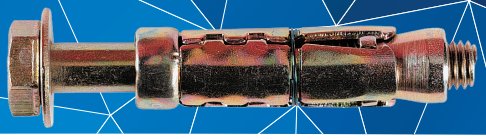
Shield Anchors
Loose Bolt



INFORMATION

The loose bolt shield anchor is a three-way expansion shield suitable for use in concrete and brick.

The thick walls of the expanders give the anchor its exceptional grip and allow it to cater for oversized holes caused by powerful drills in weaker materials such as brickwork.

It provides a reliable fixing solution for general-purpose applications such as:

- Fencing
- Gates
- Pipe and ductwork
- Security Shutters
- Fire doors

BASE MATERIAL

- Concrete C20/25 to C50/60
- Non-Cracked Concrete
- Solid Brickwork
- Solid Concrete Blocks

FEATURES

- Three-way Expansion
- Medium Duty Anchor
- Zinc Plated
- Reaction To Fire Class A1

SOFTWARE

Click here to download the software

RELATED PRODUCTS

SDS+ Drill Bits

Hole Cleaning Pump

BOP1

Projecting Bolt ZYP

Shield only ZYP

Shield only A4 Stainless Steel

Eye Bolt Shield Anchor ZYP

Hook Bolt Shield Anchor ZYP

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Technical Data Sheet

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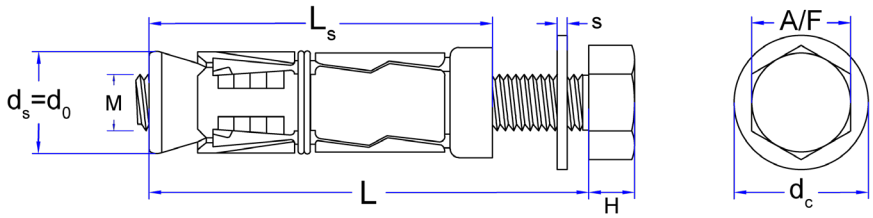
RANGE DATA



RANGE DATA											
Part Number	Size of Thread	Sleeve Diameter = Drill Hole Diameter	Length	Head Height	Shield Length	Width Across Flats	Bolt Grade	Washer Diameter	Washer Thickness	Retail Bag Part Number	Trade Bag Part Number
	M	$d_s = d_0$	L	H	L_s	A/F	-	d_c	s	-	-
	mm	mm	mm	mm	mm	mm	-	mm	mm	-	-
ALB0610	6	12	55	4.0	45	10	8.8	12	1.5	JB8000	JP3147
ALB0625			70							JB8003	JP3150
ALB0640			85							-	-
ALB0810	8	14	60	5.5	50	13	8.8	16	1.5	JB8006	JP3153
ALB0825			75							JB8009	JP3156
ALB0840			90							JB8012	JP3159
ALB1010	10	16	70	6.5	60	17	8.8	20	2.0	JB8015	JP3162
ALB1025			85							JB8018	JP3165
ALB1050			110							JB8021	JP3168
ALB1075			135							JB8024	JP3171
ALB1210	12	20	85	7.5	75	19	8.8	24	2.5	JB8027	-
ALB1225			100							JB8030	-
ALB1240			115							-	-
ALB1260			135							JB8033	JP3174
ALB1615	16	25	135	10.0	110	24	8.8	30	3.0	-	-
ALB1630			150							-	-
ALB1660			180							-	-

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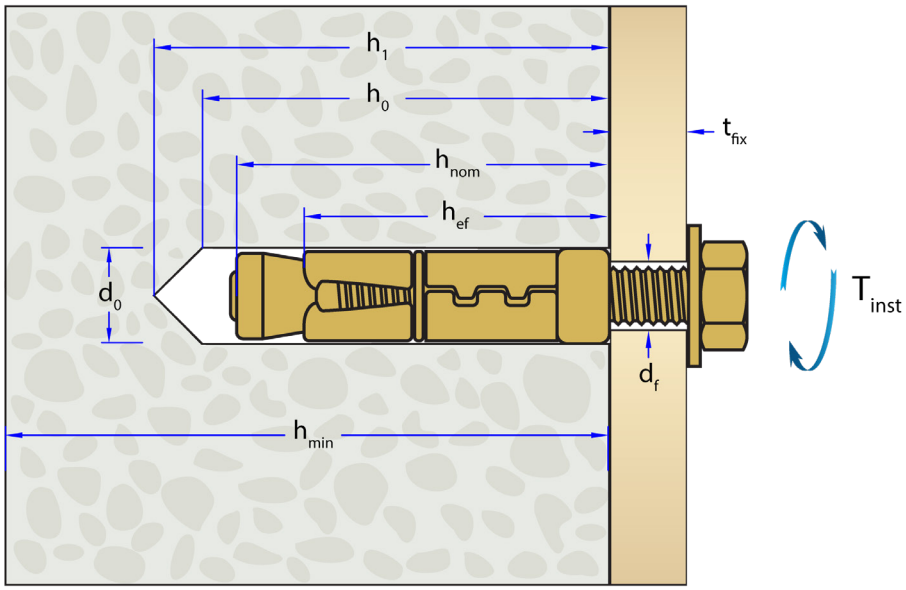
INSTALLATION INTO CONCRETE



