



[pfeifergroup.com](http://pfeifergroup.com)



*Formwork*

Formwork beams

# FACTS

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## *Capacity & capability*

At our Imst (A) location we produce formwork beams according to high quality standards. With a production capacity of approx. 8 million linear metres we are considered one of Europe's leading manufacturers. All formwork beam sizes are continuously in stock for optimized and short notice service for our customers.

## *Quality*

Our internal quality control system ensures compliance with our high standards of quality. Furthermore, the quality of our production is also continuously monitored by two external organizations: Institute MPA Stuttgart and the Holzforschung Austria Wien.

## *Environment*

We harvest our timber from sustainable managed forests. The use of wood binds the harmful greenhouse-gas CO<sub>2</sub> long term and thus has a strong emission-reducing effect.

## *Logistics*

Our products are available in 89 countries around the world, and we therefore have a well-established logistical network.



Promoting sustainable  
forest management  
[www.pefc.de](http://www.pefc.de)



The mark of  
responsible forestry  
FSC® C019841

Status: 03/2016 – this document is prepared in German and is also translated in several other languages. In case of discrepancies or divergence, only the German version is valid. We reserve the right to modify this document at any time without prior notice.



# PHILOSOPHY

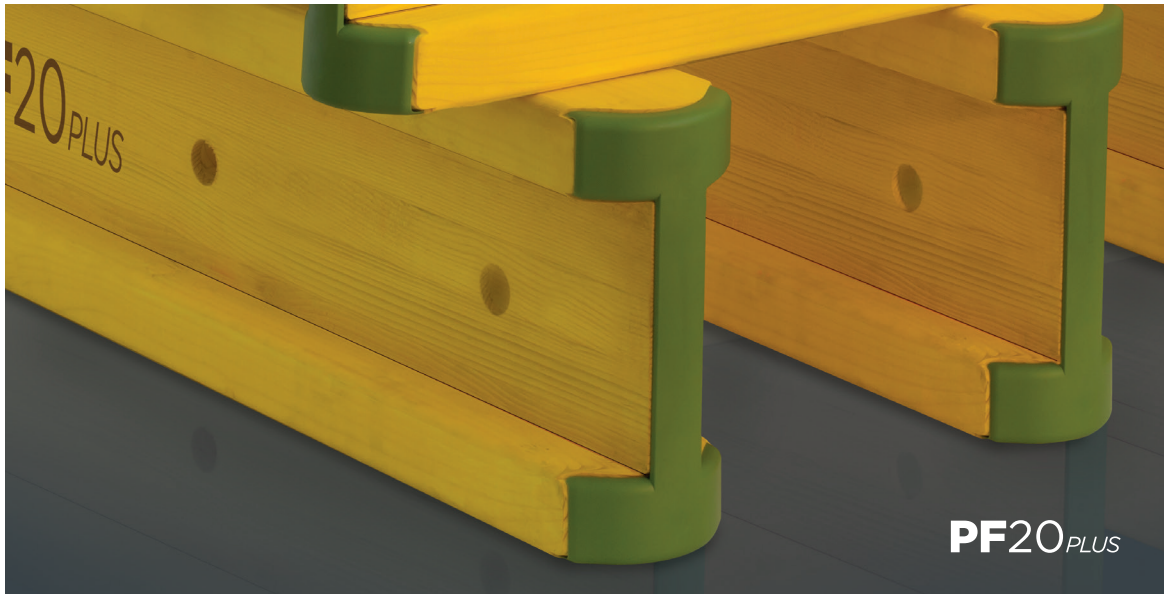
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*The Pfeifer-Group is developing a new generation of timber formwork beams. After intensive development and test phase we are launching one of the bester timer formwork beams on the market: the PF20plus. Lighter, stronger, safer and more durable! The applications range from the ceiling on wall formwork, bridge and tunnel formwork to work platforms.*





# FORMWORK BEAMS **PF20<sub>PLUS</sub>** | **PF20**



## *Features* **PF20<sub>PLUS</sub>**

- ≡ beam ends and protective cap are rounded
- ≡ the entire face side is protected by the cap
- ≡ shock proof
- ≡ high dimensional stability
- ≡ low shrinkage
- ≡ no risk of injury
- ≡ no sticking and no steel brackets necessary to secure the protective cap
- ≡ good mechanical properties of the protective cap at high and low temperatures
- ≡ UV stabilisers against weathering effects in the protecting cap

## *Features* **PF20**

- ≡ beam ends are rounded
- ≡ the entire face side is protected against climatic influence by a special face side stain
- ≡ compact, light weight
- ≡ shock proof
- ≡ high dimensional stability
- ≡ low shrinkage
- ≡ low risk of injury

