Declaration of Performance

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

Walraven Drop-in Anchor WDI1

DoP No. 16/0783-WDI1

1. **Unique identification code of the product-type:**
   Walraven Drop-in Anchor WDI1, Item numbers: 6103006, 6103008, 6103010, 6103012, 6103016
   Walraven Drop-in Anchor WDI1L, Item numbers: 6103106, 6103108, 6103110, 6103112, 6103116
   Walraven Drop-in Anchor WDI1 SSt, Item number: 6103708, 6103710, 6103712, 6103716

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:** 330747-00-0601 “Fasteners for use in concrete for redundant non-structural systems”
   European Technical Assessment: ETA - 16/0783 (28/11/2025).
   Technical Assessment Body: Instytut Techniki Budowlanej
   Notified body: 1488.

6. **Declared performance/s:**

Essential Characteristic	Performance	Harmonized Technical Specification
Safety and accessibility in use (BWR 4)		
Characteristic resistance for all load directions	See Annex C1 - C3 ETA-16/0783	EAD 330747-00-0601
Durability	See Annex A1, A2, B1 ETA-16/0783	EAD 330747-00-0601
Safety in case of fire (BWR 2)		
Resistance to fire	See Annex C4, ETA-16/0783	EAD 330747-00-0601
Reaction to Fire	Anchors satisfy requirements for Class A1	EN 13501-1

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
CCO
J. van Walraven Holding B.V.

Signature

Date 15-12-2025
Place: Mijdrecht

Table C1: Characteristic resistance – WDI1 DROP IN ANCHOR – in solid concrete elements

WDI1 DROP IN ANCHOR			Property class	M6/25	M8/30	M10/40	M12/50	M16/65	M20/80
All load directions (fastening screw or threaded rod property class ≥ 4.8)									
Characteristic resistance in cracked and uncracked concrete C12/15	F_{Rk}	[kN]	≥ 4.8	1,2	2	3,5	5	10	13
Characteristic resistance in cracked and uncracked concrete C20/25 to C50/60	F_{Rk}	[kN]	≥ 4.8	1,5	3	4,5	6	13	17
Partial safety factor	γ_2 (1)	[–]	–	1,2					
Spacing	s_{cr}	[mm]		200				260	320
Edge distance	c_{cr}	[mm]		150				195	240
Shear load with lever arm									
Characteristic bending resistance	$M^0_{Rk,s}$	[Nm]	4.8	6	15	30	52	133	260
Characteristic bending resistance	$M^0_{Rk,s}$	[Nm]	5.8	8	19	37	66	167	325
Characteristic bending resistance	$M^0_{Rk,s}$	[Nm]	6.8	9	23	45	79	200	390
Characteristic bending resistance	$M^0_{Rk,s}$	[Nm]	8.8	12	30	60	105	267	520
Partial safety factor	γ_{Ms} (1)	[–]	–	1,25					

(1) in the absence of other national regulations

Table C2: Characteristic resistance – WDI1 SSt DROP IN ANCHOR – in solid concrete elements

WDI1 SSt DROP IN ANCHOR			Property class	M6/25	M8/30	M10/40	M12/50	M16/65
All load directions (fastening screw or threaded rod property class A4-70)								
Characteristic resistance in cracked and uncracked concrete C12/15	F_{Rk}	[kN]	A4-70	0,75	1,5	2,5	3,5	6,5
Characteristic resistance in cracked and uncracked concrete C20/25 to C50/60	F_{Rk}	[kN]	A4-70	1,0	2,0	3,0	4,5	8,0
Partial safety factor	γ_2 (1)	[–]	–	1,2				
Spacing	s_{cr}	[mm]		200				260
Edge distance	c_{cr}	[mm]		150				195
Shear load with lever arm								
Characteristic bending resistance	$M^0_{Rk,s}$	[Nm]	A4-70	11	26	52	92	233
Partial safety factor	γ_{Ms} (1)	[–]	–	1,25				

(1) in the absence of other national regulations

WDI1 DROP IN ANCHOR, WDI1 SSt DROP IN ANCHOR and WDI1L DROP IN ANCHOR LIPPED	**Annex C1**
Performances Characteristic resistance	of European Technical Assessment ETA-16/0783

Table C3: Characteristic resistance – WDI1L DROP IN ANCHOR LIPPED – in solid concrete elements

