Declaration of Performance

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

Walraven WB300

DoP No. 23/0312-WB300

1. **Unique identification code of the product-type:**
   Walraven Injection Anchor WB300, Item numbers: 6099030E, 6099030W, 6099031E, 6099040W

2. **Intended use/es:**
   For fixing and/or supporting to masonry, structural elements (which contributes to the stability of the works) or heavy units.

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

4. **System/s of AVCP:**
   System 1

5. **European Assessment Document:** EAD 330076-01-0604 "Metal injection anchors for use in masonry", May 2021.
   European Technical Assessment: ETA - 23/0312 (28/11/2024).
   Technical Assessment Body: Technical and Test Institute for Construction Prague
   Notified body: 1020.

6. **Declared performance/s:**

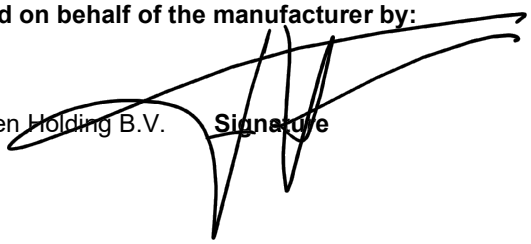
Essential Characteristic	Performance	Harmonized Technical Specification
Mechanical resistance and stability (BWR 1)		
Characteristic resistance for tension and shear loads	See Annex C 1 to C 5, ETA-23/0312	EAD 330076-01-0604
Reduction factor for job site test (ß – factor)	See Annex C 1 to C 5, ETA-23/0312	EAD 330076-01-0604
Edge distances and spacing	See Annex B 8, B 9	EAD 330076-01-0604
Displacement under shear and tension loads	See Annex C 1 to C 5	EAD 330076-01-0604
Durability	See Annex A3	EAD 330076-01-0604
Safety in case of fire (BWR 2)		
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
Co-CEO
J. van Walraven Holding B.V.



Signature

Date 19-02-2025
Place: Mijdrecht

Table C1: Characteristic resistance under tension and shear loading with sleeve

Base material	Anchor rods $N_{Rk} = V_{Rk}$ [kN] 1)								Internal threaded sockets $N_{Rk} = V_{Rk}$ [kN] 1)					
	Use conditions d/d, w/d				Use conditions w/w				Use conditions d/d, w/d			Use conditions w/w		
	M8	M10	M12	M16	M8	M10	M12	M16	M8	M10	M12	M8	M10	M12
Sleeve	16/85	16/85	16/85	20/85	16/85	16/85	16/85	20/85	16/85	20/85	20/85	16/85	20/85	20/85
Brick N° 1	1,5	1,5	1,5	2,0	1,5	1,5	1,5	2,0	1,5	2,5	3,5	1,5	2,5	3,5
Brick N° 2	0,6	0,75	0,75	1,5	0,6	0,75	0,75	1,2	1,5	1,2	0,9	1,5	1,2	0,9
Brick N° 3	1,2	1,5	1,5	1,5	1,2	1,2	1,2	1,5	-	-	-	-	-	-
Brick N° 4	2,0	1,5	1,5	2,0	2,0	1,5	1,5	2,0	0,5	0,9	0,9	0,5	0,9	0,9
Brick N° 5	0,6	0,5	0,5	0,6	0,6	0,5	0,6	0,6	-	-	-	-	-	-
Brick N° 6	0,6	-	-	0,6	0,5	-	-	0,5	-	-	-	-	-	-
Brick N° 7	2,0	1,5	1,5	1,5	1,5	1,2	1,2	1,2	1,5	2,0	2,0	1,2	1,5	2,0
Brick N° 8	0,5	0,9	0,9	0,5	0,5	0,75	0,75	0,5	-	0,75	0,4	-	0,6	0,6
Brick N° 9	0,6	1,2	1,2	1,2	0,5	0,9	0,9	0,9	-	0,3	0,5	-	0,3	0,5
Brick N° 10	0,5	0,3	0,3	-	0,5	0,3	0,3	-	0,5	0,3	0,6	0,5	0,3	0,6

1) For design according TR 054: $N_{Rk} = N_{Rk,p} = N_{Rk,b} = N_{Rk,s}$; $N_{Rk,pb}$ according to TR 054
For $V_{Rk,s}$ see Annex C1, Table C2; Calculation of $V_{Rk,pb}$ and $V_{Rk,c}$ according to TR 054

