Deutsches Institut für Bautechnik

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Approval body for construction products and types of construction

Bautechnisches Prüfamt

An institution established by the Federal and Laender Governments

Designated according to Article 29 of Regulation (EU) No 305/2011 and member of EOTA (European Organisation for Technical Assessment)

European Technical Assessment ETA-21/0022 of 29 January 2024

English translation prepared by DIBt - Original version in German language

General Part

Technical Assessment Body issuing the European Technical Assessment:	Deutsches Institut für Bautechnik
Trade name of the construction product	SEKURANT POINT TYP 2,; SEKURANT X20 TYP 2, X50 TYP 2; SEKURANT VARIO TYP 4,11; SECU WIRE TYP 2
Product family to which the construction product belongs	Anchor devices for fastening personal fall protection systems to concrete structures
Manufacturer	SKYLOTEC GmbH Im Mühlengrund 6-8 56566 Neuwied DEUTSCHLAND
Manufacturing plant	Plants of SKYLOTEC GmbH
This European Technical Assessment contains	18 pages including 14 annexes which form an integral part of this assessment
This European Technical Assessment is issued in accordance with Regulation (EU) No 305/2011, on the basis of	EAD 331072-00-0601
This version replaces	ETA-21/0022 issued on 17 May 2021

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Specific part

1 Technical description of the product

The subject of this assessment are anchor points for protecting persons (operators) working at heights against a fall. The fall protection systems are made of stainless steel 1.4301 / 1.4305 / 1.4307 / 1.4308 / 1.4401 / 1.4404. It is fastened to reinforced normal concrete (cracked or uncracked), strength classes C20/25 to C50/60 according to EN 206[1]. The fall protection systems are fastened to the concrete with the different fasteners which can be found in the following table 1 and the annexes.

This ETA includes the products listed in the following table 1:

Table 1: Products of ETA

Annex No.	Trade Name (Product of this ETA)	Fastener
2	SEKURANT® POINT 2 TYP 2	SECUPOHL expansion anchor M14
3	SEKURANT® X20 2 TYP 2	Fischer bolt anchor FAZ II Plus 8/10 A4 or Hilti metal expansion anchor HST3-R M8x75/10 or Hilti concrete screw HUS-HR 8x55
4	SEKURANT® X50 2 TYP 2	
5	SEKURANT® Vario TYP 4	Hilti push-in anchor HKD-SR M8x30
6	SEKURANT® Vario TYP 11	Fisher hollow slab anchor FHY M10 A4
7	SECU® Wire TYP 2	Fischer bolt anchor FAZ II Plus 8/10 A4 or Hilti metal expansion anchor HST3-R M8x75/10

The components and the system setup of the product are given in Annex (1-7).

2 Specification of the intended use in accordance with the applicable EAD 33-1072-01-0601

The fall protection systems listed in table 1 is used to protect operators working at height, by arresting them in a fall. The operators attach themselves to the eye using e.g. ropes and karabiners. In the case of a fall the fall protection systems listed in Table prevent the fall and resulting physical damage assuming the correct usage by the operator. The fall protection systems listed in table are designed for use in all areas of industry, construction and maintenance.

The intended use of the fall protection systems listed in table 1 is the attachment to flat roofs or other flat surfaces (e.g. concrete walls) made of concrete.

The direction of any load for the SECU® protection system can be applied in all direction to the mounting level. The direction of load for the SEKURANT® protection system (In all variations) shall be parallel to the mounting level. Thus use at a (concrete-) wall is intended only when the direction of force still applies at a 90 ° angle to the fastening axis

The performances given in Section 3 are only valid if the of the products listed in table 1 are used in compliance with the specifications and conditions given in Annexes 1 - 7.

[1] EN 206:2013+A2:2021 Concrete - Specification, performance, production and conformity

The verifications and assessment methods on which this European Technical Assessment is based lead to the assumption of a working life of the products listed in table 1 of at least 25 years. The indications given on the working life cannot be interpreted as a guarantee given by the producer, but are to be regarded only as a means for choosing the right products in relation to the expected economically reasonable working life of the works.

3 Performance of the product and references to the methods used for its assessment

3.1 Safety in case of fire (BWR 2)

Essential characteristic	Performance
Reaction to fire	Class A1

3.2 Safety and accessibility in use (BWR 4)

Essential characteristic	Performance
Static loading	Level (kN); see respective product in annexes
Dynamic loading	Level (No. of users); see respective product in annexes
Check of deformation capacity in case of constraining forces	see respective product in annexes
Durability	No performance assessed

4 Assessment and verification of constancy of performance (AVCP) system applied, with reference to its legal base

In accordance with EAD No. 331072-01-0601, the applicable European legal act is: Decision (EU) 2018/771.
The system to be applied is: 1+

5 Technical details necessary for the implementation of the AVCP system, as provided for in the applicable EAD

Technical details necessary for the implementation of the AVCP system are laid down in the control plan deposited with Deutsches Institut für Bautechnik.

