Declaration of Performance

According to Annex III of the Regulation (EU) Nr.305/2011
(Construction Products Regulation).

Walraven Concrete Screw W-LX

DoP No. 21/0613-W-LX-6

1. **Unique identification code of the product-type:**
   Walraven Concrete Screw W-LX, Item numbers: 62430304, 62430306, 62430308, 62430406, 62430408, 62430409, 62430410, 62430412, 62430507, 62430509, 62430510, 62430512, 62430514, 62430608, 62430610, 62430711, 62430713, 62431304, 62431306, 62432304, 62432306, 62433304, 62433305, 62433314, 62433315, 62433324, 62433325, 62434304, 62434305

2. **Intended use/es:**
   Metal anchors for use in concrete (light-duty type): for use in redundant systems for fixing and/or supporting to concrete elements, such as lightweight suspended ceilings, as well as installations.

3. **Manufacturer:**
   J. van Walraven Holding B.V., Industrieweg 5, 3641 RK Mijdrecht, The Netherlands

4. **System/s of AVCP:**
   System 2+

5. **European Assessment Document:** EAD 330747-00-0601 "Fasteners for use in concrete for redundant non-structural systems", May 2018.
   European Technical Assessment: ETA - 21/0613 (12/10/2021).
   Technical Assessment Body: Instytut Techniki Budowlanej
   Notified body: 1488.

6. **Declared performance/s:**

Essential Characteristic	Performance	Harmonized Technical Specification
Safety in use (BWR 1)		
Characteristic resistance in concrete	See Annex C1 and C2, ETA-21/0613	EAD 330747-00-0601
Edge distances and spacing	See Annex C1 and C2, ETA-21/0613	EAD 330747-00-0601
Safety in case of fire (BWR 2)		
Reaction to Fire	Anchors satisfy requirements for Class A1	EN 13501-1
Resistance to fire	See Annex C3, ETA-21/0613	EOTA TR020

7. **Appropriate Technical Documentation and/or Specific Technical Documentation:**
   N/A

8. **The performance of the product identified above is in conformity with the set of declared performance/s. This declaration of performance is issued, in accordance with Regulation (EU) No 305/2011, under the sole responsibility of the manufacturer identified above.**

Signed for and on behalf of the manufacturer by:

Frank Nijdam
Co-CEO
J. van Walraven Holding B.V.

Signature

Date 07-03-2025
Place: Mijdrecht

Table C1: Characteristic values **in concrete – standard** embedment depth

Anchor			**W-LX**				
Size			**W-LX-05**	**W-LX-06**	**W-LX-08**	**W-LX-10**	**W-LX-14**
Any load directions							
Characteristic resistance in cracked and non-cracked concrete C20/25	F^0_{Rk}	[kN]	5	9	12	20	30
Installation safety factor	γ_{inst}	[-]	1,2	1,0			
Increasing factors for F^0_{Rk}	ψ_c	C30/37	1,08				
		C40/50	1,15				
		C50/60	1,19				
Effective embedment depth	h_{ef}	[mm]	30	42	53	65	92
Spacing	s_{cr}	[mm]	90	126	160	196	276
Edge distance	c_{cr}	[mm]	45	63	80	98	138
Shear load with lever arm							
Characteristic bending moment	$M^0_{Rk,s}$	[Nm]	19,0	31,8	72,4	123,6	329,6
Partial safety factor	$\gamma_{M,s}$	[-]	1,5				

Table C2: Characteristic values **in concrete – reduced** embedment depth

Anchor			**W-LX**				
Size			**W-LX-05**	**W-LX-06**	**W-LX-08**	**W-LX-10**	**W-LX-14**
Any load directions							
Characteristic resistance in cracked and non-cracked concrete C20/25	F^0_{Rk}	[kN]	3	6	7,5	9	12
Installation safety factor	γ_{inst}	[-]	1,2	1,0			
Increasing factors for F^0_{Rk}	ψ_c	C30/37	1,08				
		C40/50	1,15				
		C50/60	1,19				
Effective embedment depth	h_{ef}	[mm]	17,5	30	37	40	55
Spacing	s_{cr}	[mm]	70	90	120	120	180
Edge distance	c_{cr}	[mm]	35	45	60	60	90
Shear load with lever arm							
Characteristic bending moment	$M^0_{Rk,s}$	[Nm]	19,0	31,8	72,4	123,6	329,6
Partial safety factor	$\gamma_{M,s}$	[-]	1,5				

