

Area of Application

ESSVE Lightweight concrete screw is used for anchoring in porous materials such as lightweight concrete, also known as Leca, Ytong, Siporex, Blue concrete, etc. The lightweight concrete screw can be used to install wooden studs and steel joists, sill installation, installing fittings securing insulation etc. For the installation in insulation, for example, ESSVE Insulation holder's Washer Ø90 mm, item number 36122, can be used. The screw is classified in corrosivity category C4, which means it is suitable for both outdoor and indoor use.

Description

Lightweight concrete screw's thread is designed for porous materials such as lightweight concrete. The countersunk screw is equipped with cutting grooves to minimise the risk of over-tightening and facilitate countersinking in the wood.

Installation

The lightweight concrete screw is screwed directly into the lightweight concrete, i.e. no pre-drilling is required. A torque screwdriver is recommended for installation. Use a low speed on the screwdriver to avoid over-tightening the screw. Over-tightening can mean that the thread is stripped, which greatly reduces the load capacity and a new installation should be carried out.

Installation

1. The lightweight concrete screw is screwed directly into the lightweight concrete, i.e. no pre-drilling is required.

For wood: try on a case by case basis whether the detail needs to be pre-drilled or not. Factors that affect any pre-drilling of the wooden detail are, e.g. whether installation takes place close to the edge of the wood, whether the detail is thin and brittle, whether the light concrete is of a low quality, etc.

For steel: To install thin steel strip (<0.7 mm), you can use a lighter hammer to punch a hole in the steel strip and then screw in the screw.

2. Screw in Light concrete screw min. 60 mm. Ideally use a torque screwdriver and a low speed to avoid over-tightening. Over-tightening can mean that the thread is stripped, which greatly reduces the load capacity and a new installation will be necessary. The installation is finished.

Specification

Material	Steel
Surface treatment	CorrSeal
Corrosion categories	C4

Practical load capacity and technical data

Incl. Safety factors according to the Boverket's General Guidelines 1993:1, Type approval of fixings.

val of fixings.

If necessary, and as part of our technical support, pull-out testing can be conducted for specific objects.

Material/ Designation	Installation depth mm	Lightweight concrete qual. 500		Lightweight concrete 2 MPa		Lightweight concrete 3 MPa		Lightweight concrete 5 MPa	
		Tensile load kg	Shear load kg	Tensile load kg	Shear load kg	Tensile load kg	Shear load kg	Tensile load kg	Shear load kg
Lightweight concrete screw Ø8.0	60	50	30			60	45		
Lightweight concrete screw Ø8.0	100	80	30			100	45		
Lightweight concrete screw Ø10.5	160			150		225		340	

Design load values

For calculation in accordance with Eurocode.

Material/ Designation	Installation depth mm	Lightweight concrete qual. 500		Lightweight concrete 2 MPa		Lightweight concrete 3 MPa		Lightweight concrete 5 MPa	
		Tensile load kN	Shear load kN	Tensile load kN	Shear load kN	Tensile load kN	Shear load kN	Tensile load kN	Shear load kN
Lightweight con- crete screw Ø8.0	60	0.65	0.40			0.80	0.60		
Lightweight con- crete screw Ø8.0	100	1.0	0.40			1.3	0.60		
Lightweight con- crete screw Ø10.5	160	2.1		2.0		3.0		4.4	

Fire rating

ESSVE Lightweight concrete screws have undergone fire testing according to the method SP Fire A4 118 at the Swedish National

Testing and Research Institute, SP. The method is based on the international standard ISO 834. Refer to the table Fire rating.

Fire rating - Lightweight concrete qual. 500

Dim mm	Fire rating	Installation depth mm	Characteristic bearing capacity kN
Lightweight concrete screw Ø8.0	R60	60	0,25
Lightweight concrete screw Ø8.0	R45	60	0,50
Lightweight concrete screw Ø8.0	R90	80	0,25
Lightweight concrete screw Ø8.0	R60	80	0,50
Lightweight concrete screw Ø8.0	R45	80	0,75
Lightweight concrete screw Ø8.0	R60	100	0,50
Lightweight concrete screw Ø8.0	R45	100	1,00
Lightweight concrete screw Ø10.5	R40	160	2,2

Lightweight concrete screw Heavy Load

Area of application

- Facade cladding
- Roof truss installation
- Canopies
- Awnings
- Extensions
- Supporting cable for duckboard and wooden decking

Description

- Very strong in porous material
- Tested high load values
- Installed without plugs directly in lightweight concrete
- Easy installation - no predrilling required
- The head is adapted for both wood and fittings
- Rust protected with CorrSeal C4

ESSBOX

Item no.	Dimension dk x L mm	D mm	F mm	B mm	Bit no	ESSBOX size	Qty./pack.
105323	10,5 x 185	21,5	25	160	TX40	206	30
105324	10,5 x 210	21,5	50	160	TX40	206	30

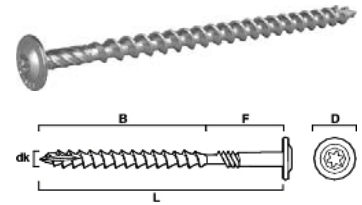
Bulk packages

Item no.	Dimension dk x L mm	D mm	F mm	S mm	Bit no	Qty/ pack.
9105323	10,5 x 185	21,5	25	160	TX40	300
9105324	10,5 x 210	21,5	50	160	TX40	300

Small package

Item no.	Dimension dk x L mm	D mm	F mm	S mm	Bit no	Qty./pack.
511284	10,5 x 185	21,5	25	160	TX40	6
511285	10,5 x 210	21,5	50	160	TX40	6

Lightweight concrete screws HL



Fire tested according to method SP Fire A4 118 at the SINTEF Research Institute. The method is based on the international standard ISO 834. Refer to the table Fire rating.



Type approved surface treatment Corr-Seal, SITAC-no 0075/05. CorrSeal is approved for use in corrosivity category C4, i.e. in outdoor environments with high corrosivity.



Fire tested according to method SP Fire A4 118 at the Swedish National Testing and Research Institute, SP. The method is based on the international standard ISO 834. Refer to the table Fire rating.