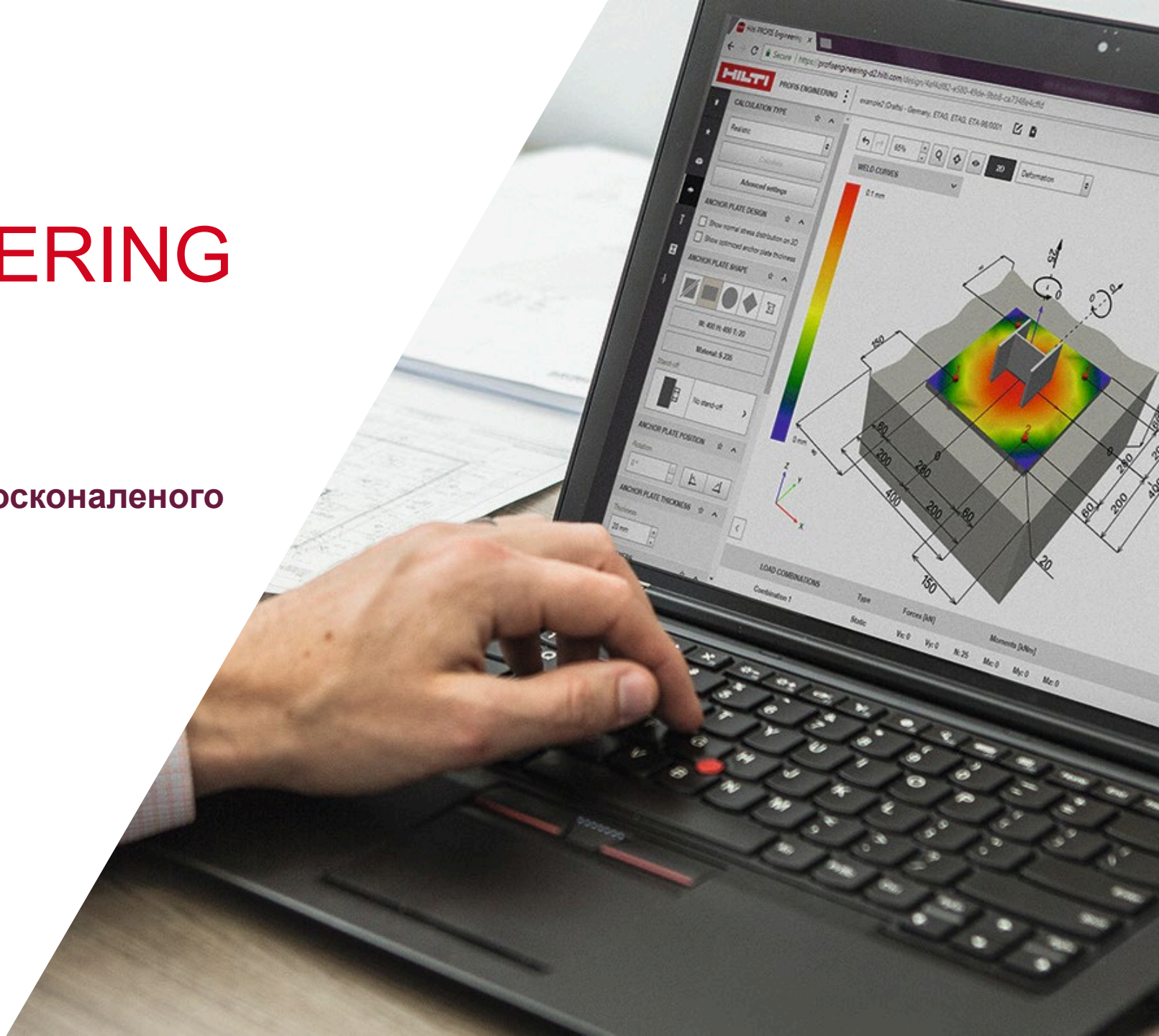




PROFIS ENGINEERING

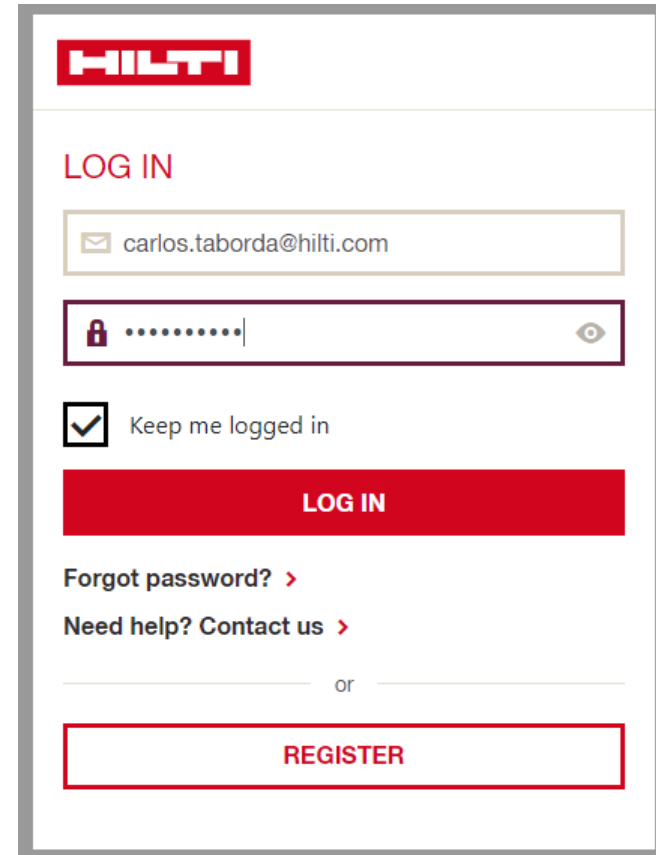
