571.2	23 596.6	920
930	23 622.0	23 647.4	23 672.8	23 698.2	23 723.6	23 749.0	23 774.4	23 799.8	23 825.2	23 850.6	930
940	23 876.0	23 901.4	23 926.8	23 952.2	23 977.6	24 003.0	24 028.4	24 053.8	24 079.2	24 104.6	940
950	24 130.0	24 155.4	24 180.8	24 206.2	24 231.6	24 257.0	24 282.4	24 307.8	24 333.2	24 358.6	950
960	24 384.0	24 409.4	24 434.8	24 460.2	24 485.6	24 511.0	24 536.4	24 561.8	24 587.2	24 612.6	960
970	24 638.0	24 663.4	24 688.8	24 714.2	24 739.6	24 765.0	24 790.4	24 815.8	24 841.2	24 866.6	970
980	24 892.0	24 917.4	24 942.8	24 968.2	24 993.6	25 019.0	25 044.4	25 069.8	25 095.2	25 120.6	980
990	25 146.0	25 171.4	25 196.8	25 222.2	25 247.6	25 273.0	25 298.4	25 323.8	25 349.2	25 374.6	990
in	mm										in

表 A7 1 ~ 999 ft 换算表

1 ft = 0.3048 m

ft	0	1	2	3	4	5	6	7	8	9
0		0.304 8	0.609 6	0.914 4	1.219 2	1.524 0	1.828 8	2.133 6	2.438 4	2.743 2
10	3.048 0	3.352 8	3.657 6	3.962 4	4.267 2	4.572 0	4.876 8	5.181 6	5.486 4	5.791 2
20	6.096 0	6.400 8	6.705 6	7.010 4	7.315 2	7.620 0	7.924 8	8.229 6	8.534 4	8.839 2
30	9.144 0	9.448 8	9.753 6	10.058 4	10.363 2	10.668 0	10.972 8	11.277 6	11.582 4	11.887 2
40	12.192 0	12.496 8	12.801 6	13.106 4	13.411 2	13.716 0	14.020 8	14.325 6	14.630 4	14.935 2
50	15.240 0	15.544 8	15.849 6	16.154 4	16.459 2	16.764 0	17.068 8	17.373 6	17.678 4	17.983 2
60	18.288 0	18.592 8	18.897 6	19.202 4	19.507 2	19.812 0	20.116 8	20.421 6	20.726 4	21.031 2
70	21.336 0	21.640 8	21.945 6	22.250 4	22.555 2	22.860 0	23.164 8	23.469 6	23.774 4	24.079 2
ft	m									

