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Designated according to Article 29 of Regulation (EU) No 305/2011

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European Technical Assessment

ETA 25/1138 of 19/11/2025

Technical Assessment Body issuing the ETA: Technical and Test Institute for Construction Prague	
Trade name of the construction product	W-HLX
Product family to which the construction product belongs	Product area code: 33 Concrete screw for use in concrete for redundant non-structural systems
Manufacturer	J. van Walraven Holding B.V. Industrieweg 5 3641 RK Mijdrecht The Netherland
Manufacturing plant	Manufacturing Plant No 2
This European Technical Assessment contains	9 pages including 7 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 330747-00-0601 Fasteners for use in concrete for redundant non-structural systems

1. Technical description of the product

The W-HLX concrete screw is made of carbon steel with coating.

The anchor is screwed into a drilled cylindrical hole. The special thread of the anchor cuts an internal thread into the member while setting. The anchorage is characterised by mechanical interlock in the special thread.

The installed anchor is shown in Annex A1.

2. Specification of the intended use in accordance with the applicable EAD

The performances given in Section 3 are only valid if the anchor is used in compliance with the specifications and conditions given in Annex B.

The provisions made in this European Technical Assessment are based on an assumed working life of the anchor of 50 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 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 according to EN 13501-1
Resistance to fire	See Annex C 1

3.2 Safety and accessibility in use (BWR 4)

Essential characteristic	Performance
Characteristic resistance for all load directions and modes of failure for simplified design	See Annex C 1
Durability	See Annex B 1

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

According to the Decision 97/161/EC of the European Commission, the system 2+ of assessment verification of constancy of performance (see Annex V to the Regulation (EU) No 305/2011) apply.

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

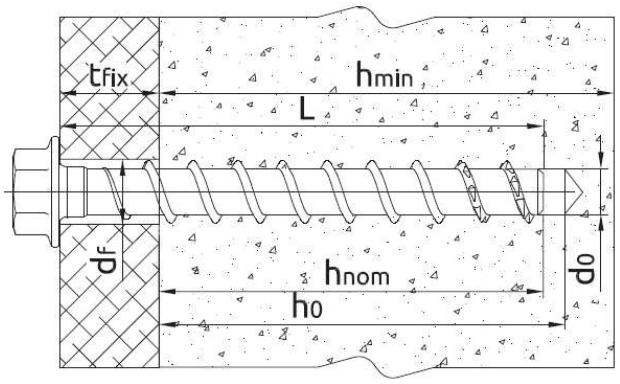
Technical details necessary for the implementation of the AVCP system are laid down in the control plan deposited at Technical and Test Institute for Construction Prague.

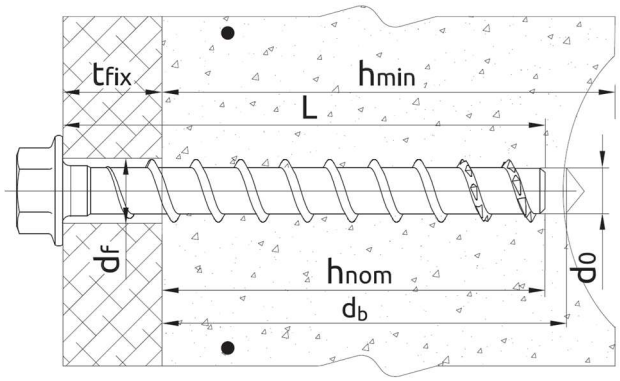
Issued in Prague on 19.11.2025

By

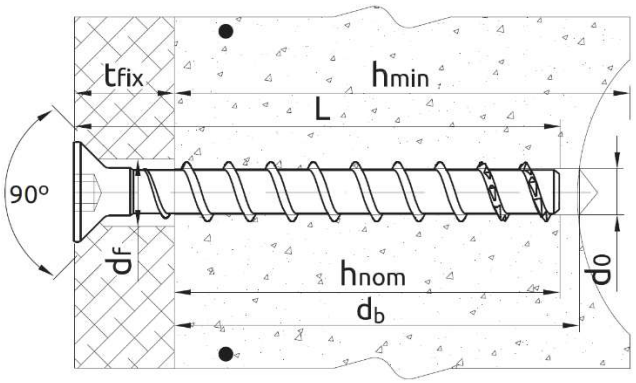
Ing. Jiří Studnička, Ph.D.
Head of the Technical Assessment Body