WDI1L DROP IN ANCHOR LIPPED			Property class	M6/25	M8/30	M10/40	M12/50	M16/ 65	M20/ 80
All load directions (fastening screw or threaded rod property class ≥ 4.8)									
Characteristic resistance in cracked and uncracked concrete class C12/15	F_{Rk}	[kN]	≥ 4.8	1,2	2	3,5	5	10	13
Characteristic resistance in cracked and uncracked concrete class C20/25 to C50/60	F_{Rk}	[kN]	≥ 4.8	1,5	3	4,5	6,5	13	17
Partial safety factor	γ_2 (1)	[–]	–	1,2					
Spacing	s_{cr}	[mm]		200				260	320
Edge distance	c_{cr}	[mm]		150				195	240
Shear load with lever arm									
Characteristic bending resistance	$M^0_{Rk,s}$	[Nm]	4.8	6	15	30	52	133	260
Characteristic bending resistance	$M^0_{Rk,s}$	[Nm]	5.8	8	19	37	66	167	325
Characteristic bending resistance	$M^0_{Rk,s}$	[Nm]	6.8	9	23	45	79	200	390
Characteristic bending resistance	$M^0_{Rk,s}$	[Nm]	8.8	12	30	60	105	267	520
Partial safety factor	γ_{Ms} (1)	[–]	–	1,25					

(1) in the absence of other national regulations

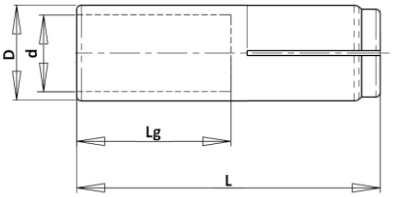
WDI1 DROP IN ANCHOR, WDI1 SSt DROP IN ANCHOR and WDI1L DROP IN ANCHOR LIPPED	Annex C2
Performances Characteristic resistance	of European Technical Assessment ETA-16/0783

Table C4: Characteristic resistance – WDI1L DROP IN ANCHOR LIPPED – in precast, prestressed hollow core slabs

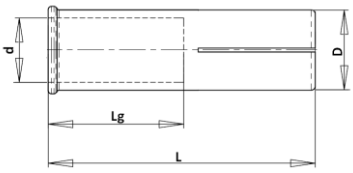
WDI1L DROP IN ANCHOR LIPPED			Property class	M6/25	M8/30	M10/30	M10/40	M12/50
All load directions (fastening screw or threaded rod property class ≥ 4.6)								
Bottom flange thickness	d_b	[mm]	–	30	30	40	30	30
Characteristic resistance in hollow concrete slabs class C40/50 to C50/60	F_{Rk}	[kN]	≥ 4.6	3,5	4,0	12	14	16
Partial safety factor	γ_{inst}	[–]	–	1,4	1,4	1,0	1,4	1,2
Spacing	s_{cr}	[mm]		200				
Edge distance	c_{cr}	[mm]		300				
Shear load with lever arm								
Characteristic bending resistance	$M^0_{Rk,s}$	[Nm]	4,6	6	15	30	30	52
Characteristic bending resistance	$M^0_{Rk,s}$	[Nm]	4.8	6	15	30	30	52
Characteristic bending resistance	$M^0_{Rk,s}$	[Nm]	5.8	8	19	37	37	66
Characteristic bending resistance	$M^0_{Rk,s}$	[Nm]	6.8	9	23	45	45	79
Characteristic bending resistance	$M^0_{Rk,s}$	[Nm]	8.8	12	30	60	60	105
Partial safety factor	γ_{Ms} (1)	[–]	–	1,25				

(1) in the absence of other national regulations

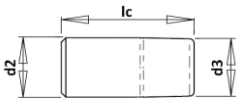
WDI1 DROP IN ANCHOR, WDI1 SSt DROP IN ANCHOR and WDI1L DROP IN ANCHOR LIPPED	**Annex C3**
Performances Characteristic resistance	of European Technical Assessment ETA-16/0783



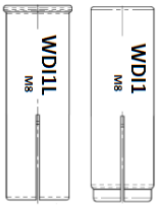
WDI1 DROP IN ANCHOR and WDI1 SSt DROP IN ANCHOR sleeve



WDI1L DROP IN ANCHOR LIPPED sleeve



expansion plug



Marking:

Identifying mark – **WDI1 / WDI1L**

Size: Mxx (A4)

xx – thread size

A4 – for stainless steel

Table A1. Anchors WDI1 DROP IN ANCHOR – materials and dimensions

WDI1 DROP IN ANCHOR		**M6/25**	**M8/30**	**M10/40**	**M12/50**	**M16/65**	**M20/80**
Anchor length L	**[mm]**	25	30	40	50	65	80
Inner diameter d	**[mm]**	6	8	10	12	16	20
External diameter D	**[mm]**	8	10	12	15	20	25
Thread length Lg	**[mm]**	11	14	19	25	28	38
Anchor material	Steel in accordance with ASTM A510, SAE 1008 or SAE 1010; zinc coating > 5 μm $f_{uk} \geq 450$ N/mm² and $f_{yk} \geq 360$ N/mm²						
Fastening screw or threaded rod material	Steel, property class ≥ 4.8 according to EN ISO 898-1; zinc coating > 5 μm						

