TECHNICAL DATASHEET

4tecx (Inslagankers)

4tecx article numbers:
4050001700, 4050001708, 4050001716, 4050001724, 4050001732, 4050001740, 4050001800, 4050001808, 4050001816, 4050001824, 4050001832, 4050001840, 4050001900, 4050001908, 4050001916, 4050001924, 4050001932

Inslaganker verzinkt ETA 7

Inslaganker met kraag verzinkt ETA 7

Inslaganker RVS A4

HE-NO

HE-NS

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

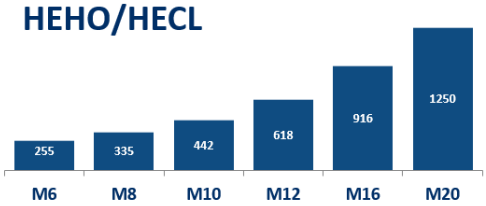
- Fixing suspended ceilings, sprinklers and ventilation systems.
- Structural fixing, inner and outer ironworks
- Fixing threaded bars

SIZES

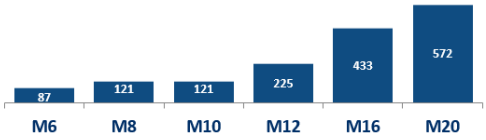
M6 - M20

RECOMMENDED LOADS IN NON CRACKED CONCRETE [kg]

HEHO/HECL



HEA4



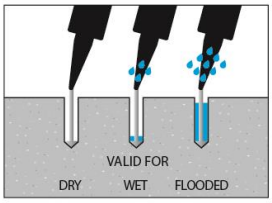
ASSESMENTS

European Technical Approval

FIRE RESISTANCE

INDEXcal

DRILL CONDITIONS



BASE MATERIAL

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APPLICATION EXAMPLES

1. RANGE

ITEM	CODE	SIZE	PHOTO	COMPONENT	MATERIAL / COATING	
1	**HEHO** **Inslaganker verzinkt ETA 7**	M6 a M20		Capsule Cone	Carbon steel Carbon steel Zinc plated ≥ 5 µm	C1 Z ZINC
2	**HECLOM** **Inslaganker met kraag verzinkt ETA 7**	M6 a M16		Capsule Cone	Carbon steel Carbon steel Zinc plated ≥ 5 µm	C1 Z ZINC
3	**HEA4** **Inslaganker RVS A4**	M6 a M20		Capsule Cone	Stainless steel A4 Stainless steel A4	C4 A4 INOX AISI 316
4	**HENOM**	M6 a M20		Capsule Cone	Carbon steel Carbon steel Zinc plated ≥ 5 µm	C1 Z ZINC
5	**HENS**	M6 a M20		Capsule Cone	Carbon steel Carbon steel Sherardized ≥ 5 µm	C3 Sh

2. ACCESSORIES

ITEM	CODE	PHOTO	DESCRIPTION
1	**EXHB**		Installation tool with rubber handle for M6 to M12
2	**EXHB**		Installation tool for M16 to M20

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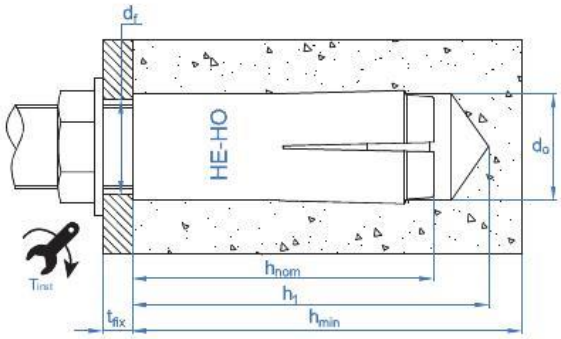
3.INSTALLATION DATA