W-LX	**Annex C1**
Performances Characteristic resistance - concrete	of European Technical Assessment ETA-21/0613

Table C3: Characteristic values **in concrete - reduced** embedment depth

Anchor size			**W-LX-06**
Any load directions			
Characteristic resistance in cracked and non-cracked concrete C20/25 to C50/60	F^0_{Rk}	[kN]	3
Installation safety factor	γ_{inst}	[-]	1,0
Effective embedment depth	h_{ef}	[mm]	24,7
Spacing	s_{cr}	[mm]	100
Edge distance	c_{cr}	[mm]	50
Shear load with lever arm			
Characteristic bending moment	$M^0_{Rk,s}$	[Nm]	31,8
Partial safety factor	$\gamma_{M,s}$	[-]	1,5

Table C4: Characteristic values **in hollow concrete slabs**

Anchor size			**W-LX-06**
Any load directions			
Bottom flange thickness	d_b	[mm]	≥ 35
Characteristic resistance in hollow concrete slabs C30/37	F_{Rk}	[kN]	5
Characteristic resistance in hollow concrete slabs C40/50 to C50/60	F_{Rk}	[kN]	6
Installation safety factor	γ_{inst}	[-]	1,0
Effective embedment depth	h_{ef}	[mm]	24,7
Spacing	s_{cr}	[mm]	100
Edge distance	c_{cr}	[mm]	50
Shear load with lever arm			
Characteristic bending moment	$M^0_{Rk,s}$	[Nm]	31,8
Partial safety factor	$\gamma_{M,s}$	[-]	1,5

W-LX	**Annex C2** of European Technical Assessment ETA-21/0613
Performances Characteristic resistance – concrete and hollow concrete slabs	

Table C5: Characteristic resistance under fire exposure **in concrete** C20/25 to C50/60 – **standard** embedment depth

Anchor			**W-LX**				
Size			**W-LX-05**	**W-LX-06**	**W-LX-08**	**W-LX-10**	**W-LX-14**
Effective embedment depth		[mm]	30	42	53	65	92
All load directions							
Characteristic resistance $F_{Rk,fi}$ [1)]	R30	[kN]	0,20	0,28	0,75	1,57	3,08
	R60	[kN]	0,18	0,25	0,65	1,18	2,31
	R90	[kN]	0,14	0,20	0,50	1,02	2,00
	R120	[kN]	0,10	0,14	0,40	0,79	1,54
Spacing	$s_{cr,fi}$	[mm]	$4 \times h_{ef}$				
Edge distance	$c_{cr,fi}$	[mm]	$2 \times h_{ef}$				
The design method covers anchors with a fire attack from one side only. In case of fire attack from more than one side, the edge distance shall be ≥ 300 mm.							

[1)] in the absence of other national regulations a partial safety factor $\gamma_{M,fi} = 1,0$ is recommended

Table C6: Characteristic resistance under fire exposure **in concrete** C20/25 to C50/60 – **reduced** embedment depth

Anchor			**W-LX**				
Size			**W-LX-05**	**W-LX-06**	**W-LX-08**	**W-LX-10**	**W-LX-14**
Effective embedment depth		[mm]	17,5	30	37	40	55
All load directions							
Characteristic resistance $F_{Rk,fi}$ [1)]	R30	[kN]	-	0,28	0,75	1,57	3,00
	R60	[kN]	-	0,25	0,65	1,18	2,31
	R90	[kN]	-	0,20	0,50	1,02	2,00
	R120	[kN]	-	0,14	0,40	0,79	1,54
Spacing	$s_{cr,fi}$	[mm]	$4 \times h_{ef}$				
Edge distance	$c_{cr,fi}$	[mm]	$2 \times h_{ef}$				
The design method covers anchors with a fire attack from one side only. In case of fire attack from more than one side, the edge distance shall be ≥ 300 mm.							

[1)] in the absence of other national regulations a partial safety factor $\gamma_{M,fi} = 1,0$ is recommended

W-LX	**Annex C3** of European Technical Assessment ETA-21/0613
Performances Characteristic resistance under fire exposure – concrete	