

**Tempofor® F3****1 Scope**

The Tempofor® F3 panel, is a solid welded construction of horizontal and vertical round tubes and welded mesh as infill panel.

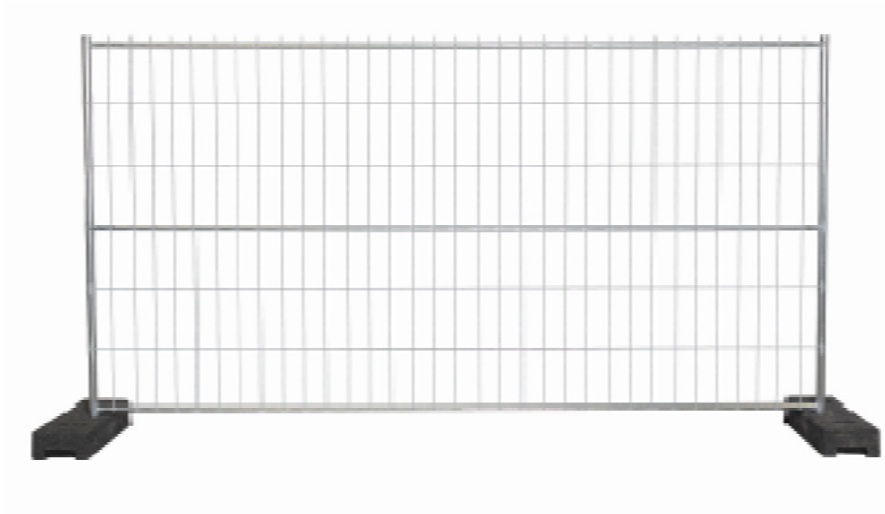
The horizontal and vertical tubes are welded together in the 4 corners.

The infill is a spot-welded mesh made of galvanized low-carbon steel wire and each wire is welded at horizontal respectively vertical round steel tubes.

This type of panel has a a barb of about 40 mm measured from the center of the horizontal tube until the end of the vertical wire.

The nominal height of the panel is 2 m.

In the middle of the panel there is an additional horizontal tube welded.



**Figure 1: Tempofor® F3 panel with barb on top**

**Tempofor® F3****1.1 Normative references**

- ISO 16120-2: Non-alloy steel wire rod for conversion to wire - Part 2: specific requirements for general purpose wire rod.
- EN 10346: Continuously hot-dip coated strip and sheet of structural steels - Technical delivery conditions

**1.2 Definitions**

- Nominal wire diameter: The diameter in mm to designate the wire.
- Real wire diameter: The average value of the minimal and the maximal diameter, measured in the same section of a straight piece of wire, by means of a micrometer to 0,01 mm.
- Mesh sizes: See figure 2  
The meshes are measured from centre to centre of the wires.
- Width of a panel (W): Distance measured between the centres of the vertical posts.
- Height of a panel (H): Distance measured between both ends of the vertical post.

**2 Raw material****2.1 Wire rod**

Chemical composition:

See table 1:

Element	C	Si	Mn	P	S
%	≤ 0,10	≤ 0,30	0,30 - 0,60	≤ 0,035	≤ 0,035

The chemical composition is in accordance with ISO 16120-2.

The designation of the wire rod is C9D.

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### 2.2 Tube

Chemical composition:

See table 2:

<b>Table 2: Chemical composition</b>					
Element	C	Si	Mn	P	S
%	≤ 0.20	≤ 0.60	≤ 1.70	≤ 0.10	≤ 0.045

The steel is in accordance with the European Standard EN 10346.

The designation of the steel is: S250GD Z100.

## 3 Properties

### 3.1 Welded mesh infill

#### 3.1.1 Wire diameter and tolerances

See table 3 :