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	$s_{cr,N}$	$c_{cr,N}$	[--]
				[--]	[--]	[--]	[--]	[--]	[--]	[--]	[--]	[--]	[--]	[--]	[--]
Inslaganker verzinkt ETA 7	4050001700	M6 x 25 Ø8	✓	8	7	4	60	105	100	27	25	6 – 10	75	38	EXHBM06
	4050001708	M8 x 30 Ø10	✓	10	9	11	60	105	100	33	30	8 – 13	90	45	EXHBM08
	4050001716	M10 x 40 Ø12	✓	12	12	17	80	140	100	43	40	10 – 17	120	60	EXHBM10
	4050001724	M12 x 50 Ø15	✓	15	14	38	100	175	100	54	50	12 – 21	150	75	EXHBM12
	4050001740	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
	4050001732	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
Inslaganker met kraag verzinkt	4050001800	M6 x 25 Ø8	✓	8	7	4	60	105	100	27	25	6 – 10	75	38	EXHBM06
	4050001808	M8 x 30 Ø10	✓	10	9	11	60	105	100	33	30	8 – 13	90	45	EXHBM08
	4050001816	M10 x 40 Ø12	✓	12	12	17	80	140	100	43	40	10 – 17	120	60	EXHBM10
	4050001824	M12 x 50 Ø15	✓	15	14	38	100	175	100	54	50	12 – 21	150	75	EXHBM12
	4050001840	M16 x 65 Ø20	✓	20	18	60	130	230	130	70	65	16 – 27	195	98	EXHBM16
	4050001832	M12 x 50 Ø16	--	16	12	38	100	175	100	54	50	12 – 21	150	75	EXHBM12
Inslaganker RVS A4	4050001900	M6 x 25 Ø8	--	8	7	4	60	105	100	27	25	6 – 10	75	38	EXHBM06
	4050001908	M8 x 30 Ø10	--	10	9	11	60	105	100	33	30	8 – 13	90	45	EXHBM08
	4050001916	M10 x 40 Ø12	--	12	12	17	80	140	100	43	40	10 – 17	120	60	EXHBM10
	4050001924	M12 x 50 Ø15	--	15	14	38	100	175	100	54	50	12 – 21	150	75	EXHBM12
	4050001932	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

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

3.1 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	$s_{cr,N}$	$c_{cr,N}$	[--]
				[--]	[--]	[--]	[--]	[--]	[--]	[--]	[--]	[--]	[--]	[--]	[--]
Inslaganker verzinkt ETA 7	4050001700	M6 x 25 Ø8	✓	8	7	4	60	105	100	27	25	6 – 10	75	38	EXHBM06
	4050001708	M8 x 30 Ø10	✓	10	9	11	60	105	100	33	30	8 – 13	90	45	EXHBM08
	4050001716	M10 x 40 Ø12	✓	12	12	17	80	140	100	43	40	10 – 17	120	60	EXHBM10
	4050001724	M12 x 50 Ø15	✓	15	14	38	100	175	100	54	50	12 – 21	150	75	EXHBM12
	4050001740	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
	4050001732	M12 x 50 Ø16	✓	16	12	38	100	175	100	50	50	12 – 21	150	75	EXHBM12
Inslaganker met kraag verzinkt	4050001800	M6 x 25 Ø8	✓	8	7	4	60	105	100	27	25	6 – 10	75	38	EXHBM06
	4050001808	M8 x 30 Ø10	✓	10	9	11	60	105	100	33	30	8 – 13	90	45	EXHBM08
	4050001816	M10 x 40 Ø12	✓	12	12	17	80	140	100	43	40	10 – 17	120	60	EXHBM10
	4050001824	M12 x 50 Ø15	✓	15	14	38	100	175	100	54	50	12 – 21	150	75	EXHBM12
	4050001840	M16 x 65 Ø20	✓	20	18	60	130	230	130	70	65	16 – 27	195	98	EXHBM16
	4050001832	M12 x 50 Ø16	✓	16	12	38	100	175	100	54	50	12 – 21	150	75	EXHBM12
Inslaganker RVS A4	4050001900	M6 x 25 Ø8	✓	8	7	4	60	105	100	27	25	6 – 10	200	150	EXHBM06
	4050001908	M8 x 30 Ø10	✓	10	9	11	60	105	100	33	30	8 – 13	200	150	EXHBM08
	4050001916	M10 x 40 Ø12	✓	12	12	17	80	140	100	43	40	10 – 17	200	150	EXHBM10
	4050001924	M12 x 50 Ø15	✓	15	14	38	100	175	100	54	50	12 – 21	200	150	EXHBM12
	4050001932	M16 x 65 Ø20	✓	20	18	60	130	230	130	70	65	16 – 27	260	195	EXHBM16
	HEA4M20	M20 x 80 Ø25	✓	25	22	100	160	280	160	86	80	20 – 34	320	240	EXHBM20

