



HE-HO



HE-CL



HE-A4



HE-NO



HE-NS



HE-HC

CHARACTERISTICS

- Functioning by deformation.
- European approval for structural applications in non-cracked concrete.
- European approval for non-structural applications in cracked and non-cracked concrete.
- Installation prior to the material to be fixed.
- Bolt can be disassembled so that the surface of the base material is smooth.
- Bolt non include.

APPLICATIONS

- Fixing suspended ceilings, sprinklers and ventilation systems.
- Structural fixing, inner and outer ironworks
- Fixing threaded bars

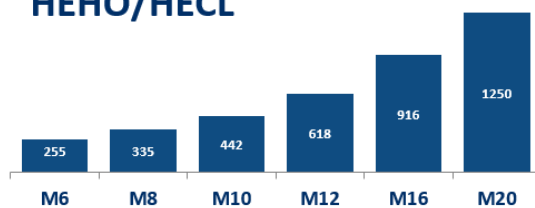
SIZES

M6 - M20

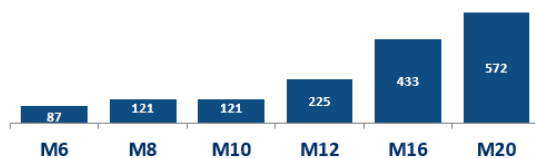
ASSESSMENTS

MAXIMUM LOAD RECOMMENDED IN NON CRACKED CONCRETE [kg]

HEHO/HECL



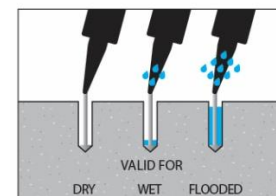
HEA4



HEHC



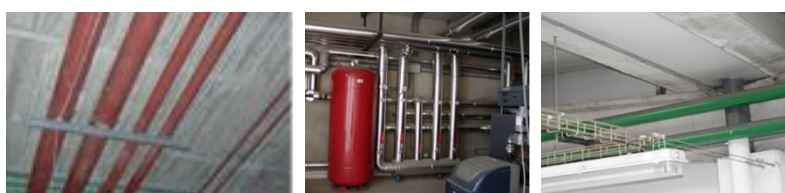
DRILL CONDITIONS



BASE MATERIAL



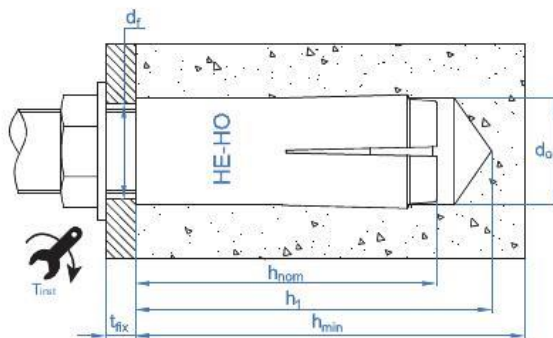
APPLICATION EXAMPLES



1. RANGE						
ITEM	CODE	SIZE	PHOTO	COMPONENT	MATERIAL / COATING	
1	HEHO	M6 to M20		Capsule Cone	Carbon steel Carbon steel Zinc plated $\geq 5 \mu\text{m}$	
2	HECLOM	M6 to M16		Capsule Cone	Carbon steel Carbon steel Zinc plated $\geq 5 \mu\text{m}$	
3	HEA4	M6 to M20		Capsule Cone	Stainless steel A4 Stainless steel A4	
4	HENOM	M6 to M20		Capsule Cone	Carbon steel Carbon steel Zinc plated $\geq 5 \mu\text{m}$	
5	HENS	M6 to M20		Capsule Cone	Carbon steel Carbon steel Atlantis $\geq 40 \mu\text{m}$	
6	HE-HC	M8 to M12		Capsule Cone	Carbon steel Carbon steel Zinc plated $\geq 5 \mu\text{m}$	

2. ACCESSORIES			
ITEM	CODE	PHOTO	DESCRIPTION
1	EXP		Installation tool with rubber handle for M6 to M12
2	EXP		Installation tool for M16 to M20

