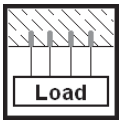
HA 8 Ring / hook anchor

	Anchor version	Benefits
	HA 8 R1	- 8mm anchor for concrete ceilings - hand-setting - follow-up expansion
	HA 8 H1	

Concrete

Tensile zone [a)]



Redundant fastening

Fire resistance

a) Redundant fastening only

Approvals / certificates

Description	Authority / Laboratory	No. / date of issue
Fire test report	IBMB, Braunschweig	UB 3245/1817-5 / 1997-12-12
Assessment report (fire)	warringtonfire	WF 166402 / 2007-10-26

Basic loading data (for a single anchor)

All data in this section applies to

- Correct setting (See setting instruction)
- No edge distance and spacing influence
- Only for redundant fastening
  Values are only valid for tensile loading
- Concrete ≥ C 20/25 ($f_{ck,cube}$ = 25 N/mm²), ≤ C50/60 ($f_{ck,cube}$ = 60 N/mm²)

Recommended loads

		Non-cracked concrete	Cracked concrete (redundant fastening)
Anchor size			
Tensile N_{rec}	[kN]	0,8	0,8

Materials

Material quality

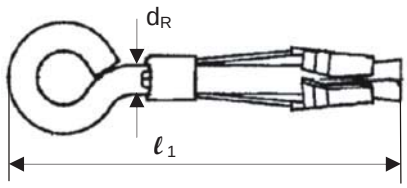
Part	Material
Expansion sleeve	Carbon steel, galvanised to min. 5 µm
Bolt	Carbon steel, galvanised to min. 5 µm

Mechanical properties of HA 8

Anchor size	HA 8 expansion sleeve	HA 8 bolt
Nominal tensile strength f_{uk} [N/mm²]	370	460
Yield strength f_{yk} [N/mm²]	270	220

Anchor dimensions

Anchor size			
Bolt diameter	d_R	[mm]	5
Length of the anchor	ℓ_1	[mm]	66

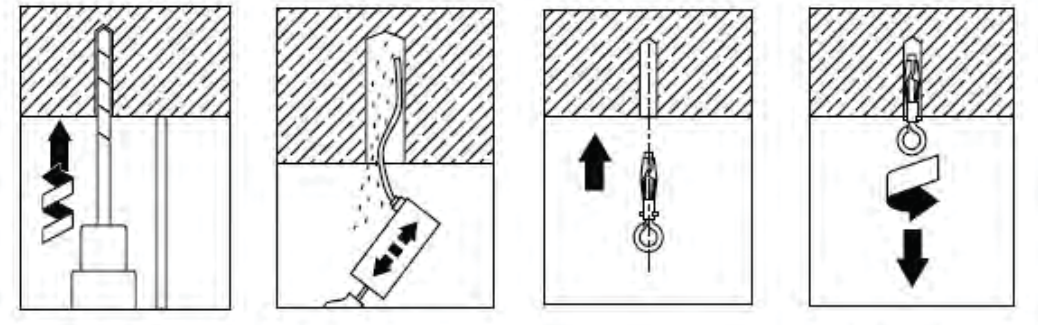


Setting

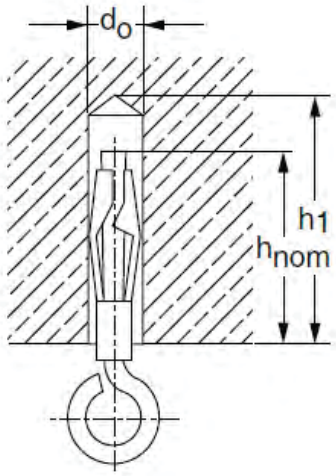
Installation equipment

Anchor size	
Rotary hammer	TE2 … TE16
Other tools	hammer, blow out pump

Setting instruction



Setting details: depth of drill hole h_1 and effective anchorage depth h_{ef}



Setting details HA 8

Nominal diameter of drill bit	d_o	[mm]	8
Cutting diameter of drill bit	$d_{cut} \leq$	[mm]	8,45
Depth of drill hole	$h_1 \geq$	[mm]	50
Effective anchorage depth	h_{ef}	[mm]	40

Base material thickness, anchor spacing and edge distance

Anchor size			
Minimum base material thickness	h_{min}	[mm]	100
Minimum spacing	s	[mm]	200
Minimum edge distance	c	[mm]	100
Minimum edge distance at the corner	c_e	[mm]	150