

X-ONE

CODES AND DIMENSIONS

X-ONE

CODE	L	B	H	L	B	H	pcs
	[mm]	[mm]	[mm]	[in]	[in]	[in]	
XONE	273	90	113	10 3/4	3 1/2	4 1/2	1

MANUAL TEMPLATE

CODE	description	pcs
ATXONE	manual template for X-ONE assembly	1

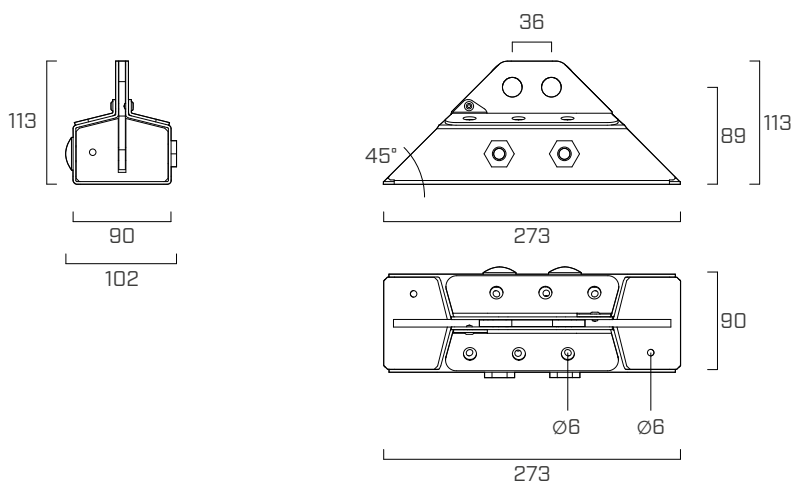
X-VGS SCREW

CODE	L	b	d ₁	TX	pcs
	[mm]	[mm]	[mm]		
XVGS11350	350	340	11	TX50	25

AUTOMATIC TEMPLATE

CODE	description	pcs
JIGONE	automatic template for X-ONE assembly	1

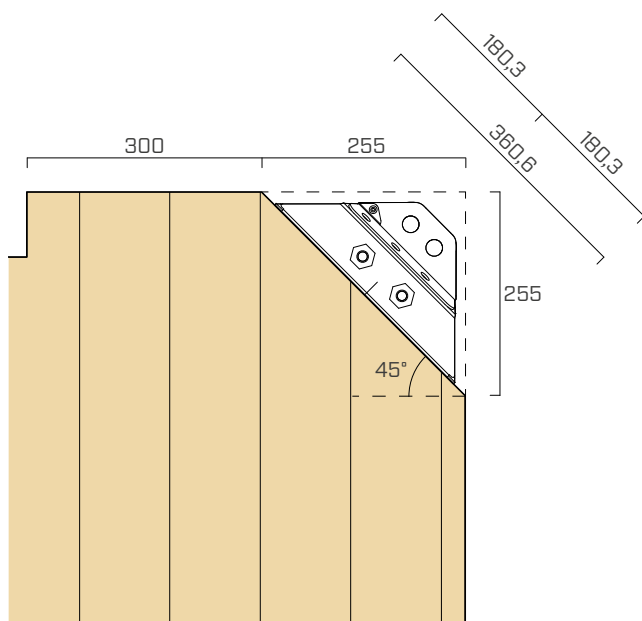
GEOMETRY



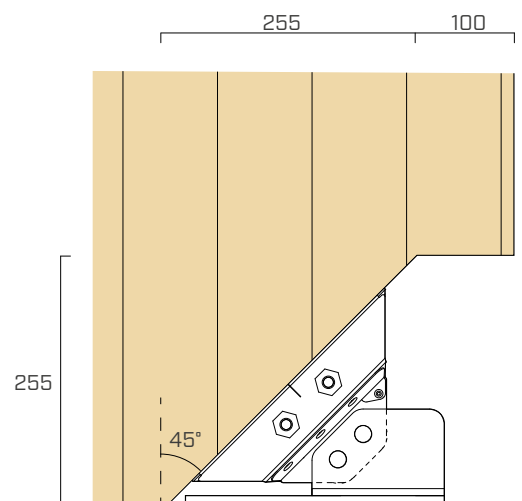
POSITIONING

Regardless of the panel thickness and its location on the construction site, the shear for fastening X-ONE is made at the top of the walls at 45°, and has a length of 360,6 mm.