W-HLX-H



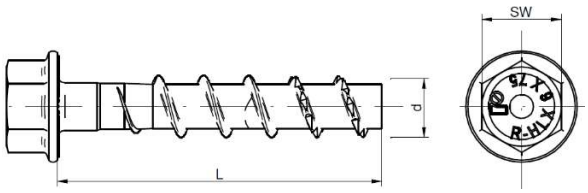
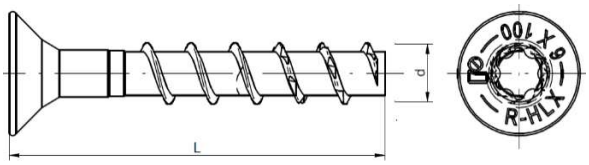
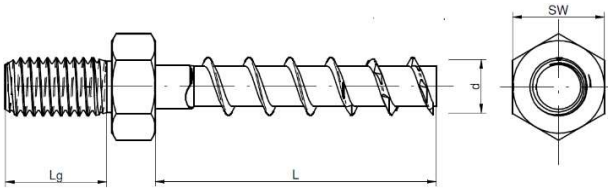
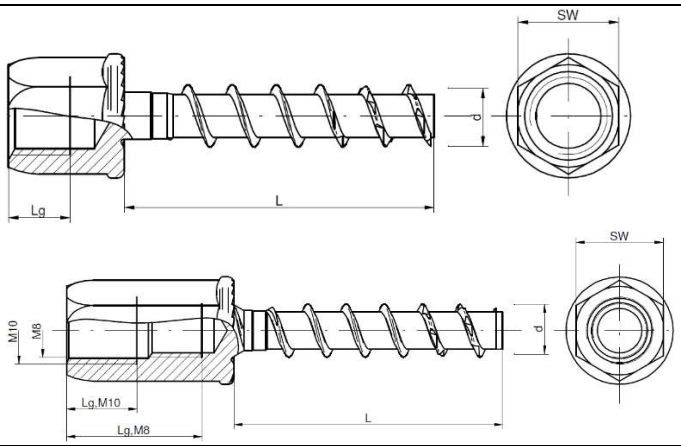
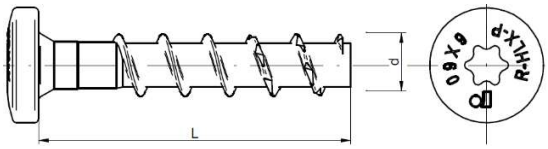
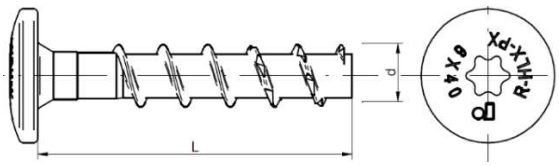


W-HLX-CS



W-HLX	
Product description Installed conditions	**Annex A 1**

W-HLX – Types

Type	Design
W-HLX-H	
W-HLX-CS	
W-HLX-M	
W-HLX-N	
W-HLX-P	
W-HLX-PX	

W-HLX	**Annex A 2**
Product description Types	

Table A1 - Materials

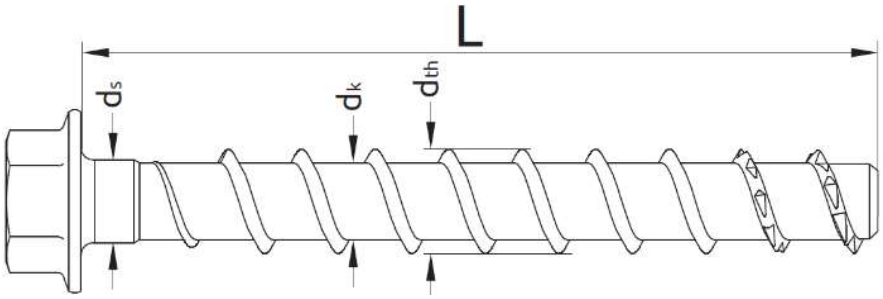
Material
Carbon steel; rupture elongation $A_5 \geq 12\%$ Galvanized zinc plating (≥ 5 μm), acc ISO 4042 or Zinc flake (≥ 5 μm), acc. ISO 10683

W-HLX – Marking

Marking:
R-HLX Identifying mark of the producer
D x L, where:
D – screw size [mm], 6
L – length of a screw [mm], e. g. 100

Table A2 - Dimensions

Nominal diameter	d_{nom}	[mm]	6
Threaded outer diameter	d_{th}	[mm]	7,9
Core diameter	d_k	[mm]	5,6
Shaft diameter	d_s	[mm]	5,85
Head sizes W-HLX-H	Sw	[-]	10
Head sizes CS	T	[-]	T40



W-HLX	
Product description Materials, Marking Dimensions	**Annex A 3**

Specifications of intended use

Anchorages subject to:

- Static and quasi-static loads
- Fire exposure

Base materials

- Compacted reinforced and unreinforced normal weight concrete without fibres (cracked and uncracked) according to EN 206:2013+A2:2021.
- Strength classes ≥ C20/25 to C50/60 according to EN 206:2013+A2:2021.
- Prestressed hollow core slabs with bottom flange thickness ≥ 25 mm and strength classes ≥ C30/37 to C50/60.

