

www.hilti.co.il

Company:		Page:	1
Address:		Specifier:	
Phone Fax:		E-Mail:	
Design:	RFI 4330.1 (HEA120)	Date:	24/04/2023
Fastening point:			

Specifier's comments:

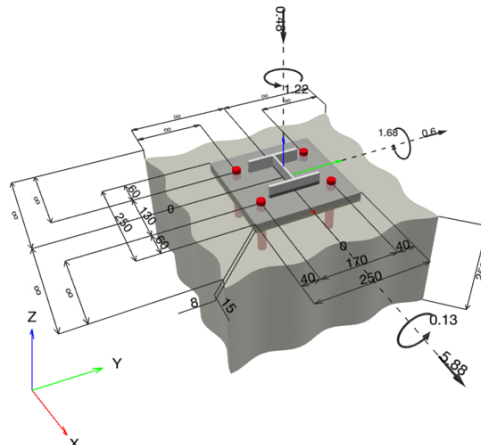
1 Anchor Design

1.1 Input data

Anchor type and diameter:	HIT-HY 200-A + HIT-Z-F 100 Years M20	
Return period (service life in years):	100	
Item number:	2106141 HIT-Z-F M20x215 (element) / 434674 HIT-HY 200-A (adhesive)	
Effective embedment depth:	$h_{ef,opti} = 100.0 \text{ mm}$ ($h_{ef,limit} = 150.0 \text{ mm}$)	
Material:	DIN EN ISO 4042	
Evaluation Service Report:	ETA 12/0006	
Issued Valid:	28/10/2020 -	
Proof:	Design Method EN 1992-4, Mechanical+ Seismic (Section 9, Annex C)	
Seismic performance category:	C2	
Seismic proof type:	9.2(3) a2) elastic design	
Seismic load percentage $\leq 20\%$:	no	
Required DLS displacements:	Tension load $\delta_{N,req(DLS)} = 1.200 \text{ mm}$, Shear load $\delta_{V,req(DLS)} = 4.900 \text{ mm}$	
Stand-off installation:	without clamping (anchor); restraint level (anchor plate): 2.00; $e_b = 8.0 \text{ mm}$; $t = 15.0 \text{ mm}$	
Anchor plate ^{CBFEM} :	Hilti Grout: , multipurpose, $f_{c,Grout} = 30.00 \text{ N/mm}^2$ $l_x \times l_y \times t = 250.0 \text{ mm} \times 250.0 \text{ mm} \times 15.0 \text{ mm}$;	
Profile:	IPBi/HEA, IPBI 120 / HE 120 A; (L x W x T x FT) = 114.0 mm x 120.0 mm x 5.0 mm x 8.0 mm	
Base material:	cracked concrete, C25/30, $f_{c,cyl} = 25.00 \text{ N/mm}^2$; $h = 250.0 \text{ mm}$, Temp. short/long: 0/0 °C, User-defined partial material safety factor $\gamma_c = 1.500$	
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	

^{CBFEM} - The anchor calculation is based on a component-based Finite Element Method (CBFEM)

Geometry [mm] & Loading [kN, kNm]



www.hilti.co.il

Company:		Page:	2
Address:		Specifier:	
Phone Fax:		E-Mail:	
Design:	RFI 4330.1 (HEA120)	Date:	24/04/2023
Fastening point:			

1.1.1 Load combination

Case	Description	Forces [kN] / Moments [kNm]	Seismic	Fire	Max. Util. Anchor [%]
1	Combination 1	N = -0.480; V _x = 5.880; V _y = 0.600; M _x = 0.130; M _y = 1.680; M _z = 1.220;	C2	no	84

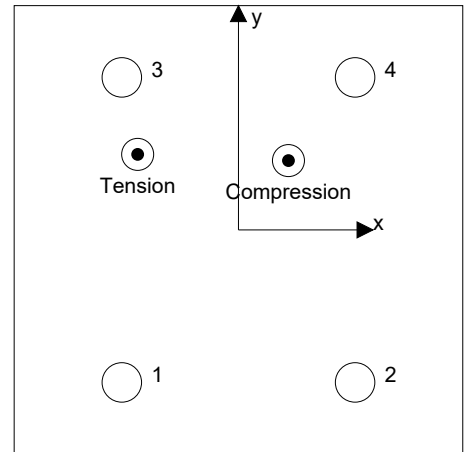
1.2 Load case/Resulting anchor forces

Anchor reactions [kN]