Issued in Berlin on 29 January 2024 by Deutsches Institut für Bautechnik

Dr.-Ing. Ronald Schwuchow
Head of Section

beglaubigt:
Hahn

This ETA includes the products listed in Table 1:

Table 1: Products included in this ETA

Annex	Tradename (Product in this ETA)	Fastener	Substructure
2	SEKURANT® POINT TYP 2	SECUPOHL expansion anchor M14	reinforced concrete C20/25 to C50/60 [a] (cracked or uncracked)
3	SEKURANT® X20 TYP 2	fischer bolt anchor FAZ II Plus 8/10 A4 [b] or Hilti metal expansion anchor HST3-R M8x75/10 [c] or Hilti concrete screw HUS4-HR 8x55 [d]	
4	SEKURANT® X50 TYP 2		
5	SEKURANT® VARIO TYP 4	Hilti push-in anchor HKD-SR M8x30 [e]	
6	SEKURANT® VARIO TYP 11	fischer hollow slab anchor FHY M10 A4 [f]	pre-stressed concrete hollow-core slab min. C45/55 [a]
7	SECU® WIRE TYP 2	fischer bolt anchor FAZ II Plus 8/10 A4 [b] or Hilti metal expansion anchor HST3-R M8x75/10 [c]	reinforced concrete C20/25 to C50/60 [a] (cracked or uncracked)

Annex 2 to 7 shows the components and system structure of the products.

a	EN 206:2013+A1:2016	Concrete: Specification, performance, production and conformity
b	ETA-19/0520	fischer Bolt Anchor FAZ II Plus, FAZ II Plus R, FAZ II Plus HCR
c	ETA-98/0001	Hilti metal expansion anchor HST3-R
d	ETA-20/0867	Hilti concrete screw HUS4
e	ETA-06/0047	Hilti push-in anchor HKD
f	ETA-21/0857	fischer Hollow-ceiling anchor FHY

SKYLOTEC Fall Protection Systems	**Annex 1.1**
Overview and rated values	

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Design values of actions

$F_{Ed} = F_{Ek} \times \gamma_F$

The recommended partial safety factor γ_F is 1,5.

The recommended safety factor is used in order to determine the corresponding design actions, provided no safety factor is given in national regulations or national annexes to EN1990.
That leads to the following values:

Example:

For one user: $F_{Ed} = F_{Ek} \times \gamma_F = 6kN \times 1{,}5 = 9kN$

For two users: $F_{Ed} = F_{Ek} \times \gamma_F = (6 + 1)kN \times 1{,}5 = 10{,}5kN$

For three users: $F_{Ed} = F_{Ek} \times \gamma_F = (6 + 2)kN \times 1{,}5 = 12kN$

SKYLOTEC Fall Protection Systems	**Annex 1.2**
Overview and rated values	

Table 2: Substructure reinforced concrete C20/25 to C50/60 (cracked and non-cracked)

Anchor Device	Rod height [mm]	Fastener	Edge distance c_{min} [mm]	Minimum substructure thickness h_{min} [mm]
SEKURANT® POINT TYP 2	300-700	SECUPOHL Expansion anchor M14	200	160

All components can be used in weathered outdoor areas.

The concrete substructure is to be pre-drilled with a borehole diameter of 16mm and a borehole depth of ≥ 140mm

Static loading / design resistance

$$F_{R,d} = \frac{F_{R,k}}{\gamma_M} = \frac{15{,}78kN}{1{,}5} = 10{,}50kN$$

The recommended safety factor γ_M is 1,5 provided no safety factor is given in national regulations or national annexes to EN1992.

Dynamic loading / design resistance

Max. two users

Deforming capacity

≤ 10 mm at 0,7kN with a maximum overhang of 300mm above the insulation.

