OMEGATEK®

DATASHEET

OMEGATEK® 300

361metal

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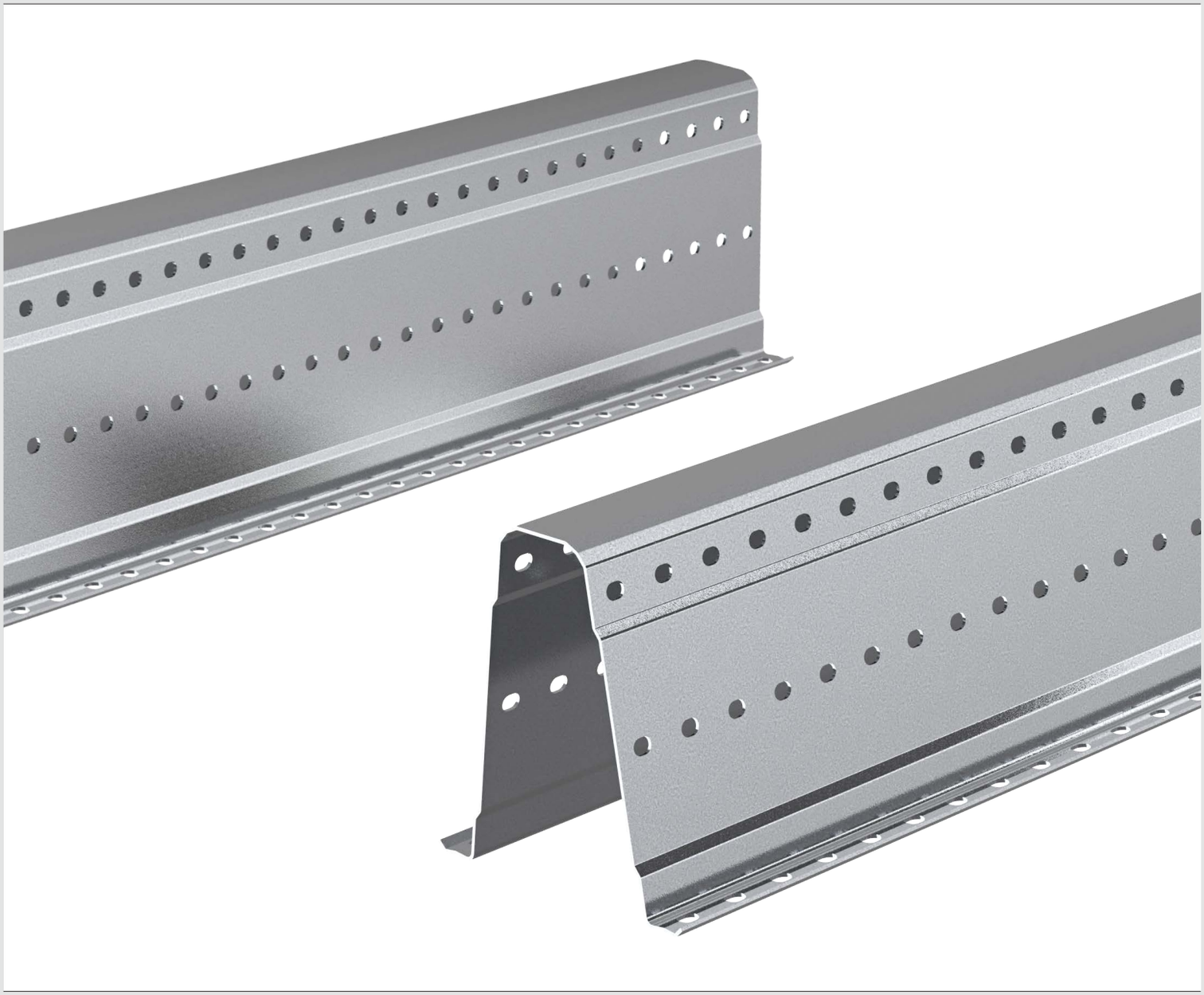
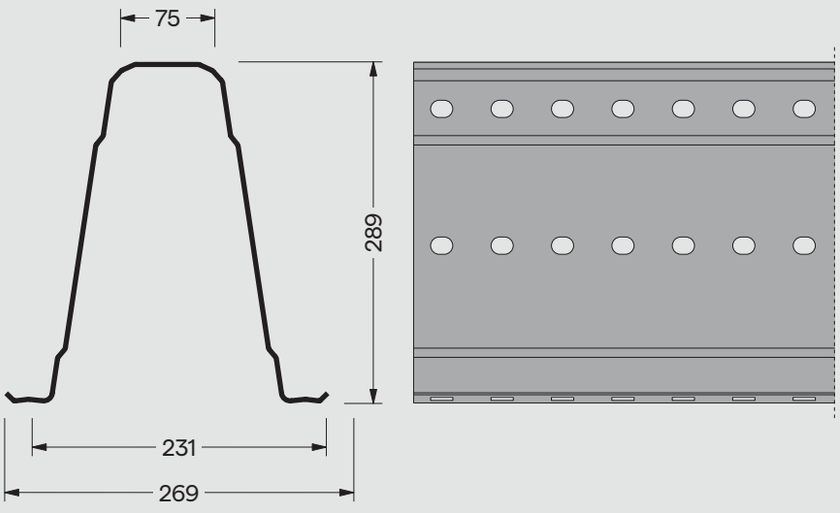