Table C2: Characteristic resistance under shear loading – steel failure

Size			M8	M10	M12	M16	Partial safety factor γ_{Ms}
Characteristic shear resistance							
Steel grade **5.8**	$V_{Rk,s}$	[kN]	9	15	21	39	1,25
Steel grade **8.8**	$V_{Rk,s}$	[kN]	15	23	34	63	1,25
Steel grade **10.9**	$V_{Rk,s}$	[kN]	18	29	42	79	1,5
Stainless steel grade **A2-70**, **A4-70**	$V_{Rk,s}$	[kN]	13	20	30	55	1,56
Stainless steel grade **A4-80**	$V_{Rk,s}$	[kN]	15	23	34	63	1,33
Stainless steel grade **1.4529** strength class **70**	$V_{Rk,s}$	[kN]	13	20	30	55	1,25
Stainless steel grade **1.4565** strength class **70**	$V_{Rk,s}$	[kN]	13	20	30	55	1,56
Characteristic bending moment							
Steel grade **5.8**	$M_{Rk,s}$	[N.m]	19	37	66	166	1,25
Steel grade **8.8**	$M_{Rk,s}$	[N.m]	30	60	105	266	1,25
Steel grade **10.9**	$M_{Rk,s}$	[N.m]	37	75	131	333	1,5
Stainless steel grade **A2-70**, **A4-70**	$M_{Rk,s}$	[N.m]	26	52	92	233	1,56
Stainless steel grade **A4-80**	$M_{Rk,s}$	[N.m]	30	60	105	266	1,33
Stainless steel grade **1.4529** strength class **70**	$M_{Rk,s}$	[N.m]	26	52	92	233	1,25
Stainless steel grade **1.4565** strength class **70**	$M_{Rk,s}$	[N.m]	26	52	92	233	1,56

Table C3: Displacements under tension and shear load

Base material	F [kN]	δ_{N0} [mm]	$\delta_{N\infty}$ [mm]	δ_{V0} [mm]	$\delta_{V\infty}$ [mm]
Solid bricks	$N_{Rk} / (\gamma_F \cdot \gamma_M)$	0,6	1,2	1,0 1)	1,5 1)
Perforated and hollow bricks		0,14	0,28	1,0 1)	1,5 1)

1) the hole gap between bolt and fixture shall be considered additionally

Table C4: β - factors for job site tests according to TR 053 with sleeve

Brick N°	N° 1	N° 2	N° 3	N° 4	N° 5	N° 6	N° 7	N° 8	N° 9	N° 10
β - factor – **d/d**, **w/d**	0,65	0,26	0,65	0,6	0,65	0,59	0,62	0,22	0,36	0,42
β - factor – **w/w**	0,58	0,22	0,58	0,53	0,58	0,53	0,55	0,18	0,31	0,37

WB300, WB300W, WB300T for masonry	**Annex C 1**
Performances Characteristic resistance, displacement β-factors for job site testing under tension load	

Table C5: Characteristic resistance under tension and shear loading without sleeve

Base material	Anchor rods $N_{Rk} = V_{Rk}$ [kN] [1]									
	Use conditions d/d, w/d					Use conditions w/w				
	M6	M8	M10	M12	M16	M6	M8	M10	M12	M16
Brick N° 1	2,0	2,0	2,0	2,0	2,5	2,0	2,0	2,0	1,5	2,0
Brick N° 2	1,2	0,9	1,5	0,9	1,2		0,9	1,2	0,75	1,2

[1] For design according TR 054: $N_{Rk} = N_{Rk,p} = N_{Rk,b} = N_{Rk,s}$; $N_{Rk,pb}$ according to TR 054
For $V_{Rk,s}$ see Annex C1, Table C2; Calculation of $V_{Rk,pb}$ and $V_{Rk,c}$ according to TR 054

Table C6: Characteristic resistance under shear loading – steel failure

Size			M6	M8	M10	M12	M16	Partial safety factor γ_{Ms}
Characteristic shear resistance								
Steel grade **5.8**	$V_{Rk,s}$	[kN]	5	9	15	21	39	1,25
Steel grade **8.8**	$V_{Rk,s}$	[kN]	8	15	23	34	63	1,25
Steel grade **10.9**	$V_{Rk,s}$	[kN]	10	18	29	42	79	1,5
Stainless steel grade **A2-70**, **A4-70**	$V_{Rk,s}$	[kN]	7	13	20	30	55	1,56
Stainless steel grade **A4-80**	$V_{Rk,s}$	[kN]	8	15	23	34	63	1,33
Stainless steel grade **1.4529** strength class **70**	$V_{Rk,s}$	[kN]	7	13	20	30	55	1,25
Stainless steel grade **1.4565** strength class **70**	$V_{Rk,s}$	[kN]	7	13	20	30	55	1,56
Characteristic bending moment								
Steel grade **5.8**	$M_{Rk,s}$	[N.m]	8	19	37	66	166	1,25
Steel grade **8.8**	$M_{Rk,s}$	[N.m]	12	30	60	105	266	1,25
Steel grade **10.9**	$M_{Rk,s}$	[N.m]	15	37	75	131	333	1,5
Stainless steel grade **A2-70**, **A4-70**	$M_{Rk,s}$	[N.m]	11	26	52	92	233	1,56
Stainless steel grade **A4-80**	$M_{Rk,s}$	[N.m]	12	30	60	105	266	1,33
Stainless steel grade **1.4529** strength class **70**	$M_{Rk,s}$	[N.m]	11	26	52	92	233	1,25
Stainless steel grade **1.4565** strength class **70**	$M_{Rk,s}$	[N.m]	11	26	52	92	233	1,56