Tension force: (+Tension, -Compression)

Anchor	Tension force	Shear force	Shear force x	Shear force y
1	3.249	3.998	3.670	-1.587
2	1.195	4.156	3.696	1.900
3	13.163	1.870	-0.759	-1.709
4	-0.001	2.124	-0.727	1.996

resulting tension force in (x/y)=(-56.2/42.1): 17.607 [kN]
 resulting compression force in (x/y)=(27.9/38.6): 18.507 [kN]



Anchor forces are calculated based on a component-based Finite Element Method (CBFEM)

www.hilti.co.il

Company:		Page:	3
Address:		Specifier:	
Phone Fax:		E-Mail:	
Design:	RFI 4330.1 (HEA120)	Date:	24/04/2023
Fastening point:			

1.3 Tension load (EN 1992-4, Section 7.2.1, Annex C, Section C.5)

	Load [kN]	Capacity [kN]	Utilization β_N [%]	Status
Steel Strength*	13.163	97.333	14	OK
Pullout Strength*	13.163	56.667	24	OK
Concrete Breakout Failure**	17.608	30.655	58	OK
Splitting failure**	N/A	N/A	N/A	N/A

* highest loaded anchor **anchor group (anchors in tension)

1.3.1 Steel Strength

$$N_{Ed,eq} \leq N_{Rd,s,eq} = \frac{N_{Rk,s,eq}}{\gamma_{M,s,eq}} \quad \text{EN 1992-4, Table 7.1, Annex C, Section C.5}$$

$$N_{Rk,s,eq} = \alpha_{gap} \cdot \alpha_{eq} \cdot N_{Rk,s,eq}^0 \quad \text{EN 1992-4, Eq. (C.8)}$$

$$N_{Rd,s,eq, reduced} = N_{Rd,s,eq} \cdot \frac{\delta_{N,req}(DLS)}{\delta_{N,eq}(DLS)} \quad \text{EN 1992-4, Eq. (C.11a)}$$

$N_{Rk,s,eq}^0$ [kN]	α_{gap}	α_{eq}	$N_{Rk,s,eq}$ [kN]		
146.000	1.000	1.000	146.000		
$\gamma_{M,s,eq}$	$N_{Rd,s,eq}$ [kN]	$N_{Ed,eq}$ [kN]	$\delta_{N,req}(DLS)$ [mm]	$\delta_{N,eq}(DLS)$ [mm]	$N_{Rd,s,eq, reduced}$ [kN]
1.500	97.333	13.163	1.200	1.200	97.333

1.3.2 Pullout Strength

$$N_{Ed,eq} \leq N_{Rd,p,eq} = \frac{\psi_{c,eq} \cdot N_{Rk,p,eq}}{\gamma_{M,p,eq}} \quad \text{EN 1992-4, Table 7.1, Annex C, Section C.5}$$

$$N_{Rk,p,eq} = \alpha_{gap} \cdot \alpha_{eq} \cdot N_{Rk,p,eq}^0 \quad \text{EN 1992-4, Eq. (C.8)}$$

$$N_{Rd,p,eq, reduced} = N_{Rd,p,eq} \cdot \frac{\delta_{N,req}(DLS)}{\delta_{N,eq}(DLS)} \quad \text{EN 1992-4, Eq. (C.11a)}$$

$N_{Rk,p,eq}^0$ [kN]	α_{gap}	α_{eq}	$N_{Rk,p,eq}$ [kN]	$\psi_{c,eq}$	$\gamma_{M,p,eq}$
100.000	1.000	0.850	85.000	1.000	1.500
$N_{Rd,p,eq}$ [kN]	$N_{Ed,eq}$ [kN]	$\delta_{N,req}(DLS)$ [mm]	$\delta_{N,eq}(DLS)$ [mm]	$N_{Rd,p,eq, reduced}$ [kN]	
56.667	13.163	1.200	1.200	56.667	

www.hilti.co.il

Company:
 Address:
 Phone | Fax: |
 Design: RFI 4330.1 (HEA120)
 Fastening point:

