HE-HO

HE-CL

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. Also for hollow core slabs (only HE-HC)
- Installation prior to the material to be fixed.
- Version for fastening diamond cutting equipment: HEHOM12D/HECLOM12D.
- Bolt can be disassembled so that the surface of the base material is smooth.
- Bolt non included.
- VdS available for sizes from M8 to M12 (HEHO, HECL, HEHC)
- FM available for sizes from M10 to M16 (HEHO, HECL)
- Available in INDEXcal.

APPLICATIONS

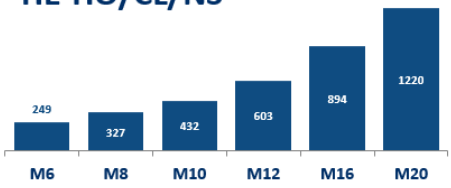
- Fixing suspended ceilings, sprinklers and ventilation systems.
- Structural fixing, inner and outer ironworks
- Fixing threaded bars
- Fixing in hollow core slabs (only HE-HC)

SIZES

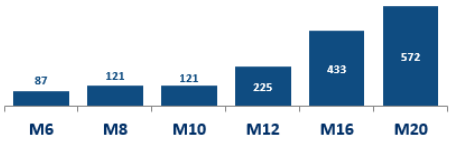
M6 - M12

MAXIMUM LOAD RECOMMENDED IN NON-CRACKED CONCRETE [kg]

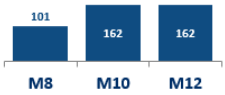
HE-HO/CL/NS



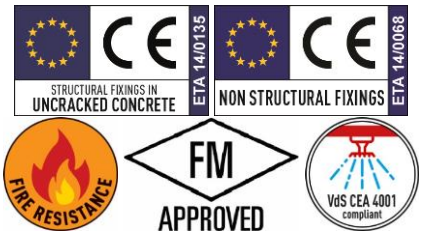
HEA4/C4



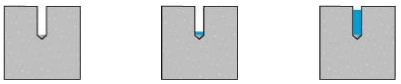
HEHC



ASSESMENTS



DRILL CONDITIONS



DRY WET FLOODED

BASE MATERIAL

APPLICATION EXAMPLES

1. RANGE

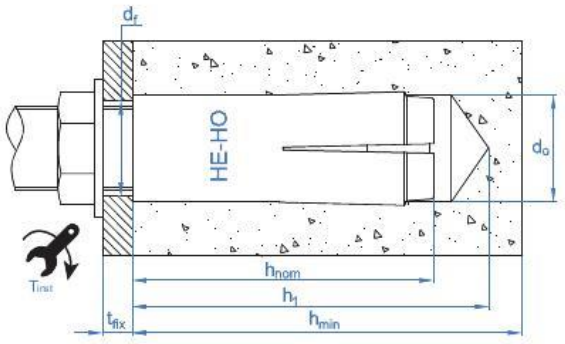
ITEM	CODE		SIZE	PHOTO	COMPONENT	MATERIAL	COATING
1	**HE-HO**	03135 03136 03137	M8 to M12		Capsule Cone	Carbon steel Carbon steel Zinc plated ≥ 5 µm	
2	**HE-CL**	03109	M12		Capsule Cone	Carbon steel Carbon steel Zinc plated ≥ 5 µm	
3	**HE-HC**	03129 03130 03131	M8 to M12		Capsule Cone	Carbon steel Carbon steel Zinc plated ≥ 5 µm	

Brymec item codes are coloured blue

2. ACCESSORIES

ITEM	CODE	PHOTO	DESCRIPTION	VALID FOR
1	**EXP**		Installation tool with rubber handle for M6-M16	**HE-HO / HE-CL**
3	**EXP-C**		Installation tool with rubber handle for M8-M12	**HE-HC**

3.INSTALLATION DATA IN CONCRETE



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 EXHB
[--]	[--]	[--]	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	M08 - 03135	M8 x 30 Ø10	✓	10	9	11	60	105	100	33	30	8 – 13	90	45	M08 - 03138
	M10 - 03136	M10 x 40 Ø12	✓	12	12	17	80	140	100	43	40	10 – 17	120	60	M10 - 03139
	M12 - 03137	M12 x 50 Ø15	✓	15	14	38	100	175	100	54	50	12 – 21	150	75	M12 - 03140
HE-CL	M12 - 03109	M12 x 50 Ø15	✓	15	14	38	100	175	100	54	50	12 – 21	150	75	M12 - 03140