Table C7: Displacements under tension and shear load

Base material	F [kN]	δ_{N0} [mm]	$\delta_{N\infty}$ [mm]	δ_{V0} [mm]	$\delta_{V\infty}$ [mm]
Brick N° 1	$N_{Rk} / (\gamma_F \cdot \gamma_M)$	0,1	0,2	0,5 [1]	0,7 [1]
Brick N° 2		0,1	0,2	0,1 [1]	0,2 [1]

[1] the hole gap between bolt and fixture shall be considered additionally

Table C8: β - factors for job site tests according to TR 053 without sleeve

Brick N°	N° 1	N° 2
β - factor – **d/d**, **w/d**	0,65	0,25
β - factor – **w/w**	0,58	0,22

WB300, WB300W, WB300T for masonry	**Annex C 2**
Performances Characteristic resistance, displacement β-factors for job site testing under tension load	

Table C9: Characteristic resistance under tension and shear loading with sleeve WB300W with installation temperature < -10°C

Base material	Anchor rods $N_{Rk} = V_{Rk}$ [kN] 1)								Internal threaded sockets $N_{Rk} = V_{Rk}$ [kN] 1)					
	Use conditions d/d, w/d				Use conditions w/w				Use conditions d/d, w/d			Use conditions w/w		
	M8	M10	M12	M16	M8	M10	M12	M16	M8	M10	M12	M8	M10	M12
Sleeve	16/85	16/85	16/85	20/85	16/85	16/85	16/85	20/85	16/85	20/85	20/85	16/85	20/85	20/85
Brick N° 1	1,2	1,2	1,2	1,5	1,2	1,2	1,2	1,5	1,2	2,0	3,0	1,2	2,0	3,0
Brick N° 2	0,5	0,6	0,6	1,2	0,5	0,6	0,6	0,9	1,2	0,9	0,75	1,2	0,9	0,75
Brick N° 3	0,9	1,2	1,2	1,2	0,9	0,9	0,9	1,2	-	-	-	-	-	-
Brick N° 4	1,5	1,2	1,2	1,5	1,5	1,2	1,2	1,5	0,4	0,75	0,75	0,4	0,75	0,75
Brick N° 5	0,5	0,4	0,4	0,5	0,5	0,4	0,5	0,5	-	-	-	-	-	-
Brick N° 6	0,5	-	-	0,5	0,4	-	-	0,4	-	-	-	-	-	-
Brick N° 7	1,5	1,2	1,2	1,2	1,2	0,9	0,9	0,9	1,2	1,5	1,5	0,9	1,2	1,5
Brick N° 8	0,4	0,75	0,75	0,4	0,4	0,6	0,6	0,4	-	0,6	0,3	-	0,5	0,5
Brick N° 9	0,5	0,9	0,9	0,9	0,4	0,75	0,75	0,75	-	-	0,4	-	-	0,4
Brick N° 10	0,4	-	-	-	0,4	-	-	-	0,4	-	0,5	0,4	-	0,5

1) For design according TR 054: $N_{Rk} = N_{Rk,p} = N_{Rk,b} = N_{Rk,s}$; $N_{Rk,pb}$ according to TR 054
For $V_{Rk,s}$ see Annex C1, Table C2; Calculation of $V_{Rk,pb}$ and $V_{Rk,c}$ according to TR 054

Table C10: Characteristic resistance under tension and shear loading without sleeve WB300W with installation temperature < -10°C

Base material	Anchor rods $N_{Rk} = V_{Rk}$ [kN] 1)									
	Use conditions d/d, w/d					Use conditions w/w				
	M6	M8	M10	M12	M16	M6	M8	M10	M12	M16
Brick N° 1	1,5	1,5	1,5	1,5	2,0	1,2	1,5	1,5	1,2	1,5
Brick N° 2	0,9	0,75	1,2	0,75	0,9		0,75	0,9	0,6	0,9

1) For design according TR 054: $N_{Rk} = N_{Rk,p} = N_{Rk,b} = N_{Rk,s}$; $N_{Rk,pb}$ according to TR 054
For $V_{Rk,s}$ see Annex C1, Table C2; Calculation of $V_{Rk,pb}$ and $V_{Rk,c}$ according to TR 054

