

INFORMATION

The torque controlled Heavy Duty Anchor Hexagon Bolt is a stainless steel high performance anchor for use in cracked/non-cracked concrete and structural applications such as:

- Columns
- Guard rails
- Façades
- Staircases
- Silo installation
- Machines
- Cantilever beams

BASE MATERIAL

- Concrete C20/25 to C50/60
- Cracked Concrete
- Non-Cracked Concrete

FEATURES

- High Performance
- C1, C2 Seismic Performance
- Wide Range Of Sizes
- Fast And Secure Installation
- Through Fixing
- Three way Expansion Sleeve
- Stainless Steel A4/316
- Close Spacing And Edge Distance
- Reaction To Fire Class A1
- Fire Resistant Loading

APPROVALS

European Technical Assessment
Option 1 Cracked Concrete



ETA-07/0331
Fire Resistance



ETA-07/0331



C1, C2
Seismic Performance Categories

RELATED PRODUCTS

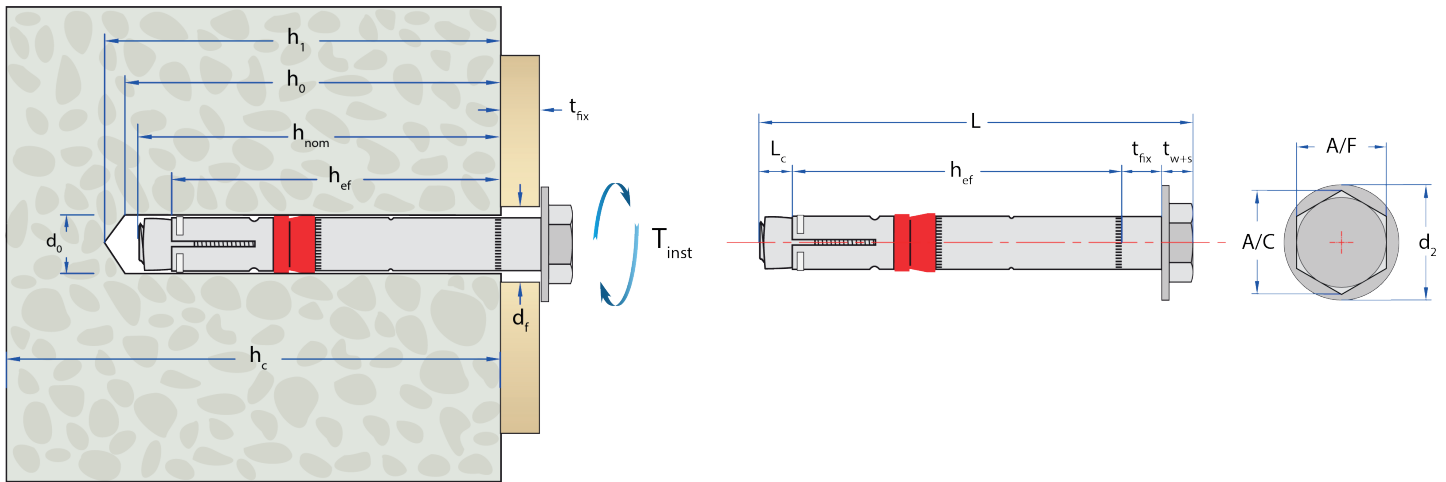


SDS+ Drill Bits



Hole Cleaning Pump

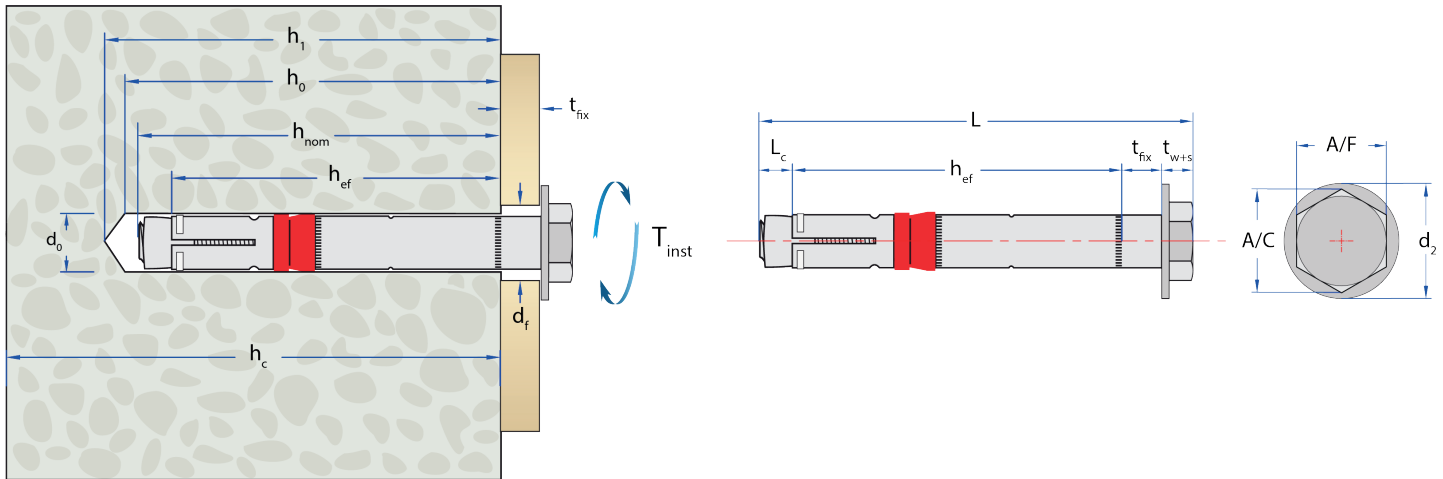
RANGE AND LOAD DATA





RANGE AND LOAD DATA

RANGE DATA													
Part Number	Size of Thread	Min. Structure Thickness (h_c)	Drill Hole Diameter (d_o)	Min Hole Depth (h_i)	Fixture Clearance Hole (d_f)	Cone Length (L_c)	Effective Embedment Depth (h_{ef})	Max Fixture Thickness (t_{fix})	Washer and Screw Thickness (t_{w+s})	Total Length (L)	Width Across Flats (A/F)	Washer Outer diameter (d_2)	Tightening Torque (T_{inst})
	-	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	Nm
JHD0810SS	M8	120	12	80	14	11	60	10	8.8	85	13	20	30
JHD0830SS								30		105			
JHD0850SS								50		125			
JHD1015SS	M10	140	15	95	17	14	71	15	10.9	106	17	25	50
JHD1025SS								25		116			
JHD1045SS								45		136			
JHD1210SS	M12	160	18	105	20	16	80	10	13.8	117	19	30	80
JHD1225SS								20		127			
JHD1240SS								40		147			



For combined loads, variations in structure thickness, reduced spacing and edge calculations download the free **Anchor Calculation Program** from www.jcpfixings.co.uk





NON-CRACKED CONCRETE