Page: 4
 Specifier:
 E-Mail:
 Date: 24/04/2023

1.3.3 Concrete Breakout Failure

$$N_{Ed,eq} \leq N_{Rd,c,eq} = \frac{N_{Rk,c,eq}}{\gamma_{M,c,eq}} \quad \text{EN 1992-4, Table 7.1, Annex C, Section C.5}$$

$$N_{Rk,c,eq} = \alpha_{gap} \cdot \alpha_{eq} \cdot N_{Rk,c}^0 \cdot \frac{A_{c,N}}{A_{c,N}^0} \cdot \psi_{s,N} \cdot \psi_{re,N} \cdot \psi_{ec1,N} \cdot \psi_{ec2,N} \cdot \psi_{M,N} \quad \text{EN 1992-4, Eq. (7.1), Eq. (C.8)}$$

$$N_{Rd,c,eq, \text{reduced}} = N_{Rd,c,eq} \cdot \frac{\delta_{N,req(DLS)}}{\delta_{N,eq(DLS)}} \quad \text{EN 1992-4, Eq. (C.11a)}$$

$$N_{Rk,c}^0 = k_1 \cdot \sqrt{f_{ck}} \cdot h_{ef}^{1.5} \quad \text{EN 1992-4, Eq. (7.2)}$$

$$A_{c,N}^0 = s_{cr,N} \cdot s_{cr,N} \quad \text{EN 1992-4, Eq. (7.3)}$$

$$\psi_{s,N} = 0.7 + 0.3 \cdot \frac{c}{c_{cr,N}} \leq 1.00 \quad \text{EN 1992-4, Eq. (7.4)}$$

$$\psi_{ec1,N} = \frac{1}{1 + \left(\frac{2 \cdot e_{N,1}}{s_{cr,N}} \right)} \leq 1.00 \quad \text{EN 1992-4, Eq. (7.6)}$$

$$\psi_{ec2,N} = \frac{1}{1 + \left(\frac{2 \cdot e_{N,2}}{s_{cr,N}} \right)} \leq 1.00 \quad \text{EN 1992-4, Eq. (7.6)}$$

$$\psi_{M,N} = 2.0 - \frac{z}{1.5 \cdot h_{ef}} \geq 1.00 \quad \text{EN 1992-4, Eq. (7.7)}$$

$A_{c,N}$ [mm ²]	$A_{c,N}^0$ [mm ²]	$c_{cr,N}$ [mm]	$s_{cr,N}$ [mm]	$f_{c,cyl}$ [N/mm ²]		
180,000	90,000	150.0	300.0	25.00		
$e_{c1,N}$ [mm]	$\psi_{ec1,N}$	$e_{c2,N}$ [mm]	$\psi_{ec2,N}$	$\psi_{s,N}$	$\psi_{re,N}$	
34.5	0.813	70.4	0.681	1.000	1.000	
z [mm]	$\psi_{M,N}$	k_1	$N_{Rk,c}^0$ [kN]	α_{gap}	α_{eq}	$N_{Rk,c,eq}$ [kN]
84.1	1.439	7.700	38.500	1.000	0.750	45.983
$\gamma_{M,c,eq}$	$N_{Rd,c,eq}$ [kN]	$N_{Ed,eq}$ [kN]	$\delta_{N,req(DLS)}$ [mm]	$\delta_{N,eq(DLS)}$ [mm]	$N_{Rd,c,eq, \text{reduced}}$ [kN]	
1.500	30.655	17.608	1.200	1.200	30.655	

Group anchor ID

1-3

www.hilti.co.il

Company:		Page:	5
Address:		Specifier:	
Phone Fax:		E-Mail:	
Design:	RFI 4330.1 (HEA120)	Date:	24/04/2023
Fastening point:			

1.4 Shear load (EN 1992-4, Section 7.2.2, Annex C, Section C.5)

	Load [kN]	Capacity [kN]	Utilization β_v [%]	Status
Steel Strength (without lever arm)*	4.156	11.900	35	OK
Steel failure (with lever arm)*	N/A	N/A	N/A	N/A
Pryout Strength*	4.156	15.677	27	OK
Concrete edge failure in direction **	N/A	N/A	N/A	N/A

* highest loaded anchor **anchor group (relevant anchors)