Доступ та покроковий підхід до вдосконаленого проєктування базової плити

2021



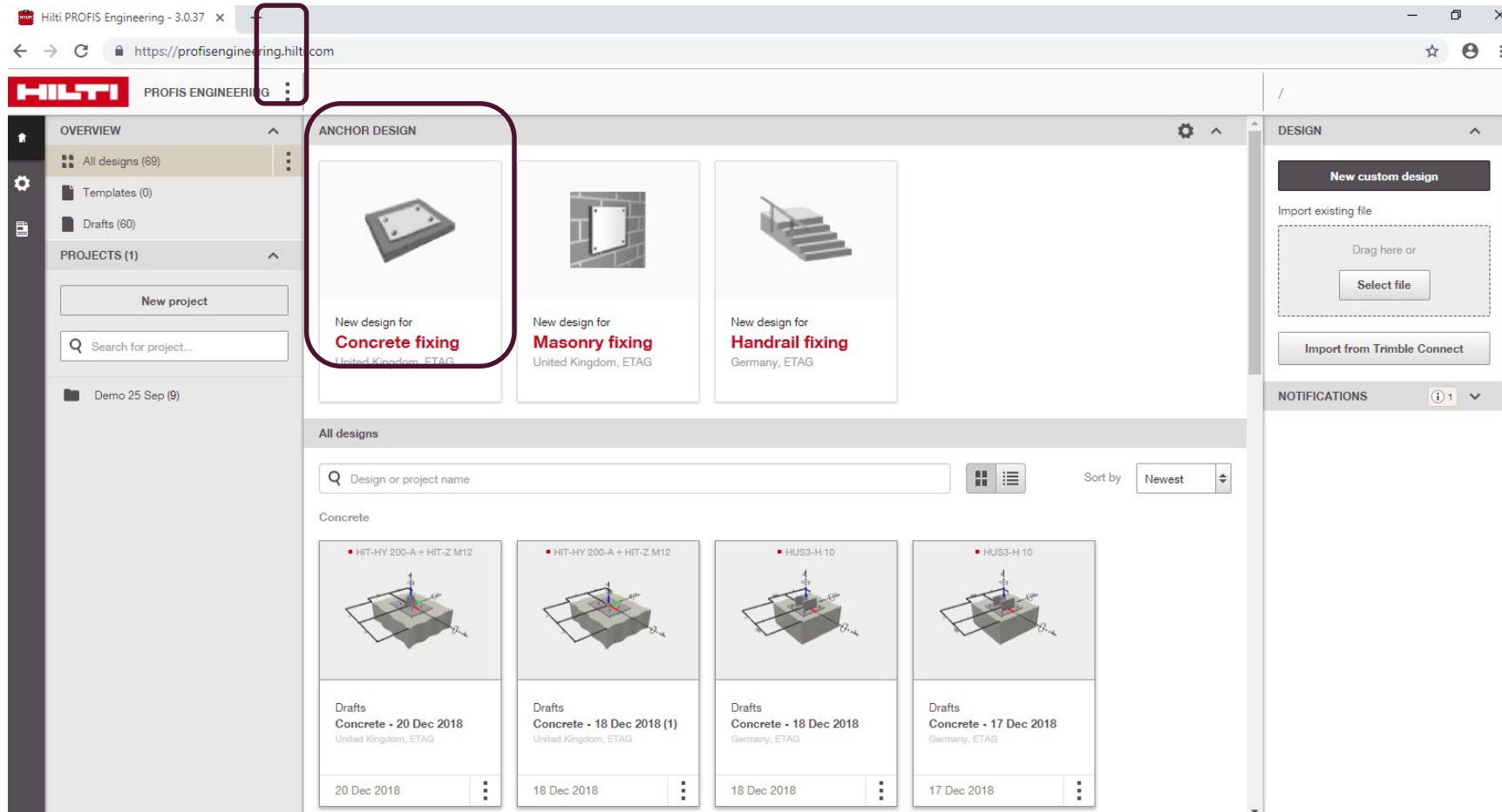
УВІЙДІТЬ PROFIS ENGINEERING ВИКОРИСТОВУЮЧИ ЛОГІН І ПАРОЛЬ ЗАРЕЄСТРОВАНОВОГО КОРИСТУВАЧА