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

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3.2 NON-STRUCTURAL APPLICATION

Family	Code	Size	Assessed	Drill bit 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 EXHB
[--]	[--]	[--]	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	M08 - 03135	M8 x 30 Ø10	✓	10	9	11	60	105	100	33	30	8 – 13	90	45	M08 - 03138
	M10 - 03136	M10 x 40 Ø12	✓	12	12	17	80	140	100	43	40	10 – 17	120	60	M10 - 03139
	M12 - 03137	M12 x 50 Ø15	✓	15	14	38	100	175	100	54	50	12 – 21	150	75	M12 - 03140
HE-CL															
	M12 - 03109	M12 x 50 Ø15	✓	15	14	38	100	175	100	54	50	12 – 21	150	75	M12 - 03140
HE-HC	M08 - 03129	M8 x 25 Ø10	✓	10	9	11	75	60	80	28	25	8 – 13	120	60	M08C - 03132
	M10 - 03130	M10 x 25 Ø12	✓	12	12	17	75	60	80	28	25	10 – 17	120	60	M10C - 03133
	M12 - 03131	M12 x 25 Ø15	✓	15	14	38	75	60	80	29	25	12 – 21	120	60	M12C - 03134

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

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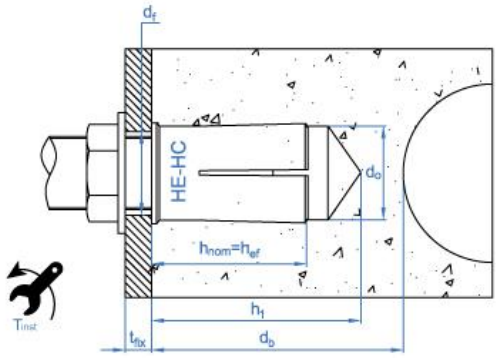
4.INSTALLATION DATA IN HOLLOW CORE



4.1 NON-STRUCTURAL APPLICATION

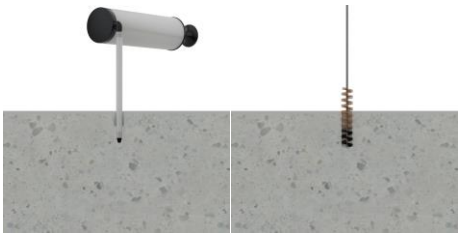
Family	Code	Size	Assessed	Drill bit diameter	Fixture diameter	Max. Installation torque	Minimum spacing	Minimum edge distance	Minimum bottom flange thickness	Hole depth	Installation depth	Bolt length*	Critical Spacing	Critical edge distance	Installation tool
															EXHB
[--]	[--]	[--]	ETA	d_0	d_f	T_{ins}	s_{min}	c_{min}	d_b	h_1	h_{nom}	e	$s_{cr,N}$	$c_{cr,N}$	[--]
				[--]	[--]	[--]	[--]	[--]	[--]	[--]	[--]	[--]	[--]	[--]	[--]
HE-HC	M08 - 03129	M8 x 25 Ø10	✓	10	9	11	200	150	35	28	25	8 – 13	200	150	M08C - 03132
	M10 - 03130	M10 x 25 Ø12	✓	12	12	17	200	150	35	28	25	10 – 17	200	150	M10C - 03133
	M12 - 03131	M12 x 25 Ø15	✓	15	14	38	200	150	35	29	25	12 – 21	200	150	M12C - 03134