RANGE DATA									
Part Number	Drill Hole Diameter	Minimum Hole Depth	Nominal Embedment Depth	Max Fixture Thickness	Minimum Concrete Thickness	Fixture Clearance Hole	Installation Torque	Minimum Spacing	Minimum Edge Distance
	d_0	h_1	h_{nom}	t_{fix}	h_{min}	d_f	T_{inst}	(s_{min})	(c_{min})
	mm	mm	mm	mm	mm	mm	Nm	mm	mm
ALB0610	12	50	45	10	100	7	6	105	53
ALB0625				25					
ALB0640				40					
ALB0810	14	55	50	10	100	9	14	120	60
ALB0825				25					
ALB0840				40					
ALB1010	16	65	60	10	100	12	27	150	75
ALB1025				25					
ALB1050				50					
ALB1075				75					
ALB1210	20	85	75	10	120	14	46	180	90
ALB1225				25					
ALB1240				40					
ALB1260				60					
ALB1615	25	125	110	15	200	18	110	285	143
ALB1630				30					
ALB1660				60					

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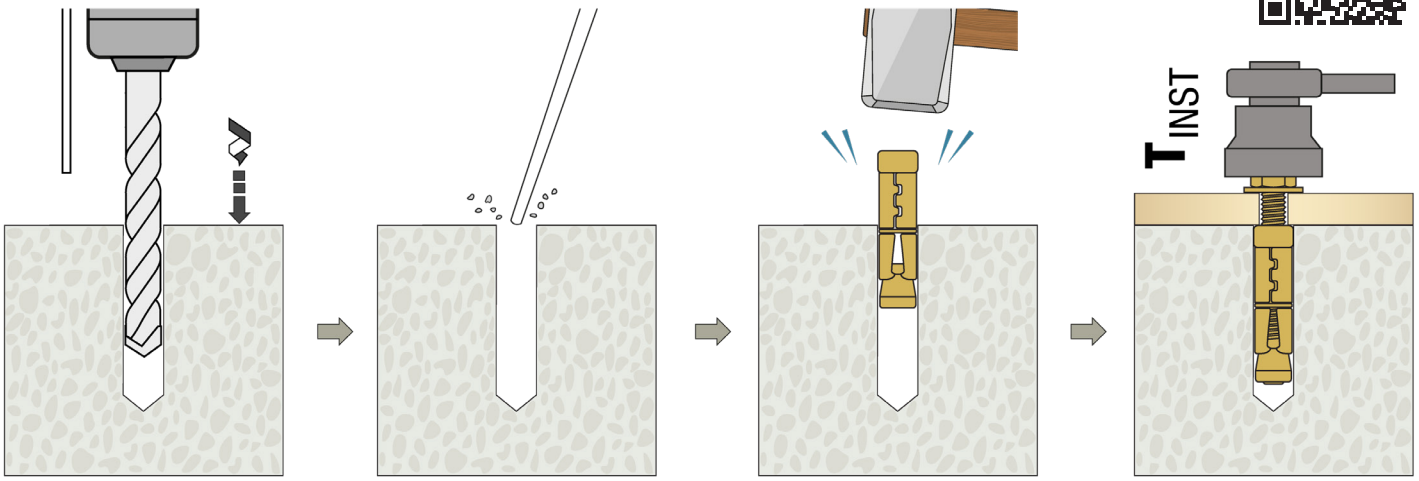
INSTALLATION INSTRUCTIONS INTO SOLID CONCRETE

Click on the QR code or scan it to watch the video



-Drill correct diameter hole to the corresponding depth by using the rotary hammer drilling mode