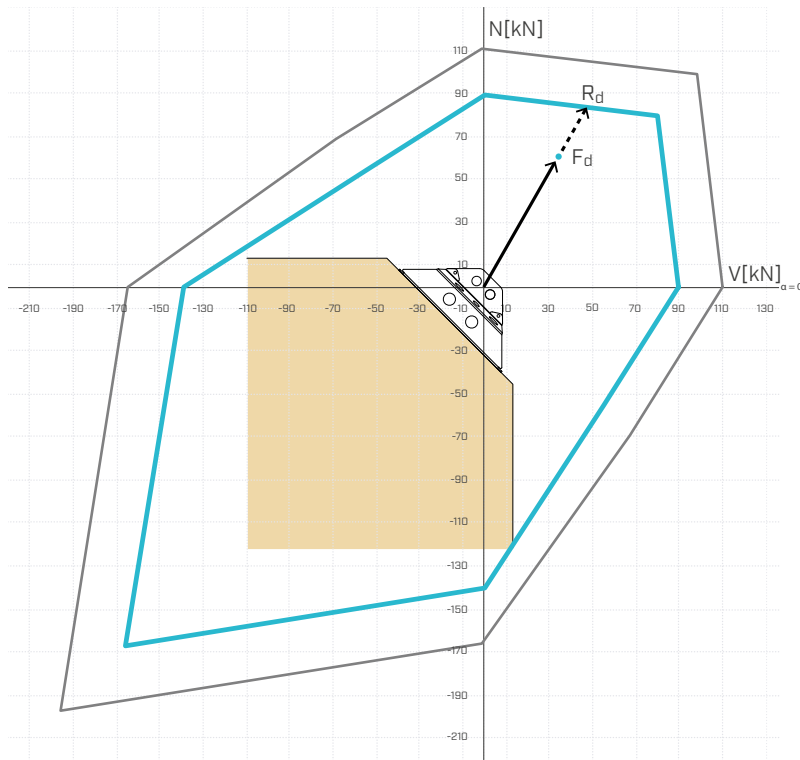
INTER-STOREY AND TOP NODES SPECIAL STANDARD SHEAR



BOTTOM NODES SPECIAL STANDARD SHEAR



DESIGN STRENGTHS



Design strength domain according to EN1995-1-1 and EN1993-1-8

A table summarizing the **characteristic strengths** in the various stress configurations and a reference to the relative safety coefficient according to the failure mode (steel or timber) is shown.

	GLOBAL STRENGTH	STRENGTH COMPONENTS		FAILURE MODES	PARTIAL SAFETY COEFFICIENTS ⁽¹⁾
α	R_k [kN]	V_k [kN]	N_k [kN]		γ_M
0°	111.6	111.6	0	VGS tension	$\gamma_{M2} = 1,25$
45°	141,0	99,7	99,7	block tearing on M16 holes	$\gamma_{M2} = 1,25$
90°	111.6	0,0	111.6	VGS tension	$\gamma_{M2} = 1,25$
135°	97,0	-68.6	68,6	VGS tension	$\gamma_{M2} = 1,25$
180°	165.9	-165.9	0	VGS thread extract	$\gamma_{M, \text{timber}} = 1,3$
225°	279.6	-197.7	-197.7	timber compression	$\gamma_{M, \text{timber}} = 1,3$
270°	165.9	0,0	-165.9	thread withdrawal VGS	$\gamma_{M, \text{timber}} = 1,3$
315°	97,0	68,6	-68.6	VGS tension	$\gamma_{M2} = 1,25$
360°	111.6	111.6	0	VGS tension	$\gamma_{M2} = 1,25$

NOTES

⁽¹⁾ The partial safety coefficients should be taken according to the current regulations used for the calculation. The table shows the values on steel side according to EN1993-1-8 and on the timber side according to EN1995-1-1.

The verification of the X-ONE connection is considered successful when the representative point of the F_d stress falls within the design strength domain:

$$F_d \leq R_d$$

The X-ONE design domain refers to the strength values and γ_M coefficients shown in the table and for loads with instantaneous life class (earthquake and wind).

LEGEND:

- R_k
- R_d EN 1995-1-1