<https://profisengineering.hilti.com/>

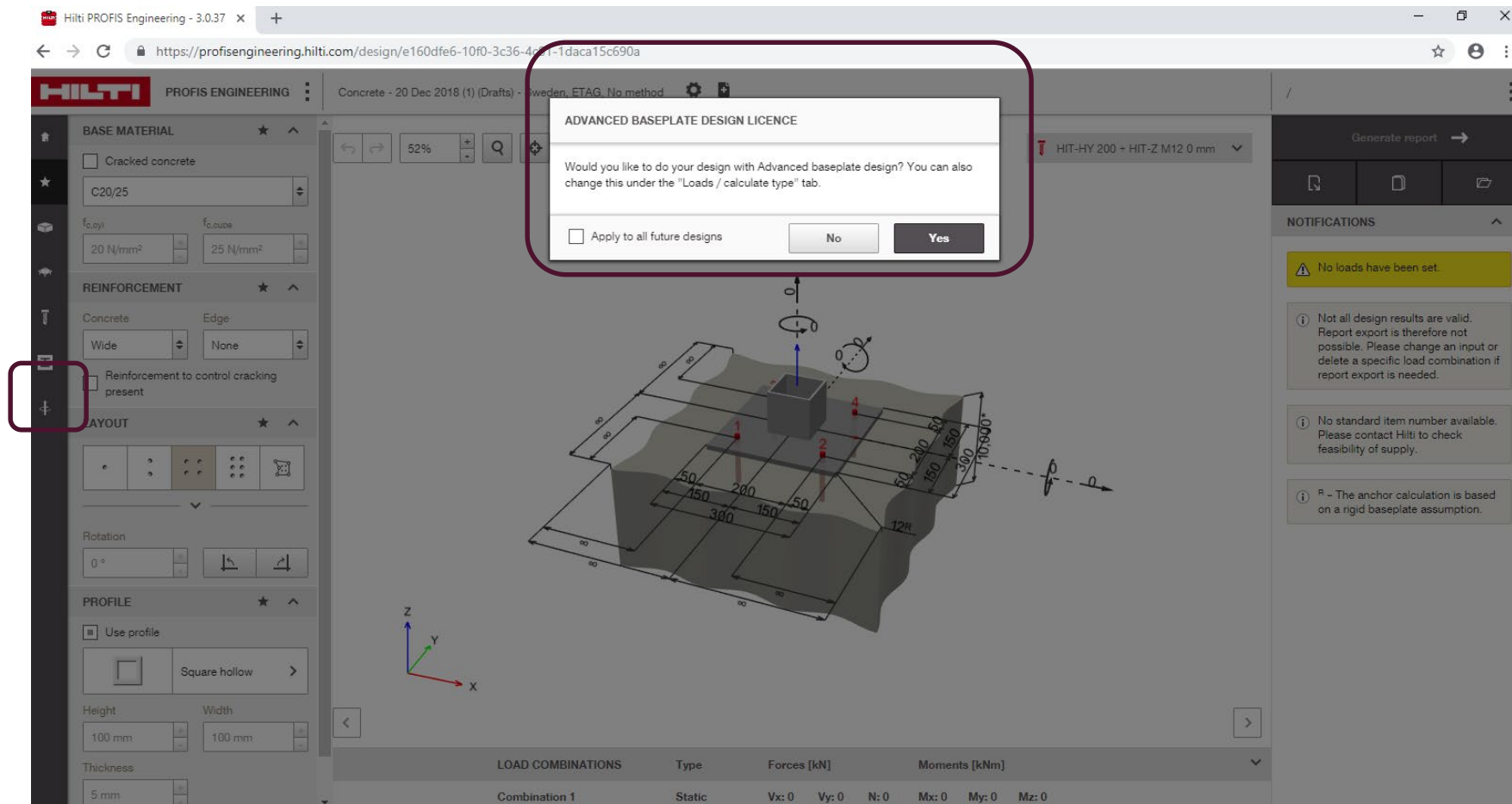


The screenshot shows the login interface for Profis Engineering. At the top left is the HILTI logo. Below it, the text "LOG IN" is displayed. There are two input fields: the first contains the email address "carlos.taborda@hilti.com" and has an envelope icon; the second contains a masked password "....." and has a lock icon and a visibility toggle icon. Below the password field is a checkbox labeled "Keep me logged in" which is checked. A prominent red "LOG IN" button is positioned below the checkbox. Underneath the button are two links: "Forgot password? >" and "Need help? Contact us >". At the bottom, there is a red-outlined "REGISTER" button. The word "or" is centered between the "LOG IN" and "REGISTER" buttons.

ВВЕДІТЬ СВОЇ НАЛАШТУВАННЯ, ВКЛЮЧАЮЧИ МОВУ ТА РЕГІОН, ПЕРЕД ТИМ, ЯК ОТРИМАТИ ДОСТУП ДО КОНКРЕТНОГО МОДУЛЯ РОЗРУХНКУ



ПРИ НЕОБХІДНОСТІ, ПІДТВЕРДІТЬ ДОСТУП ДО РОЗШИРЕНОГО РОЗРАХУНКУ БАЗОВОЇ ПЛИТИ ЗА ДОПОМОГОЮ СПЛИВАЮЧИХ ПОВІДОМЛЕНЬ АБО ВКЛАДКА НАВАНТАЖЕНЬ / ТИП РОЗРАХУНКУ



ВСТАНОВІТЬ РЕЖИМ РОЗРАХУНКУ ВАШОЇ ПЛИТИ - ЖОРСТКИЙ АБО ГНУЧКИЙ

The screenshot displays the Hilti PROFIS Engineering software interface. The browser address bar shows the URL: <https://profisengineering.hilti.com/design/e160dfe6-10f0-3c36-4c81-1daca15c690a>. The software title is "HILTI PROFIS ENGINEERING". The project name is "Concrete - 20 Dec 2018 (1) (Drafts) - Sweden, Steel: EN based design, Anchor: ETAG, No method".