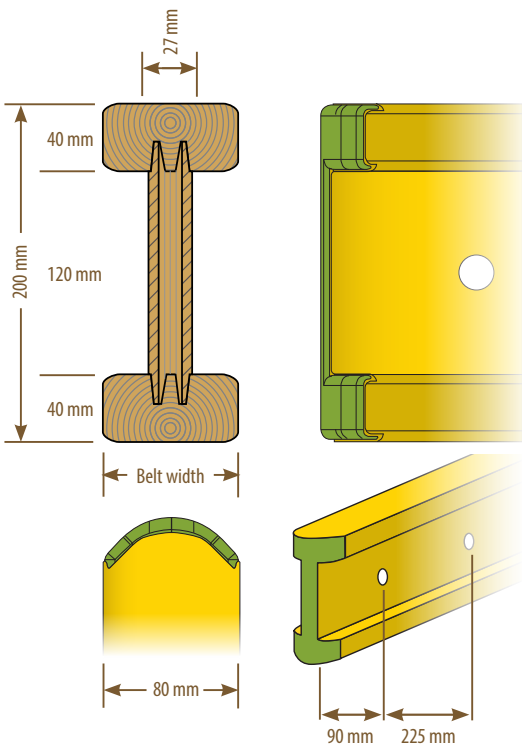


# ASSEMBLY

## Product range

### Formwork Beams PF20plus | PF20

- Length: 190, 245, 250, 265, 275, 290, 300, 330, 360, 390, 450, 490, 590 cm, Special lengths possible up to 11.90 m
- PF20plus: protection cap possible up to 9 m – over 9 m only cut straight
- PF20: rounding with sealing possible up to 9 m – over 9 m only cut straight
- Black thickness: 27 mm
- Weight: approx. 4.5 kg/running meters
- Wood moisture: 12 % +/- 2 % at delivery
- Package units: 50 or 100 pieces
- Size tolerances: Height H = 200+/- 2 mm; Length tolerance: indicated length +/- 10 mm



### Formwork Beams PF20plus | PF20

#### Characteristic limit values according to EN 13377

- Shear force  $Q = 11 \text{ kN}$
- A support reaction  $A = 22 \text{ kN}$
- Bending moment  $M = 5 \text{ kNm}$
- Rigidity I  $E_I = 450 \text{ kNm}^2$

#### Permissible loads for plate girder according to EN 13377

- Lateral force  $V_k = 23,9 \text{ kN}$
- Contact resistance  $R_{b,k} = 47,8 \text{ kN}$
- Bending moment  $M_k = 10,9 \text{ kNm}$
- Rigidity I  $E_I = 450 \text{ kNm}^2$

## Measurement table

### Example:

**Given:** Ceiling thickness (18 cm) + crossbeam spacing (75 cm)

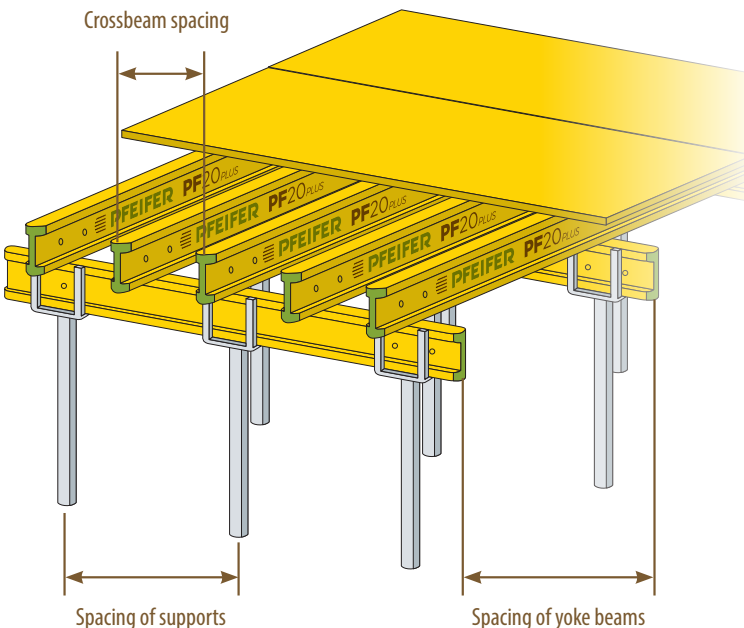
**Sought:** Yoke beam spacing + support spacing

- Ceiling thickness: 18 cm
- Crossbeam spacing: 75 cm
- Permissible yoke-beam spacing according to table 1 = 2,65 m
- Select same or next smaller yoke-beam spacing in table 2 = 2,5 m
- Choose value 2,50 in table 2, choose the value for ceiling thickness (18 cm) and read the permissible support spacing value : 1,36 m
- Attention: The corresponding bearing capacity of the supports must be verified.