-Clean the hole by blowing three times to remove drilling debris and dust

-Remove the bolt and washer and insert the assembled shield into the concrete using a hammer

-Reattach the bolt and washer and tighten with a torque wrench to the recommended value

PERFORMANCE DATA FOR STRUCTURAL APPLICATIONS (NON-CRACKED CONCRETE)

Performance Data* (C20/25 to C50/60 non-cracked concrete) - Bolt Grade 8.8									
Size of Thread	Drill Hole Diameter	Minimum Hole Depth	Minimum Concrete Thickness	Characteristic Resistance		Design Resistance		Recommended Resistance	
M	d_0	h_1	h_{min}	Tensile (N_{Rk})	Shear (V_{Rk})	Tensile (N_{Rd})	Shear (V_{Rd})	Tensile(N_{Rrec})	Shear (V_{Rrec})
mm	mm	mm	mm	kN	kN	kN	kN	kN	kN
6	12	50	100	3.6	8.0	2.0	6.4	1.4	4.5
8	14	55	100	4.5	12.8	2.5	8.5	1.7	6.0
10	16	65	100	7.2	17.9	4.0	11.9	2.8	8.5
12	20	85	120	9.6	33.7	5.3	26.9	3.7	19.2
16	25	125	200	24.0	62.7	13.3	50.1	9.5	35.7

* Important notes:

- Fasteners subject to static and quasi-static loads.
- Performance data stated for a single anchor, without the effect of spacing and edge distances. The influence of these parameters must be verified where applicable.
- Minimum concrete thickness, hole diameter, and embedment depth shall correspond to the dimensions stated in this document.
- Concrete strength class C20/25 to C50/60 is assumed.
- Drill holes produced using rotary hammer drilling, unless otherwise noted.
- Installation carried out strictly in accordance with the product's Installation Instructions and performed by a trained operator.
- Characteristic and design resistances derived from JCP internal technical data.
- Design resistances are calculated from characteristic values using the appropriate partial safety factors corresponding to the decisive failure mode.
- The Recommended Resistance is calculated using an additional safety factor (γ_{Add}) equal to 1.4.
- Performance data is valid for shear loading without a lever arm; installations involving a lever arm require additional verifications.
- Performance data is not valid for combined tensile and shear loading; where combined loading occurs, further checks shall be performed.
- For project-specific assessments or conditions not explicitly covered, download the JCP Anchor Calculation Program.

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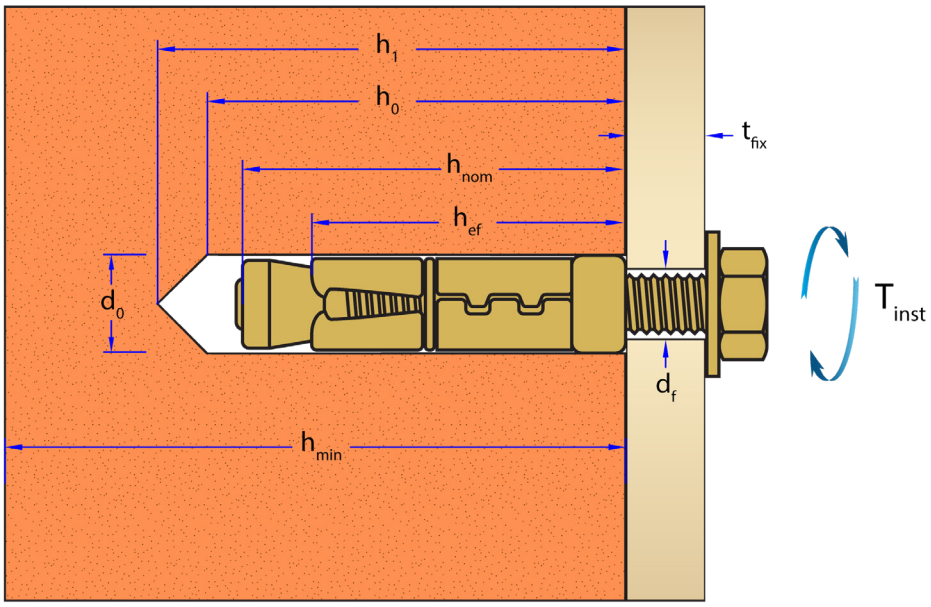
INSTALLATION INTO SOLID BRICKWORK (20 N/mm²)