Table C11: Characteristic resistance under shear loading – steel failure

Size	M6	M8	M10	M12	M16	Partial safety factor γ_{Ms}
See Annex C 1 or C 2						

Table C12: Displacements under tension and shear load

Base material	F [kN]	δ_{N0} [mm]	$\delta_{N\infty}$ [mm]	δ_{V0} [mm]	$\delta_{V\infty}$ [mm]
See Annex C 1 or C 2					

Table C13: β - factors for job site tests according to TR 053 with sleeve WB300W with installation temperature < -10°C

Brick N°	N° 1	N° 2	N° 3	N° 4	N° 5	N° 6	N° 7	N° 8	N° 9	N° 10
β - factor – d/d, w/d	0,62	0,24	0,62	0,57	0,62	0,57	0,6	0,20	0,34	0,40
β - factor – w/w	0,55	0,21	0,55	0,51	0,55	0,51	0,53	0,18	0,30	0,36

Table C14: β - factors for job site tests according to TR 053 without sleeve WB300W with installation temperature < -10°C

Brick N°	N° 1	N° 2
β - factor – d/d, w/d	0,62	0,24
β - factor – w/w	0,55	0,21

WB300W
for masonry

Performances
Characteristic resistance, displacement
β-factors for job site testing under tension load

Annex C 3

Table C15: Characteristic resistance under tension and shear loading

Base material	Anchor rods $N_{Rk} = V_{Rk}$ [kN] [1]											
	Use conditions d/d				Use conditions w/d				Use conditions w/w			
	M8	M10	M12	M16	M8	M10	M12	M16	M8	M10	M12	M16
Brick N° 11	0,75	0,75	0,9	1,5	0,6	0,75	0,75	1,2	0,6	0,75	0,75	1,2
Brick N° 12	1,2	1,5	2,0	3,5	0,9	1,2	1,5	2,5	0,9	1,2	1,5	2,5
Brick N° 13	3,0	3,0	4,0	5,0	2,5	2,5	3,5	4,0	2,0	2,0	3,0	3,5

[1] For design according TR 054: $N_{Rk} = N_{Rk,p} = N_{Rk,b} = N_{Rk,s}$; $N_{Rk,pb}$ according to TR 054
For $V_{Rk,s}$ see Annex C1, Table C2; Calculation of $V_{Rk,pb}$ and $V_{Rk,c}$ according to TR 054

Table C16: Characteristic resistance under shear loading – steel failure

Size			M8	M10	M12	M16	Partial safety factor γ_{Ms}
Characteristic shear resistance							
Steel grade **4.6**	$V_{Rk,s}$	[kN]	7	11	17	31	1,67
Steel grade **5.8**	$V_{Rk,s}$	[kN]	9	15	21	39	1,25
Steel grade **8.8**	$V_{Rk,s}$	[kN]	15	23	34	63	1,25
Steel grade **10.9**	$V_{Rk,s}$	[kN]	18	29	42	79	1,5
Stainless steel grade **A2-70**, **A4-70**	$V_{Rk,s}$	[kN]	13	20	30	55	1,56
Stainless steel grade **A4-80**	$V_{Rk,s}$	[kN]	15	23	34	63	1,33
Stainless steel grade **1.4529** strength class **70**	$V_{Rk,s}$	[kN]	13	20	30	55	1,25
Stainless steel grade **1.4565** strength class **70**	$V_{Rk,s}$	[kN]	13	20	30	55	1,56
Characteristic bending moment							
Steel grade **4.6**	$M_{Rk,s}$	[N.m]	15	30	52	133	1,67
Steel grade **5.8**	$M_{Rk,s}$	[N.m]	19	37	66	166	1,25
Steel grade **8.8**	$M_{Rk,s}$	[N.m]	30	60	105	266	1,25
Steel grade **10.9**	$M_{Rk,s}$	[N.m]	37	75	131	333	1,5
Stainless steel grade **A2-70**, **A4-70**	$M_{Rk,s}$	[N.m]	26	52	92	233	1,56
Stainless steel grade **A4-80**	$M_{Rk,s}$	[N.m]	30	60	105	266	1,33
Stainless steel grade **1.4529** strength class **70**	$M_{Rk,s}$	[N.m]	26	52	92	233	1,25
Stainless steel grade **1.4565** strength class **70**	$M_{Rk,s}$	[N.m]	26	52	92	233	1,56