Use conditions (Environmental conditions)

- Structures subject to dry internal conditions.

Design:

- The anchorages are designed under the responsibility of an engineer experienced in anchorages and concrete work.
- The anchorages are designed in accordance with the EN 1992-4:2018, design method B
- Anchorages under fire exposure have to be designed in accordance with EN 1992-4, Annex D.
- Verifiable calculation notes and drawings are prepared taking account of the loads to be anchored. The position of the anchor is indicated on the design drawings (e.g. positions of the fastener relative to reinforcement or to support, etc.).

Installation:

- Anchor installation carried out by appropriately qualified personnel and under the supervision of the person responsible for technical matters of the site.
- Use of the anchor only as supplied by the manufacturer without exchanging any components of the anchor.
- Anchor installation in accordance with the manufacturer's specifications and drawings using the appropriate tools.
- Effective anchoring depth, edge distance and spacing not less than the specified values without minus tolerance.
- In case of aborted drill hole: new drilling at a minimum distance away of twice the depth of the aborted hole or smaller distance if the aborted drill hole is filled with high strength mortar and if under shear or oblique tension load it is not in the direction of load application.

W-HLX	**Annex B 1**
Intended use Specifications	

Table B1 - Installation parameters for solid concrete

Type	Drill hole diameter d_0 [mm]	Maximum cutting diameter $d_{cut,max}$ [mm]	Nominal embedment depth h_{nom} [mm]	Min. hole depth h_0 [mm]	Max. hole diameter in fixture d_f [mm]	Maximum installation torque $T_{imp,max}$ [Nm]	Minimum thickness of concrete member h_{min} [mm]	Minimum spacing s_{min} [mm]	Minimum edge distance c_{min} [mm]
W-HLX-6	6	6,4	55	65	9	250	80	35	35
	6	6,4	40	50	9	250	80	35	35
	6	6,4	35	45	9	250	80	35	35

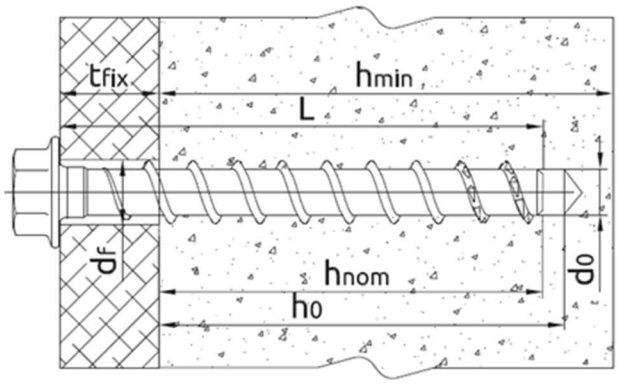
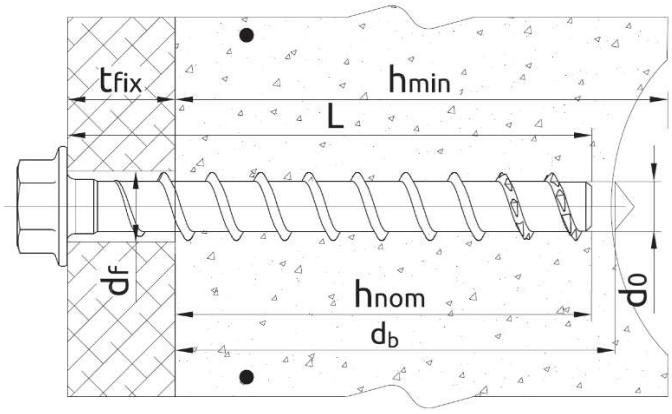


Table B2 - Installation parameters for pre-stressed hollow core slabs

Type	Drill hole diameter d_0 [mm]	Maximum cutting diameter $d_{cut,max}$ [mm]	Nominal embedment depth h_{nom} [mm]	Min. hole depth h_0 [mm]	Max. hole diameter in fixture d_f [mm]	Maximum installation torque $T_{imp,max}$ [Nm]	Bottom flange thickness d_b [mm]	Minimum spacing s_{min} [mm]	Minimum edge distance c_{min} [mm]
W-HLX-6	6	6,4	35	45	9	250	25	35	35
	6	6,4	35	45	9	250	30	35	35
	6	6,4	35	45	9	250	35	35	35