RANGE DATA								
Part Number	Drill Hole Diameter	Minimum Hole Depth	Nominal Embedment Depth	Max Fixture Thickness	Fixture Clearance Hole	Installation Torque	Minimum Spacing	Minimum Edge Distance
	d_0	h_1	h_{nom}	t_{fix}	d_f	T_{inst}	(s_{min})	(c_{min})
	mm	mm	mm	mm	mm	Nm	mm	mm
ALB0610	12	50	45	10	7	5	*	*
ALB0625				25				
ALB0640				40				
ALB0810	14	55	50	10	9	12	*	*
ALB0825				25				
ALB0840				40				
ALB1010	16	65	60	10	12	22	*	*
ALB1025				25				
ALB1050				50				
ALB1075				75				
ALB1210	20	85	75	10	14	38	*	*
ALB1225				25				
ALB1240				40				
ALB1260				60				

* Fixings shall be installed only in solid structural load-bearing brickwork and positioned centrally within the body of the brick. Anchors shall not be installed in the edge brick adjacent to a free edge. It is assumed that one fixing only is installed per brick unit, and spacing shall be such that anchors are not set in the same or in adjacent bricks, leaving at least one clear brick unit between fixings.

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INSTALLATION INSTRUCTIONS INTO SOLID BRICKWORK (20 N/mm²)

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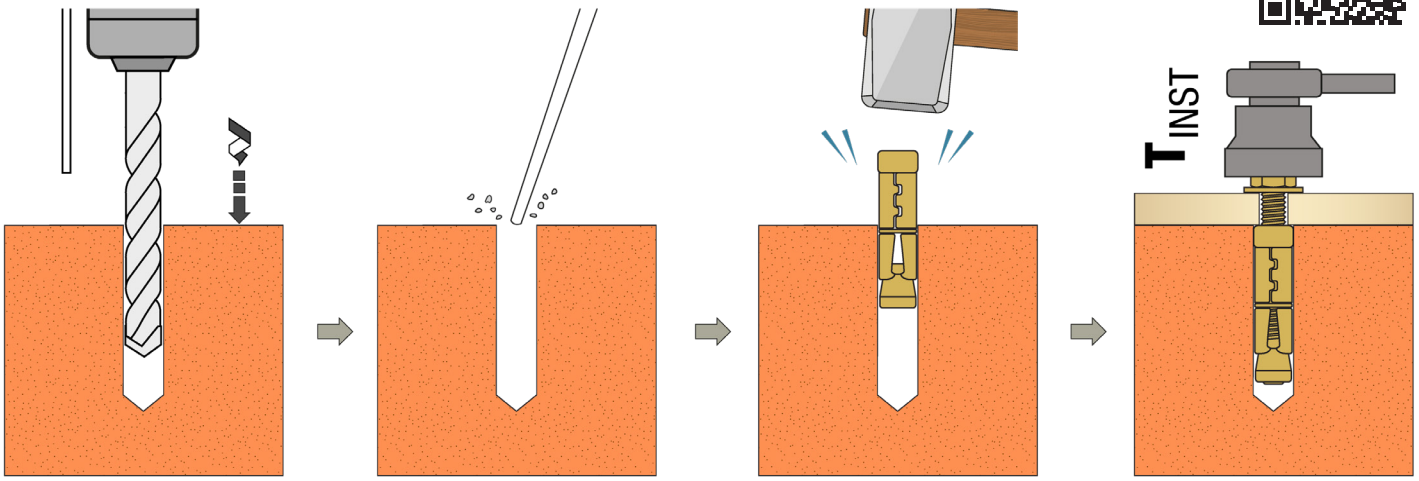

-Drill correct diameter hole to the corresponding depth by using the rotary hammer drilling mode

-Clean the hole by blowing three times to remove drilling debris and dust

-Remove the bolt and washer and insert the assembled shield into the substrate using a hammer

-Reattach the bolt and washer and tighten with a torque wrench to the recommended value

PERFORMANCE DATA FOR APPLICATIONS INTO SOLID BRICKWORK (20 N/mm²)

Performance Data* (Solid Brickwork 20N/mm²) - Bolt Grade 8.8							
Size of Thread	Drill Hole Diameter	Characteristic Resistance		Design Resistance		Recommended Resistance	
M	d_0	Tensile (N_{Rk})	Shear (V_{Rk})	Tensile (N_{Rd})	Shear (V_{Rd})	Tensile(N_{Rrec})	Shear (V_{Rrec})
mm	mm	kN	kN	kN	kN	kN	kN
6	12	5.0		1.8		1.3	
8	14	5.5		2.0		1.4	
10	16	5.5		2.0		1.4	
12	20	5.5		2.0		1.4	