Table C17: Displacements under tension and shear load

Size			M8	M10	M12	M16
Load	F	[kN]	$N_{Rk} / (\gamma_F \cdot \gamma_M)$			
AAC2	δ_{N0}	[mm]	0,36	0,34	0,35	0,77
	$\delta_{N\infty}$	[mm]	0,73	0,68	0,70	1,54
	δ_{V0}	[mm]	0,34	0,10	0,11	0,31
	$\delta_{V\infty}$	[mm]	0,5	0,15	0,16	0,45
AAC4	δ_{N0}	[mm]	0,36	0,34	0,35	0,77
	$\delta_{N\infty}$	[mm]	0,73	0,68	0,70	1,54
	δ_{V0}	[mm]	0,73	0,54	0,29	0,33
	$\delta_{V\infty}$	[mm]	1,09	0,81	0,44	0,5
AAC6	δ_{N0}	[mm]	0,07	0,04	0,05	0,07
	$\delta_{N\infty}$	[mm]	0,14	0,07	0,10	0,14
	δ_{V0}	[mm]	0,73	0,54	0,29	0,33
	$\delta_{V\infty}$	[mm]	1,09	0,81	0,44	0,5

[1] the hole gap between bolt and fixture shall be considered additionally

Table C18: β - factors for job site tests according to TR 053

Brick N°	N° 11	N° 12	N° 13
β - factor - Use conditions **d/d**	0,97	0,97	0,97
β - factor - Use conditions **w/d**	0,81	0,81	0,81
β - factor - Use conditions **w/w**	0,72	0,72	0,72

WB300, WB300W, WB300T for masonry	**Annex C 4**
Performances Characteristic resistance, displacement β-factors for job site testing under tension load	

Table C19: Characteristic resistance under tension and shear loading
WB300W with installation temperature < -10°C

Base material	Anchor rods $N_{Rk} = V_{Rk}$ [kN] [1]											
	Use conditions d/d				Use conditions w/d				Use conditions w/w			
	M8	M10	M12	M16	M8	M10	M12	M16	M8	M10	M12	M16
Brick N° 11	0,6	0,6	0,75	1,2	0,5	0,6	0,6	0,9	0,5	0,6	0,6	0,9
Brick N° 12	0,9	1,2	1,5	3,0	0,75	0,9	1,2	2,0	0,75	0,9	1,2	2,0
Brick N° 13	2,5	2,5	3,5	4,5	2,0	2,0	3,0	3,5	1,5	1,5	2,5	3,0

[1] For design according TR 054: $N_{Rk} = N_{Rk,p} = N_{Rk,b} = N_{Rk,s}$; $N_{Rk,pb}$ according to TR 054
For $V_{Rk,s}$ see Annex C1, Table C2; Calculation of $V_{Rk,pb}$ and $V_{Rk,c}$ according to TR 054

Table C20: Characteristic resistance under shear loading – steel failure

Size	M6	M8	M10	M12	M16	Partial safety factor γ_{Ms}
See Annex C 4						

Table C21: Displacements under tension and shear load

Size	M6	M8	M10	M12	M16
See Annex C 4					

[1] the hole gap between bolt and fixture shall be considered additionally

Table C22: β - factors for job site tests according to TR 053
WB300W with installation temperature < -10°C

Brick N°	N° 11	N° 12	N° 13
β - factor - Use conditions **d/d**	0,92	0,92	0,92
β - factor - Use conditions **w/d**	0,77	0,77	0,77
β - factor - Use conditions **w/w**	0,69	0,69	0,69

WB300W **for masonry**	**Annex C 5**
Performances Characteristic resistance, displacement β-factors for job site testing under tension load	

Table B5: Installation parameters in solid and hollow masonry

Base material			Brick No. 1 - 10						
Anchor type			Anchor rod with sleeve				Internal threaded socket with sleeve		
Size			M8	M10	M12	M16	M8	M10	M12
Internal threaded socket	d_{to}xl_t	[mm]	-	-	-	-	12x80	14x80	16x80
Sieve sleeve	l_s	[mm]	85	85	85	85	85	85	85
	d_s	[mm]	15/16	15/16	15/16	20	15/16	20	20
Nominal drill hole diameter	d_0	[mm]	15/16	15/16	15/16	20	15/16	20	20
Diameter of cleaning brush	d_b	[mm]	$20^{\pm1}$	$20^{\pm1}$	$20^{\pm1}$	$22^{\pm1}$	$20^{\pm1}$	$22^{\pm1}$	$22^{\pm1}$
Depth of the drill hole	h_0	[mm]	90				90		
Effective anchorage depth	h_{ef}	[mm]	85				80		
Diameter of clearance hole in the fixture	$d_f \leq$	[mm]	9	12	14	18	9	12	14
Torque moment	$T_{inst} \leq$	[Nm]	2						