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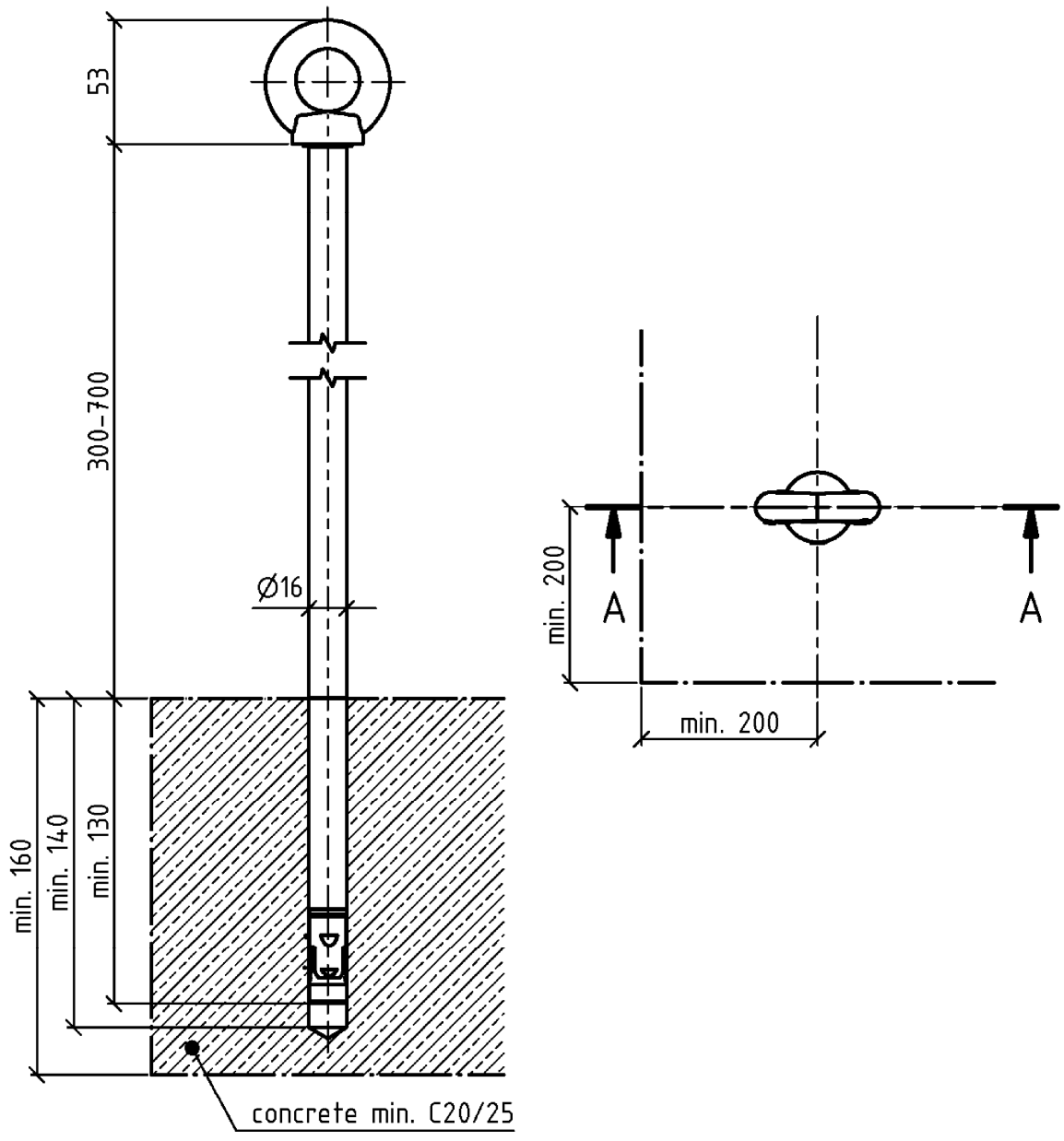

All dimensions in mm

SKYLOTEC Fall Protection Systems	**Annex 2.2**
SEKURANT® POINT TYP 2 for concrete (cracked and non-cracked)	

Table 3: Substructure reinforced concrete C20/25 to C50/60 (cracked and non-cracked)

Anchor Device	Rod height [mm]	Fastener	Edge distance c_{min} [mm]	Minimum substructure thickness h_{min} [mm]
SEKURANT® X20 TYP 2	200-1000	fischer bolt anchor FAZ II Plus 8/10 A4 [b] alternative: Hilti metal expansion anchor HST3-R M8x75/10 [c] or Hilti concrete screw HUS4-HR 8x55 [d]	50	80

All components can be used in weathered outdoor areas.

The concrete substructure is to be pre-drilled with a borehole diameter of 8mm and a borehole depth of ≥ 65mm. The installation is carried out with a torque of 20Nm.

Static loading / design resistance

$$F_{R,d} = \frac{F_{R,k}}{\gamma_M} = \frac{20{,}63kN}{1{,}5} = 13{,}75kN$$

The recommended safety factor γ_M is 1,5 provided no safety factor is given in national regulations or national annexes to EN1992.

Dynamic loading / design resistance

Max. three users

Deforming capacity

≤ 10 mm at 0,7kN with a maximum overhang of 300mm above the insulation.

[b] ETA-19/0520 fischer Bolt Anchor FAZ II Plus, FAZ II Plus R, FAZ II Plus HCR
[c] ETA-98/0001 Hilti metal expansion anchor HST3-R
[d] ETA-20/0867 Hilti concrete screw HUS4

