

Steel flat products
Hot rolled patterned plate
Dimensions, mass, permissible deviations

DIN
59 220

Flachzeug aus Stahl; warmgewalztes Blech mit Mustern; Masse, Gewichte, zulässige Abweichungen

In keeping with current practice in standards published by the International Organization for Standardization (ISO), a comma has been used throughout as the decimal marker.

Dimensions in mm

1 Field of application

This standard applies to hot rolled patterned plate (bulb plate, checker plate) as described in subclause 4.1, 3 mm to 10 mm thick, in widths from 600 mm up to 2000 mm, made from steels specified in clause 5.

2 Concept

Patterned plate is understood to mean plate one side of which (important for its application) shows a regular embossed pattern (bulb pattern or diamond pattern), the other side of which usually has a smooth surface. The pattern improves the nonskid and nonslip properties.

3 Designations

3.1 Standard designation

3.1.1 The standard designation of plate conforming to this standard shall contain the following details in the order stated:

- term (plate);
- DIN number;
- symbol or material number for the steel grade;
- code letter (T or R) for the type of pattern (see subclause 4.1);
- thickness of the plate, in mm (see subclause 6.1.1).

3.1.2 The term "plate" may be replaced by the abbreviation "Bl" as specified in DIN 1353 Part 2.

3.1.3 Example of standard designation

A patterned plate in RSt 37-2 steel (material number 1.0038) as specified in DIN 17 100, pattern T, 5 mm thick, shall be designated:

Plate DIN 59 220 – RSt 37-2 – T 5
or Plate DIN 59 220 – 1.0038 – T 5

3.2 Designation for ordering

3.2.1 To ensure the satisfactory handling of an order for plate conforming to this standard, the standard designation (the sequence of the elements of which shall not be changed) as given in subclause 3.1 shall be supplemented by the following information:

- a) quantity ordered or number of units (detail preceding the standard designation);
- b) width and length, in mm (details following the standard designation).

3.2.2 Example of designation for ordering

20 t of plate designated as in subclause 3.1.3, 1200 mm in width and 2000 mm in length:

20 t plate DIN 59 220 – RSt 37-2 – T 5 X 1200 X 2000
or 20 t plate DIN 59 220 – 1.0038 – T 5 X 1200 X 2000

Continued on pages 2 to 5

4 Types of pattern and condition on delivery

4.1 Types of pattern

4.1.1 Plate conforming to this standard may be supplied with pattern

T (bulb plate) as shown in figure 1 or

R (checker plate) as shown in figure 2.

4.1.2 The values given in the illustrations are guideline values.

4.1.3 The patterns shall not be in parallel to the longitudinal edges of the plate.

4.2 Condition on delivery

Products conforming to this standard shall be supplied in the hot rolled condition, with the surface untreated and generally with cut edges.

5 Material

Unless otherwise specified, hot rolled patterned plate conforming to this standard shall be supplied in steels specified in DIN 17 100. Other steel grades shall be the subject of a particular agreement; however, the specifications of this standard only apply to materials having a specified minimum yield strength up to 355 N/mm².

6 Dimensions, permissible deviations of dimension, mass and form

6.1 Thickness

6.1.1 The nominal thickness is understood to mean the thickness of the plate measured at a point without pattern (see also subclause 7.2.1).

6.1.2 The nominal thicknesses to be preferred when ordering are given in table 1.

6.1.3 Table 1 also lists the permissible deviations in thickness and the permissible variations in maximum and minimum thickness of the same plate (for testing see subclause 7.2.1).

Table 1. Permissible deviations in thickness and permissible variations in thickness of the same plate

Nominal thickness <i>s</i> ¹⁾	Permissible deviations from <i>s</i>	Permissible variation in thickness (referred to nominal thickness <i>s</i>)
3	+ 0,8 - 0,4	0,8
4		0,8
5	+ 1,1 - 0,4	0,9
6		0,9
8	+ 1,2 - 0,5	0,9
10		0,9

¹⁾ Please note subclause 6.1.1.

6.2 Width

6.2.1 Patterned steel plate is usually supplied in widths from 600 mm up to 2000 mm.

6.2.2 It is permitted to exceed the nominal width ordered by 20 mm. A negative deviation in nominal width is not permitted (see also subclause 7.2.2).