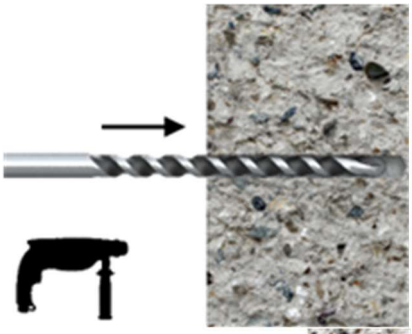
W-HLX

Intended use
Installation parameters

Annex B 2

Installation instructions

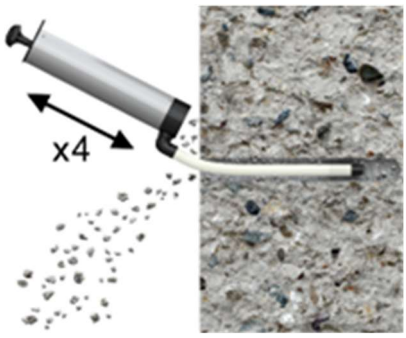
1a



1b

1. Drill the hole with a hammer drill (1a) or a dust-free drill (1b) to the required depth.
   Drill hole depth: $h_1 \geq L - t_{fix} + 10$ mm

2.



2. Clean the hole (blow dust at least 4 times with the hand pump). When using a dust-free drill bit (1b), it is not necessary to clean the hole by pump.

3.

3. Screw the concrete screw into the hole with an impact wrench and a suitable impact socket. Tighten until the fixture is clamped to the substrate.
   Installation with any tangential impact wrench.

4.

4. Finish screwing when the screw head presses the fastened element/substrate. The screw head must not be damaged.

W-HLX	**Annex B 3**
Intended use Installation instructions	

Table C1 Characteristic resistance for all load directions

Size				W-HLX-6		
Concrete solid material ≥ C20/25						
Nominal embedment depth		h_{nom}	[mm]	35	40	55
Characteristic resistance	$c = c_{min}$	F^0_{Rk}	[kN]	2,3	2,3	2,5
	$c = c_{cr}$			2,5	4,5	7,0
Robustness		γ_{inst}	[-]	1,0	1,0	1,0
Characteristic spacing		s_{cr}	[mm]	140	200	220
Characteristic edge distance		c_{cr}	[mm]	70	100	110
Pre-stressed hollow core slabs ≥ C30/37						
Nominal embedment depth		h_{nom}	[mm]	35		
Bottom flange thickness		d_b	[mm]	25	30	35
Characteristic resistance	$c = c_{min}$	F^0_{Rk}	[kN]	2,5	3,9	3,9
	$c = c_{cr}$			2,5	4,0	4,5
Robustness		γ_{inst}	[-]	1,2	1,2	1,2
Characteristic spacing		s_{cr}	[mm]	110	110	110
Characteristic edge distance		c_{cr}	[mm]	55	55	55
Shear load: steel failure with lever arm						
Characteristic bending moment		$M^0_{Rk,s}$	[Nm]	16,1		
Partial safety factor		γ_{Ms} [1)]	[-]	1,25		

[1)] In absence of other national regulations

Table C2 Characteristic resistance for all load directions under fire exposure

Size			W-HLX-6		
Concrete solid material ≥ C20/25					
Nominal embedment depth	h_{nom}	[mm]	35	40	55
Characteristic fire resistance (R30)	$F^0_{Rk,fi(30)}$	[kN]	0,59	0,85	1,75
Characteristic fire resistance (R60)	$F^0_{Rk,fi(60)}$	[kN]	0,59	0,85	1,41
Characteristic fire resistance (R90)	$F^0_{Rk,fi(90)}$	[kN]	0,59	0,85	1,01
Characteristic fire resistance (R120)	$F^0_{Rk,fi(120)}$	[kN]	0,47	0,68	0,81
Pre-stressed hollow core slabs ≥ C30/37					
Nominal embedment depth	h_{nom}	[mm]	35		
Bottom flange thickness	d_b	[mm]	25	30	35
Characteristic fire resistance (R30)	$F^0_{Rk,fi(30)}$	[kN]	0,59	0,94	0,94
Characteristic fire resistance (R60)	$F^0_{Rk,fi(60)}$	[kN]	0,59	0,94	0,94
Characteristic fire resistance (R90)	$F^0_{Rk,fi(90)}$	[kN]	0,59	0,94	0,94
Characteristic fire resistance (R120)	$F^0_{Rk,fi(120)}$	[kN]	0,47	0,75	0,75
Characteristic fire bending moment					
Characteristic fire bending moment (R30)	$M^0_{Rk,s,fi(30)}$	[Nm]	1,50		
Characteristic fire bending moment (R60)	$M^0_{Rk,s,fi(60)}$	[Nm]	1,17		
Characteristic fire bending moment (R90)	$M^0_{Rk,s,fi(90)}$	[Nm]	0,84		
Characteristic fire bending moment (R120)	$M^0_{Rk,s,fi(120)}$	[Nm]	0,67		

Note:
In case of fire attack from more than one side, the edge distance of the anchor has to be ≥ 300 mm and ≥ 2 h_{ef}

W-HLX

Performances
Characteristic resistance

Annex C 1