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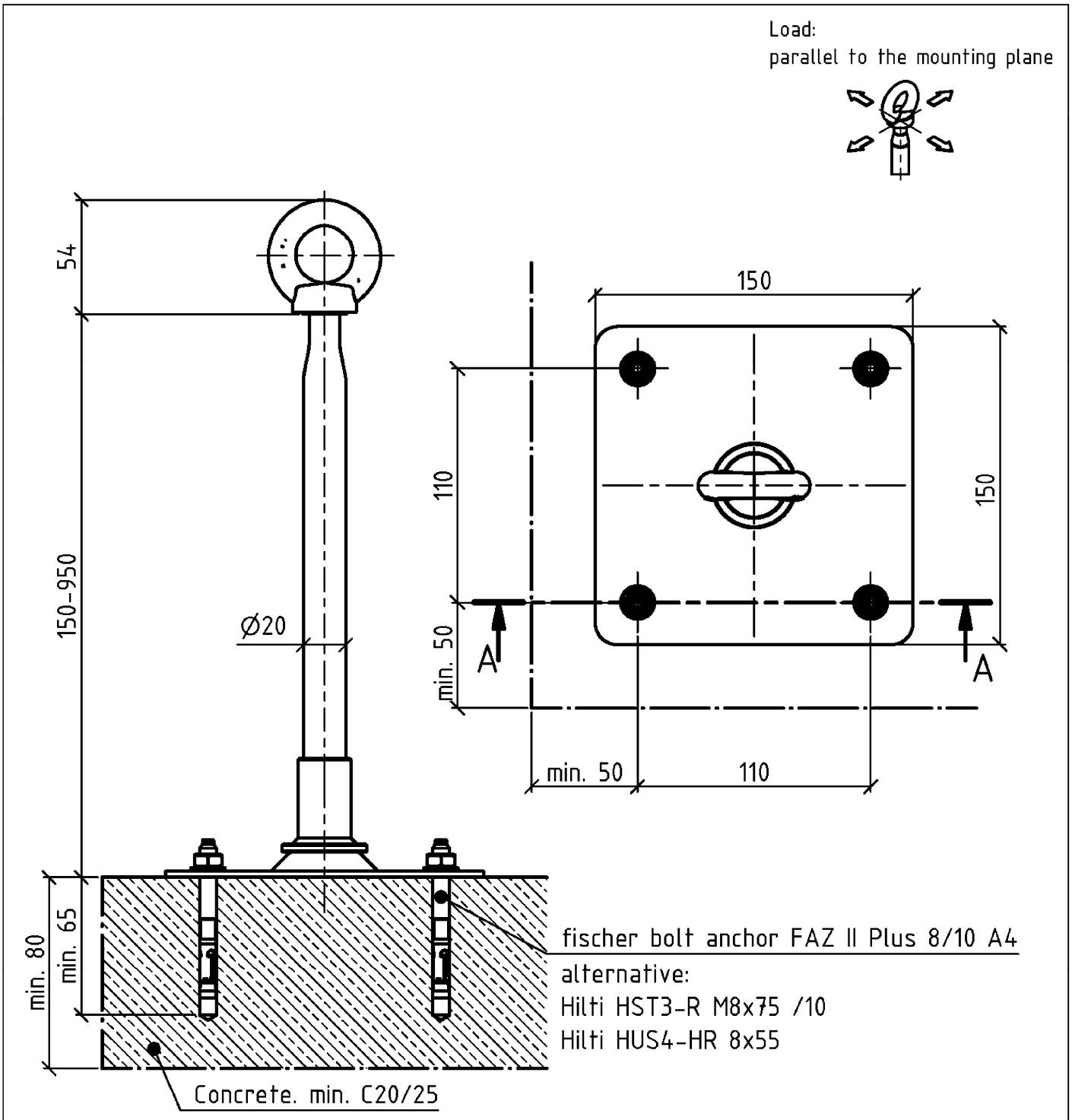

All dimensions in mm

SKYLOTEC Fall Protection Systems	**Annex 3.2**
SEKURANT® X20 TYP 2 for concrete (cracked and non-cracked)	

Table 4: Substructure reinforced concrete C20/25 to C50/60 (cracked and non-cracked)

Anchor Device	Rod height [mm]	Fastener	Edge distance c_{min} [mm]	Minimum substructure thickness h_{min} [mm]
SEKURANT® X50 TYP 2	200-1000	fischer bolt anchor FAZ II Plus 8/10 A4 [b] alternative: Hilti expansion anchor HST3-R M8x75/10 [c] or Hilti concrete screw HUS4-HR 8x55 [d]	50	80

All components can be used in weathered outdoor areas.

The concrete substructure is to be pre-drilled with a borehole diameter of 8mm and a borehole depth of ≥ 65mm. The installation is carried out with a torque of 20Nm.

Static loading / design resistance

$$F_{R,d} = \frac{F_{R,k}}{\gamma_M} = \frac{20{,}63kN}{1{,}5} = 13{,}75kN$$

The recommended safety factor γ_M is 1,5 provided no safety factor is given in national regulations or national annexes to EN1992.

Dynamic loading / design resistance

Max. three users

Deforming capacity

≤ 10 mm at 0,7kN with a maximum overhang of 300mm above the insulation.