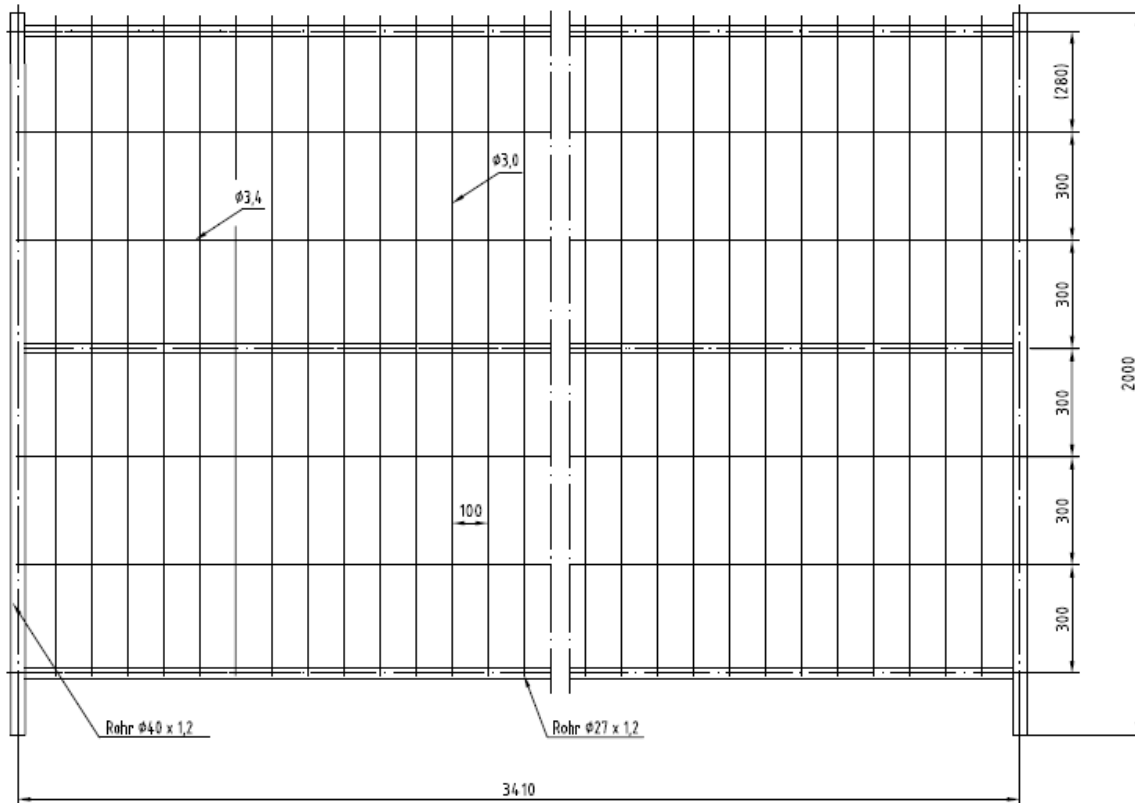
<b>Table 3: Wire dimensions and tolerances</b>	
Wire diameter and tolerances (mm)	
Vertical	Horizontal
3,00 ± 0,10	3,40 ± 0,10

#### 3.1.2 Mesh spacing

Mesh spacing is measured from centre to centre, wire or tube.

Distance between the vertical wires: 100 ± 5 mm

Distance between the horizontal wires: 5 x 300 + 280, tolerance ± 5 mm.

**Tempofor® F3****Figure 2****3.1.3 Tensile strength**

Tensile strength of the vertical and horizontal wires: Min. 550 N/mm<sup>2</sup>

**3.1.4 Weld shear strength**

The average weld shear strength of the wires will be not less than 1943 N (= 50% of the breaking load of the vertical wire).

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### 3.1.5 Metallic coating

The vertical and horizontal wires have a zinc coating weight of min. 25 g/m<sup>2</sup>

### 3.2 Tube

#### 3.2.1 Tube dimensions and tolerances

See table 4:

<b>Table 4: Dimensions and tolerances tubes(mm)</b>					
Vertical tube			Horizontal tube		
Diameter (mm)	Thickness (mm)	Height (mm)	Diameter (mm)	Thickness (mm)	Width (mm)
40,0 ± 0,20	1,2 ± 0,15	2000 ± 10	27,0 ± 0,20	1,2 ± 0,15	3410 ± 10

Note:

Other tube diameters are possible in agreement with the producing plant.

#### 3.2.2 Mechanical characteristics

Tensile strength: Min. 350 N/mm<sup>2</sup>

Yield strength: Min. 220 N/mm<sup>2</sup>

#### 3.2.3 Weld shear strength

The average weld shear strength, tube to tube shall be min 15 KN.

#### 3.2.4 Metallic coating

Minimum 100 g/m<sup>2</sup>, double side measured as specified in EN 10346. (Z100)

**Tempofor® F3****3.3 Dimension of the panel**

Standard width: 3410 ± 10 mm, measured centre to centre of the vertical posts.  
This width corresponds with a distance of 3500 mm between the centers of 2 consecutive blocks.

Standard height:

The height is specified as the overall height of the vertical tubes: 2000 mm.

Tolerance: ± 10 mm

Note:

Intermediate or infill panels, width 2200 mm and gates with width 1200 mm are available on request.

**4 Packaging**

The panels are packed in bundles of 2 x 35 panels.

In total 70 panels are packed together.

Each panel can have a "Betafence" or specific customer tag (See Figure 1).

**5 Installation of the F panels.****5.1 Connection system**

Panels are standard with or without out connections.

Other different connection systems are possible according to the possibilities of the producing plant.

Below some connection systems which are possible:

- Wire loop
- Adjustable brackets with nuts and bolts
- Eye and hook

**Technical Data Sheet**  
**TDS-06-54****Tempofor® F3**

All metallic parts are galvanized.

Sapcode	Connection systems	Barbs
7026988	mLa (Adjustable bracket)	With
7037456	H+Ö (Hook and eye)	Without
7027086	m.Bügel (Wire loop)	With
7029882	oLa (Without)	With

Connection with "wire loop":



Connection with "adjustable bracket":



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Technical Data Sheet  
TDS-06-54

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Connection with "eye and hook":



Types with security connectors for a durable and secure connection are available on request:



### **5.2** *Blocks used to install the panels*

The blocks used for this type of Tempofor® panel can be found in TDS-06-69 available on request.

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