






Compliant with
EN 13377

Form-on smartBEAM 20

-  reliably high load capacity
-  long lifespan
-  high dimensional stability

FORM-ON[®] based in the USA



Form-on smartBEAM 20

Your benefits:

- reliably high load capacity across the entire beam length thanks to homogeneous web material
- secured component load capacity, as all of the flanges are machine stress-graded and load-tested
- consistent product characteristics owing to high dimensional stability
- multiple savings compared to squared timber due to improved load capacity combined with lower weight

Technical specifications:

Web: height = 20 cm

Flange: height = 4.0 cm, width = 8.0 cm

Moment (M): 5 kNm

Shear force (Q): 11 kN

Regidity (E x J): 450 kNm²

Certification: EN 13377

Form-on smartBEAM 20	P.U.	kg/lbs.	Art.-Nr.
Form-on smartBEAM 20N 180 (5'10")	100	8.5/18.7	620019000
Form-on smartBEAM 20N 245 (8')	100	11.5/25.4	620020000
Form-on smartBEAM 20N 265 (8'3")	100	12.5/27.6	620022000
Form-on smartBEAM 20N 290 (9'6")	100	13.6/29.9	620023000
Form-on smartBEAM 20N 330 (10'9")	100	15.5/34.2	620024000
Form-on smartBEAM 20N 360 (11'9")	100	16.9/37.3	620025000
Form-on smartBEAM 20N 390 (12'9")	100	18.3/40.3	620026000
Form-on smartBEAM 20N 450 (14'9")	100	21.2/46.7	620027000
Form-on smartBEAM 20N 490 (16')	100	23.0/50.7	620028000
Form-on smartBEAM 20N 590 (19'4")	60	27.7/61.1	620029000
Form-on smartBEAM 20P 180 (5'10")	100	9.4/20.7	620038000
Form-on smartBEAM 20P 245 (8')	100	12.7/28.0	620039000
Form-on smartBEAM 20P 265 (8'3")	100	13.8/30.4	620032000
Form-on smartBEAM 20P 290 (9'6")	100	15.1/33.3	620033000
Form-on smartBEAM 20P 330 (10'9")	100	17.2/37.9	620034000
Form-on smartBEAM 20P 360 (11'9")	100	18.7/41.2	620035000
Form-on smartBEAM 20P 390 (12'9")	100	20.3/44.8	620036000
Form-on smartBEAM 20P 450 (14'9")	100	23.4/51.6	620037000
Form-on smartBEAM 20P 490 (16')	100	25.5/56.2	620040000
Form-on smartBEAM 20P 590 (19'4")	60	30.7/67.7	620041000

Example:

- ① Floor thickness: 20 cm | ② Secondary beam spacing: 0.75 m |
- ③ equals primary beam spacing as per Table 1: 2.61 m
- ④ Select primary beam spacing ≤ 2.61 in Table 2 (= 2.50 m) | ⑤ permissible prop spacing at 20 cm floor thickness in Table 2: 1.19 m

Table 1		Table 2													
Floor thickness (cm)	Floor load * (kN/m ²)	Max. perm. primary beam spacing (m) for secondary beam spacing (m) of				Max. perm. prop spacing (m) for selected secondary beam spacing (m) of									
		0.500	0.625	0.667	0.750	1.00	1.25	1.50	1.75	2.00	2.25	2.50	2.75	3.00	3.50
10	4.3	3.69	3.43	3.35	3.22	2.93	2.72	2.50	2.32	2.17	2.04	1.88	1.71	1.57	1.34
12	4.7	3.49	3.24	3.17	3.05	2.77	2.57	2.37	2.20	2.05	1.87	1.69	1.53	1.41	—
14	5.2	3.33	3.09	3.03	2.91	2.65	2.46	2.26	2.09	1.91	1.70	1.53	1.39	1.27	—
16	5.7	3.20	2.97	2.91	2.79	2.54	2.36	2.16	2.00	1.75	1.55	1.40	1.27	1.16	—
18	6.2	3.08	2.86	2.80	2.69	2.45	2.27	2.07	1.84	1.61	1.43	1.29	1.17	—	—
20	6.7	2.98	2.77	2.71	2.61	2.37	2.18	1.99	1.70	1.49	1.33	1.19	1.08	—	—
22	7.2	2.90	2.69	2.63	2.53	2.30	2.11	1.85	1.59	1.39	1.24	1.11	1.01	—	—
24	7.7	2.82	2.61	2.56	2.46	2.24	2.04	1.73	1.49	1.30	1.16	1.04	0.95	—	—
26	8.2	2.75	2.55	2.49	2.40	2.18	1.96	1.63	1.40	1.22	1.09	0.98	—	—	—
28	8.7	2.68	2.49	2.44	2.34	2.13	1.85	1.54	1.32	1.15	1.03	0.92	—	—	—
30	9.2	2.62	2.44	2.38	2.29	2.08	1.75	1.46	1.25	1.09	0.97	0.87	—	—	—
35	10.5	2.50	2.32	2.27	2.18	1.91	1.52	1.27	1.09	0.95	0.85	—	—	—	—

1) In accordance with EN 12812, this allows for a service load of 0.75 kN/m² and a variable load of 10% of a massive concrete floor-slab, totalling at least 0.75 kN/m² but no more than 1.75 kN/m² (assuming a fresh-concrete density of 2 500 kg/m³). Mid-span deflection has been limited to l/500. In the case of cavity flat-slab floors, significantly lower slab loads occur.

2) Form-on beam to EN 13377.

3) Form-on prop with a permitted loading capacity of ≥ 20 kN.

