

# 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

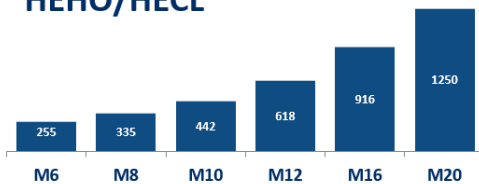
- Fixing suspended ceilings, sprinklers and ventilation systems.
- Structural fixing, inner and outer ironworks
- Fixing threaded bars

### SIZES

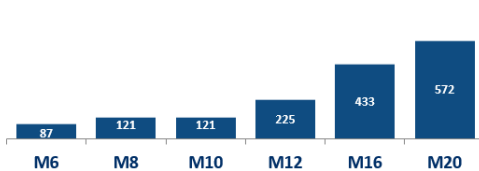
M6 - M20

### RECOMMENDED LOADS IN NON CRACKED CONCRETE [kg]

#### HEHO/HECL



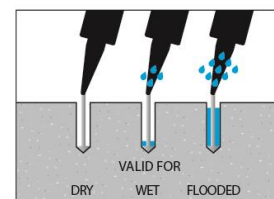
#### HEA4



### ASSESMENTS



### DRILL CONDITIONS












### BASE MATERIAL



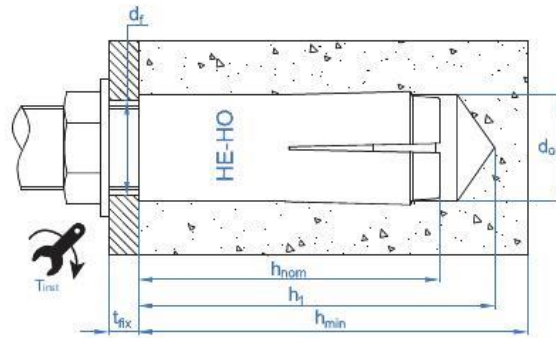
## APPLICATION EXAMPLES



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 $\geq 5 \mu\text{m}$	
2	HECLOM Inslaganker met kraag verzinkt ETA 7	M6 a M16		Capsule Cone	Carbon steel Carbon steel Zinc plated $\geq 5 \mu\text{m}$	
3	HEA4 Inslaganker RVS A4	M6 a M20		Capsule Cone	Stainless steel A4 Stainless steel A4	
4	HENOM	M6 a M20		Capsule Cone	Carbon steel Carbon steel Zinc plated $\geq 5 \mu\text{m}$	
5	HENS	M6 a M20		Capsule Cone	Carbon steel Carbon steel Sherardized $\geq 5 \mu\text{m}$	

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

### 3. INSTALLATION DATA



#### 3.1 STRUCTURAL APPLICATION

Family	Code	Size	Assessed	Drill diameter	Fixture diameter	Max. Installation thickness	Minimum spacing	Minimum edge distance	Minimum concrete thickness	Hole depth	Installation depth	Bolt length*	Critical spacing	Critical edge distance	Installation tool
[--]	[--]	[--]	[ETA]	d <sub>0</sub>	d <sub>f</sub>	T <sub>ins</sub>	S <sub>min</sub>	C <sub>min</sub>	h <sub>min</sub>	h <sub>1</sub>	h <sub>nom</sub>	e	S <sub>cr,N</sub>	C <sub>cr,N</sub>	[--]
				[--]	[--]	[--]	[--]	[--]	[--]	[--]	[--]	[--]	[--]	[--]	[--]
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
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 <sub>0</sub>	d <sub>f</sub>	T <sub>ins</sub>	S <sub>min</sub>	C <sub>min</sub>	h <sub>min</sub>	h <sub>1</sub>	h <sub>nom</sub>	e	S <sub>cr,N</sub>	C <sub>cr,N</sub>	[--]
				[--]	[--]	[--]	[--]	[--]	[--]	[--]	[--]	[--]	[--]	[--]	[--]
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
Inslaganker met kraag verzinkt	4050001732	M12 x 50 Ø16	✓	16	12	38	100	175	100	50	50	12 – 21	150	75	EXHBM12
	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
Inslaganker RVS A4	4050001832	M12 x 50 Ø16	✓	16	12	38	100	175	100	54	50	12 – 21	150	75	EXHBM12
	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

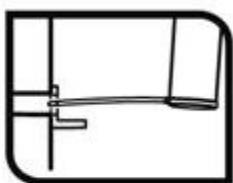
## 4. INSTALLATION PROCEDURE

### 4.1. CONCRETE INSTALLATION



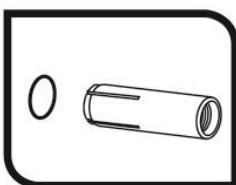
#### 1. DRILL

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.