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

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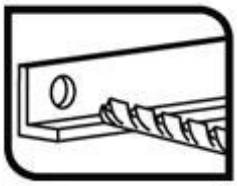
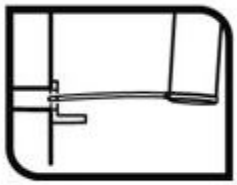
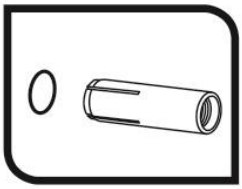
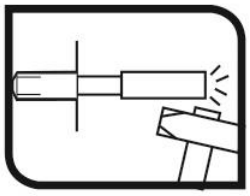
4. INSTALLATION PROCEDURE

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

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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	4050001700	M6 x 25 Ø8	✓	**6,30**	**6,30**	✓	2,00
	4050001708	M8 x 30 Ø10	✓	**8,28**	**8,28**	✓	3,00
	4050001716	M10 x 40 Ø12	✓	**12,75**	*9,10*	✓	5,00
	4050001724	M12 x 50 Ø15	✓	**17,82**	**17,82**	✓	7,50
	4050001740	M16 x 65 Ø20	✓	**26,41**	*32,50*	✓	12,0
	HEHOM20	M20 x 80 Ø25	✓	**36,06**	*47,50*	✓	20,0
	4050001732	M12 x 50 Ø16	--	**17,82**	**17,82**	✓	6,0
	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	*9,10*	--	--
	HENOM12	M12 x 50 Ø15	--	14,26	**17,82**	--	--
	HENOM16	M16 x 65 Ø20	--	21,13	*32,50*	--	--
	HENOM20	M20 x 80 Ø25	--	28,85	*47,50*	--	--
	4050001800	M6 x 25 Ø8	✓	**6,30**	**6,30**	✓	2,00
	4050001808	M8 x 30 Ø10	✓	**8,28**	**8,28**	✓	3,00
	4050001816	M10 x 40 Ø12	✓	**12,75**	*9,10*	✓	5,00
	4050001824	M12 x 50 Ø15	✓	**17,82**	**17,82**	✓	7,50
	4050001840	M16 x 65 Ø20	✓	**26,41**	*32,50*	✓	12,0
	4050001832	M12 x 50 Ø16	--	**17,82**	**17,82**	✓	6,00
	4050001900	M6 x 25 Ø8	--	2,50	2,50	✓	2,50
	4050001908	M8 x 30 Ø10	--	3,50	3,50	✓	3,50
	4050001916	M10 x 40 Ø12	--	3,50	3,50	✓	3,50
	4050001924	M12 x 50 Ø15	--	6,50	6,50	✓	6,50
	4050001932	M16 x 65 Ø20	--	12,50	12,50	✓	12,50
	HEA4M20	M20 x 80 Ø25	--	16,50	16,50	✓	16,50
	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**	*9,10*	--	--
	HENSM12	M12 x 50 Ø15	--	**17,82**	**17,82**	--	--
	HENSM16	M16 x 65 Ø20	--	**26,41**	*32,50*	--	--

