



The ANCHOR system

B3

ACP - Anchor Calculation Software



1. INTRODUCTION

2

ACP BOSSONG 3.0 - ACP: ANCHOR CALCULATION PROGRAM

- Professional Software to design anchor in concrete
- English, Italian, French and German languages
- 3D graphic REAL TIME
- Design according to ETAG ANNEX C and TR029
- Seismic design according to ETAG TR045
- Fire design according to ETAG TR020
- Several configuration of anchor plate and profile
- Shape editor with custom geometry configuration
- Anchor plate with slotted hole
- Optimization depth function for bonded anchor
- Selectable flooded hole condition for bonded anchor
- Selectable service temperature range for bonded anchor
- Filtering option to choose the required anchor
- Technical data sheet included
- Automatic notification for new updating
- Free download from www.bossong.com
- Compatible with WINDOWS system



2. TO START



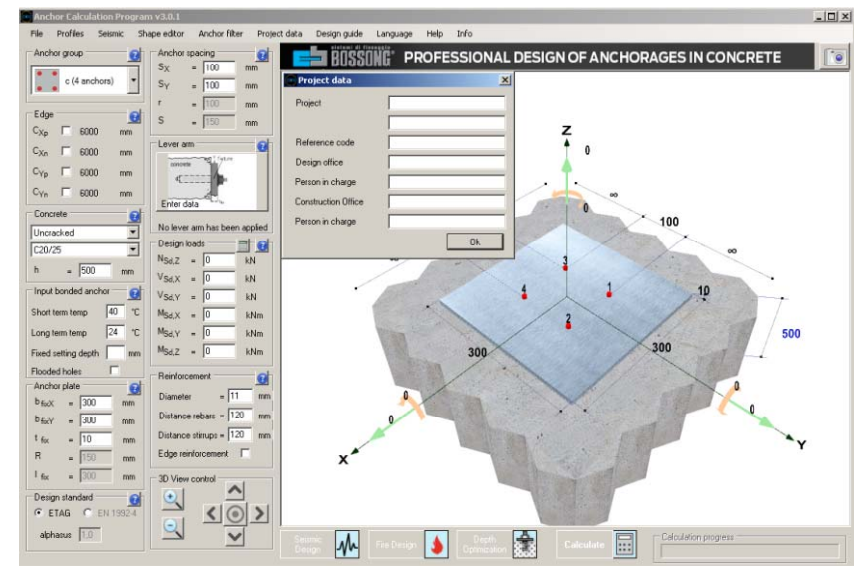
3



START

Click on the icon

Once opened the program you can personalize the final report with «project data» click



2. ANCHOR CONFIGURATION

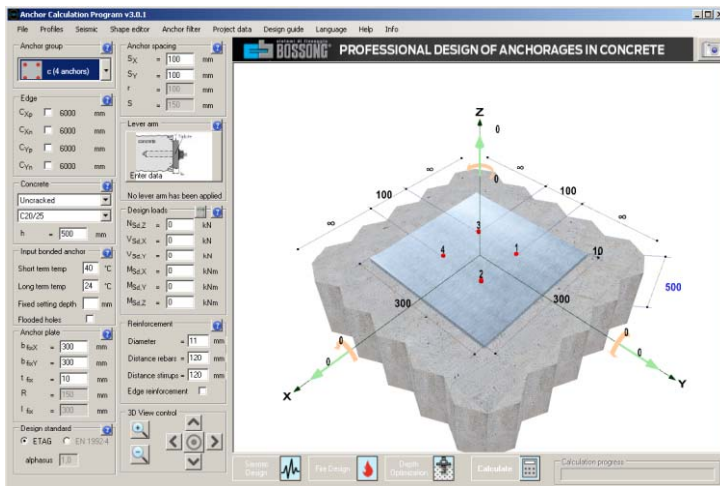
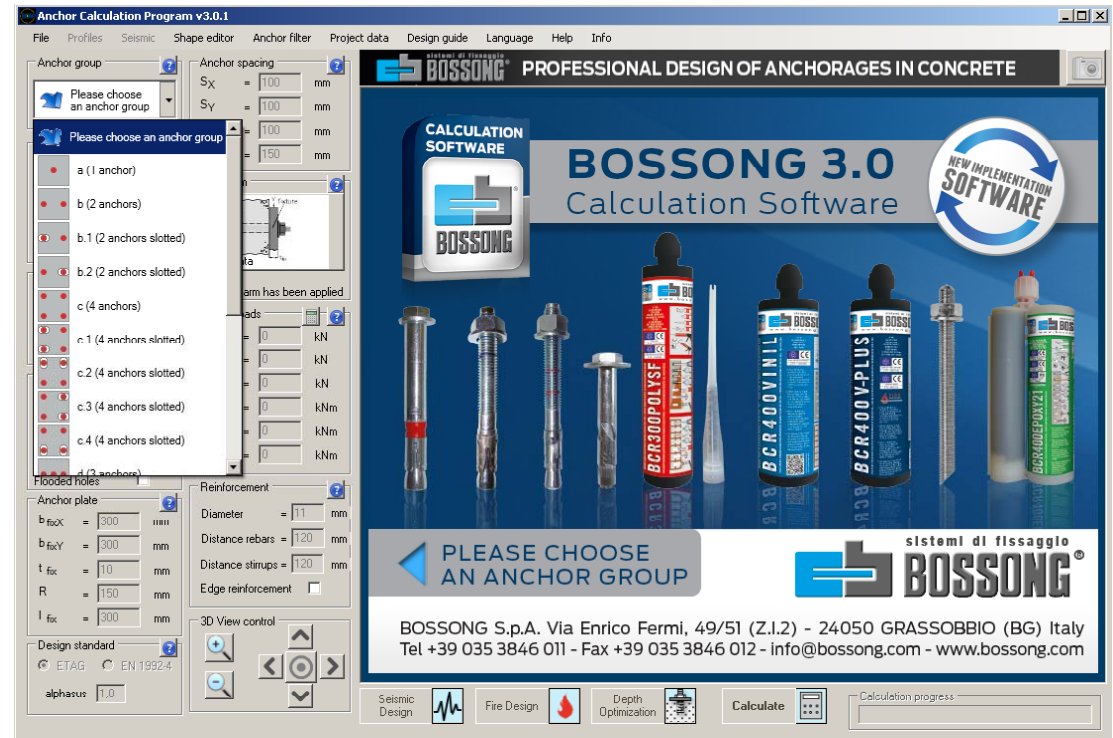


4

PLATE and ANCHORS

Click «choose anchor group» and select dimension of the base plate and number of anchors

The anchorage system selected will appear in the main window with tri dimensional graphic in real-time