SECTION GEOMETRY



Description

Range of high quality metal purlins, cold formed with certified structural galvanized sheet.

Application

Support structure for metal roofs and cladding or insulating panels in construction, support for solar installations and light structures.
CE certified product in accordance with European Standard EN 1090, specific for metallic structures.

GROSS SECTION PROPERTIES

Section	Weight	Height	Width	Thickness		GROSS SECTION PROPERTIES									
				Nomi.	Efect.										
		h	b	t_{nom}	t_{eff}	A_{gross}	$I_{y,gross}$	$I_{z,gross}$	$W_{y,gross}$	$W_{z,gross}$	I_w	I_t	$Y_{cg} = Y_{cc}$	Z_{cg}	Z_{cc}
	Kg/m	mm	mm	mm	mm	mm^2	mm^4	mm^4	mm^3	mm^3	$\times 10^6\ mm^6$	mm^4	mm	mm	mm
Omegatek® 300×2,0	11,53	289	269	2,0	1,96	1469	14441000	8223800	97948	60837	12457,0	1882	134	144	367
Omegatek® 300×2,5	14,47	289	269	2,5	2,46	1844	18126000	10311000	122730	76258	15635,0	3720	134	144	367
Omegatek® 300×3,0	17,42	289	269	3,0	2,96	2219	21812000	12420000	147740	91640	18813,0	6481	134	144	367

Note: the weights indicated in the tables are estimated theoretical weights based on the nominal dimensions of the cross-section, and variations may occur within the tolerances provided for in the EN 10051 standard.

EFFECTIVE SECTION PROPERTIES

S280 GD

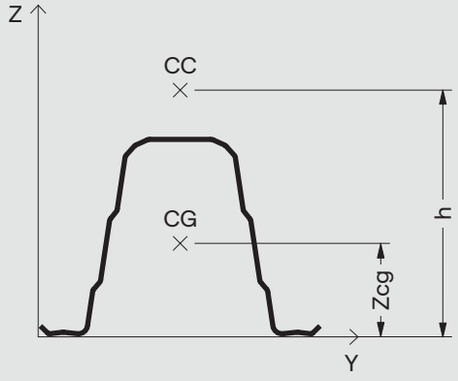
Section	Compression			Y-Axis Positive Flexion					Y-Axis Negative Flexion					Z-Axis Flexion				
	A_{eff}	$Y_{cg,eff}$	$Z_{cg,eff}$	A_{eff}	$I_{y,eff}$	$W_{y,eff}$	$Y_{cg,eff}$	$Z_{cg,eff}$	A_{eff}	$I_{y,eff}$	$W_{y,eff}$	$Y_{cg,eff}$	$Z_{cg,eff}$	A_{eff}	$I_{z,eff}$	$W_{z,eff}$	$Y_{cg,eff}$	$Z_{cg,eff}$
	mm^2	mm	mm	mm^2	mm^4	mm^3	mm	mm	mm^2	mm^4	mm^3	mm	mm	mm^2	mm^4	mm^3	mm	mm
Omegatek® 300×2,0	872	134	141	1360	13708000	89225	134	130	1355	13392000	88029	134	144	1176	6312900	41440	152	138
Omegatek® 300×2,5	1184	134	139	1744	17458000	114720	134	132	1744	17199000	114600	134	142	1521	8303250	55200	150	137
Omegatek® 300×3,0	1543	134	139	2130	21223000	140350	134	133	2131	21009000	141170	134	140	1881	10395000	68003	147	136