1.4.1 Steel Strength (without lever arm)***

$$V_{Ed,eq} \leq V_{Rd,s,eq} = \frac{V_{Rk,s,eq}}{\gamma_{Ms,V,eq}} \quad \text{EN 1992-4, Table 7.2, Annex C, Section C.5}$$

$$V_{Rk,s,eq} = \alpha_{gap} \cdot \alpha_{eq} \cdot k_7 \cdot V_{Rk,s,eq}^0 \quad \text{EN 1992-4, Eq. (7.35), Eq. (C.8)}$$

$$V_{Rd,s,eq, reduced} = V_{Rd,s,eq} \cdot \frac{\delta_{V,req(DLS)}}{\delta_{V,eq(DLS)}} \quad \text{EN 1992-4, Eq. (C.11b)}$$

$V_{Rk,s,eq}^0$ [kN]	k_7	α_{gap}	α_{eq}	$V_{Rk,s,eq}$ [kN]	
35.000	1.000	0.500	0.850	14.875	
$\gamma_{Ms,eq}$	$V_{Rd,s,eq}$ [kN]	$V_{Ed,eq}$ [kN]	$\delta_{V,req(DLS)}$ [mm]	$\delta_{V,eq(DLS)}$ [mm]	$V_{Rd,s,eq, reduced}$ [kN]
1.250	11.900	4.156	4.900	4.900	11.900

***The design is only valid for HIT-HY 200-A + HIT-Z-F 100 Years M20 with total anchor length ≤ 250.0 [mm] (e.g. HIT-HY 200-A + HIT-Z-F 100 Years M20x250)

www.hilti.co.il

Company:
 Address:
 Phone | Fax: |
 Design: RFI 4330.1 (HEA120)
 Fastening point:

Page: 6
 Specifier:
 E-Mail:
 Date: 24/04/2023

1.4.2 Pryout Strength

$$V_{Ed,eq} \leq V_{Rd,cp,eq} = \frac{V_{Rk,cp,eq}}{\gamma_{Mc,p,eq}} \quad \text{EN 1992-4, Table 7.2, Annex C, Section C.5}$$

$$V_{Rk,cp,eq} = \alpha_{gap} \cdot \alpha_{eq} \cdot k_8 \cdot N_{Rk,c} \quad \text{EN 1992-4, Eq. (7.39a), Eq. (C.8)}$$

$$V_{Rd,cp,eq, reduced} = V_{Rd,cp,eq} \cdot \frac{\delta_{V,req(DLS)}}{\delta_{V,eq(DLS)}} \quad \text{EN 1992-4, Eq. (C.11b)}$$

$$N_{Rk,c} = N_{Rk,c}^0 \cdot \frac{A_{c,N}}{A_{c,N}^0} \cdot \psi_{s,N} \cdot \psi_{re,N} \cdot \psi_{ec1,N} \cdot \psi_{ec2,N} \cdot \psi_{M,N} \quad \text{EN 1992-4, Eq. (7.1)}$$

$$N_{Rk,c}^0 = k_1 \cdot \sqrt{f_{ck}} \cdot h_{ef}^{1.5} \quad \text{EN 1992-4, Eq. (7.2)}$$

$$A_{c,N}^0 = s_{cr,N} \cdot s_{cr,N} \quad \text{EN 1992-4, Eq. (7.3)}$$

$$\psi_{s,N} = 0.7 + 0.3 \cdot \frac{c}{c_{cr,N}} \leq 1.00 \quad \text{EN 1992-4, Eq. (7.4)}$$

$$\psi_{ec1,N} = \frac{1}{1 + \left(\frac{2 \cdot e_{v,1}}{s_{cr,N}} \right)} \leq 1.00 \quad \text{EN 1992-4, Eq. (7.6)}$$

$$\psi_{ec2,N} = \frac{1}{1 + \left(\frac{2 \cdot e_{v,2}}{s_{cr,N}} \right)} \leq 1.00 \quad \text{EN 1992-4, Eq. (7.6)}$$