The "BASEPLATE DESIGN APPROACH" section is highlighted with a red box, showing the "Flexible" option selected in a dropdown menu. Below it, there is an "Advanced settings" button. The "FACTORED LOAD INPUT" section has a "Show load inputs" checkbox. The "LOAD TYPE" section shows three icons representing different load types. The "Loads" section has two radio buttons: "Design loads" (selected) and "Characteristic loads".

The central 3D model shows a concrete slab with a square baseplate. The slab dimensions are 1000x1000 mm. The baseplate dimensions are 300x300 mm. The slab thickness is 120 mm. The baseplate is positioned 50 mm from the edges of the slab. The baseplate is supported by four anchors, labeled 1, 2, 3, and 4. The anchors are spaced 200 mm apart. The baseplate is positioned 150 mm from the center of the slab. The baseplate is positioned 150 mm from the center of the slab. The baseplate is positioned 150 mm from the center of the slab. The baseplate is positioned 150 mm from the center of the slab.

The right sidebar contains a "Generate report" button and a "NOTIFICATIONS" section. The notifications include:

- PROFIS Engineering is not performing detailed design verifications for serviceability limit states (SLS). To verify displacements, please input an SLS load combination, and make sure the displacements for this load combination are within the accepted limits.
- No loads have been set.
- Not all design results are valid. Report export is therefore not possible. Please change an input or delete a specific load combination if report export is needed.
- No standard item number available. Please contact Hilti to check feasibility of supply.

The bottom of the interface shows a table for "LOAD COMBINATIONS":

LOAD COMBINATIONS	Type	Forces [kN]			Moments [kNm]		
Combination 1	Static	Vx: 0	Vy: 0	N: 0	Mx: 0	My: 0	Mz: 0

ВВЕДІТЬ СВОЇ ДАНІ ПО НАВАНТАЖЕННЯМ ТА ІНШІ ГРАНИЧНІ УМОВИ - ПЕРЕД ТИМ, ЯК ПРИСТУПИТИ ДО ОБЧИСЛЕННЯ

The screenshot displays the Hilti PROFIS Engineering software interface. The main window shows a 3D model of a steel connection with dimensions and a coordinate system (X, Y, Z). The interface includes several panels and controls:

- Left Panel (WELDS):** Contains settings for web and flange welds, including location, throat thickness, and material (S 235).
- Left Panel (STIFFENERS):** Contains settings for stiffeners, including layout, shape (Triangular), width (50 mm), height (120 mm), and thickness (4 mm).
- Top Panel:** Shows the current design (Concrete - 20 Dec 2018 (1) (Drafts) - Sweden, Steel: EN based design, Anchor: ETAG) and a dropdown menu for the anchor type (HIT-HY 200 + HIT-Z M12 0 mm).
- Right Panel (NOTIFICATIONS):** Contains a "Calculate" button and a notification stating: "PROFIS Engineering is not performing detailed design verifications for serviceability limit states (SLS). To verify displacements, please input an SLS load combination, and make sure the displacements for this load combination are within the accepted limits." Another notification mentions: "No standard item number available. Please contact Hilti to check feasibility of supply."
- Bottom Panel (LOAD COMBINATIONS):** Shows a table with the following data:

LOAD COMBINATIONS	Type	Forces [kN]	Moments [kNm]
Combination 1	Static	Vx: 0 Vy: 0 N: 5	Mx: 0 My: 0 Mz: 0

ВІДБУДУТЬСЯ ІТЕРАЦІЇ, ЩО ПОКАЗУЮТЬ ХІД РОЗРАХУНКУ ВІДСОТКІВ...

Concrete - 20 Dec 2018 (1) (Drafts) - Sweden, Steel: EN based design, Anchor: ETAG

WELDS

Web weld location

Web weld throat thickness: 4 mm

Web weld material: Web weld material: S 235

Flange weld location

Flange weld throat thickness: 4 mm

Flange weld material: Flange weld material: S 235

STIFFENERS

Layout

Shape: Triangular

Width: 50 mm, Height: 120 mm

Thickness: 4 mm

1 - Iteration 8, Load 100.00 %

LOAD COMBINATIONS

Combination	Type	Forces [kN]			Moments [kNm]		
		Vx	Vy	N	Mx	My	Mz
Combination 1	Static	0	0	5	0	0	0

NOTIFICATIONS

- Start the design calculation by clicking the Calculate button.
- PROFIS Engineering is not performing detailed design verifications for serviceability limit states (SLS). To verify displacements, please input an SLS load combination, and make sure the displacements for this load combination are within the accepted limits.
- No standard item number available. Please contact Hilti to check feasibility of supply.