S350 GD

Section	Compression			Y-Axis Positive Flexion					Y-Axis Negative Flexion					Z-Axis Flexion				
	A_{eff}	$Y_{cg,eff}$	$Z_{cg,eff}$	A_{eff}	$I_{y,eff}$	$W_{y,eff}$	$Y_{cg,eff}$	$Z_{cg,eff}$	A_{eff}	$I_{y,eff}$	$W_{y,eff}$	$Y_{cg,eff}$	$Z_{cg,eff}$	A_{eff}	$I_{z,eff}$	$W_{z,eff}$	$Y_{cg,eff}$	$Z_{cg,eff}$
	mm^2	mm	mm	mm^2	mm^4	mm^3	mm	mm	mm^2	mm^4	mm^3	mm	mm	mm^2	mm^4	mm^3	mm	mm
Omegatek® 300×2,0	827	134	143	1330	13487000	86719	134	128	1284	12858000	82135	134	148	1154	6129600	39797	154	138
Omegatek® 300×2,5	1108	134	141	1711	17227000	112050	134	130	1709	16861000	110920	134	144	1483	7981300	52547	152	138
Omegatek® 300×3,0	1421	134	140	2095	20983000	137540	134	132	2094	20660000	137300	134	142	1830	9977800	66346	150	137

Subtitle

A_{gross} Gross cross-sectional area
$I_{y,gross}$ Inertia of the gross section yy-axis
$I_{z,gross}$ Inertia of the gross section zz-axis
I_w Warp constant
I_t Torsion inertia
CG Centre of gravity coordinates
CC Cutting centre coordinates
A_{eff} Effective section area
$I_{y,eff}$ Inertia of the effective section yy-axis
$W_{y,eff}$ Flexural modulus of the effective section yy-axis
$I_{z,eff}$ Inertia of the efective section zz-axis
$W_{z,eff}$ Flexural modulus of the effective section zz-axis