3.INSTALLATION DATA



3.1 STRUCTURAL APPLICATION

Family	Code	Size	Assessed	Drill diameter	Fixture diameter	Max.Installation torque	Minimum spacing	Minimum edge distance	Minimum concrete thickness	Hole depth	Installation depth	Bolt length*	Critical spacing	Critical edge distance	Installation tool
[--]	[--]	[--]	[ETA]	d ₀	d _f	T _{ins}	S _{min}	C _{min}	h _{min}	h ₁	h _{nom}	e	S _{cr,N}	C _{cr,N}	[--]
				[--]	[--]	[--]	[--]	[--]	[--]	[--]	[--]	[--]	[--]	[--]	[--]
HE-HO	HEHOM06	M6 x 25 Ø8	✓	8	7	4	60	105	100	27	25	6 – 10	75	38	EXHBM06
	HEHOM08	M8 x 30 Ø10	✓	10	9	11	60	105	100	33	30	8 – 13	90	45	EXHBM08
	HEHOM10	M10 x 40 Ø12	✓	12	12	17	80	140	100	43	40	10 – 17	120	60	EXHBM10
	HEHOM12	M12 x 50 Ø15	✓	15	14	38	100	175	100	54	50	12 – 21	150	75	EXHBM12
	HEHOM16	M16 x 65 Ø20	✓	20	18	60	130	230	130	70	65	16 – 27	195	98	EXHBM16
	HEHOM20	M20 x 80 Ø25	✓	25	22	100	160	280	160	86	80	20 – 34	240	120	EXHBM20
	HEHOM12D	M12 x 50 Ø16	--	16	12	38	100	175	100	50	50	12 – 21	150	75	EXHBM12
HE-NO	HENOM06	M6 x 25 Ø8	--	8	7	4	60	105	100	27	25	6 – 10	75	38	EXHBM06
	HENOM08	M8 x 30 Ø10	--	10	9	11	60	105	100	33	30	8 – 13	90	45	EXHBM08
	HENOM10	M10 x 40 Ø12	--	12	12	17	80	140	100	43	40	10 – 17	120	60	EXHBM10
	HENOM12	M12 x 50 Ø15	--	15	14	38	100	175	100	54	50	12 – 21	150	75	EXHBM12
	HENOM16	M16 x 65 Ø20	--	20	18	60	130	230	130	70	65	16 – 27	195	98	EXHBM16
	HENOM20	M20 x 80 Ø25	--	25	22	100	160	280	160	86	80	20 – 34	240	120	EXHBM20
HE-CL	HECLOM06	M6 x 25 Ø8	✓	8	7	4	60	105	100	27	25	6 – 10	75	38	EXHBM06
	HECLOM08	M8 x 30 Ø10	✓	10	9	11	60	105	100	33	30	8 – 13	90	45	EXHBM08
	HECLOM10	M10 x 40 Ø12	✓	12	12	17	80	140	100	43	40	10 – 17	120	60	EXHBM10
	HECLOM12	M12 x 50 Ø15	✓	15	14	38	100	175	100	54	50	12 – 21	150	75	EXHBM12
	HECLOM16	M16 x 65 Ø20	✓	20	18	60	130	230	130	70	65	16 – 27	195	98	EXHBM16
	HECLOM12D	M12 x 50 Ø16	--	16	12	38	100	175	100	54	50	12 – 21	150	75	EXHBM12
HE-A4	HEA4M06	M6 x 25 Ø8	--	8	7	4	60	105	100	27	25	6 – 10	75	38	EXHBM06
	HEA4M08	M8 x 30 Ø10	--	10	9	11	60	105	100	33	30	8 – 13	90	45	EXHBM08
	HEA4M10	M10 x 40 Ø12	--	12	12	17	80	140	100	43	40	10 – 17	120	60	EXHBM10
	HEA4M12	M12 x 50 Ø15	--	15	14	38	100	175	100	54	50	12 – 21	150	75	EXHBM12
	HEA4M16	M16 x 65 Ø20	--	20	18	60	130	230	130	70	65	16 – 27	195	98	EXHBM16
	HEA4M20	M20 x 80 Ø25	--	25	22	100	160	280	160	86	80	20 – 34	240	120	EXHBM20
HE-NS	HENSM06	M6 x 25 Ø8	--	8	7	4	60	105	100	27	25	6 – 10	75	38	EXHBM06
	HENSM08	M8 x 30 Ø10	--	10	9	11	60	105	100	33	30	8 – 13	90	45	EXHBM08
	HENSM10	M10 x 40 Ø12	--	12	12	17	80	140	100	43	40	10 – 17	120	60	EXHBM10
	HENSM12	M12 x 50 Ø15	--	15	14	38	100	175	100	54	50	12 – 21	150	75	EXHBM12
	HENSM16	M16 x 65 Ø20	--	20	18	60	130	230	130	70	65	16 – 27	195	98	EXHBM16
	HENSM20	M20 x 80 Ø25	--	25	22	100	160	280	160	86	80	20 – 34	240	120	EXHBM20