Table B6: Edge distances and spacing in solid and hollow masonry

Anchor rod

Base material [1]	M8			M10, M12			M16		
	$c_{cr} = c_{min}$	$s_{cr\,II} = s_{min\,II}$	$s_{cr\perp} = s_{min\perp}$	$c_{cr} = c_{min}$	$s_{cr\,II} = s_{min\,II}$	$s_{cr\perp} = s_{min\perp}$	$c_{cr} = c_{min}$	$s_{cr\,II} = s_{min\,II}$	$s_{cr\perp} = s_{min\perp}$
	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]
Brick N° 1	128	255	255	128	255	255	128	255	255
Brick N° 2	128	255	255	128	255	255	128	255	255
Brick N° 3	100	373	238	100	373	238	120	373	238
Brick N° 4	100	370	238	100	370	238	120	370	238
Brick N° 5	100	245	110	100	245	110	120	245	110
Brick N° 6	100	400	200	-	-	-	120	400	200
Brick N° 7	100	235	115	100	235	115	120	235	115
Brick N° 8	100	240	113	100	240	113	120	240	113
Brick N° 9	100	250	248	100	250	248	120	250	248
Brick N° 10	100	250	248	100	250	248	-	-	-

Internal threaded socket

Base material [1]	M8			M10			M12		
	$c_{cr} = c_{min}$	$s_{cr\,II} = s_{min\,II}$	$s_{cr\perp} = s_{min\perp}$	$c_{cr} = c_{min}$	$s_{cr\,II} = s_{min\,II}$	$s_{cr\perp} = s_{min\perp}$	$c_{cr} = c_{min}$	$s_{cr\,II} = s_{min\,II}$	$s_{cr\perp} = s_{min\perp}$
	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]
Brick N° 1	128	255	255	128	255	255	128	255	255
Brick N° 2	128	255	255	128	255	255	128	255	255
Brick N° 4	100	370	238	120	370	238	120	370	238
Brick N° 7	100	235	115	120	235	115	120	235	115
Brick N° 8	100	240	113	120	240	113	120	240	113
Brick N° 9	-	-	-	120	250	248	120	250	248
Brick N° 10	100	250	248	120	250	248	120	250	248

[1] Brick N° according to Annex B 2 to B 4

WB300, WB300W, WB300T for masonry	**Annex B 8**
Intended use Installation parameters	

Table B7: Installation parameters in solid masonry without sleeve

Base material			Brick No. 1 - 2				
Anchor type			Anchor rod without sleeve				
Size			M6	M8	M10	M12	M16
Nominal drill hole diameter	d_0	[mm]	8	10	12	14	18
Diameter of cleaning brush	d_b	[mm]	$9^{\pm1}$	$14^{\pm1}$	$14^{\pm1}$	$14^{\pm1}$	$20^{\pm1}$
Depth of the drill hole	h_0	[mm]	80	90			
Effective anchorage depth	h_{ef}	[mm]	80	90			
Diameter of clearance hole in the fixture	$d_f \leq$	[mm]	7	9	12	14	18
Torque moment	$T_{inst} \leq$	[Nm]	2				

Table B8: Edge distances and spacing in solid masonry without sleeve

Base material [1]	Anchor rod					
	M6			M8, M10, M12, M16		
	$c_{cr} = c_{min}$	$s_{cr\,II} = s_{min\,II}$	$s_{cr\perp} = s_{min\perp}$	$c_{cr} = c_{min}$	$s_{cr\,II} = s_{min\,II}$	$s_{cr\perp} = s_{min\perp}$
	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]
Brick N° 1	120	240	240	135	270	270
Brick N° 2	120	240	240	135	270	270

[1] Brick N° according to Annex B 2

Table B9: Installation parameters in autoclaved aerated concrete

Base material			Brick No. 11 - 13			
Anchor type			Anchor rod without sleeve			
Size			M8	M10	M12	M16
Nominal drill hole diameter	d_0	[mm]	10	12	14	18
Diameter of cleaning brush	d_b	[mm]	$14^{\pm1}$	$14^{\pm1}$	$20^{\pm1}$	$20^{\pm1}$
Depth of the drill hole	h_0	[mm]	80		95	105
Effective anchorage depth	h_{ef}	[mm]	75		90	100
Diameter of clearance hole in the fixture	$d_f \leq$	[mm]	9	12	14	18
Torque moment	$T_{inst} \leq$	[Nm]	2			

Table B10: Edge distances and spacing autoclaved aerated concrete

Base material [1]	Anchor rod								
	M8, M10			M12			M16		
	$c_{cr} = c_{min}$	$s_{cr\,II} = s_{min\,II}$	$s_{cr\perp} = s_{min\perp}$	$c_{cr} = c_{min}$	$s_{cr\,II} = s_{min\,II}$	$s_{cr\perp} = s_{min\perp}$	$c_{cr} = c_{min}$	$s_{cr\,II} = s_{min\,II}$	$s_{cr\perp} = s_{min\perp}$
	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]
Brick N° 11	113	225	225	135	270	270	150	300	300
Brick N° 12	113	225	225	135	270	270	150	300	300
Brick N° 13	113	225	225	135	270	270	150	300	300

