

BUILD IN WOOD

SYSTEM AND CONNECTION MATRIX



rothoblaas

Solutions for Building Technology



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LOCK




CONCEALED TIMBER-TO-TIMBER CONNECTOR

LOCK is the innovative hook plate for completely concealed timber-to-timber joints that ensures exceptional strength.

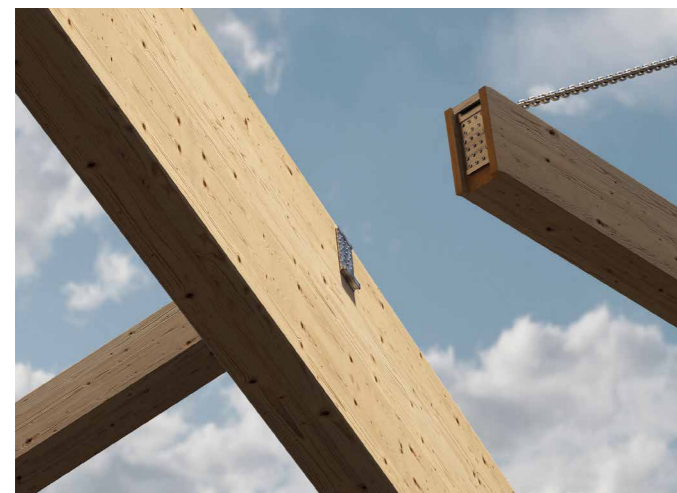
It can be easily disassembled, is ideal for the construction of small structures and can be used concealed even with elements of reduced section.

Optimal for post-and-beam systems, carports, pergolas or slabs, in both indoor and outdoor applications.



 VIDEO
 CALCULATION TOOL
 DESIGN REGISTERED
 CE
 ETA-19/0831
 SERVICE CLASS: SC1 SC2 SC3

MATERIAL
 EN AW-6005A aluminium alloy
 EVO version with special paint in graphite black colour



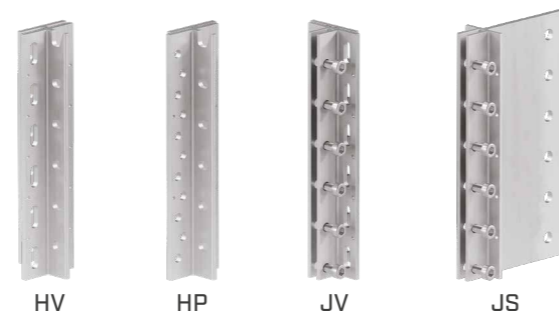
ALUMEGA



PINNED CONNECTION FOR POST AND BEAM

ALUMEGA is the connector that standardizes beam-to-beam and beam-to-post joints for post-and-beam systems, even with large spans.

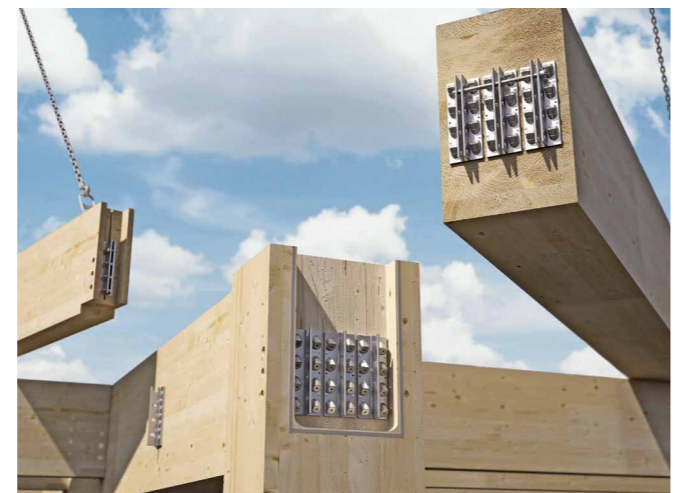
With ALUMEGA post and beam connector, the theoretical behaviour assumed in the design of timber-to-timber connections is enabled:

- It acts as post and beam connectors that allows free rotation of the beam at the ends.
- The possibility of placing several modules side by side makes it possible to solve all connections on timber, concrete and steel.