(*) Bolt length to be threaded(not included) = e + washer thickness + thickness of material to be fixed

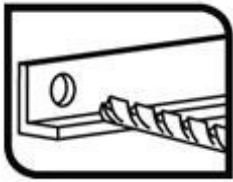
3.2 NON STRUCTURAL APPLICATION

Family	Code	Size	Assessed	Drill diameter	Fixture diameter	Max.Installation torque	Minimum spacing	Minimum edge distance	Minimum concrete thickness	Hole depth	Installation depth	Bolt length *	Critical spacing	Critical edge distance	Installation tool
[--]	[--]	[--]	[ETA]	d ₀	d _f	T _{ins}	s _{min}	c _{min}	h _{min}	h ₁	h _{nom}	e	s _{cr,N}	c _{cr,N}	[--]
				[--]	[--]	[--]	[--]	[--]	[--]	[--]	[--]	[--]	[--]	[--]	[--]
HE-HO	HEHOM06	M6 x 25 Ø8	✓	8	7	4	60	105	100	27	25	6 – 10	75	38	EXHBM06
	HEHOM08	M8 x 30 Ø10	✓	10	9	11	60	105	100	33	30	8 – 13	90	45	EXHBM08
	HEHOM10	M10 x 40 Ø12	✓	12	12	17	80	140	100	43	40	10 – 17	120	60	EXHBM10
	HEHOM12	M12 x 50 Ø15	✓	15	14	38	100	175	100	54	50	12 – 21	150	75	EXHBM12
	HEHOM16	M16 x 65 Ø20	✓	20	18	60	130	230	130	70	65	16 – 27	195	98	EXHBM16
	HEHOM20	M20 x 80 Ø25	✓	25	22	100	160	280	160	86	80	20 – 34	240	120	EXHBM20
HE-CL	HEHOM12D	M12 x 50 Ø16	✓	16	12	38	100	175	100	50	50	12 – 21	150	75	EXHBM12
	HECLOM06	M6 x 25 Ø8	✓	8	7	4	60	105	100	27	25	6 – 10	75	38	EXHBM06
	HECLOM08	M8 x 30 Ø10	✓	10	9	11	60	105	100	33	30	8 – 13	90	45	EXHBM08
	HECLOM10	M10 x 40 Ø12	✓	12	12	17	80	140	100	43	40	10 – 17	120	60	EXHBM10
	HECLOM12	M12 x 50 Ø15	✓	15	14	38	100	175	100	54	50	12 – 21	150	75	EXHBM12
	HECLOM16	M16 x 65 Ø20	✓	20	18	60	130	230	130	70	65	16 – 27	195	98	EXHBM16
HE-A4	HECLOM12D	M12 x 50 Ø16	✓	16	12	38	100	175	100	54	50	12 – 21	150	75	EXHBM12
	HEA4M06	M6 x 25 Ø8	✓	8	7	4	60	105	100	27	25	6 – 10	200	150	EXHBM06
	HEA4M08	M8 x 30 Ø10	✓	10	9	11	60	105	100	33	30	8 – 13	200	150	EXHBM08
	HEA4M10	M10 x 40 Ø12	✓	12	12	17	80	140	100	43	40	10 – 17	200	150	EXHBM10
	HEA4M12	M12 x 50 Ø15	✓	15	14	38	100	175	100	54	50	12 – 21	200	150	EXHBM12
	HEA4M16	M16 x 65 Ø20	✓	20	18	60	130	230	130	70	65	16 – 27	260	195	EXHBM16
HE-HC	HEA4M20	M20 x 80 Ø25	✓	25	22	100	160	280	160	86	80	20 – 34	320	240	EXHBM20
	HEHCM08	M8 x 25 Ø10	✓	10	9	11	75	60	80	28	25	8 – 13	120	60	EXHBM08C
	HEHCM10	M10 x 25 Ø12	✓	12	12	17	75	60	80	28	25	10 – 17	120	60	EXHBM10C
	HEHCM12	M12 x 25 Ø15	✓	15	14	38	75	60	80	29	25	12 – 21	120	60	EXHBM12C

(*) Bolt length to be threaded(not included) = e + washer thickness + thickness of material to be fixed

4. INSTALLATION PROCEDURE

4.1. CONCRETE INSTALLATION



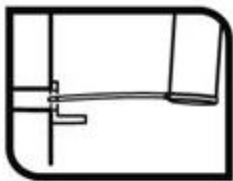
1. DRILL

Check the concrete base is well compacted and porosity insignificant.

