Tempofor® F2 Medium

1 Description

The Tempofor® F2 Medium panel, "F" stands for "flat", 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.
Some types of panels can have a barb of about 40mm measured from the center of the horizontal tube until the end of the vertical wire.
The nominal height of the panel is 2m.

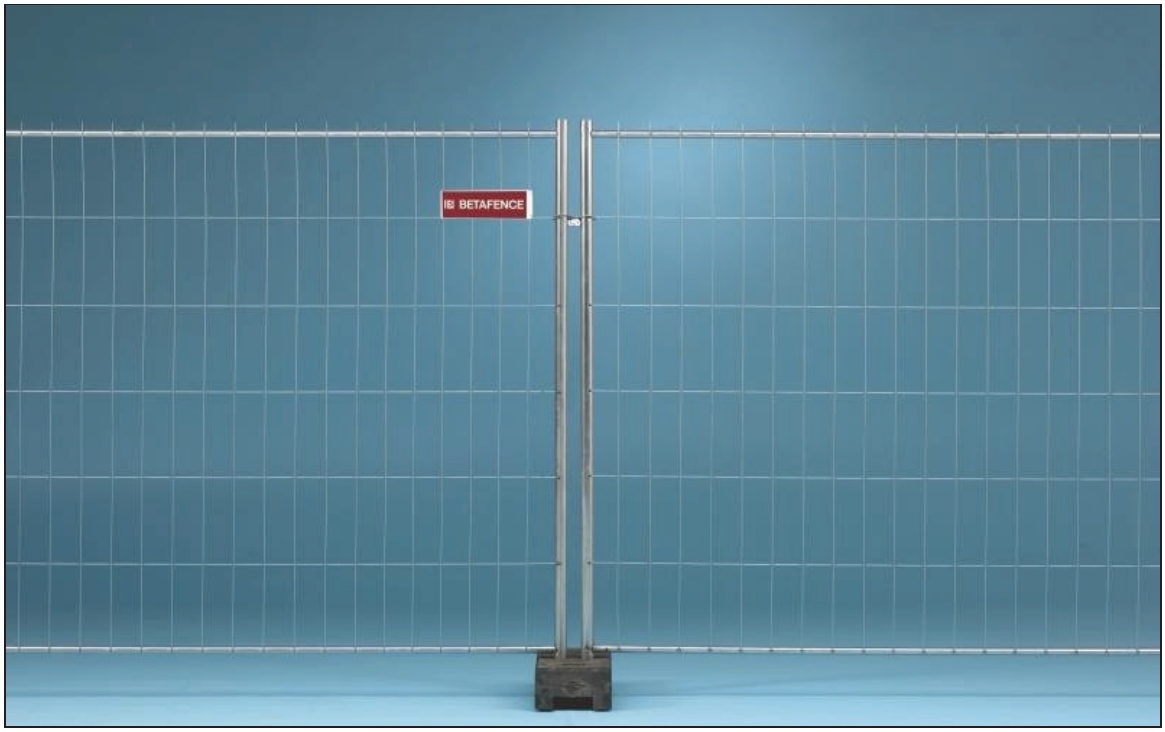

Figure 1: Tempofor panel with barb on top

2 Normative references

- ISO 16120-2:Non-alloy steel wire rod for conversion to wire - Part 2: specific requirements for general purpose wire rod.
- EN 10244-2: Steel wire and wire products - Non ferrous metallic coatings on steel wire. Part 2: zinc or zinc-alloy coatings on steel wire.
- EN 10346: Continuously hot-dip coated strip and sheet of structural steels - Technical delivery conditions
- EN 10305-3: Steel tubes for precision application – Technical delivery conditions – Part3: Welded cold sized tubes

3 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 0,01mm
- Mesh sizes: See figure 1
  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

4 Raw material

4.1 Wire rod

Chemical composition: See table 1

Table 1 : Chemical composition

Element	C	Si	Mn	P	S
%	≤ 0,10	≤ 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.

4.2 Tube

Chemical composition: See table 2

Table 2: Chemical composition					
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 EN10346.

The designation of the steel is: S250GD Z100.

- Zinc weight
  Minimum 100g/m², double side measured as specified in EN 10346. (Z100)

- Mechanical characteristics:
  tensile strength: min. 350 N/mm²
  yield strength: min. 220 N/mm²

5 Requirements.

5.1 Welded mesh infill

5.1.1 Wire diameter and tolerances

See table 3

Table 3: wire dimensions and tolerances					
Wire diameter and tolerances (mm)		Tensile strength (N/mm²)		Zinc weight (g/m²)	
Vertical	Horizontal	Vertical	Horizontal	Vertical	Horizontal
3,00 ± 0,10	3,00 ± 0,10	Min.550	Min.550	min.25	min.25

5.1.2 Mesh spacing

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

the vertical wires: 100 ± 5mm

the horizontal wires: 5x300+280, tolerance ± 5mm.