 VIDEO
 CALCULATION TOOL
 DESIGN REGISTERED
 CE
 ETA-23/0824
 SERVICE CLASS: SC1 SC2 SC3

MATERIAL
 EN AW-6082 aluminium alloy



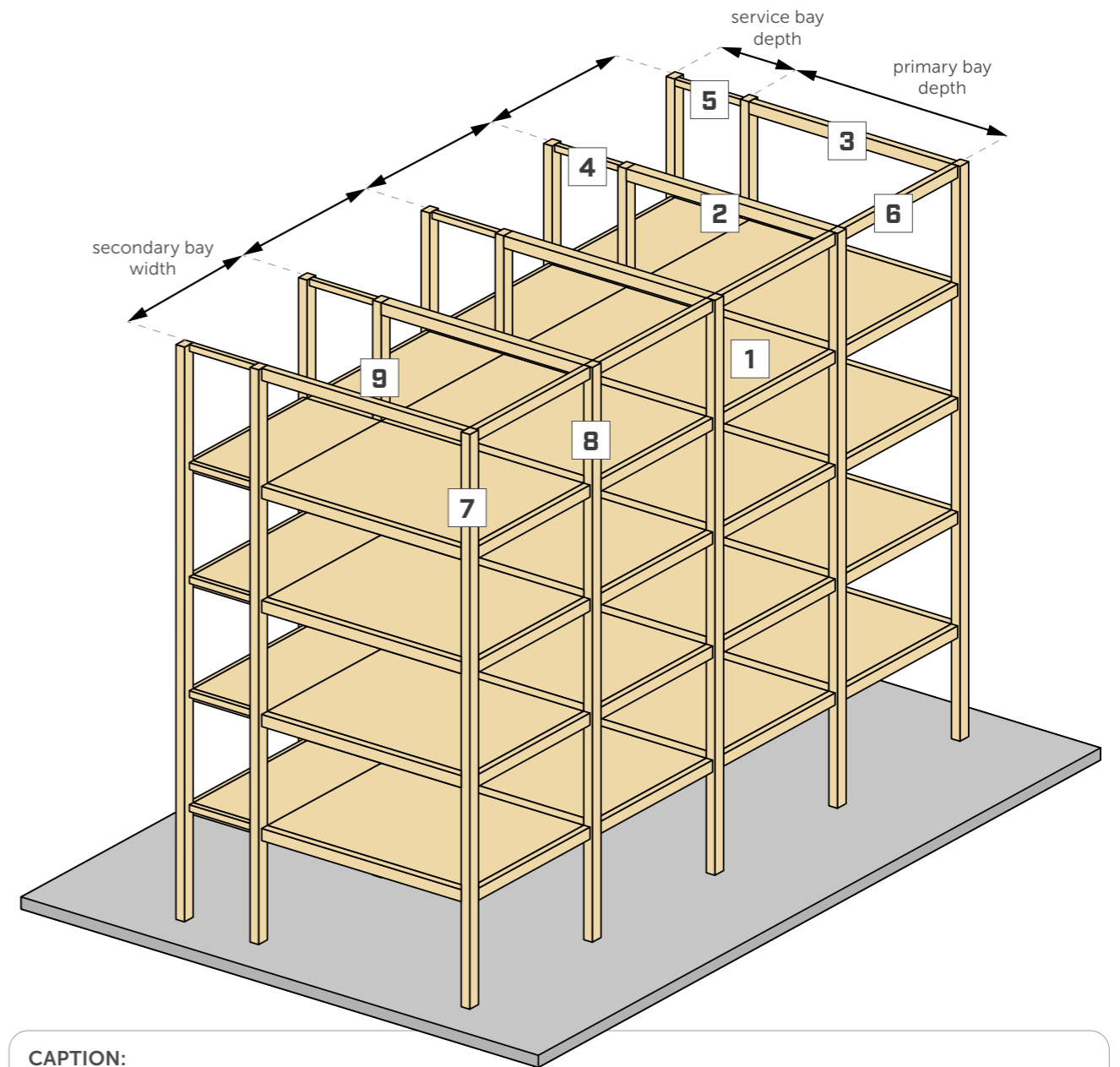
For further information, see PLATES AND CONNECTORS FOR TIMBER at www.rothoblaas.com.