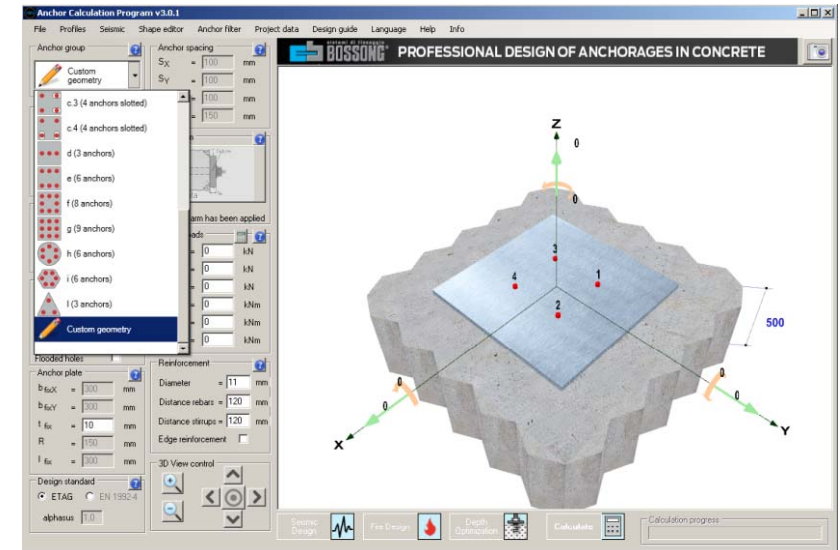
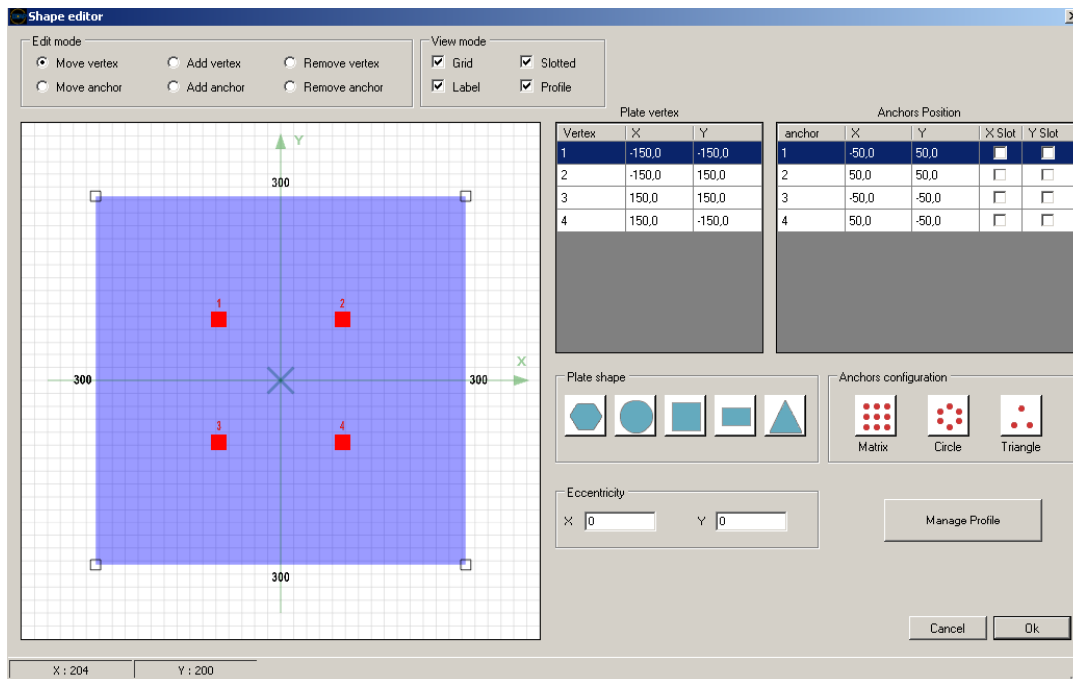
2. ANCHOR CONFIGURATION



5

SHAPE EDITOR

Click «custom geometry» to open the SHAPE EDITOR



You can draw fixture geometry through the vertex and clearance holes XY coordinates

3. CONCRETE

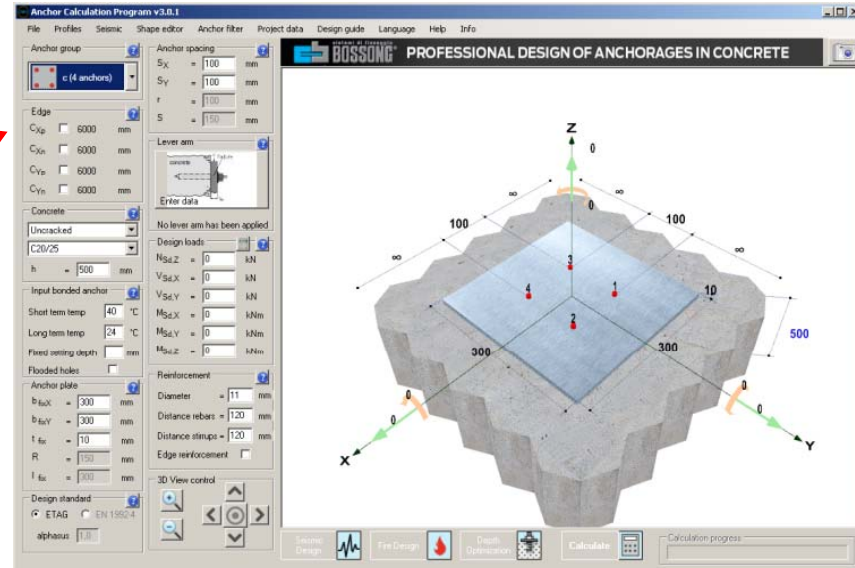


6

EDGE DISTANCE

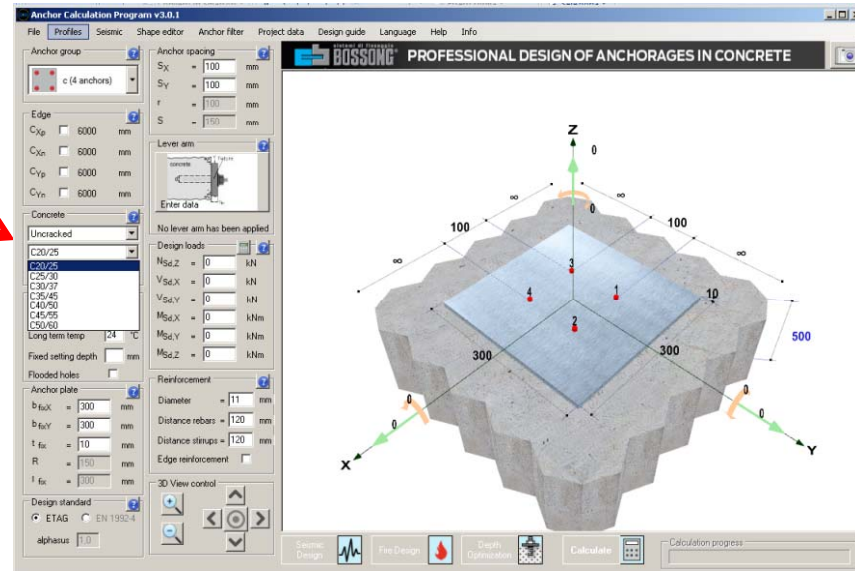
Go to «Edge» and fill the distance edge in mm.
Change ment in real-time in the window.

Note: when base concrete has angle segments it means that the distance is not relevant (default value without influence 6000 mm). When is flat the distance is calculated and relevant.



CONCRETE

Go to «Concrete» and select if the base material is cracked or uncracked.
The class of the concrete resistance e.g. C20/25.
The thickness of the base material