续表 A7

ft	0	1	2	3	4	5	6	7	8	9
80	24.384 0	24.688 8	24.993 6	25.298 4	25.603 2	25.908 0	26.212 8	26.517 6	26.822 4	27.127 2
90	27.432 0	27.736 8	28.041 6	28.346 4	28.651 2	28.956 0	29.260 8	29.565 6	29.870 4	30.175 2
100	30.480 0	30.784 8	31.089 6	31.394 4	31.699 2	32.004 0	32.308 8	32.613 6	32.918 4	33.223 2
110	33.528 0	33.832 8	34.137 6	34.442 4	34.747 2	35.052 0	35.356 8	35.661 6	35.966 4	36.271 2
120	36.576 0	36.880 8	37.185 6	37.490 4	37.795 2	38.100 0	38.404 8	38.709 6	39.014 4	39.319 2
130	39.624 0	39.928 8	40.233 6	40.538 4	40.843 2	41.148 0	41.452 8	41.757 6	42.062 4	42.367 2
140	42.672 0	42.976 8	43.281 6	43.586 4	43.891 2	44.196 0	44.500 8	44.805 6	45.110 4	45.415 2
150	45.720 0	46.024 8	46.329 6	46.634 4	46.939 2	47.244 0	47.548 8	47.853 6	48.158 4	48.463 2
160	48.768 0	49.072 8	49.377 6	49.682 4	49.987 2	50.292 0	50.596 8	50.901 6	51.206 4	51.511 2
170	51.816 0	52.120 8	52.425 6	52.730 4	53.035 2	53.340 0	53.644 8	53.949 6	54.254 4	54.559 2
180	54.864 0	55.168 8	55.473 6	55.778 4	56.083 2	56.388 0	56.692 8	56.997 6	57.302 4	57.607 2
190	57.912 0	58.216 8	58.521 6	58.826 4	59.131 2	59.436 0	59.740 8	60.045 6	60.350 4	60.655 2
200	60.960 0	61.264 8	61.569 6	61.874 4	62.179 2	62.484 0	62.788 8	63.093 6	63.398 4	63.703 2
210	64.008 0	64.312 8	64.617 6	64.922 4	65.227 2	65.532 0	65.836 8	66.141 6	66.446 4	66.751 2
220	67.056 0	67.360 8	67.665 6	67.970 4	68.275 2	68.580 0	68.884 8	69.189 6	69.494 4	69.799 2
230	70.104 0	70.408 8	70.713 6	71.018 4	71.323 2	71.628 0	71.932 8	72.237 6	72.542 4	72.847 2
240	73.152 0	73.456 8	73.761 6	74.066 4	74.371 2	74.676 0	74.980 8	75.285 6	75.590 4	75.895 2
250	76.200 0	76.504 8	76.809 6	77.114 4	77.419 2	77.724 0	78.028 8	78.333 6	78.638 4	78.943 2
260	79.248 0	79.552 8	79.857 6	80.162 4	80.467 2	80.772 0	81.076 8	81.381 6	81.686 4	81.991 2
270	82.296 0	82.600 8	82.905 6	83.210 4	83.515 2	83.820 0	84.124 8	84.429 6	84.734 4	85.039 2
280	85.344 0	85.648 8	85.953 6	86.258 4	86.563 2	86.868 0	87.172 8	87.477 6	87.782 4	88.087 2
290	88.392 0	88.696 8	89.001 6	89.306 4	89.611 2	89.916 0	90.220 8	90.525 6	90.830 4	91.135 2
300	91.440 0	91.744 8	92.049 6	92.354 4	92.659 2	92.964 0	93.268 8	93.573 6	93.878 4	94.183 2
310	94.488 0	94.792 8	95.097 6	95.402 4	95.707 2	96.012 0	96.316 8	96.621 6	96.926 4	97.231 2
320	97.536 0	97.840 8	98.145 6	98.450 4	98.755 2	99.060 0	99.364 8	99.669 6	99.974 4	100.279
330	100.584	100.889	101.194	101.498	101.803	102.108	102.413	102.718	103.022	103.327
340	103.632	103.937	104.242	104.546	104.851	105.156	105.461	105.766	106.070	106.375
350	106.680	106.985	107.290	107.594	107.899	108.204	108.509	108.814	109.118	109.423
360	109.728	110.033	110.338	110.642	110.947	111.252	111.557	111.862	112.166	112.471
370	112.776	113.081	113.386	113.690	113.995	114.300	114.605	114.910	115.214	115.519
380	115.824	116.129	116.434	116.738	117.043	117.348	117.653	117.958	118.262	118.567
390	118.872	119.177	119.482	119.786	120.091	120.396	120.701	121.006	121.310	121.615
400	121.920	122.225	122.530	122.834	123.139	123.444	123.749	124.054	124.358	124.663
410	124.968	125.273	125.578	125.882	126.187	126.492	126.797	127.102	127.406	127.711
420	128.016	128.321	128.626	128.930	129.235	129.540	129.845	130.150	130.454	130.759
430	131.064	131.369	131.674	131.978	132.283	132.588	132.893	133.198	133.502	133.807
440	134.112	134.417	134.722	135.026	135.331	135.636	135.941	136.246	136.550	136.855
450	137.160	137.465	137.770	138.074	138.379	138.684	138.989	139.294	139.598	139.903
460	140.208	140.513	140.818	141.122	141.427	141.732	142.037	142.342	142.646	142.951
470	143.256	143.561	143.866	144.170	144.475	144.780	145.085	145.390	145.694	145.999
480	146.304	146.609	146.914	147.218	147.523	147.828	148.133	148.438	148.742	149.047
490	149.352	149.657	149.962	150.266	150.571	150.876	151.181	151.486	151.790	152.095
500	152.400	152.705	153.010	153.314	153.619	153.924	154.229	154.534	154.838	155.143
510	155.448	155.753	156.058	156.362	156.667	156.972	157.277	157.582	157.886	158.191
520	158.496	158.801	159.106	159.410	159.715	160.020	160.325	160.630	160.934	161.239
ft	m									