BUILD IN WOOD

SYSTEM AND CONNECTION MATRIX

The Build-in-Wood structural system is designed as a post and beam frame, due both to the flexibility of internal configuration offered by this structural approach and its material efficiency. The primary bay is designed as a flexible open space with perimeter columns only. The system configuration has been developed with a clear servicing strategy which accounts for reduced beam depth in the service bay. Primary beams are oriented perpendicular to the façade, spanning out from a central servicing corridor. The lateral stability of the system is provided by CLT or concrete core (not shown).

Different beam and column sizes are determined based on their location within the building, bay width and depth and based on the building use - residential or commercial. The connection matrix of the next pages is developed by considering the load scenarios for all beam to column connections, and by associating a suitable Rothoblaas solution to each connection (LOCK or ALUMEGA).



CAPTION:

- | | | |
|---------------------|---------------------|--------------------|
| 1 slab | 4 service beam | 7 corner column |
| 2 primary beam | 5 service edge beam | 8 perimeter column |
| 3 primary edge beam | 6 perimeter beam | 9 internal column |

RESIDENTIAL

BUILDING USE (live load) = 2 kN/m²

CONFIGURATION			SERVICE BEAM (GL24h)			SERVICE EDGE BEAM (GL24h)			PRIMARY BEAM (GL24h)			PRIMARY EDGE BEAM (GL24h)			PERIMETER BEAM (GL24h)			
secondary bay width	primary bay depth	service bay depth	beam size		connection		beam size		connection		beam size		connection		beam size		connection	
[cm]	[cm]	[cm]	[cm]	n°-connector	n°-screw type Ø x L	[cm]	n°-connector	n°-screw type Ø x L	[cm]	n°-connector	n°-screw type Ø x L	[cm]	n°-connector	n°-screw type Ø x L	[cm]	n°-connector	n°-screw type Ø x L	