[b] ETA-19/0520 fischer Bolt Anchor FAZ II Plus, FAZ II Plus R, FAZ II Plus HCR
[c] ETA-98/0001 Hilti metal expansion anchor HST3-R
[d] ETA-20/0867 Hilti concrete screw HUS4

SKYLOTEC Fall Protection Systems	**Annex 4.1**
SEKURANT® X50 TYP 2 for concrete (cracked and non-cracked)	

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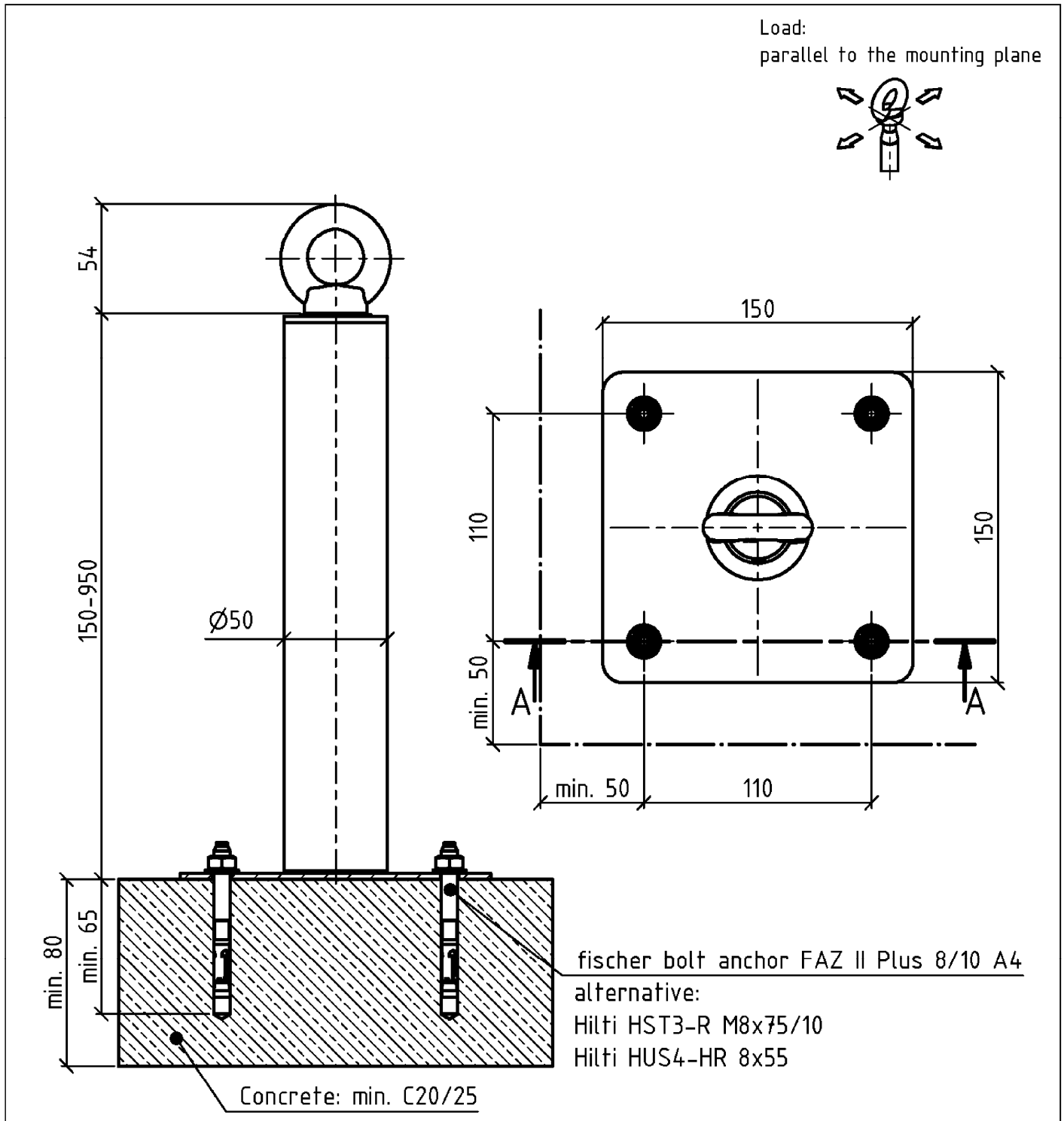

All dimensions in mm

SKYLOTEC Fall Protection Systems	**Annex 4.2**
SEKURANT® X50 TYP 2 for concrete (cracked and non-cracked)	

Table 5: Substructure reinforced concrete C20/25 to C50/60 (cracked and non-cracked)

Anchor Device	Rod height [mm]	Fastener	Edge distance c_{min} [mm]	Minimum substructure thickness h_{min} [mm]
SEKURANT® VARIO TYP 4	200-700	Hilti push-in anchor HKD-SR [e)]	105	100

All components can be used in weathered outdoor areas.

The concrete substructure is to be pre-drilled with a borehole diameter of 6mm and a borehole depth of 33mm. The installation is carried out with a torque of 16Nm.