ОЦІНІТЬ СВІЙ РОЗРАХУНОК - ЖОРСТКИЙ ТА ГНУЧКИЙ - І «СКАСУЙТЕ», ЩОБ ПЕРЕГЛЯНУТИ АБО «ПРИЙМІТЬ», ЩОБ ПЕРЕЙТИ ДО ПЕРЕВІРКИ

Click for more details

0 mm

Plastic strain

Deformation

Concrete stresses

0 mm

	Equivalent rigid baseplate (FEM)	Flexible baseplate (FEM)
Anchor tension forces		
Anchor 1	1.3 kN	2 kN (54%)
Anchor 2	1.2 kN	2 kN (67%)
Anchor 3	1.3 kN	2 kN (54%)
Anchor 4	1.2 kN	2 kN (67%)
Baseplate plastic strain (max)	None	0%
Baseplate deformation (max)	0 mm	0 mm

Upon clicking "Confirm", you confirm that you have specified the baseplate (thickness of 12 mm) and acknowledge that you have been informed about the implications of using the flexible calculation functionality. Please click "Cancel" if you do not want to proceed further with this assessment, or in case your specified baseplate cannot be considered close to rigid.

Cancel Confirm

WELDS

Web weld location

Web weld throat thickness

4 mm

Web weld material

Web weld material: S 235

Flange weld location

Flange weld throat thickness

4 mm

Flange weld material

Flange weld material: S 235

STIFFENERS

Layout

Shape

Triangular

Width

50 mm

Height

120 mm

Thickness

4 mm

Generate report

NOTIFICATIONS

Start the design calculation by clicking the Calculate button.

Calculate

PROFIS Engineering is not performing detailed design verifications for serviceability limit states (SLS). To verify displacements, please input an SLS load combination, and make sure the displacements for this load combination are within the accepted limits.

No standard item number available. Please contact Hilti to check feasibility of supply.

ПЕРЕГЛЯНЬТЕ РОЗРАХУНКИ АНКЕРІВ, ФУНДАМЕНТНОЇ ПЛИТИ, ЗВАРНИХ ШВІВ, РЕБЕР ЖОРСТКОСТІ, БЕТОНУ ТА ПРОФІЛЮ

The screenshot displays the Hilti PROFIS Engineering software interface. The central 3D model shows a concrete foundation with a steel anchor plate and a stiffener. The design results are summarized in the right-hand panel:

- ANCHOR DESIGN**
 - Tension
 - Concrete breakout: 13%
 - Shear
 - Pryout: 1%
 - Combination: 5%
- BASEPLATE**
 - Von Mises stress / plastic strain
 - Von Mises stress σ_{eq} : 15 N/mm²
 - Plastic strain ϵ_{pl} : 0%
 - Hole bearing: 0.006 kN < 103.68 kN, 1%

The bottom panel shows the following load combination data:

LOAD COMBINATIONS	Type	Forces [kN]	Moments [kNm]
Combination 1	Static	Vx: 0 Vy: 0 N: 5	Mx: 0 My: 0 Mz: 0

НАТИСНІТЬ «ЗГЕНЕРУВАТИ ЗВІТ», ЩОБ ОТРИМАТИ РЕЗУЛЬТАТ - ПОТІМ НАЛАШТУЙТЕ ДЕТАЛІ ТА ЗБЕРЕЖІТЬ...