450	600	225	20x24	1-LOCKT100240	56-LBS 7x80	20x24	1-LOCKT125240	70-LBS 7x80	40x44	2-ALUMEGA240HP 2-ALUMEGA240JV	28-HBSP 10x100 16-VGS 9x180	24x52	1-ALUMEGA360HP 1-ALUMEGA360JV	22-HBSP 10x120 12-VGS 9x180	20x36	1-LOCKT100215	48-LBS 7x80	
		300	20x28	1-LOCKT125240	70-LBS 7x80	20x32	1-LOCKT125265	80-LBS 7x80	40x44	2-ALUMEGA240HP 2-ALUMEGA240JV	28-HBSP 10x100 16-VGS 9x180	24x52	1-ALUMEGA360HP 1-ALUMEGA360JV	22-HBSP 10x120 12-VGS 9x180	20x36	1-LOCKT100215	48-LBS 7x80	
	750	225	20x24	1-LOCKT100240	56-LBS 7x80	20x24	1-LOCKT125240	70-LBS 7x80	40x56	2-ALUMEGA360HP 2-ALUMEGA360JV	44-HBSP 10x100 24-VGS 9x180	24x60	1-ALUMEGA360HP 1-ALUMEGA360JV	22-HBSP 10x160 12-VGS 9x200	20x36	1-LOCKT100215	48-LBS 7x80	
		300	20x28	1-LOCKT125240	70-LBS 7x80	20x32	1-LOCKT125265	80-LBS 7x80	40x56	2-ALUMEGA360HP 2-ALUMEGA360JV	44-HBSP 10x100 24-VGS 9x180	24x60	1-ALUMEGA360HP 1-ALUMEGA360JV	22-HBSP 10x160 12-VGS 9x200	20x36	1-LOCKT100215	48-LBS 7x80	
	600	600	225	20x28	1-LOCKT125240	70-LBS 7x80	20x28	1-LOCKT125265	80-LBS 7x80	40x48	2-ALUMEGA240HP 2-ALUMEGA240JV	28-HBSP 10x180 16-VGS 9x200	24x56	1-ALUMEGA360HP 1-ALUMEGA360JV	22-HBSP 10x180 12-VGS 9x200	24x40	1-LOCKT100215	48-LBS 7x80
			300	20x36	1-LOCKT125290	90-LBS 7x80	20x36	1-LOCKT125290	90-LBS 7x80	40x48	2-ALUMEGA240HP 2-ALUMEGA240JV	28-HBSP 10x180 16-VGS 9x200	24x56	1-ALUMEGA360HP 1-ALUMEGA360JV	22-HBSP 10x180 12-VGS 9x200	24x40	1-LOCKT100215	48-LBS 7x80
750		225	20x28	1-LOCKT125240	70-LBS 7x80	20x28	1-LOCKT125265	80-LBS 7x80	40x64	2-ALUMEGA360HP 2-ALUMEGA360JV	44-HBSP 10x120 24-VGS 9x180	24x64	1-ALUMEGA480HP 1-ALUMEGA480JV	30-HBSP 10x140 16-VGS 9x180	24x40	1-LOCKT100215	48-LBS 7x80	
		300	20x36	1-LOCKT125290	90-LBS 7x80	20x36	1-LOCKT125290	90-LBS 7x80	40x64	2-ALUMEGA360HP 2-ALUMEGA360JV	44-HBSP 10x120 24-VGS 9x180	24x64	1-ALUMEGA480HP 1-ALUMEGA480JV	30-HBSP 10x140 16-VGS 9x180	24x40	1-LOCKT100215	48-LBS 7x80	

