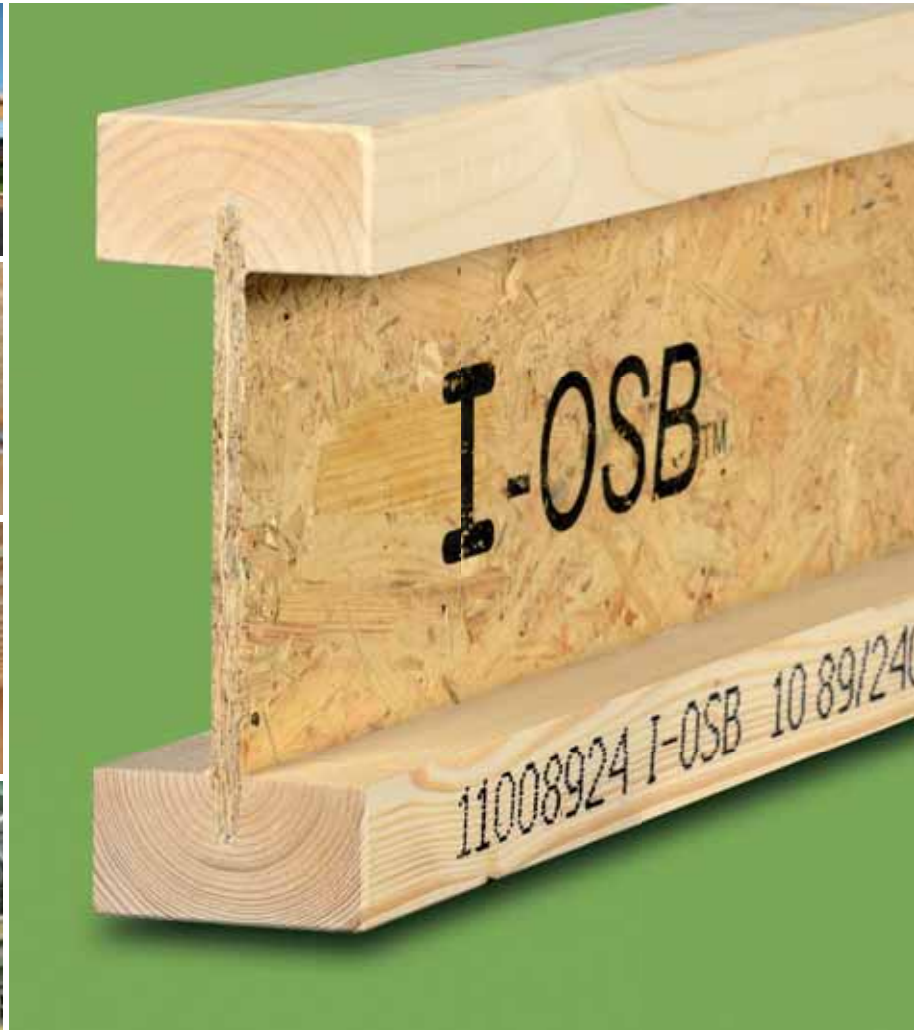


I-OSB™

WOOD-BEAMS



- ❑ suitable for solid structures of large span ceilings
- ❑ provide easy solution for installation of distribution system
- ❑ low weight and easy handling
- ❑ provide minimum thermal bridges of walls and roofs
- ❑ standard and individual dimension offered
- ❑ Czech certification according to STO-2286/11

Building structures must comply to increasingly stricter standards. Particularly high demands are put on thermal and technical parameters as well as environment. Also, demands of architects, who design spacious rooms with large ceiling spans, increase. In this regard, the effective solutions are construction elements for structures of walls, ceilings and roofs - I-OSB™ wooden beams.

The I – OSB™ wooden beams can be used for all types of structures including wooden houses or when dealing with sub-structures using classic technologies. They can be applied also in case of revitalization of old buildings. CZECH PAN offers the beams of a wide range of standard dimensions, however, the production can be adapted to almost any individual requirements of the clients.