Performance Data (C20/25 non-cracked concrete)

Size Of Thread	Effective Embedment Depth (h_{ef})	Minimum Concrete Thickness (h_{min})	Characteristic Resistance		Design Resistance		Approved Resistance		Design Spacing (s)		Design Edge Distance (c)	
			Tensile (N_{Rk})	Shear (V_{Rk})	Tensile (N_{Rd})	Shear (V_{Rd})	Tensile (N_{Ra})	Shear (V_{Ra})	Tensile	Shear	Tensile	Shear
-	mm	mm	kN	kN	kN	kN	kN	kN	mm	mm	mm	mm
M8	60	120	16.0	24.0	10.6	17.6	7.5	12.5	130	50	110	170
M10	71	140	25.0	37.0	16.6	27.2	11.8	19.4	320	80	190	240
M12	80	160	35.0	62.0	23.3	45.5	16.6	32.5	500	220	260	390

CRACKED CONCRETE

Performance Data (C20/25 cracked concrete)

Size Of Thread	Effective Embedment Depth (h_{ef})	Minimum Concrete Thickness (h_{min})	Characteristic Resistance		Design Resistance		Approved Resistance		Design Spacing (s)		Design Edge Distance (c)	
			Tensile (N_{Rk})	Shear (V_{Rk})	Tensile (N_{Rd})	Shear (V_{Rd})	Tensile (N_{Ra})	Shear (V_{Ra})	Tensile	Shear	Tensile	Shear
-	mm	mm	kN	kN	kN	kN	kN	kN	mm	mm	mm	mm
M8	60	120	9.0	24.0	6.0	17.6	4.2	12.5	50	120	50	250
M10	71	140	16.0	37.0	10.6	27.2	7.5	19.4	120	200	70	360
M12	80	160	25.7	51.5	17.1	34.3	12.2	24.5	240	250	120	420

FIRE RESISTANCE DATA



Fire Resistance Data (C20/25 to C50/60 cracked or non-cracked concrete)*

Size Of Thread	Effective Embedment Depth (h_{ef})	Minimum Concrete Thickness (h_{min})	Design Resistance				Approved Resistance			
			Tensile ($N_{Rd,fi}$) or Shear ($V_{Rd,fi}$) (kN)**				Tensile ($N_{Ra,fi}$) or Shear ($V_{Ra,fi}$) (kN)			
-	mm	mm	30min (R30)	60min (R60)	90min (R90)	120min (R120)	30min (R30)	60min (R60)	90min (R90)	120min (R120)
M8	60	120	6.1	4.4	2.6	1.8	4.4	3.1	1.9	1.3
M10	71	140	10.2	7.3	4.3	2.8	7.3	5.2	3.1	2.0
M12	80	160	15.7	11.1	6.4	4.1	11.2	7.9	4.6	2.9

* The determination covers anchors with a fire attack from one side only. If the fire attack is from more than one side, the design method may be taken only, if the edge distance of the anchor is $c \geq 300$ mm and $\geq 2 h_{ef}$.