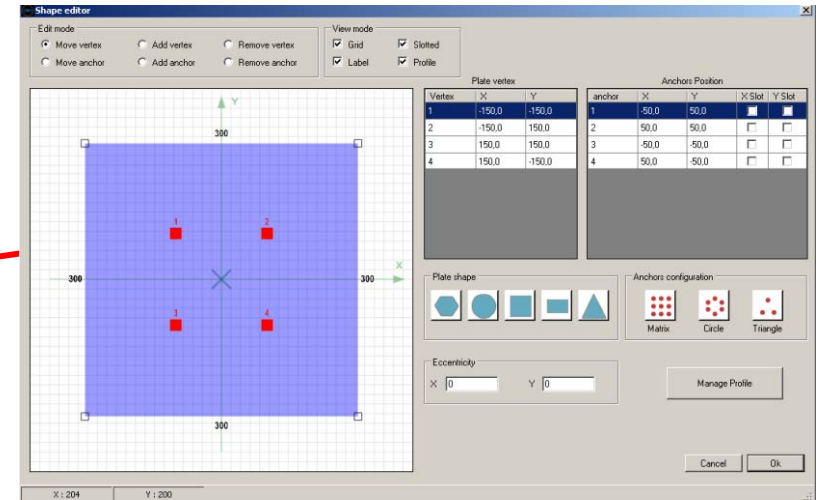
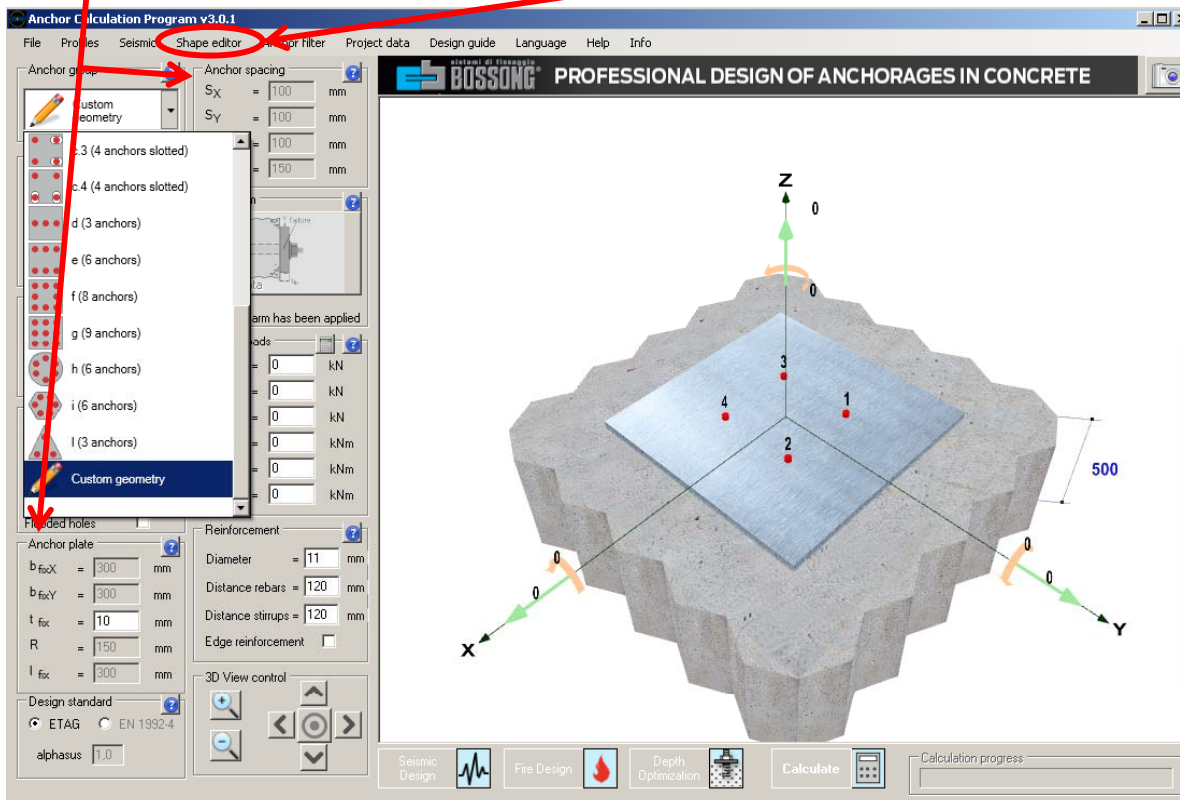
4. ANCHOR PLATE



7

ANCHOR PLATE and SPACING

Go to «Anchor Plate» and fill the plate dimensions in mm. The spacing distance of anchors. Window will change in real-time.



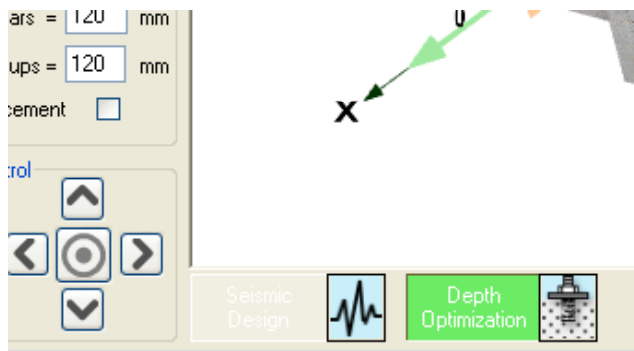
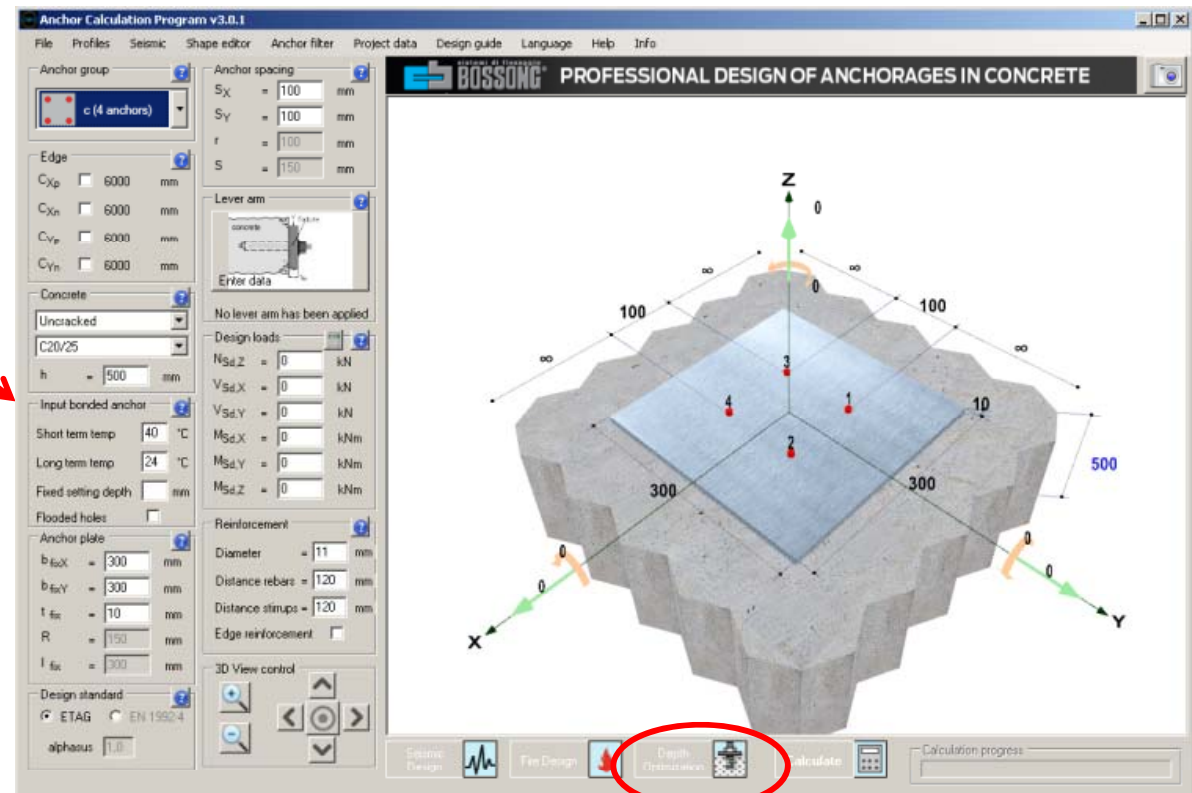
You can also set your custom anchor plate in the SHAPE EDITOR window

5. BONDED ANCHOR

BONDED ANCHOR

Go to «Input Bonded Anchor» and fill the temperature range. You can also select if flooded hole, a specific depth in mm or the **optimization setting depth**.

