Shield Anchors
Zinc and Yellow Plated Shield Only

INFORMATION

The ZYP shield anchor is an Zinc and Yellow Plated 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 and Yellow Plated (ZYP)
- Reaction To Fire Class A1

SOFTWARE

Click here to download the software

RELATED PRODUCTS

SDS+ Drill Bits

Hole Cleaning Pump

BOP1

Loose Bolt ZYP

Projecting Bolt 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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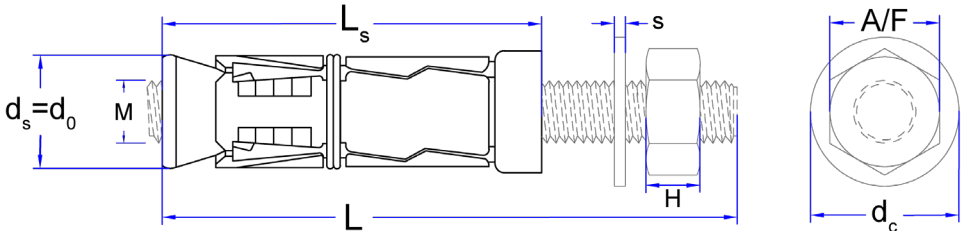
RANGE DATA

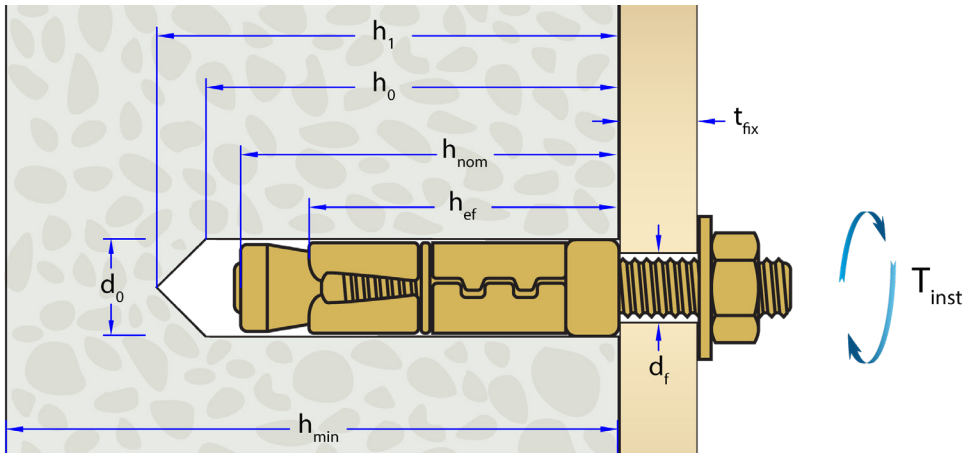


RANGE DATA								
Part Number	Size of Thread	Sleeve Diameter = Drill Hole Diameter	Length	Shield Length	Head Height*	Width Across Flats*	Washer Diameter*	Washer Thickness*
	M	$d_s = d_0$	L	L_s	H	A/F	d_c	s
	mm	mm	mm	mm	mm	mm	mm	mm
ASHOM06	6	12	*	45	5.0	10	12	1.5
ASHOM08	8	14	*	50	5.5	13	16	1.5
ASHOM10	10	16	*	60	8.0	17	20	2.0
ASHOM12	12	20	*	75	10.0	19	24	2.5
ASHOM16	16	25	*	110	13.0	24	30	3.0

* It is assumed that the nuts and washers are standard regular metric components. Accordingly, the required stud length (L) is calculated as the sum of the shield length (Ls), fixture thickness (tfix), washer thickness (s), and nut height (H) corresponding to standard metric sizes, plus an allowance for five additional threads (5 × thread pitch) to ensure full thread engagement and proper installation tolerance.

$$L = L_s + t_{fix} + s + H + (5 \times P)$$

INSTALLATION INTO CONCRETE



RANGE DATA								
Part Number	Drill Hole Diameter	Minimum Concrete Thickness	Minimum Hole Depth	Nominal Embedment Depth	Fixture Clearance Hole	Installation Torque	Minimum Spacing	Minimum Edge Distance
	d_0	h_{min}	h_1	h_{nom}	d_f	T_{inst}	(s_{min})	(c_{min})
	mm	mm	mm	mm	mm	Nm	mm	mm
ASHOM06	12	100	50	45	7	6	105	53
ASHOM08	14	100	55	50	9	14	120	60
ASHOM10	16	100	65	60	12	27	150	75
ASHOM12	20	120	85	75	14	46	180	90
ASHOM16	25	200	125	110	18	110	285	143