Static loading / design resistance

$$F_{R,d} = \frac{F_{R,k}}{\gamma_M} = \frac{17{,}91kN}{1{,}5} = 11{,}9kN$$

The recommended safety factor γ_M is 1,5 provided no safety factor is given in national regulations or national annexes to EN1992.

Dynamic loading / design resistance

Max. two users

Deforming capacity

≤ 10mm at 0,7kN with a maximum overhang of 300mm above the insulation.

[e] ETA-06/0047 Hilti push-in anchor HKD

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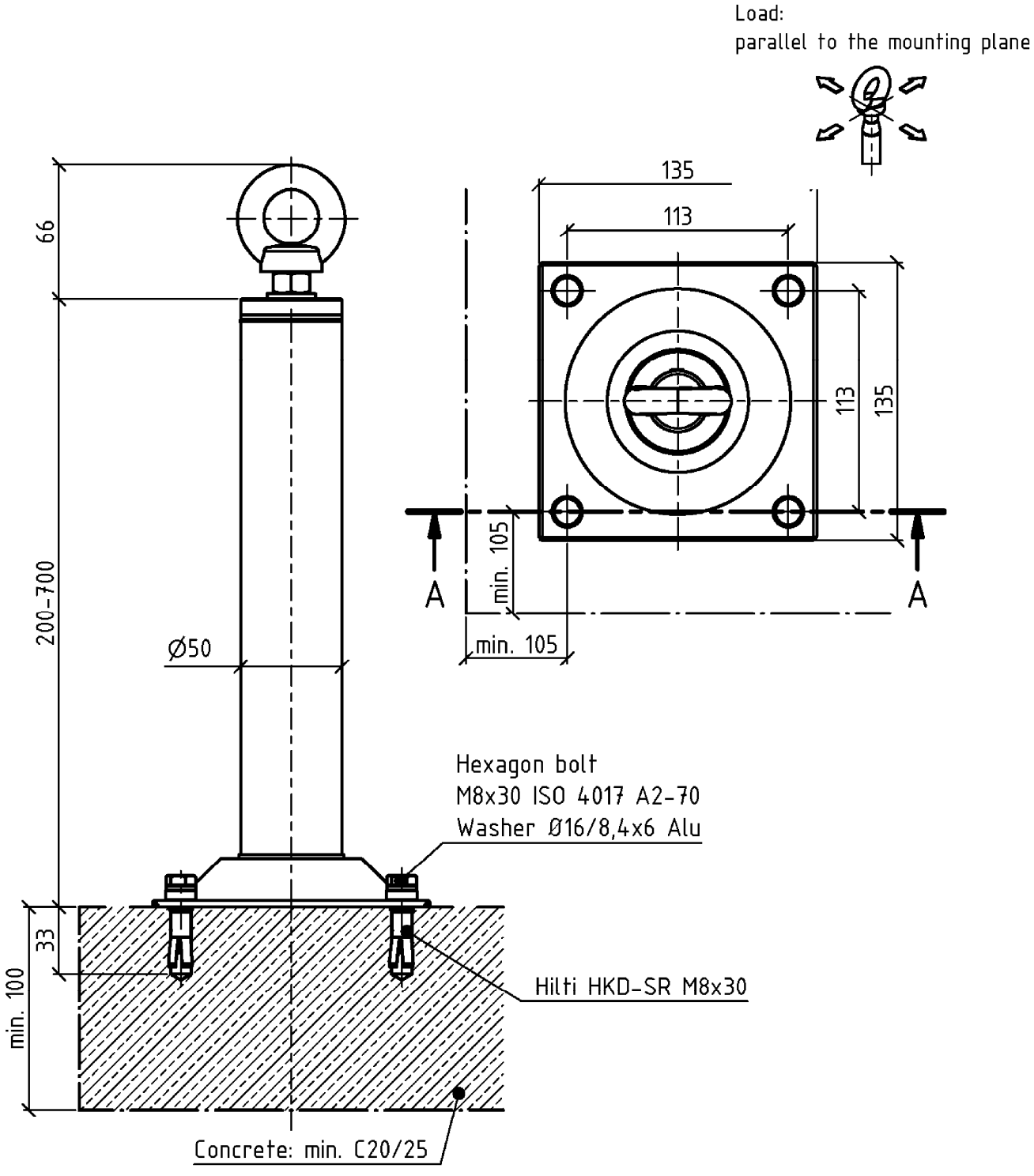

All dimensions in mm

SKYLOTEC Fall Protection Systems	**Annex 5.2**
SEKURANT® VARIO TYP 4 for concrete (cracked and non-cracked)	

Table 6: Substructure pre-stressed hollow-core slabs C45/55

Anchor Device	Rod height [mm]	Fastener	Edge distance c_{min} [mm]	Minimum substructure thickness h_{min} [mm]
SEKURANT® VARIO TYP 11	200-700	fischer hollow slab anchor FHY M10 A4 [f)]	110 / 200	28

All components can be used in weathered outdoor areas.