1 KN ≈ 100 kg

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

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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	4050001700	M6 x 25 Ø8	✓	**3,50**	**4,20**	✓	1,11
	4050001708	M8 x 30 Ø10	✓	**4,60**	**5,52**	✓	1,67
	4050001716	M10 x 40 Ø12	✓	**6,07**	*7,28*	✓	2,38
	4050001724	M12 x 50 Ø15	✓	**8,49**	**11,88**	✓	3,57
	4050001740	M16 x 65 Ø20	✓	**12,58**	*26,00*	✓	5,71
	HEHOM20	M20 x 80 Ø25	✓	**17,17**	*38,00*	✓	9,52
	4050001732	M12 x 50 Ø16	--	**8,49**	**11,88**	✓	2,86
	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	*7,28*	--	--
	HENOM12	M12 x 50 Ø15	--	6,79	**11,88**	--	--
	HENOM16	M16 x 65 Ø20	--	10.06	*26,00*	--	--
	HENOM20	M20 x 80 Ø25	--	13,74	*38,00*	--	--
	4050001800	M6 x 25 Ø8	✓	**3,50**	**4,20**	✓	1,11
	4050001808	M8 x 30 Ø10	✓	**4,60**	**5,52**	✓	1,67
	4050001816	M10 x 40 Ø12	✓	**6,07**	*7,28*	✓	2,38
	4050001824	M12 x 50 Ø15	✓	**8,49**	**11,88**	✓	3,57
	4050001840	M16 x 65 Ø20	✓	**12,58**	*26,00*	✓	5,71
	4050001832	M12 x 50 Ø16	--	**8,49**	**11,88**	✓	2,86
	4050001900	M6 x 25 Ø8	--	1,19	1,19	✓	1,19
	4050001908	M8 x 30 Ø10	--	1,67	1,67	✓	1,67
	4050001916	M10 x 40 Ø12	--	1,67	1,67	✓	1,67
	4050001924	M12 x 50 Ø15	--	3,10	3,10	✓	3,10
	4050001932	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**	--	--
	HENSM10	M10 x 40 Ø12	--	**6,07**	*7,28*	--	--
	HENSM12	M12 x 50 Ø15	--	**8,49**	**11,88**	--	--
	HENSM16	M16 x 65 Ø20	--	**12,58**	*26,00*	--	--

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	4050001700	M6 x 25 Ø8	✓	**2,50**	**3,00**	✓	0,79
	4050001708	M8 x 30 Ø10	✓	**3,29**	**3,94**	✓	1,19
	4050001716	M10 x 40 Ø12	✓	**4,34**	*5,20*	✓	1,70
	4050001724	M12 x 50 Ø15	✓	**6,06**	**8,49**	✓	2,55
	4050001740	M16 x 65 Ø20	✓	**8,98**	*18,57*	✓	4,08
	HEHOM20	M20 x 80 Ø25	✓	**12,27**	*27,14*	✓	6,80
	4050001732	M12 x 50 Ø16	--	**6,06**	**8,49**	✓	1,19
	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	*5,20*	--	--
	HENOM12	M12 x 50 Ø15	--	4,85	**8,49**	--	--
	HENOM16	M16 x 65 Ø20	--	7,19	*18,57*	--	--
	HENOM20	M20 x 80 Ø25	--	9,81	*27,14*	--	--
	4050001800	M6 x 25 Ø8	✓	**2,50**	**3,00**	✓	0,79
	4050001808	M8 x 30 Ø10	✓	**3,29**	**3,94**	✓	1,19
	4050001816	M10 x 40 Ø12	✓	**4,34**	*5,20*	✓	1,70
	4050001824	M12 x 50 Ø15	✓	**6,06**	**8,49**	✓	2,55
	4050001840	M16 x 65 Ø20	✓	**8,98**	*18,57*	✓	4,08
	4050001832	M12 x 50 Ø16	--	**6,06**	**8,49**	✓	2,04
	4050001900	M6 x 25 Ø8	--	0,85	0,85	✓	0,85
	4050001908	M8 x 30 Ø10	--	1,19	1,19	✓	1,19
	4050001916	M10 x 40 Ø12	--	1,19	1,19	✓	1,19
	4050001924	M12 x 50 Ø15	--	2,21	2,21	✓	2,21
	4050001932	M16 x 65 Ø20	--	4,25	4,25	✓	4,25
	HEA4M20	M20 x 80 Ø25	--	5,61	5,61	✓	5,61
	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**	*5,20*	--	--
	HENSM12	M12 x 50 Ø15	--	**6,06**	**8,49**	--	--
	HENSM16	M16 x 65 Ø20	--	**8,98**	*18,57*	--	--

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.4tecx.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.