UDC 621.87-424-034.14 December 1974

Crane Rails Type F (Flat) Dimensions, Static Values, Steel Grades

DIN 536 Part 2

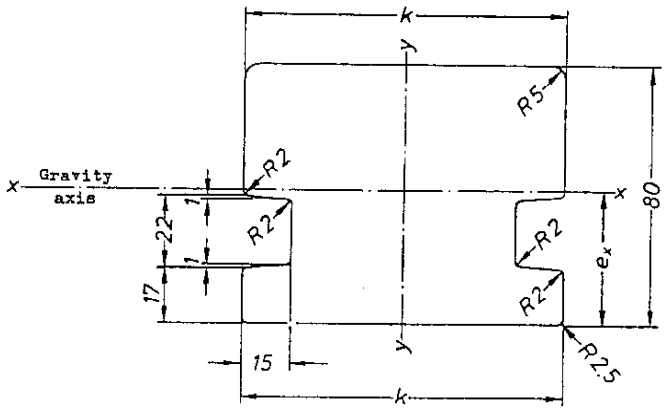
Kranschienen, Form F (flach); Maße, statische Werte, Stahlsorten

Dimensions in mm

1. Scope

This Standard applies to hot rolled crane rails of Type F for flangeless wheels having dimensions according to the Table in Section 2 and in the steels quoted in Section 4.

2. Designation



Designation of a crane rail, Type F with head width k = 100 mm:

Crane rail F 100 DIN 536

Symbol	Head width k	Cross-section cm²	Weight[1] kg/m	Moment of inertia J_x cm⁴	Distance of outer fibre from X axis e_x cm	Section modulus W_x cm³	Moment of inertia J_y cm⁴	Section modulus W_y cm³
F 100	100	73,2	57,5	414	4,09	101	541	108
F 120	120	89,2	70,1	499	4,07	123	962	160

[1]) See Section 5

3. Dimensions and static values

3.1. Hot rolled crane rails of Type F according to this Standard are supplied in the dimensions according to the Table in Section 2.

3.2. The static values are also given in this Table.

Continued on page 2
Explanations on page 2

4. Material

4.1. Hot rolled crane rails according to this Standard are manufactured from steel with tensile strength of at least 690 N/mm^2.

4.2. One of the certificates according to DIN 50049, as agreed when ordering, can be issued in respect of the execution and results of testings on the material.

5. Weight and permissible weight variations

5.1. The weight shown in the Table in Section 2 has been calculated from the cross-section on the basis of a density of 7.85 kg/dm^3.

5.2. The permissible weight variation is

± 6 % for an individual crane rail,

± 4 % for the complete delivery.

The weight variation here means the difference between the weight of crane rails delivered and the theoretical weight calculated from the values according to the Table in Section 2.

6. Mode of delivery

6.1. Hot rolled crane rails according to this Standard are supplied in fixed lengths in the range from 9 to 12 m; the permissible length variation is ± 50 or $^{+100}_{0}$ mm. The required fixed length and required length variation shall be agreed when ordering.

6.2. Inclusion in the delivery of long or short lengths is subject to special agreement.

7. Any other requirements

7.1. Crane rails must be free from external and internal defects which impair usefulness to an appreciable extent.

7.2. If joints are necessary in the case of longer rail lengths, and if such joints are to be produced by welding, the provisions in DIN 8563 Part 1 to Part 3 should be complied with in order to ensure the quality of welding. After welding, the weld point should be given suitable finishing treatment in the region of the head and the base of the rail so that the transitions are smooth and flush.

Other relevant standards

DIN 536 Part 1 Crane rails Type A (with foot flange)

DIN 15070 Cranes; calculation bases for wheels

Explanations

In conjunction with the new issue of DIN 536 Part 1, Part 2 of this Standard covering crane rails of Type F has also been revised. The new version differs from the earlier November 1962 issue only in the following points:

a) The information on the materials to be used (Section 4) has been amended and the values for tensile strength converted to N/mm^2.

b) The permissible weight variations (Section 5.2) have been increased to ± 6 % for individual crane rails.

c) Section 7 on other requirements has been newly included.

d) The rounding radius on the rail head has been reduced to 5 mm.

In addition, the layout of DIN 536 Part 2 has been brought into line with that of the new issue of DIN 536 Part 1.