续表 A7

ft	0	1	2	3	4	5	6	7	8	9
530	161.544	161.849	162.154	162.458	162.763	163.068	163.373	163.678	163.982	164.287
540	164.592	164.897	165.202	165.506	165.811	166.116	166.421	166.726	167.030	167.335
550	167.640	167.945	168.250	168.554	168.859	169.164	169.469	169.774	170.078	170.383
560	170.688	170.993	171.298	171.602	171.907	172.212	172.517	172.822	173.126	173.431
570	173.736	174.041	174.346	174.650	174.955	175.260	175.565	175.870	176.174	176.479
580	176.784	177.089	177.394	177.698	178.003	178.308	178.613	178.918	179.222	179.527
590	179.832	180.137	180.442	180.746	181.051	181.356	181.661	181.966	182.270	182.575
600	182.880	183.185	183.490	183.794	184.099	184.404	184.709	185.014	185.318	185.623
610	185.928	186.233	186.538	186.842	187.147	187.452	187.757	188.062	188.366	188.671
620	188.976	189.281	189.586	189.890	190.195	190.500	190.805	191.110	191.414	191.719
630	192.024	192.329	192.634	192.938	193.243	193.548	193.853	194.158	194.462	194.767
640	195.072	195.377	195.682	195.986	196.291	196.596	196.901	197.206	197.510	197.815
650	198.120	198.425	198.730	199.034	199.339	199.644	199.949	200.254	200.558	200.863
660	201.168	201.473	201.778	202.082	202.387	202.692	202.997	203.302	203.606	203.911
670	204.216	204.521	204.826	205.130	205.435	205.740	206.045	206.350	206.654	206.959
680	207.264	207.569	207.874	208.178	208.483	208.788	209.093	209.398	209.702	210.007
690	210.312	210.617	210.922	211.226	211.531	211.836	212.141	212.446	212.750	213.055
700	213.360	213.665	213.970	214.274	214.579	214.884	215.189	215.494	215.798	216.103
710	216.408	216.713	217.018	217.322	217.627	217.932	218.237	218.542	218.846	219.151
720	219.456	219.761	220.066	220.370	220.675	220.980	221.285	221.590	221.894	222.199
730	222.504	222.809	223.114	223.418	223.723	224.028	224.333	224.638	224.942	225.247
740	225.552	225.857	226.162	226.466	226.771	227.076	227.381	227.686	227.990	228.295
750	228.600	228.905	229.210	229.514	229.819	230.124	230.429	230.734	231.038	231.343
760	231.648	231.953	232.258	232.562	232.867	233.172	233.477	233.782	234.086	234.391
770	234.696	235.001	235.306	235.610	235.915	236.220	236.525	236.830	237.134	237.439
780	237.744	238.049	238.354	238.658	238.963	239.268	239.573	239.878	240.182	240.487
790	240.792	241.097	241.402	241.706	242.011	242.316	242.621	242.926	243.230	243.535
800	243.840	244.145	244.450	244.754	245.059	245.364	245.669	245.974	246.278	246.583
810	246.888	247.193	247.498	247.802	248.107	248.412	248.717	249.022	249.326	249.631
820	249.936	250.241	250.546	250.850	251.155	251.460	251.765	252.070	252.374	252.679
830	252.984	253.289	253.594	253.898	254.203	254.508	254.813	255.118	255.422	255.727
840	256.032	256.337	256.642	256.946	257.251	257.556	257.861	258.166	258.470	258.775
850	259.080	259.385	259.690	259.994	260.299	260.604	260.909	261.214	261.518	261.823
860	262.128	262.433	262.738	263.042	263.347	263.652	263.957	264.262	264.566	264.871
870	265.176	265.481	265.786	266.090	266.395	266.700	267.005	267.310	267.614	267.919
880	268.224	268.529	268.834	269.138	269.443	269.748	270.053	270.358	270.662	270.967
890	271.272	271.577	271.882	272.186	272.491	272.796	273.101	273.406	273.710	274.015
900	274.320	274.625	274.930	275.234	275.539	275.844	276.149	276.454	276.758	277.063
910	277.368	277.673	277.978	278.282	278.587	278.892	279.197	279.502	279.806	280.111
920	280.416	280.721	281.026	281.330	281.635	281.940	282.245	282.550	282.854	283.159
930	283.464	283.769	284.074	284.378	284.683	284.988	285.293	285.598	285.902	286.207
940	286.512	286.817	287.122	287.426	287.731	288.036	288.341	288.646	288.950	289.255
950	289.560	289.865	290.170	290.474	290.779	291.084	291.389	291.694	291.998	292.303
960	292.608	292.913	293.218	293.522	293.827	294.132	294.437	294.742	295.046	295.351
970	295.656	295.961	296.266	296.570	296.875	297.180	297.485	297.790	298.094	298.399
ft	m									