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INSTALLATION INSTRUCTIONS INTO SOLID CONCRETE

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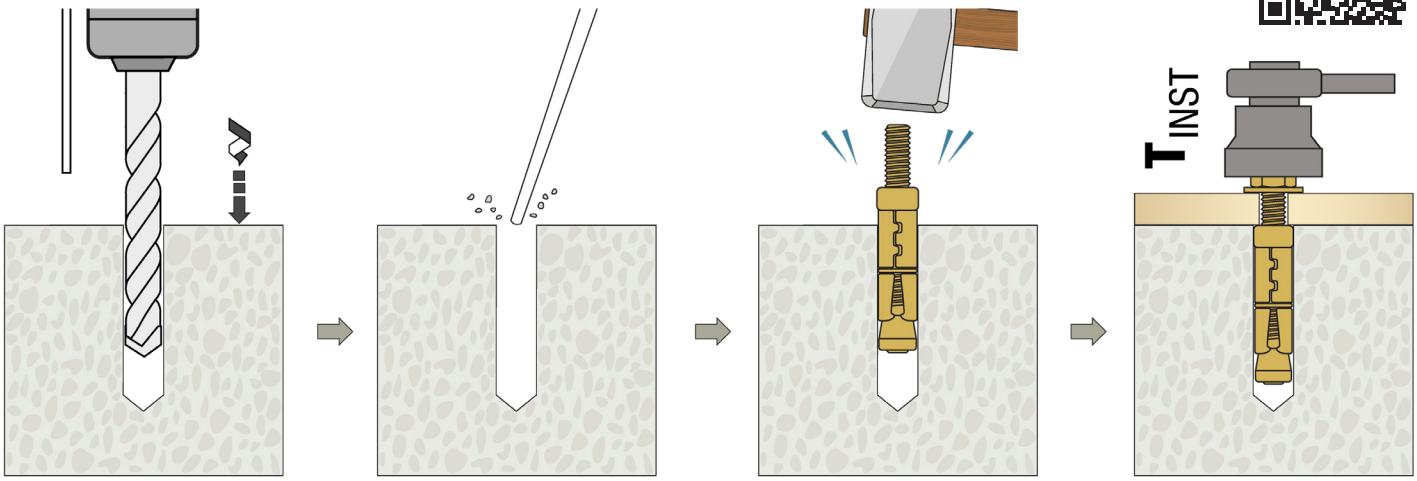

-Drill correct diameter hole to the corresponding depth by using the rotary hammer drilling mode

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

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

-Reattach the nut 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 4.6*									
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	4.0	2.0	2.3	1.4	1.6
8	14	55	100	4.5	7.3	2.5	4.3	1.7	3.0
10	16	65	100	7.2	11.6	4.0	6.9	2.8	4.9
12	20	85	120	9.6	16.9	5.3	10.1	3.7	7.2
16	25	125	200	24.0	31.3	13.3	18.7	9.5	13.3

* 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.
- Stud grade 4.6 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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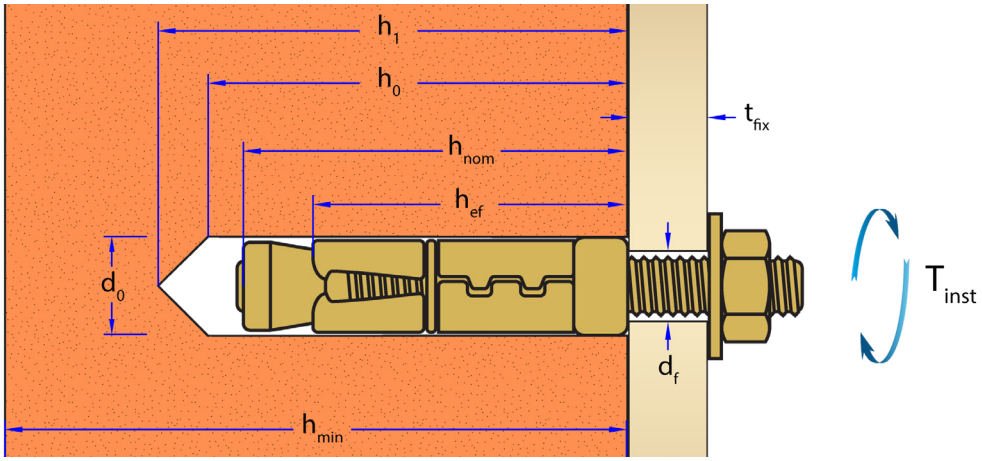
INSTALLATION INTO SOLID BRICKWORK (20 N/mm²)

