



FRIULSIDER
YOUR FIXING FACTORY

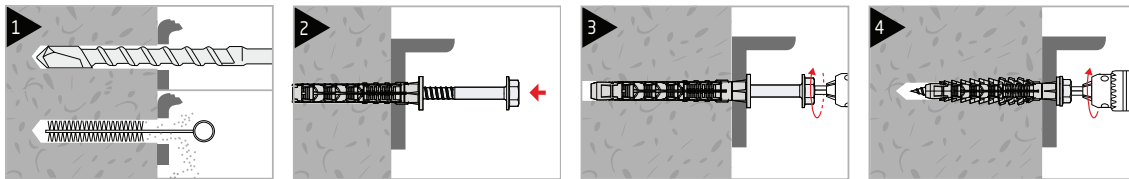


Recommended Loads in Autoclaved Aerated Concrete (AAC)

Anchor Size	Ø 10			
	Nominal embedment depth	h_{nom}	70mm	90mm
Autoclaved aerated concrete (AAC) $\geq 2,5MPa$	N	kN	0.14	0.20
	V	kN	0.14	0.20
Minimum spacing	S_{min}	mm	250	250
Minimum edge distance	C_{min}	mm	100	100
Min thickness of aerated concrete	h_{min}	mm	240	240

1kN \approx 100 kgf Note: the above load values refer to working temperature of $\leq 40^\circ$
 N = Recommended working load - Tension V = Recommended working load - Shear

Installation



Autoclaved Aerated Concrete (AAC)

Autoclaved Aerated Concrete (AAC) such as CSR Hebel® products are manufactured from sand, lime and cement to which a gas-forming agent is added. The liberated gas expands the mixture, forming extremely small, finely dispersed air pockets, resulting in lightweight aerated concrete. AAC products are innovative and environmentally preferable building materials. This is due to their lightweight nature, excellent thermal, fire and acoustic properties and design versatility. These inherent properties of AAC products help achieve quick and cost efficient construction practices as well as providing for comfortable operating environments inside buildings all year round.

Selecting the correct fixing for AAC material is very important and depends on application, loading requirements, fixing head style and material finish. The CSR Hebel® selection guide below provides some guidance for the correct fixing selection however due to continual base material and fixing development also refer to ICCONS for further guidance of suitable fixings for AAC.

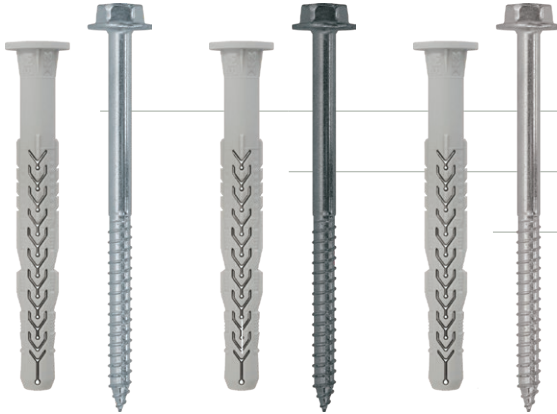
Selection of Grade of Fixing

Grade of Fixing	Application	Working Permissible Loads	
		Load (kN)	Approx. Load (kg)
Light Duty	Skirting, Coat hooks, small light fittings, towel rails, mirrors picture & painting hangings, pipe brackets, carpet smooth edge	< 0.2	~ 20
Medium Duty	Mirrors, large light fittings, door & window framing, plasterboard, shelving, light weight cupboards & fittings, meter box, tool rack, curtain tracks & rods, towel rails	0.2 - 0.5	20 - 50
Heavy Duty	Grab rails, hand rails cisterns, clothes dryers, hand basin, sinks, heavy cupboards	0.5 - 2.0	50 - 200

Extract from CSR Hebel® Technical Manual Part 5: Proprietary Fixings & Brackets and Surface Finishes – Section 8.1



Only the following sizes of X3 Nylon Frame Fixing are suitable for use in Autoclaved Aerated Concrete (AAC) Applications.



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Nylon Frame Fixing - Collared



- Carbon Steel Zinc Clear Hex Head Screw w/ flanged Plug
- Carbon Steel Galvanised Hex Head Screw w/ flanged Plug
- Stainless Steel 316 A4 Hex Head Screw w/ flanged Plug



The below table values refer to applications for fastening to Autoclaved Aerated Concrete (AAC) base material only

ZINC CLEAR Part No.	GALVANISED Part No.	316SS Part No.	Description	Drill Diameter (mm)	Min. Anchor Embedment (mm)	Max. Fixture Thickness (mm)	Head / Drive Type	Screw Size (mm)
FMX3TH10080 (64703b10080n6)	FMX3TH10080G (64703c10080n6)	FMX3TH10080SS (64703010080n6)	10 x 80mm	10	70	10	13mm Hex with internal T40	7 x 88
FMX3TH10100 (64703b10100n6)	FMX3TH10100G (64703c10100n6)	FMX3TH10100SS (64703010100n6)	10 x 100mm			30		7 x 108
FMX3TH10120 (64703b10120n6)	FMX3TH10120G (64703c10120n6)	FMX3TH10120SS (64703010120n6)	10 x 120mm			50		7 x 128
FMX3TH10140 (64703b10140n6)	FMX3TH10140G (64703c10140n6)	FMX3TH10140SS (64703010140n6)	10 x 140mm			70		7 x 148
		FMX3TH10160SS (64703010160n6)	10 x 160mm			90		7 x 168

FRIULSIDER X3
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Nylon Frame Fixing - Non Collared



- Carbon Steel Class 8.8 Galvanised Countersunk



The below table values refer to applications for fastening to Autoclaved Aerated Concrete (AAC) base material only

GALVANISED Part No.	Description	Drill Diameter (mm)	Min. Anchor Embedment (mm)	Max. Fixture Thickness (mm)	Head / Drive Type	Screw Size (mm)
FMX3C10080G (64602c10080n6)	10 x 80mm	10	70	10	Countersunk T40	7 x 88
FMX3C10100G (64602c10100n6)	10 x 100mm			30		7 x 108
FMX3C10120G (64602c10120n6)	10 x 120mm			50		7 x 128
FMX3C10140G (64602c10140n6)	10 x 140mm			70		7 x 148
FMX3C10160G (64602c10160n6)	10 x 160mm			90		7 x 168