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续表 A7

ft	0	1	2	3	4	5	6	7	8	9
980	298.704	299.009	299.314	299.618	299.923	300.228	300.533	300.838	301.142	301.447
990	301.752	302.057	302.362	302.666	302.971	303.276	303.581	303.886	304.190	304.495
ft	m									

附录 B

换算举例

(参考件)

B.1 有两个尺寸极限值的尺寸换算例子

B.1.1 把图B1中英制尺寸换算成毫米

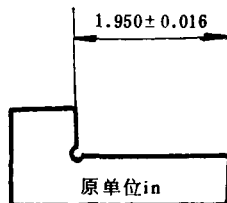


图 B1

B.1.1.1 把 1.950 ± 0.016 in换算成极限值1.966in和1.934in。

B.1.1.2 原公差为0.032in。

B.1.1.3 根据原公差按照第2.1.1款确定换算值修约精度符合表1中第三栏第四行0.01mm。

B.1.1.4 按照第2.1.2款换算两极限值成毫米分别为：49.936 4mm和49.123 6mm。

B.1.1.5 按照第2.1.3款用一般修约方法修约两个换算值得49.94mm和49.12mm。

B.1.2 把图B2中 49.5 ± 0.4 mm换算成英寸

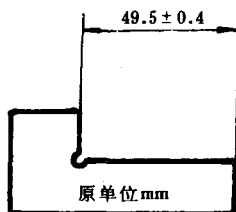


图 B2

B.1.2.1 把 49.5 ± 0.4 mm换算成极限值是49.9mm和49.1mm。

B.1.2.2 计算原公差为0.8mm。

B.1.2.3 根据原公差，按照第2.1.1款确定换算值修约精度符合表2中第三栏第四行0.001in。

B.1.2.4 按照第2.1.2款换算两极限值成英寸分别为1.964 57in和1.933 07in。

B.1.2.5 按照第2.1.3款用一般修约方法修约两个换算值得1.965in和1.933in。

B.2 有位置度公差的例子，如图B3。1.508in是 ϕD 孔中心的理论正确位置尺寸， $\phi 0.004$ in是位置度公差；换算成毫米。

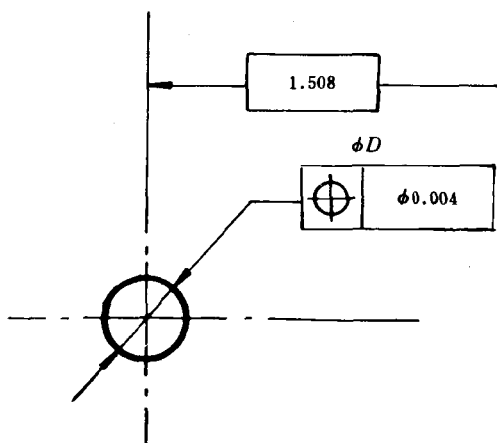


图 B3

B.2.1 根据公差0.004in按照2.1.1确定换算值修约精度符合表1第三栏第三行0.001mm。

B.2.2 按照第2.2.1款换算

$$1.508 \times 25.4 = 38.30320 \text{ mm}$$

$$0.004 \times 25.4 = 0.10160 \text{ mm}$$