Floor thickness (cm)	Total load kN/m <sup>2</sup>	Table 1					Table 2									
		Cross-beam spacing (m)					Yoke-beam spacing (m)									
		0,50	0,63	0,67	0,75	1,00	1,25	1,50	1,75	2,00	2,25	2,50	3,00	3,50		
		Max. distance between cross beams (m)					Max. distance between yoke-beams (m) = max. distance between ceiling support beams									
10	4,40	3,63	3,37	3,29	3,17	2,88	2,67	2,46	2,28	2,13	2,01	1,91	1,67	1,43		
12	4,92	3,43	3,19	3,12	3,00	2,72	2,53	2,33	2,16	2,02	1,90	1,79	1,49	1,28		
14	5,44	3,27	3,04	2,97	2,86	2,60	2,41	2,41	2,05	1,92	1,80	1,62	1,35	1,16		
16	5,96	3,14	2,92	2,85	2,74	2,49	2,31	2,12	1,90	1,83	1,64	1,48	1,23	1,05		
18	6,48	3,03	2,81	2,75	2,65	2,40	2,22	2,03	1,88	1,70	1,51	1,36	1,13	0,97		
20	7,00	2,93	2,72	2,66	2,56	2,32	2,14	1,95	1,80	1,57	1,40	1,2	1,05	0,90		
22	7,52	2,84	2,64	2,58	2,48	2,26	2,06	1,88	1,67	1,46	1,30	1,17	0,98	0,84		
24	8,04	2,76	2,57	2,51	2,42	2,19	2,00	1,82	1,56	1,37	1,22	1,09	0,91	0,78		
26	8,56	2,70	2,50	2,45	2,35	2,14	1,93	1,71	1,47	1,29	1,14	1,03	0,86	0,73		
28	9,08	2,63	2,44	2,39	2,30	2,09	1,88	1,62	1,38	1,21	1,08	0,97	0,81	0,69		
30	9,66	2,57	2,39	2,34	2,25	2,03	1,82	1,52	1,30	1,14	1,01	0,91	0,76	0,65		
35	11,22	2,45	2,27	2,23	2,14	1,89	1,57	1,31	1,12	0,98	0,87	0,78	0,65	0,56		
40	12,78	2,35	2,18	2,13	2,04	1,72	1,38	1,15	0,98	0,86	0,77	0,69	0,57	0,49		
45	14,34	2,26	2,10	2,04		1,53	1,23	1,02	0,88	0,77	0,68	0,61	0,51	0,44		
50	15,90	2,18	2,01	1,94		1,38	1,11	0,92	0,79	0,69	0,61	0,55	0,46	0,40		

The deflection of the beams is limited to  $L/500$ .

Live load  $1,5 \text{ kN/m}^2$  or 20 % of concrete weight.





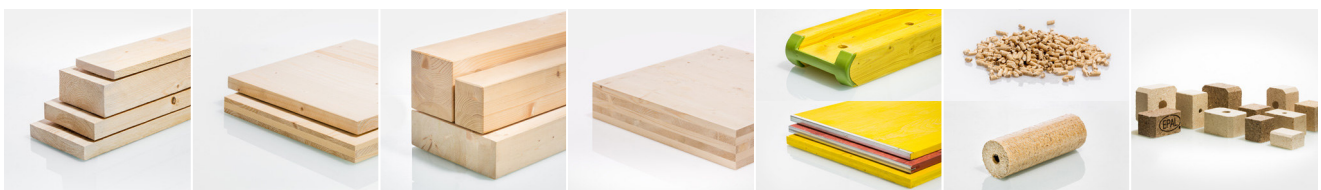
PFEIFER TIMBER GMBH

Fabrikstraße 54 · A-6460 Imst

Tel.: +43 5412 6960 0

Fax: +43 5412 6960 200

info@pfeifergroup.com



Sawn timber

Solid wood panels

Glulam

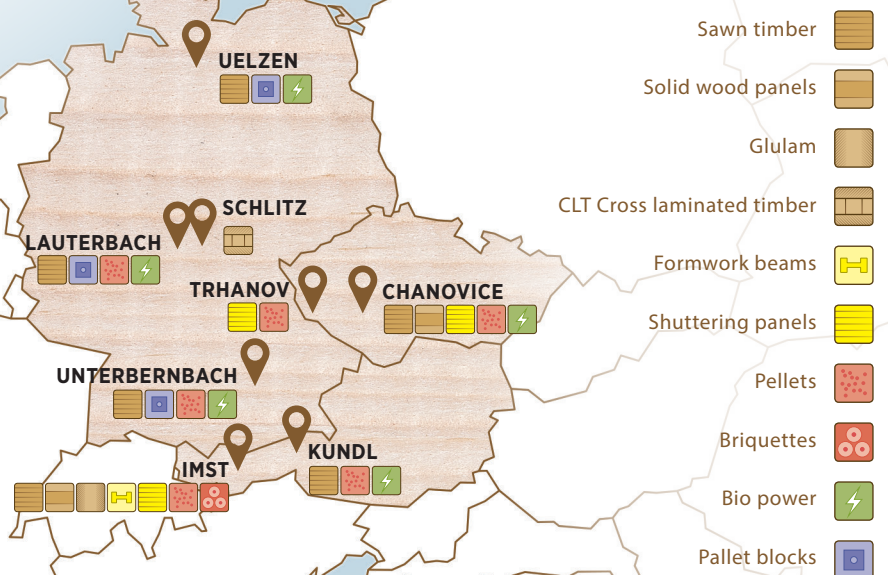
CLT Cross laminated  
timber

Formwork beams  
Shuttering panels

Pellets  
Briquettes

Pallet blocks

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**AND THE WORLD**



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