

VT 20K and VT 20 Girders

User Information



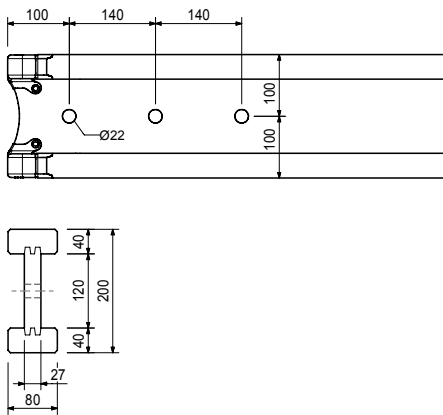
1. Identification markings

of the VT 20 and VT 20K girders, referred to as VT 20 in the following.
The VT 20 is classified according to EN 13377:2002 (D) in Girder Class P 20.



*BWU03 - Materials Testing Institute, Stuttgart

2. Dimensions and weight



Nominal Length [m]	Actual Length [mm]	Weight [kg]
1,45	1450	7,60
2,15	2150	11,40
2,45	2450	13,00
2,65	2650	14,00
2,90	2900	15,40
3,30	3300	17,50
3,60	3600	19,00
3,90	3900	20,60
4,50	4500	23,80
4,90	4900	25,90
5,90	5900	31,20

3. VT 20 application

The VT 20 is used as formwork girder for all areas of forming.
Main areas are wall-, column-, slab- and special formworks.

3.1 Wall- and column formworks

The VT 20 is used for constructing wall formwork elements. It serves to support the formlining which has direct contact to the fresh concrete during concreting. It transfers the loads from the fresh concrete pressure to the steel walers which support it on the side opposite the formlining. The VT 20 and steel waler are connected by means of hook straps.

3.2 Slab Formwork

The VT 20 is used as a main beam with support provided by a crosshead or clawhead, or directly through the head plate of a slab prop. It is also used as a secondary beam for transferring slab loads into the main beam. In both cases the VT 20 must project 150 mm over the axis of the beam to be supported.

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3.3 Further applications

In addition the VT 20 is also used for stopends at slab edges as well as for special forms.

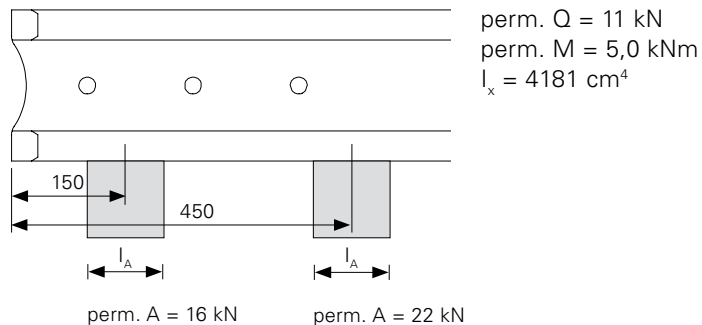
4. Mechanical properties

The maximum support forces, shear forces and moments are to be taken from the following sketches (permissible loads).

The permissible values are calculated with $\gamma_M = 1,3 / k_{mod} = 0,9 / \gamma_F = 1,5$.

Bearing width for transferring the max. support force: $l_A \geq 135 \text{ mm}$

Flexural strength: $EI_x = 460 \text{ kNm}^2$



5. Handling of damaged girders

Due to its low weight, the VT 20 is basically moved, assembled and dismantled by hand. No damage occurs through the use of machinery. Damage could occur if the VT 20 falls to the ground from a great height or is shortened by means of a saw. The VT 20 is to be inspected before every use for signs of damage and, if necessary, taken out of service.

6. Storage

The VT 20 is stored in a horizontal position: chord on chord or chord on web. The entire surface is to be supported in order to avoid any distortion occurring.