

Text Height at Scale - Metric

ISO 3098 lettering heights at every common metric drawing scale

$$\text{paper height} \times \text{scale factor} = \text{model text height}$$

Model text height (mm) to plot at the height above

DRAWING SCALE	2.5 mm	3.5 mm	5 mm	7 mm
1:1	2.5	3.5	5	7
1:2	5	7	10	14
1:5	12.5	17.5	25	35
1:10	25	35	50	70
1:20	50	70	100	140
1:25	62.5	87.5	125	175
1:50	125	175	250	350
1:100	250	350	500	700
1:200	500	700	1000	1400
1:500	1250	1750	2500	3500
1:1000	2500	3500	5000	7000
1:1250	3125	4375	6250	8750
1:2500	6250	8750	12500	17500

ISO 3098 lettering heights and line widths

HEIGHT	TYPE B h/10	TYPE A h/14	WHAT IT IS FOR
1.8 mm	0.18 red	0.13 violet	Only when the standard height will not fit
2.5 mm	0.25 white	0.18 red	Dimensions, notes, labels, callouts
3.5 mm	0.35 yellow	0.25 white	Secondary titles - SECTION A-A
5 mm	0.5 brown	0.35 yellow	Primary titles - TYPICAL FLY BRACE DETAIL
7 mm	0.7 blue	0.5 brown	Cover sheets and title block
10 mm	1.0 orange	0.7 blue	Cover sheet titles

Type B is the preferred application in ISO 3098-0. Heights step by the square root of 2, the same progression as the ISO 216 paper sizes.

Worked example

A floor plan at 1:100. For notes that read 2.5 mm high on the printed sheet, the model text height is $2.5 \times 100 = 250$ mm. Section titles at 3.5 mm on paper become $3.5 \times 100 = 350$ mm. Plot the notes with the 0.25 pen and the titles with the 0.35 pen.

Text Height at Scale - Imperial

Model text height for architectural and civil scales, in feet and inches

$$\text{paper height} \times \text{scale factor} = \text{model text height}$$

Architectural scales

DRAWING SCALE	3/32"	1/8"	3/16"	1/4"
3" = 1'-0"	3/8"	1/2"	3/4"	1"
1 1/2" = 1'-0"	3/4"	1"	1 1/2"	2"
1" = 1'-0"	1 1/8"	1 1/2"	2 1/4"	3"
3/4" = 1'-0"	1 1/2"	2"	3"	4"
1/2" = 1'-0"	2 1/4"	3"	4 1/2"	6"
3/8" = 1'-0"	3"	4"	6"	8"
1/4" = 1'-0"	4 1/2"	6"	9"	1'
3/16" = 1'-0"	6"	8"	1'	1'-4"
1/8" = 1'-0"	9"	1'	1'-6"	2'
3/32" = 1'-0"	1'	1'-4"	2'	2'-8"
1/16" = 1'-0"	1'-6"	2'	3'	4'
1/32" = 1'-0"	3'	4'	6'	8'

Civil / engineering scales

DRAWING SCALE	3/32"	1/8"	3/16"	1/4"
1" = 10'	11 1/4"	1'-3"	1'-10 1/2"	2'-6"
1" = 20'	1'-10 1/2"	2'-6"	3'-9"	5'
1" = 30'	2'-9 3/4"	3'-9"	5'-7 1/2"	7'-6"
1" = 40'	3'-9"	5'	7'-6"	10'
1" = 50'	4'-8 1/4"	6'-3"	9'-4 1/2"	12'-6"
1" = 60'	5'-7 1/2"	7'-6"	11'-3"	15'
1" = 100'	9'-4 1/2"	12'-6"	18'-9"	25'
1" = 200'	18'-9"	25'	37'-6"	50'

A foot is drawn 1/4" in long at 1/4" = 1'-0", so the scale factor is 12 / 0.25 = 48. Every factor above is worked out the same way.

Set the model text height from the column for the height you want on paper. In AutoCAD, an annotative text style does this for you: set the paper height once, give the viewport its scale, and the model height follows. The columns above are what the software is calculating, and what you still need when the text is not annotative.

TEXT HEIGHT AT SCALE - REFERENCE CHART

SHEET 2 OF 2 | IMPERIAL

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