Table A2. Anchor WDI1 SSt DROP IN ANCHOR – materials and dimensions

WDI1 SSt DROP IN ANCHOR		**M6/25**	**M8/30**	**M10/40**	**M12/50**	**M16/65**
Anchor length L	**[mm]**	25	30	40	50	65
Inner diameter d	**[mm]**	6	8	10	12	16
External diameter D	**[mm]**	8	10	12	15	20
Thread length Lg	**[mm]**	11	14	19	25	28
Anchor material	Stainless steel 1.4401 according to EN 10088 (AISI 316) $f_{uk} \geq 500$ N/mm² and $f_{yk} \geq 210$ N/mm²					
Fastening screw or threaded rod material	Stainless steel 1.4401 in accordance with EN 10088; property class ≥ 70 according to EN ISO 3506					

WDI1 DROP IN ANCHOR, WDI1 SSt DROP IN ANCHOR and WDI1L DROP IN ANCHOR LIPPED	**Annex A1**
Product description Characteristic of the product	of European Technical Assessment ETA-16/0783

Table A3. Anchors WDI1L DROP IN ANCHOR LIPPED – materials and dimensions

WDI1L DROP IN ANCHOR LIPPED		M6/25	M8/30	M10/30	M10/40	M12/50	M16/65	M20/80
Anchor length L	**[mm]**	25	30	30	40	50	65	80
Inner diameter d	**[mm]**	6	8	10	10	12	16	20
External diameter D	**[mm]**	8	10	12	12	15	20	25
Thread length Lg	**[mm]**	11	14	15	19	25	28	38
Anchor material	Steel in accordance with ASTM A510, SAE 1008 or SAE 1010; zinc coating > 5 μm $f_{uk} \geq 450$ N/mm² and $f_{yk} \geq 360$ N/mm²							
Fastening screw or threaded rod material	Steel, property class ≥ 4.8 according to EN ISO 898-1, zinc coating > 5 μm, for anchoring in solid concrete elements Steel, property class ≥ 4.6 according to EN-ISO 898-1, zinc coating > 5 μm, for anchoring in precast hollow core slabs							

Table A4. Expansion plug – materials and dimensions

		M6/25	M8/30	M10/30	M10/40	M12/50	M16/65	M20/80
Expansion plug		M6	M8	M10	M10	M12	M16	M20
Rear diameter d_2	**[mm]**	4,90	6,40	7,80	8,00	10,30	13,55	16,55
Front diameter d_3	**[mm]**	4,15	5,10	6,70	6,80	7,80	12,20	14,95
Length l_c	**[mm]**	9,40	11,40	13,60	16,00	20,75	25,40	30,00
Expansion plug material	Steel in accordance with JISG3505, SWRM8K or SWRM10K; zinc coating > 5 μm or stainless steel 1.4401 according to EN 10088 (AISI 316)							

WDI1 DROP IN ANCHOR, WDI1 SSt DROP IN ANCHOR and WDI1L DROP IN ANCHOR LIPPED	**Annex A2**
Product description Characteristic of the product	of European Technical Assessment ETA-16/0783

Specification of intended use

Anchorages subject to:

- Multiple use for non-structural applications: sizes from M6 to M20 (WDI1 DROP IN ANCHOR and WDI1L DROP IN ANCHOR LIPPED) and sizes from M6 to M16 (WDI1 SSt DROP IN ANCHOR).
- Static and quasi-static loads: sizes from M6 to M20 (WDI1 DROP IN ANCHOR and WDI1L DROP IN ANCHOR LIPPED) and sizes from M6 to M16 (WDI1 SSt DROP IN ANCHOR).
- Anchorages with requirements related to resistance to fire: sizes from M8 to M20 (WDI1 DROP IN ANCHOR and WDI1L DROP IN ANCHOR LIPPED) and sizes from M8 to M16 (WDI1 SSt DROP IN ANCHOR), in solid concrete elements of strength class C20/25 to C50/60 according to EN 206.

Base material:

- Reinforced or unreinforced, cracked or uncracked normal weight concrete of strength class C12/15 at minimum to C50/60 at maximum according to EN 206.
- Solid concrete elements: sizes from M6 to M20 (WDI1 DROP IN ANCHOR, WDI1L DROP IN ANCHOR LIPPED) and M6 to M16 (WDI1 SSt DROP IN ANCHOR).
- Precast prestressed hollow core slabs (with w/e ≤ 4,2) strength class C40/50 to C50/60 according to EN 206: sizes from M6 to M12 (WDI1L DROP IN ANCHOR LIPPED).