**For combined loads, use Anchor Calculation Program.

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SUPPLEMENTARY DATA

Influence Of Concrete Strength (Cracked/Non-cracked Concrete)					
Concrete strength		C20/25	C30/37	C40/50	C50/60
Cylinder	N/mm ²	20	30	40	50
Cube	N/mm ²	25	37	50	60
Factor	-	1.0	1.22	1.41	1.55

Important Note:

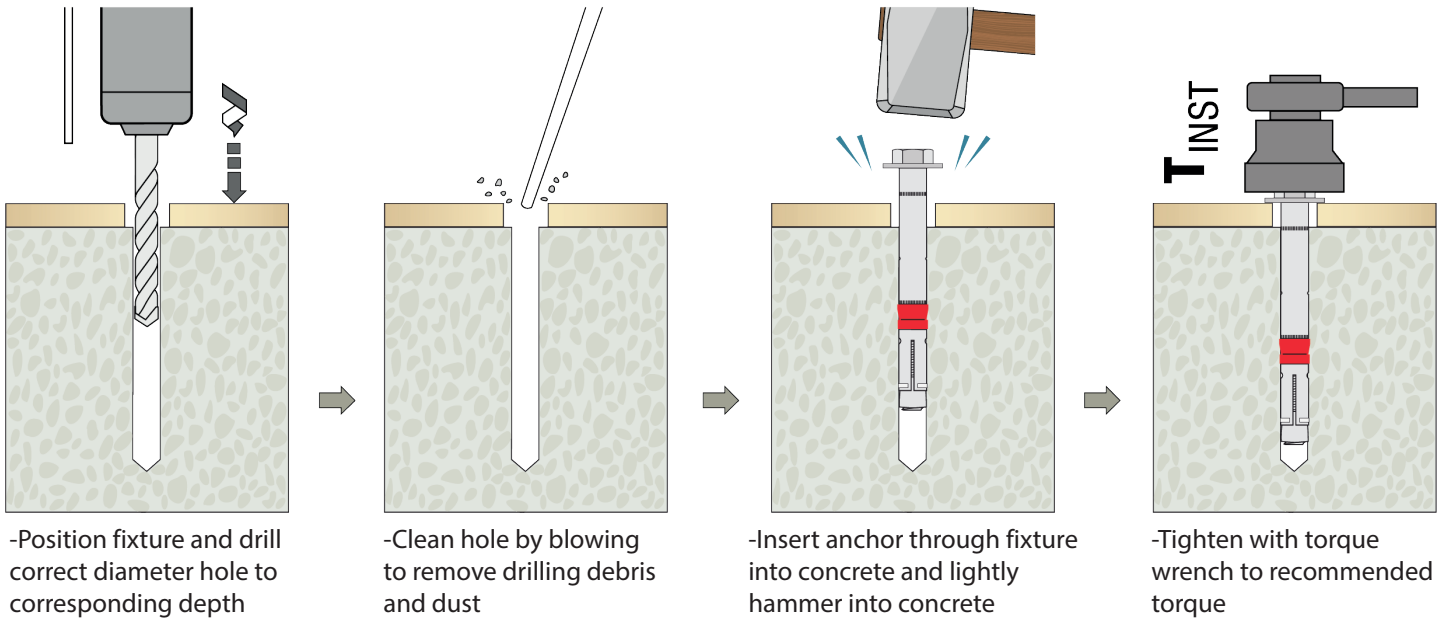
When using concrete factors ensure that loads do not exceed Steel Design Resistance.

Steel Failure						
Size Of Thread	Tensile Resistance			Shear Resistance		
	Characteristic Resistance (N _{Rk,s})	Design Resistance (N _{Rd,s})*	Approved Resistance (N _{Ra,s})	Characteristic Resistance (V _{Rk,s})	Design Resistance (V _{Rd,s})**	Approved Resistance (V _{Ra,s})
-	kN	kN	kN	kN	kN	kN
M8	26.0	13.9	9.9	24.0	17.6	12.5
M10	41.0	21.9	15.6	37.0	27.2	19.4
M12	60.0	32.0	22.8	62.0	45.5	32.5

* A partial safety factor (γ_{MS}) equal to 1.87 is included.

** A partial safety factor (γ_{MS}) equal to 1.36 is included.

INSTALLATION INSTRUCTIONS



INSTALLATION INSTRUCTIONS VIDEO

To watch the video and subscribe, please click on the link or scan the QR code:

[How to install a Heavy Duty Anchor](#)