Dry and wet drills allowed

Drill at hammer or percussion position

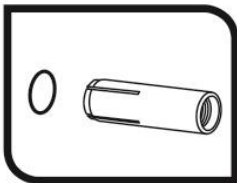
Respect specified diameter and depth.



2. BLOW AND CLEAN

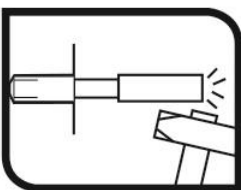
Clean hole from dust and drill debris.

Use air pump and brush



3. INSTALLATION

Introduce the anchor in the hole completely. Use hammer if necessary. The anchor must not stand out of the surface of the base material.



4. EXPAND ANCHOR

Insert the expansion tool into the inner cone of the anchor.

Hammer until the setting tool is level with the anchor

5. RESISTANCE

Resistances in concrete class C20/25 for an isolated anchor without spacing or concrete edge distance effects are indicated in the following table:

5.1 CHARACTERISTIC RESISTANCE[kN]

General parameters			Structural applications			Non Structural applications	
Family	Code	Size	Assessed	Tension	Shear	Assessed	Resistance to any direction
				N _{Rk}	V _{Rk}		F _{Rk}
HE-HO	HEHOM06	M6 x 25 Ø8	✓	6,30	6,30	✓	2,00
	HEHOM08	M8 x 30 Ø10	✓	8,28	8,28	✓	3,00
	HEHOM10	M10 x 40 Ø12	✓	12,75	<u>9,10</u>	✓	5,00
	HEHOM12	M12 x 50 Ø15	✓	17,82	17,82	✓	7,50
	HEHOM16	M16 x 65 Ø20	✓	26,41	<u>32,50</u>	✓	12,0
	HEHOM20	M20 x 80 Ø25	✓	36,06	<u>47,50</u>	✓	20,0
	HEHOM12D	M12 x 50 Ø16	--	17,82	17,82	✓	6,0
HE-NO	HENOM06	M6 x 25 Ø8	--	5,04	6,30	--	--
	HENOM08	M8 x 30 Ø10	--	6,63	8,28	--	--
	HENOM10	M10 x 40 Ø12	--	10,20	<u>9,10</u>	--	--
	HENOM12	M12 x 50 Ø15	--	14,26	17,82	--	--
	HENOM16	M16 x 65 Ø20	--	21,13	<u>32,50</u>	--	--
	HENOM20	M20 x 80 Ø25	--	28,85	<u>47,50</u>	--	--
HE-CL	HECLOM06	M6 x 25 Ø8	✓	6,30	6,30	✓	2,00
	HECLOM08	M8 x 30 Ø10	✓	8,28	8,28	✓	3,00
	HECLOM10	M10 x 40 Ø12	✓	12,75	<u>9,10</u>	✓	5,00
	HECLOM12	M12 x 50 Ø15	✓	17,82	17,82	✓	7,50
	HECLOM16	M16 x 65 Ø20	✓	26,41	<u>32,50</u>	✓	12,0
	HECLOM12D	M12 x 50 Ø16	--	17,82	17,82	✓	6,00
HE-A4	HEA4M06	M6 x 25 Ø8	--	2,50	2,50	✓	2,50
	HEA4M08	M8 x 30 Ø10	--	3,50	3,50	✓	3,50
	HEA4M10	M10 x 40 Ø12	--	3,50	3,50	✓	3,50
	HEA4M12	M12 x 50 Ø15	--	6,50	6,50	✓	6,50
	HEA4M16	M16 x 65 Ø20	--	12,50	12,50	✓	12,50
	HEA4M20	M20 x 80 Ø25	--	16,50	16,50	✓	16,50
HE-NS	HENSM06	M6 x 25 Ø8	--	6,30	6,30	--	--
	HENSM08	M8 x 30 Ø10	--	8,28	8,28	--	--
	HENSM10	M10 x 40 Ø12	--	12,75	<u>9,10</u>	--	--
	HENSM12	M12 x 50 Ø15	--	17,82	17,82	--	--
	HENSM16	M16 x 65 Ø20	--	26,41	<u>32,50</u>	--	--
HE-HC	HEHCM08	M8 x 25 Ø10	--	--	--	✓	2,5
	HEHCM10	M10 x 25 Ø12	--	--	--	✓	4,0
	HEHCM12	M12 x 25 Ø15	--	--	--	✓	4,0