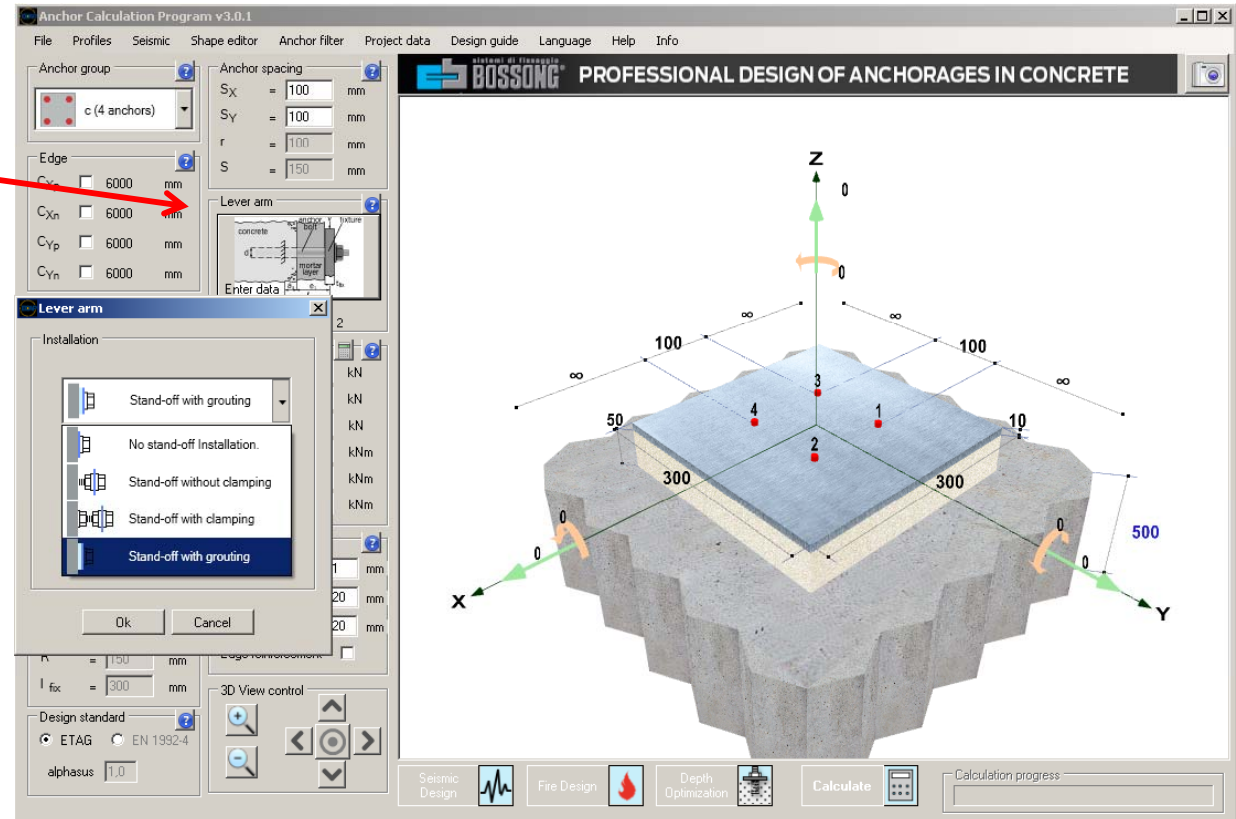
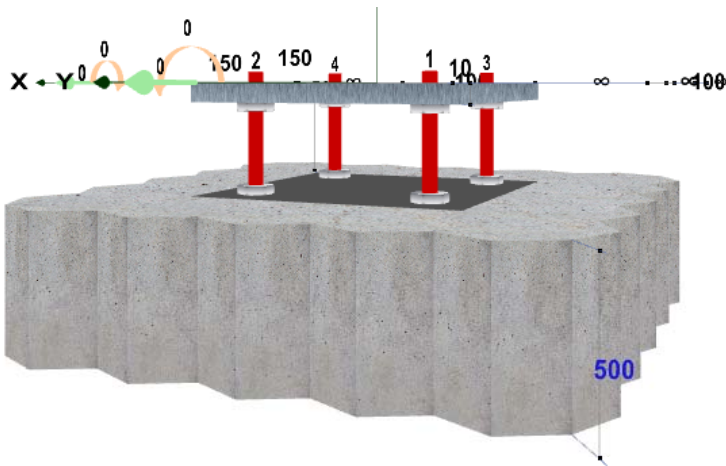
Note: Program use dry/wet and medium setting depth as default.



6. LEVER ARM

LEVER ARM

Go to «Lever Arm» and select the type of installation: stand-off installation with or without clamping or stand-off with grouting

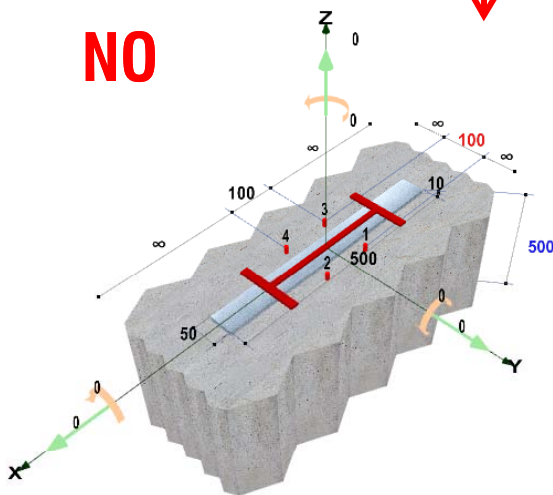


6. PROFILE

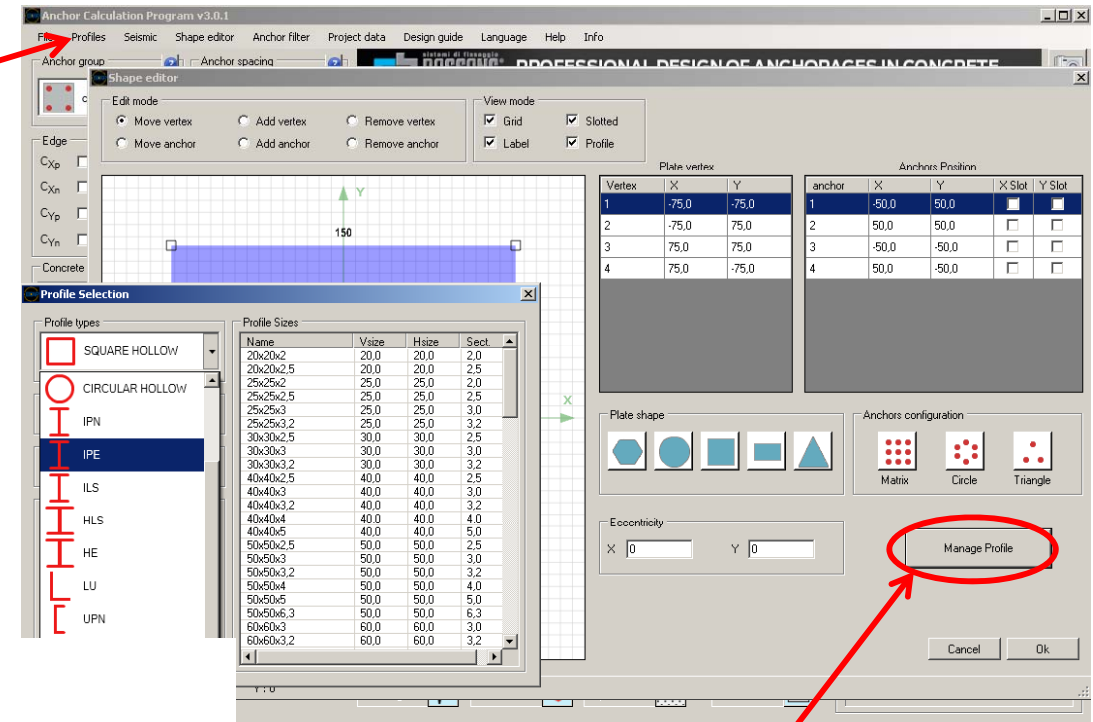
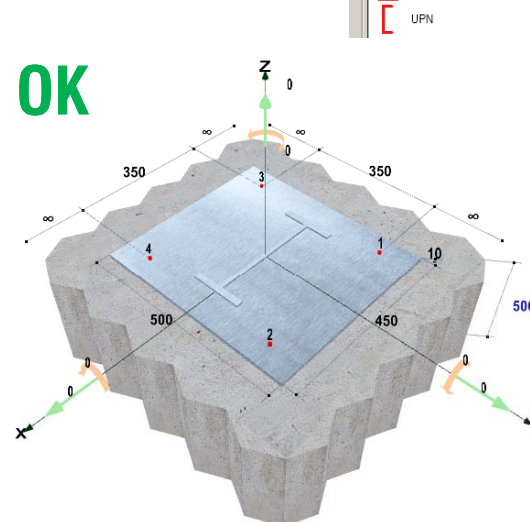
PROFILE

Go to «Profile» and select the type.
 Tanks to the 3D graphic real time you can check immediately if the position of the anchor is suitable for the chosen profile.