COMMERCIAL

BUILDING USE (live load) = 3 kN/m²

CONFIGURATION			SERVICE BEAM (GL24h)			SERVICE EDGE BEAM (GL24h)			PRIMARY BEAM (GL24h)			PRIMARY EDGE BEAM (GL24h)			PERIMETER BEAM (GL24h)			
secondary bay width	primary bay depth	service bay depth	beam size		connection		beam size		connection		beam size		connection		beam size		connection	
[cm]	[cm]	[cm]	[cm]	n°-connector	n°-screw type Ø x L	[cm]	n°-connector	n°-screw type Ø x L	[cm]	n°-connector	n°-screw type Ø x L	[cm]	n°-connector	n°-screw type Ø x L	[cm]	n°-connector	n°-screw type Ø x L	
450	600	300	20x32	1-LOCKT125265	80-LBS 7x80	20x32	1-LOCKT125265	80-LBS 7x80	40x48	2-ALUMEGA240HP 2-ALUMEGA240JV	28-HBSP 10x160 16-VGS 9x180	20x60	1-ALUMEGA360HP 1-ALUMEGA360JV	22-HBSP 10x140 12-VGS 9x180	20x36	1-LOCKT100215	48-LBS 7x80	
		450	32x40	2-ALUMEGA240HP 2-ALUMEGA240JV	28-HBSP 10x100 16-VGS 9x180	20x48	1-ALUMEGA360HP 1-ALUMEGA240JV	22-HBSP 10x100 8-VGS 9x200	40x48	2-ALUMEGA240HP 2-ALUMEGA240JV	28-HBSP 10x160 16-VGS 9x180	20x60	1-ALUMEGA360HP 1-ALUMEGA360JV	22-HBSP 10x140 12-VGS 9x180	20x36	1-LOCKT100215	48-LBS 7x80	
	750	300	20x32	1-LOCKT125265	80-LBS 7x80	20x32	1-LOCKT125265	80-LBS 7x80	40x60	2-ALUMEGA360HP 2-ALUMEGA360JV	44-HBSP 10x100 24-VGS 9x180	20x60	1-ALUMEGA480HP 1-ALUMEGA480JV	30-HBSP 10x100 16-VGS 9x180	20x36	1-LOCKT100215	48-LBS 7x80	
		450	32x40	2-ALUMEGA240HP 2-ALUMEGA240JV	28-HBSP 10x100 16-VGS 9x180	20x48	1-ALUMEGA360HP 1-ALUMEGA240JV	22-HBSP 10x100 8-VGS 9x200	40x60	2-ALUMEGA360HP 2-ALUMEGA360JV	44-HBSP 10x100 24-VGS 9x180	20x60	1-ALUMEGA480HP 1-ALUMEGA480JV	30-HBSP 10x100 16-VGS 9x180	20x36	1-LOCKT100215	48-LBS 7x80	
600	600	300	20x44	1-ALUMEGA360HP 1-ALUMEGA240JV	22-HBSP 10x100 8-VGS 9x220	20x36	1-ALUMEGA360HP 1-ALUMEGA240JV	22-HBSP 10x100 8-VGS 9x200	40x52	2-ALUMEGA360HP 2-ALUMEGA360JV	44-HBSP 10x120 24-VGS 9x180	24x60	1-ALUMEGA480HP 1-ALUMEGA480JV	30-HBSP 10x120 16-VGS 9x180	20x40	1-LOCKT100215	48-LBS 7x80	
		450	32x44	2-ALUMEGA240HP 2-ALUMEGA240JV	28-HBSP 10x160 16-VGS 9x180	20x48	1-ALUMEGA360HP 1-ALUMEGA360JV	22-HBSP 10x160 12-VGS 9x180	40x52	2-ALUMEGA360HP 2-ALUMEGA360JV	44-HBSP 10x120 24-VGS 9x180	24x60	1-ALUMEGA480HP 1-ALUMEGA480JV	30-HBSP 10x120 16-VGS 9x180	20x40	1-LOCKT100215	48-LBS 7x80	
	750	300	20x44	1-ALUMEGA360HP 1-ALUMEGA240JV	22-HBSP 10x100 8-VGS 9x220	20x36	1-ALUMEGA360HP 1-ALUMEGA240JV	22-HBSP 10x100 8-VGS 9x200	40x68	2-ALUMEGA360HP 2-ALUMEGA360JV	44-HBSP 10x180 24-VGS 9x200	32x64	1-ALUMEGA360HP 1-ALUMEGA360JV	44-HBSP 10x100 24-VGS 9x180	20x40	1-LOCKT100215	48-LBS 7x80	
		450	32x44	2-ALUMEGA240HP 2-ALUMEGA240JV	28-HBSP 10x160 16-VGS 9x180	20x48	1-ALUMEGA360HP 1-ALUMEGA360JV	22-HBSP 10x160 12-VGS 9x180	40x68	2-ALUMEGA360HP 2-ALUMEGA360JV	44-HBSP 10x180 24-VGS 9x200	32x64	1-ALUMEGA360HP 1-ALUMEGA360JV	44-HBSP 10x100 24-VGS 9x180	20x40	1-LOCKT100215	48-LBS 7x80	