1 kN ≈ 100 kg

Values underlined and in italics show Steel failure, **bold** values concrete failure and other indicate pull out failure.

5.2 DESIGN RESISTANCE [kN]

General parameters			Structural applications			Non Structural applications	
Family	Code	Size	Assessed	Tension	Shear	Assessed	Resistance to any direction
				N _{Rk}	V _{Rk}		F _{Rk}
HE-HO	HEHOM06	M6 x 25 Ø8	✓	3,50	4,20	✓	1,11
	HEHOM08	M8 x 30 Ø10	✓	4,60	5,52	✓	1,67
	HEHOM10	M10 x 40 Ø12	✓	6,07	<u>7,28</u>	✓	2,38
	HEHOM12	M12 x 50 Ø15	✓	8,49	11,88	✓	3,57
	HEHOM16	M16 x 65 Ø20	✓	12,58	<u>26,00</u>	✓	5,71
	HEHOM20	M20 x 80 Ø25	✓	17,17	<u>38,00</u>	✓	9,52
	HEHOM12D	M12 x 50 Ø16	--	8,49	11,88	✓	2,86
HE-NO	HENOM06	M6 x 25 Ø8	--	2,40	4,20	--	--
	HENOM08	M8 x 30 Ø10	--	3,15	5,52	--	--
	HENOM10	M10 x 40 Ø12	--	4,86	<u>7,28</u>	--	--
	HENOM12	M12 x 50 Ø15	--	6,79	11,88	--	--
	HENOM16	M16 x 65 Ø20	--	10,06	<u>26,00</u>	--	--
	HENOM20	M20 x 80 Ø25	--	13,74	<u>38,00</u>	--	--
	HEHOM12D	M12 x 50 Ø16	--	8,49	11,88	✓	2,86
HE-CL	HECLOM06	M6 x 25 Ø8	✓	3,50	4,20	✓	1,11
	HECLOM08	M8 x 30 Ø10	✓	4,60	5,52	✓	1,67
	HECLOM10	M10 x 40 Ø12	✓	6,07	<u>7,28</u>	✓	2,38
	HECLOM12	M12 x 50 Ø15	✓	8,49	11,88	✓	3,57
	HECLOM16	M16 x 65 Ø20	✓	12,58	<u>26,00</u>	✓	5,71
	HECLOM12D	M12 x 50 Ø16	--	8,49	11,88	✓	2,86
	HEA4M06	M6 x 25 Ø8	--	1,19	1,19	✓	1,19
HE-A4	HEA4M08	M8 x 30 Ø10	--	1,67	1,67	✓	1,67
	HEA4M10	M10 x 40 Ø12	--	1,67	1,67	✓	1,67
	HEA4M12	M12 x 50 Ø15	--	3,10	3,10	✓	3,10
	HEA4M16	M16 x 65 Ø20	--	5,95	5,95	✓	5,95
	HEA4M20	M20 x 80 Ø25	--	7,86	7,86	✓	7,86
	HENSM06	M6 x 25 Ø8	--	3,50	4,20	--	--
	HENSM08	M8 x 30 Ø10	--	4,60	5,52	--	--
HE-NS	HENSM10	M10 x 40 Ø12	--	6,07	<u>7,28</u>	--	--
	HENSM12	M12 x 50 Ø15	--	8,49	11,88	--	--
	HENSM16	M16 x 65 Ø20	--	12,58	<u>26,00</u>	--	--
	HEHCM08	M8 x 25 Ø10	--	--	--	✓	1,39
	HEHCM10	M10 x 25 Ø12	--	--	--	✓	2,22
HE-HC	HEHCM12	M12 x 25 Ø15	--	--	--	✓	2,22

1 kN ≈ 100 kg

Values underlined and in italics show Steel failure, **bold** values concrete failure and other indicate pull out failure.