[1] Brick N° according to Annex B 5

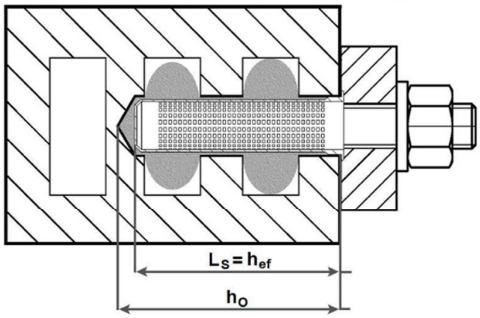
WB300, WB300W, WB300T
for masonry

Intended use
Installation parameters

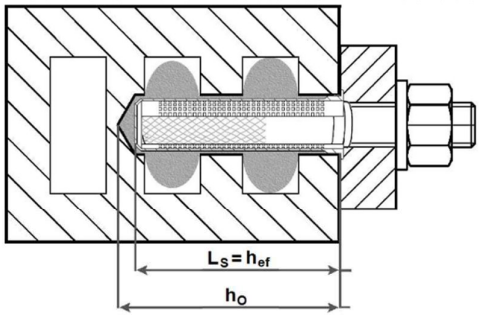
Annex B 9

Installation in hollow or perforated brick masonry

Installation of anchor rod with sieve sleeve

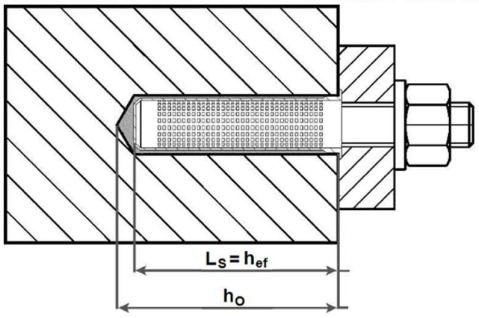


Installation of internal threaded socket with sieve sleeve

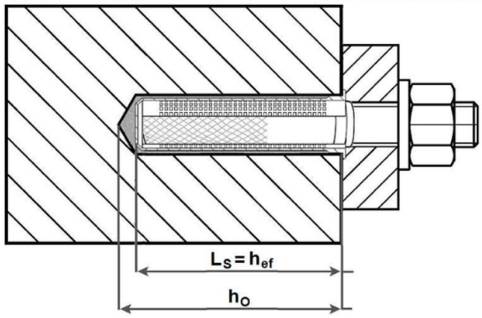


Installation in solid brick masonry

Installation of anchor rod with or without sieve sleeve

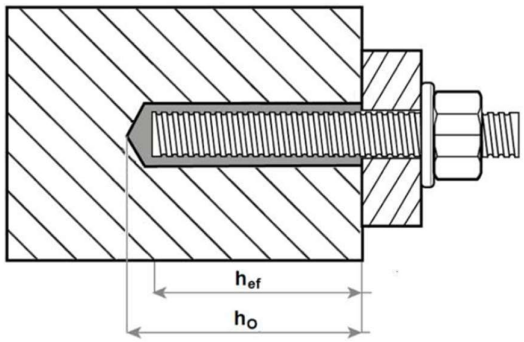


Installation of internal threaded socket with sieve sleeve

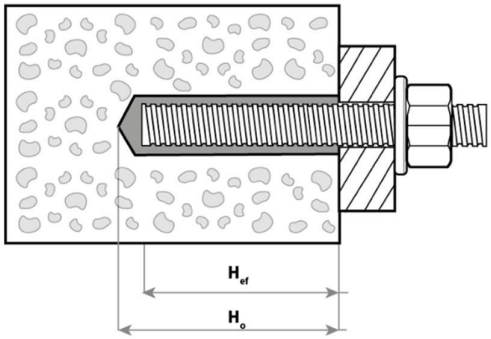


Installation in autoclaved aerated concrete

Installation of anchor rod without sieve sleeve



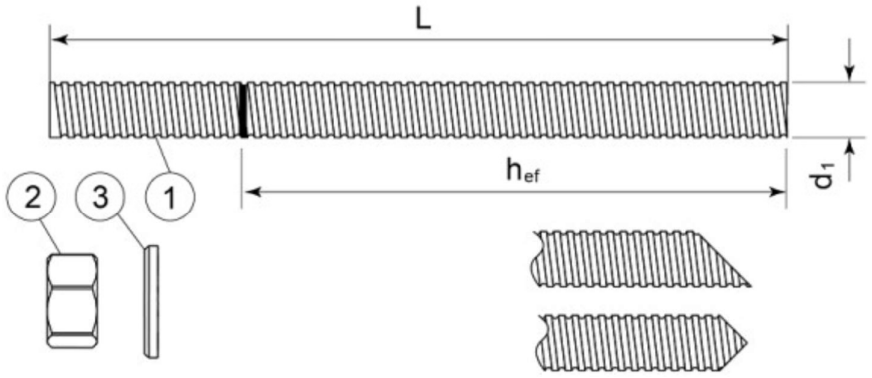
Installation of anchor rod without sieve sleeve



L_s = length of the sieve sleeve
h_{ef} = effective setting depth
h_0 = bore hole depth

WB300, WB300W, WB300T for masonry	**Annex A 1**
Product description Installed condition	

Threaded rod M6, M8, M10, M12, M16



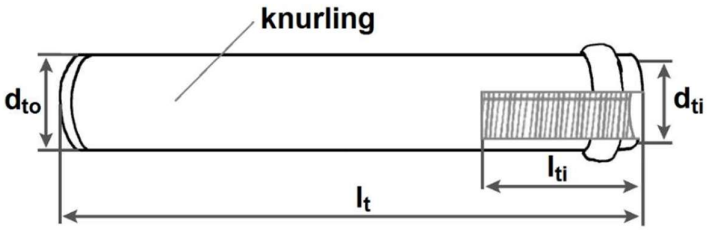
Standard commercial threaded rod with marked embedment depth

Part	Designation	Material
Steel, zinc plated ≥ 5 µm acc. to EN ISO 4042 or Steel, hot-dip galvanized ≥ 40 µm acc. to EN ISO 1461 and EN ISO 10684 or Steel, zinc diffusion coating ≥ 15 µm acc. to EN 13811		
1	Anchor rod	Steel, EN 10087 or EN 10263 Property class 4.6[1)], 5.8, 8.8, 10.9[2)] EN ISO 898-1