COMMERCIAL

BUILDING USE (live load) = 4 kN/m²

CONFIGURATION			SERVICE BEAM (GL24h)			SERVICE EDGE BEAM (GL24h)			PRIMARY BEAM (GL24h)			PRIMARY EDGE BEAM (GL24h)			PERIMETER BEAM (GL24h)		
secondary bay width	primary bay depth	service bay depth	beam size	connection		beam size	connection		beam size	connection		beam size	connection		beam size	connection	
[cm]	[cm]	[cm]	[cm]	n°-connector	n°-screw type Ø x L	[cm]	n°-connector	n°-screw type Ø x L	[cm]	n°-connector	n°-screw type Ø x L	[cm]	n°-connector	n°-screw type Ø x L	[cm]	n°-connector	n°-screw type Ø x L
450	600	300	20x36	1-ALUMEGA360HP 1-ALUMEGA240JV	22-HBSP 10x100 8-VGS 9x200	20x32	1-LOCKT125290	90-LBS 7x80	40x48	2-ALUMEGA360HP 2-ALUMEGA240JV	44-HBSP 10x100 16-VGS 9x200	24x60	1-ALUMEGA360HP 1-ALUMEGA360JV	22-HBSP 10x180 12-VGS 9x200	20x36	1-LOCKT100215	48-LBS 7x80
		450	32x40	2-ALUMEGA240HP 2-ALUMEGA240JV	28-HBSP 10x100 16-VGS 9x180	20x48	1-ALUMEGA360HP 1-ALUMEGA360JV	22-HBSP 10x120 12-VGS 9x180	40x48	2-ALUMEGA360HP 2-ALUMEGA240JV	44-HBSP 10x100 16-VGS 9x200	24x60	1-ALUMEGA360HP 1-ALUMEGA360JV	22-HBSP 10x180 12-VGS 9x200	20x36	1-LOCKT100215	48-LBS 7x80
	750	300	20x36	1-ALUMEGA360HP 1-ALUMEGA240JV	22-HBSP 10x100 8-VGS 9x200	20x32	1-LOCKT125290	90-LBS 7x80	40x60	2-ALUMEGA360HP 2-ALUMEGA360JV	44-HBSP 10x140 24-VGS 9x180	32x56	2-ALUMEGA360HP 2-ALUMEGA360JV	44-HBSP 10x100 24-VGS 9x180	20x36	1-LOCKT100215	48-LBS 7x80
		450	32x40	2-ALUMEGA240HP 2-ALUMEGA240JV	28-HBSP 10x100 16-VGS 9x180	20x48	1-ALUMEGA360HP 1-ALUMEGA360JV	22-HBSP 10x120 12-VGS 9x180	40x60	2-ALUMEGA360HP 2-ALUMEGA360JV	44-HBSP 10x140 24-VGS 9x180	32x56	2-ALUMEGA360HP 2-ALUMEGA360JV	44-HBSP 10x100 24-VGS 9x180	20x36	1-LOCKT100215	48-LBS 7x80
	900	300	20x36	1-ALUMEGA360HP 1-ALUMEGA240JV	22-HBSP 10x100 8-VGS 9x200	20x32	1-LOCKT125290	90-LBS 7x80	40x72	2-ALUMEGA480HP 2-ALUMEGA480JV	60-HBSP 10x100 32-VGS 9x180	32x72	2-ALUMEGA360HP 2-ALUMEGA360JV	44-HBSP 10x100 24-VGS 9x180	20x36	1-LOCKT100215	48-LBS 7x80
		450	32x40	2-ALUMEGA240HP 2-ALUMEGA240JV	28-HBSP 10x100 16-VGS 9x180	20x48	1-ALUMEGA360HP 1-ALUMEGA360JV	22-HBSP 10x120 12-VGS 9x180	40x72	2-ALUMEGA480HP 2-ALUMEGA480JV	60-HBSP 10x100 32-VGS 9x180	32x72	2-ALUMEGA360HP 2-ALUMEGA360JV	44-HBSP 10x100 24-VGS 9x180	20x36	1-LOCKT100215	48-LBS 7x80
600	600	300	20x44	1-ALUMEGA360HP 1-ALUMEGA240JV	22-HBSP 10x160 8-VGS 9x240	20x36	1-ALUMEGA360HP 1-ALUMEGA240JV	22-HBSP 10x100 8-VGS 9x200	40x56	2-ALUMEGA360HP 2-ALUMEGA360JV	44-HBSP 10x160 24-VGS 9x200	24x64	1-ALUMEGA480HP 1-ALUMEGA480JV	30-HBSP 10x160 16-VGS 9x200	24x40	1-LOCKT100215	48-LBS 7x80
		450	32x48	2-ALUMEGA360HP 2-ALUMEGA240JV	44-HBSP 10x100 16-VGS 9x200	20x52	1-ALUMEGA360HP 1-ALUMEGA360JV	22-HBSP 10x180 12-VGS 9x200	40x56	2-ALUMEGA360HP 2-ALUMEGA360JV	44-HBSP 10x160 24-VGS 9x200	24x64	1-ALUMEGA480HP 1-ALUMEGA480JV	30-HBSP 10x160 16-VGS 9x200	24x40	1-LOCKT100215	48-LBS 7x80