NO



OK

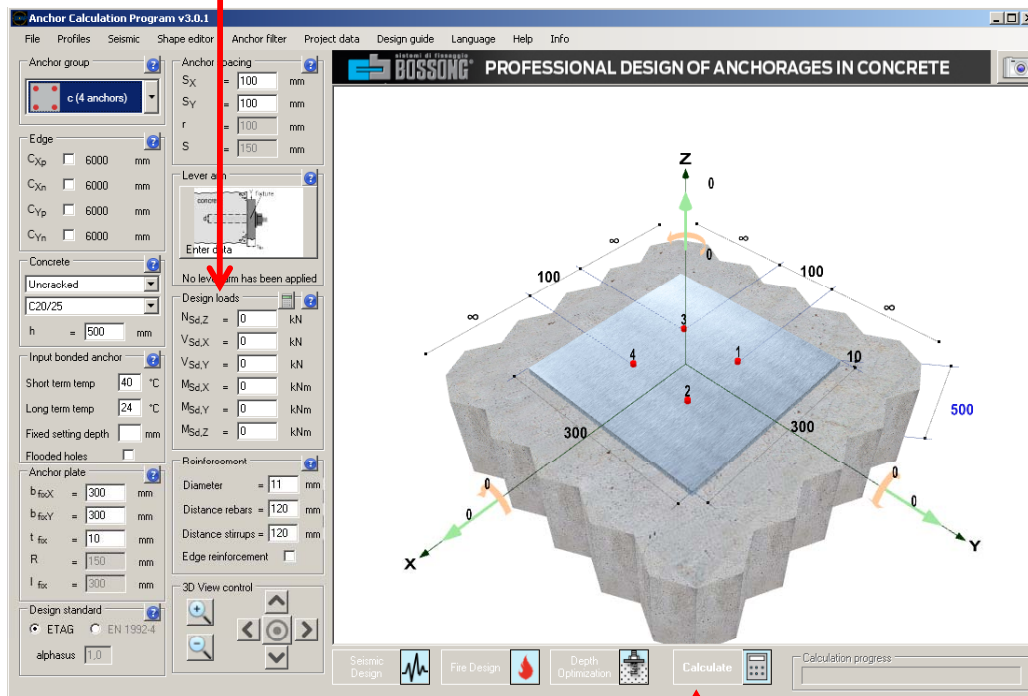


You can select the profile also in Shape EDITOR window.

7. LOADS and RESULTS

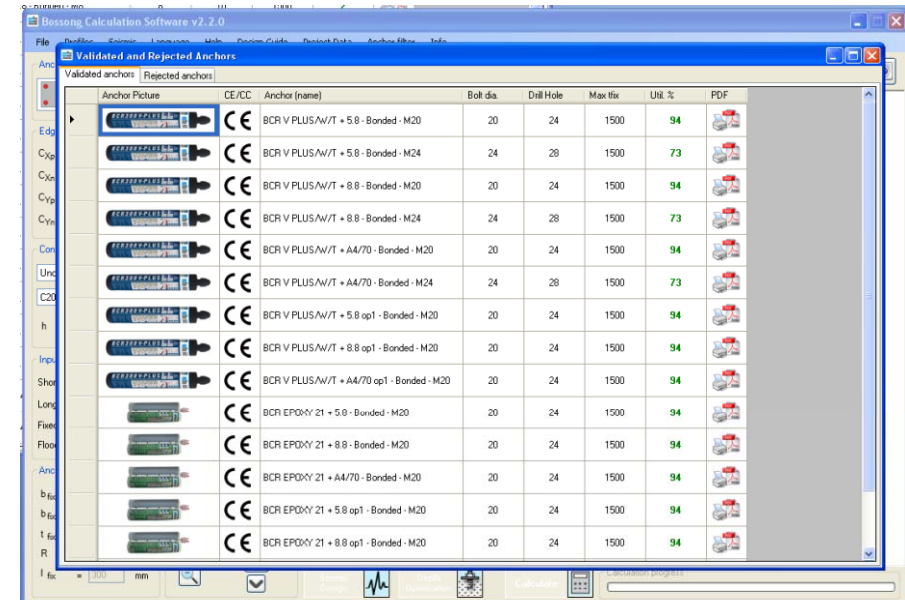
DESIGN LOADS

Go to «Design Loads» and fill it with Ultimate Limit State loads ULS in kN.



And then click on CALCULATE

VALIDATED ANCHORS



The program open a list of validated anchors but you can also select an unvalidated list

Note: the green number ref to the best use of the anchor for this application. 100 is the optimized performance of the anchor for this use. Validated anchors are under 100 e.g. 30. Not validated anchors are more then 100 e.g. 120

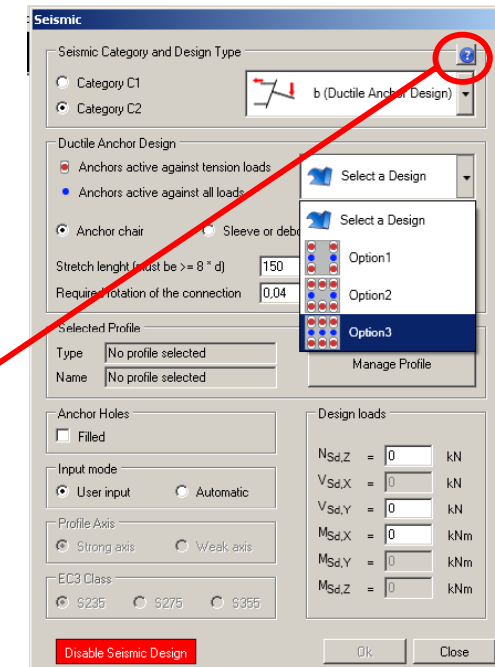
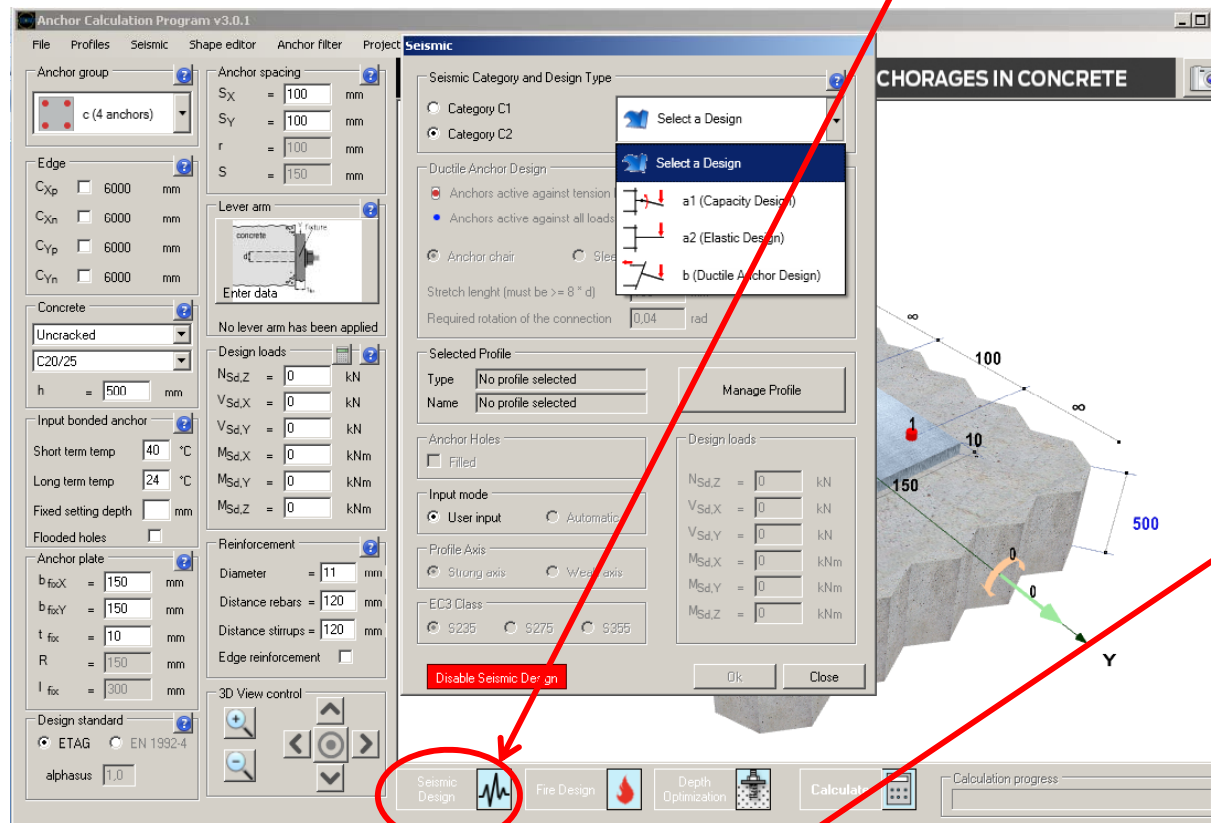
8. SEISMIC LOADS