B.2.3 按照第2.2.3款和第2.2.4款修约1.508in的换算值为38.303mm，0.004in为0.101mm。

B.3 理论正确尺寸和与其有关尺寸及公差的换算如图B4。

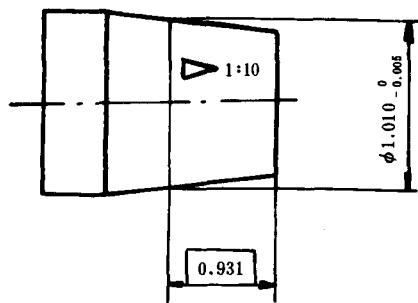


图 B4

B.3.1 把理论正确尺寸0.931in换算成毫米。

查表A5, $0.931 \text{ in} = 23.6474 \text{ mm}$

B.3.2 按照第2.2.4款对B.3.1所得值进行修约得23.647mm。

B.3.3 求理论正确尺寸换算前后的差为：

$$23.6474 - 23.647 = 0.0004 \text{ mm}$$

B.3.4 计算得出直径公差为0.005in选择表1中第三栏第三行0.001mm的精度。

B.3.5 按照第2.1.2款换算两个极限值分别得25.6540mm和25.5270mm。

B.3.6 根据换算前后理论正确尺寸的差调整直径两个极限尺寸的换算值。理论正确尺寸换算前后对直径的影响为：

$$0.0004 \times 0.1 = 0.00004 \text{ mm}, 0.1 \text{ 为锥度 } 1:10$$

调整直径两极限值

$$25.6540 - 0.00004 = 25.65396 \text{ mm}$$

$$25.5270 - 0.00004 = 25.52696 \text{ mm}$$

B.3.7 按照2.4.3用特殊修约方法修约调整后直径得

$$25.653 \text{ mm 和 } 25.527 \text{ mm}$$

B.4 均布8孔有公差英制尺寸换算成毫米如图B5。

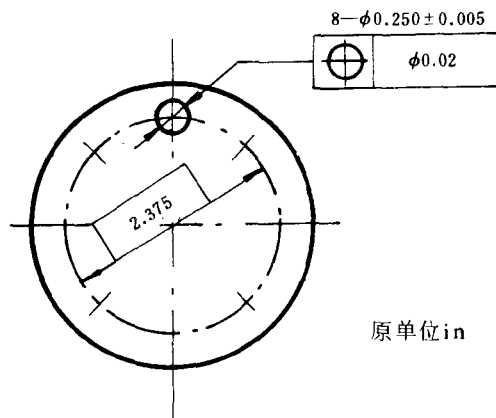


图 B5

B.4.1 计算得孔公差为0.01in按照2.1.1从表1中查得符合第三栏第四行精度。

B.4.2 计算得孔径两个极限值分别为0.255in和0.245in。

B.4.3 查表A5得到

$$0.255\text{in} = 6.4770\text{mm}$$

$$0.245\text{in} = 6.2230\text{mm}$$

$$0.02\text{in} = 0.508\text{mm}$$

B.4.4 按照2.2.2换算理论正确位置尺寸

$$2.375 \times 25.4 = 60.325\text{mm}$$

B.4.5 按照2.2.4修约理论正确位置尺寸的换算值为60.325mm。

B.4.6 按照2.2.2用特殊修约方法修约孔的直径和位置度公差：

位置度公差为0.50mm

孔径为6.47mm和6.23mm

附加说明：

本标准由铁道部标准计量研究所提出并归口。

本标准由铁道部标准计量研究所负责起草。

本标准主要起草人周克、左荣森。