	750	300	20x48	1-ALUMEGA360HP 1-ALUMEGA360JV	22-HBSP 10x160 12-VGS 9x180	20x36	1-ALUMEGA360HP 1-ALUMEGA240JV	22-HBSP 10x100 8-VGS 9x200	40x72	2-ALUMEGA480HP 2-ALUMEGA480JV	60-HBSP 10x140 32-VGS 9x180	32x64	2-ALUMEGA360HP 2-ALUMEGA360JV	44-HBSP 10x100 24-VGS 9x180	24x40	1-LOCKT100215	48-LBS 7x80
		450	32x48	2-ALUMEGA360HP 2-ALUMEGA240JV	44-HBSP 10x100 16-VGS 9x200	20x52	1-ALUMEGA360HP 1-ALUMEGA360JV	22-HBSP 10x160 12-VGS 9x200	40x72	2-ALUMEGA480HP 2-ALUMEGA480JV	60-HBSP 10x140 32-VGS 9x180	32x64	2-ALUMEGA360HP 2-ALUMEGA360JV	44-HBSP 10x100 24-VGS 9x180	24x40	1-LOCKT100215	48-LBS 7x80
	900	300	20x44	1-ALUMEGA360HP 1-ALUMEGA240JV	22-HBSP 10x160 8-VGS 9x240	20x36	1-ALUMEGA360HP 1-ALUMEGA240JV	22-HBSP 10x100 8-VGS 9x200	40x88	2-ALUMEGA600HP 2-ALUMEGA480JV	76-HBSP 10x120 32-VGS 9x220	32x76	2-ALUMEGA480HP 2-ALUMEGA480JV	60-HBSP 10x100 32-VGS 9x180	24x40	1-LOCKT100215	48-LBS 7x80
		450	32x48	2-ALUMEGA360HP 2-ALUMEGA240JV	44-HBSP 10x100 16-VGS 9x200	20x52	1-ALUMEGA360HP 1-ALUMEGA360JV	22-HBSP 10x180 12-VGS 9x200	40x88	2-ALUMEGA600HP 2-ALUMEGA480JV	76-HBSP 10x120 32-VGS 9x220	32x76	2-ALUMEGA480HP 2-ALUMEGA480JV	60-HBSP 10x100 32-VGS 9x180	24x40	1-LOCKT100215	48-LBS 7x80
750	900	300	32x40	2-ALUMEGA240HP 2-ALUMEGA240JV	28-HBSP 10x140 16-VGS 9x180	20x40	1-ALUMEGA360HP 1-ALUMEGA240JV	22-HBSP 10x140 8-VGS 9x240	48x88	2-ALUMEGA720HP 2-ALUMEGA600JV	92-HBSP 10x140 40-VGS 9x220	40x76	2-ALUMEGA480HP 2-ALUMEGA480JV	60-HBSP 10x120 32-VGS 9x180	24x44	1-LOCKT100215	48-LBS 7x80
		450	40x48	2-ALUMEGA360HP 2-ALUMEGA360JV	44-HBSP 10x140 24-VGS 9x180	24x56	1-ALUMEGA480HP 1-ALUMEGA360JV	30-HBSP 10x140 12-VGS 9x240	48x88	2-ALUMEGA720HP 2-ALUMEGA600JV	92-HBSP 10x140 40-VGS 9x220	40x76	2-ALUMEGA480HP 2-ALUMEGA480JV	60-HBSP 10x120 32-VGS 9x180	24x44	1-LOCKT100215	48-LBS 7x80



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- FASTENING
- AIRTIGHTNESS AND WATERPROOFING
- SOUNDPROOFING
- FALL PROTECTION
- TOOLS AND MACHINES

Rothoblaas is the multinational Italian company that has made innovative technology its mission, making its way to the forefront for timber buildings and construction safety in just a few years. Thanks to its comprehensive product range and the technically-prepared and widespread sales network, the company promotes the transfer of its know-how to the customers and aims to be a prominent and reliable partner for developing and innovating products and building methods. All of this contributes to a new culture of sustainable construction, focused on increasing comfortable living and reducing CO₂ emissions.



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