* Important notes:

- Fasteners subject to static and quasi-static loads.
- Performance data stated for a single anchor, without the effect of spacing and edge distances. The influence of these parameters must be verified where applicable.
- It is assumed that anchors are installed centrally within the body of a 20 N/mm² brick, with one fixing only per brick unit.
- Anchors shall not be installed in the edge brick adjacent to a free edge, and spacing shall be arranged such that anchors are not installed in the same or in adjacent bricks.
- Drill holes produced using rotary hammer drilling, unless otherwise noted.
- Installation carried out strictly in accordance with the product's Installation Instructions and performed by a trained operator.
- Characteristic and design resistances derived from JCP internal technical data.
- Design resistances are calculated from characteristic values using the appropriate partial safety factors corresponding to the decisive failure mode.
- The Recommended Resistance is calculated using an additional safety factor (γ_{Add}) equal to 1.4.
- Performance data is valid for shear loading without a lever arm; installations involving a lever arm require additional verifications.
- Performance data is not valid for combined tensile and shear loading; where combined loading occurs, further checks shall be performed.

Due to the variable nature of bricks and blocks, the above figures are for guidance only. For critical applications, a site test is recommended.

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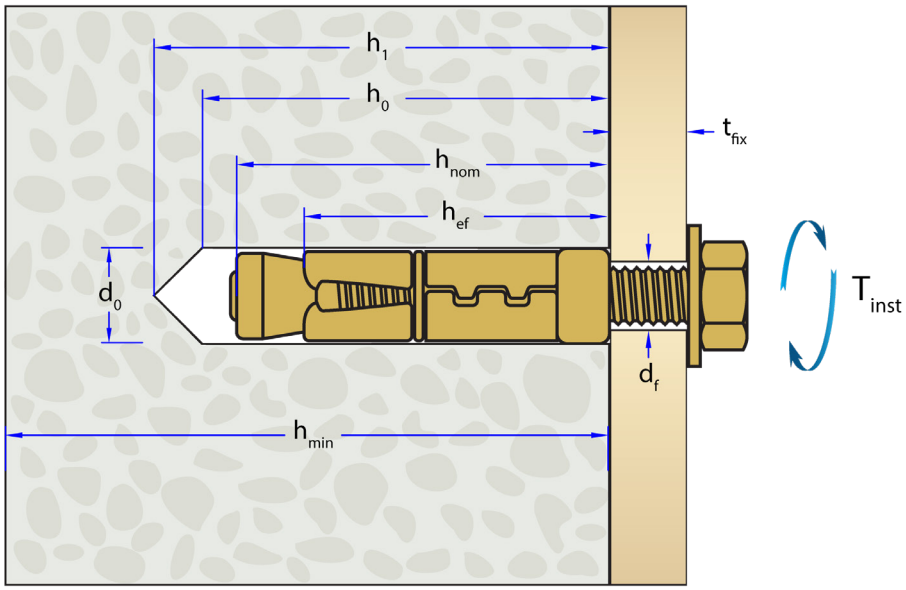
INSTALLATION INTO SOLID CONCRETE BLOCKS (7 N/mm²)



RANGE DATA								
Part Number	Drill Hole Diameter	Minimum Hole Depth	Nominal Embedment Depth	Max Fixture Thickness	Fixture Clearance Hole	Installation Torque	Minimum Spacing	Minimum Edge Distance
	d_0	h_1	h_{nom}	t_{fix}	d_f	T_{inst}	(s_{min})	(c_{min})
	mm	mm	mm	mm	mm	Nm	mm	mm
ALB0610	12	50	45	10	7	5	*	*
ALB0625				25				
ALB0640				40				
ALB0810	14	55	50	10	9	12	*	*
ALB0825				25				
ALB0840				40				
ALB1010	16	65	60	10	12	22	*	*
ALB1025				25				
ALB1050				50				
ALB1075				75				
ALB1210	20	85	75	10	14	38	*	*
ALB1225				25				
ALB1240				40				
ALB1260				60				

* Fixings shall be installed only in solid structural load-bearing concrete block-work and positioned centrally within the body of the block. The minimum edge distance from the edge of the block shall be not less than $1.5 \times h_{nom}$. Where block dimensions permit, two or more anchors may be installed within the same block or in adjacent blocks, provided that the centre-to-centre spacing between anchors is not less than $3 \times h_{nom}$.