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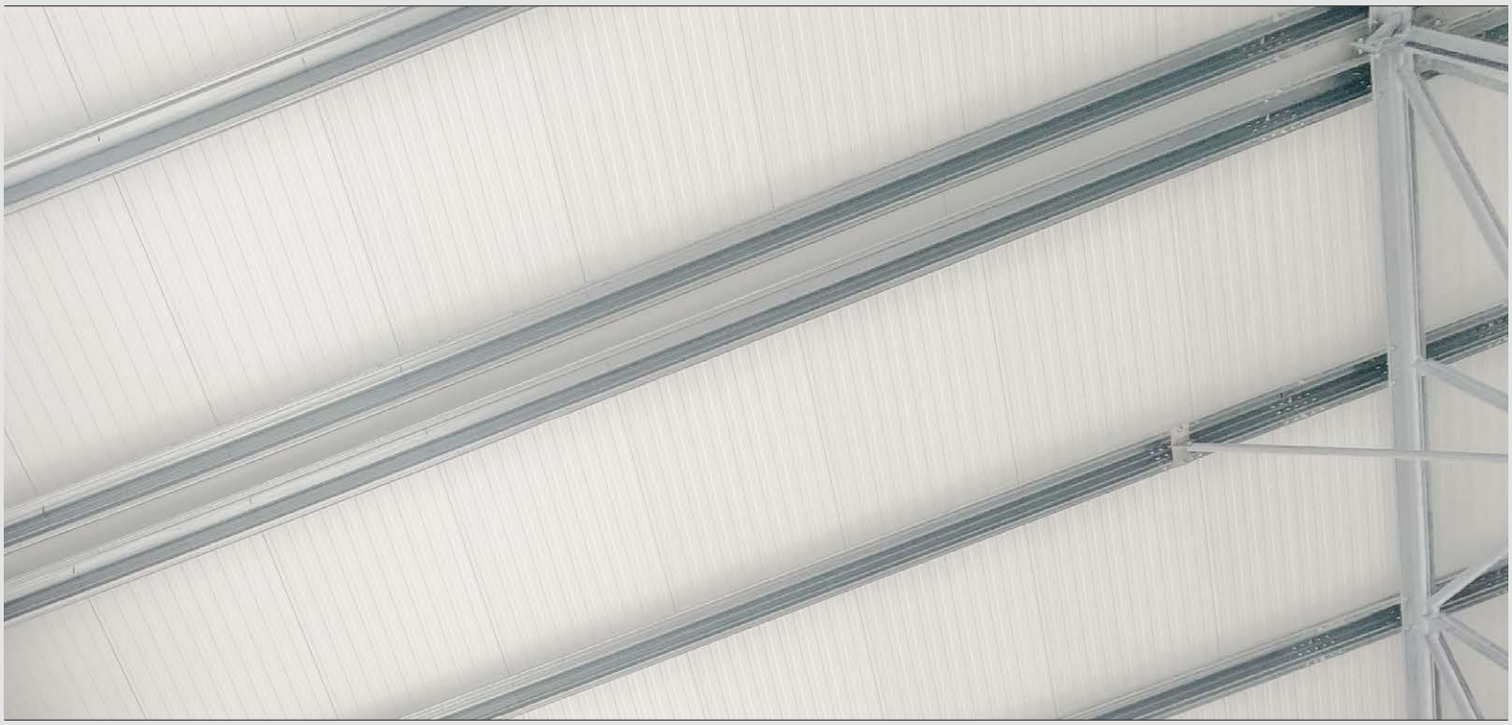
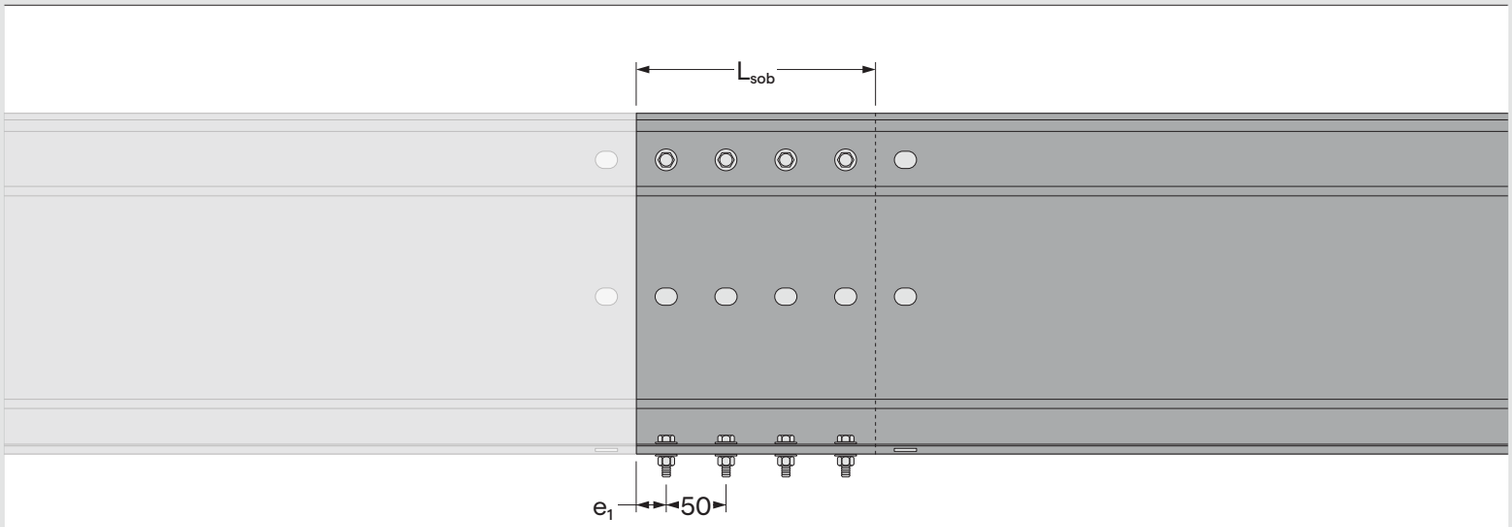
CONNECTIONS AND CONSTRUCTION ARRANGEMENTS



