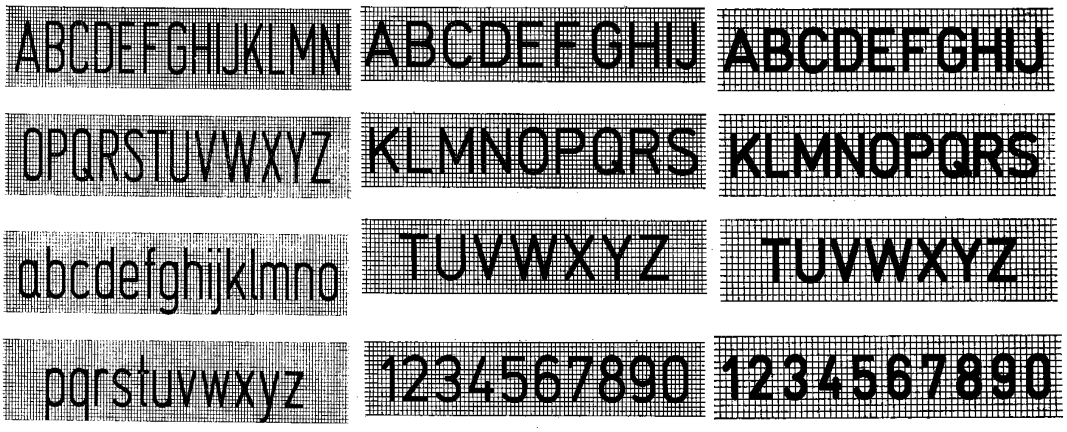
Lettering of Drawings

For general use lettering of technical inscriptions on machines and devices, as well as on products, so called **technical lettering** is used (Czech standard ČSN 01 0451). This lettering must not be used for lettering of technical documentation.

Technical Lettering

Technical lettering is defined in three dimensions of width: **slim** letters, **middle** letters and **wide** letters. There are two standards defined inclination for technical lettering. So called **vertical** letters, which are widely preferred, and **inclined** letters. Inclination of this one is 75°. Inclined letters are not used in official presentation at this time.



Slim letters Middle letters Wide letters

Lettering for Technical Drawings

For lettering of technical documentation must be used **lettering for technical drawings** (Czech standards ČSN EN 3098 – 0 to 6 (01 3115) - the same standard of ISO - International Standard Organisation has designation ISO 3098/I - 1974). MTD - page 62.

For **general use** for technical documentation are used **letters of type B**. We must use always only them.

Vertical letters (preferred).

Inclined letters (by 75°) are not used in official presentation of technical documentation and we strictly must not use them.

We must use only **standardised values**, of heights of capital letters in mm: **1.8 - 2.5 - 3.5 - 5 - 7 - 10 - 14 - 20 mm**.

The Letters for lettering of drawings are defined as **constructed to the net of squares.** The size of **one square** of net is the **1/10 of height of the capital letters** for letters of type **B** (letters of type **A** - 1/14)**. Total heigh**t of the net of squares is for letters of type **B 17 squares** (**A** 22). There are **four squares above** the letters for writing of punctuation marks, and **three squares under** the capital letters for writing of down-draught of some lower case letters such as **g**, **p**, **y** etc. (**A** four squares).

Weight of a line is for letters of type **B 1/10** of height - as we fill the squares (**A** 1/14). Line end may be drawn with corners - by filling of end square, or they may be rounded as usual when writing by technical pen.

Height of lower case letters is standardised to **7/10** of height of letters (**A** 10/14).

Width of capital letters with standard width (**B**, **E**, **H** etc.) is **6/10** of height of letters (**A** 7/14).