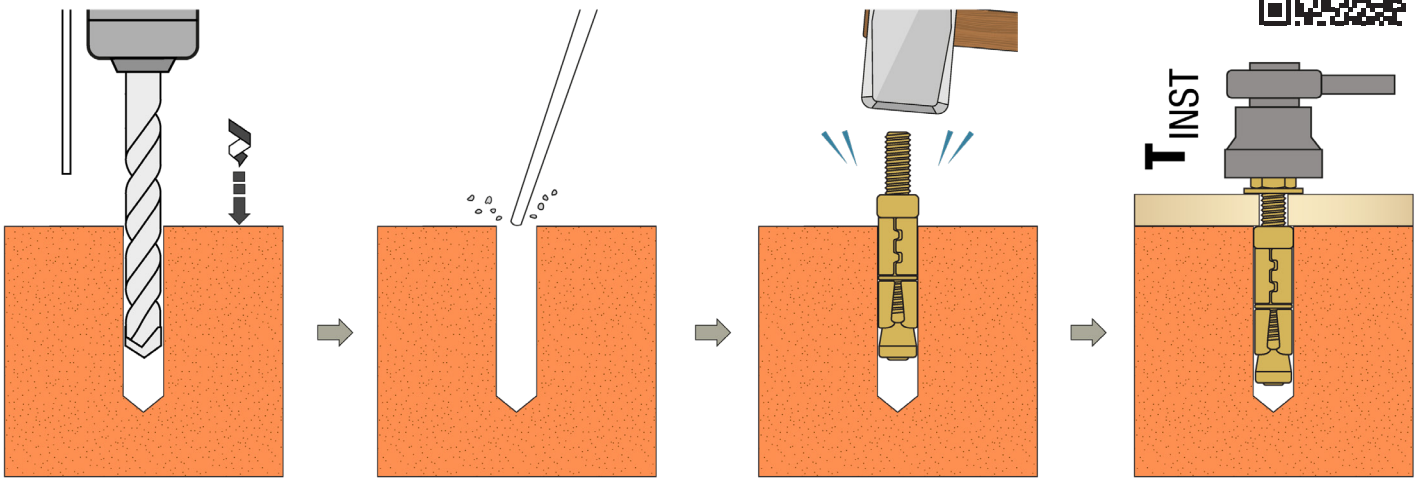


RANGE DATA							
Part Number	Drill Hole Diameter	Minimum Hole Depth	Nominal Embedment Depth	Fixture Clearance Hole	Installation Torque	Minimum Spacing	Minimum Edge Distance
	d_0	h_1	h_{nom}	d_f	T_{inst}	(s_{min})	(c_{min})
	mm	mm	mm	mm	Nm	mm	mm
ASHOM06	12	50	45	7	5	*	*
ASHOM08	14	55	50	9	12	*	*
ASHOM10	16	65	60	12	22	*	*
ASHOM12	20	85	75	14	38	*	*

* 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.

INSTALLATION INSTRUCTIONS INTO SOLID BRICKWORK (20 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 nut and washer and insert the shield into the substrate using a hammer