01. Simple amendment between supports



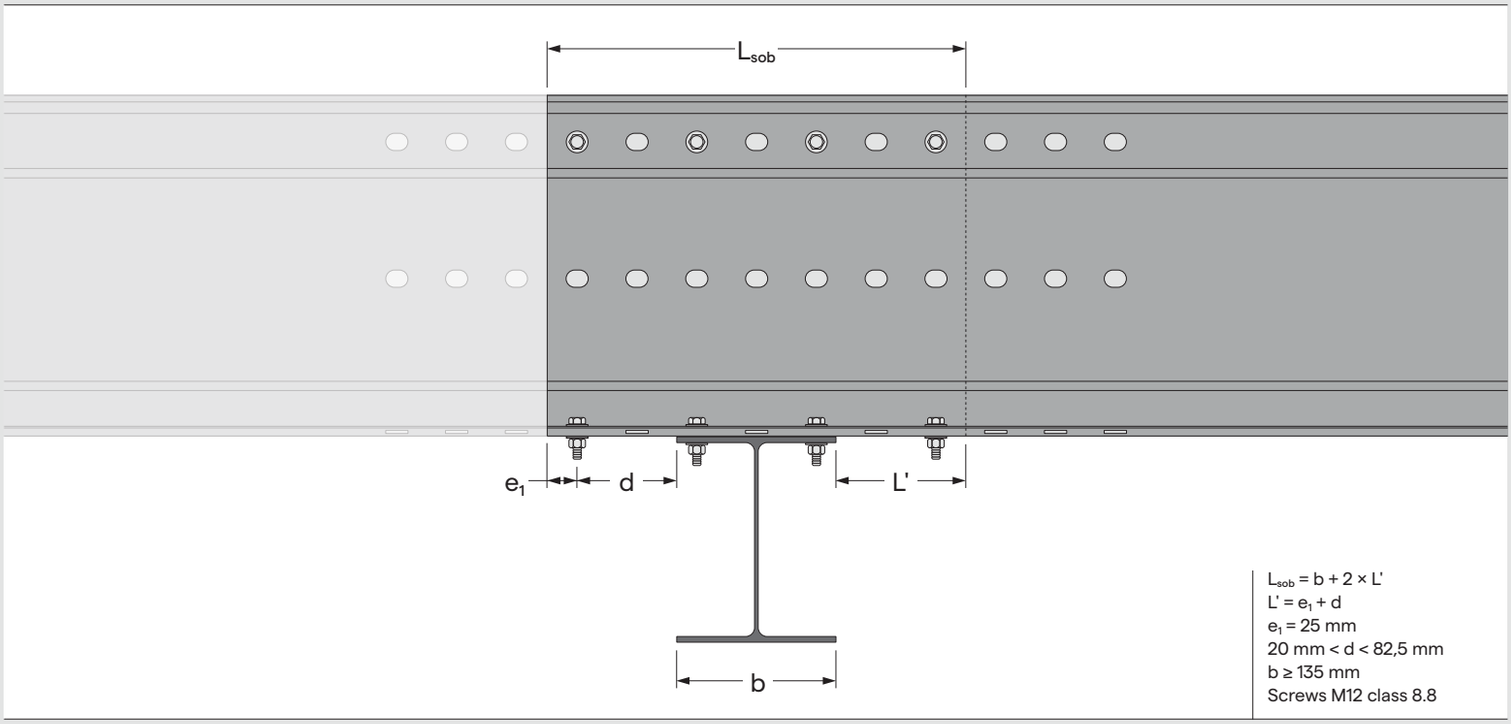
SECTION	e_1	L_{sob}	NR. OF SCREWS	Ø SCREWS*
	mm	mm	units	mm
Omegatek® 300×1,0	25	200	4	12
Omegatek® 300×1,5	25	200	4	12