Use conditions (environmental conditions):

- WDI1 DROP IN ANCHOR, WDI1L DROP IN ANCHOR LIPPED all sizes (galvanized steel) and WDI1 SSt DROP IN ANCHOR size M6 (stainless steel): structures subject to dry internal conditions.
- WDI1 SSt DROP IN ANCHOR sizes from M8 to M16 (stainless steel): structures subject to dry internal conditions and also in concrete subject to external atmospheric exposure (including industrial and marine environment) or exposure in permanently damp internal conditions if no particular aggressive conditions exist. Such particular aggressive conditions are e.g. permanent, alternating immersion in seawater or the splash zone of seawater, chloride atmosphere of indoor swimming pools or atmosphere with extreme chemical pollution (e.g. in desulphurization plants or road tunnels where de-icing materials are used).

Design:

- Anchorages are designed under the responsibility of an engineer experienced in anchorages and concrete work.
- Verifiable calculation notes and drawings are prepared taking account of the loads to be transmitted. The position of the anchor is indicated on the design drawings (e.g. position of the anchor relative to reinforcement or to supports, etc.).
- Anchorages under static and quasi-static loads are designed in accordance with EN 1992-4:2018; the anchors WDI1 DROP IN ANCHOR, WDI1 SSt DROP IN ANCHOR and WDI1L DROP IN ANCHOR LIPPED anchored in solid concrete elements according to design method C, the anchors WDI1L DROP IN ANCHOR LIPPED anchored in precast, prestressed hollow core slabs according to design method B.
- The design of anchorages under fire exposure has to consider the conditions given in the EOTA Technical Report TR 020.
- Fasteners are only to be used for multiple use for non-structural applications acc. to EAD 330747-00-0601.

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 component of the anchor.
- Anchor installation in accordance with the manufacturer's specifications and drawings and using the appropriate tools.
- Check of concrete being well compacted, e.g. without significant voids.
- Positioning of the drill holes without damaging the reinforcement.
- In case of aborted 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.
- Anchor installation such that the effective anchorage depth is complied with.
- Anchor expansion by impact on the cone (expansion plug) of the anchor.

WDI1 DROP IN ANCHOR, WDI1 SSt DROP IN ANCHOR and WDI1L DROP IN ANCHOR LIPPED	**Annex B1**
Intended use Specification	of European Technical Assessment ETA-16/0783

Table C5: Characteristic resistance under fire exposure in solid concrete elements of strength class C20/25 to C50/60 – WDI1 DROP IN ANCHOR and WDI1L DROP IN ANCHOR LIPPED

Fire resistance class	WDI1 DROP IN ANCHOR and WDI1L DROP IN ANCHOR LIPPED		M8/30	M10/40	M12/50	M16/65	M20/80
All load directions							
R30	Characteristic resistance $F_{Rk,fi}$ (1),(2)	[kN]	0,4	0,9	1,6	3,1	4,3
R60		[kN]	0,3	0,8	1,3	2,4	3,7
R90		[kN]	0,3	0,6	1,1	2,0	3,2
R120		[kN]	0,2	0,5	0,8	1,6	2,5
Spacing	$s_{cr,fi}$	[mm]	4 x h_{ef}				
Edge distance	$c_{cr,fi}$	[mm]	2 x 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

(2) fastening screw or threaded rod property class not less than 4.8

Table C6: Characteristic resistance under fire exposure in solid concrete elements of strength class C20/25 to C50/60 – WDI1 SSt DROP IN ANCHOR

Fire resistance class	WDI1 SSt DROP IN ANCHOR		M8/30	M10/40	M12/50	M16/65
All load directions						
R30	Characteristic resistance $F_{Rk,fi}$ (1),(2)	[kN]	0,5	0,8	1,1	2,1
R60		[kN]	0,5	0,8	1,1	2,1
R90		[kN]	0,5	0,8	1,1	2,1
R120		[kN]	0,4	0,6	0,9	1,6
Spacing	$s_{cr,fi}$	[mm]	4 x h_{ef}			
Edge distance	$c_{cr,fi}$	[mm]	2 x 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

(2) fastening screw or threaded rod property class not less than A4-70

WDI1 DROP IN ANCHOR, WDI1 SSt DROP IN ANCHOR and WDI1L DROP IN ANCHOR LIPPED	**Annex C4**
Performances Characteristic resistance under fire exposure	of European Technical Assessment ETA-16/0783