5.3 MAXIMUM LOADS RECOMMENDED [kN]

General parameters			Structural applications			Non Structural applications	
Family	Code	Size	Assessed	Tension	Shear	Assessed	Resistance to any direction
				N _{Rk}	V _{Rk}		F _{Rk}
HE-HO	HEHOM06	M6 x 25 Ø8	✓	2,50	3,00	✓	0,79
	HEHOM08	M8 x 30 Ø10	✓	3,29	3,94	✓	1,19
	HEHOM10	M10 x 40 Ø12	✓	4,34	<u>5,20</u>	✓	1,70
	HEHOM12	M12 x 50 Ø15	✓	6,06	8,49	✓	2,55
	HEHOM16	M16 x 65 Ø20	✓	8,98	<u>18,57</u>	✓	4,08
	HEHOM20	M20 x 80 Ø25	✓	12,27	<u>27,14</u>	✓	6,80
	HEHOM12D	M12 x 50 Ø16	--	6,06	8,49	✓	1,19
HE-NO	HENOM06	M6 x 25 Ø8	--	1,71	3,00	--	--
	HENOM08	M8 x 30 Ø10	--	2,25	3,94	--	--
	HENOM10	M10 x 40 Ø12	--	3,47	<u>5,20</u>	--	--
	HENOM12	M12 x 50 Ø15	--	4,85	8,49	--	--
	HENOM16	M16 x 65 Ø20	--	7,19	<u>18,57</u>	--	--
	HENOM20	M20 x 80 Ø25	--	9,81	<u>27,14</u>	--	--
HE-CL	HECLOM06	M6 x 25 Ø8	✓	2,50	3,00	✓	0,79
	HECLOM08	M8 x 30 Ø10	✓	3,29	3,94	✓	1,19
	HECLOM10	M10 x 40 Ø12	✓	4,34	<u>5,20</u>	✓	1,70
	HECLOM12	M12 x 50 Ø15	✓	6,06	8,49	✓	2,55
	HECLOM16	M16 x 65 Ø20	✓	8,98	<u>18,57</u>	✓	4,08
	HECLOM12D	M12 x 50 Ø16	--	6,06	8,49	✓	2,04
HE-A4	HEA4M06	M6 x 25 Ø8	--	0,85	0,85	✓	0,85
	HEA4M08	M8 x 30 Ø10	--	1,19	1,19	✓	1,19
	HEA4M10	M10 x 40 Ø12	--	1,19	1,19	✓	1,19
	HEA4M12	M12 x 50 Ø15	--	2,21	2,21	✓	2,21
	HEA4M16	M16 x 65 Ø20	--	4,25	4,25	✓	4,25
	HEA4M20	M20 x 80 Ø25	--	5,61	5,61	✓	5,61
HE-NS	HENSM06	M6 x 25 Ø8	--	2,50	3,00	--	--
	HENSM08	M8 x 30 Ø10	--	3,29	3,94	--	--
	HENSM10	M10 x 40 Ø12	--	4,34	<u>5,20</u>	--	--
	HENSM12	M12 x 50 Ø15	--	6,06	8,49	--	--
	HENSM16	M16 x 65 Ø20	--	8,98	<u>18,57</u>	--	--
HE-HC	HEHCM08	M8 x 25 Ø10	--	--	--	✓	0,99
	HEHCM10	M10 x 25 Ø12	--	--	--	✓	1,59
	HEHCM12	M12 x 25 Ø15	--	--	--	✓	1,59

1 kN ≈ 100 kg

Values underlined and in italics show Steel failure, **bold** values concrete failure and other indicate pull out failure.

6. OFFICIAL DOCUMENTATION

The following documents are available on our official website www.indexfix.com:

- European assessment ETA 14/0135 for Installation in non-cracked concrete according to guideline EAD 330232-00-0601, option 7, from M6 to M20.
- European assessment ETA 14/0068 for non-structural applications in redundant systems in cracked and uncracked concrete according to guideline EAD 330747-00-0601, option 7, from M6 to M20.
- AVCP certificate 1219-CPR-0079 for use in non-cracked concrete.
- AVCP certificate 1219-CPR-0078 for non-structural applications in redundant systems in cracked and uncracked concrete
- Declaration of performance DoP HE.
- Available for the anchor design software INDEXcal.