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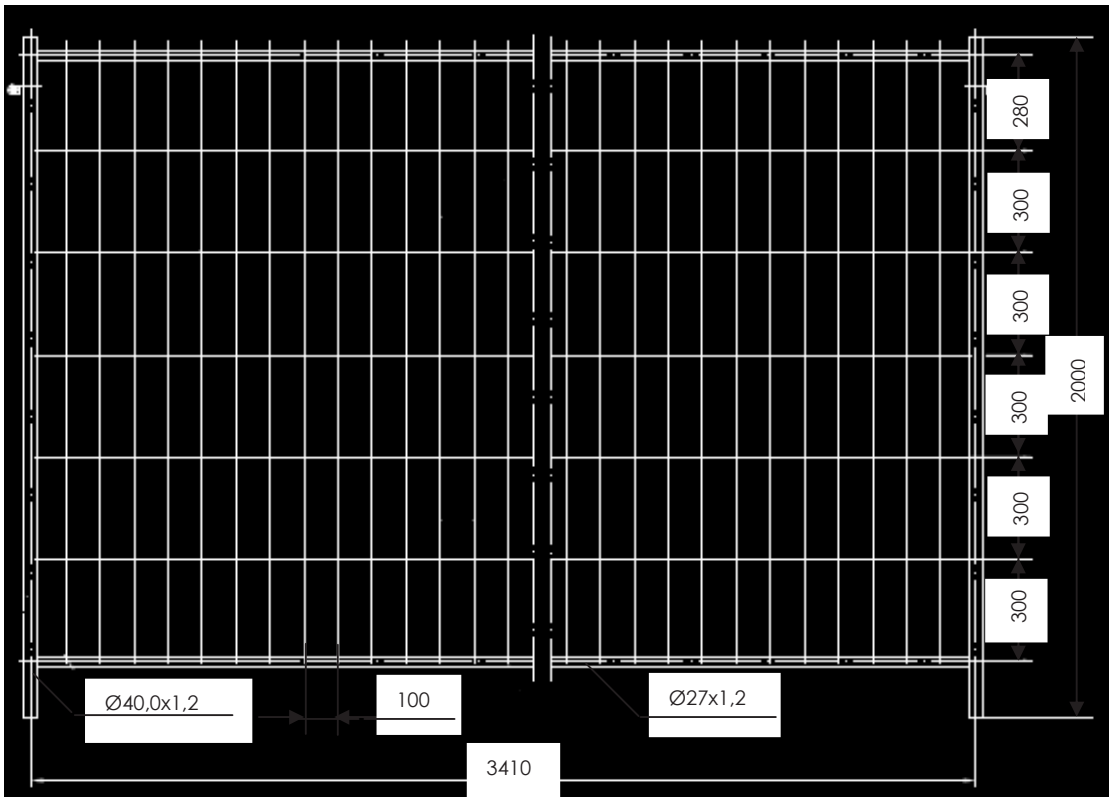

5.2 Weld shear strength

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

5.3 Tube dimensions and tolerances

- Dimensions and tolerances: See table 4

Table 4: dimensions and tolerances tubes(mm)					
vertical tube			horizontal tube		
diameter	thickness	height	diameter	thickness	width
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.

5.4 Width and height of the panels

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

Standard height:
The height is specified as the overall height of the vertical tubes: 2000mm.
Tolerance: ±10 mm

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

5.5 Packaging

The panels are packed in bundles of 2x35 panels. In total 70 panels are packed together.
Each panel can have a "Betafence" or specific customer tag (See Figure 1).

6 Installation of the F panels.

6.1 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

All metallic parts are hot dipped galvanised.

Sapcode	Connection systems	Barbs
7038409	mLa (Adjustable bracket)	With
7037449	H+Ö (Hook and eye)	Without
7038408	m.Bügel (Wire loop)	With
7034150	oLa (Without)	With

Connection with "wire loop":

Connection with "adjustable bracket":

Connection with "eye and hook":

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

6.2 Blocks used to install the panels

Concrete or recycled PVC blocks can be used for installing the panels.

- Concrete blocks
  Dimensions: 680x250mm
  Weight: 36kg
  Holes: 6 holes (3x2) for 3 panel position

- Recycled PVC:
  Dimensions: 630x250mm
  Weight: 26kg
  Holes: 4 holes (2x2) for 2 panel positions and 1 rectangle hole for traffic signs