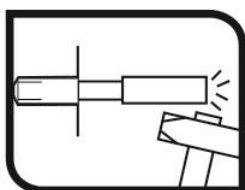
#### 2. BLOW AND CLEAN

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 <sub>Rk</sub>	V <sub>Rk</sub>		F <sub>Rk</sub>
HE	4050001700	M6 x 25 Ø8	✓	<b>6,30</b>	<b>6,30</b>	✓	2,00
	4050001708	M8 x 30 Ø10	✓	<b>8,28</b>	<b>8,28</b>	✓	3,00
	4050001716	M10 x 40 Ø12	✓	<b>12,75</b>	<u>9,10</u>	✓	5,00
	4050001724	M12 x 50 Ø15	✓	<b>17,82</b>	<b>17,82</b>	✓	7,50
	4050001740	M16 x 65 Ø20	✓	<b>26,41</b>	<u>32,50</u>	✓	12,0
	HEHOM20	M20 x 80 Ø25	✓	<b>36,06</b>	<u>47,50</u>	✓	20,0
	4050001732	M12 x 50 Ø16	--	<b>17,82</b>	<b>17,82</b>	✓	6,0
	HENOM06	M6 x 25 Ø8	--	5,04	<b>6,30</b>	--	--
	HENOM08	M8 x 30 Ø10	--	6,63	<b>8,28</b>	--	--
	HENOM10	M10 x 40 Ø12	--	10,20	<u>9,10</u>	--	--
	HENOM12	M12 x 50 Ø15	--	14,26	<b>17,82</b>	--	--
	HENOM16	M16 x 65 Ø20	--	21,13	<u>32,50</u>	--	--
	HENOM20	M20 x 80 Ø25	--	28,85	<u>47,50</u>	--	--
	4050001800	M6 x 25 Ø8	✓	<b>6,30</b>	<b>6,30</b>	✓	2,00
	4050001808	M8 x 30 Ø10	✓	<b>8,28</b>	<b>8,28</b>	✓	3,00
	4050001816	M10 x 40 Ø12	✓	<b>12,75</b>	<u>9,10</u>	✓	5,00
	4050001824	M12 x 50 Ø15	✓	<b>17,82</b>	<b>17,82</b>	✓	7,50
	4050001840	M16 x 65 Ø20	✓	<b>26,41</b>	<u>32,50</u>	✓	12,0
	4050001832	M12 x 50 Ø16	--	<b>17,82</b>	<b>17,82</b>	✓	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	--	<b>6,30</b>	<b>6,30</b>	--	--
	HENSM08	M8 x 30 Ø10	--	<b>8,28</b>	<b>8,28</b>	--	--
	HENSM10	M10 x 40 Ø12	--	<b>12,75</b>	<u>9,10</u>	--	--
	HENSM12	M12 x 50 Ø15	--	<b>17,82</b>	<b>17,82</b>	--	--
	HENSM16	M16 x 65 Ø20	--	<b>26,41</b>	<u>32,50</u>	--	--