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

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

Performance Data* (Solid Brickwork 20N/mm²) - Bolt Grade 4.6*							
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.
- Stud grade 4.6 is assumed.
- 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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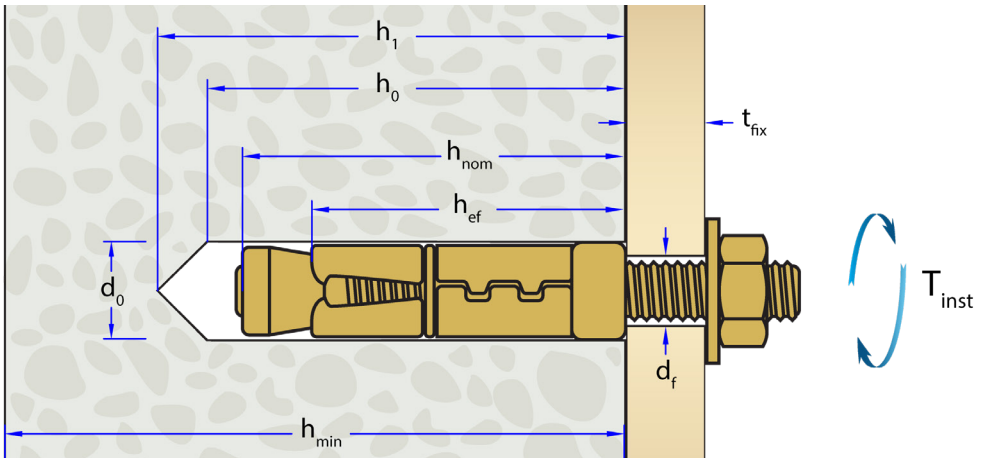
INSTALLATION INTO SOLID CONCRETE BLOCKS (7 N/mm²)



RANGE DATA							
Part Number	Drill Hole Diameter	Minimum Hole Depth	Nominal Embedment Depth	Fixture Clearance Hole	Installation Torque	Minimum Spacing	Minimum Edge Distance
	d_0	h_1	h_{nom}	d_f	T_{inst}	(s_{min})	(c_{min})
	mm	mm	mm	mm	Nm	mm	mm
ASHOM06	12	50	45	7	5	*	*
ASHOM08	14	55	50	9	12	*	*
ASHOM10	16	65	60	12	22	*	*
ASHOM12	20	85	75	14	38	*	*

* 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 $3 \times h_{nom}$.

INSTALLATION INSTRUCTIONS INTO SOLID CONCRETE

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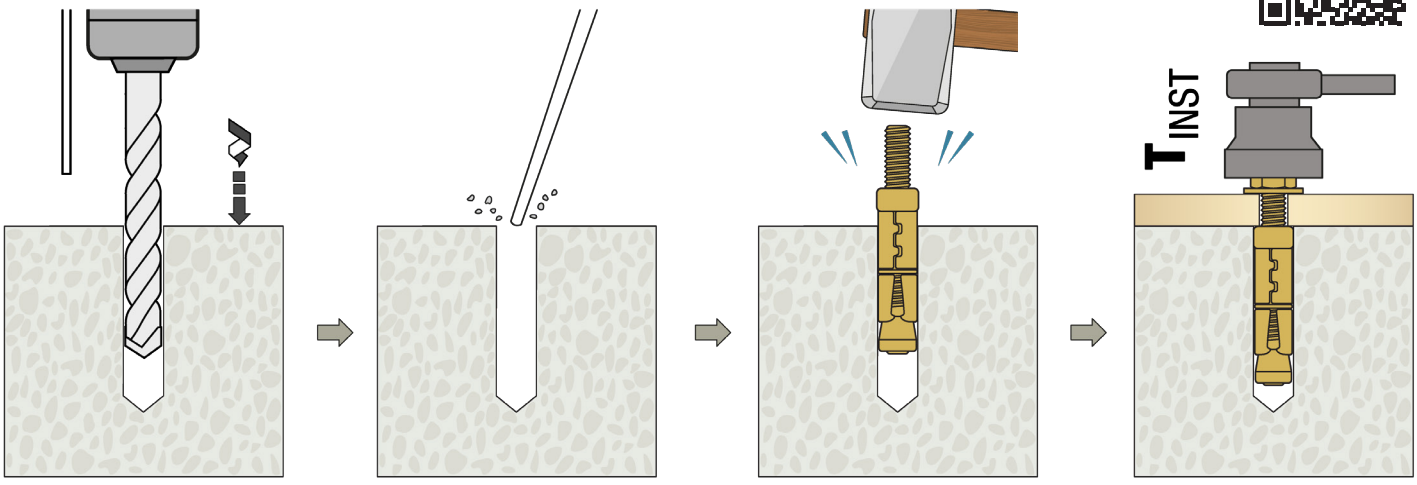

-Drill correct diameter hole to the corresponding depth by using the rotary hammer drilling mode

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

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

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

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

Performance Data* (Solid Concrete Block 7N/mm²) - Bolt Grade 4.6*							
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.
- Stud grade 4.6 is assumed.
- 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.
- 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.
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