12

SEISMIC LOADS

Click on Seismic Load to activate the panel.



In the seismic panel you can select the C1 or C2 design category, the type of design and the relative loads.

For detailed info click on Help

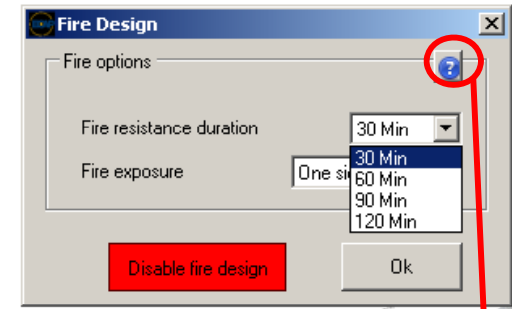
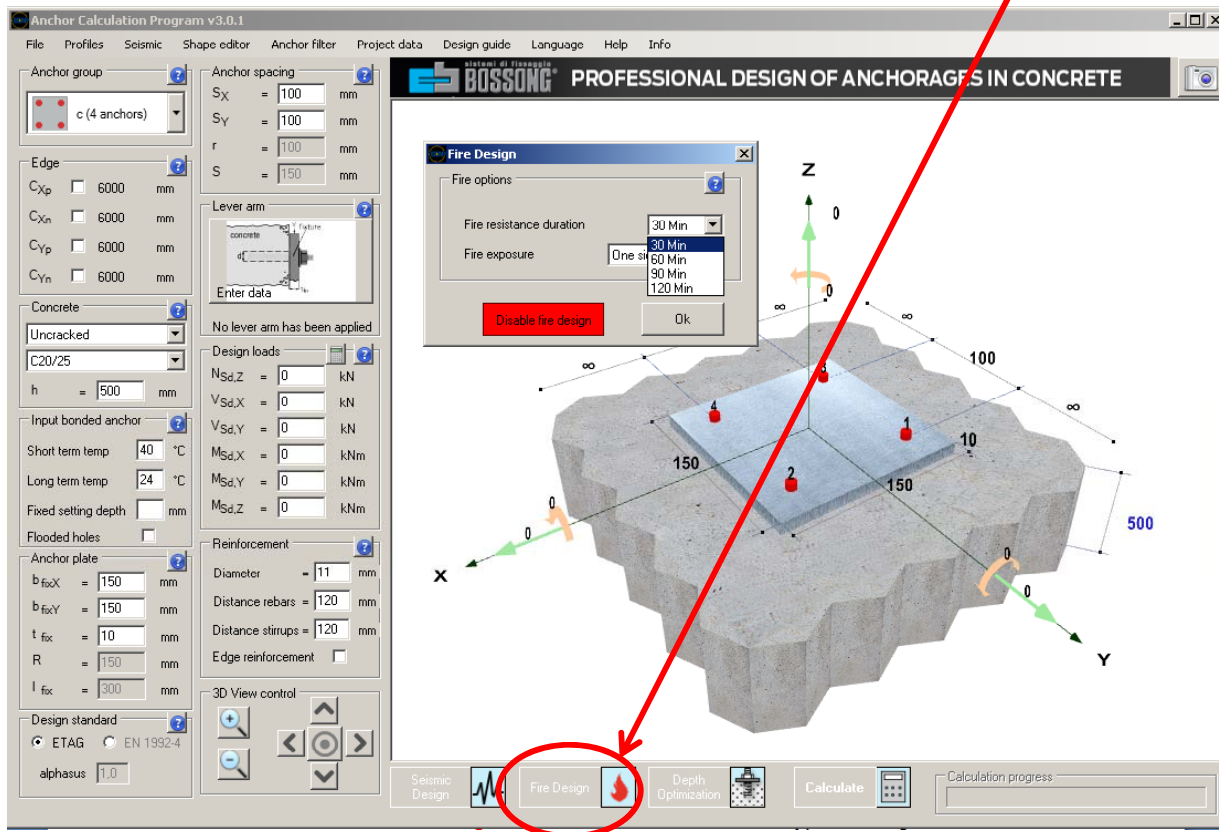
9. FIRE DESIGN



13

FIRE DESIGN

Click on Fire Design to activate the panel.



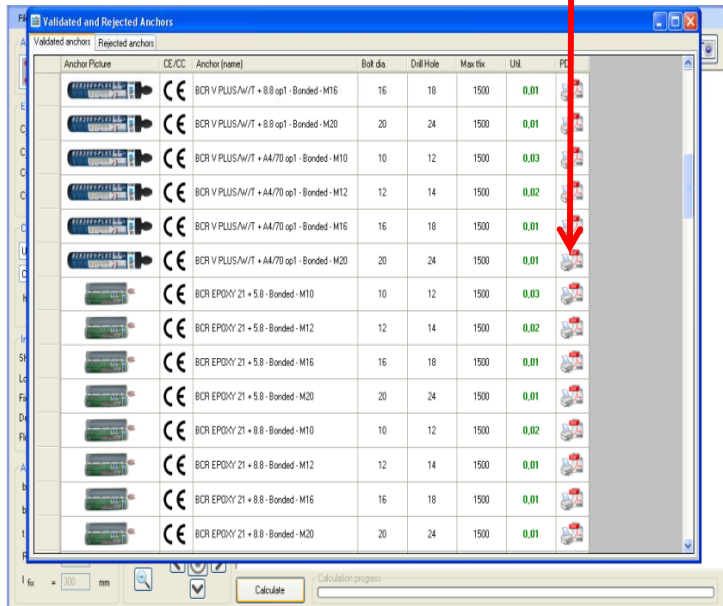
For detailed info click on Help

10. DESIGN REPORT



REPORT

Once choosed the anchor, click on pdf picture and the program will open the REPORT



Bossong 3.0
Calculation Software

BOSSONG S.p.A. Via Enrico Fermi, 51 (2117) - 24050 GRASSOBBIO (BG) Italy
Tel: +39 035 3846 011 - Fax: +39 035 3846 012 - info@bossong.com - www.bossong.com