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 <sub>Rk</sub>	V <sub>Rk</sub>		F <sub>Rk</sub>
HE	4050001700	M6 x 25 Ø8	✓	<b>3,50</b>	<b>4,20</b>	✓	1,11
	4050001708	M8 x 30 Ø10	✓	<b>4,60</b>	<b>5,52</b>	✓	1,67
	4050001716	M10 x 40 Ø12	✓	<b>6,07</b>	<u>7,28</u>	✓	2,38
	4050001724	M12 x 50 Ø15	✓	<b>8,49</b>	<b>11,88</b>	✓	3,57
	4050001740	M16 x 65 Ø20	✓	<b>12,58</b>	<u>26,00</u>	✓	5,71
	HEHOM20	M20 x 80 Ø25	✓	<b>17,17</b>	<u>38,00</u>	✓	9,52
	4050001732	M12 x 50 Ø16	--	<b>8,49</b>	<b>11,88</b>	✓	2,86
	HENOM06	M6 x 25 Ø8	--	2,40	<b>4,20</b>	--	--
	HENOM08	M8 x 30 Ø10	--	3,15	<b>5,52</b>	--	--
	HENOM10	M10 x 40 Ø12	--	4,86	<u>7,28</u>	--	--
	HENOM12	M12 x 50 Ø15	--	6,79	<b>11,88</b>	--	--
	HENOM16	M16 x 65 Ø20	--	10,06	<u>26,00</u>	--	--
	HENOM20	M20 x 80 Ø25	--	13,74	<u>38,00</u>	--	--
	4050001800	M6 x 25 Ø8	✓	<b>3,50</b>	<b>4,20</b>	✓	1,11
	4050001808	M8 x 30 Ø10	✓	<b>4,60</b>	<b>5,52</b>	✓	1,67
	4050001816	M10 x 40 Ø12	✓	<b>6,07</b>	<u>7,28</u>	✓	2,38
	4050001824	M12 x 50 Ø15	✓	<b>8,49</b>	<b>11,88</b>	✓	3,57
	4050001840	M16 x 65 Ø20	✓	<b>12,58</b>	<u>26,00</u>	✓	5,71
	4050001832	M12 x 50 Ø16	--	<b>8,49</b>	<b>11,88</b>	✓	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	--	<b>3,50</b>	<b>4,20</b>	--	--
HENSM08	M8 x 30 Ø10	--	<b>4,60</b>	<b>5,52</b>	--	--	
HENSM10	M10 x 40 Ø12	--	<b>6,07</b>	<u>7,28</u>	--	--	
HENSM12	M12 x 50 Ø15	--	<b>8,49</b>	<b>11,88</b>	--	--	
HENSM16	M16 x 65 Ø20	--	<b>12,58</b>	<u>26,00</u>	--	--	

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 <sub>Rk</sub>	V <sub>Rk</sub>		F <sub>Rk</sub>
HE	4050001700	M6 x 25 Ø8	✓	<b>2,50</b>	<b>3,00</b>	✓	0,79
	4050001708	M8 x 30 Ø10	✓	<b>3,29</b>	<b>3,94</b>	✓	1,19
	4050001716	M10 x 40 Ø12	✓	<b>4,34</b>	<u>5,20</u>	✓	1,70
	4050001724	M12 x 50 Ø15	✓	<b>6,06</b>	<b>8,49</b>	✓	2,55
	4050001740	M16 x 65 Ø20	✓	<b>8,98</b>	<u>18,57</u>	✓	4,08
	HEHOM20	M20 x 80 Ø25	✓	<b>12,27</b>	<u>27,14</u>	✓	6,80
	4050001732	M12 x 50 Ø16	--	<b>6,06</b>	<b>8,49</b>	✓	1,19
	HENOM06	M6 x 25 Ø8	--	1,71	<b>3,00</b>	--	--
	HENOM08	M8 x 30 Ø10	--	2,25	<b>3,94</b>	--	--
	HENOM10	M10 x 40 Ø12	--	3,47	<u>5,20</u>	--	--
	HENOM12	M12 x 50 Ø15	--	4,85	<b>8,49</b>	--	--
	HENOM16	M16 x 65 Ø20	--	7,19	<u>18,57</u>	--	--
	HENOM20	M20 x 80 Ø25	--	9,81	<u>27,14</u>	--	--
	4050001800	M6 x 25 Ø8	✓	<b>2,50</b>	<b>3,00</b>	✓	0,79
	4050001808	M8 x 30 Ø10	✓	<b>3,29</b>	<b>3,94</b>	✓	1,19
	4050001816	M10 x 40 Ø12	✓	<b>4,34</b>	<u>5,20</u>	✓	1,70
	4050001824	M12 x 50 Ø15	✓	<b>6,06</b>	<b>8,49</b>	✓	2,55
	4050001840	M16 x 65 Ø20	✓	<b>8,98</b>	<u>18,57</u>	✓	4,08
	4050001832	M12 x 50 Ø16	--	<b>6,06</b>	<b>8,49</b>	✓	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	--	<b>2,50</b>	<b>3,00</b>	--	--
HENSM08	M8 x 30 Ø10	--	<b>3,29</b>	<b>3,94</b>	--	--	
HENSM10	M10 x 40 Ø12	--	<b>4,34</b>	<u>5,20</u>	--	--	
HENSM12	M12 x 50 Ø15	--	<b>6,06</b>	<b>8,49</b>	--	--	
HENSM16	M16 x 65 Ø20	--	<b>8,98</b>	<u>18,57</u>	--	--	

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](http://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.