

Recommended ⁽¹⁾ Loads in Autoclaved aerated concrete (AAC)

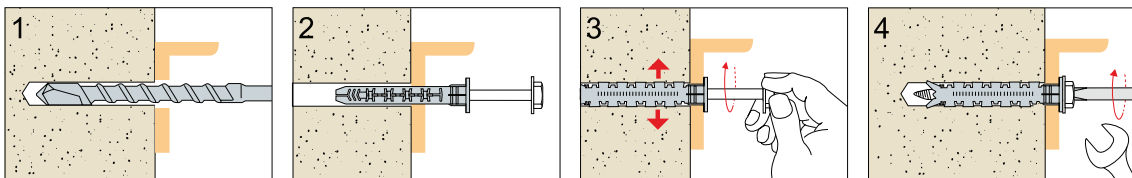
Anchor Size			Ø 10
Autoclaved aerated concrete	≥ 2,5MPa	F	kN
Minimum spacing		S _{min}	mm
Minimum edge distance		C _{min}	mm
Min thickness of aerated concrete		h _{min}	mm

1kN ≈ 100 kgf

NOTE: The above load values refer to a working temperature of ≤ 40°C. For temperatures higher than 40°C, please consult ETA-10/0425 for values.

⁽¹⁾ The recommended loads F derive from the characteristic loads on the ETA-10/0425 certification and are inclusive of the partial safety factors $\gamma_f=1.4$ and γ_m for each construction support category (see ETA).

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



FRIULSIDER YOUR FIXING FACTORY FM-X5 Nylon Frame Fixing

Carbon Steel Zinc Clear Hex Head Screw

Carbon Steel Galvanised Hex Head Screw

3DG
COATING



ZINC CLEAR Part No.	GALVANISED Part No.	Description	Drill Diameter (mm)	Min. Anchor Embedment (mm)	Max. Fixture Thickness (mm)	Head / Drive Type	Screw Size (mm)
FHMX510085 (64302b10085)	FHMX510085G (64302c10085)	10 x 85mm	10	70	15	Hex with internal T40	7 x 90
FHMX510100 (64302b10100)	FHMX510100G (64302c10100)	10 x 100mm			30		7 x 105
FHMX510115 (64302b10115)	FHMX510115G (64302c10115)	10 x 115mm			45		7 x 120
FHMX510135 (64302b10135)	FHMX510135G (64302c10135)	10 x 135mm			65		7 x 140
FHMX510160 (64302b10160)	FHMX510160G (64302c10160)	10 x 160mm			90		7 x 165

NOTE: Fire Rating (F90), valid for facade applications only.



FRIULSIDER YOUR FIXING FACTORY FM-X5 Nylon Frame Fixing

Carbon Steel Zinc Clear Countersunk Screw

Stainless Steel 316 A4 Countersunk Screw



ZINC CLEAR Part No.	316SS Part No.	Description	Drill Diameter (mm)	Min. Anchor Embedment (mm)	Max. Fixture Thickness (mm)	Head / Drive Type	Screw Size (mm)
FCMX510085 (64301b10085)	FCMX510085SS (64301010085)	10 x 85mm	10	70	15	T40 CSK	7 x 90
FCMX510100 (64301b10100)	FCMX510100SS (64301010100)	10 x 100mm			30		7 x 105
FCMX510115 (64301b10115)	FCMX510115SS (64301010115)	10 x 115mm			45		7 x 120
FCMX510135 (64301b10135)	FCMX510135SS (64301010135)	10 x 135mm			65		7 x 140
FCMX510160 (64301b10160)	FCMX510160SS (64301010160)	10 x 160mm			90		7 x 165

NOTE: Fire Rating (F90), valid for facade applications & metal door frames