$$\psi_{M,N} = 1 \quad \text{EN 1992-4, Eq. (7.7)}$$

$A_{c,N}$ [mm ²]	$A_{c,N}^0$ [mm ²]	$c_{cr,N}$ [mm]	$s_{cr,N}$ [mm]	k_8	$f_{c,cyl}$ [N/mm ²]	
50,525	90,000	150.0	300.0	2.560	25.00	
$e_{c1,v}$ [mm]	$\psi_{ec1,N}$	$e_{c2,v}$ [mm]	$\psi_{ec2,N}$	$\psi_{s,N}$	$\psi_{re,N}$	$\psi_{M,N}$
0.0	1.000	0.0	1.000	1.000	1.000	1.000
k_1	$N_{Rk,c}^0$ [kN]	α_{gap}	α_{eq}	$V_{Rk,cp,eq}^0$ [kN]	$V_{Rk,cp,eq}$ [kN]	
7.700	38.500	0.500	0.850	55.330	23.515	
$\gamma_{Mc,p,eq}$	$V_{Rd,cp,eq}$ [kN]	$V_{Ed,eq}$ [kN]	$\delta_{V,req(DLS)}$ [mm]	$\delta_{V,eq(DLS)}$ [mm]	$V_{Rd,cp,eq, reduced}$ [kN]	
1.500	15.677	4.156	4.900	4.900	15.677	

Group anchor ID

2

www.hilti.co.il

Company:		Page:	7
Address:		Specifier:	
Phone Fax:		E-Mail:	
Design:	RFI 4330.1 (HEA120)	Date:	24/04/2023
Fastening point:			

1.5 Combined tension and shear loads (EN 1992-4, Section 7.2.3 Annex C, Section C.5 (3))

Steel failure

β_N	β_V	k_{15}	Utilization $\beta_{N,V}$ [%]	Status
0.033	0.336	1.000	37	OK

$$\beta_N^{k_{15}} + \beta_V^{k_{15}} \leq 1.0$$

Concrete failure

β_N	β_V	k_{15}	Utilization $\beta_{N,V}$ [%]	Status
0.574	0.265	1.000	84	OK

$$\beta_N^{k_{15}} + \beta_V^{k_{15}} \leq 1.0$$

1.6 Warnings

- The anchor design methods in PROFIS Engineering require rigid anchor plates as per current regulations (ETAG 001/Annex C, EOTA TR029, etc.). This means load re-distribution on the anchors due to elastic deformations of the anchor plate are not considered - the anchor plate is assumed to be sufficiently stiff, in order not to be deformed when subjected to the design loading. PROFIS Engineering calculates the minimum required anchor plate thickness with CBFEM to limit the stress of the anchor plate based on the assumptions explained above. The proof if the rigid base plate assumption is valid is not carried out by PROFIS Engineering. Input data and results must be checked for agreement with the existing conditions and for plausibility!
- Check your national regulations for proper selection of the seismic performance category!
- Checking the transfer of loads into the base material is required in accordance with EN 1992-4, Annex A!
- Attention! In case of compressive anchor forces a buckling check as well as the proof of the local load transfer into and within the base material (incl. punching) has to be done separately.
- The design is only valid if the clearance hole in the fixture is not larger than the value given in Table 6.1 of EN 1992-4! For larger diameters of the clearance hole see section 6.2.2 of EN 1992-4!
- The accessory list in this report is for the information of the user only. In any case, the instructions for use provided with the product have to be followed to ensure a proper installation.
- For the determination of the $\psi_{re,v}$ (concrete edge failure) the minimum concrete cover defined in the design settings is used as the concrete cover of the edge reinforcement.
- The design is only valid for HIT-HY 200-A + HIT-Z-F 100 Years M20 with total anchor length ≤ 250.0 [mm] (e.g. HIT-HY 200-A + HIT-Z-F 100 Years M20x250)
- The anchor design methods in PROFIS Engineering require rigid anchor plates, as per current regulations (AS 5216:2021, ETAG 001/Annex C, EOTA TR029 etc.). This means that the anchor plate should be sufficiently rigid to prevent load re-distribution to the anchors due to elastic/plastic displacements. The user accepts that the anchor plate is considered close to rigid by engineering judgment."
- The characteristic bond resistances depend on the return period (service life in years): 100
- Warning: The grout has to be applied on roughened concrete surface according to EN 1992-1-1, section 6.2.5

www.hilti.co.il

Company:		Page:	8
Address:		Specifier:	
Phone Fax:		E-Mail:	
Design:	RFI 4330.1 (HEA120)	Date:	24/04/2023
Fastening point:			