Technical Data Sheet

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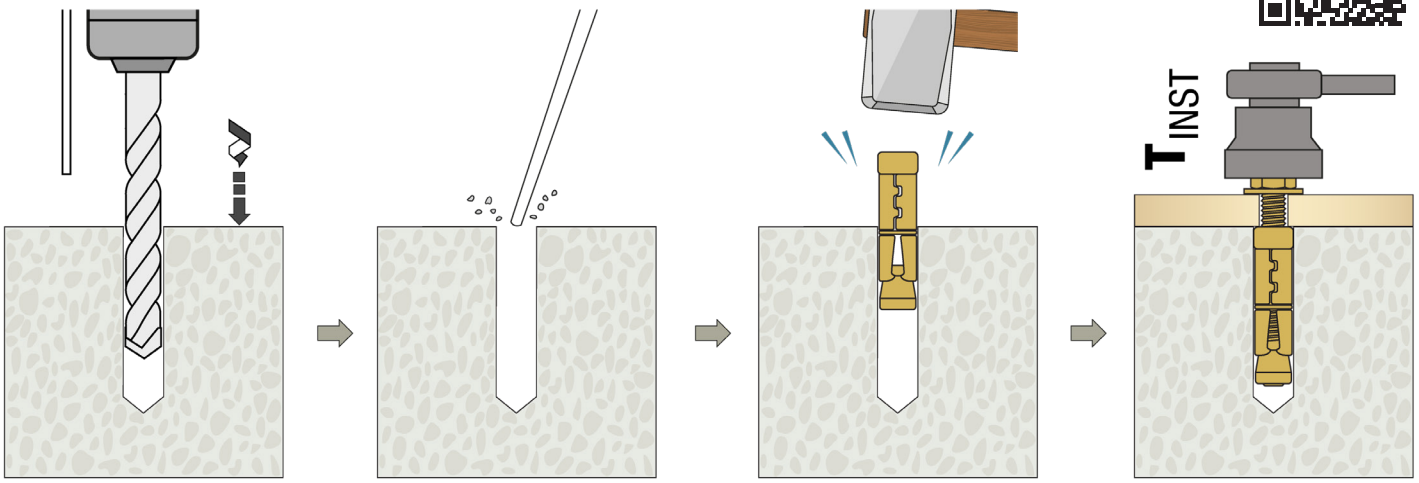
INSTALLATION INSTRUCTIONS INTO SOLID CONCRETE BLOCKS (7 N/mm²)

Click on the QR code or scan it to watch the video



-Drill correct diameter hole to the corresponding depth by using the rotary hammer drilling mode

-Clean the hole by blowing three times to remove drilling debris and dust

-Remove the bolt and washer and insert the assembled shield into the block using a hammer

-Reattach the bolt and washer and tighten with a torque wrench to the recommended value

PERFORMANCE DATA FOR APPLICATIONS INTO SOLID CONCRETE BLOCKS (7 N/mm²)

Performance Data* (Solid Concrete Block 7N/mm²) - Bolt Grade 8.8							
Size of Thread	Drill Hole Diameter	Characteristic Resistance		Design Resistance		Recommended Resistance	
M	d_0	Tensile (N_{Rk})	Shear (V_{Rk})	Tensile (N_{Rd})	Shear (V_{Rd})	Tensile(N_{Rrec})	Shear (V_{Rrec})
mm	mm	kN	kN	kN	kN	kN	kN
6	12	4.0		1.4		1.0	
8	14	5.7		2.0		1.5	
10	16	5.7		2.0		1.5	
12	20	5.7		2.0		1.5	

* Important notes:

- Fasteners subject to static and quasi-static loads.
- Performance data stated for a single anchor, without the effect of spacing and edge distances. The influence of these parameters must be verified where applicable.
- It is assumed that anchors are installed centrally within the body of a 7 N/mm² concrete block, with one fixing only per block unit.
- Anchors shall not be installed in the edge block adjacent to a free edge.
- Drill holes produced using rotary hammer drilling, unless otherwise noted.
- Installation carried out strictly in accordance with the product's Installation Instructions and performed by a trained operator.
- Characteristic and design resistances derived from JCP internal technical data.
- Design resistances are calculated from characteristic values using the appropriate partial safety factors corresponding to the decisive failure mode.
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