The concrete substructure is to be pre-drilled with a borehole diameter of 16mm and a borehole depth of ≥ 65mm. The installation is carried out with a torque of 20Nm.

Static loading / design resistance

$$F_{R,d} = \frac{F_{R,k}}{\gamma_M} = \frac{23{,}85kN}{1{,}5} = 15{,}9kN$$

The recommended safety factor γ_M is 1,5 provided no safety factor is given in national regulations or national annexes to EN1992.

Dynamic loading / design resistance

Max. three users

Deforming capacity

≤ 10 mm at 0,7kN with a maximum overhang of 300mm above the insulation.

[f] ETA-21/0857 fischer Hollow-ceiling anchor FHY

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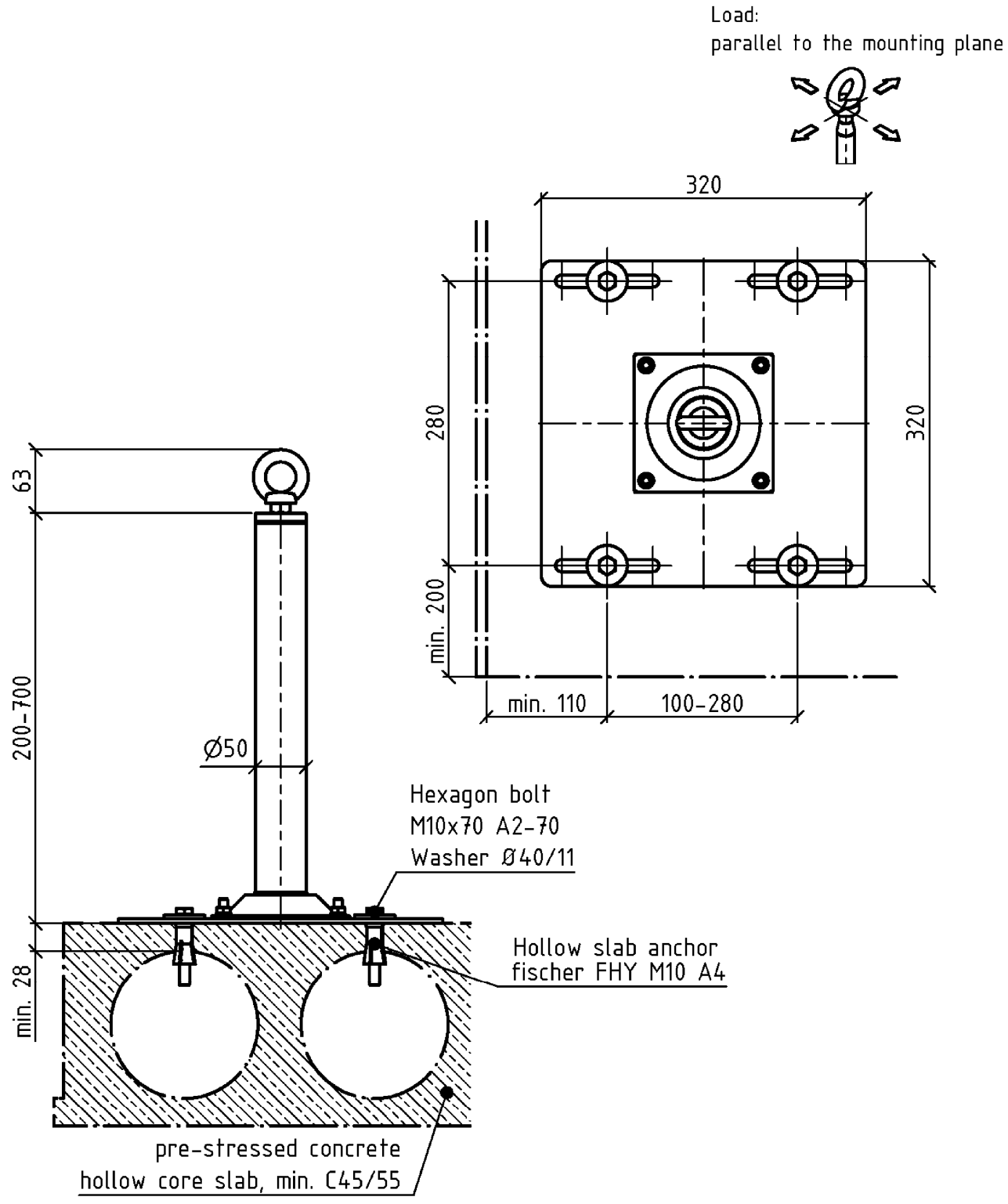

All dimensions in mm

SKYLOTEC Fall Protection Systems	**Annex 6.2**
SEKURANT® VARIO TYP 11 for pre-stressed concrete hollow core slabs	

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Tabelle 7: Untergrund bewehrter Normalbeton C20/25 bis C50/60 (gerissen und ungerissen)

Anschlageinrichtung	Seillänge [mm]	Befestiger	Randabstand c_{min} [mm]	Mindestbauteildicke h_{min} [mm]
SECU® WIRE TYP 2	445	fischer FAZ II Plus 8/10 A4[b)] Hilti HST3-R M8x75/10[c)]	100 / 120	80

Alle Bauteile der Anschlageinrichtung (Anker und Beton) sind im bewetterten Außenbereich einsetzbar.