LIGHT, STABLE AND FOR BIG STRUCTURES

The flange plates of the I-OSB™ beams are made of dried and wrought soft wood with finger joints. OSB board, which is joined by glued wedge joints with the flange plates, is used for the



posts. The beams are manufactured on a special line with continuous quality control to ensure very high quality. Contrary to traditional massive wooden beams, the I-OSB™ wooden beams are stable in shape and lighter. In addition, they can convey high loads also for large construction dimensions, such as ceilings and roofs. In addition, the beams can be easily handled and processed. This makes assembly quicker and substantially cheaper.

THE DISTRIBUTION SYSTEMS WITHOUT NO EXTRA COSTS

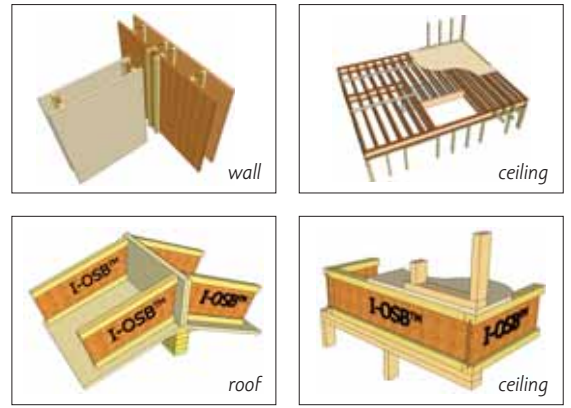
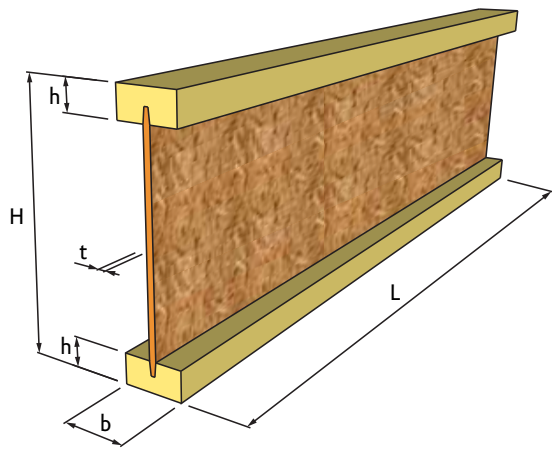
With the ceiling structures made of traditional beams it is not possible to use the ceiling cavity for installation of distribution systems of larger dimensions, such as sewer, ventilation etc. Therefore, it is necessary to build expensive structures of suspended ceilings or installation

skin walls. This is not necessary for the I-OSB™ beams through which lateral passages can be constructed. This makes installation of the distribution system easily and cheap.

IMPROVED ENERGY SAVINGS AND SAFETY

For perimeter structures - both walls and roofs - improved, better quality insulation materials are used, and they improve energy balance of completed buildings. In this regard, the structural components of the building play an important role, such as roof frames and wall posts. The I-OSB™ wooden beams achieve better results when compared to standard beams. In addition, they eliminate risk of condensate inside the structure or its interior surface. Therefore, the perimeter structures of buildings designed from the I-OSB™ wooden structures are safer and budget-wise.