2	Hexagon nut EN ISO 4032	According to threaded rod, EN 20898-2
3	Washer EN ISO 887, EN ISO 7089, EN ISO 7093 or EN ISO 7094	According to threaded rod
Stainless steel		
1	Anchor rod	Material: A2-70, A4-70, A4-80, EN ISO 3506
2	Hexagon nut EN ISO 4032	According to threaded rod
3	Washer EN ISO 887, EN ISO 7089, EN ISO 7093 or EN ISO 7094	According to threaded rod
High corrosion resistant steel		
1	Anchor rod	Material: 1.4529, 1.4565, EN 10088-1
2	Hexagon nut EN ISO 4032	According to threaded rod
3	Washer EN ISO 887, EN ISO 7089, EN ISO 7093 or EN ISO 7094	According to threaded rod

[1)] Only for use in Autoclaved aerated concrete
[2)] Galvanized rod of high strength are sensitive to hydrogen induced brittle failure

WB300, WB300W, WB300T for masonry	**Annex A 3**
Product description Threaded rod and materials	

Internal threaded socket



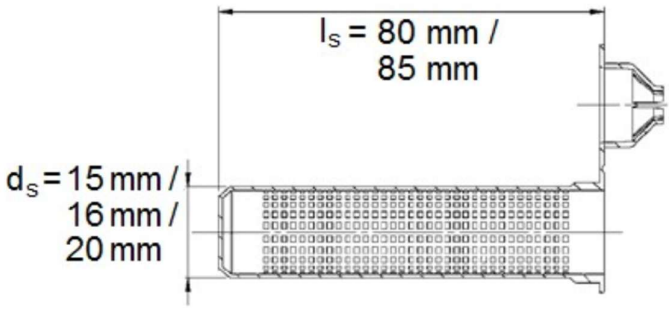
Marking:
Identifying mark of the producer “m”
Size of internal thread e.g. M8

Table A1: Dimensions of internal threaded socket

Internal threaded socket	Inner diameter d_{ti}	Outer diameter d_{to} [mm]	Length of the internal thread l_{ti} [mm]	Total length l_t [mm]
12 x 80	M8	12	30	80
14 x 80	M10	14	30	80
16 x 80	M12	16	30	80

Designation	Material
Internal threaded socket	strength class 5.8 EN ISO 898-1, galvanized ≥ 5 µm EN ISO 4042

Sieve sleeve



Types:
SH15/85
SH16/85
SH20/85

Designation	Material
Sieve sleeve	Polypropylene

WB300, WB300W, WB300T for masonry	**Annex A 4**
Product description Internal threaded socket and materials Sleeve	