1.7 Installation data

Anchor plate, steel: S 275; E = 210,000.00 N/mm²; f_{yk} = 275.00 N/mm²

Anchor type and diameter: HIT-HY 200-A + HIT-Z-F 100 Years M20

Profile: IPBi/HEA, IPBI 120 / HE 120 A; (L x W x T x FT) = 114.0 mm x 120.0 mm x 5.0 mm x 8.0 mm

Item number: 2106141 HIT-Z-F M20x215 (element) / 434674 HIT-HY 200-A (adhesive)

Hole diameter in the fixture (pre-setting) : d_r = 22.0 mm

Maximum installation torque: 150 Nm

Hole diameter in the fixture (through fastening) : d_r = 24.0 mm

Hole diameter in the base material: 22.0 mm

Plate thickness (input): 15.0 mm

Hole depth in the base material: 156.0 mm

Minimum thickness of the base material: 200.0 mm

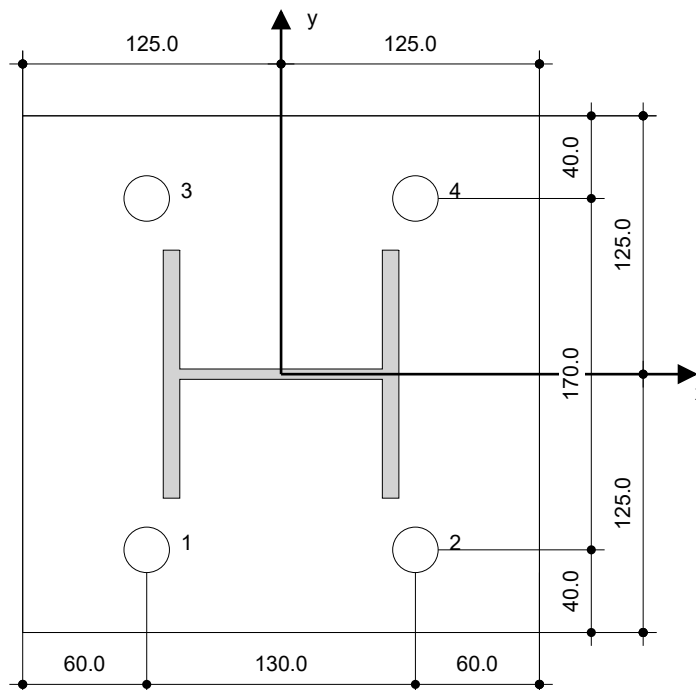
Drilling method: Hammer drilled

Cleaning: No cleaning of the drilled hole is required

Hilti SAFEset HIT-Z non-cleaning bonded expansion anchor with HIT-HY 200 injection mortar with 100 mm embedment h_{ef}, M20, Hot dip galvanized, Hammer drilled installation per ETA 12/0006

1.7.1 Recommended accessories

Drilling	Cleaning	Setting
<ul style="list-style-type: none"> • Suitable Rotary Hammer • Properly sized drill bit 	<ul style="list-style-type: none"> • No accessory required 	<ul style="list-style-type: none"> • Dispenser including cassette and mixer • Torque wrench



Coordinates Anchor [mm]

Anchor	x	y	c _{-x}	c _{+x}	c _{-y}	c _{+y}
1	-65.0	-85.0	-	-	-	-
2	65.0	-85.0	-	-	-	-
3	-65.0	85.0	-	-	-	-
4	65.0	85.0	-	-	-	-

Company:		Page:	9
Address:		Specifier:	
Phone Fax:		E-Mail:	
Design:	RFI 4330.1 (HEA120)	Date:	24/04/2023
Fastening point:			