Project:

Reference code:

Design office:

Person in charge:

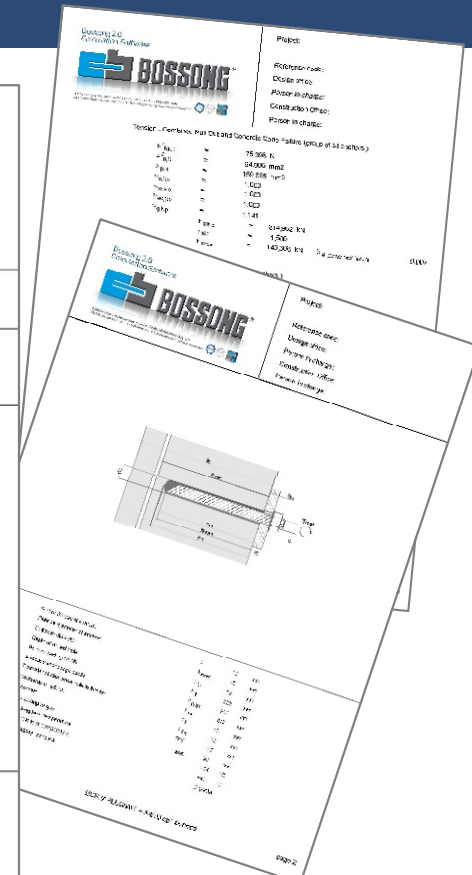
Construction Office:

Person in charge:

Anchor (name) BCR V PLUS/W/T + A4/70 op1 Bonded	Dimension BCR V PLUS/W/T - M10/A4-70
Article code -	Approval ETA-09/0140
MATERIAL:	
- Bi-component vinyl ester styrene-free resin	
- Threaded rod class A4-70	
ANCHOR TYPE:	
- Bonded anchor available in sizes: 825 ml, 400 ml, 345 ml, 300 ml, 185 ml	
PRODUCT:	
Heavy-duty bi-component vinyl ester, styrene-free resin for use in different base materials as concrete, solid masonry, hollow bricks masonry and wood. Due to the absence of styrene the use is possible also in closed places. This resin can be used also with wet concrete and flooded hole.	
CALCULATION CONDITIONS:	
This calculation is based on specific values exclusive for the product. Any modification made - this being change of product brand or changes in physical conditions for design - requires a recalculation of the design.	
Anchor plate:	
The design program assumes, in accordance with ECOTA TR029, that the anchor plate does not deform as a result of applied actions. Thus, and in accordance with ECOTA TR029 the anchor plate shall be sufficiently stiff and its design should be carried out according to standards for steel structures ensuring elastic behaviour.	
Additional Proofs:	
With regard to design of anchorages one shall be aware of the additional proofs for ensuring the characteristic resistance of the concrete member (structural component) described in ECOTA TR029, chapter 7.	
All conditions of the European Technical Approval (ETA) and Bossong technical publications shall be complied with in all details.	
WARNING:	
Installation and loads technical data can be modified by us. For update technical data sheet see www.bossong.com or be in contact with our Technical Office.	

13/05/2015

Tension	Reinforcement
N _{Sd,Z} 1 kN	Diameter 11 mm
V _{Sd,X} 1 kN	Distance rebars 120 mm
V _{Sd,Y} 1 kN	Distance stirrups 120 mm
Bending	Edge reinforcement: No
M _{Sd,X} 0 kNm	Anchor Plate
M _{Sd,Y} 0 kNm	D _{rx,X} 380 mm
Tension	D _{rx,Y} 360 mm
N _{Sd,Z} 0 kN	E _{rx} 15 mm
Lever arm	Edge distance
No lever arm has been applied	C _{Xp} 6000 mm
Concrete	C _{Xn} 6000 mm
C20/25	C _{Yp} 480 mm
Member height h 250 mm	C _{Yn} 6000 mm
	Spacing
	S _X 200 mm
	S _Y 160 mm




11. DATA SHEET

15

TECHNICAL DATA SHEET

If you click on the picture of the anchor the program will open the Technical Data Sheet

Anchor Picture	CE/CC	Anchor (name)	Bolt dia.	Drill Hole	Max fix.	Unit	PDF
	CE	BCR V PLUS/W/T + 8.8 op1 - Bonded - M16	16	18	1500	0.01	
	CE	BCR V PLUS/W/T + 8.8 op1 - Bonded - M20	20	24	1500	0.01	
	CE	BCR V PLUS/W/T + A4/70 op1 - Bonded - M10	10	12	1500	0.03	
	CE	BCR V PLUS/W/T + A4/70 op1 - Bonded - M12	12	14	1500	0.02	
	CE	BCR V PLUS/W/T + A4/70 op1 - Bonded - M16	16	18	1500	0.01	
	CE	BCR V PLUS/W/T + A4/70 op1 - Bonded - M20	20	24	1500	0.01	
	CE	BCR EPOXY 21 + 5.8 - Bonded - M10	10	12	1500	0.03	
	CE	BCR EPOXY 21 + 5.8 - Bonded - M12	12	14	1500	0.02	
	CE	BCR EPOXY 21 + 5.8 - Bonded - M16	16	18	1500	0.01	
	CE	BCR EPOXY 21 + 5.8 - Bonded - M20	20	24	1500	0.01	
	CE	BCR EPOXY 21 + 8.8 - Bonded - M10	10	12	1500	0.02	
	CE	BCR EPOXY 21 + 8.8 - Bonded - M12	12	14	1500	0.01	
	CE	BCR EPOXY 21 + 8.8 - Bonded - M16	16	18	1500	0.01	
	CE	BCR EPOXY 21 + 8.8 - Bonded - M20	20	24	1500	0.01	



www.bossong.com

SCHEDA TECNICA TECHNICAL DATA SHEET FICHE TECHNIQUE TECHNISCHES DATENBLATT


EPOXY 21

Prodotto per uso strutturale in accordo al D.M. 14/01/2008

CE ETS 11064
M12 - M24
Opzione > Op10a 1


CE ETS 11064
M16 - M24
Opzione > Op10a 7
M8 - M30

CE ETS 11064
M8 - M30




**BCR-900
EPOXY 21**

Cartuccia a shuttle
Shuttle cartridge
Cartouche a shuttle
Shuttlekartusche
900 ml
cod. 747846

 5


**BCR-470
EPOXY 21**

Cartuccia a shuttle
Shuttle cartridge
Cartouche a shuttle
Shuttlekartusche
470 ml
cod. 747844

 12


**BCR-400
EPOXY 21**

Cartuccia a shuttle
Shuttle cartridge
Cartouche a shuttle
Shuttlekartusche
400 ml
cod. 747840

 12

**BCR-400
EPOXY 21**

Cartuccia a shuttle
Shuttle cartridge
Cartouche a shuttle
Shuttlekartusche
400 ml
cod. 747840

 12

STOCKAGGIO E CONSERVAZIONE
STORAGE AND CONSERVATION
STOCKAGE ET CONSERVATION
LAGERUNG UND AUFBEWAHRUNG

DURATA (mesi)
EPOXY (months)
EGENSCHE (mon)
HALTBARKEIT (Monats)

aggiornamento > updating 20/02/2014

**SCHEDA TECNICA
TECHNICAL DATA SHEET
FICHE TECHNIQUE
TECHNISCHES DATENBLATT**

> Dati installazione > Installation data > Données d'installation > Installationsangaben

> Dati carico > Load data > Données de charge > Lastdaten

> Procedure di installazione > Installation procedure > Procédure d'installation > Installationsverfahren