Brymec item codes are coloured blue

5. INSTALLATION PROCEDURE

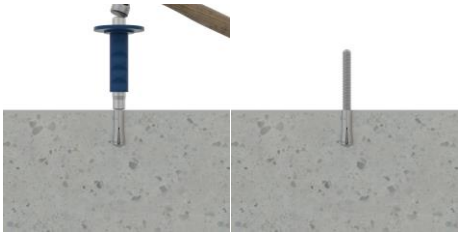
5.1. CONCRETE INSTALLATION

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

6. RESISTANCE IN CONCRETE

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

6.1 CHARACTERISTIC RESISTANCE [kN]

General parameters			Structural applications			Non Structural applications	
Family	Code	Size	Assessed	Tension N_{Rk}	Shear V_{Rk}	Assessed	Resistance to any direction F_{Rk}
HE-HO	M08 - 03135	M8 x 30 Ø10	✓	**8,08**	**8,08**	✓	3,00
	M10 - 03136	M10 x 40 Ø12	✓	**12,45**	*9,10*	✓	5,00
	M12 - 03137	M12 x 50 Ø15	✓	**17,39**	**17,39**	✓	7,50
HE-CL	M12 - 03109	M12 x 50 Ø15	✓	**17,39**	**17,39**	✓	7,50
HE-HC	M08 - 03129	M8 x 25 Ø10	--	--	--	✓	2,5
	M10 - 03130	M10 x 25 Ø12	--	--	--	✓	4,0
	M12 - 03131	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.

Brymec item codes are coloured blue

6.2 DESIGN RESISTANCE [kN]

General parameters			Structural applications			Non Structural applications	
Family	Code	Size	Assessed	Tension N_{Rk}	Shear V_{Rk}	Assessed	Resistance to any direction F_{Rk}
HE-HO	M08 - 03135	M8 x 30 Ø10	✓	**4,49**	**5,39**	✓	1,67
	M10 - 03136	M10 x 40 Ø12	✓	**5,93**	*7,28*	✓	2,38
	M12 - 03137	M12 x 50 Ø15	✓	**8,28**	**11,60**	✓	3,57
HE-CL	M12 - 03109	M12 x 50 Ø15	✓	**8,28**	**11,60**	✓	3,57
HE-HC	M08 - 03129	M8 x 25 Ø10	--	--	--	✓	1,39
	M10 - 03130	M10 x 25 Ø12	--	--	--	✓	2,22
	M12 - 03131	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.

Brymec item codes are coloured blue

6.3 MAXIMUM LOADS RECOMMENDED [kN]

General parameters			Structural applications			Non-Structural applications	
Family	Code	Size	Assessed	Tension N_{Rk}	Shear V_{Rk}	Assessed	Resistance to any direction F_{Rk}
HE-HO	M08 - 03135	M8 x 30 Ø10	✓	**3,21**	**3,85**	✓	1,19
	M10 - 03136	M10 x 40 Ø12	✓	**4,23**	*5,20*	✓	1,70
	M12 - 03137	M12 x 50 Ø15	✓	**5,92**	**8,28**	✓	2,55
HE-CL	M12 - 03109	M12 x 50 Ø15	✓	**5,92**	**8,28**	✓	2,55
HE-HC	M08 - 03129	M8 x 25 Ø10	--	--	--	✓	0,99
	M10 - 03130	M10 x 25 Ø12	--	--	--	✓	1,59
	M12 - 03131	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.

Brymec item codes are coloured blue

7. RESISTANCES

Resistance in hollow core slabs from C30/37 to C50/60 for an isolated anchor without spacing or concrete edge distance effects are indicated in the following table:

7.1 RESISTANCES

General parameters				Load in all directions [F_{Rk}] (Non-Structural applications)		
Family	Code	Size	Assessed	CHARACTERISTIC [kN]	DESIGN [kN]	MAXIMUM RECOMMENDED LOADS [kN]
HE-HC	M08 - 03129	M8 x 25 Ø10	✓	5,5	3,06	2,18
	M10 - 03130	M10 x 25 Ø12	✓	6,0	2,86	2,04
	M12 - 03131	M12 x 25 Ø15	✓	6,5	3,10	2,21

1 KN ≈ 100 kg

Brymec item codes are coloured blue

8. 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.
- Declaration of performance DoP HE.
- Certificate VdS CEA 4001:2021-01(07) *Guidelines for sprinklers systems. Planning and installation for applications of water extinguising systems on concrete elements* from M8 to M20.
- Certificate FM *Pipe Hanger Components for Automatic Sprinkler Systems* from M10 to M16
- Available for the anchor design software INDEXcal.