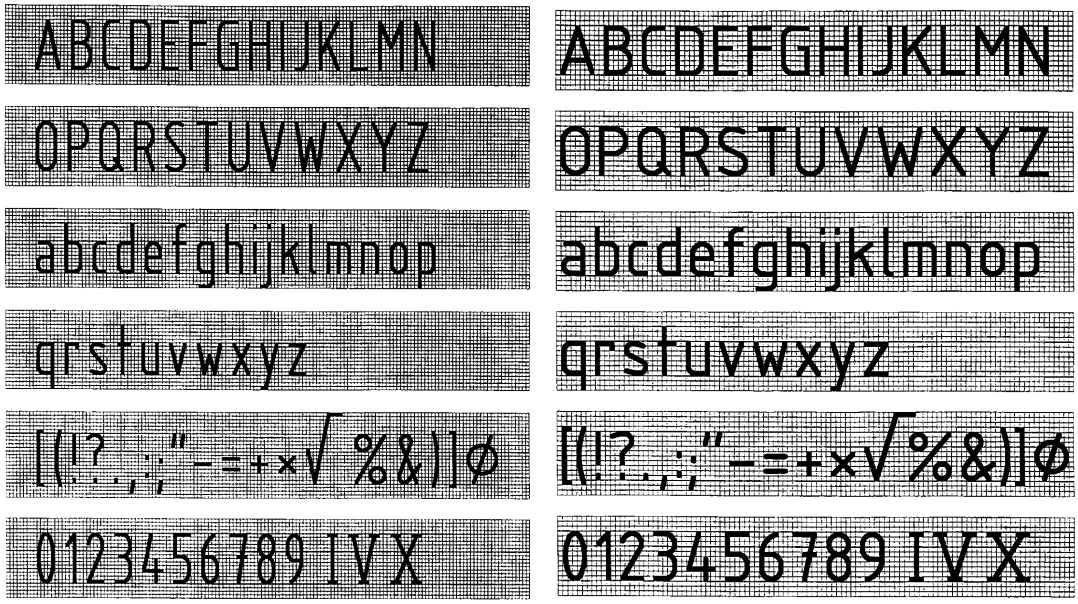
Width of lower case letters and numbers, with standard width, is **5/10** of high. (**A** letters 6/14, numbers 7/14).

Letters and numbers which have **not standard width** (**I**, **M**, **W** etc.) we must write **exactly according to the picture in standard**, keeping their shapes in a net of squares.

Spaces between the letters are for letters of type **B** standardised to **2/10** of height of capital letters or area of **20 squares** between the letters which are not adjacent by parallel lines for example in word **TAB** (**A** 2/14 and 28 squares).

Spaces between the words are for letters of type **B** standardised to **6/10** of height of letters (**A** 6/14).

Line spacing is for letters of type **B 19/10** (lettering with punctuation marks) or **15/10** (lettering without punctuation marks) of height of letters.



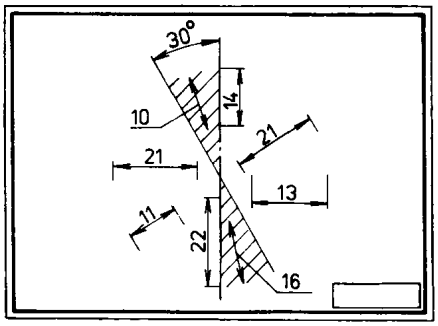
Letters of type A. Letters of type B. - preferred

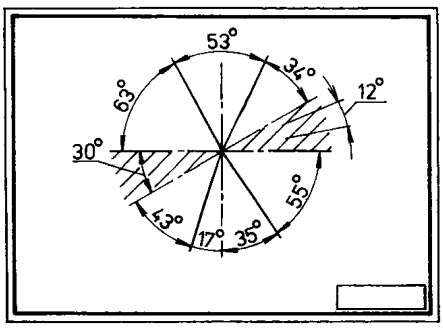
Directions of Lettering

Lettering on drawing is not allowed in an arbitrary direction. Basic direction is **horizontal.** In this direction we write all inscriptions and notices, which are not attached to certain direction.

If we are dimensioning, we write usually the figures in **direction of dimensioning line.** Basic direction is horizontal as well. If we dimension **vertically** we write **from the below to up with seeing from the right**, that means letters will be on the left, from the dimension line. This is the limit direction. All angles between these directions are right.

If we need dimensioning from opposite directions (with seeing from the left), we may do it to angle 30° to vertical line. That means that this is the limit direction of dimension line. MTD - page 108, picture 3.50 (third edition page 106).





If we need dimension **in not allowed angle** we must write inscription horizontally, underline this inscription by **reference line** and connect it with centre of dimension line.

Heights of Letters for Lettering of Drawings

For lettering of drawings we usually use these **heights of letters:**

- for **dimensioning 3.5 mm**, for larger drawings 5 mm
- for **notices 7 mm**, for larger drawings 10 mm
- for **number of parts on assembly drawings 10 mm,** for larger drawings 14 mm

Dictionary

English	Czech
dimension	rozměr
dimension line	kótovací čára
dimensioning	kótování