Summary of the I-OSB™ wooden beam products

	Identification of beam	Order number	Post thickness t [mm]	Flange plates b x h [mm]	Beam height H [mm]	Max length L [m]
Customized production programme	I-OSB 08 45/160	10804516	8	45 x 38	160	13
	I-OSB 08 45/200	10804520			200	
	I-OSB 08 45/240	10804524			240	
	I-OSB 08 45/300	10804530			300	
	I-OSB 08 45/350	10804535			350	
	I-OSB 08 58/160	10805816			160	
	I-OSB 08 58/200	10805820		200		
	I-OSB 08 58/240	10805824		240		
	I-OSB 08 58/300	10805830		300		
	I-OSB 08 58/350	10805835		350		
	I-OSB 08 89/140	10808914		140		
	I-OSB 08 89/160	10808916		160		
	I-OSB 08 89/180	10808918		180		
I-OSB 08 89/200	10808920	200				
Standard production programme	I-OSB 10 45/160	11004516	10	45 x 45	160	13
	I-OSB 10 45/200	11004520			200	
	I-OSB 10 45/240	11004524			240	
	I-OSB 10 45/300	11004530			300	
	I-OSB 10 45/350	11004535			350	
	I-OSB 10 58/160	11005816			160	
	I-OSB 10 58/200	11005820		200		
	I-OSB 10 58/240	11005824		240		
	I-OSB 10 58/300	11005830		300		
	I-OSB 10 58/350	11005835		350		
	I-OSB 10 58/400	11005840		400		
	I-OSB 10 89/200	11008920		200		
	I-OSB 10 89/240	11008924		240		
	I-OSB 10 89/300	11008930		300		
	I-OSB 10 89/350	11008935		350		
	I-OSB 10 89/400	11008940		400		
	Customized production programme	I-OSB 12 100/350		11210035	12	
I-OSB 12 100/400		11210040	400			
I-OSB 12 100/450		11210045	450			
I-OSB 12 101/500		11210150	500			
I-OSB 12 101/550		11210155	550			
I-OSB 12 120/350		11212035	350			
I-OSB 12 120/400		11212040	400			
I-OSB 12 120/450		11212045	450			
I-OSB 12 120/500		11212050	500			
I-OSB 12 120/550		11212055	550			
I-OSB 12 121/500		11212150	500			
I-OSB 12 121/550		11212155	550			
I-OSB 12 141/500		11214150	500			
I-OSB 12 141/550		11214155	550			
I-OSB 12 161/500		11216150	500			
I-OSB 12 161/550		11216155	550			

Characteristic values of standard production programme of the I-OSB™ wooden beams for designing according to EC5

Identification	Characteristic moment *) $M_{y,k}$ [kNm]	Bending resistance $EI_{y,mean}$ [Nmm ² .10 ⁹]	Characteristic shear *) V_k [kN]	Shearing resistance $GA_{y,mean}$ [MN]
I-OSB 10 45/160	3,26	151	8,82	0,76
I-OSB 10 45/200	4,35	270	11,49	1,19
I-OSB 10 45/240	5,48	426	14,18	1,62
I-OSB 10 45/300	7,26	736	18,17	2,27
I-OSB 10 45/350	8,81	1065	21,47	2,81
I-OSB 10 58/160	4,25	196	8,82	0,76
I-OSB 10 58/200	5,65	349	11,53	1,19
I-OSB 10 58/240	7,11	551	14,26	1,62
I-OSB 10 58/300	9,38	947	18,32	2,27
I-OSB 10 58/350	11,33	1367	21,69	2,81
I-OSB 10 58/400	13,34	1871	25,02	3,35
I-OSB 10 89/200	8,77	539	11,58	1,19
I-OSB 10 89/240	10,99	848	14,35	1,62
I-OSB 10 89/300	14,41	1451	18,51	2,27
I-OSB 10 89/350	17,33	2086	21,96	2,81
I-OSB 10 89/400	20,31	2843	25,39	3,35

For the values in the table, the design value is calculated as follows $X_d = k_{mod} \cdot X_k / \gamma_m$
 (X_d - design value, X_k - characteristic value from table, k_{mod} - modification coefficient, γ_m - reliability sub-coefficient)



I-OSB™ AND THE K-KONTROL® CONSTRUCTION SYSTEM

The I-OSB™ beams and individual components of the K-KONTROL® construction system perfectly fit in each other like a puzzle. The basis construction element of the K-KONTROL® construction system is a self-supporting sandwich panel used particularly for construction of walls and roofs. The I-OSB™ wooden beams are used here for the construction of ceilings but they can also be used for joining of individual panels. For the roof structures made from K-KONTROL®

construction system, the beams are also used as integrated chevrons.

Both products of CZECH PAN, the Czech Republic based company – the I-OSB™ wooden beams and the K-KONTROL® construction system make an integrated system that can be used for construction of houses conforming to the most demanding requirements applicable to quality, safety, energy savings and environment.

YOUR DEALER:

