BUILDING SOLUTIONS

EXPANDET
A SENCO BRAND

STRONG BONDINGS WITH CHEMICAL ANCHORS

A bonded anchor functions as glued bond between a drilled hole in concrete, brick, breezeblock or other base materials and a steel element. The steel elements used are primarily threaded rods or reinforcement bars, however internal threaded sleeves and other steel elements can be used as well.

The Expandet strategy for bonded anchors is based on two demands: Second to none performance (loads) and a highly versatile and simple approach for the most complex product in our range. Since the introduction of the first generation of ESI mortars in 2006, Expandet has worked with just two products to cover all applications.

"BONDED ANCHORS ARE REFERRED TO AS THE KING OF ANCHORAGES"

One product, A thousand names

In the building industry bonded anchors go by a variety of terms and names, that all relate to the same product. Here are a few examples: chemical anchor, injection mortar, glued-in rods, chemical fixing, bonded anchor.

Bonded anchors are referred to as the king of anchorages due to its ability to handle high loads and their ability to be universal in almost every application.
Therefore it is the most trusted system with the lowest deformation. A single M12 threaded rod can be loaded with 2760 kg in 140 mm C20/25 concrete! ››

All you need is ... Expandet!
Expandet offers the whole package to complete your project: chemically bonded anchors, mechanical anchors and thermoplastic based plugs.

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Calculate it!

The Expandet product range offers solutions for all applications including a full range of high quality accessories, available at competitive prices.

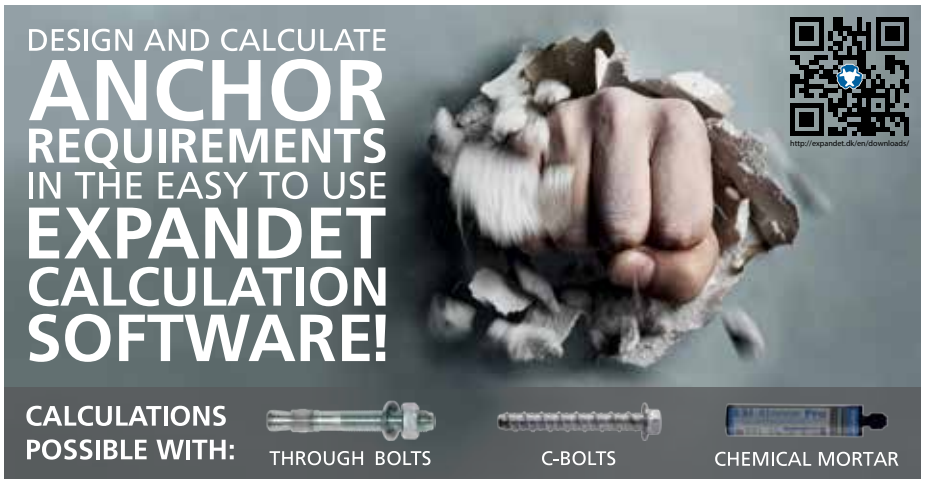
Both PBT Fasteners in the Netherlands and Expandet in Denmark cut threaded rods to customized lengths and finishes such as zinc plated, hot dipped galvanized and stainless steel.

In order to ease the planner's work Expandet has created an effective piece of software which calculates the amount of anchors needed and their exact placement in the structure. The Expandet Calculation program (ECP) is free of charge and can be downloaded from the Expandet-website. Moreover very experienced personnel (more than 40 years of experience) can assist in advice on applications and load calculations. ››

"BONDED ANCHORS CAN BE USED IN ALMOST ANY BASE MATERIAL"

Small spacing and edge equals lower loads

This applies to all anchors and brands! Anchors need to have a minimum edge distance and a minimum spacing between each anchor in a group. For heavy duty products like bonded anchors the spacing plays a crucial role as the load capacity is highly dependent on the area of concrete available.



Bonded anchors allow you to work

- certified in almost any base material
- in many configurations (low/high embedment depths.; thick/thin concrete small/large edge distances and spacing's)
- to solve very high demanding installations in steel constructions or heavy machinery
- with different steel strengths and alloys from 4.6 zinc plated to HCR steel 1.4529, class 70
- directly on the material surface or standoff installations (facades or elevated anchor plates with mortar)
- with non-defined materials and applications. A bonded anchor is often suitable for fixings in materials which are no longer used or applications using custom made base materials

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Improved mixture

The improved chemical mortars are high performance vinylester mortars which are universally applicable due to their high load capacities and backed up by many approvals and certifica-

"INSTALLATION DOWN TO -20°C!"

tions. With the Volume Calculator the amount of cartidges needed can be calculated.The Expandet Xtreme Pro chemical mortars come in all year versions ESI Xtreme Pro and a winter version EVL Xtreme Pro.

Calculate the necessary cartridges using our volume calculator!

The EVL Xtreme Pro allows for installation down to -20°C! Even though the ESI Xtreme Pro allows for installation at minus degrees (-5°C) the EVL Xtreme Pro has a much faster curing time.curing time. •

Open and curing time

A bonded anchor begins to harden the second the two components are mixed. Therefore, it restricts the time one can work with the product and thus an open time and curing time is given.

Open time: Possible working time before product hardens-

Curing time: Required time before element can be loaded

Note: on a very hot day when the concrete can be hot and curing times shorter you must plan your work carefully!

Approvals and certifications

ETA (option 1)
for cracked and non-cracked concrete with threaded rods (M8-M30) and rebar (ø8- ø32). Flooded holes, Seismic C1 and 3 service temperature ranges is also included in the ETA.

ETA - Option 1

Seismic C1

ETA (ETAG 029)
for masonry (solid clay, sandlime, hollow brick and aerated concrete)

ETAG 029

ETA (Tr023)
for post installed rebar (ø8-ø32) as precast according Eurocode 2. Only covers ESI as EVL cures too fast for deep embedment depths – up to 1800mm

ETA - TR023

Fire test
for threaded rods in concrete

Fire Tested R120

LEED certified
US certification on indoor use and emissions.

LEED tested

VOC A+ certified
(environmental certificate for emission of VOC. Level A+ is the highest safety and lowest (no) emission

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APPLICATIONS

Pictures are for inspiration to open your mind for the many applications chemical anchors can be used.

Steelwork constructions | Timber constructions | Guard rails | Façades | Staircases | Steel brackets | Machines | Masts | Awnings | Canopies | Gates | Consoles | Pipelines | Gratings | Satellite antennas | Industrial robots | Brickwork support systems | Balustrades | Road and tunnel installations | Rebar post installed and "as anchor" | Highway and Road Noise Reduction Barriers | Crash Barriers | Road signs