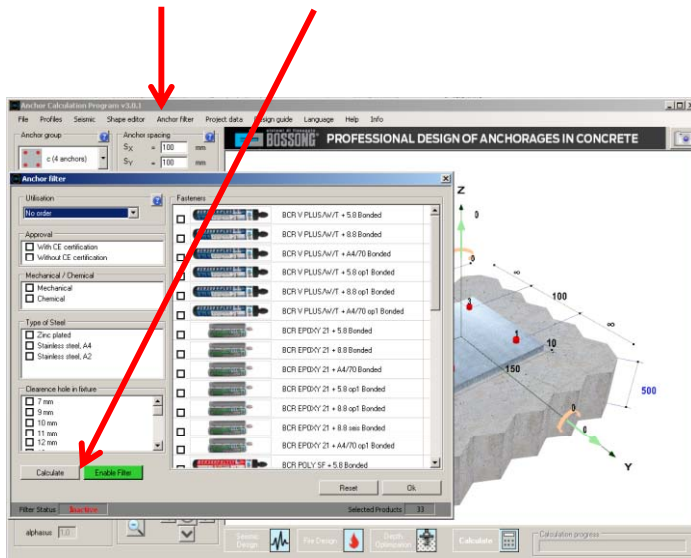
12. NOTES



16

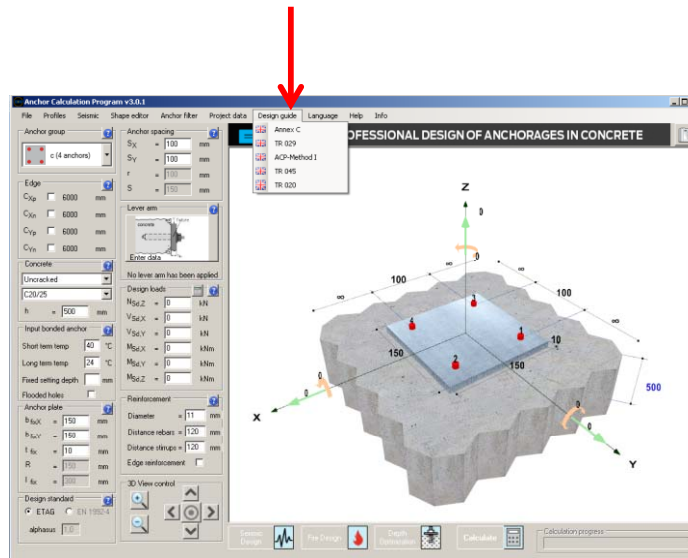
FILTERING

It is possible select only one or a set of specific anchors for this application going to «Anchor filter» then click calculate



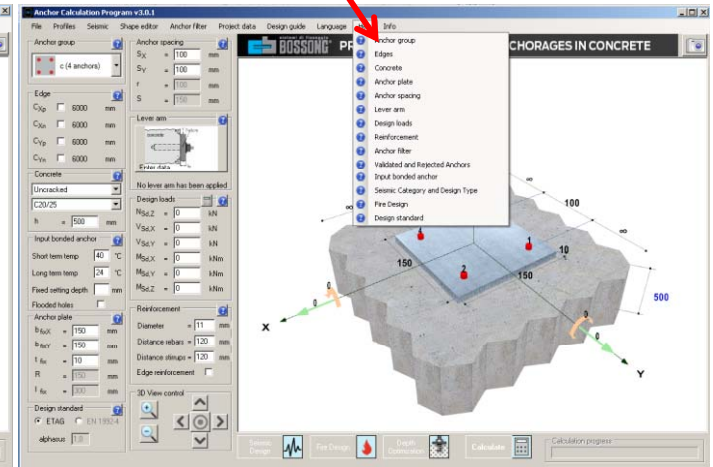
DESIGN GUIDE

For information about guide lines used in this program, please go to «Design guide» click and have a pdf



HELP

For any help, please go to «Help»



13. DOWNLOAD



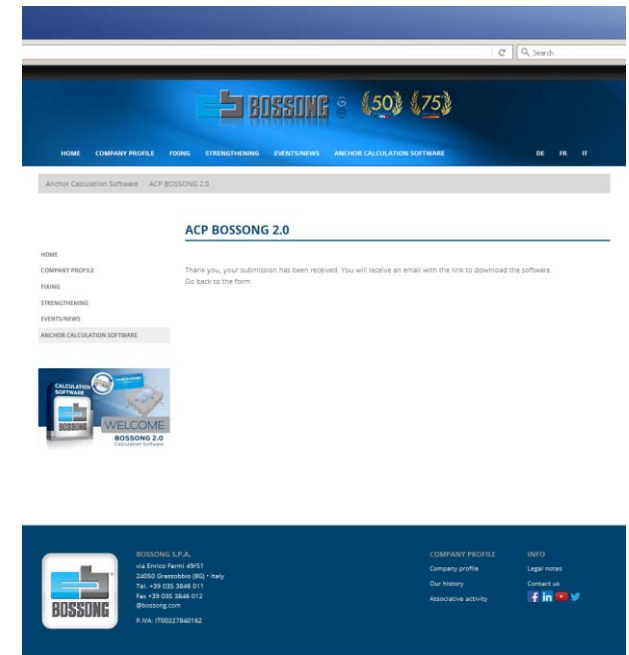
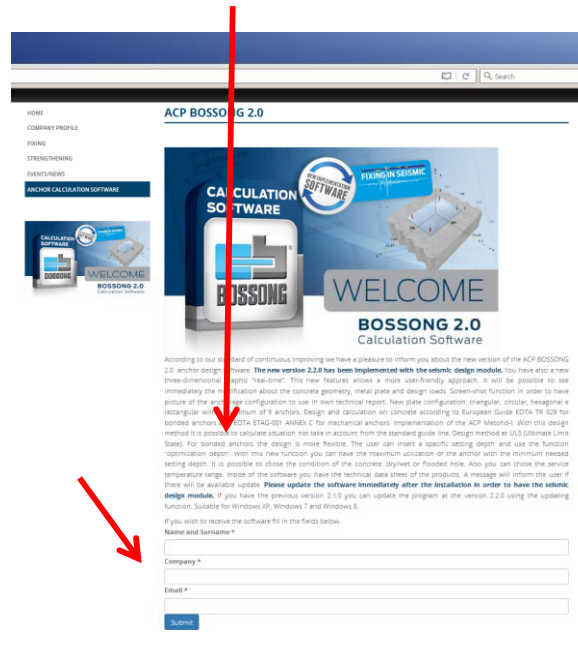
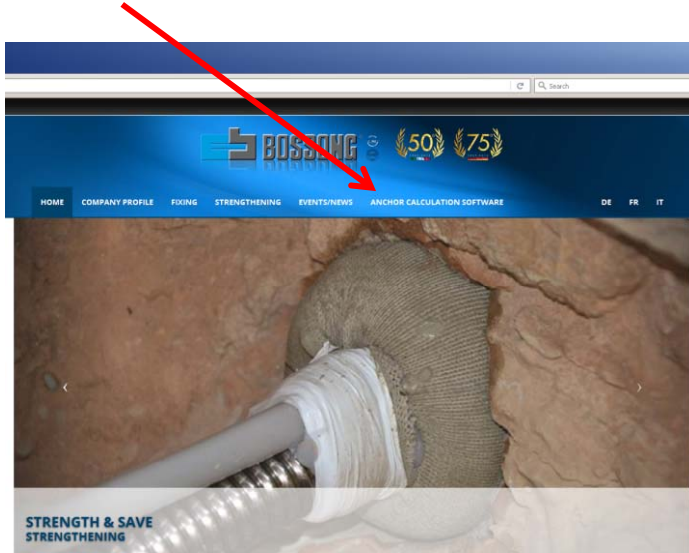
17

HOW TO DOWNLOAD Bossong ACP

Go to www.bossong.com and select «Anchor Calculation Software»

Fill it with your data e.g. name, company, email and then submit

You will receive an email as feed back with a link to download the software



ACP Software

https://www.youtube.com/watch?v=BYjnR9c_Q88&feature=youtu.be



CIAO
AND THANK YOU FOR
YOUR ATTENTION