GENERATE REPORT

Summary

Anchor type and diameter
HIT-HY 200 + HIT-Z M12

Base material
C20/25

Evaluation service report
ETA 12,0006

Issued - Valid
2017-05-30

Proof
Design method ETAG Bond

Effective embedment depth
hef=60 mm

Stand-off installation
eb=0 mm (No stand-off)

Details

Custom Comments

Layout

Trimble connect

Cancel

Save and generate


LOAD COMBINATIONS

Type	Forces [kN]	Moments [kNm]
Combination 1	Static Vx: 0 Vy: 0 N: 5	Mx: 0 My: 0 Mz: 0

Von Mises stress / plastic strain
Von Mises stress σ_{eq} 15 N/mm²
Plastic strain ϵ_{pl} 0%

Hole bearing
0.006 kN < 103.68 kN 1%

..ПЕРЕД ЗАВАНТАЖЕННЯМ PDF-ФАЙЛУ, ЩО МІСТИТЬ ДОКЛАДНІ РОЗРАХУНКИ, ПЕРЕВІРКИ ТА ПІДТВЕРДЖЕННЯ!



Hilti PROFIS Engineering 3.0.37

www.hilti.se

Company: _____ Page: 1
 Address: _____ Specifier: _____
 Phone / Fax: _____ E-Mail: _____
 Design: Concrete - 20 Dec 2018 (1) Date: 2018-12-20
 Fastening Point: _____

Specifier's comments:

1 Anchor Design

1.1 Input data

Anchor type and size: HIT-HY 200 + HIT-Z M12

Item number: 2018411 HIT-Z M12x105 (insert) / 2022696 HIT-HY 200-A (mortar)

Effective embedment depth: $f_{\text{eff,dist}} = 80.0 \text{ mm}$ ($f_{\text{eff,dist}} = 144.0 \text{ mm}$)

Material: DIN EN ISO 4042

Approval No.: ETA 12/0006

Issued / Valid: 2017-05-30 | -

Proof: Design Method ETAG BOND (EOTA TR 029)

Stand-off installation: $e_s = 0.0 \text{ mm}$ (no stand-off); $t = 12.0 \text{ mm}$

Baseplate: $l_y \times l_x \times t = 300.0 \text{ mm} \times 300.0 \text{ mm} \times 12.0 \text{ mm}$

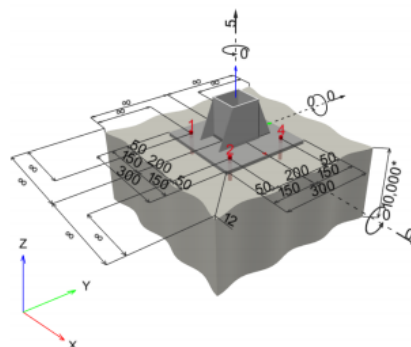
Profile: Square hollow; (L x W x T) = 100.0 mm x 100.0 mm x 5.0 mm

Base material: uncracked concrete, C20/25, $f_{\text{ctd}} = 25.00 \text{ N/mm}^2$; $h = 10,000.0 \text{ mm}$, Temp. short/long: 40/24 °C

Installation: hammer drilled hole, Installation condition: Dry

Reinforcement: No reinforcement or Reinforcement spacing $\geq 150 \text{ mm}$ (any \emptyset) or $\geq 100 \text{ mm}$ ($\emptyset \leq 10 \text{ mm}$) no longitudinal edge reinforcement

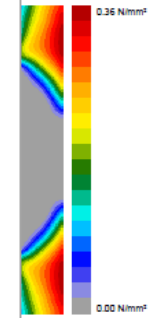
Geometry [mm] & Loading [kN, kNm]



Input data and results must be checked for conformity with the existing conditions and for plausibility.
 PROFIS Engineering | c/o 12025-2009 Hilti AG, FL 9494 Schaan | Hilti is a registered trademark of Hilti AG, Schaan

2	3	12
2018-12-20	2018-12-20	2018-12-20
O ⁴	JS	
O ²		

into account the tensile forces that develop
 scope of PROFIS Engineering



EN1992-1 section 8.7 and EN1993-1-8.

f_{td} [N/mm ²]	γ_c
20.00	1.50
Status	
OK	

2	3	12
---	---	----