Die Unterkonstruktion aus Beton ist mit einem Bohrdurchmesser von 8mm und einer Bohrlochtiefe von ≥ 65mm vorzubohren. Die Montage erfolgt mit einem Drehmoment von 20Nm.

Statische Belastung / Bemessungswiderstand

$$F_{R,d} = \frac{F_{R,k}}{\gamma_M} = \frac{15{,}0kN}{1{,}5} = 10{,}0kN$$

Der empfohlene Teilsicherheitsbeiwert ist γ_M beträgt 1,5 sofern kein Teilsicherheitsbeiwert in den nationalen Vorschriften oder nationalen Anhängen zu EN 1992 angegeben ist.

Dynamische Beanspruchbarkeit / Bemessungswiderstand
Maximal eine Person

Verformungskapazität
Keine Leistung bewertet

[b] ETA-19/0520 fischer Bolzenanker FAZ II Plus, FAZ II Plus R, FAZ II Plus HCR
[c] ETA-98/0001 Hilti Metallspreizanker HST3-R

SKYLOTEC Absturzsicherungssysteme	**Anhang 7.1**
SECU® WIRE TYP 2 für Beton (gerissen und ungerissen)	

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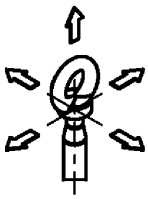
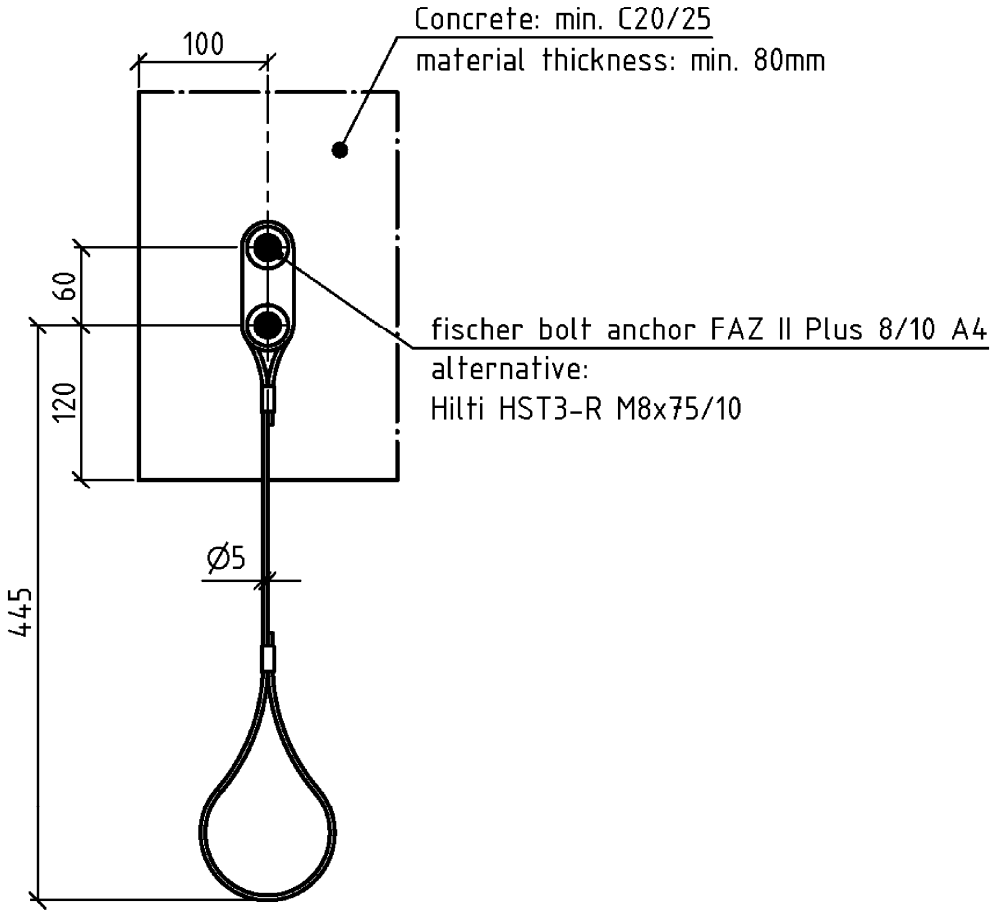
Load:
all directions





All dimensions in mm

SKYLOTEC Fall Protection Systems	**Annex 7.2**
SECU® WIRE TYP 2 for concrete (cracked and non-cracked)	