2 Anchor plate rigidity check

2.1 Input data

Anchor plate:	Shape: Rectangular $l_x \times l_y \times t = 250.0 \text{ mm} \times 250.0 \text{ mm} \times 15.0 \text{ mm}$ Calculation: Anchor Plate Rigidity Check Material: S 275; $F_y = 275.00 \text{ N/mm}^2$; $\epsilon_{lim} = 5.00\%$
Anchor type and size:	HIT-HY 200-A + HIT-Z-F 100 Years M20, $h_{ef} = 100.0 \text{ mm}$
Anchor stiffness:	The anchor is modeled considering stiffness values determined from load displacement curves tested in an independent laboratory. Please note that no simple replacement of the anchor is possible as the anchor stiffness has a major impact on the load distribution results.
Design method:	EN-based design using component-based FEM
Seismic proof time:	a2) Elastic Design
Stand-off installation:	$e_b = 8.0 \text{ mm}$ (Stand-off with grouting); $t = 15.0 \text{ mm}$
Profile:	IPBI 120 / HE 120 A; $(L \times W \times T \times FT) = 114.0 \text{ mm} \times 120.0 \text{ mm} \times 5.0 \text{ mm} \times 8.0 \text{ mm}$ Material: S 235; $F_y = 235.00 \text{ N/mm}^2$; $\epsilon_{lim} = 5.00\%$ Eccentricity x: 0.0 mm Eccentricity y: 0.0 mm
Base material:	Cracked concrete; C25/30; $f_{c,cyl} = 25.00 \text{ N/mm}^2$; $h = 250.0 \text{ mm}$; $E = 31,000.00 \text{ N/mm}^2$; $G = 12,916.67 \text{ N/mm}^2$; $\nu = 0.20$
Welds (profile to anchor plate):	Type of redistribution: Plastic Material: S 275
Mesh size:	Number of elements on edge: 8 Min. size of element: 10.0 mm Max. size of element: 50.0 mm

2.2 Anchor plate classification

Results below are displayed for the decisive load combinations: Combination 1

Anchor tension forces	Equivalent rigid anchor plate (CBFEM)	Component-based Finite Element Method (CBFEM) anchor plate design
Anchor 1	5.516 kN	3.249 kN
Anchor 2	0.000 kN	1.195 kN
Anchor 3	6.835 kN	13.163 kN
Anchor 4	0.000 kN	-0.001 kN

User accepted to consider the selected anchor plate as rigid by his/her engineering judgement. This means the anchor design guidelines can be applied.



www.hilti.co.il

Company:		Page:	10
Address:		Specifier:	
Phone Fax:		E-Mail:	
Design:	RFI 4330.1 (HEA120)	Date:	24/04/2023
Fastening point:			

2.3 Warnings

- By using the CBFEM calculation functionality of PROFIS Engineering you may act outside the applicable design codes and your specified anchor plate may not behave rigid. Please, validate the results with a professional designer and/or structural engineer to ensure suitability and adequacy for your specific jurisdiction and project requirements.
- The anchor is modeled considering stiffness values determined from load displacement curves tested in an independent laboratory. Please note that no simple replacement of the anchor is possible as the anchor stiffness has a major impact on the load distribution results.



www.hilti.co.il

Company:		Page:	11
Address:		Specifier:	
Phone Fax:		E-Mail:	
Design:	RFI 4330.1 (HEA120)	Date:	24/04/2023
Fastening point:			

3 Summary of results

	Load combination	Max. utilization	Status
Anchors	Combination 1	84%	OK

Fastening meets the design criteria!



www.hilti.co.il

Company:		Page:	12
Address:		Specifier:	
Phone Fax:		E-Mail:	
Design:	RFI 4330.1 (HEA120)	Date:	24/04/2023
Fastening point:			

4 Remarks; Your Cooperation Duties

- Any and all information and data contained in the Software concern solely the use of Hilti products and are based on the principles, formulas and security regulations in accordance with Hilti's technical directions and operating, mounting and assembly instructions, etc., that must be strictly complied with by the user. All figures contained therein are average figures, and therefore use-specific tests are to be conducted prior to using the relevant Hilti product. The results of the calculations carried out by means of the Software are based essentially on the data you put in. Therefore, you bear the sole responsibility for the absence of errors, the completeness and the relevance of the data to be put in by you. Moreover, you bear sole responsibility for having the results of the calculation checked and cleared by an expert, particularly with regard to compliance with applicable norms and permits, prior to using them for your specific facility. The Software serves only as an aid to interpret norms and permits without any guarantee as to the absence of errors, the correctness and the relevance of the results or suitability for a specific application.
- You must take all necessary and reasonable steps to prevent or limit damage caused by the Software. In particular, you must arrange for the regular backup of programs and data and, if applicable, carry out the updates of the Software offered by Hilti on a regular basis. If you do not use the AutoUpdate function of the Software, you must ensure that you are using the current and thus up-to-date version of the Software in each case by carrying out manual updates via the Hilti Website. Hilti will not be liable for consequences, such as the recovery of lost or damaged data or programs, arising from a culpable breach of duty by you.