*Screws class 8.8

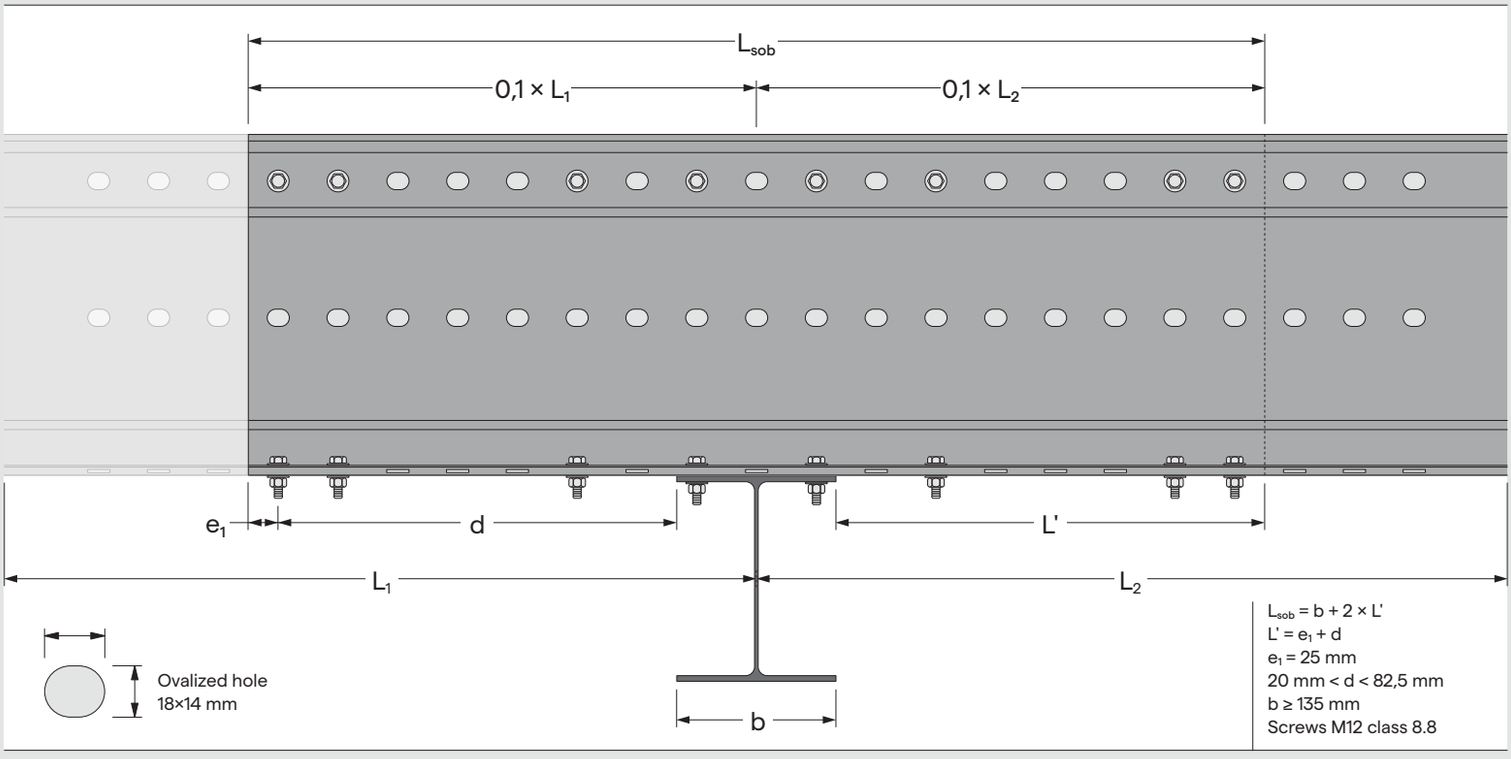
Subtitle

L_{sob} Overlap length
e_1 Distance between the center of the screw and the end of the profile
Ø Screws diameter

02. Simple amendment on intermediate support



03. Amendment with reinforcement on intermediate support



Subtitle

L_{sob}	Overlap length
L'	Distance between the end of the support beam flange and the end of the profile
e_1	Distance between the center of the screw and the end of the profile
d	Distance between the end of the support beam flange and the center of the end screw
b	Length of the upper flange of the support beam
Ø	Screws diameter

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